CHINO BASIN WATERMASTER

NOTICE OF MEETING

Thursday, October 25, 2018

11:00 a.m. – Watermaster Board Meeting

AT THE CHINO BASIN WATERMASTER OFFICES
9641 San Bernardino Road
Rancho Cucamonga, CA 91730
(909) 484-3888

CHINO BASIN WATERMASTER

Thursday, October 25, 2018

11:00 a.m. – Watermaster Board Meeting

AGENDA

CHINO BASIN WATERMASTER
WATERMASTER BOARD MEETING
11:00 a.m. – October 25, 2018
WITH
Mr. Robert DiPrimio – Chair
Mr. Jeff Pierson – Vice-Chair
At The Offices Of
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

AGENDA

CALL TO ORDER

PLEDGE OF ALLEGIANCE

PUBLIC COMMENTS

AGENDA - ADDITIONS/REORDER

I. CONSENT CALENDAR

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

A. MINUTES

Approve as presented:

1. Minutes of the Watermaster Board Meeting held September 27, 2018 *(Page 1)*

B. FINANCIAL REPORTS

Receive and file as presented:

1. Cash Disbursements for the month of August 2018 *(Page 5)*
2. Watermaster VISA Check Detail for the month of August 2018 *(Page 19)*
3. Combining Schedule for the Period July 1, 2018 through August 31, 2018 *(Page 23)*
4. Treasurer's Report of Financial Affairs for the Period August 1, 2018 through August 31, 2018 *(Page 27)*
5. Budget vs. Actual Report for the Period July 1, 2018 through August 31, 2018 *(Page 31)*

II. BUSINESS ITEMS

A. CHINO BASIN STORAGE FRAMEWORK *(Page 49)*

Receive and file the Final Storage Framework Investigation Report, and authorize the use of the tools and technical information developed by the investigation for storage planning and future evaluations.

B. CHINO BASIN WATERMASTER ANNUAL FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2017 AND 2016; AND THE CHINO BASIN WATERMASTER MANAGEMENT REPORT FOR JUNE 30, 2017 *(Page 53)*

Receive and file (1) the Chino Basin Watermaster Annual Financial Report for the Fiscal Year Ended June 30, 2018 dated October 25, 2018; and (2) the Chino Basin Watermaster Management Report for June 30, 2018 dated October 25, 2018.

A. LEGAL COUNSEL REPORT
1. Appeal of April 28, 2017 Order
2. December 28, 2018 Court Hearing
3. Motion for Amendment of Non-Agricultural Pool Pooling Plan

B. ENGINEER REPORT
1. FY 2017/18 GLMC Annual Report
2. Plumes Status Reports
3. Safe Yield Recalculation
4. Geoscience Data Request for Integrated Model

C. CFO REPORT
1. FY 2018/19 Assessment Package

D. GM REPORT
1. Introduction of New Employees
2. Habitat Conservation Plan
3. Watermaster Reappointment
4. FY 2018/19 First Interim Organization Performance Report *(Page 61)*
5. Chino Basin 40th Judgment Anniversary Commemoration
6. Other

IV. INFORMATION
1. Cash Disbursements for September 2018 *(Page 63)*
2. Plumes Status Reports *(Page 73)*

V. BOARD MEMBER COMMENTS

VI. OTHER BUSINESS

VII. CONFIDENTIAL SESSION - POSSIBLE ACTION
Pursuant to Article 2.6 of the Watermaster Rules & Regulations, a Confidential Session may be held during the Watermaster Board meeting for the purpose of discussion and possible action.

1. Appeal of April 28, 2017 Order

VIII. FUTURE MEETINGS AT WATERMASTER

10/23/18	Tue	1:00 p.m.	FY 2018/19 Assessment Package Workshop #1
10/25/18	Thu	10:00 a.m.	Non-Agricultural Pool Special Meeting (Confidential Session Only)
10/25/18	Thu	11:00 a.m.	Watermaster Board
10/30/18	Tue	1:00 p.m.	FY 2018/19 Assessment Package Workshop #2 (If Needed)
11/08/18	Thu	9:00 a.m.	Appropriative Pool
11/08/18	Thu	11:00 a.m.	Non-Agricultural Pool
11/08/18	Thu	1:30 p.m.	Agricultural Pool
11/15/18	Thu	8:00 a.m.	Appropriative Pool Strategic Planning (Confidential Session Only)
11/15/18	Thu	9:00 a.m.	Advisory Committee
11/15/18	Thu	11:00 a.m.	Watermaster Board*

*Rescheduled from 11/22/18 due to the Thanksgiving Holiday.

ADJOURNMENT

CHINO BASIN WATERMASTER

I. CONSENT CALENDAR

A. MINUTES

1. Watermaster Board Meeting held on September 27, 2018

DRAFT MINUTES
CHINO BASIN WATERMASTER
WATERMASTER BOARD MEETING
September 27, 2018

The Watermaster Board meeting was held at the offices of the Chino Basin Watermaster located at 9641 San Bernardino Road, Rancho Cucamonga, CA on September 27, 2018.

WATERMASTER BOARD MEMBERS PRESENT

Jeff Pierson, Vice-Chair	Agricultural Pool – Crops
Bob Kuhn, Secretary/Treasurer	Three Valleys Municipal Water District
Josh Swift for Robert DiPrimio	Fontana Water Company
Bob Bowcock	CalMat Co.
Eunice Ulloa	City of Chino
Paul Hofer	Agricultural Pool – Crops
Steve Elie	Inland Empire Utilities Agency
Gino Filippi	City of Upland
Don Galleano	Western Municipal Water District

WATERMASTER BOARD MEMBER ABSENT

Robert DiPrimio	Fontana Water Company

WATERMASTER STAFF PRESENT

Peter Kavounas	General Manager
Joseph Joswiak	Chief Financial Officer
Edgar Tellez Foster	Senior Environmental Engineer
Anna Nelson	Executive Services Director/Board Clerk
Justin Nakano	Water Resources Senior Associate

WATERMASTER CONSULTANTS PRESENT

Scott Slater	Brownstein Hyatt Farber Schreck, LLP
Brad Herrema	Brownstein Hyatt Farber Schreck, LLP
Mark Wildermuth	Wildermuth Environmental, Inc.
Andy Malone	Wildermuth Environmental, Inc.
Carolina Sanchez	Wildermuth Environmental, Inc.

OTHERS PRESENT

Ron Craig	City of Chino Hills
Todd Corbin	Jurupa Community Services District
Joanne Chan	West Valley Water District
Curtis Paxton	Chino Basin Desalter Authority
Teri Layton	San Antonio Water Company
Brian Lee	San Antonio Water Company
Van Jew	Monte Vista Water District
Chris Berch	Inland Empire Utilities Agency
Betty Anderson	Jurupa Community Services District
Dave Crosley	City of Chino
Amanda Coker	City of Chino
Bob Feenstra	Agricultural Pool – Dairy
Darron Poulsen	City of Pomona
Steve Corrington	MIH Water Treatment
Brian Geye	California Speedway Corporation
David De Jesus	Three Valleys Municipal Water District
Art Kidman	Kidman Gagen Law, LLP
Matt Litchfield	Three Valleys Municipal Water District
Rosemary Hoerning	City of Upland

Manny Martinez	Monte Vista Water District
Tim Barr	Western Municipal Water District
Halla Razak	Inland Empire Utilities Agency
Eric Grubb	Cucamonga Valley Water District

CALL TO ORDER
Vice-Chair Jeff Pierson chaired the meeting and called the Watermaster Board meeting to order at 11:00 a.m.

PLEDGE OF ALLEGIANCE

PUBLIC COMMENTS
None

AGENDA – ADDITIONS/REORDER
None

I. CONSENT CALENDAR

A. MINUTES
Approve as presented:
1. Minutes of the Watermaster Board Meeting held August 23, 2018

B. FINANCIAL REPORTS
Receive and file as presented:
1. Cash Disbursements for the month of July 2018
2. Watermaster VISA Check Detail for the month of July 2018
3. Combining Schedule for the Period July 1, 2018 through July 31, 2018
4. Treasurer's Report of Financial Affairs for the Period July 1, 2018 through July 31, 2018
5. Budget vs. Actual Report for the Period July 1, 2018 through July 31, 2018

C. OBMP SEMI-ANNUAL STATUS REPORT 2018-1
Adopt the Semi-Annual OBMP Status Report 2018-1, along with filing a copy with the Court, subject to any necessary non-substantive changes.

D. WATER TRANSACTIONS
Approve the proposed transaction:
The purchase of 500.000 acre-feet of water from West Valley Water District by Cucamonga Valley Water District. This purchase is made from West Valley Water District's Excess Carryover Account. Date of application: July 11, 2018.

(0:01:21)
Motion by Ms. Eunice Ulloa, seconded by Mr. Steve Elie and by unanimous vote.
Moved to approve Consent Calendar as presented.

II. BUSINESS ITEMS

A. FISCAL YEAR 2018/19 BUDGET TRANSFER (FORM T-18-07-01)
Adopt Fiscal Year 2018/19 Budget Transfer (Form T-18-07-01) as presented.

(0:01:57) Mr. Kavounas gave an introduction for Item II.A. and asked if the Board would like for Mr. Joswiak to give a more detailed presentation. The Board declined to have the presentation provided.

(0:02:47)
Motion by Mr. Don Galleano, seconded by Mr. Paul Hofer, and by unanimous vote.
Moved to approve Business Item II.A. as presented.

B. 2018 RECHARGE MASTER PLAN UPDATE AND RESOLUTION NO. 2018-04
Approve the 2018 RMPU as presented, adopt Resolution No. 2018-04, and authorize General Counsel to make the appropriate filing requesting the Court's approval.

