

# CHINO BASIN WATERMASTER



## NOTICE OF MEETING

**Thursday, July 15, 2021**

9:00 a.m. – Advisory Committee 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, July 15, 2021**

9:00 a.m. – Advisory Committee Meeting

***AGENDA***

**CHINO BASIN WATERMASTER  
ADVISORY COMMITTEE MEETING**

9:00 a.m. – July 15, 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: 837 9710 7185

Passcode: 905660

**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 June 17, 2021 *(Page 1)*

**B. FINANCIAL REPORTS**

Receive and file as presented:

1. Cash Disbursements for the month of May 2021 *(Page 7)*
2. Watermaster VISA Check Detail for the month of May 2021 *(Page 18)*
3. Combining Schedule for the Period July 1, 2020 through May 31, 2021 *(Page 21)*
4. Treasurer's Report of Financial Affairs for the Period May 1, 2021 through May 31, 2021 *(Page 24)*
5. Budget vs. Actual Report for the Period July 1, 2020 through May 31, 2021 *(Page 28)*
6. Cash Disbursements for June 2021 (Information Only) *(Page 58)*

**C. APPLICATION: WATER TRANSACTION *(Page 71)***

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

The purchase of 6.5 acre-feet of water from Nicholson Family Trust-Exempt Marital Trust by Fontana Water Company. This purchase is made from Nicholson Family Trust-Exempt Marital Trust's Annual Production Right/Operating Safe Yield.

**D. APPLICATION: RECHARGE – SAN ANTONIO WATER COMPANY *(Page 79)***

Recommend to the Watermaster Board to approve San Antonio Water Company's Application for Recharge and direct Watermaster staff to account for up to 2,500 AFY of supplemental water to be recharged in San Antonio Water Company's existing Local Supplemental Storage account from July 2021 to July 2026.

**II. BUSINESS ITEMS**

**A. FISCAL YEAR 2021/22 SCOPE AND BUDGET TO COMPLY WITH APRIL 28, 2017 COURT ORDER REGARDING SAFE YIELD RECALCULATION METHODOLOGY (DISCUSSION ONLY)**

*(After Page 90)*

**B. FISCAL YEAR 2021/22 BUDGET AMENDMENTS (FORM A-21-07-01) (Page 92)**

1. Approve the Fiscal Year 2021/22 Budget Amendment for the Safe Yield Reset methodology evaluation as ordered by the Court at its April 28, 2017 Hearing; and
2. Approve the Fiscal Year 2021/22 Budget Amendment for the scope recommended by the GLMC.

**III. REPORTS/UPDATES**

**A. LEGAL COUNSEL**

1. San Bernardino County Superior Court Emergency Order
2. June 25, 2021 Hearing
3. Rules & Regulations Update
4. Evergreen Storage Agreements
5. Kaiser Permanente Lawsuit

**B. ENGINEER**

None

**C. CHIEF FINANCIAL OFFICER**

None

**D. GENERAL MANAGER**

1. DWR Executive Drought Proclamation
2. August Meeting Schedule
3. Other

**E. INLAND EMPIRE UTILITIES AGENCY (Page 134)**

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\***

07/15/21 Thu 9:00 a.m. Advisory Committee  
07/15/21 Thu 9:30 a.m. Recharge Investigations and Projects Committee (RIPComm)  
07/22/21 Thu 11:00 a.m. Watermaster Board

\* We are currently assessing and will hold in-person meetings in the future. Notification will be provided with future agendas/meeting notices.

**ADJOURNMENT**



# CHINO BASIN WATERMASTER

## I. CONSENT CALENDAR

### A. MINUTES

1. Advisory Committee Meeting held on June 17, 2021

**DRAFT MINUTES**  
**CHINO BASIN WATERMASTER**  
**ADVISORY COMMITTEE MEETING**

June 17, 2021

The Advisory Committee meeting was held via Zoom (conference call and web meeting) on June 17, 2021.

**ADVISORY COMMITTEE MEMBERS PRESENT ON CALL**

**AGRICULTURAL POOL COMMITTEE**

Jeff Pierson, Chair

Bob Feenstra

Pete Hall

Marilyn Levin for Carol Boyd

Agricultural Pool – Crops

Agricultural Pool – Dairy

Agricultural Pool – State of California –CIM

Agricultural Pool – State of California –DOJ

**APPROPRIATIVE POOL COMMITTEE**

Chris Diggs, Vice-Chair

Dave Crosley

Ron Craig

Scott Burton

Steven Ledbetter

John Bosler

Josh Swift

Cris Fealy

Steven Popelar for Chris Berch

Stephanie Reimer for Justin Scott-Coe

Stephanie Reimer for Justin Scott-Coe

Brian Lee

City of Pomona

City of Chino

City of Chino Hills

City of Ontario

City of Upland

Cucamonga Valley Water District

Fontana Union Water Company

Fontana Water Company

Jurupa Community Services District

Monte Vista Irrigation Company

Monte Vista Water District

San Antonio Water Company

**NON-AGRICULTURAL POOL COMMITTEE**

Brian Geye, 2<sup>nd</sup> Vice-Chair

Bob Bowcock

California Speedway Corporation

CalMat Co.

**WATERMASTER BOARD MEMBERS PRESENT ON CALL**

Bob Kuhn

Three Valleys Municipal Water District

**WATERMASTER STAFF PRESENT ON CALL**

Peter Kavounas

Joseph Joswiak

Edgar Tellez Foster

Anna Nelson

Justin Nakano

Frank Yoo

Janine Wilson

Vanessa Aldaz

General Manager

Chief Financial Officer

Water Resources Mgmt. and Planning Dir.

Executive Services Director

Water Resources Technical Manager

Water Resources Senior Associate

Senior Accountant

Administrative Assistant

**WATERMASTER CONSULTANTS PRESENT ON CALL**

Brad Herrema

Andy Malone

Lucy Hedley

Brownstein Hyatt Farber Schreck, LLP

West Yost

West Yost

**OTHERS PRESENT ON CALL**

Gino Filippi

Amanda Coker

Eunice Ulloa

Courtney Jones

Agricultural Pool – Crops

City of Chino

City of Chino

City of Ontario

Nicole deMoet  
Braden Yu  
Eduardo Espinoza  
Jiwon Seung  
Tarren Torres  
James Curatalo  
Brenda Fowler  
Ben Lewis  
Joshua Aguilar  
Shivaji Deshmukh  
Bill Schwartz  
Jeff Davis  
David De Jesus  
Matthew Litchfield  
Richard Rees

City of Upland  
City of Upland  
Cucamonga Valley Water District  
Cucamonga Valley Water District  
Egoscue Law Group, Inc.  
Fontana Union Water Company  
Fontana Water Company  
Golden State Water Company  
Inland Empire Utilities Agency  
Inland Empire Utilities Agency  
Monte Vista Water District  
Provost & Pritchard Consulting Group  
Three Valleys Municipal Water District  
Three Valleys Municipal Water District  
Wood plc

### **CALL TO ORDER**

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

### **ROLL CALL**

(0:01:03) Ms. Nelson conducted the roll call and announced that a quorum was present.

### **AGENDA – ADDITIONS/REORDER**

None

#### **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 May 20, 2021

#### **B. FINANCIAL REPORTS**

Receive and file as presented:

1. Cash Disbursements for the month of April 2021
2. Watermaster VISA Check Detail for the month of April 2021
3. Combining Schedule for the Period July 1, 2020 through April 30, 2021
4. Treasurer's Report of Financial Affairs for the Period April 1, 2021 through April 30, 2021
5. Budget vs. Actual Report for the Period July 1, 2020 through April 30, 2021
6. Cash Disbursements for May 2021 (Information Only)

#### **C. APPLICATION: WATER TRANSACTION**

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

The transfer of 500 acre-feet of water from the City of Chino to Monte Vista Water District.

#### **D. APPLICATION: RECHARGE – CUCAMONGA VALLEY WATER DISTRICT**

Recommend to the Watermaster Board to approve Cucamonga Valley Water District's Application for Recharge and direct Watermaster staff to account for this supplemental water recharged in Cucamonga Valley Water District's existing Local Supplemental Storage account.

**E. APPLICATION: LOCAL STORAGE AGREEMENT (ONAP)**

Recommend to the Watermaster Board to approve the proposed agreements on the condition that Watermaster's approval of Storage Agreements authorizing storage in excess of 500,000 acre-feet Safe Storage Capacity beyond June 30, 2021 are subject to Watermaster's further exercise of discretion to limit and reduce storage in accordance with the Peace Agreement.

**F. REFUND OF PRIOR ASSESSED RECHARGE IMPROVEMENT PROJECT FUNDS**

Approve refund of the carry-over monies for the previously assessed Recharge Improvement Projects Funds of \$1,234,582.42 with the upcoming November 2021 Assessment Package.

(0:05:12) A voice vote was taken, and the results are attached to these minutes.  
*Motion by Mr. Ron Craig, seconded by Mr. Chris Diggs, and passed unanimously.*  
***Moved to approve the Consent Calendar as presented.***

**II. BUSINESS ITEMS**

**A. 2020 ANNUAL REPORT OF THE PRADO BASIN HABITAT SUSTAINABILITY COMMITTEE**

Recommend to the Watermaster Board to receive and file.

(0:06:42) Mr. Kavounas offered to give the same presentation that was given at the Pool Committee meetings. The Advisory Committee declined to receive the presentation again.

(0:08:25) A voice vote was taken, and the results are attached to these minutes.  
*Motion by Mr. Chris Diggs, seconded by Mr. Ron Craig, and passed unanimously.*  
***Moved to recommend to the Watermaster Board to receive and file the 2020 Annual Report of the Prado Basin Habitat Sustainability Committee.***

**III. REPORTS/UPDATES**

**A. LEGAL COUNSEL**

1. San Bernardino County Superior Court Emergency Order
2. May 28, 2021 Hearing
3. June 25, 2021 Hearing
4. Kaiser Permanente Lawsuit

The Engineer's Report was given before the Legal Counsel Update.

(0:31:06) Mr. Herrema gave a report.

**B. ENGINEER**

1. 2020 State of the Basin: Groundwater Quality

(0:10:15) Mr. Malone introduced the item and handed off to Ms. Hedley (West Yost ) who gave a presentation. A discussion ensued.

**C. CHIEF FINANCIAL OFFICER**

1. Audit of Recharge O&M Expenses
2. FY 2020/21 Ongoing Auditing Activity by Fedak & Brown, LLP
3. Pool Budget Process, Approvals, and Invoicing

(0:34:43) Mr. Joswiak stated that he had nothing new to report since the prior Pool Committee meetings. A discussion ensued.

**D. GENERAL MANAGER**

1. Overlying (Agricultural) Pool Expenses Paid by Overlying (Non-Agricultural) Pool
2. Agricultural Pool Well Tax Discussion
3. Other

(0:52:43) Mr. Kavounas gave a report and invited Mr. Tellez Foster to give a report and show a table regarding grant opportunities for disadvantaged communities. 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)

None

**F. METROPOLITAN MEMBER AGENCY REPORTS**

(1:04:20) Mr. Litchfield reported that Mr. Adel Hagekhalil has replaced the retired Mr. Jeff Kightlinger as new General Manager for Metropolitan Water District.

(1:05:36) Mr. Deshmukh reported on an information item provided to the IEUA Board regarding the Chino Basin Program. He also reported that the MWD Board unanimously approved grant funding for upgrades to the Montclair Basin.

**IV. COMMITTEE MEMBER COMMENTS**

None

**V. OTHER BUSINESS**

None

**VI. 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 10:09 a.m.

Secretary: \_\_\_\_\_

Approved: \_\_\_\_\_

Attachments:

1. 20210617 Advisory Committee Volume Vote Outcome for Consent Calendar and Business Item II.A.

# Attachment 1 to 20210617 Advisory Committee Meeting Minutes

June 17, 2021 Advisory Committee Meeting Roll Call Vote Outcome

Agency	Member	Alternate	Consent Calendar	Business Item II.A.
City of Chino Hills	Craig, Ron		yes	yes
		Wiley, Mark		
City of Chino	Crosley, Dave		yes	yes
		Coker, Amanda		
		Jakher, Amer		
		Castro, Vivian		
Cucamonga Valley Water District	Bosler, John		yes	yes
		Espinoza, Eduardo		
		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			
		Letulle, Chander		
		Popelar, Steven	yes	yes
Monte Vista Water District	Scott-Coe, Justin			
		Reimer, Stephanie	yes	yes
City of Ontario	Burton, Scott		yes	yes
		Jones, Courtney		
City of Pomona	Diggs, Chris, Vice-Chair		yes	yes
City of Upland	Yu, Braden			
		Ledbetter, Steven	yes	yes
		deMoet, Nicole		
Minor 1 - Monte Vista Irrigation Company	Scott-Coe, Justin			
		Reimer, Stephanie	yes	yes
Minor 2 - San Antonio Water Company	Lee, Brian		yes	yes
		Layton, Teri		
Agricultural Pool	deBoom, Nathan			
	DeHaan, Henry			
	Feenstra, Robert		yes	yes
	Huitsing, John			
	LaBrucherie, Jr., Ron			
	Pierson, Jeff, Chair			
	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			
<b>OUTCOME:</b>			<b>Passed Unanimously</b>	<b>Passed Unanimously</b>

# CHINO BASIN WATERMASTER

## I. CONSENT CALENDAR

### B. FINANCIAL REPORTS

1. Cash Disbursements for the month of May 2021
2. Watermaster VISA Check Detail for the month of May 2021
3. Combining Schedule for the Period July 1, 2020 through May 31, 2021
4. Treasurer's Report of Financial Affairs for the Period May 1, 2021 through May 31, 2021
5. Budget vs. Actual Report for the Period July 1, 2020 through May 31, 2021
6. Cash Disbursements for June 2021 (Information Only)



# CHINO BASIN WATERMASTER

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PETER KAVOUNAS, P.E.  
General Manager

## STAFF REPORT

DATE: July 15, 2021  
TO: Advisory Committee Members  
SUBJECT: Cash Disbursement Report - Financial Report B1 (May 31, 2021)  
(Consent Calendar Item I.B.1.)

### SUMMARY

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

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

Financial Impact: Funds disbursed were included in the FY 2020/21 "Amended" Watermaster Budget.

### Future Consideration

**Advisory Committee – July 15, 2021:** Receive and File

**Watermaster Board – July 22, 2021:** Receive and File (Normal Course of Business)

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### ACTIONS:

**Appropriative Pool – July 8, 2021:** Received and filed

**Non-Agricultural Pool – July 8, 2021:** Moved unanimously to receive and file, without approval

**Agricultural Pool – July 8, 2021:** Received and filed

**Advisory Committee – July 15, 2021:**

**Watermaster Board – July 22, 2021:**

*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*



## BACKGROUND

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

## DISCUSSION

Total cash disbursements during the month of May 2021 were \$410,222.63.

The most significant expenditure during the month was to West Yost Associates in the amount of \$201,578.20 (check number 22806 dated May 4, 2021).

## ATTACHMENTS

1. Financial Report – B1

**CHINO BASIN WATERMASTER**  
**Cash Disbursements For The Month of**  
**May 2021**

Type	Date	Num	Name	Memo	Account	Paid Amount
<b>Bill Pmt -Check</b>	<b>05/04/2021</b>	<b>22799</b>	<b>ACCENT COMPUTER SOLUTIONS, INC.</b>	<b>143347</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/01/2021	143347		Monthly Services - May 2021	6052.4 · IT Managed Services	4,018.28
				Overwatch - May 2021	6052.5 · IT Data Backup/Storage	699.00
				OmniCloud - May 2021	6052.5 · IT Data Backup/Storage	170.00
				Office 365 Subscriptions/Business Premier - May 2	6052.4 · IT Managed Services	204.75
				Image office storage (per GB, per month)	6052.5 · IT Data Backup/Storage	795.86
<b>TOTAL</b>						<b>5,887.89</b>
<b>Bill Pmt -Check</b>	<b>05/04/2021</b>	<b>22800</b>	<b>EUROFINS EATON ANALYTICAL</b>		<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/13/2021	L0563922		L0563922	7108.41 · Hydraulic Control - PBHSP	1,050.00
Bill	04/16/2021	L0564405		L0564405	7103.5 · Grdwtr Qual-Lab Svcs	848.00
<b>TOTAL</b>						<b>1,898.00</b>
<b>Bill Pmt -Check</b>	<b>05/04/2021</b>	<b>22801</b>	<b>NELSON, ANNA</b>	<b>Tuition Reimbursement</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/27/2021			Tuition reimbursement-AN	6193 · Employee Training	237.74
<b>TOTAL</b>						<b>237.74</b>
<b>Bill Pmt -Check</b>	<b>05/04/2021</b>	<b>22802</b>	<b>PREMIERE GLOBAL SERVICES</b>	<b>30528556</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/29/2021	30528556		Fee - General	6022 · Telephone	39.00
				Fee - Confidential	6022 · Telephone	39.00
				Call shortfalls	6022 · Telephone	78.00
				Service Fee	6022 · Telephone	25.51
<b>TOTAL</b>						<b>181.51</b>
<b>Bill Pmt -Check</b>	<b>05/04/2021</b>	<b>22803</b>	<b>READY REFRESH BY NESTLE</b>	<b>0023230253</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/27/2021	0023230253		Office Water Bottle - April 2021	6031.7 · Other Office Supplies	91.08
<b>TOTAL</b>						<b>91.08</b>
<b>Bill Pmt -Check</b>	<b>05/04/2021</b>	<b>22804</b>	<b>SAN BERNARDINO COUNTY - DEPT. AIRPORT:</b>	<b>Lease No. CNO0000773</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/29/2021	CNO0000773		Annual rental payment-extensometer site	7107.9 · Grd Level-Other	1,596.00
<b>TOTAL</b>						<b>1,596.00</b>
<b>Bill Pmt -Check</b>	<b>05/04/2021</b>	<b>22805</b>	<b>VISION SERVICE PLAN</b>	<b>00-101789-0001</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/27/2021	00101789		Vision Insurance Premium - May 2021	60182.2 · Dental & Vision Ins	93.83
<b>TOTAL</b>						<b>93.83</b>
<b>Bill Pmt -Check</b>	<b>05/04/2021</b>	<b>22806</b>	<b>WEST YOST</b>		<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	03/31/2021	2044444		2044444	6906.31 · OBMP-Pool, Adv. Board Mtgs	8,601.75
Bill	03/31/2021	2044445		2044445	6906.32 · OBMP-Other General Meetings	17,532.75

**CHINO BASIN WATERMASTER**  
**Cash Disbursements For The Month of**  
**May 2021**

<b>Type</b>	<b>Date</b>	<b>Num</b>	<b>Name</b>	<b>Memo</b>	<b>Account</b>	<b>Paid Amount</b>
Bill	03/31/2021	2044446		2044446	6906.71 · OBMP-Data Req.-CBWM Staff	11,310.00
Bill	03/31/2021	2044447		2044447	6906.72 · OBMP-Data Req.-Non CBWM Staff	339.00
Bill	03/31/2021	2044448		2044448	6906.23 · SGMA Reporting Requirements	3,237.50
Bill	03/31/2021	2044470		2044470	6906 · OBMP Engineering Services	1,594.50
Bill	03/31/2021	2044450		2044450	6906.1 · OBMP-Watermaster Model Update	8,551.00
Bill	03/31/2021	2044451		2044451	6906.24 · Compliance-SWRCB	5,075.25
Bill	03/31/2021	2044452		2044452	6906.26 · 2020 OBMP Update	1,664.25
Bill	03/31/2021	2044453		2044453	6906.73 · OBMP-2020 Safe Yield Recalc	5,087.25
Bill	03/31/2021	2044454		2044454	6906.21 · State of the Basin Report	42,804.00
Bill	03/31/2021	2044455		2044455	6906.15 · Integrated Model Mtgs-IEUA Cost	1,123.75
Bill	03/31/2021	2044456		2044456	7103.3 · Grdwtr Qual-Engineering	7,107.74
Bill	03/31/2021	2044457		2044457	7104.3 · Grdwtr Level-Engineering	9,685.43
Bill	03/31/2021	2044458		2044458	7107.2 · Grd Level-Engineering	6,466.87
Bill	03/31/2021	2044459		2044459	7107.2 · Grd Level-Engineering	113.00
Bill	03/31/2021	2044460		2044460	7402 · PE4-Engineering	14,492.75
Bill	03/31/2021	2044461		2044461	7402.10 · PE4 - Northwest MZ1 Area Proj.	3,308.25
Bill	03/31/2021	2044462		2044462	7108.31 · Hydraulic Control - PBHSP	10,261.00
Bill	03/31/2021	2044463		2044463	7111.3 · Data Collection & Mgmt-Eng. Ser	497.50
Bill	03/31/2021	2044464		2044464	7202.2 · Engineering Svc	7,498.91
Bill	03/31/2021	2044465		2044465	7206.1 · SB88 Specs-Ensure Compliance	3,530.00
Bill	03/31/2021	2044466		2044466	7210 · OBMP - 2023 RMPU	1,481.00
Bill	03/31/2021	2044467		2044467	7502 · PE6&7-Engineering	26,809.50
Bill	03/31/2021	2044468		2044468	7510 · PE6&7-IEUA Salinity Mgmt. Plan	3,273.75
Bill	03/31/2021	2044469		2044469	7511 · PE6&7-SAWBMP Task Force-50% IEU	131.50
<b>TOTAL</b>						<b>201,578.20</b>
<b>Bill Pmt -Check</b>	<b>05/04/2021</b>	<b>ACH 050421</b>	<b>CALPERS</b>	<b>1394905143</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/01/2021	1394905143		Medical Insurance Premiums - May 2021	60182.1 · Medical Insurance	11,326.80
<b>TOTAL</b>						<b>11,326.80</b>
<b>Bill Pmt -Check</b>	<b>05/10/2021</b>	<b>ACH 051021</b>	<b>PUBLIC EMPLOYEES' RETIREMENT SYSTEM</b>	<b>Payor #3493</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
General Journal	04/30/2021	04/30/2021	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 04/18/21-05/01/21	2000 · Accounts Payable	8,986.85
<b>TOTAL</b>						<b>8,986.85</b>
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22807</b>	<b>ACWA JOINT POWERS INSURANCE AUTHORITY</b>	<b>10666988</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/22/2021	0666988		Prepayment - June 2021	1409 · Prepaid Life, BAD&D & LTD	246.83
				May 2021	60191 · Life & Disab.Ins Benefits	246.83
<b>TOTAL</b>						<b>493.66</b>
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22808</b>	<b>APPLIED COMPUTER TECHNOLOGIES</b>	<b>3341</b>	<b>1012 · Bank of America Gen'l Ckg</b>	

**CHINO BASIN WATERMASTER**  
**Cash Disbursements For The Month of**  
**May 2021**

Type	Date	Num	Name	Memo	Account	Paid Amount
Bill	04/30/2021	3341		Database Consulting Services - April 2021	6052.2 · Applied Computer Technol	3,850.00
TOTAL						3,850.00
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22809</b>	<b>BOWCOCK, ROBERT</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/15/2021	4/15 Board Officers		4/15/21 Board Officers/Pool Chairs Meeting	6311 · Board Member Compensation	125.00
Bill	04/22/2021	4/22 Board Mtg		4/122/21 Board Meeting	6311 · Board Member Compensation	125.00
Bill	04/30/2021	4/30 Court Hearing		4/30/21 Court Hearing	6311 · Board Member Compensation	125.00
TOTAL						375.00
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22810</b>	<b>BURRTEC WASTE INDUSTRIES, INC.</b>	<b>N2111961530</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/04/2021	N2111961530		Disposal Service - May 2021	6024 · Building Repair & Maintenance	135.72
TOTAL						135.72
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22811</b>	<b>DE BOOM, NATHAN</b>	<b>Ag Pool Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/08/2021	4/08 Ag Pool Mtg		4/08/21 Ag Pool Meeting	8411 · Ag Pool Member Compensation	25.00
				4/08/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
TOTAL						125.00
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22812</b>	<b>EGOSCUE LAW GROUP, INC.</b>	<b>April 2021</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/30/2021	General Counsel		Ag Pool Legal Services - April 2021	8467 · Ag Legal & Technical Services	26,075.00
TOTAL						26,075.00
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22813</b>	<b>ELIE, STEVEN</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/22/2021	4/22 Board Mtg		4/22/21 Board Meeting	6311 · Board Member Compensation	125.00
Bill	04/30/2021	4/30 Court Hearing		4/30/21 Court Hearing	6311 · Board Member Compensation	125.00
TOTAL						250.00
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22814</b>	<b>EMPOWER LAB</b>	<b>Employee Training</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/30/2021			Empower Lab - April 2021	6193 · Employee Training	1,075.00
TOTAL						1,075.00
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22815</b>	<b>FILIPPI, GINO</b>	<b>Ag Pool Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/08/2021	4/08 Ag Pool Mtg		4/08/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	04/22/2021	4/22 Board Mtg		4/22/21 Board Meeting	8470 · Ag Meeting Attend -Special	125.00
TOTAL						250.00
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22816</b>	<b>FOLSOM, BETTY</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/12/2021	4/12 Call w/Bd Chair		4/12/21 call with J. Curatalo and P. Rogers	6311 · Board Member Compensation	125.00
Bill	04/22/2021	4/22 Board Mtg		4/22/21 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL						250.00

**CHINO BASIN WATERMASTER**  
Cash Disbursements For The Month of  
May 2021

Type	Date	Num	Name	Memo	Account	Paid Amount
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22817</b>	<b>FONTANA UNION WATER COMPANY'</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/06/2021	4/06 Board Officers		4/06/21 Board Officers check-in-Curatalo	6311 · Board Member Compensation	125.00
Bill	04/13/2021	4/13 WM Business Mtg		4/13/21 Discuss WM business-Curatalo	6311 · Board Member Compensation	125.00
Bill	04/14/2021	4/14 Mtg w/GM		4/14/21 Meeting w/General Manager-Curatalo	6311 · Board Member Compensation	125.00
Bill	04/15/2021	4/15 Board Officers		4/15/21 Board Officers/Pool Chairs-Curatalo	6311 · Board Member Compensation	125.00
Bill	04/20/2021	4/20 Board Agenda		4/20/21 Board Agenda Preview-Curatalo	6311 · Board Member Compensation	125.00
Bill	04/22/2021	4/22 Board Mtg		4/22/21 Board meeting-Curatalo	6311 · Board Member Compensation	125.00
Bill	04/23/2021	4/23 Admin Mtg		4/23/21 Administrative meeting-Curatalo	6311 · Board Member Compensation	125.00
Bill	04/30/2021	4/30 Court Hearing		4/30/21 Court Hearing-Curatalo	6311 · Board Member Compensation	125.00
<b>TOTAL</b>						<b>1,000.00</b>
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22818</b>	<b>GEYE, BRIAN</b>	<b>VOID:</b>	<b>1012 · Bank of America Gen'l Ckg</b>	<b>0.00</b>
<b>TOTAL</b>						<b>0.00</b>
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22819</b>	<b>JOSEPH S. JOSWIAK</b>	<b>Transcript Reimbursement 03/26/21</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/28/2021	Transcript Reimburse		March 26, 2021 hearing transcript	6046 · Legal Publications/Services	106.00
<b>TOTAL</b>						<b>106.00</b>
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22820</b>	<b>EASTVALE DEVELOPMENT - PIERSON</b>	<b>Ag Pool and Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/01/2021	4/01 GLMC Mtg		4/01/21 GLMC Meeting	6311 · Board Member Compensation	125.00
Bill	04/02/2021	4/02 Call w/Ag Chair		4/02/21 Conf. call w/Ag Pool Chair/counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	04/06/2021	4/06 Call w/Ag Chair		4/06/21 Conf. call w/Ag Pool Chair/counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	04/06/2021	4/06 Brd Officers		4/06/21 Board Officers/Pool Chairs Meeting	6311 · Board Member Compensation	125.00
Bill	04/07/2021	4/07 Call w/Ag Chair		4/07/21 Conf. call w/Ag Pool Chair/counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	04/08/2021	4/08 Ag Pool Mrg		4/08/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	04/13/2021	4/13 Budget Workshop		4/13/21 Budget Workshop	6311 · Board Member Compensation	125.00
Bill	04/15/2021	4/15 Bd Officers Mtg		4/15/21 Board Officers/Pool Chairs Meeting	6311 · Board Member Compensation	125.00
Bill	04/19/2021	4/19 Call w/Ag Chair		4/19/21 Conf. call w/Ag Pool Chair/ counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	04/20/2021	4/20 Board Agenda		4/20/21 Board Agenda Preview	6311 · Board Member Compensation	125.00
Bill	04/22/2021	4/22 Call w/Ag Chair		4/22/21 Conf. call w/Ag Pool Chair/ counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	04/22/2021	4/22 Board Mtg		4/22/21 Board Meeting	6311 · Board Member Compensation	125.00
Bill	04/27/2021	4/27 Call w/Ag Chair		4/27/21 Conf. call w/Ag Pool Chair/counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	04/29/2021	4/29 Call w/Ag Chair		4/29/21 Conf. call w/Ag Pool Chair/counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	04/30/2021	4/30 Court Hearing		4/30/21 Court Hearing	6311 · Board Member Compensation	125.00
<b>TOTAL</b>						<b>1,875.00</b>
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22821</b>	<b>PIETERSMA, RONALD</b>	<b>Ag Pool Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/08/2021	4/08 Ag Pool Mtg		4/08/21 Ag Pool Meeting	8411 · Ag Pool Member Compensation	25.00
				4/08/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00

**CHINO BASIN WATERMASTER**  
Cash Disbursements For The Month of  
May 2021

Type	Date	Num	Name	Memo	Account	Paid Amount
TOTAL						125.00
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22822</b>	<b>PRINTING RESOURCES</b>	<b>67009</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/30/2021	67009		10x13 envelopes - qty 500	6031.7 · Other Office Supplies	254.47
TOTAL						254.47
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22823</b>	<b>ROGERS, PETER</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/12/2021	4/12 Mtg w/Bd Chair		4/12/21 Meeting w/J. Curatalo	6311 · Board Member Compensation	125.00
Bill	04/13/2021	4/13 Budget Mtg		4/13/21 Budget Meeting	6311 · Board Member Compensation	125.00
Bill	04/22/2021	4/22 Board Mtg		4/22/21 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL						375.00
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22824</b>	<b>RR FRANCHISING, INC.</b>	<b>Building Maintenance</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/01/2021	98992		May 2021 monthly service - office and annex	6024 · Building Repair & Maintenance	915.00
Bill	05/01/2021	99636		Electrostatic spraying & window washing	6024 · Building Repair & Maintenance	690.00
TOTAL						1,605.00
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22825</b>	<b>SPECTRUM BUSINESS</b>	<b>2031978042321</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/30/2021	2031978042321		4/23/21-5/22/21	6053 · Internet Expense	804.52
TOTAL						804.52
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22826</b>	<b>STATE COMPENSATION INSURANCE FUND</b>	<b>1970970-20</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/01/2021	1970970-20		Premium 4/26/21 - 5/26/21	60183 · Worker's Comp Insurance	514.25
TOTAL						514.25
<b>Bill Pmt -Check</b>	<b>05/11/2021</b>	<b>22827</b>	<b>VERIZON WIRELESS</b>	<b>VOID: 9877537415</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
TOTAL						0.00
<b>General Journal</b>	<b>05/14/2021</b>	<b>05/14/2021</b>	<b>ADP, LLC</b>	<b>ADP Tax Service</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
				ADP Tax Service for 04/17/21-579883121	1012 · Bank of America Gen'l Ckg	155.50
				ADP Tax Service for 05/01//21-579883121	1012 · Bank of America Gen'l Ckg	155.50
TOTAL						311.00
<b>General Journal</b>	<b>05/15/2021</b>	<b>05/15/2021</b>	<b>Payroll and Taxes for 05/02/21-05/15/21</b>	<b>Payroll and Taxes for 05/02/21-05/15/21</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
				Direct Deposits for 05/02/21-05/15/21	1012 · Bank of America Gen'l Ckg	29,979.46
				Payroll Taxes for 05/02/21-05/15/21	1012 · Bank of America Gen'l Ckg	11,506.53
				457(f) EE Deductions for 05/02/21-05/15/21	1012 · Bank of America Gen'l Ckg	5,759.32
				401(a) EE Deductions for 05/02/21-05/15/21	1012 · Bank of America Gen'l Ckg	1,648.79
TOTAL						48,894.10

**CHINO BASIN WATERMASTER**  
**Cash Disbursements For The Month of**  
**May 2021**

Type	Date	Num	Name	Memo	Account	Paid Amount
Check	05/17/2021	05/17/2021	Service Charge	Service Charge	1012 · Bank of America Gen'l Ckg	
				Service Charge	6039.1 · Banking Service Charges	1,226.93
TOTAL						<u>1,226.93</u>
Bill Pmt -Check	05/18/2021	22828	BANK OF AMERICA	XXXX-XXXX-XXXX-9341	1012 · Bank of America Gen'l Ckg	
Bill	04/30/2021	XXXX-XXXX-XXXX-9341		Supplies for meeting-discuss WM business	6909.1 · OBMP Meetings	93.12
				Miscellaneous office supplies	6031.7 · Other Office Supplies	49.43
				Gloves for field staff work	6151 · Small Tools & Equipment	26.17
				Miscellaneous office supplies	6031.7 · Other Office Supplies	34.90
				Gloves for field staff work	6151 · Small Tools & Equipment	182.98
				Plotter paper	6031.7 · Other Office Supplies	186.11
				Miscellaneous office supplies	6031.7 · Other Office Supplies	62.61
				Webcams for office	6055 · Computer Hardware	193.93
TOTAL						<u>829.25</u>
Bill Pmt -Check	05/18/2021	22829	CORELOGIC INFORMATION SOLUTIONS	82079837	1012 · Bank of America Gen'l Ckg	
Bill	04/30/2021	82079837		April 2021	7103.7 · Grdwtr Qual-Computer Svc	62.50
				82079837	7101.4 · Prod Monitor-Computer	62.50
TOTAL						<u>125.00</u>
Bill Pmt -Check	05/18/2021	22830	DE HAAN, HENRY	Ag Pool Member Compensation	1012 · Bank of America Gen'l Ckg	
Bill	04/08/2021	4/08 Ag Pool Mtg		4/08/21 Ag Pool Meeting	8411 · Ag Pool Member Compensation	25.00
				4/08/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
TOTAL						<u>125.00</u>
Bill Pmt -Check	05/18/2021	22831	FEDAK & BROWN LLP	Audit Services	1012 · Bank of America Gen'l Ckg	
Bill	04/30/2021			April 2020	6062 · Audit Services	200.00
TOTAL						<u>200.00</u>
Bill Pmt -Check	05/18/2021	22832	FIRST LEGAL NETWORK LLC	40048579	1012 · Bank of America Gen'l Ckg	
Bill	04/30/2021	40048579		Court filings for April 2021	6061.5 · Court Filing Services	193.68
TOTAL						<u>193.68</u>
Bill Pmt -Check	05/18/2021	22833	LEGAL SHIELD	111802	1012 · Bank of America Gen'l Ckg	
Bill	05/14/2021	111802		Employee deductions - May 2021	60194 · Other Employee Insurance	161.40
TOTAL						<u>161.40</u>
Bill Pmt -Check	05/18/2021	22834	LOEB & LOEB LLP	1949453	1012 · Bank of America Gen'l Ckg	
Bill	04/30/2021	1949453		Non-Ag Pool Legal Services - April 2021	8567 · Non-Ag Legal Service	6,463.80
TOTAL						<u>6,463.80</u>

**CHINO BASIN WATERMASTER**  
**Cash Disbursements For The Month of**  
**May 2021**

Type	Date	Num	Name	Memo	Account	Paid Amount
<b>Bill Pmt -Check</b>	<b>05/18/2021</b>	<b>22835</b>	<b>VERIZON WIRELESS</b>	<b>Telephone Service</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/27/2021	9877537415		Acct #642073270-00001	6022 · Telephone	0.04
Bill	05/14/2021	9879066928		Acct #470810953-00001	6022 · Telephone	1.28
<b>TOTAL</b>						<b>1.32</b>
<b>Bill Pmt -Check</b>	<b>05/18/2021</b>	<b>22836</b>	<b>WEST POINT MEDICAL CENTER</b>	<b>Employee COVID-19 Tests</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/30/2021	ALD195360		Covid test Aldaz - Nov. 18, 2020	60194 · Other Employee Insurance	390.00
Bill	04/30/2021	JUR175406		Covid test Jurado - Nov. 25, 2020	60194 · Other Employee Insurance	390.00
<b>TOTAL</b>						<b>780.00</b>
<b>Bill Pmt -Check</b>	<b>05/18/2021</b>	<b>22837</b>	<b>WESTERN MUNICIPAL WATER DISTRICT</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/22/2021	4/22 Board Mtg		4/22/21 Board meeting - Galleano	6311 · Board Member Compensation	125.00
<b>TOTAL</b>						<b>125.00</b>
<b>Bill Pmt -Check</b>	<b>05/19/2021</b>	<b>22838</b>	<b>CUCAMONGA VALLEY WATER DISTRICT</b>	<b>Rent Expense</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/18/2021			Lease due on June 1, 2021	1422 · Prepaid Rent	7,213.72
<b>TOTAL</b>						<b>7,213.72</b>
<b>Bill Pmt -Check</b>	<b>05/19/2021</b>	<b>22839</b>	<b>FONTANA UNION WATER COMPANY'</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/30/2021	3/09 Brd Officer Mtg		3/09/21 Board Officers Mtg - Curatalo	6311 · Board Member Compensation	125.00
Bill	04/30/2021	3/11 Appro Pool Mtg		3/11/21 Appropriative Pool Meeting - Curatalo	6311 · Board Member Compensation	125.00
Bill	04/30/2021	3/18 Brd Officers Mt		3/18/21 Board Officers Meeting - Curatalo	6311 · Board Member Compensation	125.00
Bill	04/30/2021	3/23 Board Agenda		3/23/21 Board Agenda Preview Mtg. - Curatalo	6311 · Board Member Compensation	125.00
Bill	04/30/2021	3/25 Board Mtg		3/25/21 Board Meeting - Curatalo	6311 · Board Member Compensation	125.00
Bill	04/30/2021	3/26 Court Hearing		3/26/21 Court Hearing - Curatalo	6311 · Board Member Compensation	125.00
<b>TOTAL</b>						<b>750.00</b>
<b>Bill Pmt -Check</b>	<b>05/19/2021</b>	<b>22840</b>	<b>FRONTIER COMMUNICATIONS</b>	<b>909-484-3890-050914-5</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/18/2021	9094843890050914-5		Office fax	6022 · Telephone	169.29
<b>TOTAL</b>						<b>169.29</b>
<b>Bill Pmt -Check</b>	<b>05/19/2021</b>	<b>22841</b>	<b>GREAT AMERICA LEASING CORP.</b>	<b>29331504</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/13/2021	29331504		Invoice for April 2021 - standard payment	6043.1 · Ricoh Lease Fee	1,481.41
				Supply freight fee	6043.2 · Ricoh Usage & Maintenance Fee	8.57
<b>TOTAL</b>						<b>1,489.98</b>
<b>Bill Pmt -Check</b>	<b>05/19/2021</b>	<b>22842</b>	<b>KUHN, BOB</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/06/2021	4/06 Budget Workshop		4/06/21 Budget Workshop/Admin Mtg	6311 · Board Member Compensation	125.00
Bill	04/08/2021	4/08 Appro Pool Mtg		4/08/21 Appropriative Pool Meeting	6311 · Board Member Compensation	125.00



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Type	Date	Num	Name	Memo	Account	Paid Amount
Bill	04/13/2021	4/13 Budget Workshop		4/13/21 Budget Workshop #2	6311 · Board Member Compensation	125.00
Bill	04/14/2021	4/14 Admin Mtg		4/14/21 Administrative Meeting	6311 · Board Member Compensation	125.00
Bill	04/15/2021	4/15 Exec Committee		4/15/21 Exec Committee/Pool Chairs Mtg.	6311 · Board Member Compensation	125.00
Bill	04/20/2021	4/20 Exec Committee		4/20/21 Exec Committee/GM Meeting	6311 · Board Member Compensation	125.00
Bill	04/22/2021	4/22 Board Mtg		4/22/21 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL						875.00
<b>Bill Pmt -Check</b>	<b>05/19/2021</b>	<b>22843</b>	<b>R&amp;D PEST SERVICES</b>	<b>0272382</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/18/2021	0272382		Treat office and annex for pest control	6024 · Building Repair & Maintenance	100.00
TOTAL						100.00
<b>Bill Pmt -Check</b>	<b>05/19/2021</b>	<b>22844</b>	<b>STAULA, MARY L</b>	<b>Retiree Medical</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/31/2021			Retiree Medical	60182.4 · Retiree Medical	19.24
TOTAL						19.24
<b>Bill Pmt -Check</b>	<b>05/19/2021</b>	<b>22845</b>	<b>UNITED HEALTHCARE</b>	<b>052581381576</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/14/2021	052581381576		Dental Insurance Premium - June 2021	60182.2 · Dental & Vision Ins	805.17
TOTAL						805.17
<b>Bill Pmt -Check</b>	<b>05/19/2021</b>	<b>22846</b>	<b>VANDEN HEUVEL, GEOFFREY</b>	<b>Ag Pool Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/08/2021	4/08 Ag Pool Mtg		4/08/21 Ag Pool Meeting	8411 · Ag Pool Member Compensation	25.00
				4/08/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	04/30/2021	3/11 Ag Pool Mtg		3/11/21 Ag Pool Meeting	8411 · Ag Pool Member Compensation	25.00
				3/11/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	05/13/2021	5/13 Ag Pool Mtg		5/13/21 Ag Pool Meeting	8411 · Ag Pool Member Compensation	25.00
				5/13/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
TOTAL						375.00
<b>Bill Pmt -Check</b>	<b>05/21/2021</b>	<b>ACH 052121</b>	<b>PUBLIC EMPLOYEES' RETIREMENT SYSTEM</b>	<b>Payor #3493</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
General Journal	05/15/2021	05/15/2021	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 5/02/21-05/15/21	2000 · Accounts Payable	8,986.84
TOTAL						8,986.84
<b>Bill Pmt -Check</b>	<b>05/25/2021</b>	<b>ACH 052521</b>	<b>PUBLIC EMPLOYEES' RETIREMENT SYSTEM</b>	<b>Payor #3493</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/01/2021	16416570		Annual Unfunded Accrued Liability-Plan 3299	60180 · Employers PERS Expense	7,622.21
TOTAL						7,622.21
<b>General Journal</b>	<b>05/25/2021</b>	<b>05/25/2021</b>	<b>Wage Works FSA Direct Debits - May 2021</b>	<b>Wage Works FSA Direct Debits - May 2021</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
				Wage Works FSA Direct Debits - May 2021	1012 · Bank of America Gen'l Ckg	572.32
				Wage Works FSA Direct Debits - May 2021	1012 · Bank of America Gen'l Ckg	572.32
				Wage Works FSA Direct Debits - May 2021	1012 · Bank of America Gen'l Ckg	81.50

**CHINO BASIN WATERMASTER**  
**Cash Disbursements For The Month of**  
**May 2021**

Type	Date	Num	Name	Memo	Account	Paid Amount
				Wage Works FSA Direct Debits - May 2021	1012 - Bank of America Gen'l Ckg	-408.06
TOTAL						<u>818.08</u>
<b>General Journal</b>	<b>05/29/2021</b>	<b>05/29/2021</b>	<b>Payroll and Taxes for 05/16/21-05/29/21</b>	<b>Payroll and Taxes for 05/16/21-05/29/21</b>	<b>1012 - Bank of America Gen'l Ckg</b>	
				Direct deposits for 05/16/21-05/29/21	1012 - Bank of America Gen'l Ckg	30,992.76
				Payroll and Taxes for 05/16/21-05/29/21	1012 - Bank of America Gen'l Ckg	11,744.23
				457(f) EE Deductions for 05/16/21-05/29/21	1012 - Bank of America Gen'l Ckg	5,759.32
				401(a) EE Deductions for 05/16/21-05/29/21	1012 - Bank of America Gen'l Ckg	1,648.79
TOTAL						<u>50,145.10</u>
					<b>Total Disbursements:</b>	<u><u><b>410,222.63</b></u></u>



# CHINO BASIN WATERMASTER

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

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PETER KAVOUNAS, P.E.  
General Manager

## STAFF REPORT

DATE: July 15, 2021  
TO: Advisory Committee Members  
SUBJECT: VISA Check Detail Report - Financial Report B2 (May 31, 2021)  
(Consent Calendar Item I.B.2.)

### SUMMARY

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

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

Financial Impact: Funds disbursed were included in the FY 2020/21 "Amended" Watermaster Budget.

### Future Consideration

**Advisory Committee – July 15, 2021:** Receive and File

**Watermaster Board – July 22, 2021:** Receive and File (Normal Course of Business)

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### ACTIONS:

**Appropriative Pool – July 8, 2021:** Received and filed

**Non-Agricultural Pool – July 8, 2021:** Moved unanimously to receive and file, without approval

**Agricultural Pool – July 8, 2021:** Received and filed

**Advisory Committee – July 15, 2021:**

**Watermaster Board – July 22, 2021:**

*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*

## 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 May 2021 was \$829.25. The payment was processed in the amount of \$829.25 (by check number 22828 dated May 18, 2021). The monthly charges for May 2021 of \$829.25 were for routine and customary expenditures and properly documented with receipts.

## ATTACHMENTS

1. Financial Report – B2

CHINO BASIN WATERMASTER  
VISA Check Detail Report  
May 2021

Type	Num	Date	Name	Memo	Account	Paid Amount
Bill Pmt -Check	05/18/2021	22828	BANK OF AMERICA	XXXX-XXXX-XXXX-9341	1012 · Bank of America Gen'l Ckg	
Bill	04/30/2021	XXXX-XXXX-XXXX-9341		Supplies for meeting-discuss WM business	6909.1 · OBMP Meetings	93.12
				Miscellaneous office supplies	6031.7 · Other Office Supplies	49.43
				Gloves for field staff work	6151 · Small Tools & Equipment	26.17
				Miscellaneous office supplies	6031.7 · Other Office Supplies	34.90
				Gloves for field staff work	6151 · Small Tools & Equipment	182.98
				Plotter paper	6031.7 · Other Office Supplies	186.11
				Miscellaneous office supplies	6031.7 · Other Office Supplies	62.61
				Webcams for office	6055 · Computer Hardware	193.93
					<b>Total Disbursements:</b>	<b>\$829.25</b>

TOTAL



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**PETER KAVOUNAS, P.E.**  
General Manager

## STAFF REPORT

**DATE:** July 15, 2021  
**TO:** Advisory Committee Members  
**SUBJECT:** Combining Schedule of Revenue, Expenses and Changes in Net Assets for the Period July 1, 2020 through May 31, 2021 - Financial Report B3 (May 31, 2021)  
(Consent Calendar Item I.B.3.)

### SUMMARY

Issue: Record of Revenue, Expenses and Changes in Net Assets for the Period July 1, 2020 through May 31, 2021.

Recommendation: Receive and file Combining Schedule of Revenue, Expenses and Changes in Net Assets for the Period July 1, 2020 through May 31, 2021 as presented.

Financial Impact: Funds disbursed were included in the FY 2020/21 "Amended" Watermaster Budget.

### Future Consideration

**Advisory Committee – July 15, 2021:** Receive and File

**Watermaster Board – July 22, 2021:** Receive and File (Normal Course of Business)

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### ACTIONS:

**Appropriative Pool – July 8, 2021:** Received and filed

**Non-Agricultural Pool – July 8, 2021:** Moved unanimously to receive and file, without approval

**Agricultural Pool – July 8, 2021:** Received and filed

**Advisory Committee – July 15, 2021:**

**Watermaster Board – July 22, 2021:**

*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*

## BACKGROUND

A Combining Schedule of Revenue, Expenses and Changes in Net Assets for the period July 1, 2020 through May 31, 2021 is provided to keep all members apprised of the FY 2020/21 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 21.0, 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, 2020 THROUGH MAY 31, 2021

Financial Report - B3

	WATERMASTER ADMINISTRATION	OPTIMUM BASIN MANAGEMENT	POOL ADMINISTRATION & SPECIAL PROJECTS			AP ESCROW ACCOUNT	GROUNDWATER REPLENISHMENT	LAIF VALUE ADJ.	GASB 75 BEG. NET POSITION	GRAND TOTALS	AMENDED BUDGET 2020-2021
			APPROPRIATIVE POOL	AG POOL	NON-AG POOL						
<b>Administrative Revenues:</b>											
Administrative Assessments			8,933,741		369,221					9,302,963	9,302,939
Interest Revenue			38,288	1,794	705					40,786	130,813
Mutual Agency Project Revenue	173,102									173,102	176,203
Miscellaneous Income	56									56	0
<b>Total Revenues</b>	<b>173,158</b>	<b>-</b>	<b>8,972,029</b>	<b>1,794</b>	<b>369,926</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9,516,907</b>	<b>9,609,955</b>
<b>Administrative &amp; Project Expenditures:</b>											
Watermaster Administration	1,669,451									1,669,451	1,637,557
Watermaster Board-Advisory Committee	210,552									210,552	237,438
Ag Pool Misc. Expense - Ag Fund <sup>1</sup>				8,450						8,450	400
Ag Pool Legal Services - Ag Fund <sup>2</sup>				203,169						203,169	-
Pool Administration			309,024	317,268	98,976					725,268	1,143,674
Optimum Basin Mgmt Administration		1,333,278								1,333,278	2,121,839
OBMP Project Costs		2,927,044								2,927,044	4,787,906
Debt Service		534,496								534,496	534,496
Basin Recharge Improvements		-								-	1,693,292
<b>Total Administrative/OBMP Expenses</b>	<b>1,880,003</b>	<b>4,794,818</b>	<b>309,024</b>	<b>317,268</b>	<b>98,976</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7,611,708</b>	<b>12,156,603</b>
<b>Net Administrative/OBMP Expenses</b>	<b>(1,706,845)</b>	<b>(4,794,818)</b>									
Allocate Net Admin Expenses To Pools	1,706,845		1,251,629	390,986	64,230						
Allocate Net OBMP Expenses To Pools		4,260,322	3,139,092	975,909	145,321						
Allocate Debt Service to App Pool		534,496	534,496								
Allocate Basin Recharge to App Pool		-	-								
Agricultural Expense Transfer*			1,684,163	(1,684,163)							
<b>Total Expenses</b>			<b>6,918,403</b>	<b>211,619</b>	<b>308,527</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7,611,708</b>	<b>12,156,603</b>
<b>Net Administrative Income</b>			<b>2,053,626</b>	<b>(209,825)</b>	<b>61,398</b>					<b>1,905,199</b>	<b>(2,546,648)</b>
<b>Other Income/(Expense)</b>											
Replenishment Water Assessments							1,495,550			1,495,550	0
Desalter Replenishment Obligation							-			-	0
Exhibit "G" Non-Ag Pool Water			-							-	0
RTS Charges from IEUA							(44,475)			(44,475)	0
Interest Revenue			-	-	-		-			-	0
MWD Water Purchases										-	0
Non-Ag Stored Water Purchases										-	0
Exhibit "G" Non-Ag Pool Water			-							-	0
Groundwater Replenishment							(1,466,888)			(1,466,888)	0
LAIF - Fair Market Value Adjustment								-		-	0
Gain on Sale of Assets			-		-			-		-	0
Other Post-Employment Benefits (OPEB)			-		-					-	0
Prior Year Adjustment - Ag Pool Expense			165,695	(165,695)						-	0
AP Special Assessment - Ag Pool Exp.			(165,695)	4,625		161,070				-	0
AP Escrow Account - Interest Earned						202				202	0
Refund-Basin O&M Expenses			(127,582)		(5,084)					(132,666)	0
Refund-Recharge Debt Service			(107,164)							(107,164)	0
Funding To/(From) Reserves										-	0
<b>Net Other Income/(Expense)</b>			<b>(234,746)</b>	<b>(161,070)</b>	<b>(5,084)</b>	<b>161,272</b>	<b>(15,812)</b>	<b>-</b>	<b>-</b>	<b>(255,440)</b>	<b>0</b>
<b>Net Transfers To/(From) Reserves</b>		<b>1,649,759</b>	<b>1,818,880</b>	<b>(370,895)</b>	<b>56,315</b>	<b>161,272</b>	<b>(15,812)</b>	<b>-</b>	<b>-</b>	<b>1,649,759</b>	<b>(2,546,648)</b>
		<b>0</b>									
<b>Net Assets, July 1, 2020</b>			<b>7,673,531</b>	<b>515,498</b>	<b>107,781</b>	<b>0</b>	<b>(3,460)</b>	<b>43,169</b>	<b>(443,445)</b>	<b>7,893,075</b>	
<b>Net Assets, End of Period</b>			<b>9,492,411</b>	<b>144,603</b>	<b>164,096</b>	<b>161,272</b>	<b>(19,272)</b>	<b>43,169</b>	<b>(443,445)</b>	<b>9,542,834</b>	<b>9,542,834</b>
<b>19/20 Assessable Production</b>			<b>69,918,990</b>	<b>21,841,407</b>	<b>3,588,067</b>					<b>95,348,464</b>	
<b>19/20 Production Percentages</b>			<b>73.330%</b>	<b>22.907%</b>	<b>3.763%</b>					<b>100.000%</b>	

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

Note <sup>1</sup> - Agricultural Pool 50% Mediation Services

N:\Administration\Meetings - Agendas & Minutes\2021\Staff Reports\07 - July\Advisory\20210715 - B3 Combining Schedule\_May 2021.xlsx\Ju Note <sup>2</sup> - Agricultural Pool Legal Services for Dec. 2020 through May 2021





# CHINO BASIN WATERMASTER

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PETER KAVOUNAS, P.E.  
General Manager

## STAFF REPORT

DATE: July 15, 2021

TO: Advisory Committee Members

SUBJECT: Treasurer's Report of Financial Affairs for the Period May 1, 2021 through May 31, 2021 - Financial Report B4 (May 31, 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 May 1, 2021 through May 31, 2021.

Recommendation: Receive and file Treasurer's Report of Financial Affairs for the Period May 1, 2021 through May 31, 2021 as presented.

Financial Impact: Funds disbursed were included in the FY 2020/21 "Amended" Watermaster Budget.

### Future Consideration

**Advisory Committee – July 15, 2021:** Receive and File

**Watermaster Board – July 22, 2021:** Receive and File (Normal Course of Business)

---

### ACTIONS:

**Appropriative Pool – July 8, 2021:** Received and filed

**Non-Agricultural Pool – July 8, 2021:** Moved unanimously to receive and file, without approval

**Agricultural Pool – July 8, 2021:** Received and filed

**Advisory Committee – July 15, 2021:**

**Watermaster Board – July 22, 2021:**

*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*

## BACKGROUND

A Treasurer's Report of Financial Affairs for the Period May 1, 2021 through May 31, 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 21.0, 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  
MAY 1, 2021 THROUGH MAY 31, 2021**

Financial Report - B4

**DEPOSITORIES:**

Cash on Hand - Petty Cash			\$	500
Bank of America				
Governmental Checking-Demand Deposits	\$	258,076		
Zero Balance Account - Payroll		-		258,076
Restricted Funds - AP Escrow				161,272
Trust Account - County of San Bernardino				845
Local Agency Investment Fund - Sacramento				11,012,270
<b>TOTAL CASH IN BANKS AND ON HAND</b>				<b>\$ 11,432,963</b>
TOTAL CASH IN BANKS AND ON HAND	5/31/2021			11,833,554
	4/30/2021			11,833,554
<b>PERIOD INCREASE (DECREASE)</b>				<b>\$ (400,591)</b>

**CHANGE IN CASH POSITION DUE TO:**

Decrease/(Increase) in Assets: Accounts Receivable			\$	(2,476)
Assessments Receivable				-
Prepaid Expenses, Deposits & Other Current Assets				-
(Decrease)/Increase in Liabilities: Accounts Payable				113,010
Accrued Payroll, Payroll Taxes & Other Current Liabilities				21,716
Long Term Liabilities				3,596
Transfer to/(from) Reserves				(536,437)
<b>PERIOD INCREASE (DECREASE)</b>				<b>\$ (400,591)</b>

**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 4/30/2021	\$ 500	\$ 63,693	\$ -	\$ 161,247	\$ 845	\$ 11,607,270	\$ 11,833,554
Deposits	-	605,014	-	26	-	-	605,040
Transfers	-	(137,299)	(83,107)	-	-	(595,000)	(815,406)
Withdrawals/Checks	-	(273,332)	83,107	-	-	-	(190,225)
<b>Balances as of 5/31/2021</b>	<b>\$ 500</b>	<b>\$ 258,076</b>	<b>\$ -</b>	<b>\$ 161,272</b>	<b>\$ 845</b>	<b>\$ 11,012,270</b>	<b>\$ 11,432,963</b>
<b>PERIOD INCREASE OR (DECREASE)</b>	<b>\$ -</b>	<b>\$ 194,383</b>	<b>\$ -</b>	<b>\$ 26</b>	<b>\$ -</b>	<b>\$ (595,000)</b>	<b>\$ (400,591)</b>

**CHINO BASIN WATERMASTER  
TREASURER'S REPORT OF FINANCIAL AFFAIRS FOR THE PERIOD  
MAY 1, 2021 THROUGH MAY 31, 2021**

Financial Report - B4

**INVESTMENT TRANSACTIONS**

Effective Date	Transaction	Depository	Activity	Redeemed	Days to Maturity	Interest Rate(*)	Maturity Yield
5/4/2021	Withdrawal		(595,000)				
<b>TOTAL INVESTMENT TRANSACTIONS</b>			<b>\$ (595,000)</b>	<b>\$0</b>			

\* The earnings rate for L.A.I.F. is a daily variable rate; 0.44% was the effective yield rate at the Quarter ended March 31, 2021.

**INVESTMENT STATUS  
May 31, 2021**

<u>Financial Institution</u>	Principal Amount	Number of Days	Interest Rate	Maturity Date
Local Agency Investment Fund	\$ 11,012,270			
<b>TOTAL INVESTMENTS</b>	<b>\$ 11,012,270</b>			

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: July 15, 2021

TO: Advisory Committee Members

SUBJECT: Budget vs. Actual Report for the Period July 1, 2020 through May 31, 2021 -  
Financial Report B5 (May 31, 2021) (Consent Calendar Item I.B.5.)

### SUMMARY

Issue: Record of revenues and expenses of Watermaster for the Period of July 1, 2020 through May 31, 2021.

Recommendation: Receive and file Budget vs. Actual Report for the Period July 1, 2020 through May 31, 2021 as presented.

Financial Impact: Funds disbursed were included in the FY 2020/21 "Amended" Watermaster Budget.

### Future Consideration

**Advisory Committee – July 15, 2021:** Receive and File

**Watermaster Board – July 22, 2021:** Receive and File (Normal Course of Business)

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### ACTIONS:

**Appropriative Pool – July 8, 2021:** Received and filed

**Non-Agricultural Pool – July 8, 2021:** Moved unanimously to receive and file, without approval

**Agricultural Pool – July 8, 2021:** Received and filed

**Advisory Committee – July 15, 2021:**

**Watermaster Board – July 22, 2021:**

*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*

## BACKGROUND

A Budget vs. Actual Report for the period July 1, 2020 through May 31, 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 21.0, 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 – MAY 2021

Year-To-Date (YTD) for the eleven months ending May 31, 2021, all but five categories were at or below the projected budget. The categories over budget were the following: (1) Watermaster Legal Services (6070s) over budget by \$367,664 or 198.6% as a result of increased activities in the areas of court coordination (results of the numerous court hearing); unbudgeted expenses for the Ely 3 Basin Investigation; and miscellaneous legal expenses during the last eleven months; (2) Advisory Committee Expenses (6200s) over budget by \$7,992 or 17.1% as a result of increased Watermaster staff time allocated to the Advisory Committee activities; (3) Appropriative Pool Administrative expenses (8300s) over budget by \$758 or 0.2% as a result of increased Watermaster staff time allocated to the Appropriative Pool activities; (4) Agricultural Meeting Attendance expenses (8470) over budget by \$14,975 or 73.6% as a result of increased meeting activity by the Agricultural Pool; and (5) Agricultural Pool Miscellaneous Expense - Ag Pool Fund expenses (8485) over budget by \$8,050 or 2,012.5%. The Agricultural Meeting Attendance expenses (8470) will be funded/adjusted by action of the Agricultural Pool. Please note that while account 8485 is presented as part of the overall Watermaster budget, the expenses booked into this account are directly charged to the Agricultural Pool's Special Fund, not charged against the Watermaster's general fund. Please see Financial Report B-3 for more information regarding the Ag Pool's Special Fund accounting.

For the majority of the expense categories within the Watermaster budget for FY 2020/21, the individual line-item budgets are divided into 12-monthly amounts and allocated accordingly. As the fiscal year progresses, the category listed above could level out over time and be within the budget levels.

There are no Budget Transfers or Budget Amendments being proposed for FY 2020/21 at the current time. It is anticipated that for next month, the Budget Transfers will be submitted to adjust the categories over budget at year-end June 30, 2021.

Overall, the Watermaster (YTD) Actual Expenses were \$3,981,227 or 34.3% below the (YTD) Budgeted Expenses of \$11,592,935.

### PREVIOUSLY REPORTED ACTIONS (Descending Order)

December 2020:

There were no Pool, Advisory or Board meetings scheduled for the month of December 2020.

August 2020:

As a result of action taken by the Agricultural Pool at their September 3, 2020 Special Pool Meeting, the FY 2020/21 "Approved" budget for account 8467 (Agricultural Pool Legal Services) was increased from \$300,000 to \$500,000. This action increased the "Amended" FY 2020/21 budget from \$9,007,955 to \$9,207,955.

Budget Amendment (Form A-20-09-01) in the amount of \$267,000 was unanimously approved by the Advisory Committee on September 17, 2020 and unanimously adopted by the Board on September 24, 2020. This action increased the overall "Amended" FY 2020/21 budget from \$9,207,955 to \$9,474,955. The three budget accounts increased were (1) the 2020 OBMP Update-Engineering expenses (6906.26) increased by an additional amount of \$182,000; (2) the 2020 OBMP Update-BHFS expenses (6907.45) increased by an additional amount of \$25,000; and (3) the 2020 OBMP Update-Dodson & Associates expenses (6908.1) increased by an additional amount of \$60,000.

#### July 2020:

During the month of July 2020, the "Carry Over" funding was calculated. The Total "Carry Over" funding amount of \$2,546,648.17 has been posted to the general ledger accounts. The total amount of \$2,546,648.17 consisted of \$1,693,292.20 from Capital Improvement Projects, \$430,584.49 from Engineering Services; \$375,271.48 from OBMP Activities, and \$47,500.00 from Administration Services. More detailed information is provided regarding this issue under the "Carry Over" Funding section.

The Amended Budget for FY 2020/21 is \$11,554,603.17 which includes \$2,546,648.17 for the prior years "Carry Over" funding. The Original Approved budget for FY 2020/21 of \$9,007,955 was adopted by the Watermaster Board on May 21, 2020 ( $\$9,007,955 + \$2,546,648.17 = \$11,554,603.17$ ).

## SALARIES EXPENSE

### CURRENT MONTH – MAY 2021

As of May 31, 2021, the total (YTD) Watermaster salary expenses were \$18,891 or 1.0% below the (YTD) budgeted amount of \$1,912,277. 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 2020/21 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 \$25,659 or 2.5%; Advisory Committee (account 6201) above budget by \$14,346 or 54.1%; Watermaster Board (account 6301) above budget by \$18,162 or 43.0%; Appropriative Pool (account 8301) above budget by \$28,385 or 72.5%; OBMP (account 6901) above budget by \$55,544 or 44.0%; Groundwater Level (account 7104.1) above budget by \$30,148 or 53.5%; Comprehensive Recharge (account 7201) above budget by \$39,551 or 85.4%; and PE 6&7 (account 7501) above budget by \$6,047 or 111.1%.

The table summarizes the Year-To-Date (YTD) Actual Watermaster salary costs compared to the Year-To-Date (YTD) Budget as of May 31, 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:

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	<u>Jul '20 - May '21</u> <u>Actual</u>	<u>Jul '20 - May '21</u> <u>Budget</u>	<u>\$ Over Budget</u>	<u>% of Budget</u>	<u>FY 2020/21</u> <u>Annual Budget</u>
<b>WM Salary Expense</b>					
6011 · WM Staff Salaries	1,057,903.74	1,032,245.00	25,658.74	102.49%	1,118,265.00
6011.1 · WM Staff Salaries - Overtime	6,829.38	11,000.00	-4,170.62	62.09%	12,000.00
6011.4 · 457(f) NQDC Plan	30,999.40	32,070.00	-1,070.60	96.66%	34,986.00
6017 · Temporary Services	0.00	19,250.00	-19,250.00	0.0%	21,000.00
6201 · Advisory Committee - WM Staff Salaries	40,840.71	26,495.00	14,345.71	154.15%	28,703.00
6301 · Watermaster Board - WM Staff Salaries	60,389.53	42,228.00	18,161.53	143.01%	45,747.00
8301 · Appropriative Pool - WM Staff Salaries	67,554.27	39,169.00	28,385.27	172.47%	42,433.00
8401 · Agricultural Pool - WM Staff Salaries	29,846.62	33,309.00	-3,462.38	89.61%	36,085.00
8501 · Non-Agricultural Pool - WM Staff Salaries	19,831.47	22,912.00	-3,080.53	86.56%	24,821.00
6901 · OBMP - WM Staff Salaries	181,877.48	126,333.00	55,544.48	143.97%	136,861.00
7101.1 · Production Monitor - WM Staff Salaries	43,912.98	81,335.00	-37,422.02	53.99%	88,113.00
7102.1 · In-line Meter - WM Staff Salaries	0.00	9,365.00	-9,365.00	0.0%	10,145.00
7103.1 · Grdwater Quality - WM Staff Salaries	34,973.91	55,263.00	-20,289.09	63.29%	59,868.00
7104.1 · Grdwater Level - WM Staff Salaries	86,486.03	56,338.00	30,148.03	153.51%	61,033.00
7107.1 · GrdLevel Monitoring - WM Staff Salaries	0.00	6,192.00	-6,192.00	0.0%	6,708.00
7108.1 · Hydraulic Control - WM Staff Salaries	1,918.68	3,902.00	-1,983.32	49.17%	4,227.00
7108.11 · Prado Basin - WM Staff Salaries	719.88	5,896.00	-5,176.12	12.21%	6,387.00
7201 · Comp Recharge - WM Staff Salaries	85,890.00	46,339.00	39,551.00	185.35%	50,200.00
7301 · PE3&5 - WM Staff Salaries	0.00	16,326.00	-16,326.00	0.0%	17,686.00
7401 · PE4 - WM Staff Salaries	336.07	9,983.00	-9,646.93	3.37%	10,815.00
7501 · PE6&7 - WM Staff Salaries	11,490.92	5,444.00	6,046.92	211.08%	5,898.00
7501.1 · PE 6&7 - WM Staff Salaries (Plume)	0.00	5,354.00	-5,354.00	0.0%	5,800.00
7601 · PE8&9 - WM Staff Salaries	20,024.88	21,736.00	-1,711.12	92.13%	23,547.00
<b>Subtotal WM Staff Costs</b>	<b>1,781,825.95</b>	<b>1,708,484.00</b>	<b>73,341.95</b>	<b>104.29%</b>	<b>1,851,328.00</b>
60185 · Vacation	33,258.92	79,647.00	-46,388.08	41.76%	86,888.00
60186 · Sick Leave	7,984.35	52,524.00	-44,539.65	15.2%	57,299.00
60187 · Holidays	70,316.67	71,622.00	-1,305.33	98.18%	71,622.00
<b>Subtotal WM Paid Leaves</b>	<b>111,559.94</b>	<b>203,793.00</b>	<b>-92,233.06</b>	<b>54.74%</b>	<b>215,809.00</b>
<b>Total WM Salary Costs</b>	<b>1,893,385.89</b>	<b>1,912,277.00</b>	<b>-18,891.11</b>	<b>99.01%</b>	<b>2,067,137.00</b>

PREVIOUSLY REPORTED ACTIONS (Descending Order)  
None

LEGAL SERVICES  
BROWNSTEIN HYATT FARBER SCHRECK EXPENSES

CURRENT MONTH – MAY 2021

As of May 31, 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 \$31,220 or 3.4% below the (YTD) budgeted amount of \$908,991.

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 2020/21. 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 \$963,853. Budget Amendment (Form A-20-09-01) which was approved in September 2020 increased the budget from \$963,853 to \$988,853, an increase of \$25,000.

WATERMASTER ADMINISTRATIVE LEGAL SERVICES:

Overall, the Watermaster Administrative Legal Services expense (6070s) as of May 31, 2021 was \$367,664 or 198.6% above the budgeted amount of \$185,135. The specific items within the Administrative Legal

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Services expenses (6070s) which were over budget were the Court Coordination expenses (6071) over budget by \$110,341 or 314.3%; Personnel Matters (6073) which were over budget by \$7,106 or 71.8%; Miscellaneous (6078) which were over budget by \$223,669 or 255.4%; and the Ely Basin Investigation (6078.25) which were over budget by \$78,217 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 Rules and Regulations (6072) under budget by \$9,923 or 100%; Interagency Issues (6074) under budget by \$32,670 or 100.0%; and Party Status Maintenance expenses (6077) under budget by \$9,075 or 91.2%.

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 May 31, 2021 was \$61,874 or 35.1% below the budgeted amount of \$176,288. 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.

The legal services budget was developed with the assumption of having eleven months of meetings, intentionally excluding the month of December 2020. For December 2020, no meetings were conducted during the month, as anticipated. During April 2021, there was no Advisory Committee meeting held.

OBMP LEGAL SERVICES:

The OBMP legal expenses (accounts 6907.31 through 6907.90) were below the budget for the month. As of May 31, 2021, the category of OBMP legal expenses were \$337,010 or 61.6% below the budgeted amount of \$547,568. The majority of expenses within this OBMP category were under budget (YTD), however, the OBMP Update expenses (6907.45) were over budget by \$65,714 or 52.9%; and the Upper SAR Integrated Model expenses (6907.46) were over budget by \$89 or 100.0%.

The table listed below summarizes the Brownstein Hyatt Farber Schreck (BHFS) expenses as of May 31, 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 '20 - May '21 Actual	Jul '20 - May '21 Budget	\$ Over Budget	% of Budget	FY 2020/21 Annual Budget
<b>6070 · Watermaster Legal Services</b>					
6071 · BHFS Legal - Court Coordination	145,448.54	35,108.00	110,340.54	414.29%	38,300.00
6072 · BHFS Legal - Rules & Regulations	0.00	9,923.00	-9,923.00	0.0%	10,825.00
6073 · BHFS Legal - Personnel Matters	17,005.50	9,900.00	7,105.50	171.77%	9,900.00
6074 · BHFS Legal - Interagency Issues	0.00	32,670.00	-32,670.00	0.0%	35,640.00
6076 · BHFS Legal - Storage Issues	0.00	0.00	0.00	0.0%	0.00
6077 · BHFS Legal - Party Status Maintenance	871.20	9,946.00	-9,074.80	8.76%	10,850.00
6078 · BHFS Legal - Miscellaneous (Note 1)	311,257.10	87,588.00	223,669.10	355.37%	95,550.00
6078.13 · BHFS - Assessment Packages-Updates	0.00	0.00	0.00	0.0%	0.00
6078.25 · BHFS - Ely # Basin Investigation	78,217.13	0.00	78,217.13	100.0%	0.00
<b>Total 6070 · Watermaster Legal Services</b>	<b>552,799.47</b>	<b>185,135.00</b>	<b>367,664.47</b>	<b>298.59%</b>	<b>201,065.00</b>
<b>6275 · BHFS Legal - Advisory Committee</b>	<b>13,897.80</b>	<b>19,800.00</b>	<b>-5,902.20</b>	<b>70.19%</b>	<b>21,780.00</b>
<b>6375 · BHFS Legal - Board Meeting</b>	<b>61,416.00</b>	<b>70,200.00</b>	<b>-8,784.00</b>	<b>87.49%</b>	<b>77,220.00</b>
<b>6375.1 · BHFS Legal - Board Workshop(s)</b>	<b>0.00</b>	<b>12,038.00</b>	<b>-12,038.00</b>	<b>0.0%</b>	<b>12,038.00</b>
<b>8375 · BHFS Legal - Appropriative Pool</b>	<b>13,300.65</b>	<b>24,750.00</b>	<b>-11,449.35</b>	<b>53.74%</b>	<b>27,225.00</b>
<b>8475 · BHFS Legal - Agricultural Pool</b>	<b>13,567.95</b>	<b>24,750.00</b>	<b>-11,182.05</b>	<b>54.82%</b>	<b>27,225.00</b>
<b>8575 · BHFS Legal - Non-Ag Pool</b>	<b>12,231.45</b>	<b>24,750.00</b>	<b>-12,518.55</b>	<b>49.42%</b>	<b>27,225.00</b>
<b>Total BHFS Legal Services</b>	<b>114,413.85</b>	<b>176,288.00</b>	<b>-61,874.15</b>	<b>64.9%</b>	<b>192,713.00</b>
<b>6907.3 · WM Legal Counsel</b>					
6907.31 · Archibald South Plume	0.00	12,031.00	-12,031.00	0.0%	13,125.00
6907.32 · Chino Airport Plume	0.00	12,031.00	-12,031.00	0.0%	13,125.00
6907.33 · Desalter/Hydraulic Control	0.00	41,456.00	-41,456.00	0.0%	45,225.00
6907.34 · Santa Ana River Water Rights	8,398.35	14,919.00	-6,520.65	56.29%	16,275.00
6907.36 · Santa Ana River Habitat	1,158.30	43,404.00	-42,245.70	2.67%	47,350.00
6907.38 · Reg. Water Quality Cntrl Board	0.00	39,738.00	-39,738.00	0.0%	43,350.00
6907.39 · Recharge Master Plan	2,873.85	29,838.00	-26,964.15	9.63%	32,550.00
6907.40 · Storage Agreements	0.00	70,308.00	-70,308.00	0.0%	76,700.00
6907.41 · Prado Basin Habitat Sustainability	5,321.70	14,896.00	-9,574.30	35.73%	16,250.00
6907.42 · Safe Yield Recalculation	0.00	0.00	0.00	0.0%	0.00
6907.44 · SGMA Compliance	89.10	9,946.00	-9,856.90	0.9%	10,850.00
6907.45 · OBMP Update	189,897.12	124,183.00	65,714.12	152.92%	133,200.00
6907.46 · Upper SAR Integrated Model	89.10	0.00	89.10	100.0%	0.00
6907.47 · 2020 Safe Yield Reset	2,730.60	79,383.00	-76,652.40	3.44%	86,600.00
6907.48 · Ely Basin Investigation	0.00	26,148.00	-26,148.00	0.0%	28,525.00
6907.90 · WM Legal Counsel - Unanticipated	0.00	29,287.00	-29,287.00	0.0%	31,950.00
<b>Total 6907 · WM Legal Counsel</b>	<b>210,558.12</b>	<b>547,568.00</b>	<b>-337,009.88</b>	<b>38.45%</b>	<b>595,075.00</b>
<b>Total Brownstein, Hyatt, Farber, Schreck Costs</b>	<b>877,771.44</b>	<b>908,991.00</b>	<b>-31,219.56</b>	<b>96.57%</b>	<b>988,853.00</b>

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)

September 2020:

Budget Amendment (Form A-20-09-01) in the amount of \$267,000 increased three budget accounts. One of those accounts was related to the FY 2020/21 BHFS budget. The 2020 OBMP Update-BHFS expenses

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(6907.45) was increased by an additional amount of \$25,000. This additional budget amount increased the "Amended" BHFS FY 2020/21 budget from \$963,853 to \$988,853.

## OBMP ENGINEERING SERVICES AND LEGAL COSTS

### CURRENT MONTH – MAY 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 eleven months ending May 31, 2021, the actual expenses of \$1,204,772 were below the budgeted amount of \$1,857,335 by \$652,563 or 35.1%. For a detailed discussion, the following is provided.