(0:03:25) Mr. Kavounas introduced Mr. Nakano to give a presentation.

(0:12:27) Motion by Mr. Elie, seconded by Ms. Ulloa. A discussion ensued.

(0:13:34) Vote Taken
Motion by Mr. Steve Elie, seconded by Ms. Eunice Ulloa, and by unanimous vote.
Moved to approve the 2018 Recharge Master Plan Update as presented, adopt the Resolution 2018-04 including any findings, and authorize general counsel to make the appropriate findings.

(0:13:45) Ms. Ulloa thanked Watermaster staff and other participants on a job well done with the 2018 Recharge Master Plan Update.

C. TASK ORDER NO. 4 UNDER MASTER AGREEMENT FOR COLLABORATIVE PROJECTS: CHINO BASIN CONJUNCTIVE USE ENVIRONMENTAL WATER STORAGE/EXCHANGE PROGRAM EVALUATION AND CONCEPTUAL DESIGN SUPPORT
Approve Task Order No. 4 Under Master Agreement for Collaborative Projects: Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program Evaluation and Conceptual Design Support and authorize the General Manager to execute the agreement on behalf of Watermaster.

(0:14:12) Mr. Kavounas gave a report.

(0:15:10)
Motion by Mr. Bob Bowcock, seconded by Mr. Bob Kuhn, and by unanimous vote.
Moved to approve Business Item II.C. as presented.

III. REPORTS/UPDATES

A. LEGAL COUNSEL REPORT
1. Appeal of April 28, 2017 Order
2. August 24, 2018 Court Hearing

(0:15:50) Mr. Slater gave a report. A discussion ensued.

B. ENGINEER REPORT
1. Storage Framework
2. Fiscal Year 2017/18 GLMC Annual Report

(0:19:43) Mr. Malone gave a report.

C. CFO REPORT
None

D. GM REPORT
1. Proposed Changes to DYY Program Operation
2. CDA Production
3. 40th Judgment Anniversary Commemoration
4. Other

(0:21:32) Mr. Kavounas gave a report and announced Mr. Rick Hansen's retirement as General Manager from Three Valleys Municipal Water District.

IV. INFORMATION

1. Cash Disbursements for August 2018

V. BOARD MEMBER COMMENTS

None

VI. OTHER BUSINESS

None

VII. CONFIDENTIAL SESSION - POSSIBLE ACTION

None

ADJOURNMENT

Vice-Chair Pierson adjourned the Watermaster Board meeting at 11:23 a.m.

Secretary:_____

Approved:_____

CHINO BASIN WATERMASTER

I. CONSENT CALENDAR

B. FINANCIAL REPORTS

1. Cash Disbursements for the month of August 2018
2. Watermaster VISA Check Detail for the month of August 2018
3. Combining Schedule for the Period July 1, 2018 through August 31, 2018
4. Treasurer's Report of Financial Affairs for the Period August 1, 2018 through August 31, 2018
5. Budget vs. Actual Report for the Period July 1, 2018 through August 31, 2018

CHINO BASIN WATERMASTER

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

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: October 25, 2018

TO: Board Members

SUBJECT: Cash Disbursement Report - Financial Report B1 (August 31, 2018)

SUMMARY

Issue: Record of Cash Disbursements for the month of August 2018.

Recommendation: Receive and file Cash Disbursements for August 2018 as presented.

Financial Impact: Funds disbursed were included in the FY 2018/19 "Amended" Watermaster Budget.

Future Consideration
Watermaster Board – October 25, 2018: Receive and File (Normal Course of Business)

ACTIONS:
Appropriative Pool – October 11, 2018: Received and filed
Non-Agricultural Pool – October 11, 2018: Moved unanimously to receive and file, without approval
Agricultural Pool – October 11, 2018: Received and filed
Advisory Committee – October 18, 2018: Received and filed
Watermaster Board – October 25, 2018:

BACKGROUND

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

DISCUSSION

Total cash disbursements during the month of August 2018 were $2,196,411.78.

The most significant expenditures during the month were to Inland Empire Utilities Agency in the amounts of $1,463,581.30 and $29,590.05 (check number 20982 dated August 29, 2018 and check number 20986 dated August 29, 2018); Wildermuth Environmental, Inc. in the amounts of $146,362.64 and $198,093.65 (check number 20936 dated August 2, 2018 and check number 20967 dated August 20, 2018); and Brownstein Hyatt Farber Schreck in the amount of $106,631.26 (check number 20968 dated August 20, 2018).

ATTACHMENTS

1. Financial Report - B1

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
August 2018

Type	Date	Num	Name	Memo	Account	Paid Amount
Bill Pmt -Check	**08/01/2018**	**20924**	**ACCENT COMPUTER SOLUTIONS, INC.**	**122798**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/01/2018	122798		Monthly Service- August 2018	6052.4 · IT Managed Services	4,226.00
				Overwatch - August 2018	6052.5 · IT Data Backup/Storage	699.00
				OmniCloud- August 2018	6052.5 · IT Data Backup/Storage	96.00
				Office 365 subscriptions- August 2018	6054 · Computer Software	49.80
TOTAL						5,070.80
Bill Pmt -Check	**08/01/2018**	**20925**	**CENTURYLINK**	**71851276**	**1012 · Bank of America Gen'l Ckg**	
Bill	07/24/2018	71851278		7/17/18-8/16/18	6053 · Internet Expense	1,050.47
TOTAL						1,050.47
Bill Pmt -Check	**08/01/2018**	**20926**	**COMPUTER NETWORK**	**103861**	**1012 · Bank of America Gen'l Ckg**	
Bill	07/24/2018	103861		Hard drive repair for 2 laptops	6055 · Computer Hardware	528.00
TOTAL						528.00
Bill Pmt -Check	**08/01/2018**	**20927**	**EUROFINS EATON ANALYTICAL**	**L0401772**	**1012 · Bank of America Gen'l Ckg**	
Bill	06/30/2018	L0401772		L0401772	7108.4 · Hydraulic Control-Lab Svcs	1,240.00
TOTAL						1,240.00
Bill Pmt -Check	**08/01/2018**	**20928**	**LOEB & LOEB LLP**	**1778682**	**1012 · Bank of America Gen'l Ckg**	
Bill	06/30/2018	1778682		Non-Ag Pool Legal Services - June 2018	8567 · Non-Ag Legal Service	8,413.20
TOTAL						8,413.20
Bill Pmt -Check	**08/01/2018**	**20929**	**STANDARD INSURANCE CO.**	**Policy # 00-649299-0009**	**1012 · Bank of America Gen'l Ckg**	
Bill	07/24/2018	006492990009		Policy # 00-649299-0009	60191 · Life & Disab.Ins Benefits	776.96
TOTAL						776.96
Bill Pmt -Check	**08/01/2018**	**20930**	**STATE COMPENSATION INSURANCE FUND**	**1970970-18**	**1012 · Bank of America Gen'l Ckg**	
Bill	06/30/2018	1970970-17		Final premium statement for 2017	60183 · Worker's Comp Insurance	550.99
TOTAL						550.99
Bill Pmt -Check	**08/01/2018**	**20931**	**THE HOWARD E. NYHART CONPANY, INC.**	**0141317**	**1012 · Bank of America Gen'l Ckg**	
Bill	06/30/2018	0141317		FYE 6/30/2018 GASB 75 Report	6062.5 · Audit Support Services	4,250.00
TOTAL						4,250.00
Bill Pmt -Check	**08/01/2018**	**20932**	**ULLOA, EUNICE**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
Bill	06/14/2018	6/14 Appro Pool Mtg		6/14/18 Appropriative Pool meeting	6311 · Board Member Compensation	125.00
Bill	06/21/2018	6/21 Advisory Comm		6/21/18 Advisory Committee meeting	6311 · Board Member Compensation	125.00
Bill	06/28/2018	6/28 Board Mtg		6/28/18 Board meeting	6311 · Board Member Compensation	125.00

P7

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
August 2018

	Type	Date	Num	Name	Memo	Account	Paid Amount
TOTAL							375.00
	Bill Pmt -Check	**08/01/2018**	**20933**	**UNITED HEALTHCARE**	**052515168889**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/24/2018	052515168889		Dental Insurance Premium - August 2018	60182.2 · Dental & Vision Ins	688.74
TOTAL							688.74
	Bill Pmt -Check	**08/01/2018**	**20934**	**VERIZON WIRELESS**	**9810841828**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/24/2018	9810841828		Acct #642073270-00001	7103.7 · Grdwtr Qual-Computer Svc	100.04
TOTAL							100.04
	Bill Pmt -Check	**08/01/2018**	**20935**	**WESTERN MUNICIPAL WATER DISTRICT**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	06/28/2018	6/28 Board Mtg		6/28/18 Board Meeting - Galleano attendance	6311 · Board Member Compensation	125.00
TOTAL							125.00
	Bill Pmt -Check	**08/02/2018**	**20936**	**WILDERMUTH ENVIRONMENTAL INC**		**1012 · Bank of America Gen'l Ckg**	
	Bill	06/30/2018	2018177		2018177	6906.31 · OBMP-Pool, Adv. Board Mtgs	11,843.96
	Bill	06/30/2018	2018178		2018178	6906.32 · OBMP-Other General Meetings	2,247.65
	Bill	06/30/2018	2018179		2018179	6906.74 · OBMP-Mat'l Phy. Injury Requests	2,086.60
	Bill	06/30/2018	2018180		2018180	6906.71 · OBMP-Data Req.-CBWM Staff	2,949.60
P8	Bill	06/30/2018	2018181		2018181	6906 · OBMP Engineering Services	1,986.10
	Bill	06/30/2018	2018182		2018182	6906.81 · Prepare Annual Reports	120.50
	Bill	06/30/2018	2018183		2018183	7103.3 · Grdwtr Qual-Engineering	12,953.00
	Bill	06/30/2018	2018184		2018184	7104.3 · Grdwtr Level-Engineering	27,629.33
	Bill	06/30/2018	2018185		2018185	7107.2 · Grd Level-Engineering	12,427.50
	Bill	06/30/2018	2018186		2018186	7107.2 · Grd Level-Engineering	1,558.84
	Bill	06/30/2018	2018187		2018187	7108.31 · Hydraulic Control - PBHSP	984.80
	Bill	06/30/2018	2018188		2018188	7202.2 · Engineering Svc	587.06
	Bill	06/30/2018	2018189		2018189	7402 · PE4-Engineering	12,579.25
	Bill	06/30/2018	2018190		2018190	7402.10 · PE4 - Northwest MZ1 Area Proj.	4,839.65
	Bill	06/30/2018	2018191		2018191	7510 · PE6&7-IEUA Salinity Mgmt. Plan	26,240.90
	Bill	06/30/2018	2018192		2018192	7602 · PE8&9-Engineering	22,748.40
	Bill	06/30/2018	2018193		2018193	6906.27 · HCP Mtgs/Tech. Review-IEUA Cost	2,579.50
TOTAL							146,362.64
	Bill Pmt -Check	**08/03/2018**	**ACH 080318**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
	General Journal	07/28/2018	07/28/2018	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 07/15/18-07/28/18	2000 · Accounts Payable	6,886.20
TOTAL							6,886.20
	Bill Pmt -Check	**08/07/2018**	**ACH 080718**	**CALPERS**	**1394905143**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/16/2018	1394905143		1394905143	60182.1 · Medical Insurance	7,827.63

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
August 2018

	Type	Date	Num	Name	Memo	Account	Paid Amount
TOTAL							7,827.63
	Bill Pmt -Check	**08/07/2018**	**20937**	**ACCENT COMPUTER SOLUTIONS, INC.**	**122920**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018	122920		Workstation-Gregory-Balance Due	6055 · Computer Hardware	899.20
TOTAL							899.20
	Bill Pmt -Check	**08/07/2018**	**20938**	**CHEF DAVE'S CAFE & CATERING**	**8361**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/26/2018	8361		Lunch for 7/26/18 Watermaster Board meeting	6312 · Meeting Expenses	681.50
TOTAL							681.50
	Bill Pmt -Check	**08/07/2018**	**20939**	**CHINO CHAMPION NEWSPAPER**	**8043**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/16/2018	8043		Subscription-Chino Champion newspaper-1 year	6112 · Subscriptions/Publications	35.00
TOTAL							35.00
	Bill Pmt -Check	**08/07/2018**	**20940**	**ELIE, STEVEN**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/23/2018	7/23 Special Board		7/23/18 Special Board Meeting	6311 · Board Member Compensation	125.00
TOTAL							125.00
	Bill Pmt -Check	**08/07/2018**	**20941**	**FILIPPI, GINO**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/23/2018	7/23 Special Board		7/23/18 Special Board Meeting	6311 · Board Member Compensation	125.00
	Bill	07/26/2018	7/26 Board Mtg		7/26/18 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL							250.00
	Bill Pmt -Check	**08/07/2018**	**20942**	**KUHN, BOB**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/05/2018	7/05 Exec Committee		7/05/18 Pool Chair & Executive Committee Mtg.	6311 · Board Member Compensation	125.00
	Bill	07/12/2018	7/12 Admin Mtg		7/12/18 Administrative & Check Signing Meeting	6311 · Board Member Compensation	125.00
	Bill	07/19/2018	7/19 Executive Comm		7/19/18 Pool Chair & Executive Committee Mtg.	6311 · Board Member Compensation	125.00
	Bill	07/23/2018	7/23 Special Board		7/23/18 Special Board Meeting	6311 · Board Member Compensation	125.00
	Bill	07/24/2018	7/24 Admin Mtg		7/24/18 Administrative & GM Meeting	6311 · Board Member Compensation	125.00
	Bill	07/26/2018	7/26 Board Mtg		7/26/18 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL							750.00
	Bill Pmt -Check	**08/07/2018**	**20943**	**PARKER, KATHERINE**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/26/2018	7/26 Board Mtg		7/26/18 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL							125.00
	Bill Pmt -Check	**08/07/2018**	**20944**	**PAYCHEX**	**2018072600**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018	2018072600		July 2018	6012 · Payroll Services	440.47
TOTAL							440.47

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
August 2018

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill Pmt -Check	**08/07/2018**	**20945**	**PIETERSMA, RONALD**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/19/2018	7/19 Ag Pool Mtg		7/19/18 Ag Pool Meeting	8411 · Compensation	25.00
					7/19/18 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
TOTAL							125.00
	Bill Pmt -Check	**08/07/2018**	**20946**	**READY REFRESH BY NESTLE**	**0023230253**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018	0023230253		Office Water Bottle - July 2018	6031.7 · Other Office Supplies	79.26
TOTAL							79.26
	Bill Pmt -Check	**08/07/2018**	**20947**	**RR FRANCHISING, INC.**	**59463**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/01/2018	59463		Janitorial Service - August 2018	6024 · Building Repair & Maintenance	740.00
TOTAL							740.00
	Bill Pmt -Check	**08/07/2018**	**20948**	**STATE COMPENSATION INSURANCE FUND**	**1970970-18**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/01/2018	1970970-18		Monthly premium 7/26/18-8/26/18	60183 · Worker's Comp Insurance	552.42
TOTAL							552.42
	Bill Pmt -Check	**08/07/2018**	**20949**	**VISION SERVICE PLAN**	**00-101789-0001**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018	001017890001		Vision Insurance Premium - August 2018	60182.2 · Dental & Vision Ins	63.18
TOTAL							63.18
	Bill Pmt -Check	**08/07/2018**	**20950**	**WESTERN MUNICIPAL WATER DISTRICT**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/23/2018	7/23 Special Board		7/23/18 Special Board Mtg. - Galleano attendance	6311 · Board Member Compensation	125.00
	Bill	07/26/2018	7/26 Board Mtg		7/26/18 Board Meeting - Galleano attendance	6311 · Board Member Compensation	125.00
TOTAL							250.00
	Bill Pmt -Check	**08/07/2018**	**20951**	**YUKON DISPOSAL SERVICE**	**08-K2 213849**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/01/2018	08-k2 213849		Disposal Service - August 2018	6024 · Building Repair & Maintenance	117.14
TOTAL							117.14
	General Journal	**08/11/2018**	**08/11/2018**	**Payroll and Taxes for 07/29/18-08/11/18**	**Payroll and Taxes for 07/29/18-08/11/18**	**1012 · Bank of America Gen'l Ckg**	
					Direct Deposits for 07/29/18-08/11/18	1012 · Bank of America Gen'l Ckg	26,605.90
					Payroll Taxes for 07/29/18-08/11/18	1012 · Bank of America Gen'l Ckg	8,968.54
				ICMA-RC	457(b) Employee Deductions for 07/29/18-08/11/18	1012 · Bank of America Gen'l Ckg	4,541.43
				ICMA-RC	401(a) Employee Deductions for 07/29/18-08/11/18	1012 · Bank of America Gen'l Ckg	1,311.76
TOTAL							41,427.63
	Bill Pmt -Check	**08/14/2018**	**20952**	**ACCENT COMPUTER SOLUTIONS, INC.**		**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018	122947		RAM for AN desktop	6055 · Computer Hardware	204.77
	Bill	07/31/2018	123011		Progress invoice Cloud Storage-FTP Replacement	6052.6 · IT Services/Projects	1,200.00

P-10

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
August 2018

Type	Date	Num	Name	Memo	Account	Paid Amount
TOTAL						1,404.77
Bill Pmt -Check	**08/14/2018**	**20953**	**ACWA JOINT POWERS INSURANCE AUTHORIT**	**0567715**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/08/2018	0567715		Prepayment - September 2018	1409 · Prepaid Life, BAD&D & LTD	207.62
				August 2018	60191 · Life & Disab.Ins Benefits	224.74
TOTAL						432.36
Bill Pmt -Check	**08/14/2018**	**20954**	**APPLIED COMPUTER TECHNOLOGIES**	**2994**	**1012 · Bank of America Gen'l Ckg**	
Bill	07/31/2018	2994		Database Consulting Services - July 2018	6052.2 · Applied Computer Technol	3,900.00
TOTAL						3,900.00
Bill Pmt -Check	**08/14/2018**	**20955**	**BANK OF AMERICA**	**XXXX-XXXX-XXXX-9341**	**1012 · Bank of America Gen'l Ckg**	
Bill	07/31/2018	XXXX-XXXX-XXXX-9341		Miscellanous office supplies	6031.7 · Other Office Supplies	298.43
				50% deposit-Gregory workstation	6055 · Computer Hardware	899.20
				Printer for front office	6055 · Computer Hardware	289.85
				Farewell lunch for R. Zapien	6141.3 · Admin Meetings	96.04
				Printer for Sr. Accountant office	6055 · Computer Hardware	462.25
				Employee recruitment CVI's	6016 · New Employee Search Costs	520.00
				Employee recruitment CVI's	6016 · New Employee Search Costs	200.00
				Printer for CFO office	6055 · Computer Hardware	317.85
				Miscellaneous office supplies	6031.7 · Other Office Supplies	252.62
				PK meeting w/T. Layton, V. Jew	8312 · Meeting Expenses	50.69
				Court prep hearing preparation mtg #1	6909.1 · OBMP Meetings	50.00
				Court prep hearing preparation mtg #1	6909.1 · OBMP Meetings	15.00
				Board officers mtg/Pool chair	6312 · Meeting Expenses	115.00
				Court prep hearing preparation mtg #2	6909.1 · OBMP Meetings	60.00
				Staff lunch pre RIPCom mtg at IEUA	6909.1 · OBMP Meetings	60.00
				Reg.-PK-attend 1st Annual W. Grdwtr Congress	6193.2 · Conference - Registration Fee	610.00
				Early bird checkin-PK flight-GRAC	6173 · Airfare/Mileage	15.00
				Early bird checkin-PK flight-GRAC	6173 · Airfare/Mileage	15.00
				Flight-PK-attend GRAC 1st Annual Grdwtr Congres	6173 · Airfare/Mileage	99.89
				Lunch-CGC Meeting held at Watermaste	6141.3 · Admin Meetings	86.00
				Lunch-CGC Meeting held at Watermaster	6141.3 · Admin Meetings	26.40
				Miscellaneous office supplies	6031.7 · Other Office Supplies	14.20
				Reg.-PK-attend 2018 Fall Conf. and Workshop	6193.2 · Conference - Registration Fee	555.00
				Reg.-ETF-attend 2018 Fall Conf. and Workshop	6193.2 · Conference - Registration Fee	555.00
				PK mtg w/T. Layton, V. Jew	8312 · Meeting Expenses	49.88
				PK, JJ, AN meeting	6141.3 · Admin Meetings	58.40
TOTAL						5,771.70