For May 31, 2021, the accounts 6901-6903 (Optimum Basin Mgmt. Program) section was above the Year-To-Date (YTD) budget by \$55,544 or 39.7%. 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 more time on specific OBMP related areas as budgeted. As a result, Watermaster staff allocated more actual time to the OBMP project as budgeted, which resulted in an over-budget variance of \$55,544 or 44.0%. The remaining expense was the Santa Ana Watershed Project Authority (SAWPA) FY 2020/21 Basin Monitoring Program Task Force Contribution which was budgeted at \$13,433 and actual expenses were \$13,433 as of May 31, 2021.

For May 31, 2021, the accounts 6906 (Optimum Basin Mgmt. Program Engineering Services) section was below the Year-To-Date (YTD) budget by \$340,659 or 31.4%. The majority of expenses within this OBMP category were under budget (YTD), however, the accounts over budget were the State of the Basin Report expenses (6906.21) which were over budget by \$9,816 or 6.6%; and the SGMA Reporting Requirements expenses (6906.23) which were over budget by \$1,176 or 9.2%.

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, some individual line item activities were above the budget by \$65,803 while some other line item activities were below the budget by \$402,813. Above the budget line item were the OBMP Update expenses of \$65,714; and the Upper SAR Integrated Model expenses of \$89. The individual legal projects/activities that were below budget for the Year-To-Date (YTD) period were the Archibald South Plume of \$12,031; the Chino Airport Plume of \$12,031; the Desalter/Hydraulic Control of \$41,456; Santa Ana River Habitat of \$6,521; the Santa Ana River Habitat of \$42,246; the Regional Water Quality Control Board of \$39,738; the Recharge Master Plan expenses of \$26,964; Storage Agreements of \$70,308; the Prado Basin Habitat Sustainability of \$9,574; SGMA Compliance of \$9,857; the 2020 Safe Yield Reset of \$76,652; the Ely Basin Investigation expenses of \$26,148; and the WM Unanticipated legal expenses of \$29,287. For the eleven months ended May 31, 2021, the overall cumulative (YTD) budget was \$547,568 and the actual (BHFS) legal expenses totaled \$210,558 which resulted in an under-budget variance of \$337,010 or 61.5%.

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 original funding for FY 2019/20 was approved at \$225,500 and had a balance remaining in the fund of \$18,221.48 at year-end June 30, 2020. The amount of \$18,221.48 was "Carried-Over" into the FY 2020/21 budget. As mentioned in prior reports, Budget Amendment (Form A-20-09-01) increased this budget category from \$18,221.48 to \$78,221.48, an increase of \$60,000. The new "Amended" budget of \$78,221.48 has a remaining balance as of May 31, 2021 of \$25,426 or 32.5%.

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

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expenses. As of May 31, 2021, this category of expenses was \$5,013 or 63.0% below the budgeted amount of \$7,958.

Overall, the Optimum Basin Management Program (OBMP) category was \$1,204,772 actual (YTD) compared to a budget (YTD) of \$1,857,335 for an under budget of \$652,563 or 35.1% as of May 31, 2021.

The table listed below summarizes the Optimum Basin Management Program (OBMP) expenses as of May 31, 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 '20 - May '21 Actual	Jul '20 - May '21 Budget	\$ Over Budget	% of Budget	FY 2020/21 Annual Budget
<b>6900 · Optimum Basin Mgmt Plan</b>					
6901 · WM Staff Salaries	181,877.48	126,333.00	55,544.48	143.97%	136,861.00
6903 · OBMP SAWPA Group	13,433.00	13,433.00	0.00	100.0%	13,433.00
<b>Total 6901-6903 · OBMP WM Staff/SAWPA</b>	<b>195,310.48</b>	<b>139,766.00</b>	<b>55,544.48</b>	<b>139.74%</b>	<b>150,294.00</b>
<b>6906 · OBMP Engineering Services</b>					
6906.1 · OBMP - Watermaster Model Update	41,821.70	61,304.00	-19,482.30	68.22%	66,877.00
6906.15 · Integrated Model Mtgs. - IEUA Costs	6,273.10	19,433.00	-13,159.90	32.28%	21,200.00
6906.21 · State of the Basin Report	159,217.30	149,401.00	9,816.30	106.57%	162,983.00
6906.22 · Water Rights Compliance Reporting	14,482.15	22,506.00	-8,023.85	64.35%	24,552.00
6906.23 · SGMA Reporting Requirements	13,982.00	12,806.00	1,176.00	109.18%	13,970.00
6906.24 · Compliance - SB88 and SWRCB	7,083.25	11,128.00	-4,044.75	63.65%	12,140.00
6906.26 · 2019 OBMP Update	235,913.28	273,239.00	-37,325.72	86.34%	277,330.00
6906.31 · OBMP - Pool, Advisory, Board Mtgs.	80,983.35	97,038.00	-16,054.65	83.46%	105,860.00
6906.32 · OBMP - Other General Meetings	68,407.95	69,503.00	-1,095.05	98.42%	75,821.00
6906.71 · OBMP - Data Requests - CBWM Staff	43,807.70	121,172.00	-77,364.30	36.15%	132,188.00
6906.72 · OBMP - Data Requests - Non CBWM	8,852.95	45,041.00	-36,188.05	19.66%	49,136.00
6906.73 · OBMP - Safe Yield Recalculation	16,614.56	59,840.00	-43,225.44	27.77%	65,280.00
6906.74 · OBMP - Mat'l Phy. Injury Requests	5,977.45	70,091.00	-64,113.55	8.53%	76,463.00
6906.81 · Prepare Annual Reports	11,377.05	13,105.00	-1,727.95	86.82%	14,296.00
6906 · OBMP Engineering Services - Other	28,369.00	58,215.00	-29,846.00	48.73%	61,396.00
<b>Total 6906 · OBMP Engineering Services</b>	<b>743,162.79</b>	<b>1,083,822.00</b>	<b>-340,659.21</b>	<b>68.57%</b>	<b>1,159,492.00</b>
<b>6907 · OBMP Legal Fees</b>					
6907.3 · WM Legal Counsel					
6907.31 · Archibald South Plume	0.00	12,031.00	-12,031.00	0.0%	13,125.00
6907.32 · Chino Airport Plume	0.00	12,031.00	-12,031.00	0.0%	13,125.00
6907.33 · Desalter/Hydraulic Control	0.00	41,456.00	-41,456.00	0.0%	45,225.00
6907.34 · Santa Ana River Water Rights	8,398.35	14,919.00	-6,520.65	56.29%	16,275.00
6907.36 · Santa Ana River Habitat	1,158.30	43,404.00	-42,245.70	2.67%	47,350.00
6907.38 · Reg. Water Quality Cntrl Board	0.00	39,738.00	-39,738.00	0.0%	43,350.00
6907.39 · Recharge Master Plan	2,873.85	29,838.00	-26,964.15	9.63%	32,550.00
6907.40 · Storage Agreements	0.00	70,308.00	-70,308.00	0.0%	76,700.00
6907.41 · Prado Basin Habitat Sustainability	5,321.70	14,896.00	-9,574.30	35.73%	16,250.00
6907.44 · SGMA Compliance	89.10	9,946.00	-9,856.90	0.9%	10,850.00
6907.45 · OBMP Update	189,897.12	124,183.00	65,714.12	152.92%	133,200.00
6907.46 · Upper SAR Integrated Model	89.10	0.00	89.10	100.0%	0.00
6907.47 · 2020 Safe Yield Reset	2,730.60	79,383.00	-76,652.40	3.44%	86,600.00
6907.48 · Ely Basin Investigation	0.00	26,148.00	-26,148.00	0.0%	28,525.00
6907.90 · WM Legal Counsel - Unanticipated	0.00	29,287.00	-29,287.00	0.0%	31,950.00
<b>Total 6907 · WM Legal Counsel</b>	<b>210,558.12</b>	<b>547,568.00</b>	<b>-337,009.88</b>	<b>38.45%</b>	<b>595,075.00</b>
<b>Total 6907 · OBMP Legal Fees</b>	<b>210,558.12</b>	<b>547,568.00</b>	<b>-337,009.88</b>	<b>38.45%</b>	<b>595,075.00</b>
<b>6908 · OBMP Updates</b>					
6908.1 · 2020 OBMP Update-Dodson & Assoc.	52,795.67	78,221.48	-25,425.81	67.5%	78,221.48
<b>Total 6908 · OBMP Updates</b>	<b>52,795.67</b>	<b>78,221.48</b>	<b>-25,425.81</b>	<b>67.5%</b>	<b>78,221.48</b>
<b>6909 · OBMP Other Expenses</b>					
6909.1 · OBMP Meetings	221.37	1,375.00	-1,153.63	16.1%	1,500.00
6909.3 · Other OBMP Expenses	2,724.00	2,000.00	724.00	136.2%	2,000.00
6909.6 · OBMP Expenses - Miscellaneous	0.00	4,583.00	-4,583.00	0.0%	5,000.00
6909 · OBMP Other Expenses - Other	0.00	0.00	0.00	0.0%	0.00
<b>Total 6909 · OBMP Other Expenses</b>	<b>2,945.37</b>	<b>7,958.00</b>	<b>-5,012.63</b>	<b>37.01%</b>	<b>8,500.00</b>
<b>Total 6900 · Optimum Basin Mgmt Plan</b>	<b>1,204,772.43</b>	<b>1,857,335.48</b>	<b>-652,563.05</b>	<b>64.87%</b>	<b>1,991,582.48</b>

PREVIOUSLY REPORTED ACTIONS (Descending Order)

October 2020:

During September, Budget Amendment (Form A-20-09-01) in the amount of \$267,000 increased three budget accounts which are all reflected within the OBMP category. These accounts were (1) the 2020

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OBMP Update-Engineering expenses (6906.26) increased by an additional amount of \$182,000; (2) the 2020 OBMP Update-BHFS expenses (6907.45) increased by an additional amount of \$25,000; and (3) the 2020 OBMP Update-Dodson & Associates expenses (6908.1) increased by an additional amount of \$60,000. The OBMP "Amended" budget category for FY 2020/21 increased from \$1,724,582.46 to \$1,991,582.46, an increase of \$267,000.

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

CURRENT MONTH – MAY 2021

As of May 31, 2021, the total (YTD) Engineering Services expenses were \$1,238,354 or 40.3% below the (YTD) budget amount of \$3,072,864. The OBMP Implementation Projects (consolidated accounts 7100s – 7700s) were all under budget of as of May 31, 2021, except for the Groundwater Level-Contracted Services expenses (7104.8) which were under budget by \$299 or 3.3%; and PE4-Engineering expenses (7402) which were over budget by \$3,117 or 2.6%.

The Approved Engineering Services Budget was \$2,737,082. As of July 2021, the Engineering Services budget was Amended with the addition of Carry-Over funding totaling \$331,154 which brought the Amended Budget amount to \$3,068,236 (\$2,737,082 + \$331,154 = \$3,068,236). Approved in September 2020, Budget Amendment (Form A-20-09-01) increased three budget accounts, which one of those accounts was reflected within the Engineering Services category. The account within the Engineering Services category was the 2020 OBMP Update-Engineering expenses (6906.26) increased by an additional amount of \$182,000. The Engineering Services "Amended" budget category for FY 2020/21 increased from \$3,068,236 to \$3,250,236, an increase of \$182,000.

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.

According to the latest ECAC dated March 31, 2021, an under budget amount of \$720,630 is projected as of June 30, 2021. It is anticipated that of the total ending balance of \$720,630, approximately \$339,490 of the ending balance could be "Carried-Over" from FY 2020/21 into FY 2021/22 because several projects/activities will not be fully completed before June 30, 2021. The "net" under budget variance projected at fiscal year-end June 30, 2021 could be \$381,140 (\$720,630 - \$339,490 = \$381,140). Those projects/activities "Carried-Over" are projected to be the Support for 2020 OBMP Update (account 6906.26) of \$24,212; The Agriculture Production and Estimation (account 7110.3) of \$23,220; the Comp Recharge - Engineering Services (account 7202.2) of \$113,382; the Northwest MZ-1 (account 7402.1) of \$92,321; the IEUA-Update Recycled Water Permit-Salinity (account 7510) of \$43,135; and the Implementation of the 2020 Storage Management Plan (account 7610) of \$43,220 (\$24,212 + \$23,220 + \$113,382 + \$92,321 + \$43,135 + \$43,220 = \$339,490).

Watermaster does not plan to present any Budget Transfers or Budget Amendments for Engineering Services at this time. Next month, when the June 30, 2021 financials are closed, a Budget Transfer may be presented for approval.

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 May 31, 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:

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	Jul '20 - May '21	Jul '20 - May '21			FY 2020/21
	Actual	Budget	\$ Over Budget	% of Budget	Annual Budget
6906 · OBMP Engineering Services - Other	28,369.00	58,215.00	-29,846.00	48.73%	61,396.00
6906.1 · OBMP - Watermaster Model Update	41,821.70	61,304.00	-19,482.30	68.22%	66,877.00
6906.15 · Integrated Model Mtgs-IEUA Cost	6,273.10	19,433.00	-13,159.90	32.28%	21,200.00
6906.17 · Planning Study Analysis	0.00	0.00	0.00	0.0%	0.00
6906.18 · Prado Dam FS/EIS/EIR-50% IEUA	0.00	0.00	0.00	0.0%	0.00
6906.21 · State of the Basin Report	159,217.30	149,401.00	9,816.30	106.57%	162,983.00
6906.22 · Water Rights Compliance Reporting	14,482.15	22,506.00	-8,023.85	64.35%	24,552.00
6906.23 · SGMA Reporting Requirements	13,982.00	12,806.00	1,176.00	109.18%	13,970.00
6906.24 · Compliance - SB88 and SWRCB	7,083.25	11,128.00	-4,044.75	63.65%	12,140.00
6906.26 · 2019 OBMP Update	235,913.28	273,239.00	-37,325.72	86.34%	277,330.00
6906.27 · HCP Meetings/Technical Review-IEUA Cos	0.00	0.00	0.00	0.0%	0.00
6906.28 · Agriculture Prod. & Estimation	0.00	0.00	0.00	0.0%	0.00
6906.31 · OBMP - Pool, Advisory, Board Mtgs.	80,983.35	97,038.00	-16,054.65	83.46%	105,860.00
6906.32 · OBMP - Other General Meetings	68,407.95	69,503.00	-1,095.05	98.42%	75,821.00
6906.71 · OBMP - Data Requests - CBWM Staff	43,807.70	121,172.00	-77,364.30	36.15%	132,188.00
6906.72 · OBMP - Data Requests - Non CBWM	8,852.95	45,041.00	-36,188.05	19.66%	49,136.00
6906.73 · OBMP - Safe Yield Recalculation	16,614.56	59,840.00	-43,225.44	27.77%	65,280.00
6906.74 · OBMP - Mat'l Physical Injury Requests	5,977.45	70,091.00	-64,113.55	8.53%	76,463.00
6906.76 · County Extraction Well-Modeling	0.00	0.00	0.00	0.0%	0.00
6906.81 · Prepare Annual Reports	11,377.05	13,105.00	-1,727.95	86.82%	14,296.00
7103.3 · Grdwtr Qual-Engineering	118,534.95	173,285.00	-54,750.05	68.41%	189,038.00
7103.5 · Grdwtr Qual-Lab Svcs	38,334.00	51,564.00	-13,230.00	74.34%	56,252.00
7104.3 · Grdwtr Level-Engineering	139,030.18	183,353.00	-44,322.82	75.83%	200,022.00
7104.8 · Grdwtr Level-Contracted Services	9,466.20	9,167.00	299.20	103.26%	10,000.00
7104.9 · Grdwtr Level-Capital Equipment	542.96	7,333.00	-6,790.04	7.4%	8,000.00
7107.2 · Grd Level-Engineering	73,665.25	104,906.00	-31,240.75	70.22%	111,952.00
7107.3 · Grd Level-SAR Imagery	73,000.00	159,752.00	-86,752.00	45.7%	159,752.00
7107.6 · Grd Level-Contract Svcs	53,181.73	86,377.00	-33,195.27	61.57%	90,142.00
7107.8 · Grd Level-Capital Equipment	0.00	11,156.00	-11,156.00	0.0%	12,170.00
7108.31 · Hydraulic Control-PBHSP	47,932.07	63,595.00	-15,662.93	75.37%	69,376.00
7108.4 · Hydraulic Control-Lab Svcs	0.00	0.00	0.00	0.0%	0.00
7108.41 · Hydraulic Control-PBHSP	10,556.00	11,000.00	-444.00	95.96%	12,000.00
7108.6 · Hydraulic Control-Outside Professionals	3,525.00	4,583.00	-1,058.00	76.92%	5,000.00
7109.3 · Recharge & Well - Engineering	13,126.75	29,803.00	-16,676.25	0.0%	32,512.00
7110.3 · Ag Production & Estimation - Eng. Serv.	1,899.25	21,138.00	-19,238.75	0.0%	23,060.00
7111.3 · Data Collection & Mgmt. - Eng. Services	6,101.10	18,055.00	-11,953.90	0.0%	19,696.00
7202.2 · Comp Recharge-Engineering Services	56,671.06	270,013.00	-213,341.94	20.99%	294,560.00
7210 · OBMP - 2023 RMPU	6,472.05	41,261.00	-34,788.95	15.69%	45,012.00
7303 · PE3&5-Engineering - Other	4,956.40	19,972.00	-15,015.60	24.82%	21,788.00
7402 · PE4-Engineering	123,125.50	120,009.00	3,116.50	102.6%	130,524.00
7402.10 · PE4-MZ1 Pomona Project	190,447.22	325,616.91	-135,169.69	58.49%	302,992.00
7502 · PE6&7-Engineering	74,351.75	100,265.00	-25,913.25	74.16%	109,380.00
7510 · PE6&7-IEUA Salinity Mgmt. Plan	42,613.72	113,543.00	-70,929.28	37.53%	118,467.00
7511 · PE6&7-SAWBMP Task Force-50% IEUA	3,813.50	23,677.00	-19,863.50	16.11%	25,829.00
7512 · PE6&7-Recomputation WQ-50% IEUA	0.00	0.00	0.00	0.0%	0.00
7602 · PE8&9-Engineering	0.00	0.00	0.00	0.0%	0.00
7610 · PE8&9-Support 2020 Mgmt. Plan	0.00	39,618.00	-39,618.00	0.0%	43,220.00
<b>Total Engineering Services Costs</b>	<b>1,834,509.43</b>	<b>3,072,863.91</b>	<b>-1,238,354.48</b>	<b>59.7%</b>	<b>3,250,236.00</b> *

\* West Yost and Subcontractor Engineering Budget of \$2,919,082 plus Carryover Funds from FY 2019/20 of \$331,154.00  
 Carryover Funds from FY 2019/20 of \$331,154.00 = \$23,220 (6906); \$46,236 (6906.26); \$27,400 (7107.2); \$74,752 (7107.3); \$44,962 (7107.6);  
 \$4,342 (7402); \$50,852 (7402.10); and \$59,390 (7510)

PREVIOUSLY REPORTED ACTIONS (Descending Order)

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March 2021

The third quarter (ECAC) report for the current fiscal year has been provided for the period ending March 31, 2021 and shows a projected under budget at fiscal year-end June 30, 2021 of \$720,630. It is anticipated that of the total ending balance of \$720,630, approximately \$339,490 of the ending balance could be "Carried-Over" from FY 2020/21 into FY 2021/22 because several projects/activities will not be fully completed before June 30, 2021. The "net" under budget variance projected at fiscal year- end June 30, 2021 could be \$381,140 (\$720,630 - \$339,490 = \$381,140). Those projects/activities "Carried-Over" are projected to be the Support for 2020 OBMP Update (account 6906.26) of \$24,212; The Agriculture Production and Estimation (account 7110.3) of \$23,220; the Comp Recharge - Engineering Services (account 7202.2) of \$113,382; the Northwest MZ-1 (account 7402.1) of \$92,321; the IEUA-Update Recycled Water Permit-Salinity (account 7510) of \$43,135; and the Implementation of the 2020 Storage Management Plan (account 7610) of \$43,220 (\$24,212 + \$23,220 + \$113,382 + \$92,321 + \$43,135 + \$43,220 = \$339,490).

The third quarter (ECAC) summary report (for the months July 1, 2020 - March 31, 2021) is listed below:

Attachment 1a  
Chino Basin Watermaster: Invoice Projections for Engineering Tasks for Fiscal Year 2020/21  
As of March 31, 2021

Acct #	Description	Original Budget	Revised Budget	Billed Jul-20	Billed Aug-20	Billed Sep-20	Billed Oct-20	Billed Nov-20	Billed Dec-20	Billed Jan-21	Billed Feb-21
6906	OBMP Engineering	\$ 609,480	\$ 609,480	\$ 18,816	\$ 32,995	\$ 14,975	\$ 22,273	\$ 21,383	\$ 10,068	\$ 26,117	\$ 31,761
6906.26	Support 2020 OBMP Update	49,094	277,330	4,586	11,501	10,643	59,159	37,894	67,432	30,889	9,350
6906.73	Support 2020 Safe Yield Implementation	65,280	65,280	2,000	3,752	-	-	-	-	-	4,077
6906.21	State of the Basin Report	162,983	162,983	-	-	-	-	3,849	7,785	12,772	25,333
6906.15	Integrated Model Meetings and Technical Review	21,200	21,200	678	1,084	271	949	-	2,505	3,430	937
7103.3	GW and SW Quality - Engineering Services	200,130	200,130	7,826	12,560	8,818	19,082	7,349	12,171	24,429	5,603
7103.5	GW and SW Quality - Laboratory Services	57,160	57,160	3,216	17,484	6,224	8,174	3,698	3,082	2,032	-
7104.3	GW Level - Engineering Services	200,022	200,022	9,442	9,603	8,823	20,842	8,762	21,163	8,945	10,730
7104.8	GW Level - Contract Services	10,000	10,000	-	-	-	-	-	-	-	-
7104.9	GW Level - Capital Services	8,000	8,000	-	-	-	-	-	-	-	6,080
7107.2	Ground Level - Engineering Services	84,552	111,953	3,301	1,734	4,108	3,239	8,130	7,624	13,029	9,221
7107.3	Ground Level - SAR Imagery	85,000	159,752	73,000	-	-	-	-	-	-	-
7107.6	Ground Level - Contract Services	45,180	90,142	4,493	722	-	90	-	-	-	1,833
7107.80	Ground Level - Capital Equipment	12,170	12,170	-	-	409	115	51	127	153	660
7108.31	IEUA - Prado Basin Habitat Monitoring	69,376	69,376	542	-	-	1,171	2,699	4,653	14,748	10,239
7108.6	IEUA - PBHSP - Outside Pro	5,000	5,000	-	-	-	7,050	-	-	-	-
7109.3	Recharge & Well Monitoring - Engineering Serv.	32,512	32,512	-	1,627	-	-	2,521	-	-	4,776
7110.3	Agriculture Production and Estimation	23,060	46,280	-	-	-	-	-	-	-	-
7111.3	Support for Improved Data Collection Process	19,696	19,696	-	-	-	1,482	1,159	164	1,169	1,000
7202.2	Comp Recharge - Engineering Services	294,560	294,560	853	1,488	1,204	1,198	2,347	9,615	7,491	4,805
7206.1	GRCC & IEUA - SB88 Specification	-	-	2,836	8,991	2,226	3,590	3,944	8,405	8,490	2,980
7210	2023 RMPU Recharge Master Plan Scoping	45,012	45,012	-	-	-	-	-	714	2,047	1,316
7303	OBMP - Engineering Services - Desalters	21,788	21,788	429	-	-	-	-	-	-	-
7402	OBMP - Engineering Services - MZ1	126,182	130,524	17,829	27,498	27,823	6,096	170	1,777	3,467	13,054
7402.1	OBMP - Engineering Services - Northwest MZ1	252,140	302,992	26,612	8,234	29,322	12,806	7,560	53,760	13,240	4,949
7502	OBMP - Engineering Services - WQC	109,380	109,380	-	5,657	25,701	3,534	-	-	-	7,694
7510	IEUA - Update Recycled Water Permit - Salinity	59,076	118,466	10,788	8,962	15,696	17,166	11,603	8,882	16,579	6,087
7511	Support Santa Ana Watershed Task Force Efforts	25,829	25,829	53	579	605	342	-	592	658	329
7610	Implementation of the 2020 Storage Mgmt Plan	43,220	43,220	-	-	-	-	-	-	-	-
<b>Totals</b>		<b>\$ 2,737,082</b>	<b>\$ 3,250,236</b>	<b>\$ 187,298</b>	<b>\$ 154,469</b>	<b>\$ 156,850</b>	<b>\$ 188,356</b>	<b>\$ 123,117</b>	<b>\$ 220,516</b>	<b>\$ 189,683</b>	<b>\$ 162,812</b>

5/5/2021  
2020-21 CBWM\_Invoice\_Summary\_ISBM\_20210505\_3rd Qtr ECAC\_Final.xlsx--Projection Summary

WEST YOST

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



Attachment 1a  
Chino Basin Watermaster: Invoice Projections for Engineering Tasks for Fiscal Year 2020/21  
As of March 31, 2021

Acct #	Description	Billed Mar-21	Projected Apr-21	Projected May-21	Projected Jun-21	Total Projected	Less IEUA and GRCC		Portion of Cost Share		Projected CBWM Carryover to FY 21/22
							Total Projected	Under / (Over) Rev. Budget	YTD % Billed Rev. Budget	Projected % Rev. Budget	
6906	OBMP Engineering	\$ 56,242	\$ 67,772	\$ 65,812	\$ 61,672	\$ 429,886	\$ 429,886	\$ 179,594	38%	71%	\$ -
6906.26	Support 2020 OBMP Update	1,664	5,000	7,500	7,500	253,118	253,118	24,212	84%	91%	24,212
6906.73	Support 2020 Safe Yield Implementation	5,087	5,087	5,087	5,087	30,177	30,177	35,103	23%	46%	-
6906.21	State of the Basin Report	42,804	28,373	30,000	17,872	168,788	168,788	(5,805)	57%	104%	-
6906.15	Integrated Model Meetings and Technical Review	1,124	3,670	3,670	3,670	21,986	10,993	10,207	52%	52%	-
7103.3	GW and SW Quality - Engineering Services	7,108	14,900	26,926	30,400	177,169	177,169	22,961	52%	89%	-
7103.5	GW and SW Quality - Laboratory Services	1,898	2,032	-	-	47,840	47,840	9,320	80%	84%	-
7104.3	GW Level - Engineering Services	9,685	14,184	22,084	26,690	170,953	170,953	29,069	54%	85%	-
7104.8	GW Level - Contract Services	-	5,000	8,000	-	13,000	13,000	(3,000)	0%	130%	-
7104.9	GW Level - Capital Services	-	-	-	16,000	22,080	22,080	(14,080)	76%	276%	-
7107.2	Ground Level - Engineering Services	6,286	7,300	8,823	32,987	105,782	105,782	6,171	51%	94%	-
7107.3	Ground Level - SAR Imagery	-	-	39,000	47,752	159,752	159,752	-	46%	100%	-
7107.6	Ground Level - Contract Services	-	5,021	2,000	47,983	62,142	62,142	28,000	8%	69%	-
7107.80	Ground Level - Capital Equipment	294	625	172	1,000	3,606	3,606	8,564	15%	30%	-
7108.31	IEUA - Prado Basin Habitat Monitoring	10,261	52,960	16,960	6,950	121,182	60,591	8,785	64%	87%	-
7108.6	IEUA - PBHSP - Outside Pro	-	-	-	-	7,050	3,525	1,475	141%	71%	-
7109.3	Recharge & Well Monitoring - Engineering Serv.	-	4,000	3,400	2,500	18,824	18,824	13,688	27%	58%	-
7110.3	Agriculture Production and Estimation	-	-	11,530	11,530	23,060	23,060	23,220	0%	50%	23,220
7111.3	Support for Improved Data Collection Process	498	250	3,500	4,500	13,721	13,721	5,975	28%	70%	-
7202.2	Comp Recharge - Engineering Services	7,499	34,827	35,591	47,239	154,155	154,155	140,405	12%	52%	113,382
7206.1	GRCC & IEUA - SB88 Specification	3,530	15,000	15,000	36,595	111,587	-	-	n/a	n/a	-
7210	2023 RMPU Recharge Master Plan Scoping	1,481	15,000	15,000	9,453	45,012	45,012	-	12%	100%	-
7303	OBMP - Engineering Services - Desalters	-	4,000	5,000	10,000	19,429	19,429	2,359	2%	89%	-
7402	OBMP - Engineering Services - MZ1	14,493	10,330	3,000	5,000	130,534	130,534	(10)	86%	100%	-
7402.1	OBMP - Engineering Services - Northwest MZ1	3,308	19,479	29,000	16,394	224,664	224,664	78,328	53%	74%	92,321
7502	OBMP - Engineering Services - WQC	26,810	13,866	-	7,132	90,394	90,394	18,987	63%	83%	-
7510	IEUA - Update Recycled Water Permit - Salinity	3,274	33,673	33,673	33,673	200,057	75,331	43,135	84%	64%	43,135
7511	Support Santa Ana Waterised Task Force Efforts	132	3,932	3,932	3,932	15,082	15,082	10,747	13%	58%	-
7610	Implementation of the 2020 Storage Mgmt Plan	-	-	-	-	-	-	43,220	0%	0%	43,220
<b>Totals</b>		<b>\$ 203,476</b>	<b>\$ 368,281</b>	<b>\$ 394,660</b>	<b>\$ 493,510</b>	<b>\$ 2,841,029</b>	<b>\$ 2,529,606</b>	<b>\$ 720,630</b>	<b>49%</b>	<b>78%</b>	<b>\$ 339,490</b>

Note: Billed includes MWH Laboratory invoices paid directly by Watermaster.

5/6/2021  
2020-21 CBWM\_Invoice\_Summary\_ISBM\_20210505\_3rd Qtr ECAC\_Final.xlsx--Projection Summary

WEST YOST

The Fiscal Year 2020/21 Progress and Estimated Cost at Completion for the Period July 1, 2020 through March 31, 2021 narrative report (in detail) from West Yost Associates is provided. Please access this link:

<https://cbwm.syncedtool.com/shares/file/B8147ds0bFC/?modal=1>

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

December 2020

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 second quarter (ECAC) report for the current fiscal year has been provided for the period ending December 31, 2020 and shows a projected under budget at fiscal year-end June 30, 2021 of \$405,085. It is anticipated that of the total ending balance of \$405,085, approximately \$137,051 of the ending balance will be "Carried-Over" from FY 2020/21 into FY 2021/22 because several projects/activities will not be fully completed before June 30, 2021. The "net" under budget variance projected at fiscal year-end June 30, 2021 would be \$268,034 (\$405,085 - \$137,051 = \$268,034). Those projects/activities "Carried-Over" are the Support for 2020 OBMP Update (account 6906.26) of \$20,115; the Northwest MZ-1 (account 7402.1) of \$61,747; the IEUA-Update Recycled Water Permit-Salinity (account 7510) of \$11,969; and the Implementation of the 2020 Storage Management Plan (account 7610) of \$43,220 (\$20,115 + \$61,747 + \$11,969 + \$43,220 = \$137,051).

The second quarter (ECAC) summary report (for the months July 2020 – December 31) is listed below:

*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*

**Attachment 1a**  
**Chino Basin Watermaster: Invoice Projections for Engineering Tasks for Fiscal Year 2020/21**  
**As of December 31, 2020**

Acct #	Description	Original Budget	Revised Budget	Billed Jul-20	Billed Aug-20	Billed Sep-20	Billed Oct-20	Billed Nov-20	Billed Dec-20	Projected Jan-21	Projected Feb-21
6906	OBMP Engineering	\$ 609,480	\$ 609,480	\$ 18,816	\$ 32,995	\$ 14,975	\$ 22,273	\$ 21,383	\$ 10,068	\$ 45,467	\$ 65,447
6906.26	Support 2020 OBMP Update	49,094	277,330	4,586	11,501	10,643	59,159	37,894	67,432	31,000	10,500
6906.73	Support 2020 Safe Yield Implementation	65,280	65,280	2,000	3,752	-	-	-	-	-	5,000
6906.21	State of the Basin Report	162,983	162,983	-	-	-	-	3,849	7,785	20,373	29,373
6906.15	Integrated Model Meetings and Technical Review	21,200	21,200	678	1,084	271	949	-	2,505	4,000	2,500
7103.3	GW and SW Quality - Engineering Services	200,130	200,130	7,826	12,560	8,818	19,082	7,349	12,171	18,800	11,376
7103.5	GW and SW Quality - Laboratory Services	57,160	57,160	3,216	17,484	6,224	8,174	3,698	3,082	1,960	-
7104.3	GW Level - Engineering Services	200,022	200,022	9,442	9,603	8,823	20,842	8,762	21,163	13,492	19,426
7104.8	GW Level - Contract Services	10,000	10,000	-	-	-	-	-	-	-	12,000
7104.9	GW Level - Capital Services	8,000	8,000	-	-	-	-	-	-	-	-
7107.2	Ground Level - Engineering Services	84,552	111,953	3,301	1,734	4,108	3,239	8,130	7,624	9,600	14,567
7107.3	Ground Level - SAR Imagery	85,000	159,752	73,000	-	-	-	-	-	17,000	-
7107.6	Ground Level - Contract Services	45,180	90,142	4,493	722	-	90	-	-	-	15,000
7107.80	Ground Level - Capital Equipment	12,170	12,170	-	-	409	115	51	127	133	84
7108.31	IEUA - Prado Basin Habitat Monitoring	69,376	69,376	542	-	-	1,171	2,699	4,653	20,300	35,248
7108.6	IEUA - PBHSP - Outside Pro	5,000	5,000	-	-	-	7,050	-	-	-	-
7109.3	Recharge & Well Monitoring - Engineering Serv.	32,512	32,512	-	1,627	-	-	2,521	-	-	3,400
7110.3	Agriculture Production and Estimation	23,060	46,280	-	-	-	-	-	-	-	-
7111.3	Support for Improved Data Collection Process	19,696	19,696	-	-	-	1,482	1,159	164	2,000	1,500
7202.2	Comp Recharge - Engineering Services	294,560	294,560	853	1,488	1,204	1,198	2,347	9,615	20,757	49,287
7206.1	GRCC & IEUA - SB88 Specification	-	-	2,836	8,991	2,226	3,590	3,944	8,405	15,000	15,000
7210	2023 RMPU Recharge Master Plan Scoping	45,012	45,012	-	-	-	-	-	714	5,000	18,000
7303	OBMP - Engineering Services - Desalters	21,788	21,788	429	-	-	-	-	-	-	3,000
7402	OBMP - Engineering Services - MZ1	126,182	130,524	17,829	27,498	27,823	6,096	170	1,777	5,450	10,000
7402.1	OBMP - Engineering Services - Northwest MZ1	252,140	302,992	26,612	8,234	29,322	12,806	7,560	53,760	16,000	18,000
7502	OBMP - Engineering Services - WQC	109,380	109,380	-	5,657	25,701	3,534	-	-	722	15,076
7510	IEUA - Update Recycled Water Permit - Salinity	59,076	118,466	10,788	8,962	15,696	17,166	11,603	8,882	20,000	35,000
7511	Support Santa Ana Watershed Task Force Efforts	25,829	25,829	53	579	605	342	-	582	2,152	2,152
7610	Implementation of the 2020 Storage Mgmt Plan	43,220	43,220	-	-	-	-	-	-	-	-
<b>Totals</b>		<b>\$ 2,737,082</b>	<b>\$ 3,250,236</b>	<b>\$ 187,298</b>	<b>\$ 154,469</b>	<b>\$ 156,850</b>	<b>\$ 188,356</b>	<b>\$ 123,117</b>	<b>\$ 220,516</b>	<b>\$ 269,206</b>	<b>\$ 390,956</b>

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2020-21 CBWM\_Invoice\_Summary\_ISBM\_2nd Qtr ECAC\_sa CO add\_FINAL.xlsx--Projection Summary



**Attachment 1a**  
**Chino Basin Watermaster: Invoice Projections for Engineering Tasks for Fiscal Year 2020/21**  
**As of December 31, 2020**

Acct #	Description	Projected Mar-21	Projected Apr-21	Projected May-21	Projected Jun-21	Total Projected	Less IEUA and GRCC Portion of Cost Share			Projected Carryover to FY 21/22	
							Total Projected	Under / (Over) Rev. Budget	YTD % Billed Rev. Budget		Projected % Rev. Budget
6906	OBMP Engineering	\$ 76,757	\$ 56,647	\$ 55,132	\$ 53,147	\$ 473,104	\$ 473,104	\$ 136,376	29%	78%	\$ -
6906.26	Support 2020 OBMP Update	3,500	6,000	7,500	7,500	257,215	257,215	20,115	60%	93%	20,115
6906.73	Support 2020 Safe Yield Implementation	5,000	5,000	5,000	5,000	30,752	30,752	34,528	9%	47%	-
6906.21	State of the Basin Report	29,373	28,373	26,373	16,872	162,371	162,371	612	7%	100%	-
6906.15	Integrated Model Meetings and Technical Review	2,500	2,500	2,500	2,500	21,986	10,993	10,207	26%	52%	-
7103.3	GW and SW Quality - Engineering Services	22,163	24,400	17,376	14,600	176,519	176,519	23,611	34%	88%	-
7103.5	GW and SW Quality - Laboratory Services	1,350	2,660	-	-	47,848	47,848	9,312	73%	84%	-
7104.3	GW Level - Engineering Services	18,710	13,013	19,013	20,490	182,778	182,778	17,244	39%	91%	-
7104.8	GW Level - Contract Services	-	-	-	-	12,000	12,000	(2,000)	0%	120%	-
7104.9	GW Level - Capital Services	-	-	-	16,000	16,000	(8,000)	0%	200%	-	
7107.2	Ground Level - Engineering Services	10,800	8,200	8,443	31,628	111,393	111,393	559	25%	100%	-
7107.3	Ground Level - SAR Imagery	-	55	21,945	47,752	159,752	159,752	-	46%	100%	-
7107.6	Ground Level - Contract Services	15,000	5,021	-	49,815	90,141	90,141	1	6%	100%	-
7107.80	Ground Level - Capital Equipment	2,000	625	172	2,000	5,716	5,716	6,454	6%	47%	-
7108.31	IEUA - Prado Basin Habitat Monitoring	39,000	26,665	7,260	3,950	141,488	70,744	(1,368)	13%	102%	-
7108.6	IEUA - PBHSP - Outside Pro	-	-	-	-	7,050	3,525	1,475	141%	71%	-
7109.3	Recharge & Well Monitoring - Engineering Serv.	7,200	5,000	3,400	2,500	25,648	25,648	6,864	13%	79%	-
7110.3	Agriculture Production and Estimation	-	15,427	15,427	15,427	46,280	46,280	0	0%	100%	-
7111.3	Support for Improved Data Collection Process	1,000	3,500	2,696	3,000	16,501	16,501	3,195	14%	84%	-
7202.2	Comp Recharge - Engineering Services	46,005	48,523	49,287	46,005	276,568	276,568	17,992	6%	94%	-
7206.1	GRCC & IEUA - SB88 Specification	15,000	21,595	15,000	-	111,587	-	-	n/a	n/a	-
7210	2023 RMPU Recharge Master Plan Scoping	15,000	6,298	-	-	45,012	45,012	-	2%	100%	-
7303	OBMP - Engineering Services - Desalters	4,000	4,000	3,000	2,200	16,629	16,629	5,159	2%	76%	-
7402	OBMP - Engineering Services - MZ1	7,634	5,130	4,000	14,000	127,405	127,405	3,119	62%	98%	-
7402.1	OBMP - Engineering Services - Northwest MZ1	23,579	21,300	18,956	32,000	268,130	268,130	34,862	46%	88%	61,747
7502	OBMP - Engineering Services - WQC	23,860	13,866	-	2,132	90,548	90,548	18,832	32%	83%	-
7510	IEUA - Update Recycled Water Permit - Salinity	45,000	20,000	5,000	5,000	203,098	106,497	11,969	6%	90%	11,969
7511	Support Santa Ana Watershed Task Force Efforts	2,152	2,152	2,152	2,152	15,082	15,082	10,747	82%	58%	-
7610	Implementation of the 2020 Storage Mgmt Plan	-	-	-	-	-	-	43,220	0%	0%	43,220
<b>Totals</b>		<b>\$ 416,583</b>	<b>\$ 345,948</b>	<b>\$ 289,632</b>	<b>\$ 395,669</b>	<b>\$ 3,138,600</b>	<b>\$ 2,845,150</b>	<b>\$ 405,085</b>	<b>53%</b>	<b>88%</b>	<b>\$ 137,051</b>

Note: Billed includes MWH Laboratory invoices paid directly by Watermaster.

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2020-21 CBWM\_Invoice\_Summary\_ISBM\_2nd Qtr ECAC\_sa CO add\_FINAL.xlsx--Projection Summary



The Fiscal Year 2020/21 Progress and Estimated Cost at Completion for the Period July 1, 2020 through December 31, 2020 narrative report (in detail) from West Yost Associates is provided. Please access this link:

*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*



<https://cbwm.syncedtool.com/shares/file/gwKrQyrBOUv/?modal=1>

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

The third quarter (ECAC) report is scheduled for issuance and distribution in early July 1521 for the period July 1, 2020 through March 31, 2021.

October 2020:

Approved in September 2020, Budget Amendment (Form A-20-09-01) increased three budget accounts, which one of those accounts was reflected within the Engineering Services category. The account within the Engineering Services category was the 2020 OBMP Update-Engineering expenses (6906.26) increased by an additional amount of \$182,000. The Engineering Services "Amended" budget category for FY 2020/21 increased from \$3,068,236.00 (which includes Carry-Over funding of \$331,154) to \$3,250,236, an increase of \$182,000.

September 2020:

The first Progress and Estimated Cost at Completion report (ECAC) for the current fiscal year has been provided for the period ending September 30, 2020 and shows a projected under budget at fiscal year-end June 30, 2021 of \$126,430.

The first quarter (ECAC) report (for the months July 2020 - September 2020) is listed below:

Attachment 1a  
Chino Basin Watermaster: Invoice Projections for Engineering Tasks for Fiscal Year 2020/21  
As of September 30, 2020

Acct #	Description	Original Budget	Revised Budget	Billed Jul-20	Billed Aug-20	Billed Sep-20	Projected Oct-20	Projected Nov-20	Projected Dec-20	Projected Jan-21
6906	OBMP Engineering	\$ 609,480	\$ 609,480	\$ 18,816	\$ 32,995	\$ 14,975	\$ 40,872	\$ 36,945	\$ 42,987	\$ 62,271
6906.26	Support 2020 OBMP Implementation Plan Update	49,094	95,330	4,586	11,501	10,643	10,000	5,000	7,500	7,500
6906.26	Complete Partial Update of 2018 SFI and Support	-	182,000	-	-	-	37,710	37,710	37,710	16,800
6906.73	Support 2020 Safe Yield Implementation	65,280	65,280	2,000	3,752	-	-	-	-	9,921
6906.21	State of the Basin Report	182,983	182,983	-	-	-	-	17,873	20,373	20,373
6906.15	IEUA - Integrated Model Meetings and Technical	21,200	21,200	678	1,084	271	2,130	2,130	2,130	2,130
7103.3	GW and SW Quality - Engineering Services	200,130	200,130	7,826	12,560	8,818	23,800	32,721	14,384	10,329
7103.5	GW and SW Quality - Laboratory Services	57,160	57,160	3,216	17,484	6,224	10,254	11,092	3,000	1,980
7104.3	GW Level - Engineering Services	200,022	200,022	9,442	9,603	8,823	18,753	17,603	16,511	12,678
7104.8	GW Level - Contract Services	10,000	10,000	-	-	-	-	5,000	5,000	1,000
7104.9	GW Level - Capital Services	8,000	8,000	-	-	-	1,020	-	-	-
7107.2	Ground Level - Engineering Services	84,552	111,953	3,301	1,734	4,108	6,700	10,518	12,700	18,835
7107.3	Ground Level - SAR Imagery	85,000	159,752	73,000	-	-	-	438	-	17,000
7107.6	Ground Level - Contract Services	45,180	90,142	4,493	722	-	-	-	-	-
7107.80	Ground Level - Capital Equipment	12,170	12,170	-	-	409	1,000	83	2,000	133
7108.31	IEUA - Prado Basin Habitat Monitoring	69,376	69,376	542	-	-	1,338	10,020	25,390	18,559
7108.6	IEUA - PBHSP - Outside Pro	5,000	5,000	-	-	-	9,000	-	-	-
7109.3	Recharge & Well Monitoring - Engineering Serv.	32,512	32,512	-	1,627	-	-	3,400	-	1,000
7110.3	Agriculture Production and Estimation	23,060	48,280	-	-	-	-	-	-	7,713
7111.3	Support for Implementation of Improved Data Col	19,696	19,696	-	-	-	500	4,500	3,000	2,000
7202.2	Comp Recharge - Engineering Services	294,560	294,560	853	1,488	1,204	4,757	37,521	34,239	36,757
7206.1	GRCC & IEUA - SB88 Specification to Ensure Co	-	-	2,836	8,991	2,226	5,000	5,000	15,000	15,000
7210	2023 RMPU Recharge Master Plan Scoping	45,012	45,012	-	-	-	-	2,500	2,500	15,000
7303	OBMP - Engineering Services - Desalters	21,788	21,788	429	-	-	-	2,000	2,000	2,000
7402	OBMP - Engineering Services - MZ1	126,182	130,524	17,829	27,498	27,823	5,748	2,055	2,000	5,250
7402.1	OBMP - Engineering Services - Northwest MZ1	252,140	302,992	26,812	8,234	29,322	9,598	22,327	20,279	25,809
7502	OBMP - Engineering Services - WQC	109,380	109,380	-	5,657	25,701	6,500	-	-	10,722
7510	IEUA - Update Recycled Water Permit - Salinity	59,076	118,466	10,788	8,962	15,696	20,000	65,000	50,000	45,000
7511	As requested services to support Watermaster an	25,829	25,829	53	579	605	2,152	2,152	2,152	2,152
7610	Support Implementation of the 2020 Storage Mar	43,220	43,220	-	-	-	-	-	-	7,203
<b>Totals</b>		<b>\$ 2,737,082</b>	<b>\$ 3,250,236</b>	<b>\$ 187,298</b>	<b>\$ 154,469</b>	<b>\$ 156,850</b>	<b>\$ 216,829</b>	<b>\$ 333,587</b>	<b>\$ 320,842</b>	<b>\$ 374,895</b>

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2020-21 CBWM\_Invoice\_Summary\_ISBM\_20201029-Projection Summary



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

Attachment 1a  
Chino Basin Watermaster: Invoice Projections for Engineering Tasks for Fiscal Year 2020/21  
As of September 30, 2020

Acct #	Description	Projected Feb-21	Projected Mar-21	Projected Apr-21	Projected May-21	Projected Jun-21	Total Projected	Less IEUA and GRCC Portion of Cost Share			
								Total Projected	Under / (Over) Rev. Budget	YTD % Billed Rev. Budget	Projected % Rev. Budget
6906	OBMP Engineering	\$ 68,274	\$ 69,545	\$ 54,912	\$ 52,938	\$ 50,699	\$ 546,237	\$ 546,237	\$ 63,243	11%	90%
6906.26	Support 2020 OBMP Implementation Plan Update	7,500	7,500	7,500	7,500	7,500	94,230	94,230	1,100	28%	99%
6906.26	Complete Partial Update of 2018 SFI and Support	16,600	16,600	16,600	2,470	-	182,000	182,000	-	0%	100%
6906.73	Support 2020 Safe Yield Implementation	9,921	9,921	9,921	9,921	9,921	65,280	65,280	-	0%	100%
6906.21	State of the Basin Report	24,373	20,373	20,373	25,373	13,872	162,983	162,983	-	0%	100%
6906.15	IEUA - Integrated Model Meetings and Technical	2,130	2,130	2,130	2,130	2,130	21,199	10,599	10,601	10%	50%
7103.3	GW and SW Quality - Engineering Services	23,235	21,463	7,450	9,097	13,200	184,891	184,891	15,239	15%	92%
7103.5	GW and SW Quality - Laboratory Services	-	350	2,660	-	-	56,240	56,240	920	47%	98%
7104.3	GW Level - Engineering Services	17,379	18,463	12,266	18,189	20,343	180,052	180,052	19,970	14%	90%
7104.8	GW Level - Contract Services	-	-	-	-	-	11,000	11,000	(1,000)	0%	110%
7104.9	GW Level - Capital Services	-	-	-	-	16,000	17,020	17,020	(9,020)	0%	213%
7107.2	Ground Level - Engineering Services	5,624	4,431	4,811	6,971	32,032	111,764	111,764	189	8%	100%
7107.3	Ground Level - SAR Imagery	110	-	55	14,021	47,752	152,375	152,375	7,377	46%	95%
7107.6	Ground Level - Contract Services	35,021	-	-	-	49,905	90,141	90,141	-	8%	100%
7107.80	Ground Level - Capital Equipment	84	2,000	625	172	2,000	8,506	8,506	3,664	3%	70%
7108.31	IEUA - Prado Basin Habitat Monitoring	24,242	30,800	19,565	5,990	3,336	139,752	69,676	(500)	1%	101%
7108.6	IEUA - PBHSP - Outside Pro	-	-	-	-	-	9,000	4,500	0	0%	90%
7109.3	Recharge & Well Monitoring - Engineering Serv.	3,400	7,200	7,000	3,400	2,500	29,527	29,527	2,985	5%	91%
7110.3	Agriculture Production and Estimation	7,713	7,713	7,713	7,713	7,713	46,280	46,280	-	0%	100%
7111.3	Support for Implementation of Improved Data Col	1,500	1,000	2,500	2,696	2,000	19,696	19,696	-	0%	100%
7202.2	Comp Recharge - Engineering Services	37,521	34,239	36,757	31,599	28,317	285,249	285,249	9,311	1%	97%
7206.1	GRCC & IEUA - SB88 Specification to Ensure Co	15,000	15,000	15,000	12,534	-	111,587	-	-	n/a	n/a
7210	2023 RMPU Recharge Master Plan Scoping	15,000	10,012	-	-	-	45,012	45,012	-	0%	100%
7303	OBMP - Engineering Services - Desalters	2,000	4,000	2,000	2,000	2,200	18,629	18,629	3,159	2%	86%
7402	OBMP - Engineering Services - MZ1	10,000	7,800	3,448	4,091	17,000	130,539	130,539	(15)	56%	100%
7402.1	OBMP - Engineering Services - Northwest MZ1	20,000	44,000	40,725	47,200	23,271	317,376	317,376	(14,384)	21%	105%
7502	OBMP - Engineering Services - WQC	13,076	23,860	13,866	-	2,132	101,514	101,514	7,866	29%	93%
7510	IEUA - Update Recycled Water Permit - Salinity	20,000	10,000	10,000	5,000	4,241	264,667	118,466	-	30%	100%
7511	As requested services to support Watermaster an	2,152	2,152	2,152	2,152	2,152	20,604	20,604	5,225	5%	80%
7610	Support Implementation of the 2020 Storage Man	7,203	7,203	7,203	7,203	7,203	43,220	43,220	-	0%	100%
<b>Totals</b>		<b>\$ 389,058</b>	<b>\$ 377,755</b>	<b>\$ 307,231</b>	<b>\$ 280,358</b>	<b>\$ 367,419</b>	<b>\$ 3,466,592</b>	<b>\$ 3,123,808</b>	<b>\$ 126,430</b>	<b>77%</b>	<b>96%</b>

Note: Billed includes MWH Laboratory invoices paid directly by Watermaster.

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2020-21 CBWM\_Invoice\_Summary\_JSBM\_20201029-Projection Summary



Watermaster does not plan to present any Budget Transfers or Budget Amendments at this time. The Fiscal Year 2020/21 Progress and Estimated Cost at Completion for the Period July 1, 2020 through September 30, 2020 report from Wildermuth Environmental, Inc. is provided. Please access this link:

<https://cbwm.synctool.com/shares/file/BeyeZEILLbl/?modal=1>

July 2020:

The breakdown of the total Task Order amount of \$2,737,082 for the FY 2020/21 Engineering Services includes direct labor costs for Wildermuth Environmental, Inc. (90.6%) at \$2,480,970 along with other direct charges such as equipment rental, laboratory fees, travel costs, reproduction costs, and outside professional services (9.4%) at \$256,112.

The approved "Original" Engineering Services budget of \$2,737,082 was increased by "Carry Over" funding in the amount of \$386,947.58 to the "Amended" amount of \$3,124,029.58 for FY 2020/21 as provided in the Engineering Services Task Order. All of the "Carry Over" funding is for projects or activities that have bridged previous fiscal years and are expected to be completed in the FY 2020/21 timeframe or future years.

The explanations regarding the Carry-Over amount of \$386,947.58 from FY 2019/20 to the FY 2020/21 budget is provided as follows:

1. Agriculture Production and Estimation (Account 6906): \$23,220. WEI requested this carryover budget to complete the Agriculture Production and Estimation work that was originally scheduled to be performed in FY 2019/20, but was pushed to FY 2020/21 as per the FY 2020/21 budget.
2. 2020 OBMP Update (Account 6906.26): \$46,236. The FY2020/21 budget assumed the drafting sessions for the OBMP Implementation Plan (IP) would be completed in FY 2019/20. WEI requested to carryover the unspent portion of the FY2019/20 revised budget to complete the IP drafting sessions.

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3. Ground Level – Engineering Services (Account 7107.2): \$27,400. The City of Chino Hills did not perform the long-term pumping and injection tests included in the FY2019/20 budget as recommended by the Ground-Level Monitoring Committee. WEI requested this carryover to support the logistics, data collection, and analysis of data from the long-term pumping and injection tests, if these tests are performed by the City in FY2020/21.
4. Ground Level – SAR Imagery (Account 7107.3): \$74,752. WEI requested this carryover budget associated with the purchase of satellite data and the processing of the data for displacement measurement. The work was completed in FY2019/20, but the invoice has yet to be received from the subcontractor.
5. Ground Level – Contract Services (Account 7107.6): \$44,962. WEI requested this carryover budget for the Ground Level surveyor to finalize the processing of the data collected in FY2019/20. These delays sometimes occur because the surveying occurs near the end of the fiscal year.
6. GRCC & IEUA – SB88 Specification to Ensure Compliance with Regulations (Account 7206.1): Watermaster’s portion is \$55,793.58 (50% GRCC budget and 50% IEUA). WEI requested this carryover budget to finalize the SB88 work in FY 2020/21, including the preparation of a technical memorandum summarizing the results. This work was delayed due to the timing of IEUA’s response to data requests and the limitation of visiting recharge basins with IEUA staff during COVID-19.
7. OBMP – Engineering Services – MZ1 (Account 7402): \$4,342. WEI requested this carryover budget to finalize the figures for the Annual Report of the Ground-Level Monitoring Committee which will be published in FY2020/21. It is typical for this work to be carried over due to delays in receiving data from land subsidence subcontractors.
8. OBMP – Engineering Services – Northwest MZ1 (Account 7402.1): \$50,852. WEI requested this carryover budget to finalize the implementation of the Northwest MZ-1 monitoring program, including the final setup and testing of monitoring equipment at the Pomona Extensometer which was delayed due to COVID-19.
9. IEUA – Update Recycled Water Permit – Salinity (Account 7510): \$155,924 (Watermaster’s portion is \$59,390). WEI requested this carryover budget to continue the Updated Recycled Water Permit with IEUA. This work is being cost shared with IEUA and was originally scoped to be finished in FY 2019/20 and now is scheduled to be completed in December 2020.

## 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.

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- 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. 2020 - May 2021	\$ 95,864.15	\$ (47,932.08)	\$ -	\$ 47,932.08
<b>Totals</b>	<b>\$ 95,864.15</b>	<b>\$ (47,932.08)</b>	<b>\$ -</b>	<b>\$ 47,932.08</b>
	7108.31	7108.31	7108.31	
<b>Maximum Costs</b>	<b>\$ 148,752.00</b>	<b>\$ 74,376.00</b>	<b>\$ 74,376.00</b>	<b>\$ 74,376.00</b>

PREVIOUSLY REPORTED ACTIONS (Descending Order)  
 None:

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## OTHER INCOME AND EXPENSE

There were no other significant items to report within the category of Other Income and Expenses for the month ending May 31, 2021.

## PREVIOUSLY REPORTED ACTIONS (Descending Order)

### December 2020:

Replenishment water of 534.7 AF was purchased from Three Valleys Municipal Water District for the amount of \$410,114.90 (\$767.00/AF) during the month of December 2020.

### November 2020:

Replenishment water of 1,377.8 AF was purchased from Three Valleys Municipal Water District for the amount of \$1,056,772.60 (\$767.00/AF) during the month of November 2020.

### October 2020:

The 2<sup>nd</sup> quarter Basin Recharge O&M expense (account 7206) in the amount of \$362,142.76 was recorded during the month of October and payment issued directly to IEUA.

### July 2020:

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 2020/21 annual administrative fee invoice was issued on July 1, 2020 in the amount of \$173,102.47 under invoice number 2020-07-CUP. Payment in the amount of \$173,102.47 was received and deposited on August 4, 2020.

The 1<sup>st</sup> quarter Basin Recharge O&M expense (account 7206) in the amount of \$362,142.76 was recorded during the month of July, along with the FY 2020/21 annual debt service expense (account 7690.1) of \$534,496 (both expenses payable directly to IEUA).

## 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 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.

<b>Fund Balance for Agricultural Pool</b>		<b>Agricultural Pool Reserve Funds</b>	
<b>Account 8467 - Legal Services</b>		<b>As shown the B-3 Financial Report</b>	
Beginning Balance July 1, 2020:	\$ -	Agricultural Pool Reserve Funds Balance as of June 30, 2020:	\$ 515,498.06
Additions:		Additions:	
Assessment issued November 19, 2020 for \$500,000 with outstanding balance of \$384,736.12	\$ 115,263.88	AP payments w/o Escrow instructions (\$165,694.75 - \$161,070.09)	\$ 4,624.66
Admin Reserve used to cover shortfall *	\$ 102,557.12	Y-T-D Interest earned on Ag Pool Funds FY 2020/21	\$ 1,793.61
Subtotal Additions:	\$ 217,821.00	Subtotal Additions:	\$ 6,418.27
From Agricultural Pool Reserve Funds	\$ 203,169.00	Reductions:	
Total Additions:	\$ 420,990.00	Actual vs. Budget Shortfall from FY 2019/20	\$ (165,694.75)
Reductions:		Mediation invoice paid	\$ (8,450.00)
Invoices paid July 2020 - November 2020	\$ (217,821.00)	Subtotal Reductions:	\$ (174,144.75)
Invoices paid December 2020 - May 2021	\$ (203,169.00)	Invoices paid December 2020 - May 2021	\$ (203,169.00)
Subtotal Reductions:	\$ (420,990.00)	Total Reductions	\$ (377,313.75)
<b>Ending Fund Balance as of May 31, 2021</b>	<b>\$ -</b>	<b>Agricultural Pool Reserve Funds Balance as of May 31, 2021:</b>	<b>\$ 144,602.58</b>

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

Note: Balance of \$144,602.58 as shown on B-3 Financial Report

<b>Fund Balance For Agricultural Pool</b>		<b>Fund Balance For Agricultural Pool</b>	
<b>Account 8470 - Meeting Compensation</b>		<b>Account 8471 - Special Projects</b>	
Beginning Balance July 1, 2020:	\$ -	Beginning Balance July 1, 2020:	\$ -
Additions:		Additions:	
Assessment issued November 19, 2020 and paid	\$ 24,900.00	Assessment issued November 19, 2020 and paid	\$ 85,000.00
Reductions:		Reductions:	
Compensation paid July 2020 - May 2021	\$ (37,500.00)	Invoices paid July 2020 - May 2021	\$ (18,484.00)
<b>Ending Fund Balance as of May 31, 2021 *</b>	<b>\$ (12,600.00)</b>	<b>Ending Fund Balance as of May 31, 2021</b>	<b>\$ 66,516.00</b>

\* Transfer req'd between 8471 and 8470 (Ag Pool action req'd). There are some checks being held until the transfer is authorized.

<b>Fund Balance For Non-Agricultural Pool</b>	
<b>Account 8567 - Legal Services</b>	
Beginning Balance July 1, 2020:	\$ 23,301.60
Additions:	
Assessment issued November 19, 2020 and paid	\$ 75,000.00
Reductions:	
Invoices paid July 2020 - May 2021	\$ (61,252.85)
<b>Ending Fund Balance as of May 31, 2021</b>	<b>\$ 37,048.75</b>

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<b>Fund Balance For Appropriative Pool</b>	
<b>Account 8367 - Legal Services</b>	
Beginning Balance July 1, 2020:	\$ 33,788.25
Additions:	
Assessment issued November 19, 2020 and paid	\$ 130,000.00
Assessment issued February 19, 2021 and paid	\$ 135,000.00
Subtotal Additions:	<u>\$ 265,000.00</u>
Reductions:	
Invoices paid July 2020 - January 2021	\$ (148,108.00)
Accrued February 2021 - May 2021 (not paid)	\$ (80,000.00)
Subtotal Reductions:	<u>\$ (228,108.00)</u>
<b>Ending Fund Balance as of May 31, 2021</b>	<b><u><u>\$ 70,680.25</u></u></b>

PREVIOUSLY REPORTED ACTIONS (Descending Order)  
 None:

“CARRY OVER” FUNDING  
 BACKGROUND OF “CARRY OVER” FUNDING

CURRENT MONTH – MAY 2021

As of May 31, 2021, the total (YTD) amount remaining of the “Carried Over” funding is \$2,089,615.68 (\$2,546,648.17 - \$457,032.49 = \$2,089,615.68).

The following details are provided:

"Carried Over" Expenses At June 30, 2020

Other Office Equipment - Boardroom Upgrades	\$	40,000.00	A	6038	FY 2019/20	ADMIN
Blomquist Report - Update	\$	7,500.00	B	6061.6	FY 2017/18	ADMIN
Meter Installation - New Meter Installation	\$	175,400.00	C	7102.65	FY 2018/19	OBMP
Meter Installation - Calibration and Testing	\$	181,650.00	D	7102.8	FY 2018/19	OBMP
2020 OBMP Update - Tom Dodson & Associates	\$	18,221.48	E	6908.1	FY 2019/20	OBMP
OBMP Engineering Services	\$	23,220.00	F	6906	FY 2019/20	ENG
2020 OBMP Update - Engineering	\$	46,236.00	G	6906.26	FY 2019/20	ENG
Ground Level Monitoring - Engineering	\$	27,400.00	H	7107.2	FY 2019/20	ENG
Ground Level Monitoring - SAR Imagery	\$	74,752.00	I	7107.3	FY 2019/20	ENG
Ground Level Monitoring - Contract Services	\$	44,962.00	J	7107.6	FY 2019/20	ENG
SB88-Specs-Ensure Compliance-50% IEUA	\$	55,793.58	K	7206.1	FY 2019/20	ENG
PE4 - OBMP - Engineering	\$	4,342.00	L	7402	FY 2019/20	ENG
PE4 - Northwest MZ-1 Area Project	\$	43,636.91	M	7402.1	FY 2018/19	ENG
PE4 - Northwest MZ-1 Area Project	\$	50,852.00	M	7402.1	FY 2019/20	ENG
IEUA - Update Recycle Water Permit - Salinity	\$	59,390.00	N	7510	FY 2019/20	ENG
RMPU Amendment (TO #1)	\$	56,794.57	O	7690.15	FY 2016/17	PROJ
East Declez Basin (TO #1)	\$	1,171.33	P	7690.16	FY 2016/17	PROJ
GWR SCADA Upgrades (TO #4)	\$	7,025.00	Q	7690.61	FY 2014/15	PROJ
GWR SCADA Upgrades (TO #4)	\$	38,675.00	Q	7690.61	FY 2015/16	PROJ
GWR SCADA Upgrades (TO #4)	\$	58,510.50	Q	7690.61	FY 2019/20	PROJ
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 - Form T-18-07-01	\$	1,272,406.02	T	7690.9	FY 2017/18	PROJ
<b>Total Balance, July 1, 2020</b>	<b>\$</b>	<b>2,546,648.17</b>				

"Carried Over" Balance, July 1, 2019	\$					
						\$ 2,546,648.17
Less: (Invoices Received To Date FY 2019/20)						
Other Office Equipment - Boardroom Upgrades	\$	(9,497.25)	A	6038	FY 2019/20	ADMIN
Blomquist Report - Update	\$	(7,500.00)	B	6061.6	FY 2017/18	ADMIN
Meter Installation - New Meter Installation	\$	-	C	7102.65	FY 2018/19	OBMP
Meter Installation - Calibration and Testing	\$	-	D	7102.8	FY 2018/19	OBMP
2020 OBMP Update - Tom Dodson & Associates	\$	(18,221.48)	E	6908.1	FY 2019/20	OBMP
OBMP Engineering Services	\$	(23,220.00)	F	6906 <sup>2</sup>	FY 2019/20	ENG
2020 OBMP Update - Engineering	\$	(45,736.00)	G	6906.26 <sup>3</sup>	FY 2019/20	ENG
Ground Level Monitoring - Engineering	\$	(27,400.00)	H	7107.2 <sup>4</sup>	FY 2019/20	ENG
Ground Level Monitoring - SAR Imagery	\$	(73,000.00)	I	7107.3 <sup>5</sup>	FY 2019/20	ENG
Ground Level Monitoring - Contrat Services	\$	(44,962.00)	J	7107.6 <sup>6</sup>	FY 2019/20	ENG
SB88-Specs-Ensure Compliance-50% IEUA	\$	(49,274.85)	K	7206.1 <sup>7</sup>	FY 2019/20	ENG
PE4 - OBMP - Engineering	\$	(4,342.00)	L	7402 <sup>8</sup>	FY 2019/20	ENG
PE4 - Northwest MZ-1 Area Project	\$	(43,636.91)	M	7402.1	FY 2018/19	ENG
PE4 - Northwest MZ-1 Area Project	\$	(50,852.00)	M	7402.1 <sup>9</sup>	FY 2019/20	ENG
IEUA - Update Recycle Water Permit - Salinity	\$	(59,390.00)	N	7510 <sup>A</sup>	FY 2019/20	ENG
RMPU Amendment (TO #1)	\$	-	O	7690.15	FY 2016/17	PROJ
East Declez Basin (TO #1)	\$	-	P	7690.16	FY 2016/17	PROJ
GWR SCADA Upgrades (TO #4)	\$	-	Q	7690.61	FY 2014/15	PROJ
GWR SCADA Upgrades (TO #4)	\$	-	Q	7690.61	FY 2015/16	PROJ
GWR SCADA Upgrades (TO #4)	\$	-	Q	7690.61	FY 2019/20	PROJ
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 - Form T-18-07-01	\$	-	T	7690.9 <sup>1</sup>	FY 2017/18	PROJ
<b>Updated Balance as of May 31, 2021</b>						<b>\$ 2,089,615.68</b>

<sup>1</sup> Project completed with funds available for (1) reallocation to another project, (2) paydown debt service, (3) maintain as extra funding, or (4) distribution to the Appropriative Pool as a credit through the Assessment invoicing.

<sup>2</sup> Engineering work not completed in FY 2019/20. Work required to finish the Agriculture Production and estimation work.

<sup>3</sup> Engineering work not completed in FY 2019/20. Work required to finish the 2020 OBMP Update work scheduled for FY 2019/20.

<sup>4</sup> Engineering work not completed in FY 2019/20. Work required to perform GL surveys for the long-term pumping test and injection test.

<sup>5</sup> Engineering work not completed in FY 2019/20. Carry-over funding required to complete the InSAR data purchase.

<sup>6</sup> Engineering work not completed in FY 2019/20. Work required by the GL surveyor to finalize processing data.

<sup>7</sup> Engineering work not completed in FY 2019/20. Work required to finalize the SB88 Specification to ensure compliance.

<sup>8</sup> Engineering work not completed in FY 2019/20. Work required to finalize data analysis and reporting.

<sup>9</sup> Engineering work not completed in FY 2019/20. Work required to finalize implementation of the Northwest MZ-1 monitoring program.

<sup>A</sup> Engineering work not completed in FY 2019/20. Work required to finalize the FY 2019/20 portion of the Salinity project.

Updated Balance as of May 31, 2021

Other Office Equipment - Boardroom Upgrades	\$	30,502.75	A	6038	FY 2019/20	ADMIN
Blomquist Report - Update	\$	-	B	6061.6	FY 2017/18	ADMIN
Meter Installation - New Meter Installation	\$	175,400.00	C	7102.65	FY 2018/19	OBMP
Meter Installation - Calibration and Testing	\$	181,650.00	D	7102.8	FY 2018/19	OBMP
2020 OBMP Update - Tom Dodson & Associates	\$	-	E	6908.1	FY 2019/20	OBMP
OBMP Engineering Services	\$	-	F	6906	FY 2019/20	ENG
2020 OBMP Update - Engineering	\$	-	G	6906.26	FY 2019/20	ENG
Ground Level Monitoring - Engineering	\$	-	H	7107.2	FY 2019/20	ENG
Ground Level Monitoring - SAR Imagery	\$	1,752.00	I	7107.3	FY 2019/20	ENG
Ground Level Monitoring - Contrat Services	\$	-	J	7107.6	FY 2019/20	ENG
SB88-Specs-Ensure Compliance-50% IEUA	\$	7,018.73	K	7206.1	FY 2019/20	ENG
PE4 - OBMP - Engineering	\$	-	L	7402	FY 2019/20	ENG
PE4 - Northwest MZ-1 Area Project	\$	-	M	7402.1	FY 2018/19	ENG
PE4 - Northwest MZ-1 Area Project	\$	-	M	7402.1	FY 2019/20	ENG
IEUA - Update Recycle Water Permit - Salinity	\$	0.00	N	7510	FY 2019/20	ENG
RMPU Amendment (TO #1)	\$	56,794.57	O	7690.15	FY 2016/17	PROJ
East Declz Basin (TO #1)	\$	1,171.33	P	7690.16	FY 2016/17	PROJ
GWR SCADA Upgrades (TO #4)	\$	7,025.00	Q	7690.61	FY 2014/15	PROJ
GWR SCADA Upgrades (TO #4)	\$	38,675.00	Q	7690.61	FY 2015/16	PROJ
GWR SCADA Upgrades (TO #4)	\$	58,510.50	Q	7690.61	FY 2019/20	PROJ
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 - Form T-18-07-01	\$	1,272,406.02	T	7690.9	FY 2017/18	PROJ
<b>Updated Balance as of May 31, 2021</b>		<b>\$ 2,089,615.68</b>				

#### ADMINISTRATION SERVICES:

Unspent funds related to ongoing projects and associated activities from the Administration Services budget from FY 2019/20 totaling \$47,500.00 were "Carried Over" into the current FY 2020/21 budget. These funds were from the Other Office Equipment-Boardroom Upgrades [A] in the amount of \$40,000 in account 6038 and the Blomquist Report-Update [B] in the amount of \$7,500 in account (6061.6).

#### OBMP ACTIVITIES:

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 2020/21 budget. These funds were from the Meter Installation - New Meter Installation [C] in the amount of \$175,400 in account (7102.65); and Meter Installation - Calibration and Testing [D] in the amount of \$181,650 in account (7102.8). The total amount available is \$357,050 (\$175,400 + \$181,650 = \$357,050).

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, 2020 a remaining balance in the fund of \$18,221.48 was "Carried Over" into the current FY 2020/21 budget. The 2020 OBMP Update - Tom Dodson & Associates [E] in the amount of \$18,221.48 in account (6908.1).

#### ENGINEERING SERVICES:

*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*

Unspent funds related to ongoing projects and associated activities from the Engineering Services budget from FY 2019/20 in several accounts totaling \$430,584.49 were "Carried Over" into the current FY 2020/21 budget. These funds were from the OBMP Engineering Services [F] in the amount of \$23,220 in account (6906); 2020 OBMP Update-Engineering [G] in the amount of \$46,236 in account (6906.26); Ground Level Monitoring-Engineering [H] in the amount of \$27,400 in account (7107.2); Ground Level Monitoring-SAR Imagery [I] in the amount of \$74,752 in account (7107.3); Ground Level Monitoring-Contract Services [J] in the amount of \$44,962 in account (7107.6); SB88 Specs-Ensure Compliance-50% IEUA [K] in the amount of \$55,793.58 in account (7206.1); PE4-OBMP-Engineering [L] in the amount of \$4,342 in account (7402); PE4 - Northwest MZ-1 Area Project [M] in the amount of \$94,488.91 in account (7402.1); and PE6&7 - IEUA Salinity Management Plan [N] in the amount of \$59,390 in account (7510). The total amount available is \$430,584.49 ( $\$23,220 + \$46,236 + \$27,400 + \$74,752 + \$44,962 + \$55,793.58 + \$4,342 + \$94,488.91 + \$59,390 = \$430,584.49$ ).

#### COMPLETED PROJECTS WITH FUNDING AVAILABLE:

Several projects were completed during FY 2019/20 or in prior years and have remaining funds available to be either (1) reallocated to other project(s) that need additional funding, (2) keep amounts on reserve for future Capital Improvement Projects, (3) pay down the debt service; or (4) refunded back to the Appropriative Pool when the Assessment package is invoiced. The funding amounts available are as follows: East Declaz Basin [P] in the amount of \$1,171.33 (account 7690.16); and GWR SCADA Upgrades (TO#4) [Q] in the amount of \$104,210.50 (account 7690.61). The total amount available is \$105,381.83 ( $\$1,171.33 + \$104,210.50 = \$105,381.83$ ).

#### ONGOING RECHARGE IMPROVEMENT PROJECTS:

The RMPU Amendment-Task Order #1 [O] has a remaining budget from FY 2016/17 of \$56,794.57 in account (7690.15); 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 funded budget for these combined projects is \$315,504.35 ( $\$56,794.57 + \$20,062.88 + \$238,646.90 = \$315,504.35$ ).

#### FUNDS ON HOLD FOR PROJECTS:

The "Funds on Hold for Projects" [T] has a remaining budget from FY 2017/18 of \$1,272,406.02 in account (7690.9). These funds can only be allocated from the account if a Budget Transfer document is presented to the Pools, Advisory, and Board for approval and adoption.

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, 2021, any remaining balances of the FY 2019/20 and prior years funding (if any), along with any new FY 2020/21 expenses, will then be "Carried Over" into the FY 2021/22 budget.

#### PREVIOUSLY REPORTED ACTIONS (Descending Order)

None

#### AUDIT FIELD WORK

##### CURRENT MONTH – MAY 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 has been tentatively scheduled for September 2021.

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The Annual Financial and Audit Reports are tentatively scheduled for presentation 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 are tentatively scheduled for posting to the Watermaster website no later than October 31, 2021.

#### PREVIOUSLY REPORTED ACTIONS (Descending Order)

October 2020:

The final field work for the period of April 1, 2020 through June 30, 2020 was completed on September 21 and 22, 2020. Due to the COVID-19 pandemic, the auditors did not come into the Watermaster office. 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.

The Annual Financial and Audit Reports were presented to the Watermaster Board by Fedak & Brown LLP at the November 19, 2020 Board meeting. The Annual Financial and Audit Reports for FY 2019/20 were posted to the Watermaster website on October 28, 2020.

#### FY 2020/21 EXHIBIT "G" NON-AGRICULTURAL POOL SALE OF WATER

##### CURRENT MONTH – MAY 2021

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

#### PREVIOUSLY REPORTED ACTIONS (Descending Order)

January 2021:

Watermaster is required to provide a Notice of Availability of each Appropriator's pro-rata share of such water by January 31<sup>st</sup> of each year. The Notice of Availability was issued on January 29, 2021 which included the Potential Allocation Table allocating the amount of water available to each Appropriator, should each Appropriator wish to purchase its share of the water. Appropriators had until March 1, 2021 to submit their Intent to Purchase forms to notify Watermaster if they were each interested in purchasing their allocation of the water.

As of March 1, 2021, no Appropriators submitted their Intent to Purchase forms to Watermaster.

December 2020:

Pursuant to Exhibit "G" of the Restated Judgment, members of the Overlying (Non-Agricultural) Pool may annually transfer water to members of the Appropriative Pool through a Watermaster clearinghouse process. Watermaster purchases water from the Overlying (Non-Agricultural) Pool members, which Watermaster then transfers to the members of the Appropriative Pool based on the prescribed process. Members of the Appropriative Pool purchasing water through the process must complete their payments to Watermaster by June 30 of the fiscal year.