P11

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
August 2018

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill Pmt -Check	**08/14/2018**	**20956**	**COMPUTER NETWORK**	**103900**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/08/2018	103900		Hard drive repair for laptop	6055 · Computer Hardware	367.44
TOTAL							367.44
	Bill Pmt -Check	**08/14/2018**	**20957**	**CORELOGIC INFORMATION SOLUTIONS**	**81909434**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018	81909434		81909434	7103.7 · Grdwtr Qual-Computer Svc	62.50
					81909434	7101.4 · Prod Monitor-Computer	62.50
TOTAL							125.00
	Bill Pmt -Check	**08/14/2018**	**20958**	**DE HAAN, HENRY**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/12/2018	7/12 Ag Pool Mtg		7/12/18 Ag Pool Meeting	8411 · Compensation	25.00
					7/12/18 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
TOTAL							125.00
	Bill Pmt -Check	**08/14/2018**	**20959**	**DI PRIMIO, ROBERT**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/05/2018	7/05 Exec Committee		7/05/18 Executive Committee mtg w/Approp Pool	6311 · Board Member Compensation	125.00
	Bill	07/19/2018	7/19 Exec Committee		7/19/18 Executive Committee mtg w/Non-Ag Pool	6311 · Board Member Compensation	125.00
	Bill	07/23/2018	7/23 Special Board		7/23/18 Special Board Mtg	6311 · Board Member Compensation	125.00
	Bill	07/24/2018	7/24 Board Agenda		7/24/18 Board Agenda Preview	6311 · Board Member Compensation	125.00
P12	Bill	07/26/2018	7/26 Board mtg		7/26/18 Board meeting	6311 · Board Member Compensation	125.00
TOTAL							625.00
	Bill Pmt -Check	**08/14/2018**	**20960**	**EGOSCUE LAW GROUP, INC.**	**12020**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018	12020		Ag Pool Legal Services - July 2018	8467 · Ag Legal & Technical Services	35,400.00
TOTAL							35,400.00
	Bill Pmt -Check	**08/14/2018**	**20961**	**FEDAK & BROWN LLP**	**Progress Billing**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018			Progress Billing - July 2018	6062 · Audit Services	1,500.00
TOTAL							1,500.00
	Bill Pmt -Check	**08/14/2018**	**20962**	**FEENSTRA, BOB**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/12/2018	7/12 Ag Pool Mtg		7/12/18 Ag Pool mtg	8470 · Ag Meeting Attend -Special	125.00
	Bill	07/19/2018	7/19 Advisory Comm		7/19/18 Advisory Committee meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	07/23/2018	7/23 Special Board		7/23/18 Special Board meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	07/25/2018	7/25 RIPCom Mtg		7/25/18 RIPCom meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	07/26/2018	7/26 Board Mtg		7/26/18 Board meeting	8470 · Ag Meeting Attend -Special	125.00
TOTAL							625.00
	Bill Pmt -Check	**08/14/2018**	**20963**	**FIRST LEGAL NETWORK LLC**	**40019787**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018	40019787		Court filings 7/11, 7/13, 7/17, 7/23 and 7/26	6061.5 · Court Filing Services	479.30

	Type	Date	Num	Name	Memo	Account	Paid Amount
TOTAL							479.30
	Bill Pmt -Check	**08/14/2018**	**20964**	**PREMIERE GLOBAL SERVICES**	**26223659**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018	26223659		Non-Ag Pool mtg call on 7/19/18	8512 · Meeting Expense	40.41
					Fee - General	6022 · Telephone	49.00
					Fee - Confidential	6022 · Telephone	49.00
					TM4 call on 6/27	6909.1 · OBMP Meetings	6.18
					Advisory Committee request for assistance	6212 · Meeting Expense	6.17
					Advisory Committee request for assistance	6212 · Meeting Expense	6.19
					WM coordination call on 7/17	6909.1 · OBMP Meetings	12.48
					Special Board meeting call on 7/23	6312 · Meeting Expenses	15.68
					Special Board meeting call on 7/23	6312 · Meeting Expenses	6.19
					Board meeting agenda preview call on 7/24	6312 · Meeting Expenses	14.47
					Team discussion call re WM topics on 7/24	6909.1 · OBMP Meetings	33.87
					GRA presentation review call on 7/25	6909.1 · OBMP Meetings	6.20
					Service fee	6022 · Telephone	9.35
TOTAL							255.19
	Bill Pmt -Check	**08/14/2018**	**20965**	**SPECIALIZED SERVICES OF SO CAL**	**2042**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/01/2018	2042		CPR, AED, and Basic First Aid Training for staff	6192 · Seminars - General	320.00
TOTAL							320.00
	Bill Pmt -Check	**08/14/2018**	**20966**	**UNION 76**	**7076-2245-3035-5049**	**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018	7076224530355049		Vehicle Fuel - July 2018	6175 · Vehicle Fuel	171.84
TOTAL							171.84
	Check	**08/15/2018**	**08/15/2018**	**Service Charge**	**Service Charge**	**1012 · Bank of America Gen'l Ckg**	
					Service Charge	6039.1 · Banking Service Charges	629.26
TOTAL							629.26
	Bill Pmt -Check	**08/16/2018**	**ACH 081618**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
	General Journal	08/11/2018	08/11/2018	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 07/29/18-08/11/18	2000 · Accounts Payable	6,886.20
TOTAL							6,886.20
	Bill Pmt -Check	**08/20/2018**	**20967**	**WILDERMUTH ENVIRONMENTAL INC**		**1012 · Bank of America Gen'l Ckg**	
	Bill	07/31/2018	2018207		2018207	6906.31 · OBMP-Pool, Adv. Board Mtgs	6,853.55
	Bill	07/31/2018	2018208		2018208	6906.32 · OBMP-Other General Meetings	1,737.25
	Bill	07/31/2018	2018209		2018209	6906.74 · OBMP-Mat'l Phy. Injury Requests	513.30
	Bill	07/31/2018	2018210		2018210	6906.71 · OBMP-Data Req.-CBWM Staff	16,480.98
	Bill	07/31/2018	2018211		2018211	6906.72 · OBMP-Data Req.-Non CBWM Staff	1,381.70

P13

Type	Date	Num	Name	Memo	Account	Paid Amount
Bill	07/31/2018	2018212		2018212	6906.22 · Water Rights Compliance Rprting	7,572.65
Bill	07/31/2018	2018213		2018213	6906 · OBMP Engineering Services	774.80
Bill	07/31/2018	2018214		2018214	6906.9 · OBMP-2018 RMPU Master Update	26,983.90
Bill	07/31/2018	2018215		2018215	6906.15 · Integrated Model Mtgs-IEUA Cost	2,360.00
Bill	07/31/2018	2018216		2018216	6906.81 · Prepare Annual Reports	707.60
Bill	07/31/2018	2018217		2018217	7103.3 · Grdwtr Qual-Engineering	19,276.72
Bill	07/31/2018	2018218		2018218	7104.3 · Grdwtr Level-Engineering	8,398.87
Bill	07/31/2018	2018219		2018219	7107.2 · Grd Level-Engineering	4,386.18
				WSP USA Inc.	7107.6 · Grd Level-Contract Svcs	9,370.71
Bill	07/31/2018	2018220		2018220	7107.2 · Grd Level-Engineering	102.00
				Neva Ridge Technologies, Inc.	7107.3 · Grd Level-SAR Imagery	12,000.00
Bill	07/31/2018	2018221		2018221	7402 · PE4-Engineering	24,826.40
Bill	07/31/2018	2018222		2018222	7402.10 · PE4 - Northwest MZ1 Area Proj.	1,619.64
Bill	07/31/2018	2018223		2018223	7202.2 · Engineering Svc	2,010.90
Bill	07/31/2018	2018224		2018224	7502 · PE6&7-Engineering	856.00
Bill	07/31/2018	2018225		2018225	7602 · PE8&9-Engineering	49,880.50
TOTAL						198,093.65
Bill Pmt -Check	**08/20/2018**	**20968**	**BROWNSTEIN HYATT FARBER SCHRECK**		**1012 · Bank of America Gen'l Ckg**	
Bill	07/31/2018	730709		730709	6078 · BHFS Legal - Miscellaneous	20,422.80
				Out of Office Copying/Printing	6078 · BHFS Legal - Miscellaneous	15.50
				Mileage/Parking Expense	6275 · BHFS Legal - Advisory Committee	36.67
				Mileage/Parking Expense	8375 · BHFS Legal - Appropriative Pool	12.26
				Mileage/Parking Expense	8475 · BHFS Legal - Agricultural Pool	12.26
				Mileage/Parking Expense	8575 · BHFS Legal - Non-Ag Pool	12.26
Bill	07/31/2018	730710		Personnel Matters	6073 · BHFS Legal - Personnel Matters	445.50
				GM Contract Amendment	6073 · BHFS Legal - Personnel Matters	3,287.25
Bill	07/31/2018	730711		730711	6907.34 · Santa Ana River Water Rights	278.10
Bill	07/31/2018	730712		730712	6907.36 · Santa Ana River Habitat	141.75
Bill	07/31/2018	730713		730713	6275 · BHFS Legal - Advisory Committee	2,397.93
Bill	07/31/2018	730714		730714	6375 · BHFS Legal - Board Meeting	9,225.45
				Mileage/Parking Expense	6375 · BHFS Legal - Board Meeting	36.67
				Delivery/Ground Transportation	6375 · BHFS Legal - Board Meeting	250.00
Bill	07/31/2018	730715		730715	8375 · BHFS Legal - Appropriative Pool	1,826.55
Bill	07/31/2018	730717		730717	8475 · BHFS Legal - Agricultural Pool	1,826.55
Bill	07/31/2018	730719		730719	8575 · BHFS Legal - Non-Ag Pool	1,826.55
Bill	07/31/2018	730722		730722	6071 · BHFS Legal - Court Coordination	32,030.55
				Mileage/Parking Expense	6071 · BHFS Legal - Court Coordination	36.78
				Mileage/Parking Expense	6071 · BHFS Legal - Court Coordination	36.78
Bill	07/31/2018	730723		730723	6077 · BHFS Legal - Party Status Maint	3,192.75