On December 30, 2020, Hamner Park Associates, a California Limited Partnership notified Watermaster of the availability of 800 acre-feet of water for purchase. The ONAP amended its Pooling Plan which was subsequently court-approved on March 15, 2019, allowing them to set the transfer rate. At its regular meeting on November 23, 2020, the ONAP set a price of \$695.00 per acre-foot for the current fiscal year's transfers.

Watermaster is required to provide a Notice of Availability of each Appropriator's pro-rata share of such water by January 31<sup>st</sup> of each year. The Notice of Availability was issued on January 29, 2021 which

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included the Potential Allocation Table allocating the amount of water available to each Appropriator, should each Appropriator wish to purchase its share of the water. Appropriators have until March 1, 2021 to submit their Intent to Purchase forms to notify Watermaster if they were each interested in purchasing their allocation of the water. The Intent to Purchase forms could be returned to Watermaster via email or by U.S. mail.

## ASSESSMENTS AND OTHER INVOICING

### CURRENT MONTH – MAY 2021

#### FY 2020/21 Assessment Package:

Seven AP members did not pay their portion of the Ag Pool Legal Services amount as invoiced. These seven members are the City of Chino, Cucamonga Valley Water District, Fontana Union Water Company, Jurupa Community Services District, Monte Vista Water District, Monte Vista Irrigation Company, and the City of Ontario. The Ag Pool Legal Services amount invoiced to the entire AP members was \$500,000. The amount of \$115,263.88 has been received, while the amount of \$384,736.12 was not received from the seven AP members listed above, and remains outstanding to date.

#### PREVIOUSLY REPORTED ACTIONS (Descending Order)

##### December 2020:

The FY 2020/21 Assessment Package was approved by the Advisory Committee and adopted by the Board on Thursday, November 19, 2020. The Assessment invoices were issued by Watermaster on Thursday, November 19, 2020 with payment due 30-days after invoice date. Payments were due to Watermaster on Monday, December 21, 2020. As past practice, payment could be made to Watermaster by either a wire transfer or check. Per the judgment, late fees could be assessed for any judgment related payment not received as of 4:00pm on Monday, December 21, 2020.

As of December 21, 2020, all but two payments had been received in full, and seven payments were received with an outstanding balance remaining. The first late payment was from Arrowhead Mountain Spring Water Company (AP member). The check was received on January 14, 2021. The original payment was issued on December 4, 2020 but was lost in the U.S. Postal Service mail. After Watermaster contacted Arrowhead, a replacement check was issued, and later received on January 14, 2021. The original check (which was delayed in the U.S. Postal Service) eventually was received by Watermaster, and destroyed since the payment had been voided earlier by Arrowhead.

The second late payment was from San Antonio Winery (ONAP member). Watermaster contacted San Antonio Winery on December 23, 2020 to notify of a late payment. On January 6, 2021 a Notice of Delinquency was issued. On January 6, 2021 Watermaster received an email from San Antonio Winery stating that due to the COVID-19 Stay-At-Home-Order issued on December 6, 2020 for the Los Angeles area, their office is closed and they are unable to issue a check. On February 1, 2021 a check was received.

Seven AP members did not pay their portion of the Ag Pool Legal Services amount as invoiced. These seven members are the City of Chino, Cucamonga Valley Water District, Fontana Union Water Company, Jurupa Community Services District, Monte Vista Water District, Monte Vista Irrigation Company, and the City of Ontario. The Ag Pool Legal Services amount invoiced to the entire AP members was \$500,000. The amount of \$115,263.88 has been received, while the amount of \$384,736.12 was not received from the seven AP members listed above, and remains outstanding to date.

##### November 2020:

The FY 2020/21 Assessment Package was approved by the Advisory Committee and adopted by the Board on Thursday, November 19, 2020. The Assessment invoices were issued by Watermaster on Thursday, November 19, 2020 with payment due 30-days after invoice date. Payments will be due to Watermaster

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on Monday, December 21, 2020. As past practice, payment can be made to Watermaster by either a wire transfer or check. Per the judgment, late fees could be assessed for any judgment related payment not received as of 4:00pm on Monday, December 21, 2020.

Per the Judgment Section VI, 55 (c) Delinquency. Any delinquent assessment shall bear interest at 10% per annum (or such greater rate as shall equal the average current cost of borrowed funds to the Watermaster) from the due date thereof. Such delinquent assessment and interest may be collected in a show-cause proceeding herein instituted by the Watermaster, in which case the Court may allow Watermaster its reasonable costs of collection, including attorney's fees.

October 2020:

As of November 10, 2020, of the nineteen (19) Special Assessment invoices totaling \$165,694.75 issued on August 25, 2020, all of the payments have been received. Four (4) of the payments totaling \$4,624.66 did not provide escrow instructions, while fifteen (15) of the payments totaling \$161,070.09 provided escrow instructions

September 2020

To date, of the nineteen (19) Special Assessment invoices totaling \$165,694.75 issued on August 25, 2020, only one (1) invoice has not been paid. The amount due of \$29,835.46 from one Appropriator is still outstanding and delinquent per the Judgment Section VI, 55 (b).

August 2020:

The Special Assessment invoices in the amount of \$165,694.75 were issued by Watermaster on Tuesday, August 25, 2020 with payment due 30-days after invoice date. Payments will be due to Watermaster on Friday, September 25, 2020. As past practice, payment can be made to Watermaster by either a wire transfer or check. Per the judgment, late fees could be assessed for any judgment related payment not received as of 5:00pm on Friday, September 25, 2020.

July 2020:

On August 25, 2020 the Watermaster Board, after discussing a business item titled Overlying Agricultural Pool Legal Expense Increase, took action by a majority vote (8 yes and 1 no), directed staff to issue invoices to the Appropriative Pool Parties for the amount of \$165,694.75 for the unreimbursed increase, allocated on the basis of the Assessment Year 2019-2020 "Ag Pool Reallocation".

The Special Assessment invoices in the amount of \$165,694.75 were issued by Watermaster on Tuesday, August 25, 2020 with payment due 30-days after invoice date. Payments will be due to Watermaster on Friday, September 25, 2020. As past practice, payment can be made to Watermaster by either a wire transfer or check. Per the judgment, late fees could be assessed for any judgment related payment not received as of 5:00pm on Friday, September 25, 2020.

Per the Judgment Section VI, 55 (b) Payment. Each assessment shall be payable on or before thirty (30) days after notice, and shall be the obligation of the party or successor owning the water production facility at the time written notice of assessment is given, unless prior arrangement for payment by others has been made in writing and filed with Watermaster.

Per the Judgment Section VI, 55 (c) Delinquency. Any delinquent assessment shall bear interest at 10% per annum (or such greater rate as shall equal the average current cost of borrowed funds to the Watermaster) from the due date thereof. Such delinquent assessment and interest may be collected in a show-cause proceeding herein instituted by the Watermaster, in which case the Court may allow Watermaster its reasonable costs of collection, including attorney's fees.

## ATTACHMENTS

1. Financial Report – B5

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	1/12th (8.33%) of the Total Budget				11/12th (91.67%) of the Total Budget				100% of the Total Budget			
	For The Month of May 2021				Year-To-Date as of May 31, 2021				Fiscal Year End as of June 30, 2021			
	Actual	Budget	\$ Over(Under)	% of Budget	Actual	Budget	\$ Over(Under)	% of Budget	Projected	Budget	\$ Over(Under)	% of Budget
<b>Income</b>												
4010 · Local Agency Subsidies	0.00	0.00	0.00	0.0%	173,102.47	176,203.00	-3,100.53	98.24%	173,102.47	176,203.00	-3,100.53	98.24%
4110 · Admin Asmnts-Approp Pool	0.00	0.00	0.00	0.0%	8,933,741.19	8,933,719.00	22.19	100.0%	8,933,741.19	8,933,719.00	22.19	100.0%
4120 · Admin Asmnts-Non-Agri Pool	0.00	0.00	0.00	0.0%	369,221.49	369,220.00	1.49	100.0%	369,221.49	369,220.00	1.49	100.0%
4700 · Non Operating Revenues	5.51	0.00	5.51	100.0%	40,842.29	104,650.00	-63,807.71	39.03%	60,103.91	130,813.00	-70,709.09	45.95%
4900 · Miscellaneous 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%
<b>Total Income</b>	<b>5.51</b>	<b>0.00</b>	<b>5.51</b>	<b>100.0%</b>	<b>9,516,907.44</b>	<b>9,583,792.00</b>	<b>-66,884.56</b>	<b>99.3%</b>	<b>9,536,169.06</b>	<b>9,609,955.00</b>	<b>-73,785.94</b>	<b>99.23%</b>
<b>Gross Profit</b>	<b>5.51</b>	<b>0.00</b>	<b>5.51</b>	<b>100.0%</b>	<b>9,516,907.44</b>	<b>9,583,792.00</b>	<b>-66,884.56</b>	<b>99.3%</b>	<b>9,536,169.06</b>	<b>9,609,955.00</b>	<b>-73,785.94</b>	<b>99.23%</b>
<b>Expense</b>												
6010 · Admin. Salary/Benefit Costs	74,003.63	105,488.00	-31,484.37	70.15%	980,360.84	1,105,965.00	-125,604.16	88.64%	1,181,091.11	1,198,051.00	-16,959.89	98.58%
6020 · Office Building Expense	9,818.01	9,952.00	-133.99	98.65%	108,361.50	111,120.00	-2,758.50	97.52%	120,367.10	121,072.00	-704.90	99.42%
6030 · Office Supplies & Equip.	1,639.18	1,983.00	-343.82	82.66%	30,212.25	165,442.00	-135,229.75	18.26%	38,659.56	167,800.00	-129,140.44	23.04%
6040 · Postage & Printing Costs	1,489.98	2,207.00	-717.02	67.51%	28,523.52	31,926.00	-3,402.48	89.34%	32,133.84	34,446.00	-2,312.16	93.29%
6050 · Information Services	11,068.46	12,630.00	-1,561.54	87.64%	135,967.16	158,104.00	-22,136.84	86.0%	160,765.66	171,484.00	-10,718.34	93.75%
6060 · Contract Services	2,739.52	567.00	2,172.52	483.16%	53,337.04	54,033.00	-695.96	98.71%	53,597.52	54,600.00	-1,002.48	98.16%
6070 · Watermaster Legal Services	49,437.65	15,930.00	33,507.65	310.34%	552,799.47	185,135.00	367,664.47	298.59%	582,329.23	201,065.00	381,264.23	289.62%
6080 · Insurance	0.00	0.00	0.00	0.0%	39,599.81	43,989.00	-4,389.19	90.02%	43,849.81	45,342.00	-1,492.19	96.71%
6110 · Dues and Subscriptions	180.00	250.00	-70.00	72.0%	34,166.21	37,003.00	-2,836.79	92.33%	35,964.24	37,003.00	-1,038.76	97.19%
6140 · WM Admin Expenses	269.12	337.00	-67.88	79.86%	563.85	4,412.00	-3,848.15	12.78%	2,500.00	4,750.00	-2,250.00	52.63%
6150 · Field Supplies	0.00	500.00	-500.00	0.0%	1,738.48	2,750.00	-1,011.52	63.22%	2,500.00	2,750.00	-250.00	90.91%
6170 · Travel & Transportation	1,820.81	2,420.00	-599.19	75.24%	17,128.20	22,375.00	-5,246.80	76.55%	19,685.52	24,170.00	-4,484.48	81.45%
6190 · Training, Conferences, Seminars	2,857.50	5,100.00	-2,242.50	56.03%	17,945.60	36,900.00	-18,954.40	48.63%	34,415.72	38,800.00	-4,384.28	88.7%
6200 · Advisory Committee Expenses	6,822.40	4,561.00	2,261.40	149.58%	54,744.91	46,753.00	7,991.91	117.09%	57,896.68	50,983.00	6,913.68	113.56%
6300 · Watermaster Board Expenses	16,214.21	14,188.00	2,026.21	114.28%	155,807.47	172,795.00	-16,987.53	90.17%	173,117.25	186,455.00	-13,337.75	92.85%
8300 · Appr PI-WM & Pool Admin	25,374.67	28,442.00	-3,067.33	89.22%	309,023.61	308,266.00	757.61	100.25%	349,879.40	336,218.00	13,661.40	104.06%
8400 · Agri Pool-WM & Pool Admin	5,249.60	5,917.00	-667.40	88.72%	45,638.35	60,809.00	-15,170.65	75.05%	57,128.14	66,310.00	-9,181.86	86.15%
8467 · Ag Legal & Technical Services	42,750.00	41,667.00	1,083.00	102.6%	420,990.00	458,333.00	-37,343.00	91.85%	498,130.00	500,000.00	-1,870.00	99.63%
8470 · Ag Meeting Attend -Special	7,625.00	1,850.00	5,775.00	412.16%	35,325.00	20,350.00	14,975.00	173.59%	37,450.00	22,200.00	15,250.00	168.69%
8471 · Ag Pool Expense	0.00	0.00	0.00	0.0%	18,484.00	85,000.00	-66,516.00	21.75%	18,484.00	85,000.00	-66,516.00	21.75%
8485 · Ag Pool - Misc. Exp. - Ag Fund	0.00	0.00	0.00	0.0%	8,450.00	400.00	8,050.00	2,112.5%	8,450.00	400.00	8,050.00	2,112.5%
8500 · Non-Ag PI-WM & Pool Admin	20,316.04	11,496.00	8,820.04	176.72%	98,976.49	122,737.00	-23,760.51	80.64%	106,321.20	133,946.00	-27,624.80	79.38%
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	-34,387.14	-38,648.00	4,260.86	88.98%	-331,253.11	-425,128.00	93,874.89	77.92%	-355,939.32	-463,776.00	107,836.68	76.75%
6900 · Optimum Basin Mgmt Plan	130,766.73	135,827.00	-5,060.27	96.27%	1,204,772.43	1,857,335.48	-652,563.05	64.87%	1,857,703.88	1,991,582.48	-133,878.60	93.28%
9501 · G&A Expenses Allocated-OBMP	11,542.29	10,855.00	687.29	106.33%	128,505.55	119,402.00	9,103.55	107.62%	149,655.88	130,257.00	19,398.88	114.89%
7101 · Production Monitoring	3,679.55	7,860.00	-4,180.45	46.81%	44,537.98	82,050.00	-37,512.02	54.28%	79,932.36	88,893.00	-8,960.64	89.92%
7102 · In-line Meter Installation	0.00	1,264.00	-1,264.00	0.0%	4,199.64	370,448.00	-366,248.36	1.13%	7,500.00	371,595.00	-364,095.00	2.02%
7103 · Grdwtr Quality Monitoring	13,465.47	26,942.00	-13,476.53	49.98%	194,200.80	293,367.00	-99,166.20	66.2%	311,883.56	319,618.00	-7,734.44	97.58%
7104 · Gdwtr Level Monitoring	26,644.69	24,547.00	2,097.69	108.55%	235,525.37	266,962.00	-31,436.63	88.22%	271,996.96	290,805.00	-18,808.04	93.53%
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%
7107 · Ground Level Monitoring	11,869.57	12,418.00	-548.43	95.58%	201,442.98	369,979.00	-168,536.02	54.45%	365,172.00	382,320.00	-17,148.00	95.52%

	1/12th (8.33%) of the Total Budget				11/12th (91.67%) of the Total Budget				100% of the Total Budget			
	For The Month of May 2021				Year-To-Date as of May 31, 2021				Fiscal Year End as of June 30, 2021			
	Actual	Budget	\$ Over(Under)	% of Budget	Actual	Budget	\$ Over(Under)	% of Budget	Projected	Budget	\$ Over(Under)	% of Budget
7108 - Hydraulic Control Monitoring	9,714.63	8,137.00	1,577.63	119.39%	64,652.63	88,976.00	-24,323.37	72.66%	78,124.80	96,990.00	-18,865.20	80.55%
7109 - Recharge & Well Monitoring Prog	1,328.50	2,709.00	-1,380.50	49.04%	13,126.75	29,803.00	-16,676.25	44.05%	31,258.80	32,512.00	-1,253.20	96.15%
7110 - Ag Production & Estimation	1,899.25	1,922.00	-22.75	98.82%	1,899.25	21,138.00	-19,238.75	8.99%	21,575.00	23,060.00	-1,485.00	93.56%
7111 - Improved Data Collection & Mgmt	0.00	1,641.00	-1,641.00	0.0%	6,101.10	18,055.00	-11,953.90	33.79%	17,726.40	19,696.00	-1,969.60	90.0%
7200 - PE2- Comp Recharge Pgm	20,186.30	38,142.00	-17,955.70	52.92%	1,487,449.60	1,921,404.58	-433,954.98	77.42%	1,940,672.84	1,958,966.58	-18,293.74	99.07%
7300 - PE3&5-Water Supply/Desalte	1,642.00	3,964.00	-2,322.00	41.42%	4,956.40	42,715.00	-37,758.60	11.6%	44,607.60	46,474.00	-1,866.40	95.98%
7400 - PE4- Mgmt Plan	28,631.75	32,692.00	-4,060.25	87.58%	313,908.79	457,900.91	-143,992.12	68.55%	486,343.88	490,467.91	-4,124.03	99.16%
7500 - PE6&7-CoopEfforts/SaltMgmt	5,770.71	17,225.00	-11,454.29	33.5%	132,269.89	248,283.00	-116,013.11	53.27%	257,860.20	265,373.00	-7,512.80	97.17%
7600 - PE8&9-StorageMgmt/Conj Use	1,193.65	5,714.00	-4,520.35	20.89%	20,024.88	61,675.00	-41,650.12	32.47%	52,991.38	67,117.00	-14,125.62	78.95%
7690 - Recharge Improvements	0.00	0.00	0.00	0.0%	534,496.00	2,227,788.20	-1,693,292.20	23.99%	1,009,496.00	2,227,788.20	-1,218,292.20	45.31%
7700 - Inactive Well Protection Prgm	0.00	42.00	-42.00	0.0%	0.00	458.00	-458.00	0.0%	450.00	500.00	-50.00	90.0%
9502 - G&A Expenses Allocated-Projects	22,844.85	27,793.00	-4,948.15	82.2%	202,747.56	305,726.00	-102,978.44	66.32%	206,283.44	333,519.00	-127,235.56	61.85%
<b>Total Expense</b>	<b>536,468.58</b>	<b>586,531.00</b>	<b>-50,062.42</b>	<b>91.47%</b>	<b>7,611,708.25</b>	<b>11,592,935.17</b>	<b>-3,981,226.92</b>	<b>65.66%</b>	<b>10,450,011.64</b>	<b>12,156,603.17</b>	<b>-1,706,591.53</b>	<b>85.96%</b>
<b>Net Ordinary Income</b>	<b>-536,463.07</b>	<b>-586,531.00</b>	<b>50,067.93</b>	<b>91.46%</b>	<b>1,905,199.19</b>	<b>-2,009,143.17</b>	<b>3,914,342.36</b>	<b>-94.83%</b>	<b>-913,842.58</b>	<b>-2,546,648.17</b>	<b>1,632,805.59</b>	<b>35.88%</b>
<b>Other Income</b>												
4210 - Approp Pool-Replenishment	0.00	0.00	0.00	0.0%	1,463,480.70	0.00	1,463,480.70	100.0%	1,463,481.30	0.00	1,463,481.30	100.0%
4220 - Non-Ag Pool-Replenishment	0.00	0.00	0.00	0.0%	32,069.27	0.00	32,069.27	100.0%	32,069.27	0.00	32,069.27	100.0%
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	25.62	0.00	25.62	100.0%	202.17	0.00	202.17	100.0%	245.00	0.00	245.00	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%
<b>Total Other Income</b>	<b>25.62</b>	<b>0.00</b>	<b>25.62</b>	<b>100.0%</b>	<b>1,495,752.14</b>	<b>0.00</b>	<b>1,495,752.14</b>	<b>100.0%</b>	<b>1,495,795.57</b>	<b>0.00</b>	<b>1,495,795.57</b>	<b>100.0%</b>
<b>Other Expense</b>												
5010 - Groundwater Replenishment	0.00	0.00	0.00	0.0%	1,511,362.17	0.00	1,511,362.17	100.0%	1,511,362.17	0.00	1,511,362.17	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%	127,581.99	0.00	127,581.99	100.0%	127,581.99	0.00	127,581.99	100.0%
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%	5,083.75	0.00	5,083.75	100.0%	5,083.75	0.00	5,083.75	100.0%
9998 - Refund-Recharge Debt-Approp.	0.00	0.00	0.00	0.0%	107,164.00	0.00	107,164.00	100.0%	107,164.00	0.00	107,164.00	100.0%
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%
<b>Total Other Expense</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0%</b>	<b>1,751,191.91</b>	<b>0.00</b>	<b>1,751,191.91</b>	<b>100.0%</b>	<b>1,751,191.91</b>	<b>0.00</b>	<b>1,751,191.91</b>	<b>100.0%</b>
<b>Net Other Income</b>	<b>25.62</b>	<b>0.00</b>	<b>25.62</b>	<b>100.0%</b>	<b>-255,439.77</b>	<b>0.00</b>	<b>-255,439.77</b>	<b>100.0%</b>	<b>-255,396.34</b>	<b>0.00</b>	<b>-255,396.34</b>	<b>100.0%</b>
<b>Net Income</b>	<b>-536,437.45</b>	<b>-586,531.00</b>	<b>50,093.55</b>	<b>91.46%</b>	<b>1,649,759.42</b>	<b>-2,009,143.17</b>	<b>3,658,902.59</b>	<b>-82.11%</b>	<b>-1,169,238.92</b>	<b>-2,546,648.17</b>	<b>1,377,409.25</b>	<b>45.91%</b>

Note: Please see the staff report (Financial Report-B5) for additional detailed information on the account categories.

**CHINO BASIN WATERMASTER**  
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Type	Date	Num	Name	Memo	Account	Paid Amount
<b>Bill Pmt -Check</b>	<b>06/01/2021</b>	<b>22847</b>	<b>ACCENT COMPUTER SOLUTIONS, INC.</b>	<b>144080</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/01/2021	144080		Monthly Services - June 2021	6052.4 · IT Managed Services	3,969.21
				Overwatch - June 2021	6052.5 · IT Data Backup/Storage	699.00
				OmniCloud - June 2021	6052.5 · IT Data Backup/Storage	170.00
				Office 365 Subscriptions - June 2021	6052.4 · IT Managed Services	204.75
				Image office storage (per GB, per month)	6052.5 · IT Data Backup/Storage	468.00
<b>TOTAL</b>						<b>5,510.96</b>
<b>Bill Pmt -Check</b>	<b>06/01/2021</b>	<b>22848</b>	<b>BROWNSTEIN HYATT FARBER SCHRECK</b>		<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/30/2021	844617		844617	6078 · BHFS Legal - Miscellaneous	28,364.85
Bill	04/30/2021	844618		844618	6073 · BHFS Legal - Personnel Matters	943.65
Bill	04/30/2021	844619		844619	6907.36 · Santa Ana River Habitat	178.20
Bill	04/30/2021	844620		844620	6375 · BHFS Legal - Board Meeting	3,742.20
Bill	04/30/2021	844621		844621	8375 · BHFS Legal - Appropriative Pool	1,069.20
Bill	04/30/2021	844622		844622	8475 · BHFS Legal - Agricultural Pool	1,069.20
Bill	04/30/2021	844623		844623	8575 · BHFS Legal - Non-Ag Pool	1,069.20
Bill	04/30/2021	844624		844624	6071 · BHFS Legal - Court Coordination	8,010.90
				CourtCall Filing Fee-Pierson	6071 · BHFS Legal - Court Coordination	94.00
				CourtCall Filing Fee-Herrema	6071 · BHFS Legal - Court Coordination	94.00
				CourtCall Filing Fee-Elie	6071 · BHFS Legal - Court Coordination	94.00
				CourtCall Filing Fee-Bowcock	6071 · BHFS Legal - Court Coordination	94.00
				CourtCall Filing Fee-Curatalo	6071 · BHFS Legal - Court Coordination	94.00
				CourtCall Filing Fee-Kavounas	6071 · BHFS Legal - Court Coordination	94.00
				CourtCall Filing Fee-Wilson	6071 · BHFS Legal - Court Coordination	94.00
				CourtCall Filing Fee-Wildermuth	6071 · BHFS Legal - Court Coordination	94.00
Bill	04/30/2021	844625		844625	6907.39 · Recharge Master Plan	940.95
Bill	04/30/2021	844626		844626	6907.41 · Prado Basin Habitat Sustain	270.00
Bill	04/30/2021	844627		844627	6907.45 · OBMP Update	10,839.15
Bill	04/30/2021	844628		844628	6078.25 · Ely 3 Basin Investigation	6,043.50
<b>TOTAL</b>						<b>63,293.00</b>
<b>Bill Pmt -Check</b>	<b>06/01/2021</b>	<b>22849</b>	<b>EUROFINS EATON ANALYTICAL</b>		<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/11/2021	L0568880		L0568880	7108.41 · Hydraulic Control - PBHSP	1,592.00
Bill	05/11/2021	L0568881		L0568881	7108.41 · Hydraulic Control - PBHSP	440.00
<b>TOTAL</b>						<b>2,032.00</b>
<b>Bill Pmt -Check</b>	<b>06/01/2021</b>	<b>22850</b>	<b>JOSEPH S. JOSWIAK</b>	<b>Transcript Reimbursement 03/26/21</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/30/2021	4/30 Hearing Trans		April 30, 2021 hearing transcript	6046 · Legal Publications/Services	384.00
<b>TOTAL</b>						<b>384.00</b>

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Type	Date	Num	Name	Memo	Account	Paid Amount
Bill Pmt -Check	06/01/2021	22851	PIETERSMA, RONALD	Ag Pool Member Compensation	1012 · Bank of America Gen'l Ckg	
Bill	05/13/2021	5/13 Ag Pool Mtg		5/13/21 Ag Pool Meeting	8411 · Ag Pool Member Compensation	25.00
				5/13/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
TOTAL						125.00
Bill Pmt -Check	06/01/2021	22852	STANDARD INSURANCE CO.	Policy # 00-649299-0009	1012 · Bank of America Gen'l Ckg	
Bill	05/25/2021	006492990009		Policy # 00-649299-0009	60191 · Life & Disab.Ins Benefits	915.07
TOTAL						915.07
Bill Pmt -Check	06/01/2021	22853	VERIZON WIRELESS	9879678285	1012 · Bank of America Gen'l Ckg	
Bill	05/25/2021	9879618285		Acct #642073270-00001	7103.7 · Grdwtr Qual-Computer Svc	58.03
TOTAL						58.03
Bill Pmt -Check	06/01/2021	22854	VISION SERVICE PLAN	00-101789-0001	1012 · Bank of America Gen'l Ckg	
Bill	05/25/2021	00101789		Vision Insurance Premium - June 2021	60182.2 · Dental & Vision Ins	93.83
TOTAL						93.83
Bill Pmt -Check	06/01/2021	22855	WEST YOST		1012 · Bank of America Gen'l Ckg	
Bill	04/30/2021	2044932		2044932	6906.31 · OBMP-Pool, Adv. Board Mtgs	14,846.25
Bill	04/30/2021	2044933		2044933	6906.32 · OBMP-Other General Meetings	4,319.50
Bill	04/30/2021	2044934		2044934	6906.74 · OBMP-Mat'l Phy. Injury Requests	526.00
Bill	04/30/2021	2044935		2044935	6906.71 · OBMP-Data Req.-CBWM Staff	3,206.75
Bill	04/30/2021	2044936		2044936	6906.72 · OBMP-Data Req.-Non CBWM Staff	1,197.75
Bill	04/30/2021	2044937		2044937	6906.23 · SGMA Reporting Requirements	226.00
Bill	04/30/2021	2044938		2044938	6906 · OBMP Engineering Services	6,093.75
Bill	04/30/2021	2044939		2044939	6906.1 · OBMP-Watermaster Model Update	11,955.25
Bill	04/30/2021	2044940		2044940	6906.26 · 2020 OBMP Update	65.75
Bill	04/30/2021	2044941		2044941	6906.73 · OBMP-2020 Safe Yield Recalc	1,699.00
Bill	04/30/2021	2044942		2044942	6906.21 · State of the Basin Report	20,656.25
Bill	04/30/2021	2044943		2044943	6906.15 · Integrated Model Mtgs-IEUA Cost	65.75
Bill	04/30/2021	2044944		2044944	7103.3 · Grdwtr Qual-Engineering	4,781.31
Bill	04/30/2021	2044945		2044945	7104.3 · Grdwtr Level-Engineering	12,519.12
Bill	04/30/2021	2044946		2044946	7107.2 · Grd Level-Engineering	7,131.86
				Guida Surveying	7107.6 · Grd Level-Contract Svcs	42,226.41
Bill	04/30/2021	2044947		2044947	7402 · PE4-Engineering	9,394.25
Bill	04/30/2021	2044948		2044948	7402.10 · PE4 - Northwest MZ1 Area Proj.	3,551.50
Bill	04/30/2021	2044949		2044949	7108.31 · Hydraulic Control - PBHSP	37,626.50
Bill	04/30/2021	2044950		2044950	7109.3 · Recharge & Well - Engineering	2,874.50
Bill	04/30/2021	2044951		2044951	7111.3 · Data Collection & Mgmt-Eng. Ser	630.50

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Type	Date	Num	Name	Memo	Account	Paid Amount
Bill	04/30/2021	2044952		2044952	7202.2 · Engineering Svc	12,728.00
Bill	04/30/2021	2044953		2044953	7206.1 · SB88 Specs-Ensure Compliance	2,716.25
Bill	04/30/2021	2044954		2044954	7210 · OBMP - 2023 RMPU	710.50
Bill	04/30/2021	2044955		2044955	7303 · PE3&5-Engineering	2,885.00
Bill	04/30/2021	2044956		2044956	7502 · PE6&7-Engineering	3,844.25
Bill	04/30/2021	2044957		2044957	7510 · PE6&7-IEUA Salinity Mgmt. Plan	711.75
Bill	04/30/2021	2044958		2044958	7511 · PE6&7-SAWBMP Task Force-50% IEU	328.75
TOTAL						<u>209,518.45</u>
<b>Bill Pmt -Check</b>	<b>06/01/2021</b>	<b>22856</b>	<b>STANDARD INSURANCE CO.</b>	<b>Policy # 00-649299-0009</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	04/30/2021	006492990009		March 2021	60191 · Life & Disab.Ins Benefits	915.07
TOTAL						<u>915.07</u>
<b>Bill Pmt -Check</b>	<b>06/03/2021</b>	<b>ACH 063021</b>	<b>CALPERS</b>	<b>1394905143</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/01/2021	1394905143		Medical Insurance Premiums - June 2021	60182.1 · Medical Insurance	11,326.80
TOTAL						<u>11,326.80</u>
<b>Bill Pmt -Check</b>	<b>06/04/2021</b>	<b>ACH 060421</b>	<b>PUBLIC EMPLOYEES' RETIREMENT SYSTEM</b>	<b>Payor #3493</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
General Journal	05/29/2021	05/29/2021	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 05/16/21-05/29/21	2000 · Accounts Payable	8,986.85
TOTAL						<u>8,986.85</u>
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22857</b>	<b>ACWA JOINT POWERS INSURANCE AUTHORITY</b>	<b>0668631</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/02/2021	0668631		Prepayment - July 2021	1409 · Prepaid Life, BAD&D & LTD	246.83
				June 2021	60191 · Life & Disab.Ins Benefits	246.83
TOTAL						<u>493.66</u>
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22858</b>	<b>APPLIED COMPUTER TECHNOLOGIES</b>	<b>3345</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/31/2021	3345		Database Consulting Services - May 2021	6052.2 · Applied Computer Technol	3,850.00
TOTAL						<u>3,850.00</u>
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22859</b>	<b>BOWCOCK, ROBERT</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/27/2021	5/27 Board Mtg		5/27/21 Board Meeting	6311 · Board Member Compensation	125.00
Bill	05/28/2021	5/28 Court Hearing		5/28/21 Court Hearing	6311 · Board Member Compensation	125.00
TOTAL						<u>250.00</u>
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22860</b>	<b>BURRTEC WASTE INDUSTRIES, INC.</b>	<b>N2111961618</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/04/2021	N2111991618		Waste Disposal - June 2021	6024 · Building Repair & Maintenance	135.72
TOTAL						<u>135.72</u>
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22861</b>	<b>DE BOOM, NATHAN</b>	<b>Ag Pool Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	

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Type	Date	Num	Name	Memo	Account	Paid Amount
Bill	05/13/2021	5/13 Ag Pool Mtg		5/13/21 Ag Pool Meeting	8411 · Ag Pool Member Compensation	25.00
				5/13/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
TOTAL						125.00
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22862</b>	<b>ELIE, STEVEN</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/17/2021	5/17 Admin Mtg		5/17/21 Administrative Meeting w/PK	6311 · Board Member Compensation	125.00
Bill	05/28/2021	5/28 Court Hearing		5/28/21 Court Hearing	6311 · Board Member Compensation	125.00
TOTAL						250.00
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22863</b>	<b>EMPOWER LAB</b>	<b>1863</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/31/2021	1863		Empower Lab - May 2021	6193 · Employee Training	1,075.00
TOTAL						1,075.00
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22864</b>	<b>FEENSTRA, BOB</b>	<b>Ag Pool Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/31/2021	10/06/20 Legal Mtg		10/06/20 Legal Counsel Meeting	8411 · Ag Pool Member Compensation	25.00
				10/06/20 Legal Counsel Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	10/07/20 Legal Mtg		10/07/20 Legal Counsel Meeting	8411 · Ag Pool Member Compensation	25.00
				10/07/20 Legal Counsel Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	10/08/20 Ag Pool		10/08/20 Ag Pool Meeting	8411 · Ag Pool Member Compensation	25.00
				10/08/20 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	10/15/20 Advisory		10/15/20 Advisory Committee Meeting	8411 · Ag Pool Member Compensation	25.00
				10/15/20 Advisory Committee Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	10/20/20 Call Legal		10/20/20 Conference call w/legal counsel	8411 · Ag Pool Member Compensation	25.00
				10/20/20 Conference call w/legal counsel	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	10/22/20 Board Mtg		10/22/20 Board Meeting	8411 · Ag Pool Member Compensation	25.00
				10/22/20 Board Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	10/27/20 Call Legal		10/27/20 Conference call w/legal counsel	8411 · Ag Pool Member Compensation	25.00
				10/27/20 Conference call w/legal counsel	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	11/12/20 Ag Pool Mtg		11/12/20 Ag Pool Meeting	8411 · Ag Pool Member Compensation	25.00
				11/12/20 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	11/18/20 Call Legal		11/18/20 Conference call w/legal counsel	8411 · Ag Pool Member Compensation	25.00
				11/18/20 Conference call w/legal counsel	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	11/19/20 Advis Comm		11/19/20 Advisory Committee Meeting	8411 · Ag Pool Member Compensation	25.00
				11/19/20 Advisory Committee Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	11/19/20 Bd Mtg		11/19/20 Board Meeting	8411 · Ag Pool Member Compensation	25.00
				11/19/20 Board Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	11/23/20 Call Legal		11/23/20 Call w/legal counsel	8411 · Ag Pool Member Compensation	25.00
				11/23/20 Call w/legal counsel	8470 · Ag Meeting Attend -Special	100.00
Bill	05/31/2021	12/08/20 Call Legal		12/08/20 Call w/legal counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	12/10/20 Call Legal		12/10/20 Call w/legal counsel	8470 · Ag Meeting Attend -Special	125.00

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Bill	05/31/2021	12/14/20	Call Legal	12/14/20 Call w/Pierson re pending filings	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	12/21/20	Call Legal	12/21/20 Call w/Pierson, legal counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	12/30/20	Call Legal	12/30/20 Call w/legal counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	1/14	Ag Pool Mtg	1/14/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	1/18	Call Legal	1/18/21 Conf. call w/Pierson, legal counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	1/21	Advisory Comm	1/21/21 Advisory Committee Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	1/21	Call Legal	1/21/21 Conf. call w/Pierson, legal counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	1/28	Board Mtg	1/28/21 Board Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	1/28	Call Legal	1/28/21 Conf. calls	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	2/08	Call Legal	2/08/21 Conf. call w/legal counsel, State	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	2/11	Ag Pool Mtg	2/11/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	2/11	Call Legal	2/11/21 Conference call w/Pierson, Hofer	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	2/18	Advisory Comm	2/18/21 Advisory Committee Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	2/25	Board Mtg	2/25/21 Board Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	3/11	Ag Pool Mtg	3/11/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	3/15	Call SB County	3/15/21 Conf. call w/State of CA, SB County	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	3/17	Call Legal	3/17/21 Conf. call w/legal counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	3/18	Advisory Comm	3/18/21 Advisory Committee Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	3/18	Call Legal	3/18/21 Conf. call w/Legal	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	3/25	Board Mtg	3/25/21 Board Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	3/27	Call Legal	3/27/21 Legal meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	3/31	Special Ag	3/31/21 Special Ag mtg w/Pierson	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	4/02	Ontario Mtg	4/02/21 Meeting w/S. Burton - Ontario	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	4/08	Ag Pool Mtg	4/08/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	4/08	Legal Mtg	4/08/21 Conf. call w/legal counsel	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	4/15	Advisory Comm	4/15/21 Advisory Committee Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	4/22	Board Mtg	4/22/21 Board Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/31/2021	4/28	Call Legal	4/28/21 Prep for hearing, AP storage	8470 · Ag Meeting Attend -Special	125.00
<b>TOTAL</b>						<b>5,250.00</b>
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22865</b>	<b>FILIPPI, GINO</b>	<b>Ag Pool Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/13/2021	5/13	Ag Pool Mtg	5/13/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/20/2021	5/20	Advisory Comm	5/20/21 Advisory Committee Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/27/2021	5/27	Board Mtg	5/27/21 Board Meeting	8470 · Ag Meeting Attend -Special	125.00
<b>TOTAL</b>						<b>375.00</b>
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22866</b>	<b>FONTANA UNION WATER COMPANY'</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/04/2021	5/04	Admin Mtg	5/04/21 In person meeting - Curatalo	6311 · Board Member Compensation	125.00
Bill	05/11/2021	5/11	Bd Officer Chk	5/11/21 Board Officer Check-in - Curatalo	6311 · Board Member Compensation	125.00
Bill	05/13/2021	5/13	Appro Pool Mtg	5/13/21 Appropriative Pool Meeting - Curatalo	6311 · Board Member Compensation	125.00



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Type	Date	Num	Name	Memo	Account	Paid Amount
Bill	05/17/2021	5/17 GM Eval Mtg		5/17/21 GM Eval Process Meeting - Curatalo	6311 · Board Member Compensation	125.00
Bill	05/19/2021	5/19 GM Eval Mtg		5/19/21 GM Eval Process Meeting - Curatalo	6311 · Board Member Compensation	125.00
Bill	05/20/2021	5/20 Brd Officers		5/20/21 Board & Pool Officers - Curatalo	6311 · Board Member Compensation	125.00
Bill	05/25/2021	5/25 Brd Agenda Mtg		5/25/21 Board Agenda Preview Mtg. - Curatalo	6311 · Board Member Compensation	125.00
Bill	05/27/2021	5/27 Board Mtg		5/27/21 Board Meeting - Curatalo	6311 · Board Member Compensation	125.00
Bill	05/28/2021	5/28 Court Hearing		5/28/21 Court Hearing - Curatalo	6311 · Board Member Compensation	125.00
TOTAL						1,125.00
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22867</b>	<b>GEYE, BRIAN</b>	<b>Non-Ag Pool Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/13/2021	5/13 Non Ag Pool Mtg		5/13/21 Non Ag Pool Meeting	8511 · Non-Ag Pool Member Compensation	125.00
Bill	05/20/2021	5/20 Advisory Comm		5/20/21 Advisory Committee Meeting	8511 · Non-Ag Pool Member Compensation	125.00
Bill	05/20/2021	5/20 Pool Chairs Mtg		5/20/21 Board Officers & Pool Chairs Meeting	8511 · Non-Ag Pool Member Compensation	125.00
Bill	05/27/2021	5/27 Board Mtg		5/27/21 Board Meeting	8511 · Non-Ag Pool Member Compensation	125.00
Bill	05/28/2021	5/28 Court Hearing		5/28/21 Court Hearing	8511 · Non-Ag Pool Member Compensation	125.00
TOTAL						625.00
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22868</b>	<b>GRAINGER</b>	<b>9911706605</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/25/2021	9911706605		Miscellaneous water quality monitoring supplies	7103.6 · Grdwtr Qual-Supplies	317.08
TOTAL						317.08
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22869</b>	<b>IN-SITU, INC.</b>	<b>00143083</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/21/2021	00143083		00143083	7103.6 · Grdwtr Qual-Supplies	113.49
TOTAL						113.49
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22870</b>	<b>KUHN, BOB</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/11/2021	5/11 Admin Mtg		5/11/21 Administrative Meeting	6311 · Board Member Compensation	125.00
Bill	05/13/2021	5/13 Appro Pool Mtg		5/13/21 Appropriative Pool Meeting	6311 · Board Member Compensation	125.00
Bill	05/18/2021	5/18 Exec Comm		5/18/21 Executive Committee Meeting	6311 · Board Member Compensation	125.00
Bill	05/20/2021	5/20 Advisory Comm		5/20/21 Advisory Committee Meeting	6311 · Board Member Compensation	125.00
Bill	05/25/2021	5/25 Personnel Comm		5/25/21 Personnel Committee Meeting	6311 · Board Member Compensation	125.00
Bill	05/27/2021	5/27 Board Mtg		5/27/21 Board Meeting	6311 · Board Member Compensation	125.00
Bill	05/28/2021	5/28 Court Hearing		5/28/21 Court Hearing	6311 · Board Member Compensation	125.00
TOTAL						875.00
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22871</b>	<b>EASTVALE DEVELOPMENT - PIERSON</b>	<b>Ag Pool &amp; Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/04/2021	5/24 Conf Call Ag		5/04/21 Conf. call w/Ag Pool Chair and Legal	8470 · Ag Meeting Attend -Special	125.00
Bill	05/06/2021	5/06 Conf Call State		5/06/21 Conf. call w/ State AG Office	8470 · Ag Meeting Attend -Special	125.00
Bill	05/07/2021	5/07 Conf Call Legal		5/07/21 Conference call w/ Ag Pool Legal	8470 · Ag Meeting Attend -Special	125.00
Bill	05/10/2021	5/10 Ag Chair/Vice		5/10/21 Ag Pool /AP Chair & Vice Chair Mtg.	8470 · Ag Meeting Attend -Special	125.00
Bill	05/11/2021	5/11 Brd Officers		5/11/21 Board Officers Check-in	6311 · Board Member Compensation	125.00

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Type	Date	Num	Name	Memo	Account	Paid Amount
Bill	05/11/2021	5/11 Conf Call Chair		5/11/21 Conf. call w/ Ag Pool Chair and Legal	8470 · Ag Meeting Attend -Special	125.00
Bill	05/12/2021	5/12 PBHSC Mtg		5/12/21 PBHSC Meeting	6311 · Board Member Compensation	125.00
Bill	05/12/2021	5/12 Conf Call State		5/12/21 Conf. call w/ State AG Office	8470 · Ag Meeting Attend -Special	125.00
Bill	05/13/2021	5/13 Ag Pool Mtg		5/13/21 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/14/2021	5/14 Conf Call Ag		5/14/21 Conf. call w/ Ag Pool Chair and Legal	8470 · Ag Meeting Attend -Special	125.00
Bill	05/17/2021	5/17 Conf Call Ag		5/17/21 Conf. call w/ Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
Bill	05/18/2021	5/18 Budget Wkshp		5/18/21 Budget Workshop	6311 · Board Member Compensation	125.00
Bill	05/18/2021	5/18 Conf Call Ag		5/18/21 Conf. call w/ Ag Pool Members/Legal	8470 · Ag Meeting Attend -Special	125.00
Bill	05/19/2021	5/19 Conf Call w/Bd		5/19/21 Conference call w/Board Chair	6311 · Board Member Compensation	125.00
Bill	05/19/2021	5/19 Conf Call Ag		5/19/21 Conf. call w/ Ag Pool Chair and Legal	8470 · Ag Meeting Attend -Special	125.00
Bill	05/20/2021	5/20 Pool Officers		5/20/21 Board Officers and Pool Chairs mtg.	6311 · Board Member Compensation	125.00
Bill	05/20/2021	5/20 Conf Call Ag		5/20/21 Conf. call w/ Ag Pool Members/Legal	8470 · Ag Meeting Attend -Special	125.00
Bill	05/20/2021	5/20 Advisory Comm		5/20/21 Advisory Committee Meeting	8470 · Ag Meeting Attend -Special	125.00
Bill	05/24/2021	5/24 Conf Call Ag		5/24/21 Conference call w/ Ag Pool Chair	8470 · Ag Meeting Attend -Special	125.00
Bill	05/26/2021	5/26 Conf Call Legal		5/26/21 Conf. call with WM Legal counsel	6311 · Board Member Compensation	125.00
Bill	05/26/2021	5/26 Conf Call Ag		5/26/21 Conf. call w/ Ag Pool Legal	8470 · Ag Meeting Attend -Special	125.00
Bill	05/27/2021	5/27 Board Mtg		5/27/21 Board Meeting	6311 · Board Member Compensation	125.00
Bill	05/27/2021	5/27 Conf Call Ag		5/27/21 Conf. call w/ Ag Pool Members/ Legal	8470 · Ag Meeting Attend -Special	125.00
Bill	05/28/2021	5/28 Court Hearing		5/28/21 Court Hearing	6311 · Board Member Compensation	125.00
<b>TOTAL</b>						<b>3,000.00</b>
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22872</b>	<b>PREMIERE GLOBAL SERVICES</b>	<b>30609709</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/28/2021	30609709		Fee - General	6022 · Telephone	39.00
				Fee - Confidential	6022 · Telephone	39.00
				Call shortfalls	6022 · Telephone	78.00
				Service Fee	6022 · Telephone	17.00
<b>TOTAL</b>						<b>173.00</b>
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22873</b>	<b>READY REFRESH BY NESTLE</b>	<b>0023230253</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/31/2021	0023230253		Office Water Bottle - May 2021	6031.7 · Other Office Supplies	211.46
<b>TOTAL</b>						<b>211.46</b>
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22874</b>	<b>ROGERS, PETER</b>	<b>Board Member Compensation</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/25/2021	5/25 Appro Pool Mtg		5/25/21 AP members meeting w/Board Chair	6311 · Board Member Compensation	125.00
Bill	05/27/2021	5/27 Board Meeting		5/27/21 Board Meeting	6311 · Board Member Compensation	125.00
<b>TOTAL</b>						<b>250.00</b>
<b>Bill Pmt -Check</b>	<b>06/08/2021</b>	<b>22875</b>	<b>RR FRANCHISING, INC.</b>	<b>99954</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/01/2021	99954		Monthly cleaning of office and annex	6024 · Building Repair & Maintenance	915.00
<b>TOTAL</b>						<b>915.00</b>

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Type	Date	Num	Name	Memo	Account	Paid Amount
Bill Pmt -Check	06/08/2021	22876	SPECTRUM BUSINESS	2031978052321	1012 · Bank of America Gen'l Ckg	
Bill	05/31/2021	2031978052321		5/23/21-6/22/21	6053 · Internet Expense	804.52
TOTAL						804.52
Bill Pmt -Check	06/08/2021	22877	STATE COMPENSATION INSURANCE FUND	1970970-20	1012 · Bank of America Gen'l Ckg	
Bill	06/01/2021	179097020		Premium 5/26/21 - 6/26/21	60183 · Worker's Comp Insurance	514.25
TOTAL						514.25
Bill Pmt -Check	06/08/2021	22878	THE HOWARD E. NYHART COMPANY, INC.	0168120	1012 · Bank of America Gen'l Ckg	
Bill	05/31/2021	0168120		GASB 75 OPEB Reporting	6062.5 · Audit Support Services	1,500.00
TOTAL						1,500.00
Bill Pmt -Check	06/08/2021	22879	WESTERN MUNICIPAL WATER DISTRICT	Board Member Compensation	1012 · Bank of America Gen'l Ckg	
Bill	05/27/2021	5/27 Board Mtg		5/27/21 Board meeting - Galleano	6311 · Board Member Compensation	125.00
TOTAL						125.00
Bill Pmt -Check	06/08/2021	22880	GEYE, BRIAN	Non-Ag Pool Member Compensation	1012 · Bank of America Gen'l Ckg	
Bill	04/08/2021	4/08 Non Ag Mtg		4/08/21 Non-Ag Pool Meeting	8511 · Non-Ag Pool Member Compensation	125.00
Bill	04/15/2021	4/15 Pool Chairs Mtg		4/15/21 Board Officers and Pool Chairs mtg.	8511 · Non-Ag Pool Member Compensation	125.00
Bill	04/30/2021	4/30 Court Hearing		4/30/21 Court Hearing	8511 · Non-Ag Pool Member Compensation	125.00
TOTAL						375.00
General Journal	06/12/2021	06/12/2021	ADP, LLC	Banking-Payroll and Taxes for 05/30/21-06/12/21	1012 · Bank of America Gen'l Ckg	
				Direct Deposits for 05/30/21-06/12/21	1012 · Bank of America Gen'l Ckg	30,093.60
				Payroll Taxes for 05/30/21-06/12/21	1012 · Bank of America Gen'l Ckg	11,400.76
			ICMA-RC	457(f) EE Deductions for 05/30/21-06/12/21	1012 · Bank of America Gen'l Ckg	5,759.32
			ICMA-RC	401(a) EE Deductions for 05/30/21-06/12/21	1012 · Bank of America Gen'l Ckg	1,648.79
TOTAL						48,902.47
Bill Pmt -Check	06/15/2021	22881	ACCENT COMPUTER SOLUTIONS, INC.	144357	1012 · Bank of America Gen'l Ckg	
Bill	05/31/2021	144357		Sharepoint project services	6052.6 · IT Services/Projects	150.00
TOTAL						150.00
Bill Pmt -Check	06/15/2021	22882	EGOSCUE LAW GROUP, INC.	May 2021	1012 · Bank of America Gen'l Ckg	
Bill	05/31/2021	General Counsel		Ag Pool Legal Services - May 2021	8467 · Ag Legal & Technical Services	42,750.00
TOTAL						42,750.00
Bill Pmt -Check	06/15/2021	22883	FIRST LEGAL NETWORK LLC	40049485	1012 · Bank of America Gen'l Ckg	
Bill	05/31/2021	40049485		Court filings for May 2021	6061.5 · Court Filing Services	1,239.52

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TOTAL						1,239.52
Bill Pmt -Check	06/15/2021	22884	HUYNH, DAVID	Employee Reimbursement	1012 · Bank of America Gen'l Ckg	
Bill	06/11/2021			Tuition reimbursement	6193 · Employee Training	2,000.00
TOTAL						2,000.00
Bill Pmt -Check	06/15/2021	22885	KAVOUNAS, PETER	PE License Renewal	1012 · Bank of America Gen'l Ckg	
Bill	05/31/2021	PE License Renewal		PE License Renewal - Kavounas	6111 · Membership Dues	180.00
TOTAL						180.00
Bill Pmt -Check	06/15/2021	22886	RR FRANCHISING, INC.	100594	1012 · Bank of America Gen'l Ckg	
Bill	06/05/2021	100594		Electrostatic spraying of office and annex	6024 · Building Repair & Maintenance	355.00
TOTAL						355.00
Bill Pmt -Check	06/15/2021	22887	TELLEZ-FOSTER, EDGAR	Employee Reimbursement	1012 · Bank of America Gen'l Ckg	
Bill	06/08/2021	Ops Staff Mtg Reimbu		Ops staff meeting on 6/08/21	6141.3 · Admin Meetings	76.52
TOTAL						76.52
Bill Pmt -Check	06/15/2021	22888	CUCAMONGA VALLEY WATER DISTRICT	Office Lease	1012 · Bank of America Gen'l Ckg	
Bill	06/15/2021			Lease due on July 1, 2021	1422 · Prepaid Rent	7,213.72
TOTAL						7,213.72
Bill Pmt -Check	06/15/2021	22889	KESSLER ALAIR INSURANCE SERVICES, INC.	D&O Coverage-06/26/21-06/26/22	1012 · Bank of America Gen'l Ckg	
Bill	06/15/2021	D&O Coverage 21/22		D&O Coverage-06/26/21-06/30/21	6085 · Business Insurance Package	163.60
				D&O Coverage-07/01/21-06/26/21	1401 · Prepaid Insurance-Pkg	11,779.46
TOTAL						11,943.06
Bill Pmt -Check	06/15/2021	22890	LEGAL SHIELD	111802	1012 · Bank of America Gen'l Ckg	
Bill	06/15/2021	111802		Employee deductions - June 2021	60194 · Other Employee Insurance	161.40
TOTAL						161.40
Bill Pmt -Check	06/15/2021	22891	LOEB & LOEB LLP	1953230	1012 · Bank of America Gen'l Ckg	
Bill	05/31/2021	1953230		Non-Ag Pool Legal Services - May 2021	8567 · Non-Ag Legal Service	15,766.00
TOTAL						15,766.00
Bill Pmt -Check	06/15/2021	22892	STAULA, MARY L	Retiree Medical	1012 · Bank of America Gen'l Ckg	
Bill	06/30/2021			Retiree Medical	60182.4 · Retiree Medical	19.24
TOTAL						19.24
Bill Pmt -Check	06/15/2021	22893	VERIZON WIRELESS	9881215724	1012 · Bank of America Gen'l Ckg	

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Type	Date	Num	Name	Memo	Account	Paid Amount
Bill	06/15/2021	9881215724		Wireless services (4/08/21-5/04/21)	6022 · Telephone	285.48
				Wireless services (5/05/21-6/04/21)	6022 · Telephone	338.37
TOTAL						623.85
<b>Bill Pmt -Check</b>	<b>06/17/2021</b>	<b>ACH 061721</b>	<b>PUBLIC EMPLOYEES' RETIREMENT SYSTEM</b>	<b>Payor #3493</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
General Journal	06/12/2021	06/21/2021	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 05/30/21-06/12/21	2000 · Accounts Payable	8,986.84
TOTAL						8,986.84
<b>General Journal</b>	<b>06/18/2021</b>	<b>06/18/2021</b>	<b>ADP, LLC</b>	<b>ADP Tax Service for 05/29/21-582031640</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
			ADP, LLC	ADP Tax Service for 05/15/21-582031640	1012 · Bank of America Gen'l Ckg	155.50
			ADP, LLC	ADP Tax Service for 05/29/21-582031640	1012 · Bank of America Gen'l Ckg	161.55
TOTAL						317.05
<b>Bill Pmt -Check</b>	<b>06/22/2021</b>	<b>22894</b>	<b>BANK OF AMERICA</b>	<b>XXXX-XXXX-XXXX-4026</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/31/2021	XXXX-XXXX-XXXX-4026		Miscellaneous office supplies	6031.7 · Other Office Supplies	19.23
				Miscellaneous office supplies	6031.7 · Other Office Supplies	20.14
				Reg.& materials-Aldaz-CAP Course	6193 · Employee Training	1,695.00
				Miscellaneous office supplies	6031.7 · Other Office Supplies	28.91
				Lunch for Board Officers/Pool Chairs mtg.	6312 · Meeting Expenses	74.74
				Miscellaneous office supplies	6031.7 · Other Office Supplies	109.74
				Reg.-Tellez-Foster-Annual GSA Summit	6193.2 · Conference - Registration Fee	87.50
				Purchase Ipad keyboard-GM	6055 · Computer Hardware	376.05
				Staff meeting lunch 5/27/21	6141.3 · Admin Meetings	269.12
				Miscellaneous office supplies	6031.7 · Other Office Supplies	22.77
				Floral arrangement-Board Member Galleano	6312 · Meeting Expenses	294.13
				Lunch for WM Business discussion	6909.1 · OBMP Meetings	91.48
TOTAL						3,088.81
<b>Bill Pmt -Check</b>	<b>06/22/2021</b>	<b>22895</b>	<b>FRONTIER COMMUNICATIONS</b>	<b>909-484-3890-050914-5</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/18/2021	90948438900509145		Office fax	6022 · Telephone	169.29
TOTAL						169.29
<b>Bill Pmt -Check</b>	<b>06/22/2021</b>	<b>22896</b>	<b>GREAT AMERICA LEASING CORP.</b>	<b>29524444</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/16/2021	29524444		Invoice for May 2021 - standard payment	6043.1 · Ricoh Lease Fee	1,481.41
				Supply freight fee	6043.2 · Ricoh Usage & Maintenance Fee	8.57
TOTAL						1,489.98
<b>Bill Pmt -Check</b>	<b>06/22/2021</b>	<b>22897</b>	<b>PETTY CASH</b>	<b>2869-2883</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/21/2021	2869-2883		Miscellaneous office supplies	6031.7 · Other Office Supplies	107.62
				Supplies for staff meetings, misc. supplies	6141.3 · Admin Meetings	105.97

**CHINO BASIN WATERMASTER**  
**Cash Disbursements For The Month of**  
**June 2021**

Financial Report - B6  
For Informational Purposes Only

Type	Date	Num	Name	Memo	Account	Paid Amount
				Lunch for CBWM Matters meeting	6909.1 · OBMP Meetings	69.00
				Lunch for Ag Pool Legal meeting	8412 · Meeting Expenses	23.70
TOTAL						<u>306.29</u>
<b>Bill Pmt -Check</b>	<b>06/22/2021</b>	<b>22898</b>	<b>STANDARD INSURANCE CO.</b>	<b>Policy # 00-649299-0009</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/21/2021	006492990009		Policy # 00-649299-0009	60191 · Life & Disab.Ins Benefits	915.07
TOTAL						<u>915.07</u>
<b>Bill Pmt -Check</b>	<b>06/22/2021</b>	<b>22899</b>	<b>UNION 76</b>	<b>Vehicle Fuel</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/31/2021	7076224530355049		March/April 2021	6175 · Vehicle Fuel	231.96
Bill	05/31/2021	7076224530355049		May 2021	6175 · Vehicle Fuel	188.85
TOTAL						<u>420.81</u>
<b>Bill Pmt -Check</b>	<b>06/22/2021</b>	<b>22900</b>	<b>UNITED HEALTHCARE</b>	<b>052580048032</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/22/2021	052580048032		Dental Insurance Premium - July 2021	60182.2 · Dental & Vision Ins	732.28
TOTAL						<u>732.28</u>
<b>Bill Pmt -Check</b>	<b>06/22/2021</b>	<b>22901</b>	<b>WAXIE SANITARY SUPPLY</b>	<b>80097981</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/22/2021	80097981		Air Purifier-qty of 5, with stands - COVID-19	6038 · Other Office Equipment	3,708.04
TOTAL						<u>3,708.04</u>
<b>Bill Pmt -Check</b>	<b>06/22/2021</b>	<b>22902</b>	<b>BROWNSTEIN HYATT FARBER SCHRECK</b>		<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	05/31/2021	848267		848267	6275 · BHFS Legal - Advisory Committee	1,701.00
Bill	05/31/2021	848268		848268	6375 · BHFS Legal - Board Meeting	5,580.90
Bill	05/31/2021	848269		848269	8375 · BHFS Legal - Appropriative Pool	1,782.00
Bill	05/31/2021	848270		848270	8475 · BHFS Legal - Agricultural Pool	1,648.35
Bill	05/31/2021	848271		848271	8575 · BHFS Legal - Non-Ag Pool	1,648.35
Bill	05/31/2021	848272		848272	6071 · BHFS Legal - Court Coordination	10,262.70
				Filing Fee - Herrema	6071 · BHFS Legal - Court Coordination	15.00
				Court call - Wildermuth	6071 · BHFS Legal - Court Coordination	94.00
				Court call - Bowcock	6071 · BHFS Legal - Court Coordination	94.00
				Court call - Herrema	6071 · BHFS Legal - Court Coordination	94.00
				Court call - Kuhn	6071 · BHFS Legal - Court Coordination	94.00
				Court call - Elie	6071 · BHFS Legal - Court Coordination	94.00
				Court call - Pierson	6071 · BHFS Legal - Court Coordination	94.00
				Court call - Wilson	6071 · BHFS Legal - Court Coordination	94.00
				Court call - Slater	6071 · BHFS Legal - Court Coordination	94.00
Bill	05/31/2021	848273		848273	6907.39 · Recharge Master Plan	89.10
Bill	05/31/2021	848274		848274	6907.41 · Prado Basin Habitat Sustain	2,705.40
Bill	05/31/2021	848275		848275	6907.45 · OBMP Update	15,826.05

**CHINO BASIN WATERMASTER**  
**Cash Disbursements For The Month of**  
**June 2021**

Financial Report - B6  
For Informational Purposes Only

Type	Date	Num	Name	Memo	Account	Paid Amount
				09/26/20 - Lodging- Slater	6907.45 · OBMP Update	200.00
				10/02/20 - Lodging - Slater	6907.45 · OBMP Update	225.00
				10/21/20 - Lodging - Slater	6907.45 · OBMP Update	200.00
Bill	05/31/2021	848276		848276	6078.25 · Ely 3 Basin Investigation	2,819.25
Bill	05/31/2021	848264		848264	6078 · BHFS Legal - Miscellaneous	28,152.90
Bill	05/31/2021	848265		GM Evaluation	6073 · BHFS Legal - Personnel Matters	5,791.50
				Professional Services Contract	6073 · BHFS Legal - Personnel Matters	1,644.30
Bill	05/31/2021	848266		848266	6907.36 · Santa Ana River Habitat	178.20
TOTAL						81,222.00
<b>Bill Pmt -Check</b>	<b>06/23/2021</b>	<b>ACH 062321</b>	<b>PUBLIC EMPLOYEES' RETIREMENT SYSTEM</b>	<b>Payor #3493</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
Bill	06/01/2021	16442826		Annual Unfunded Accrued Liability-Plan 3299	60180 · Employers PERS Expense	7,622.21
TOTAL						7,622.21
<b>General Journal</b>	<b>06/30/2021</b>	<b>06/30/2021</b>	<b>WAGE WORKS</b>	<b>Wage Works FSA - June 2021</b>	<b>1012 · Bank of America Gen'l Ckg</b>	
				Wage Works FSA - June 2021	1012 · Bank of America Gen'l Ckg	572.32
				Wage Works FSA - June 2021	1012 · Bank of America Gen'l Ckg	572.32
				Wage Works FSA - June 2021	1012 · Bank of America Gen'l Ckg	81.50
TOTAL						1,226.14
<b>Total Disbursements:</b>						<b>567,472.83</b>



# CHINO BASIN WATERMASTER

- 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

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PETER KAVOUNAS, P.E.  
General Manager

## STAFF REPORT

DATE: July 15, 2021

TO: Advisory Committee Members

SUBJECT: Application: Water Transaction – Nicholson Family Trust-Exempt Marital Trust to Fontana Water Company (Consent Calendar Item I.C.)

### SUMMARY:

Issue: The purchase of 6.5 acre-feet of water from Nicholson Family Trust-Exempt Marital Trust by Fontana Water Company. This purchase is made from Nicholson Family Trust-Exempt Marital Trust's Annual Production Right/Operating Safe Yield.

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

Financial Impact: None

### Future Consideration

**Advisory Committee – July 15, 2021:** Advice and assistance

**Watermaster Board – July 22, 2021:** Approval [Within WM Duties and Powers]

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### ACTIONS:

**Appropriative Pool – June 10, 2021:** Unanimously recommended Advisory Committee to recommend to the Watermaster Board to approve.

**Non-Agricultural Pool – June 10, 2021:** Unanimously recommended its representatives to support at Advisory Committee and Watermaster Board subject to changes they deem appropriate.

**Agricultural Pool – June 10, 2021:** Unanimously recommended Advisory Committee to recommend to the Watermaster Board to approve.

**Advisory Committee – July 15, 2021:**

**Watermaster Board – July 22, 2021:**

*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*

## BACKGROUND

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

Where there is no material physical injury, 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 May 25, 2021. Notice of the transaction was transmitted electronically on June 4, 2021 along with the materials submitted by the requestors.

## 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.

At their June 10, 2021 Pool Committee meetings, the Appropriative and Overlying (Agricultural) Pools 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.

## 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 2020 - 2021**

**DATE REQUESTED:** May 25, 2021

**AMOUNT REQUESTED:** 6.5 Acre-Feet

<b>TRANSFER FROM (SELLER / TRANSFEROR):</b> Nicholson Family Trust-Exempt Marital Trust			<b>TRANSFER TO (BUYER / TRANSFEREE):</b> Fontana Water Company		
Name of Party Post Office Box 6010			Name of Party 15966 Arrow Route		
Street Address El Monte CA 91734			Street Address Fontana CA 92335		
City	State	Zip Code	City	State	Zip Code
(626) 448-6183			(909) 822-2201		
Telephone (626) 448-5530			Telephone (909) 823-5046		
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:**

Varies \_\_\_\_\_ 2020-2021 \_\_\_\_\_  
Projected Rate of Recapture \_\_\_\_\_ Projected Duration of Recapture \_\_\_\_\_

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

Pumping \_\_\_\_\_

**PLACE OF USE OF WATER TO BE RECAPTURED:**

Chino Basin Management Zone 3 \_\_\_\_\_

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

N/A \_\_\_\_\_

**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:

Recent perchlorate levels range from ND to 9.5 ppb and nitrate levels range from 0.47 to 11.0 ppm.

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

Static water levels range from 317bgs to 692 bgs as of January 2021.

**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?

N/A \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**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**

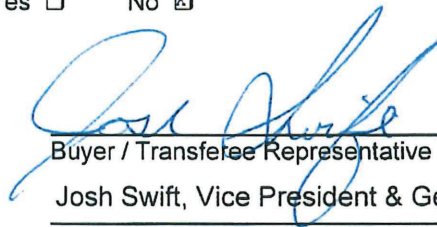
Yes  No

Robert W. Nicholson Digitally signed by Robert W. Nicholson  
Date: 2021.05.26 17:13:34 -07'00'

\_\_\_\_\_  
Seller / Transferor Representative Signature

**Robert Nicholson, Trustee**

\_\_\_\_\_  
Seller / Transferor Representative Name (Printed)



\_\_\_\_\_  
Buyer / Transferee Representative Signature

**Josh Swift, Vice President & General Manager**

\_\_\_\_\_  
Buyer / Transferee Representative Name (Printed)

**TO BE COMPLETED BY WATERMASTER STAFF:**

DATE OF WATERMASTER NOTICE: June 4, 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:

June 4, 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: **May 25, 2021**

Date of this notice: **June 4, 2021**

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

- Notice of Sale or Transfer – The purchase of 6.5 acre-feet of water from Nicholson Family Trust-Exempt Marital Trust by Fontana Water Company. This purchase is made from Nicholson Family Trust-Exempt Marital Trust’s Annual Production Right/Operating Safe Yield.

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

Appropriative Pool: June 10, 2021

Non-Agricultural Pool: June 10, 2021

Agricultural Pool: June 10, 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, as *Contests* must be submitted a minimum of fourteen (14) days prior to the Advisory Committee’s consideration of an *Application*, parties to the Judgment may file *Contests* to the *Application* with Watermaster *within seven calendar days* of when the last pool committee considers it. Any *Contest* must be in writing and state the basis of the *Contest*.

Watermaster address:

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

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

# CHINO BASIN WATERMASTER

## I. CONSENT CALENDAR

### D. APPLICATION: RECHARGE – SAN ANTONIO WATER COMPANY



# CHINO BASIN WATERMASTER

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

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PETER KAVOUNAS, P.E.  
General Manager

## STAFF REPORT

DATE: July 15, 2021

TO: Advisory Committee Members

SUBJECT: Application for Recharge – San Antonio Water Company (Consent Calendar Item I.D.)

### SUMMARY:

Issue: On May 18, 2021, San Antonio Water Company submitted an Application for Recharge for up to 2,500 acre-feet to be recharged into basins along the San Antonio Channel.

Recommendation: Recommend to the Watermaster Board to approve San Antonio Water Company's Application for Recharge and direct Watermaster staff to account for up to 2,500 AFY of supplemental water to be recharged in San Antonio Water Company's existing Local Supplemental Storage account from July 2021 to July 2026.

Financial Impact: None

### Future Consideration

**Advisory Committee – July 15, 2021:** Advice and Assistance

**Watermaster Board – July 22, 2021:** Approval [Within WM Duties and Powers]

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### ACTIONS:

**Appropriative Pool – June 10, 2021:** Unanimously recommended Advisory Committee to recommend Board approval.

**Non-Agricultural Pool – June 10, 2021:** Unanimously recommended Advisory Committee and Board representatives to support subject to change they deem necessary.

**Agricultural Pool – June 10, 2021:** Unanimously recommended Advisory Committee to recommend Board approval.

**Advisory Committee – July 15, 2021:**

**Watermaster Board – July 22, 2021:**

*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*

## BACKGROUND

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

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

## DISCUSSION

On May 18, 2021, San Antonio Water Company (SAWCo) submitted an Application for Recharge for up to 2,500 acre-feet per year from July 2021 to July 2026. The Application states that the method of recharge is surface spreading into the Upland and Montclair Basins located in Management Zone 1 (MZ-1) of the Chino Basin and identifies the source of water to be local supplemental groundwater from the San Antonio Creek.

The amount recharged will be subject to evaporative losses as consistent with all surface water recharge in Chino Basin. This water can be used to offset over-production during the same fiscal year it was imported, or should the water not be used in the fiscal year for over-production, the water will then be placed into storage. It should be noted that the volume of water in storage in Chino Basin is quickly approaching the maximum that has been evaluated under CEQA. As such, it is possible that at the time water is available for the contemplated recharge, Watermaster may not be able to approve a storage agreement. The applicant is advised to confirm with Watermaster in advance of any recharge. Pursuant to the Peace II Agreement and achievement of Hydraulic Control, losses will be applied to all water placed into a Local Supplemental Storage Account in a manner consistent to all other water held in storage.

West Yost completed a MPI analysis on June 02, 2021 declaring no negative impacts to the Basin from this recharge event (see Attachment 3.) The deliveries of the water will be monitored and accounted for in coordination with IEUA and SAWCo through Watermaster's Form 2b and Form 2c (Report of Supplemental Water Recharge by a Person).

Once approved, SAWCo must complete Form 2b *Request to Recharge Supplemental Water by a Person to Watermaster* for each recharge event during the Applications proposed period. Form 2b will be used by Watermaster staff to coordinate with SAWCo and the Inland Empire Utility Agency (IEUA) to develop a Recharge Operations Plan. During the Recharge event, Watermaster and IEUA will collect data to properly ensure the water is accounted for. Upon completion of the recharge event, SAWCo will be required to submit Form 2c *Report of Supplemental Water Recharge by a Person to Watermaster* for final review and accounting.

At their June 10, 2021 Pool Committee meetings, the Appropriative and Overlying (Agricultural) Pools unanimously recommended Advisory Committee to recommend to the Watermaster Board to approve the proposed application; the Overlying (Non-Agricultural) Pool unanimously recommended its representatives to support at Advisory Committee and Watermaster Board subject to changes they deem appropriate.

## ATTACHMENTS

1. SAWCo Recharge Application Dated May 18, 2021
2. Clinical Laboratory of San Bernardino, Inc. Water Quality Report
3. June 02, 2021 Letter from West Yost to Watermaster: Analysis of Material Physical Injury for the San Antonio Water Company (SAWCo) Recharge Application, Submitted to the Chino Basin Watermaster on May 18, 2021
4. Notice Forms

*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*

**Form 2a - Application for Supplemental Water Recharge**

<b>Applicant Information and Recharge Request</b>			
Person	San Antonio Water Company	Date Requested	05/13/2021
Contact (individual)	Brian Lee	Date Approved	
Street Address	139 North Euclid Avenue	Proposed Period of Time Covered by Recharge Application (mm/yyyy to mm/yyyy)	07/22/2021 to 06/31/2026
City	Upland		
State	CA		
Zip Code	91786	Requested Total Amount of Recharge Over the Application Period (AF)	2,500 / yr 12,500 total
Telephone	909.982.4107	Approved Total Amount of Recharge Over the Application Period (AF)	
Fax	909.920.3047		
Email	blee@sawaterco.com		

<b>Source(s) of Supply (check box and provide supporting information)</b>	
<input type="checkbox"/>	State Water Project
<input type="checkbox"/>	Colorado River Aqueduct
<input checked="" type="checkbox"/>	Local Supplemental (identify source and attach source water quality characterization including TDS and TN; use as many sheets as necessary)
<input type="checkbox"/>	Recycled Water (identify source and attach source water quality characterization including TDS and TN; use as many sheets as necessary)
<input type="checkbox"/>	Other (identify source and attach source water quality characterization including TDS and TN; use as many sheets as necessary)

<b>Method of Recharge (check box and provide supporting information)</b>	
<input checked="" type="checkbox"/>	Surface Spreading
	Recharge Basin Name(s) <span style="float: right;">Upland &amp; Montclair Basins</span>
	Expected Period of Recharge (mm/dd to mm/dd) <span style="float: right;">07/22/20 to 06/31/26</span>
	Depth to Water in Recharge Area (ft-bgs)
	Water Quality in Recharge Area (attach characterization)
<input type="checkbox"/>	Injection
	Well Names and Locations (attach well completion report if not on file with the Watermaster)
	Expected Period of Recharge (mm/dd to mm/dd)
	Depth to Water in Recharge Area (ft-bgs)
	Water Quality in Recharge Area (attach characterization)
<input type="checkbox"/>	In-Lieu Exchange
	Treatment Plant and Turnout
	Share of Safe Yield (percent and AFY)
	Carryover Right, if Applicable (AF)
	Water in Storage (AF)
	Pumping Capacity (mgd or AFM)
	Expected Period of Recharge (mm/dd to mm/dd)
	Depth to Water in Area Impacted by In-Lieu Recharge (ft-bgs)
	Water Quality in Area Impacted by In-Lieu Recharge (attach characterization)

**Form 2a - Application for Supplemental Water Recharge**

**Material Physical Injury**

Is the applicant aware of any potential material physical injury to a Party to the Judgment or the Basin that may be caused by the action covered by the Application?

YES  NO

If yes what are the proposed mitigation measures, if any, that might reasonably be imposed to ensure that the action does not result in Material Physical Injury to a Party or the Basin (provide list of mitigation measures and rational either below or attach one to this application)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

BY: **Brian C. Lee** Digitally signed by Brian C. Lee  
Date: 2021.05.13 10:24:30  
-07'00'

Applicant

May 13, 2021

Date

**To Be Completed by Watermaster**

Is the Person a Party to the Judgment that has:

Previously contributed to the implementation of the OBMP?

YES  NO

Is in compliance with their continuing covenants under the Peace Agreement?

YES  NO

(If answer to previous question is NO)

Paid or delivered to Watermaster "financial equivalent" consideration to offset the past performance prior to the OBMP implementation?

YES  NO

Promised continued future compliance with Watermaster Rules and Regulations?