P14

Type	Date	Num	Name	Memo	Account	Paid Amount
Bill	07/31/2018	730724		730724	6907.39 · Recharge Master Plan	2,405.70
				Mileage/Parking Expense	6907.39 · Recharge Master Plan	36.58
Bill	07/31/2018	730725		730725	6907.40 · Storage Agreements	603.45
Bill	07/31/2018	730726		730726	6907.42 · Safe Yield Recalculation	19,820.70
				Delivery/Ground Transportation-2 trips	6907.42 · Safe Yield Recalculation	300.00
				Lodging-5 nights	6907.42 · Safe Yield Recalculation	1,125.00
				Mileage/Parking Expense	6907.42 · Safe Yield Recalculation	36.79
Bill	07/31/2018	730727		730727	6907.44 · SGMA Compliance	4,915.35
				Mileage/Parking Expense	6907.44 · SGMA Compliance	36.78
TOTAL						106,631.26
Bill Pmt -Check	**08/20/2018**	**20969**	**CUCAMONGA VALLEY WATER DISTRICT**		**1012 · Bank of America Gen'l Ckg**	
Bill	08/16/2018			Office lease due September 1, 2018	1422 · Prepaid Rent	6,608.80
TOTAL						6,608.80
Bill Pmt -Check	**08/20/2018**	**20970**	**EUROFINS EATON ANALYTICAL**		**1012 · Bank of America Gen'l Ckg**	
Bill	07/10/2018	L0404635		L0404635	7108.4 · Hydraulic Control-Lab Svcs	440.00
Bill	07/12/2018	L0404636		L0404636	7108.4 · Hydraulic Control-Lab Svcs	1,194.00
TOTAL						1,634.00
Bill Pmt -Check	**08/20/2018**	**20971**	**GREAT AMERICA LEASING CORP.**	**23188608**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/17/2018	23188608		Invoice for August 2018	6043.1 · Ricoh Lease Fee	2,605.07
				2018 San Bernardino County Property Tax Fee	6043.3 · Ricoh Property Tax Fees	490.44
TOTAL						3,095.51
Bill Pmt -Check	**08/20/2018**	**20972**	**JOHN J. SCHATZ**	**Appropriative Pool Legal Services**	**1012 · Bank of America Gen'l Ckg**	
Bill	07/31/2018			July 2018	8367 · Legal Service	7,844.00
TOTAL						7,844.00
Bill Pmt -Check	**08/20/2018**	**20973**	**NELSON, ANNA**	**Employee Reimbursement**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/15/2018			Reimburse for Notary Recertification	6192 · Seminars - General	209.06
TOTAL						209.06
Bill Pmt -Check	**08/20/2018**	**20974**	**OFFICE & ERGONOMIC SOLUTIONS, INC.**	**Office Furniture**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/14/2018			Final Payment-office furniture	1840 · Capital Assets	5,078.91
TOTAL						5,078.91
Bill Pmt -Check	**08/20/2018**	**20975**	**PETTY CASH**	**2737-2750**	**1012 · Bank of America Gen'l Ckg**	
Bill	07/31/2018	2737-2750		Lunch for 6/15/18 Ag Pool meeting	8412 · Meeting Expenses	43.62
				Supplies for washing field trucks	6151 · Small Tools & Equipment	20.75

B 15

Type	Date	Num	Name	Memo	Account	Paid Amount
				Parking/mileage reimbursement-CalPers Seminar	6192 · Seminars - General	50.43
				Miscellaneous office supplies	6031.7 · Other Office Supplies	124.82
				Supplies-Board Exec Committee & Pool Chairs	6312 · Meeting Expenses	18.44
				Supplies for June and July staff meetings	6141.3 · Admin Meetings	28.93
				ETF mtg w/IEUA	8312 · Meeting Expenses	35.58
TOTAL						322.57
Bill Pmt -Check	**08/20/2018**	**20976**	**PIERSON, JEFFREY**	**Board and Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
Bill	07/05/2018	7/05 Exec Comm Mtg		7/05/18 Exec. Comm.- Board & Appropriative Pool	6311 · Board Member Compensation	125.00
Bill	07/10/2018	7/10 Admin Mtg		7/10/18 Admin. meeting w/GM-conference call	6311 · Board Member Compensation	125.00
Bill	07/12/2018	7/12 Ag Pool Mtg		7/12/18 Ag Pool Meeting	8411 · Compensation	25.00
				7/12/18 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	07/19/2018	7/19 Special Ag Mtg		7/19/18 Special Ag Pool Executive Strategy mtg.	8411 · Compensation	25.00
				7/19/18 Special Ag Pool Executive Strategy mtg.	8470 · Ag Meeting Attend -Special	100.00
Bill	07/19/2018	7/19 Exec Committee		7/19/19 Exec. Comm.-Board & Non-Ag Pool	6311 · Board Member Compensation	125.00
Bill	07/23/2018	7/23 Admin Meeting		7/23/18 Admin. mtg.w/GM-Pool Chairs conf. call	6311 · Board Member Compensation	125.00
Bill	07/24/2018	7/24 Admin Meeting		7/24/18 Admin. Mtg.w/GM-conference call	6311 · Board Member Compensation	125.00
TOTAL						875.00
Bill Pmt -Check	**08/20/2018**	**20977**	**STAULA, MARY L**	**Retiree Medical**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/31/2018			Retiree Medical	60182.4 · Retiree Medical	25.17
TOTAL						25.17
Bill Pmt -Check	**08/20/2018**	**20978**	**UNITED HEALTHCARE**	**052502293904**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/15/2018	052502293904		Dental Insurance Premium - September 2018	60182.2 · Dental & Vision Ins	433.36
TOTAL						433.36
Bill Pmt -Check	**08/20/2018**	**20979**	**VERIZON WIRELESS**	**9812160995**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/15/2018	9812160995		Acct #470810953-00001	6022 · Telephone	336.37
TOTAL						336.37
Bill Pmt -Check	**08/23/2018**	**ACH 082318**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/01/2018	15345627		Annual Unfunded Accrued Liability for Plan 3299	60180 · Employers PERS Expense	5,456.55
TOTAL						5,456.55
General Journal	**08/25/2018**	**08/25/2018**	**Payroll and Taxes for 08/12/18-08/25/18**	**Payroll and Taxes for 08/12/18-08/25/18**	**1012 · Bank of America Gen'l Ckg**	
				Direct Deposits for 08/12/18-08/25/18	1012 · Bank of America Gen'l Ckg	24,767.98
				Payroll Taxes for 08/12/18-08/25/18	1012 · Bank of America Gen'l Ckg	7,907.59
			ICMA-RC	457(b) Employee Deductions for 08/12/18-08/25/18	1012 · Bank of America Gen'l Ckg	4,189.76
			ICMA-RC	401(a) Employee Deductions for 08/12/18-08/25/18	1012 · Bank of America Gen'l Ckg	1,311.76

P16

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
August 2018

	Type	Date	Num	Name	Memo	Account	Paid Amount
TOTAL							38,177.09
	Bill Pmt -Check	**08/29/2018**	**20980**	**CENTURYLINK**	**72576659**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/23/2018	72576659		8/17/18-9/16/18	6053 · Internet Expense	1,050.46
TOTAL							1,050.46
	Bill Pmt -Check	**08/29/2018**	**20981**	**FRONTIER COMMUNICATIONS**	**909-484-3890-050914-5**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/23/2018	90948438900509145		Office fax	6022 · Telephone	143.76
TOTAL							143.76
	Bill Pmt -Check	**08/29/2018**	**20982**	**INLAND EMPIRE UTILITIES AGENCY**	**1800003901**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/23/2018	1800003901		TO #3 - Pomona Extensometer Contract Admin.	7402.10 · PE4 - Northwest MZ1 Area Proj.	1,463,581.30
TOTAL							1,463,581.30
	Bill Pmt -Check	**08/29/2018**	**20983**	**LEGAL SHIELD**	**0111802**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/23/2018	0111802		Employee Deductions - August 2018	60194 · Other Employee Insurance	79.70
TOTAL							79.70
	Bill Pmt -Check	**08/29/2018**	**20984**	**STANDARD INSURANCE CO.**	**Policy # 00-649299-0009**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/23/2018	006492990009		Policy # 00-649299-0009	60191 · Life & Disab.Ins Benefits	775.35
TOTAL							775.35
	Bill Pmt -Check	**08/29/2018**	**20985**	**VERIZON WIRELESS**	**9812696708**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/23/2018	9812696708		Acct #642073270-00001	7103.7 · Grdwtr Qual-Computer Svc	100.04
TOTAL							100.04
	Bill Pmt -Check	**08/29/2018**	**20986**	**INLAND EMPIRE UTILITIES AGENCY**	**1800003899**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/22/2018	1800003899		SCADA System Upgrades Project-Invoice #10	7690.61 · GWR SCADA Upgrades (TO #4)	29,590.05
TOTAL							29,590.05
	Bill Pmt -Check	**08/29/2018**	**20987**	**KESSLER ALAIR INSURANCE SERVICES, INC.**		**1012 · Bank of America Gen'l Ckg**	
	Bill	08/29/2018			Environ. Pollution Liab. coverage-Right of Entrys	6085 · Business Insurance Package	9,544.19
TOTAL							9,544.19
	Bill Pmt -Check	**08/29/2018**	**20988**	**CUBICLE AND OFFICE, LLC.**	**1041**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/29/2018	1041		Panels and desks for field staff work area	1840 · Capital Assets	18,819.43
TOTAL							18,819.43
	Bill Pmt -Check	**08/30/2018**	**ACH 083018**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	

P17

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
August 2018

Type	Date	Num	Name	Memo	Account	Paid Amount
General Journal	08/25/2018	18/08/09	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 08/12/18-08/25/18	2000 · Accounts Payable	6,886.20
TOTAL						6,886.20
General Journal	**08/31/2018**	**08/31/2018**	**Wage Works FSA Direct Debits - August 2018**	**Wage Works FSA Direct Debits - August 2018**	**1012 · Bank of America Gen'l Ckg**	
				Wage Works FSA Direct Debits - August 2018	1012 · Bank of America Gen'l Ckg	724.98
				Wage Works FSA Direct Debits - August 2018	1012 · Bank of America Gen'l Ckg	-215.36
				Wage Works FSA Direct Debits - August 2018	1012 · Bank of America Gen'l Ckg	509.60
				Wage Works FSA Direct Debits - August 2018	1012 · Bank of America Gen'l Ckg	76.25
TOTAL						1,095.47
					Total Disbursements:	**2,196,411.78**

P18

CHINO BASIN WATERMASTER

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

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: October 25, 2018

TO: Board Members

SUBJECT: VISA Check Detail Report - Financial Report B2 (August 31, 2018)

SUMMARY

Issue: Record of VISA credit card payment disbursed for the month of August 2018.

Recommendation: Receive and file VISA Check Detail Report for August 2018 as presented.

Financial Impact: Funds disbursed were included in the FY 2018/19 "Amended" Watermaster Budget.

Future Consideration
Watermaster Board – October 25, 2018: Receive and File (Normal Course of Business)

ACTIONS:
Appropriative Pool – October 11, 2018: Received and filed
Non-Agricultural Pool – October 11, 2018: Moved unanimously to receive and file, without approval
Agricultural Pool – October 11, 2018: Received and filed
Advisory Committee – October 18, 2018: Received and filed
Watermaster Board – October 25, 2018:

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 August 2018 was $5,771.70. The payment was processed in the amount of $5,771.70 (by check number 20955 dated August 14, 2018). The monthly charges for August 2018 of $5,771.70 were for routine and customary expenditures and properly documented with receipts.

ATTACHMENTS

1. Financial Report - B2

CHINO BASIN WATERMASTER
VISA Check Detail Report
August 2018

Type	Num	Date	Name	Memo	Account	Paid Amount
Bill Pmt -Check	**08/14/2018**	**20955**	**BANK OF AMERICA**	**XXXX-XXXX-XXXX-9341**	**1012 · Bank of America Gen'l Ckg**	
Bill	07/31/2018	XXXX-XXXX-XXXX-9341		Miscellanous office supplies	6031.7 · Other Office Supplies	298.43
				50% deposit-Gregory workstation	6055 · Computer Hardware	899.20
				Printer for front office	6055 · Computer Hardware	289.85
				Farewell lunch for R. Zapien	6141.3 · Admin Meetings	96.04
				Printer for Sr. Accountant office	6055 · Computer Hardware	462.25
				Employee recruitment CVI's	6016 · New Employee Search Costs	520.00
				Employee recruitment CVI's	6016 · New Employee Search Costs	200.00
				Printer for CFO office	6055 · Computer Hardware	317.85
				Miscellaneous office supplies	6031.7 · Other Office Supplies	252.62
				PK meeting w/T. Layton, V. Jew	8312 · Meeting Expenses	50.69
				Court prep hearing preparation mtg #1	6909.1 · OBMP Meetings	50.00
				Court prep hearing preparation mtg #1	6909.1 · OBMP Meetings	15.00
				Board officers mtg/Pool chair	6312 · Meeting Expenses	115.00
				Court prep hearing preparation mtg #2	6909.1 · OBMP Meetings	60.00
				Staff lunch pre RIPCom mtg at IEUA	6909.1 · OBMP Meetings	60.00
				Reg.-PK-attend 1st Annual W. Grdwtr Congress	6193.2 · Conference - Registration Fee	610.00
				Early bird checkin-PK flight-GRAC	6173 · Airfare/Mileage	15.00
				Early bird checkin-PK flight-GRAC	6173 · Airfare/Mileage	15.00
				Flight-PK-attend GRAC 1st Annual Grdwtr Congress	6173 · Airfare/Mileage	99.89
				Lunch-CGC Meeting held at Watermaste	6141.3 · Admin Meetings	86.00
				Lunch-CGC Meeting held at Watermaster	6141.3 · Admin Meetings	26.40
				Miscellaneous office supplies	6031.7 · Other Office Supplies	14.20
				Reg.-PK-attend 2018 Fall Conf. and Workshop	6193.2 · Conference - Registration Fee	555.00
				Reg.-ETF-attend 2018 Fall Conf. and Workshop	6193.2 · Conference - Registration Fee	555.00
				PK mtg w/T. Layton, V. Jew	8312 · Meeting Expenses	49.88
				PK, JJ, AN meeting	6141.3 · Admin Meetings	58.40
TOTAL					**Total Disbursements:**	**5,771.70**

P21

THIS PAGE

HAS

INTENTIONALLY

BEEN LEFT

BLANK

FOR PAGINATION

CHINO BASIN WATERMASTER

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

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: October 25, 2018

TO: Board Members

SUBJECT: Combining Schedule of Revenue, Expenses and Changes in Net Assets for the Period July 1, 2018 through August 31, 2018 - Financial Report B3 (August 31, 2018)

SUMMARY

Issue: Record of Revenue, Expenses and Changes in Net Assets for the Period July 1, 2018 through August 31, 2018.

Recommendation: Receive and file Combining Schedule of Revenue, Expenses and Changes in Net Assets for the Period July 1, 2018 through August 31, 2018 as presented.

Financial Impact: Funds disbursed were included in the FY 2018/19 "Amended" Watermaster Budget.

Future Consideration
Watermaster Board – October 25, 2018: Receive and File (Normal Course of Business)

ACTIONS:
Appropriative Pool – October 11, 2018: Received and filed
Non-Agricultural Pool – October 11, 2018: Moved unanimously to receive and file, without approval
Agricultural Pool – October 11, 2018: Received and filed
Advisory Committee – October 18, 2018: Received and filed
Watermaster Board – October 25, 2018:

BACKGROUND

A Combining Schedule of Revenue, Expenses and Changes in Net Assets for the period July 1, 2018 through August 31, 2018 is provided to keep all members apprised of the FY 2018/19 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 18.0, 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, 2018 THROUGH AUGUST 31, 2018