YES  NO

Date of Approval from Appropriative Pool (mm/dd/yyyy) \_\_\_\_\_

Date of Approval from Overlying Non-Ag Pool (mm/dd/yyyy) \_\_\_\_\_

Date of Approval from Overlying Ag Pool (mm/dd/yyyy) \_\_\_\_\_

Hearing Date (if any) (mm/dd/yyyy) \_\_\_\_\_

Date of Approval by Advisory Committee (mm/dd/yyyy) \_\_\_\_\_

Date of Approval from Board (mm/dd/yyyy) \_\_\_\_\_

Recharge Agreement Number \_\_\_\_\_





# Clinical Laboratory of San Bernardino, Inc.

Celebrating 50 Years of Analytical Service 1967-2017

San Antonio Water Co.  
139 N Euclid Ave  
Upland CA, 91786

Project: Routine  
Sub Project:  
Project Manager: Brian Lee

Work Order: 20G1278  
Received: 07/14/20 17:04  
Reported: 07/24/20

## V - Screen

20G1278-01 (Water)

Sample Date: 07/14/20 11:30

Sampler: Chad

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
<b>General Chemical Analyses</b>									
Alkalinity, Total (as CaCO <sub>3</sub> )	SM 2320 B	150	5.0		mg/L	07/22/20	07/22/20	2029088	
Ammonia as N (NH <sub>3</sub> -N)	EPA 350.1	ND	0.50		mg/L	07/23/20	07/23/20	2030090	
Bicarbonate (HCO <sub>3</sub> )	SM 2320 B	170	5.0		mg/L	07/22/20	07/22/20	2029088	
Carbonate (CO <sub>3</sub> )	SM 2320B	ND	5.0		mg/L	07/22/20	07/22/20	2029088	
Chloride (Cl)	EPA 300.0	1.0	1.0	500	mg/L	07/15/20	07/15/20	2029091	
Specific Conductance (E.C.)	SM 2510B	300	2.0	1600	umhos/cm	07/15/20	07/15/20	2029088	
Fluoride (F)	EPA 300.0	0.34	0.10	2	mg/L	07/15/20	07/15/20	2029091	
Hydroxide (OH)	SM 2320B	ND	5.0		mg/L	07/22/20	07/22/20	2029088	
MBAS (LAS Mole. Wt 340.0)	SM 5540C	ND	0.10	0.5	mg/L	07/15/20	07/15/20	2029090	
Nitrate as N (NO <sub>3</sub> -N)	EPA 300.0	ND	0.40	10	mg/L	07/15/20	07/15/20	2029091	
Nitrite as N (NO <sub>2</sub> -N)	EPA 300.0	ND	0.40	1	mg/L	07/15/20	07/15/20	2029091	
Organic Nitrogen	Calculation	ND	1.5		mg/L	07/23/20	07/23/20	[CALC]	
pH (Lab)	SM 4500HB	8.4			pH Units	07/15/20	07/15/20	2029088	
Sulfate (SO <sub>4</sub> )	EPA 300.0	19	0.50	500	mg/L	07/15/20	07/15/20	2029091	
Total Filterable Residue/TDS	SM 2540C	170	5.0	1000	mg/L	07/16/20	07/17/20	2029124	
Total Kjeldahl Nitrogen	EPA 351.2	ND	1.0		mg/L	07/20/20	07/20/20	2029167	
Total Organic Carbon	SM 5310B	ND	0.30		mg/L	07/15/20	07/16/20	2029082	

## Metals

Boron (B)	EPA 200.7	ND	100		ug/L	07/21/20	07/21/20	2030050	
Calcium (Ca)	EPA 200.7	49	1.0		mg/L	07/16/20	07/16/20	2029131	
Copper (Cu)	EPA 200.7	ND	50	1000	ug/L	07/21/20	07/21/20	2030050	
Iron (Fe)	EPA 200.7	ND	100	300	ug/L	07/21/20	07/21/20	2030050	
Magnesium (Mg)	EPA 200.7	8.3	1.0		mg/L	07/16/20	07/16/20	2029131	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	07/21/20	07/21/20	2030050	
Potassium (K)	EPA 200.7	1.9	1.0		mg/L	07/16/20	07/16/20	2029131	
Silica (SiO <sub>2</sub> )	EPA 200.7	15	0.50		mg/L	07/22/20	07/22/20	2030087	
Sodium (Na)	EPA 200.7	4.8	1.0		mg/L	07/16/20	07/16/20	2029131	
Zinc (Zn)	EPA 200.7	ND	50	5000	ug/L	07/21/20	07/21/20	2030050	

## Anion / Cation Balance

Hardness, Total (as CaCO <sub>3</sub> )	Calculated	160			mg/L	07/16/20	07/16/20	[CALC]	
Total Anions	Calculated	3.23			meq/L	07/16/20	07/22/20	[CALC]	
Total Cations	Calculated	3.39			meq/L	07/16/20	07/16/20	[CALC]	
% difference	Calculated	4.9				07/16/20	07/22/20	[CALC]	

pH (Lab) was analyzed ASAP but received and analyzed past the 15 minute hold time.

ND Analyte NOT DETECTED at or above the reporting limit

Bob Glaubig  
Laboratory Director







23692 Birtcher Drive  
Lake Forest CA 92630

949.420.3030 phone  
530.756.5991 fax  
westyost.com

June 2, 2021

Project No.: 941-80-20-04  
SENT VIA: EMAIL

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

**SUBJECT: Analysis of Material Physical Injury for the San Antonio Water Company (SAWC) Recharge Application, Submitted to the Chino Basin Watermaster on May 13, 2021 (hereafter May 13, 2021 recharge application)**

Dear Mr. Kavounas:

Pursuant to your direction, Watermaster's Engineer conducted a material physical injury (MPI) analysis of the SAWC's May 13, 2021 recharge application. This MPI analysis was completed pursuant to the Watermaster Rules and Regulations and the Peace Agreement. Specifically, Article 10 of the Watermaster Rules and Regulations (paragraph 10.10) requires that:

*"[...] Watermaster prepare a written summary and analysis (which will include an analysis of the potential for material physical injury) of the Application and provide the Parties with a copy of the written summary and advanced notice of the date of Watermaster's scheduled consideration and possible action on any pending Applications."*

Per the Peace Agreement (page 8), material physical injury is defined as:

*"[...] material injury that is attributable to Recharge, Transfer, storage and recovery, management, movement or Production of water or implementation of the OBMP, including, but not limited to, degradation of water quality, liquefaction, land subsidence, increases in pump lift and adverse impacts associated with rising groundwater."*

The MPI analysis presented herein is based on our professional experience and judgment in the Chino Basin, including the collection and analysis of monitoring data, past evaluations of Chino Basin storage programs, groundwater modeling of various groundwater management alternatives in the Chino Basin, and prior MPI analyses.

## SAWC'S RECHARGE APPLICATION OF MAY 13, 2021

The SAWC proposes to recharge up to 12,500 acre-feet (af) at a rate of 2,500 af per year (afy) of San Antonio Creek water into the Chino Basin during the five-year period of July 2021 through June 2026. The SAWC proposes to divert San Antonio Creek water through its existing non-potable system and subsequently discharge it to the concrete-lined reach of San Antonio Creek located downstream of the Pomona Valley Protective Association (PVPA) diversion facilities and upstream of the College Heights and Upland Basins. The SAWC proposes to recharge this water in the Upland Basin and Montclair Basins 1-4. Diversions into the Upland Basin would occur through the existing San Antonio Creek diversion into Upland Basin. Diversions into the Montclair Basins would occur through the existing San Antonio Creek diversion into Montclair Basin 1 and subsequently be routed to other basins in the Montclair Basins complex. The SAWC will need to coordinate their proposed diversions for recharge with the Inland Empire Utilities Agency (IEUA), the Chino Basin Water Conservation District, the City of Upland, and Watermaster to ensure that their water is diverted as proposed, measured and accounted for, and its recharge activities do not interfere with other recharge operations and stormwater management.

Watermaster classifies the water proposed to be recharged by the SAWC as supplemental water; therefore, the proposed recharge will contribute to Watermaster's Peace II obligation to recharge 6,500 afy of supplemental water in MZ1.

Watermaster's Engineer evaluated the following impacts to determine the potential for MPI from the proposed recharge:

- Groundwater level impacts (liquefaction, land subsidence, and increases in pump lift)
- Balance of recharge and discharge in every area and subarea
- Water quality impacts

### Groundwater Level Impacts (Liquefaction, Land Subsidence, and Increases in Pump Lift)

The proposed project will produce a localized increase in groundwater levels in the vicinity of the recharge basins where the recharge occurs. The temporary increase in groundwater levels will be followed by a return to the groundwater levels that would occur had the water not been recharged. The impacts of these localized changes in groundwater levels is described below:

- *Liquefaction.* As of April 2021, the depth to groundwater is about 690 feet below ground surface (bgs) beneath the Upland Basin and about 560 ft-bgs beneath the Montclair Basins. Provided that SAWC conducts recharge at these basins such that groundwater levels remain below 50 feet bgs,<sup>1</sup> there will be no threat of liquefaction due to the localized increases in groundwater levels.
- *Land subsidence.* Land subsidence due to changes in groundwater levels typically occurs with declining groundwater levels. Thus, there will be no threat of aquifer-system compaction and land subsidence due to the localized increases in groundwater levels caused by the recharge.

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<sup>1</sup> Per the County of Riverside's 2003 Riverside County Integrated Project (RCIP) Environmental Impact Report (EIR), areas with depth to groundwater of greater than 50 feet are considered low risk for liquefaction.

- *Pumping lifts.* Because of the temporary increases in groundwater levels, pumping lifts and pumping costs may be slightly reduced for wells in the vicinity of the recharge.

## Balance of Recharge and Discharge in Every Area and Subarea

The SAWC did not provide information on how it plans to recover the recharged water, so the location of future recovery remains unknown; thus, the balance of recharge and discharge has not been analyzed.

## Water Quality Impacts

The source of the supplemental water in the SAWC's May 13, 2021 recharge application is San Antonio Creek water diverted upstream of San Antonio Dam. West Yost obtained water quality data of the San Antonio Creek water from SAWC and the Watermaster's database for the period 2016-2021. These data indicate no exceedances of primary California Title 22 maximum contaminant levels (MCLs).

### *Impacts to Receiving Waters*

The proposed recharge will likely improve the general water quality in MZ2 and the Chino Basin. We compared observed concentrations of chemicals regulated under Title 22 drinking water regulations at Monte Vista Water District (MVWD) wells located near the Upland and Montclair Basins to the MCLs. Contaminants with observations exceeding MCLs included 1,2,3-Trichloropropane (TCP), 1,2-Dibromo-3-chloropropane (DBCP), nitrate, and perchlorate—with all being commonly observed contaminants in areas previously used in citrus cultivation in the Chino Valley area.

Exhibit 5-11 from the 2018 State of the Basin Report (WEI, 2019)<sup>2</sup> shows the maximum observed TCP concentration at municipal wells in the Chino Basin during the five-year period of July 2013 to June 2018. Review of this exhibit indicates that several wells in the northwest area of the Chino Basin have TCP concentrations that exceed the California maximum contaminant level (MCL) of 0.005 ugi. The potential source(s) of TCP contamination in groundwater in this area were investigated in 2019 and it was concluded that the likely source of the TCP appears to be from land applications of soil fumigants.<sup>3</sup> The investigation also concluded it is unlikely that managed aquifer recharge (MAR) operations in the area will have a significant impact on the TCP concentrations at MVWD wells. And, that if MVWD continues to produce groundwater as they indicated in the recent 2020 Storage Management Plan, it is unlikely that MAR operations in the area will have a significant impact on the TCP concentrations outside of this area.

The proposed recharge of 2,500 af is not unusually large compared to historical recharge at the College Heights, Upland, and Montclair spreading basins, and it will not significantly change the direction and speed of groundwater flow in the area between the recharge basins and the wells owned by the MVWD.

Additionally, Watermaster recently conducted a groundwater modeling study to evaluate a 100,000 af storage and recovery program in the Chino Basin. The study concluded that the "displacements [of contaminant plumes due to the storage and recovery program] are negligible and are not potential MPI."<sup>4</sup> Based on these results and the location and magnitude of the proposed recharge, our professional opinion

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<sup>2</sup> <http://www.cbwm.org/pages/reports/engineering/>

<sup>3</sup> WEI, 2019. "Investigation of the Likely Source of 1,2,3-Trichloropropane (1,2,3-TCP) in Groundwater near Recharge Basins in Management Zone 1 (MZ1) and the Impact of Managed Aquifer Recharge (MAR) on It." Technical Memorandum dated December 16, 2019.

<sup>4</sup> West Yost (2021). *Evaluation of the Local Storage Limitation Solution*. February 2021.



is that the proposed recharge will not change the direction and/or speed of movement of known contaminant plumes in the Chino Basin.

Based on this analysis, we conclude that the recharge proposed by the SAWC will not significantly impact the water quality at wells.

### ***Basin Plan Compliance***

The proposed recharge will occur in the Chino North Groundwater Management Zone (GMZ). The 2004 Regional Water Quality Control Plan for the Santa Ana Basin (Basin Plan) has maximum benefit-based TDS and nitrate (expressed as nitrogen) concentration objectives in the Chino-North GMZ of 420 milligrams per liter (mg/L) and 5 mg/L, respectively. Pursuant to the Basin Plan, Watermaster and the IEUA are required to manage artificial recharge in Chino North GMZ such that the five-year, volume-weighted average TDS and nitrate concentrations of the recycled water, imported water, and new stormwater recharged across all recharge facilities does not exceed the maximum benefit-based Basin Plan objectives.<sup>5</sup>

Based on the water quality data from SAWC and the Watermaster's database for the period 2016-2021, the estimated TDS and nitrate concentrations of the SAWC recharge is expected to be about 200 mg/L (ranging from 170 to 250 mg/L) and non-detect (ranging from non-detect to 0.44 mg/L), respectively. The current ambient TDS and nitrate concentrations in the Chino-North GMZ are 350 mg/L and 10.3 mg/L, respectively. Thus, the proposed recharge will not encroach on the current assimilative capacity or interfere with Watermaster and the IEUA's regulatory obligations.

## **Conclusion**

Based on the information available at this time, our professional opinion is that there will be no MPI due to the SAWC's proposed recharge as described in its May 13, 2021 recharge application.

Please contact me if you have any questions or concerns regarding this MPI analysis.

Sincerely,  
WEST YOST



Carolina Sanchez, PE  
Senior Engineer  
RCE #85598

cc: Justin Nakano

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<sup>5</sup> As of December 2020, the five-year, volume-weighted average TDS and nitrate concentrations of the recycled water, imported water, and new stormwater recharged across all recharge facilities are 260 mg/L and 1.6 mg/L, respectively.

***CHINO BASIN WATERMASTER***

**NOTICE**

**OF**

**APPLICATION(S)**

**RECEIVED FOR**

**RECHARGE**

Date of Notice:

June 4, 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.

**APPLICATION FOR RECHARGE**

Notification Dated: June 4, 2021

A party to the Judgment has submitted a proposed Application for Recharge 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 Application. Watermaster staff is not aware of any evidence to suggest that this recharge would cause material physical injury and hereby provides this notice to advise interested persons that this Application 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 Application begins the Watermaster process (comes before Watermaster).

## NOTICE OF APPLICATION(S) RECEIVED

Date of Application: **May 18, 2021**

Date of this notice: **June 4, 2021**

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

- Notice of Application for Recharge – On May 18, 2021 San Antonio Water Company submitted an Application for Recharge for up to 2,500 acre-feet to be recharged into basins along the San Antonio Channel.

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

Appropriative Pool: June 10, 2021

Non-Agricultural Pool: June 10, 2021

Agricultural Pool: June 10, 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, as *Contests* must be submitted a minimum of fourteen (14) days prior to the Advisory Committee's consideration of an *Application*, parties to the Judgment may file *Contests* to the *Application* with Watermaster *within seven calendar days* of when the last pool committee considers it. Any *Contest* must be in writing and state the basis of the *Contest*.

Watermaster address:

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

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



# **CHINO BASIN WATERMASTER**

## **II. BUSINESS ITEMS**

- A. FISCAL YEAR 2021/22 SCOPE AND BUDGET TO COMPLY WITH APRIL 28, 2017 COURT ORDER REGARDING SAFE YIELD RECALCULATION METHODOLOGY (DISCUSSION ONLY)**



# CHINO BASIN WATERMASTER

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

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**PETER KAVOUNAS, P.E.**  
General Manager

## STAFF REPORT

DATE: July 15, 2021

TO: Advisory Committee

SUBJECT: Fiscal Year 2021/22 Scope and Budget to Comply with April 28, 2017 Court Order Regarding Safe Yield Recalculation Methodology (Business Item II.A.)

### SUMMARY:

Issue: A scope and budget to comply with the April 28, 2017 Court Order Regarding Safe Yield Recalculation Methodology for FY 2021/22 needs to be approved.

Recommendation: Discussion only

Financial Impact: A budget amendment for \$378,811 is necessary and will be brought forth for consideration separately.

### Future Consideration

**Advisory Committee – July 15, 2021:** Discussion only

**Watermaster Board – July 22, 2021:** TBD

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### 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:**

**Watermaster Board – July 22, 2021:**

*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*

## BACKGROUND

Watermaster's proposed Engineering budget includes a new task for Fiscal Year 2021/22 to perform work to implement requirements outlined in the April 28, 2017 Court Order (Task 7614 – Support Implementation of the Safe Yield Court Order). Task 7614 has an overall budget of \$378,811 split between three subtasks:<sup>1</sup>

1. Update Safe Yield Methodology (pursuant to Paragraph 4.4 of the Court Order)
2. Annual data collection and evaluation (pursuant to Paragraph 4.5 of the Court Order)
3. Support the peer review process (pursuant to Paragraph 4.7 of the Court Order)

In May 2021, the Advisory Committee recommended that Watermaster extract Task 7614 from the Engineering budget for further review, specifically to examine the proposed scope and budget for subtask 1. The Appropriative Pool hired Mr. Thomas Harder of Thomas Harder and Company to review the proposed scope and budget for Task 7614 and provide feedback to the Watermaster Engineer (West Yost). Mr. Harder met with West Yost staff to review the assumptions, scope, and budget for Task 7614, focusing on subtask 1.

The item was presented to the three Pool Committees. The Appropriative Pool expressed to Watermaster that its consultant, Thomas Harder and Company, will send written comments on the Scope and Budget of Task 7614. The ONAP and OAP offered no comments.

On July 13, 2021, the Appropriative Pool legal counsel transmitted to Watermaster the written comments received from Thomas Harder and Company (Attachment 1). Watermaster responses to comments are shown in Attachment 2.

## DISCUSSION

After carefully reviewing the written comments from the Appropriative Pool consultant, Watermaster has concluded that no changes to the scope and budget (\$378,811) of Task 7614 are necessary.

## ATTACHMENTS

1. Thomas Harder and Company's comments on Task 7614 transmitted by Appropriative Pool Legal Counsel
2. Watermaster's Response to Comments made by Appropriative Pool's consultant

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<sup>1</sup> A more detailed description of Task 7614 and the subtask descriptions can be found in Watermaster's latest Engineering budget narrative.

July 13, 2021

Mr. John Schatz, Esq.  
P.O. Box 7775  
Laguna Niguel, CA 92607

**Re: Review of West Yost 2021/22 Scope of Work Regarding the Chino Basin Watermaster Safe Yield Reset Methodology and Recommended Modifications**

Dear Mr. Schatz,

At the request of the Chino Basin Watermaster Appropriative Pool (AP), I have prepared this letter summarizing my review of the Chino Basin Watermaster's (Watermaster's) scope of work to support implementation of the San Bernardino County Superior Court's (the Court's) Order for the Safe Yield Reset process. The draft scope of work, as developed by Watermaster's engineer West Yost, is described in "*Account 7614 – PE8/9: Storage Management/Conjunctive Use - Support Implementation of the Safe Yield Court Order*" of the Watermaster 2021/22 Fiscal Year budget. This scope of work includes three tasks:

1. Update the Safe Yield Methodology
2. Annual Data Collection and Evaluation
3. Support Peer Review Process

The AP has asked me to review the proposed scope of work and render an opinion as to whether it is consistent with the Court's Order for the Safe Yield Reset Process.<sup>1</sup> To that end, my opinions presented herein are based on a review of the following documents:

- Section 4.4 Safe Yield Reset Methodology of the Court's Order for the Safe Yield Reset Process<sup>1</sup>
- Draft Watermaster Summary of Proposed Engineering Services and Cost Estimates for Fiscal Year 2021/22; Account 7614 – PE8/9: Storage Management/Conjunctive Use - Support Implementation of the Safe Yield Court Order

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<sup>1</sup> Chino Basin Municipal Water District v. City of Chino et al., San Bernardino Superior Court Case No. RCV 51010. Notice of Rulings after Hearing on Watermaster's Motion Regarding 2015 Safe Yield Reset Agreement, Amendment of Restated Judgment, Paragraph 6. Dated April 28, 2017.

- West Yost’s detailed Draft Work Breakdown describing the individual tasks for updating the Safe Yield Reset Methodology
- TH&Co’s Technical Review of the Models and Methodology Used as a Basis for the 2020 Safe Yield Reset (letter to John Schatz dated April 23, 2020)

I have also had two phone conversations with Garrett Rapp of West Yost to get additional detail and clarity regarding their initial draft proposed scope of work.

### **Conclusion Regarding Scope of Work Consistency with Court Order**

In evaluating whether the West Yost scope of work is consistent with the Court’s Order for the Safe Yield Reset process, my primary frame of reference is Section 4.4 of the Court’s Order, which states, *“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.”* By use of the term “may,” the Order suggests that modifications to the Safe Yield Reset Methodology are optional. Supplemental changes to the methodology deemed appropriate or necessary could include any of several “best management practices” or advances in “hydrologic science,” which could encompass a broad range of topics.

Based on my review of West Yost’s proposed scope of work in support of implementing the Safe Yield Court Order, and specifically Task 1 (Task 3 in the detailed work breakdown), it appears that they have developed it, at least in part, in response to recommendations I made on behalf of the AP after reviewing the models and methodology used to reset the Safe Yield in 2020.<sup>2</sup> One of the recommendations I made in that letter was that the Watermaster should conduct a predictive uncertainty analysis on the Safe Yield estimate to “provide the basin managers a sense as to the potential variability in the estimate, for use in making decisions” (pg. 4, 2<sup>nd</sup> paragraph). Watermaster’s Task 1 scope of work includes (in part):

- The Consultant will define proposed approaches to apply the state-of-the-art practice to address model uncertainty in updating the Safe Yield and perform a preliminary assessment of their applicability to the Chino Basin.
- The Consultant will quantify the computational tractability of performing up to three proposed approaches to modeling uncertainty. This includes estimating the time and resources necessary to automate the creation and implementation of model ensembles, perturbing model parameters, and post-processing data for each of the proposed approaches.

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<sup>2</sup> TH&Co, 2020. Technical Review of the Models and Methodology Used as a Basis for the 2020 Safe Yield Reset. Letter Report Submitted to John Schatz on April 23, 2020.



In the sense that this scope of work is in response to the recommendation of the AP and reflects future advances in best management practices and hydrologic science, it is consistent with Section 4.4 of the Court Order for the Safe Yield Reset Process.

### Recommended Modifications to the Draft Scope of Work

The detailed scope of work for Task 1, as provided by West Yost, includes several tasks that are, in my opinion, the responsibility of the consultant and should not be included. The detailed breakdown for Task 1 (which is Task 3 in the detailed breakdown) is as follows:

<b>Task 3</b>	<b>Update Safe Yield Reset Methodology (CO Paragraph 4.4)</b>
3.01	Define initial conceptual approaches to address modeling uncertainty
3.02	Prepare internal TM based on findings in 3.01
3.03	Review TM with WM staff
3.04	Review literature to assess state-of-the-art modeling methods
3.05	Prepare internal TM documenting and comparing state-of-the-art methods
3.06	Review TM with WM staff
3.07	Develop alternatives for addressing uncertainty and implementation approaches
3.08	Prepare internal TM documenting alternatives developed in 3.07
3.09	Review TM with WM staff
3.10	Quantify computational tractability
3.11	Prepare internal TM documenting computational cost and time estimates developed in 3.08
3.12	Review TM with WM staff
3.13	Prepare draft methodology TM #1 for peer review
3.14	Review TM with WM staff
3.15	Revise and finalize TM, send to Watermaster parties
3.16	Prepare powerpoint presentation and agenda for first peer review workshops
3.17	Review powerpoint with WM staff
3.18	Revise and finalize powerpoint
3.19	Conduct peer review workshops #1/2
3.20	Prepare draft responses to peer review comments
3.21	Review responses with WM staff
3.22	Finalize responses to peer review comments

**COMMENT 1** Subtasks 3.04 through 3.06 (yellow highlighted tasks) involve research into state-of-the-art modeling methods, tasks that would typically be conducted by the consultant outside the formal scope of work as part of their own internal research and development. Subtasks 3.10 **COMMENT 2** through 3.12 involve the consultant testing analysis approaches with their equipment to develop computational costs and schedules, a process that should also be the responsibility of the consultant. In my opinion, these research and development tasks should not be included in the Task 1 (Task 3) scope of work. Based on the detailed draft scope of work/cost estimate provided to TH&Co, removal of these tasks would reduce the Task 1 budget by \$82,006.



Regarding the scope of work in Task 2, all of the subtasks shown below will eventually be needed and/or beneficial to update the groundwater flow model for reevaluating the Safe Yield:

<b>2</b>	<b><i>Collect data and prepare initial data collection report for FY2020/21 data (CO Paragraph 4.5)</i></b>
2.01	Inventory existing data and typical data needs from Parties
2.02	Collect and tabulate data from AP Parties' 2020 UWMPs
2.03	Coordinate with WM staff for stakeholder meetings
2.04	Prepare materials for stakeholder meetings
2.05	Conduct stakeholder meetings/workshops
2.06	Debrief with WM staff after stakeholder meetings
2.07	Coordinate with WM to develop documentation on groundwater pumping records and estimates
2.08	Collect current land use data and associated supporting data and information
2.09	Compare current land use data to projections from 2020 SYR
2.10	Prepare technical memorandum characterizing land use data
2.11	Collect data on water use practices
2.12	Prepare exhibits and text characterizing water use data
2.13	Collect groundwater pumping data
2.14	Prepare exhibits and text comparing historical groundwater pumping to past projections
2.15	Collect data to update status of regional water infrastructure
2.16	Prepare exhibits and text to describe regional infrastructure
2.17	Develop draft report
2.18	Prepare for and conduct peer review meetings on report
2.19	Respond to comments on report
2.20	Complete final report

**COMMENT 3** While the Court Order specifies annual data collection for many of the Task 2 Subtasks proposed by West Yost (e.g. groundwater pumping and cultural conditions), Subtasks 2.09 and 2.14 (yellow highlighted) are analysis tasks that, based on the description above, do not appear to be necessary now to advise “prudent management discretion.”<sup>3</sup> Further, it will be more meaningful to conduct these analyses closer to model calibration for the next Safe Yield Reset when more data are available for comparison. I recommend Subtasks 2.09 and 2.14 be removed from the scope of work.

Regarding Task 3 Support Peer Review Process, the scope of work with respect to level of effort provided by West Yost is consistent with previous peer review efforts and typical of Watermaster process. While I don’t have any comments regarding the hours, the current plan to develop the scope of work internally within Watermaster, then present it to the Appropriative Pool via a series of workshops in the Spring of 2022 after the methodology has been developed is problematic. By

<sup>3</sup> Chino Basin Municipal Water District v. City of Chino et al., San Bernardino Superior Court Case No. RCV 51010. Notice of Rulings after Hearing on Watermaster’s Motion Regarding 2015 Safe Yield Reset Agreement, Amendment of Restated Judgment, Paragraph 6. Dated April 28, 2017. Section 4.5 (c).





limiting outside technical input until after the methodology is drafted could result in peer review input that requires significant additional work, and cost, that can be avoided if technical input is provided throughout the development. I'm sensitive to Watermaster's concern that having too many representatives involved in the process can slow it down. **My recommendation is that COMMENT 4 the Watermaster include one technical representative from the Pools to participate in the development of the Safe Yield Reset methodology from the beginning to ensure that the APs concerns are addressed and to avoid delays during the peer review process prior to implementation.**

In summary, I recommend removing the following subtasks from the Watermaster 2021/22 scope of work for Account 7614 to Support Implementation of the Safe Yield Court Order:

**Task 1 (Task 3 of West Yost Detail) Update Safe Yield Methodology**

3.04 Review literature to assess state-of-the-art modeling methods	\$26,024
3.05 Prepare internal TM documenting and comparing state of the art Methods	\$13,012
3.10 Quantify computational tractability	\$34,204
3.11 Prepare internal TM documenting computational cost and time estimates developed in 3.08	<u>\$8,766</u>
Subtotal Task 1:	\$82,006

**Task 2 Annual Data Collection and Evaluation**

2.09 Compare current land use data to projections from 2020 SYR	\$11,008
2.14 Prepare exhibits and text comparing historical groundwater pumping to past projections	<u>\$9,036</u>
Subtotal Task 2:	\$20,044

I appreciate the opportunity to provide consulting services to the Chino Basin Watermaster Appropriative Pool. If you have any questions, don't hesitate to contact me at (714) 394-4449.

Sincerely,



Thomas Harder, P.G., C.HG.  
Principal Hydrogeologist



Watermaster's Response to Tom Harder Comments sent by John Schatz on 7/13/21

Comment 1: "Subtasks 3.04 through 3.06 [effort to assess state-of-the-art modeling methods] involve research into state-of-the-art modeling methods, tasks that would typically be conducted by the consultant outside the formal scope of work as part of their own internal research and development."

Response to Comment 1:

Initially, this comment does not pertain to the scope of the technical approach necessary for the Task, rather it addresses Watermaster's contract administration and the associated budget.

As to the inclusion of the subtasks as necessary to the Task, it is prudent and necessary to research and review the various "uncertainty analysis" methods applied in other groundwater basins to recommend a suitable technical approach in the Chino Basin. This type of survey and evaluation is a common task in similar technical studies. The costs to perform this work should not be borne by the Watermaster Engineer for the following reasons:

1. The application of uncertainty analyses to groundwater modeling and management is a relatively new and evolving field. The state of the art is evolving as much new work is being performed in California in the development of Groundwater Sustainability Plans to comply with SGMA.
2. The physical setting of the Chino Basin, the Watermaster's current modeling tools, and the current method to recalculate and reset the Safe Yield, are all unique to the Chino Basin. There will be pros and cons to each modeling approach to address uncertainty in the Chino Basin, and all methods may not be suitable.
3. The Watermaster Engineer is well versed in existing techniques to account for model uncertainty in the parameters related to the physical representation of the basin. However, the Safe Yield recalculation is prospective, hence, uncertainty in climate variability and cultural conditions (e.g., pumping projections, storage, outdoor water use, and land use changes) should also be considered and addressed. Understanding the new work that considers these prospective uncertainties in climate and cultural conditions will benefit this effort in the Chino Basin.
4. The technical work to recalculate the Safe Yield is subject to scrutiny and peer review; it is necessary to support all of the Watermaster's technical recommendations with thorough research and documentation before presenting to the Court.

Comment 2: "Subtasks 3.10 through 3.12 [effort to quantify computational tractability of proposed approaches to address uncertainty] involve the consultant testing analysis approaches with their

equipment to develop computational costs and schedules, a process that should also be the responsibility of the consultant.”

Response to Comment 2:

Initially, this comment does not pertain to the scope of the technical approach necessary for the Task, rather it addresses Watermaster’s contract administration and the associated budget.

As to the inclusion of the subtasks as necessary to the Task, evaluating the computational tractability of proposed approaches to address uncertainty will: (i) determine the technical feasibility of performing the work; (ii) determine the temporal feasibility of conducting the work within the required timeframe of the Safe Yield Reset; and (iii) determine the cost feasibility for the Watermaster Parties. This type of feasibility work is a common task in similar technical studies and will inform the Safe Yield recalculation and reset process.

Comment 3: “While the Court Order specifies annual data collection for many of the Task 2 Subtasks proposed by West Yost (e.g., groundwater pumping and cultural conditions), Subtasks 2.09 and 2.14 (yellow highlighted) are analysis tasks that, based on the description above, do not appear to be necessary now to advise “prudent management discretion. Further, it will be more meaningful to conduct these analyses closer to model calibration for the next Safe Yield Reset when more data are available for comparison. I recommend Subtasks 2.09 and 2.14 be removed from the scope of work.”

Response to Comment 3:

Initially, this comment does not pertain to the scope of the technical approach necessary for the Task, , rather it presents the reviewer’s perspective on how Watermaster should perform its function of implementing the Restated Judgment and the Court’s orders.

The comment is suggesting that current land use and pumping data should not be compared to land use and pumping that was assumed in the prior Safe Yield Reset. Paragraph 4.5(c) of the April 2017 Court Order (p. 16) requires that Watermaster must annually analyze the collected data to “[e]valuate the potential need for prudent management discretion to avoid or mitigate undesirable results... 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...” Without the proposed evaluations in subtasks 2.09 and 2.14, Watermaster cannot, during FY2021/22, make a determination of “material change from existing and projected conditions or threatened undesirable results.”

Comment 4: “My recommendation is that the Watermaster include one technical representative from the Pools to participate in the development of the Safe Yield Reset methodology from the beginning to ensure that the APs concerns are addressed and to avoid delays during the peer review process prior to implementation.”

Response to Comment 4:

Initially, this comment does not pertain to the scope of the technical approach necessary for the Task, rather it presents this reviewer’s perspective. The approach was presented for comment to all Pools in August 2020.

Stakeholder participation is beneficial in the potential supplement of the Safe Yield Reset methodology to incorporate advances in best management practices and hydrologic science. The scope of work was proposed to minimize costs and be time efficient. However, if the Watermaster Parties want a more robust stakeholder process, the scope and budget can be revised to include more stakeholder participation and meetings.

# CHINO BASIN WATERMASTER

## II. BUSINESS ITEMS

### B. FISCAL YEAR 2021/22 BUDGET AMENDMENTS (FORM A-21-07-01)



# CHINO BASIN WATERMASTER

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

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PETER KAVOUNAS, P.E.  
General Manager

## STAFF REPORT

DATE: July 15, 2021  
TO: Advisory Committee Members  
SUBJECT: Fiscal Year 2021/22 Budget Amendments (Form A-21-07-01) (Business Item II.B.)  
Revised from version distributed on July 9, 2021

### SUMMARY:

Issue: The Watermaster FY 2021/22 "Approved" budget needs to be increased to include the proposed work for the Safe Yield Reset Methodology evaluation and the scope of work recommended by the Ground-Level Monitoring Committee (GLMC).

Recommendations:

1. Approve the Fiscal Year 2021/22 Budget Amendment for the Safe Yield Reset methodology evaluation as ordered by the Court at its April 28, 2017 Hearing; and
2. Approve the Fiscal Year 2021/22 Budget Amendment for the scope recommended by the GLMC.

Financial Impact: This action will increase the overall "Approved" FY 2021/22 budget. The Assessment calculation will be increased by the same amount when the Assessment Package is considered in November 2021.

Future Consideration

**Advisory Committee – July 15, 2021:** Approval

**Watermaster Board – July 22, 2021:** Adoption [Advisory Committee Approval Required]

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ACTIONS:

**Appropriative Pool – May 13, 2021:** No action was taken.

**Non-Agricultural Pool – May 13, 2021:** Direct Advisory Committee and Board reps to collaborate with the other Pools on a 2021-2022 proposed budget.

**Agricultural Pool – May 13, 2021:** No action was taken.

**Advisory Committee – May 20, 2021:** Moved to approve the Fiscal Year 2021/22 budget as presented *without* the GLMC and SY Methodology work which will be brought back through the Watermaster process for reconsideration within the next two months. Passed by majority 80 volume votes in favor. Mr. Feenstra, representing the Agricultural Pool, abstained.

**Watermaster Board – May 27, 2021:** Moved to adopt the budget approved by the Advisory Committee and direct staff to take two amendments (Support Implementation of the Safe Yield Court Order and Develop a Subsidence Management Plan for Northwest MZ-1) through the Watermaster process in June. Passed by majority 8 votes in favor and 1 against.

**Appropriative Pool – June 10, 2021:** AP recommends that this item be brought back through the Pools and Advisory next month stating "We recommend that it not go to the Advisory next week but are committed to working with Watermaster staff and consultants on the final scoping with the objective of taking action in July."

**Non-Agricultural Pool – June 10, 2021:** Moved to approve staff recommendation of Business Item II.A. and to direct the Pool representatives to support at the Advisory Committee and Watermaster Board meetings subject to changes which they deem appropriate, contingent on the Appropriative Pool's action.

**Agricultural Pool – June 10, 2021:** No action was taken.

**Advisory Committee – June 17, 2021:** Not agendized

**Watermaster Board – June 24, 2021:** Not agendized

**Appropriative Pool – July 8, 2021:** Item 1. The Appropriative Pool will be providing written comments by Monday, July 12, 2021. Item 2. Unanimously moved to recommend to the Advisory Committee to approve the Fiscal Year 2021/22 Budget Amendment for the scope recommended by the GLMC.

**Non-Agricultural Pool – July 8, 2021:** Item 1. Direct Advisory and Board representatives to exercise their discretion to address the item as necessary. Item 2. Unanimously approved recommendation as presented and directed the Pool representatives to support at the Advisory Committee and Watermaster Board meetings subject to changes which they deem appropriate.

**Agricultural Pool – July 8, 2021:** Item 1. Unanimously approved to recommend to the Advisory Committee to approve the Fiscal Year 2021/22 Budget Amendment for the Safe Yield Reset methodology evaluation. Item 2. Unanimously approved to recommend to the Advisory Committee to approve the Fiscal Year 2021/22 Budget Amendment for the scope recommended by the GLMC.

**Advisory Committee – July 15, 2021:**

**Watermaster Board – July 22, 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, Advisory Committee for 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 May 20, 2021 the Advisory Committee approved the May 20, 2021 version of the FY 2021/22 budget excluding two elements of Engineering Services scope of work which will be reconsidered by the Advisory Committee within two months. The total approved budget is \$7,276,213. The two proposed elements of Engineering Services scope of work that were excluded from the approved budget relate to the Court-ordered evaluation of the Safe Yield Reset methodology and the Ground-Level Monitoring Committee scope of work in FY 2021/22 that is needed to develop a subsidence management plan in the Northwest MZ1 area.

On May 27, 2021 the Watermaster Board approved the May 27, 2021 version of FY 2021/22 budget at \$7,276,213 and directed staff to take budget amendments for the two excluded elements of Engineering Services scope of work through the Watermaster process in June 2021.

## DISCUSSION

The Safe Yield Reset Methodology Evaluation work has been included in the proposed budget to meet Court-ordered requirements. The information was presented to the stakeholders during the April 13, 2021 and May 18, 2021 budget workshops. The Appropriative Pool consultant, Mr. Thomas Harder, prepared comments on item 7614 which were received on Tuesday, July 13, 2021. Upon review of the comments, Watermaster has determined that the comments do not warrant a change in the originally proposed scope and budget of \$378,811, as presented during the March 23, 2021 Budget release workshop. The comments and Watermaster responses are presented as a separate item on the July 15, 2021 Advisory Committee agenda.