	WATERMASTER ADMINISTRATION	OPTIMUM BASIN MANAGEMENT	POOL ADMINISTRATION & SPECIAL PROJECTS APPROPRIATIVE POOL	AG POOL	NON-AG POOL	GROUNDWATER REPLENISHMENT	LAIF VALUE ADJ.	GASB 75 BEG. NET POSITION	GRAND TOTALS	AMENDED BUDGET 2018-2019
Administrative Revenues:										
Administrative Assessments			-		-				-	8,655,545
Interest Revenue			-	-	-				-	63,968
Mutual Agency Project Revenue	167,712								167,712	167,712
Miscellaneous Income	21								21	0
Total Revenues	167,733	-	-	-	-	-	-	-	167,733	8,887,225
Administrative & Project Expenditures:										
Watermaster Administration	370,968								370,968	1,337,141
Watermaster Board-Advisory Committee	37,262								37,262	226,519
Ag Pool Misc. Expense - Ag Fund				-					-	400
Pool Administration			25,599	90,962	26,510				143,071	624,643
Optimum Basin Mgmt Administration		235,869							235,869	2,273,267
OBMP Project Costs		3,187,445							3,187,445	5,503,869
Debt Service		580,585							580,585	580,585
Basin Recharge Improvements		-							-	3,068,941
Total Administrative/OBMP Expenses	408,230	4,003,899	25,599	90,962	26,510	-	-	-	4,555,199	13,615,365
Net Administrative/OBMP Expenses	(240,497)	(4,003,899)								
Allocate Net Admin Expenses To Pools	240,497		174,593	57,008	8,895				-	
Allocate Net OBMP Expenses To Pools		3,423,314	2,485,219	811,474	126,621				-	
Allocate Debt Service to App Pool		580,585	580,585						-	
Allocate Basin Recharge to App Pool		-	-						-	
Agricultural Expense Transfer*			959,445	(959,445)					-	
Total Expenses			4,225,440	-	162,026	-	-	-	4,555,199	13,615,365
Net Administrative Income			(4,225,440)	-	(162,026)	-	-	-	(4,387,466)	(4,728,140)
Other Income/(Expense)										
Replenishment Water Assessments						-			-	0
Desalter Replenishment Obligation						-			-	0
Non-Ag Stored Water Purchases									-	0
Exhibit "G" Non-Ag Pool Water			-						-	0
Interest Revenue						-			-	0
MWD Water Purchases									-	0
Non-Ag Stored Water Purchases									-	0
Exhibit "G" Non-Ag Pool Water			-						-	0
MWD Water Purchases									-	0
Groundwater Replenishment						-			-	0
LAIF - Fair Market Value Adjustment							-		-	0
Gain on Sale of Assets			-		-		-		-	0
Other Post-Employment Benefits (OPEB)			-		-			-	-	0
Refund-Excess Reserves			-		-				-	0
Refund-Recharge Debt			-						-	0
Funding To/(From) Reserves									-	0
Net Other Income/(Expense)			-	-	-	-	-	-	-	0
Net Transfers To/(From) Reserves		(4,387,466)	(4,225,440)	-	(162,026)	-	-	-	(4,387,466)	(4,728,140)
		0								
Net Assets, July 1, 2018			9,661,977	493,108	80,791	(4,534)	(20,461)	(443,445)	9,767,436	
Net Assets, End of Period			5,436,536	493,108	(81,235)	(4,534)	(20,461)	(443,445)	5,379,970	5,379,970
16/17 Assessable Production			82,269.159	26,862.554	4,191.579				113,323.292	
16/17 Production Percentages			72.597%	23.704%	3.699%				100.000%	

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

N:\Administration\Meetings - Agendas & Minutes\2018\Staff Reports\10 - October\Board\[20181025 - B3 Combining Schedule_August 2018.xls]Jul2018-Aug2018

THIS PAGE

HAS

INTENTIONALLY

BEEN LEFT

BLANK

FOR PAGINATION

CHINO BASIN WATERMASTER

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

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: October 25, 2018

TO: Board Members

SUBJECT: Treasurer's Report of Financial Affairs for the Period August 1, 2018 through August 31, 2018 - Financial Report B4 (August 31, 2018)

SUMMARY

Issue: Record of increases or decreases in the cash position, assets and liabilities of Watermaster for the Period of August 1, 2018 through August 31, 2018.

Recommendation: Receive and file Treasurer's Report of Financial Affairs for the Period August 1, 2018 through August 31, 2018 as presented.

Financial Impact: Funds disbursed were included in the FY 2018/19 "Amended" Watermaster Budget.

Future Consideration
Watermaster Board – October 25, 2018: Receive and File (Normal Course of Business)

ACTIONS:
Appropriative Pool – October 11, 2018: Received and filed
Non-Agricultural Pool – October 11, 2018: Moved unanimously to receive and file, without approval
Agricultural Pool – October 11, 2018: Received and filed
Advisory Committee – October 18, 2018: Received and filed
Watermaster Board – October 25, 2018:

BACKGROUND

A Treasurer's Report of Financial Affairs for the Period August 1, 2018 through August 31, 2018 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 18.0, 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
AUGUST 1, 2018 THROUGH AUGUST 31, 2018

DEPOSITORIES:			
Cash on Hand - Petty Cash			$ 500
Bank of America			
Governmental Checking-Demand Deposits		$ 462,632	
Zero Balance Account - Payroll		-	462,632
Trust Account - County of San Bernardino			845
Local Agency Investment Fund - Sacramento			7,700,442
TOTAL CASH IN BANKS AND ON HAND	8/31/2018		**$ 8,164,419**
TOTAL CASH IN BANKS AND ON HAND	7/31/2018		10,174,932
PERIOD INCREASE (DECREASE)			**$ (2,010,513)**

CHANGE IN CASH POSITION DUE TO:

Decrease/(Increase) in Assets:	Accounts Receivable	$ 180,131
	Assessments Receivable	-
	Prepaid Expenses, Deposits & Other Current Assets	(27,568)
(Decrease)/Increase in Liabilities	Accounts Payable	898,922
	Accrued Payroll, Payroll Taxes & Other Current Liabilities	14,085
	Long Term Liabilities	2,280
	Transfer to/(from) Reserves	(3,078,363)
	PERIOD INCREASE (DECREASE)	**$ (2,010,513)**

P29

SUMMARY OF FINANCIAL TRANSACTIONS:	Petty Cash	Govt'l Checking Demand	Zero Balance Account Payroll	Trust Account County of San Bernardino	Local Agency Investment Funds	Totals
Balances as of 7/31/2018	$ 500	$ 448,145	$ -	$ 845	$ 9,725,442	$ 10,174,932
Deposits	-	2,210,899	-	-	-	2,210,899
Transfers	-	(167,070)	(113,980)	-	(2,025,000)	(2,306,050)
Withdrawals/Checks	-	(2,029,341)	113,980	-	-	(1,915,362)
Balances as of 8/31/2018	$ 500	$ 462,632	$ -	$ 845	$ 7,700,442	$ 8,164,419
PERIOD INCREASE OR (DECREASE)	**$ -**	**$ 14,487**	**$ -**	**$ -**	**$ (2,025,000)**	**$ (2,010,513)**

CHINO BASIN WATERMASTER
TREASURER'S REPORT OF FINANCIAL AFFAIRS FOR THE PERIOD
AUGUST 1, 2018 THROUGH AUGUST 31, 2018

INVESTMENT TRANSACTIONS

Effective Date	Transaction	Depository	Activity	Redeemed	Days to Maturity	Interest Rate(*)	Maturity Yield
8/22/2018	Withdrawal		(525,000)				
8/24/2018	Withdrawal		(1,500,000)				
TOTAL INVESTMENT TRANSACTIONS			**$ (2,025,000)**	**$0**			

* The earnings rate for L.A.I.F. is a daily variable rate; 1.90% was the effective yield rate at the Quarter ended June 30, 2018.

INVESTMENT STATUS
August 31, 2018

Financial Institution	Principal Amount	Number of Days	Interest Rate	Maturity Date
Local Agency Investment Fund	$ 7,700,442			
TOTAL INVESTMENTS	**$ 7,700,442**			

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

P30

CHINO BASIN WATERMASTER

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

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: October 25, 2018

TO: Board Members

SUBJECT: Budget vs. Actual Report for the Period July 1, 2018 through August 31, 2018 - Financial Report B5 (August 31, 2018)

SUMMARY

Issue: Record of revenues and expenses of Watermaster for the Period of July 1, 2018 through August 31, 2018.

Recommendation: Receive and file Budget vs. Actual Report for the Period July 1, 2018 through August 31, 2018 as presented.

Financial Impact: Funds disbursed were included in the FY 2018/19 "Amended" Watermaster Budget.

Future Consideration
Watermaster Board – October 25, 2018: Receive and File (Normal Course of Business)

ACTIONS:
Appropriative Pool – October 11, 2018: Received and filed
Non-Agricultural Pool – October 11, 2018: Moved unanimously to receive and file, without approval
Agricultural Pool – October 11, 2018: Received and filed
Advisory Committee – October 18, 2018: Received and filed
Watermaster Board – October 25, 2018:

BACKGROUND

A Budget vs. Actual Report for the period July 1, 2018 through August 31, 2018 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 18.0, 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 – AUGUST 2018

Year-To-Date (YTD) for the two months ending August 31, 2018, all but seven categories were at or below the projected budget. The categories over budget were: (1) the Administration Salary/Benefits expenses (6010's) which were over budget by $7,410 or 4.1% as a result of increased staff time and activities in the administrative functions. Please note that the overage is only in the administrative section, not with the entire consolidated staffing budget; (2) Watermaster Legal Services expenses (6070's) over budget by $67,375 or 259.1% as a result of miscellaneous legal matters as detailed in the BHFS section; (3) Business Insurance expenses (6080's) over budget by $6,846 or 23.8% as a result of the additional coverage for Environmental and Pollution Liability as recommended by our broker, for water sampling activities within the basin by the Watermaster staff, not budgeted for in the FY 2018/19 budget; (4) Watermaster Board expenses (6300's) over budget by $2,001 or 7.4% as a result of increased activities and Board meetings during the months of July 2018 through August 2018; (5) Appropriative Pool Administration expenses (8300's) over budget by $1,520 or 6.3% as a result of increased legal activities by the Appropriative Pool attorney for the months of July 2018 through August 2018; (6) Agricultural Pool Legal Services (8467's) over budget by $32,950 or 96.4% as a result of increased legal activities performed by the Agricultural Pool's attorney during the months of July 2018 through August 2018; and (7) Non-Agricultural Pool Administration expenses (8500's) over budget by $7,653 or 40.6% as a result of increased legal activities performed by the Non-Agricultural Pool's attorney during the months of July 2018 through August 2018. For the majority of the expense categories within the Watermaster budget for FY 2018/19, the individual line-item budgets are divided into 12-monthly amounts and allocated accordingly. As the fiscal year progresses, these categories listed above could level out over time and be within the budget levels.

Overall, the Watermaster (YTD) Actual Expenses were $2,341,399 or 34.0% below the (YTD) Budgeted Expenses of $6,896,598.