The scope of work to develop a subsidence management plan in Northwest MZ1 is called for in the Watermaster's Subsidence Management Plan and is recommended by the Ground-Level Monitoring Committee. The process to develop a recommended scope for the GLMC is open to all stakeholders. The recommended scope was excluded from the budget during the May 20, 2021 Advisory Committee meeting at the request of one party requesting additional time for its consultant to evaluate the recommendation and submit written comments. Comments were received on June 3, 2021 and were resolved through additional discussion. The revised scope (Attachment 2) was presented to the Pool Committees during the July 8, 2021 meetings and there were no further comments.

A 47-page detailed report titled "Summary of Proposed Engineering Services and Cost Estimates for Fiscal Year 2021/22" which was also provided during the Watermaster Board meeting of May 27, 2021 is available at the link below. The section pertaining to Develop a Subsidence Management Plan for Northwest MZ-1 (7402.10) is detailed on pages 33-35 and Support Implementation of the Safe Yield Court Order (7614) is detailed on pages 45-47. <https://cbwm.syncedtool.com/shares/file/tfH8uEAx4wn/?modal=1>

The two items are recommended for approval and inclusion in the "Amended" FY 2021/22 budget. The Advisory Committee is recommended to approve budget amendments as follows:

1. OBMP-Support Implementation of the Safe Yield Court Order (7614): \$378,811
2. OBMP-Northwest MZ1 Area Project (7402.10): \$147,031

All three Pool Committees have recommended the budget amendment for budget item 7402.10; The Overlying (Agricultural) Pool has also recommended approval for budget item 7614.

*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*

ATTACHMENTS

1. Fiscal Year 2021/22 Budget Amendment (Form A-21-07-01)
2. Recommended Scope of Services and Budget of the Ground-Level Monitoring Committee for Fiscal Year 2021/22 (Final) dated July 8, 2021



**CHINO BASIN WATERMASTER  
BUDGET AMENDMENT FORM A-21-07-01**

To: **All Parties**

Fiscal Year 2021/22

From : Joseph S. Joswiak, CFO Date: July 15, 2021

**Describe reason for the budget amendment here:** During the May 20, 2021 Advisory Committee meeting, two items from the budget were excluded. The action by the Advisory Committee was to approve the Fiscal Year 2021/22 budget as presented without the GLMC and SY Methodology work which will be brought back through the Watermaster process for reconsideration within the next two months. Account 7614 in the amount of \$378,811 and account 7402.10 in the amount of \$147,031 is being included into the budget. A Budget Amendment Form is proposed to increase the total Watermaster budget from \$7,276,213 (excluding any Carry-Over funding) to \$7,802,055. The additional funding will come from the Assessment Process when the Assessment Package is approved in November 2021, and invoices generated.

<b>Expenditure Amendment</b>				
<i>Line Item Description</i>	<i>Account Number</i>	<i>Approved Budget</i>	<i>Amended Budget</i>	<i>Amendment Amount</i>
OBMP-Support Imp. of Safe Yield Court Order	7614	\$0	\$378,811	\$378,811
OBMP-Northwest MZ1 Area Project	7402.1	\$0	\$147,031	\$147,031
<b>TOTAL:</b>				<b>\$ 525,842</b>

<b>Revenue Source</b>				
<i>Line Item Description</i>	<i>Account Number</i>	<i>Approved Budget</i>	<i>Amended Budget</i>	<i>Amendment Amount</i>
Assessment Package	9999	\$7,276,213	\$7,802,055	\$525,842
<b>TOTAL:</b>				<b>\$ 525,842</b>

<p align="center"><b>Amendment Procedure</b></p> <ol style="list-style-type: none"> <li>1. Staff takes amendment requests to the Pools, Advisory Committee &amp; Board for approval.</li> <li>2. The Chief Financial Officer will prepare and process the budget entry.</li> <li>4. A log will be maintained by the Finance Department detailing the adjustment.</li> <li>5. A fiscal year file will also be kept to hold all budget amendment forms for auditor review.</li> </ol>	<p align="center"><b>Finance Use Only</b></p> <p>Date Board Approved _____</p> <p>Entered into System By _____</p> <p>Finance Log # _____</p> <p>Date Posted _____</p> <p>Approved By _____</p> <p>Date Approved _____</p>
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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 an 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<sup>SM</sup> (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					
		Person Days	Total	Travel	New Equip.	Equip. Rental	Outside Pro	Misc.	Total	Totals by Task	Recommended Budget FY 2020/21 a	Approved Budget FY 2020/21 b	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
<b>Task 1. Setup and Maintenance of the Monitoring Network</b>			\$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
<b>Task 2. MZ-1: Aquifer-System Monitoring and Testing</b>			\$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
<b>Task 3. Basin Wide Ground-Level Monitoring Program (InSAR)</b>			\$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
<b>Task 4. Perform Ground-Level Surveys</b>			\$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	\$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
<b>Task 5. Data Analysis and Reporting</b>			\$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
<b>Task 6. Develop a Subsidence-Management Plan for Northwest MZ-1</b>			\$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	\$46,664	\$0	\$46,664
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	\$0	\$61,813	\$14,735	\$47,078
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				
<b>Task 7. Meetings and Administration</b>			\$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
<b>Totals</b>											\$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)

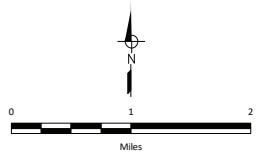
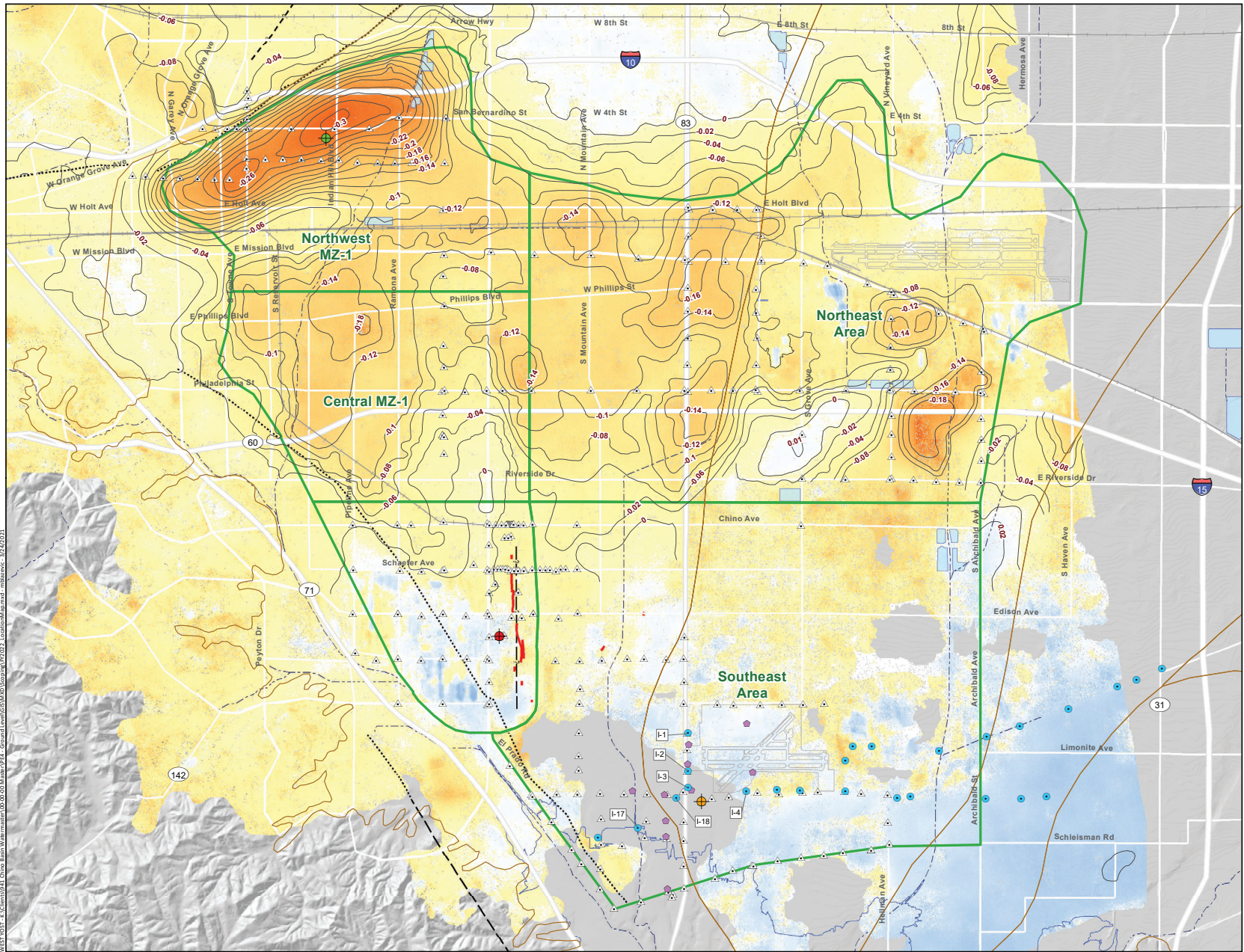
#### ***Task 3.2. Check and Review InSAR Results***

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.

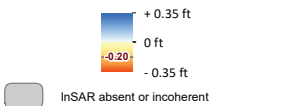
### **Task 4. Perform Ground-Level Surveys**

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.





Relative Change in Land Surface Altitude as Estimated by InSAR (March 2011 to March 2020)



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



**Figure 1**  
**Ground-Level Monitoring Program**  
**Fiscal Year 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.

<b>Table 2. Ground Level Monitoring Program Ground-Level Survey History Over the Last Six Years</b>						
Ground-Level Survey Area	Ground-Level Survey Completed (Y/N)?					
	2016	2017	2018	2019	2020	2021 <sup>(b)</sup>
Managed Area	Y	N	Y	N	N	N
Fissure Zone Area <sup>(a)</sup>	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 <sup>(a)</sup>	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.<sup>1</sup>

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.

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<sup>1</sup> [http://www.cbwm.org/rep\\_legal.htm](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).<sup>2</sup> 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<sup>3</sup>; 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

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<sup>2</sup> [Work Plan to Develop a Subsidence-Management Plan for Northwest MZ-1](#)

<sup>3</sup> The use of sonar technology to measure piezometric levels in wells is 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.<sup>4</sup>

### 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

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<sup>4</sup> <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.

### 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

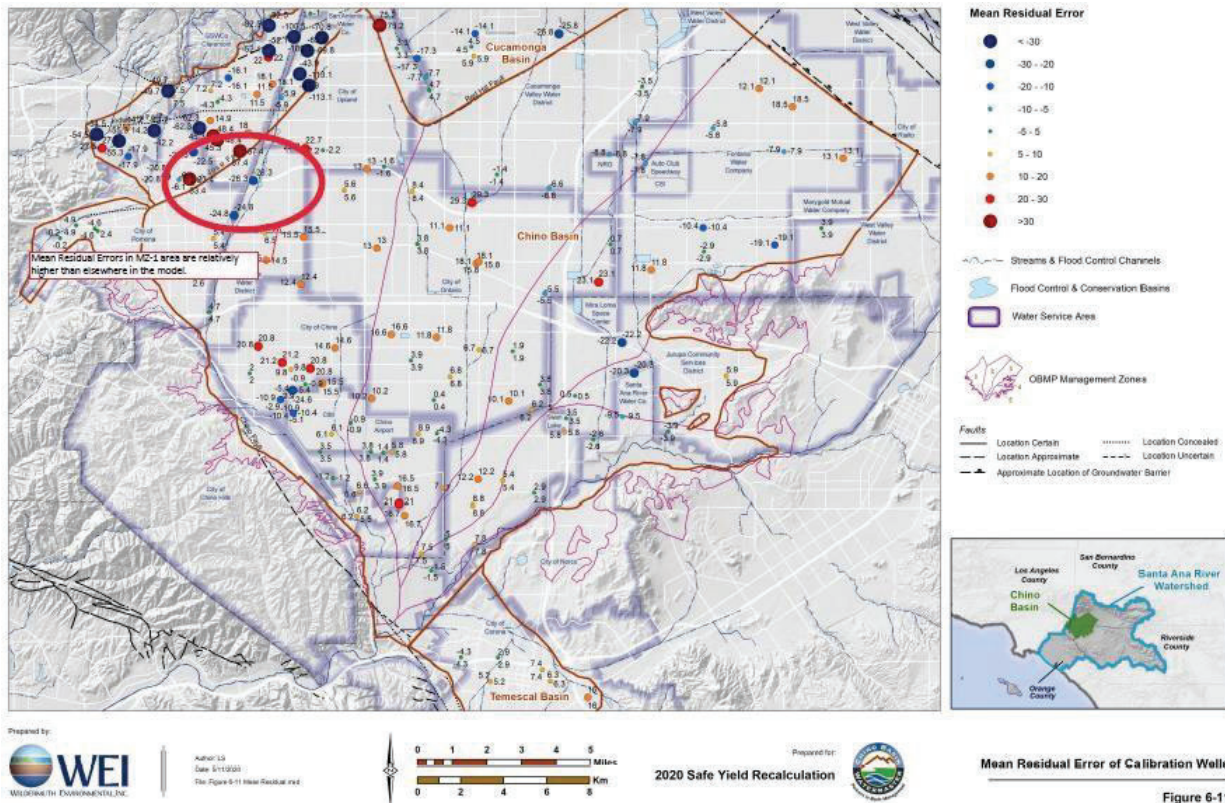
Comments to the 2020 Safe Yield update identified a spatial bias in calibration at the Six Basins/Chino Basin Boundary. At the time, WEI indicated that wells in the area are perforated across multiple layers and that estimated water level would be influenced by head in all layers.

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**

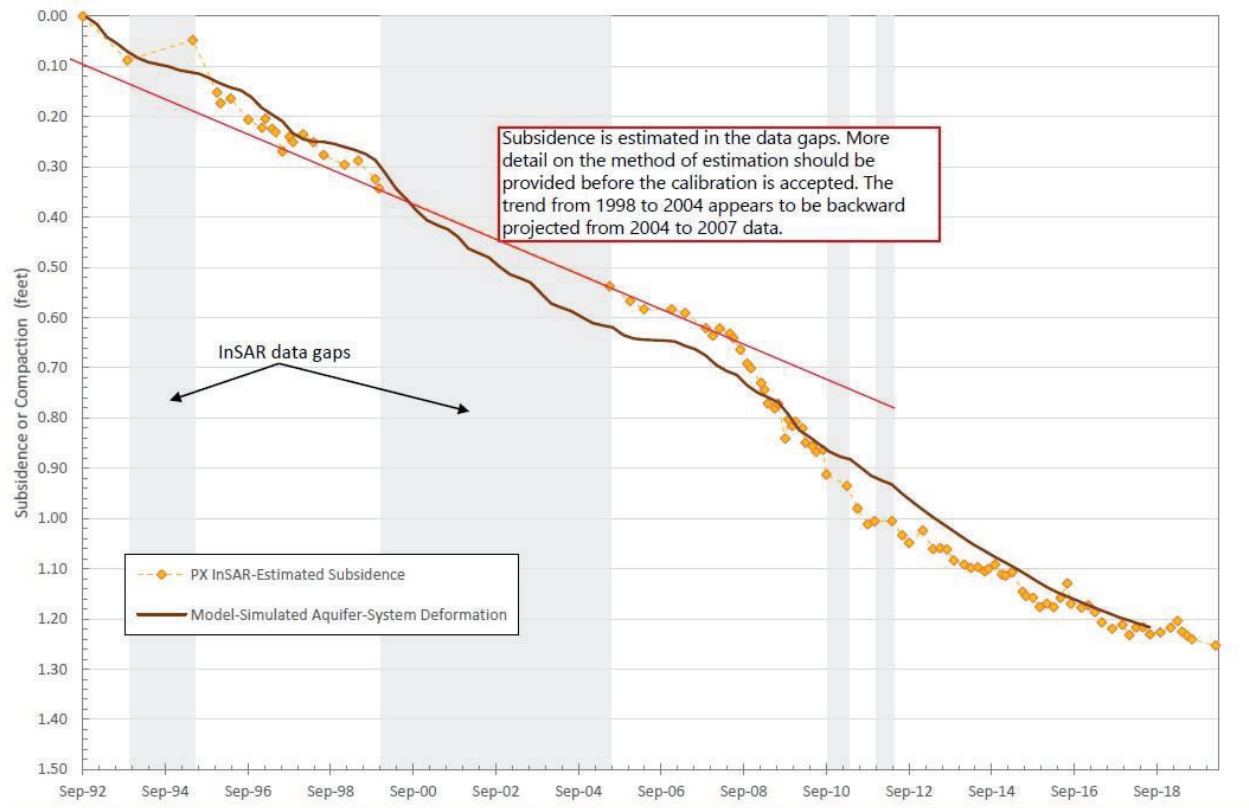
During the March 4 meeting, WY presented InSAR-Estimated subsidence and Model-Simulated Aquifer System Deformation for the PX 1D model. InSAR data gaps were shown, with the InSAR-Estimated Subsidence projected through the data gaps. WY did not provide the method used to estimate subsidence

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 reevaluated.

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

Task Descriptions	FY2015-16				FY2016-17				FY2017-18				FY2018-19				FY2019-20			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
<b>Task 1 – Describe Initial Hydrogeologic Conceptual Model &amp; the Monitoring and Testing Program</b>																				
1.1 Describe the information and knowledge needed to manage subsidence																				
1.2 Describe current state of knowledge with tables and figures																				
1.3 Describe the gaps in data and knowledge																				
1.4 Describe the potential location and general design of the Pomona Extensometer facility (PX)																				
1.5 Describe the proposed monitoring and testing program																				
1.6 Prepare Task 1 memorandum – Initial Hydrogeologic Conceptual Model and																				
1.7 Prepare Task 1 memorandum – Initial Hydrogeologic Conceptual Model and																				
<b>Task 2 – Implement the Initial Monitoring Program</b>																				
2.1 Convene all wells in the North MZ-1 Area																				
2.2 Establish monitoring and reporting strategies with producers																				
2.3 Install transducers in all wells not currently equipped with transducers																				
2.4 Perform one quarter of passive monitoring																				
2.5 Conduct short-term controlled pumping tests, analyze data																				
2.6 Prepare Task 2 memorandum – Results of Initial Monitoring and Testing Program																				
<b>Task 3 – Develop and Evaluate the Baseline Management Alternative</b>																				
3.1 Obtain concurrence on the Baseline Management Alternative (BMA)																				
3.2 Characterize and evaluate the basin response to the BMA (no subsidence management)																				
3.3 Estimate future subsidence in the North MZ-1 Area																				
3.4 Catalog property and infrastructure potentially impacted by subsidence and fissuring																				
3.5 Determine if damages due to subsidence are insurable and estimate cost for insurance policy																				
3.6 Prepare Task 3 memorandum – Evaluation of the Baseline Management Alternative																				
3.6 Prepare Task 3 memorandum – Evaluation of the Baseline Management Alternative																				
<b>Task 4 – Develop and Evaluate the Initial Subsidence-Management Alternative</b>																				
4.1 Estimate pre-consolidation stress in the North MZ-1 Area																				
4.2 Describe the Initial Subsidence-Management Alternative (ISMA)																				
4.3 Characterize and evaluate the basin response to the ISMA																				
4.4 Prepare Task 4 memorandum – Evaluation of the Initial Subsidence-Management Alternative																				
<b>Task 5 – Design and Install the Pomona Extensometer Facility</b>																				
5.1 Identify alternative sites for the Pomona Extensometer facility (PX)																				
5.2 Acquire construction and permanent easements																				
5.3 Prepare plans and technical specifications for bid package																				
5.4 Provide support for bidding process																				
5.5 Provide construction oversight to install the PX																				
5.6 Install transducers, data loggers, and telemetry; perform testing																				
5.7 Prepare Task 5 memorandum – Completion Report for the Pomona Extensometer Facility																				
<b>Task 6 – Design and Conduct One-Year Quarterly System Stress Tests</b>																				
6.1 Describe the implementation plan for a one-year test of the ISMA																				
6.2 Collect and analyze data (monthly)																				
6.3 Prepare quarterly summaries of the data collection and analytical results																				
<b>Task 7 – Update Hydrogeologic Conceptual Model</b>																				
7.1 Construct and calibrate one-dimensional compaction model at the PX																				
7.2 Update hydrogeologic conceptual model based on testing and modeling results																				
7.3 Prepare Task 7 memorandum – Updated Hydrogeologic Conceptual Model of the North MZ-1 Area																				
<b>Task 8 – Update Chino Basin Groundwater Model</b>																				
8.1 Update groundwater model based on the Task 7 Memorandum																				
8.2 Add SUB package to groundwater model																				
8.3 Prepare Task 8 memorandum – Updated Chino Basin Groundwater Model with SUB Package																				
<b>Task 9 – Refine and Evaluate Subsidence-Management Alternatives</b>																				
9.1 Re-evaluate the BMA and ISMA																				
9.2 Develop a new subsidence-management alternative (SMA-2)																				
9.3 Characterize and evaluate the basin response to the SMA-2																				
9.4 Characterize and evaluate the basin response to the SMA-3 and SMA-4																				
9.5 Select preferred subsidence-management alternative for the North MZ-1 area																				
9.6 Prepare Task 9 memorandum – Subsidence Management Plan for the North MZ-1 Area																				
<b>Task 10 – Update the Chino Basin Subsidence Management Plan</b>																				
10.1 Describe implementation plan for the Subsidence-Management Plan (SMP) for the North MZ-1 Area																				
10.2 Prepare Task 10 memorandum – Updated Chino Basin Subsidence Management Plan																				
10.3 LSC recommends the updated Chino Basin Subsidence Management Plan (CBSMP)																				
10.4 Review the updated CBSMP with Watermaster in the monthly process meetings																				
<b>Task 11 – Meetings and Administration (Annual)</b>																				
11.1 Ad Hoc Meetings																				
11.2 Project Administration and Financial Reporting																				
11.3 Scope and Budget for subsequent Fiscal Year																				

Schedule.xlsx – NorthMZ-1WorkPlan\_Schedule  
 5/5/2015

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).

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

## 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

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### 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)<sup>1</sup> 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).<sup>2</sup> 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:

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<sup>1</sup> West Yost, formerly Wildermuth Environmental, Inc. (2019). Chino Basin Optimum Basin Management Program, 2018 State of the Basin Report.

<sup>2</sup> [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<sup>3</sup> 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 (1<sup>st</sup> 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).<sup>4</sup>

#### *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

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<sup>3</sup> 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.

<sup>4</sup> [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.

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.







- 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.

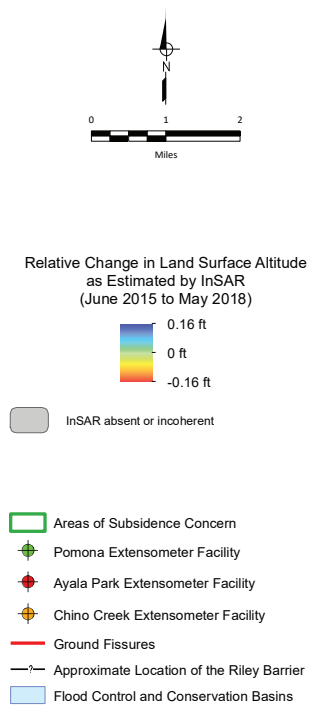
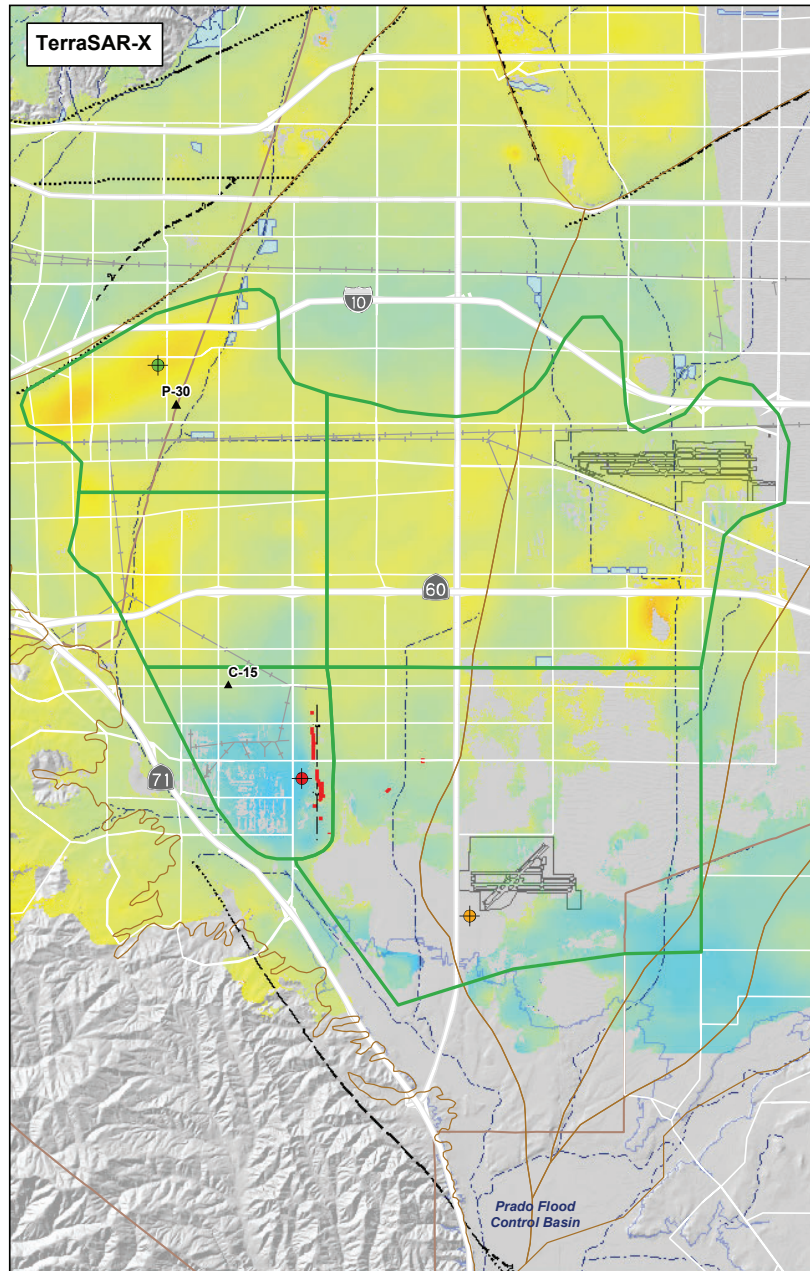
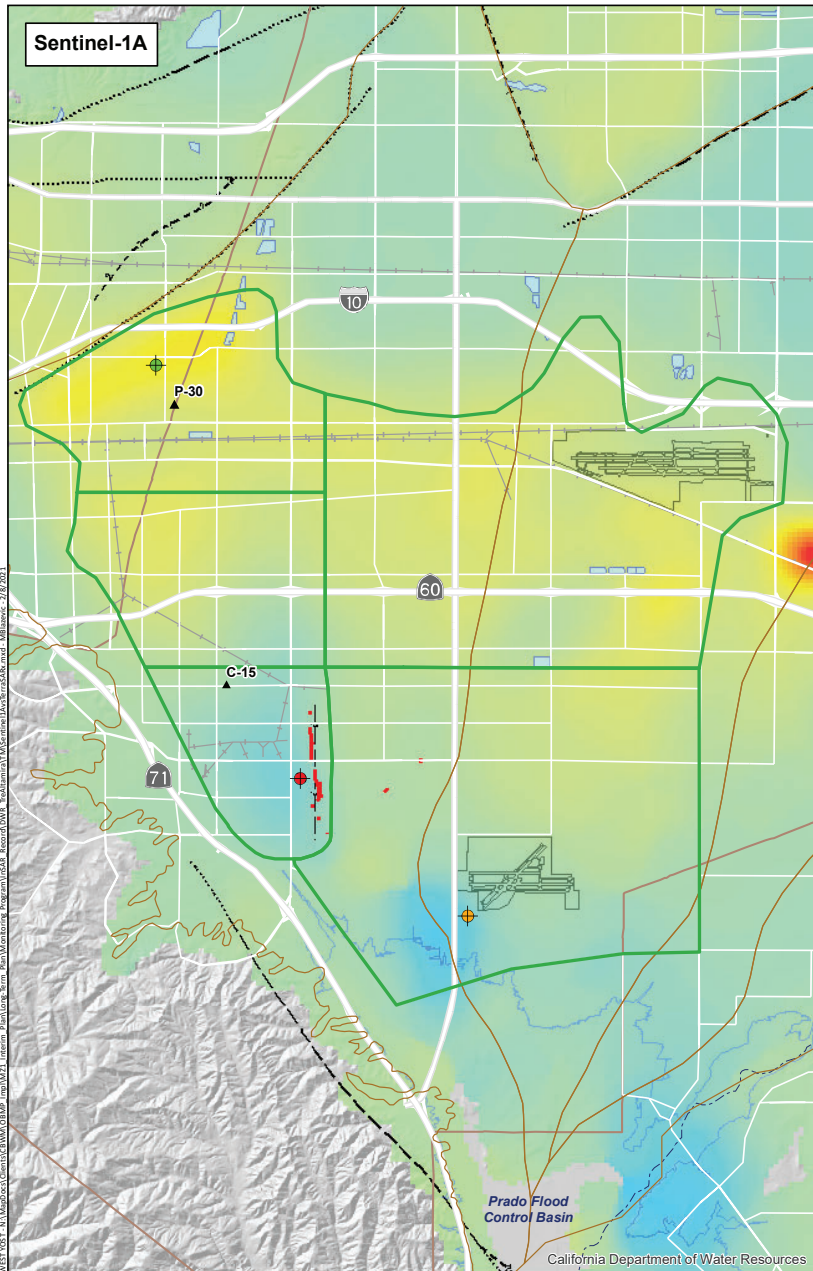
Figures 3 and 4 show total vertical ground motion estimated across the western Chino Basin between June 2015 and May 2018 from Sentinel-1A and TerraSAR-X. Across the areas of subsidence concern, the main observations are:

- 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.





**Figure 3**

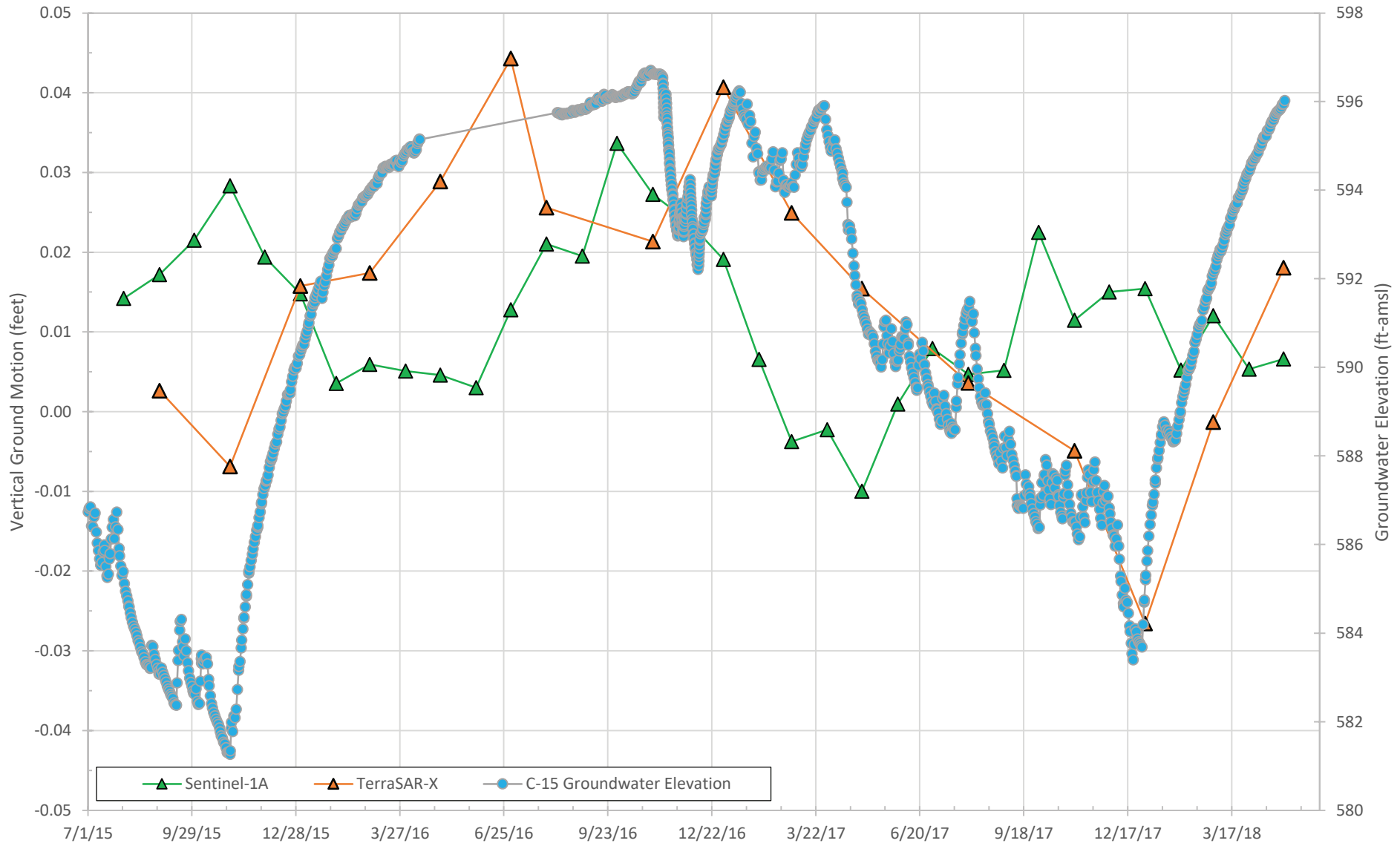
**Sentinel-1A**  
**Total Vertical Ground Motion**  
**Estimated across the Chino Basin**  
**June 2015 to May 2018**

Chino Basin Watermaster  
 Ground-Level Monitoring Committee



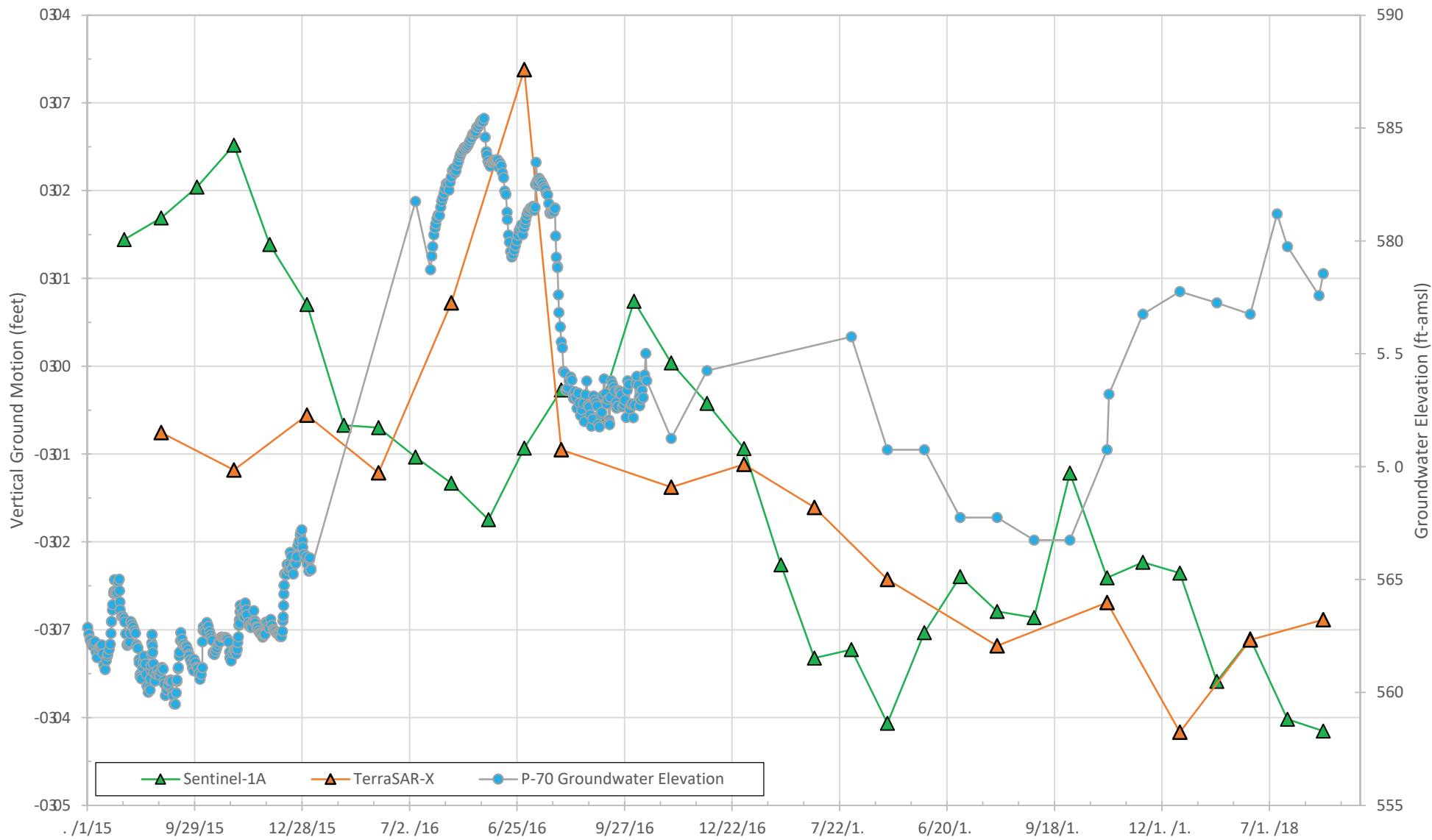


**Figure 5. Cumulative Vertical Ground Motion Displacement Measured by the Sentinel-1A and TerraSAR-X Satellites at City of Chino 15  
August 2015 to May 2018**



▲ Sentinel-1A    
 ▲ TerraSAR-X    
 ● C-15 Groundwater Elevation

**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 freely 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.

# CHINO BASIN WATERMASTER

## III. REPORTS/UPDATES

### E. INLAND EMPIRE UTILITIES AGENCY

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

### **III. REPORTS/UPDATES**

#### **E. INLAND EMPIRE UTILITIES AGENCY**

Click on this [link](#) for the IEUA Interagency Water Managers' Report