PREVIOUSLY REPORTED ACTIONS (Descending Order)

July 2018:
During the month of July 2018, the "Carry Over" funding was calculated. The Total "Carry Over" funding amount of $4,728,140.07 has been posted to the general ledger accounts. The total amount of $4,728,140.07 consisted of $3,068,940.82 from Capital Improvement Projects, $1,594,653.00 from Engineering Services, and $64,546.25 from Administration Services. More detailed information is provided regarding this issue under the "Carry Over" Funding section.

The Amended Budget for FY 2018/19 is $13,615,365.07 which includes $4,728,140.07 for the prior years "Carry Over" funding. The Original Approved budget for FY 2018/19 of $8,887,225 was adopted by the Watermaster Board on May 24, 2018 ($8,887,225 + $4,728,140.07 = $13,615,365.07).

SALARIES EXPENSE

CURRENT MONTH – AUGUST 2018

As of August 31, 2018, the total (YTD) Watermaster salary expenses were $13,607 or 4.3% below the (YTD) budgeted amount of $319,656. 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) as of October 2, 2018.

Two candidates for the Field Operations Specialist (position #9 and position #10) were presented with a conditional offer letter dated September 7, 2018. Both candidates successfully cleared a background investigation, drug screening, and pre-employment physical. The two new Watermaster employees started employment on Tuesday, October 2, 2018. Both employees will be introduced to the Watermaster parties at the Pools, Advisory, and Board meetings during the month of October 2018.

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 2018/19 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 allocations are tracking within budget.

The table summarizes the Year-To-Date (YTD) Actual Watermaster salary costs compared to the Year-To-Date (YTD) Budget as of August 31, 2018. 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 '18 - Aug '18 Actual	Jul '18 - Aug '18 Budget	$ Over Budget	% of Budget	FY 2018/19 Annual Budget
WM Salary Expense					
6011 · WM Staff Salaries	178,904.55	171,893.00	7,011.55	104.08%	993,161.00
6011.1 · WM Staff Salaries - Overtime	1,703.55	0.00	1,703.55	100.0%	0.00
6011.4 · 457(f) NQDC Plan	5,658.17	4,940.00	718.17	114.54%	37,034.00
6017· Temporary Services	0.00	3,500.00	-3,500.00	0.0%	21,000.00
6201 · Advisory Committee - WM Staff Salaries	4,562.93	4,372.00	190.93	104.37%	25,259.00
6301 · Watermaster Board - WM Staff Salaries	6,489.17	6,996.00	-506.83	92.76%	40,422.00
8301 · Appropriative Pool - WM Staff Salaries	7,250.31	6,504.00	746.31	111.48%	37,577.00
8401 · Agricultural Pool - WM Staff Salaries	3,735.66	5,509.00	-1,773.34	67.81%	31,829.00
8501 · Non-Agricultural Pool - WM Staff Salaries	3,053.13	3,757.00	-703.87	81.27%	21,712.00
6901 · OBMP - WM Staff Salaries	11,474.16	24,391.00	-12,916.84	47.04%	140,931.00
7101.1 · Production Monitor - WM Staff Salaries	7,227.54	11,094.00	-3,866.46	65.15%	64,095.00
7102.1 · In-line Meter - WM Staff Salaries	0.00	3,230.00	-3,230.00	0.0%	18,657.00
7103.1 · Grdwater Quality - WM Staff Salaries	7,340.85	12,428.00	-5,087.15	59.07%	71,806.00
7104.1 · Grdwater Level - WM Staff Salaries	10,040.00	10,986.00	-946.00	91.39%	63,475.00
7107.1 · GrdLevel Monitoring - WM Staff Salaries	0.00	916.00	-916.00	0.0%	5,290.00
7108.1 · Hydraulic Control - WM Staff Salaries	0.00	695.00	-695.00	0.0%	4,015.00
7108.11 · Prado Basin - WM Staff Salaries	0.00	947.00	-947.00	0.0%	5,466.00
7201 · Comp Recharge - WM Staff Salaries	8,972.27	10,123.00	-1,150.73	88.63%	58,482.00
7301 · PE3&5 - WM Staff Salaries	1,474.40	2,790.00	-1,315.60	52.85%	16,174.00
7401 · PE4 - WM Staff Salaries	3,179.17	1,717.00	1,462.17	185.16%	9,919.00
7501 · PE6&7 - WM Staff Salaries	0.00	968.00	-968.00	0.0%	5,588.00
7501.1 · PE 6&7 - WM Staff Salaries (Plume)	0.00	852.00	-852.00	0.0%	4,925.00
7601 · PE8&9 - WM Staff Salaries	2,243.95	3,695.00	-1,451.05	60.73%	21,350.00
Subtotal WM Staff Costs	263,309.81	292,303.00	-28,993.19	90.08%	1,698,167.00
60185 · Vacation	33,624.35	13,339.00	20,285.35	252.08%	77,067.00
60186 · Sick Leave	4,617.00	9,459.00	-4,842.00	48.81%	54,656.00
60187 · Holidays	4,497.64	4,555.00	-57.36	98.74%	68,319.00
Subtotal WM Paid Leaves	42,738.99	27,353.00	15,385.99	156.25%	200,042.00
Total WM Salary Costs	306,048.80	319,656.00	-13,607.20	95.74%	1,898,209.00

PREVIOUSLY REPORTED ACTIONS (Descending Order)

July 2018:
The Sr. Field Operations Specialist submitted his written resignation on July 3, 2018 and left employment of Watermaster on July 17, 2018. Watermaster staff met with the Personnel Committee on August 23, 2018 to discuss the plan to reclassify Position #10 from a Water Resources Associate to a Sr. Field Operations Specialist. The Personnel Committee unanimously approved and recommended moving forward with the new position reclassification and adjustment.

The positions of Field Operations Specialist (Position #9) and Sr. Field Operations Specialist (Position #10) are currently under recruitment. The final selection of the two top candidates, along with issuance of a conditional offer of employment will take place before September 10, 2018 with the final screening process being successful completion of a background investigation, passing a drug test, and passing a pre-employment physical. The two positions are anticipated to be onboard with Watermaster as early as October 1, 2018. Both candidates will be introduced to the Watermaster parties at the Pools, Advisory, and Board meetings scheduled for October 2018.

LEGAL SERVICES
BROWNSTEIN HYATT FARBER SCHRECK EXPENSES

CURRENT MONTH – AUGUST 2018

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 2018/19. 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 $963,028.

As of August 31, 2018, 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 $31,132 or 19.3% above the (YTD) budgeted amount of $161,233.

WATERMASTER ADMINISTRATIVE LEGAL SERVICES:
Overall, the Watermaster Administrative Legal Services expense (6070's) as of August 31, 2018, was $67,375 or 259.1% above the budgeted amount of $26,003. The specific items within the Administrative Legal Services expenses (6070's) which were over budget were Court Coordination (6071) over budget by $34,739 or 477.0; Personnel Matters (6073) which were over budget by $2,261 or 137.0%; Party Status Maintenance (6077) which were over budget by $1,100 or 36.4%; and the Miscellaneous Category (6078) which were over budget by $37,020 or 587.6%. 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 (6070's) which were under budget were the expenses for Rules and Regulations (6072) under budget by $1,805 or 100.0%; and Interagency Issues (6074) under budget by $5,940 or 100.0%.

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 August 31, 2018 was $2,226 or 6.8% below the budgeted amount of $32,850. 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 2018. With regards to the Board Meeting expenses (6375), an additional Special Board Meeting was held during the month of July 2018 which increased the legal services for this specific line item category.

OBMP LEGAL SERVICES:
The OBMP legal expenses (accounts 6907.31 through 6907.90) were below the budget for the month. As of August 31, 2018 the category of OBMP legal expenses were $34,017 or 33.2% below the budgeted amount of $102,380. The majority of expenses within this OBMP category were under budget (YTD), however, the Recharge Master Plan expenses (6907.39) were over budget by $6,232 or 78.9%; and Safe Yield Redetermination and Reset legal expenses (6907.42) were over budget by $21,220 or 111.7%.

The table listed below summarizes the Brownstein Hyatt Farber Schreck (BHFS) expenses as of August 31, 2018 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 '18 - Aug '18 Actual	Jul '18 - Aug '18 Budget	$ Over Budget	% of Budget	FY 2018/19 Annual Budget
6070 · Watermaster Legal Services					
6071 · BHFS Legal - Court Coordination	42,022.49	7,283.00	34,739.49	576.99%	43,700.00
6072 · BHFS Legal - Rules & Regulations	0.00	1,805.00	-1,805.00	0.0%	10,825.00
6073 · BHFS Legal - Personnel Matters	3,910.95	1,650.00	2,260.95	237.03%	9,900.00
6074 · BHFS Legal - Interagency Issues	0.00	5,940.00	-5,940.00	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	4,124.70	3,025.00	1,099.70	136.35%	18,150.00
6078 · BHFS Legal - Miscellaneous (Note 1)	43,319.55	6,300.00	37,019.55	687.61%	37,800.00
Total 6070 · Watermaster Legal Services	93,377.69	26,003.00	67,374.69	359.1%	156,015.00
6275 · BHFS Legal - Advisory Committee	3,674.23	3,960.00	-285.77	92.78%	21,780.00
6375 · BHFS Legal - Board Meeting	16,815.66	14,040.00	2,775.66	119.77%	77,220.00
6375.1 · BHFS Legal - Board Workshop(s)	0.00	0.00	0.00	0.0%	12,038.00
8375 · BHFS Legal - Appropriative Pool	3,365.77	4,950.00	-1,584.23	68.0%	27,225.00
8475 · BHFS Legal - Agricultural Pool	3,402.55	4,950.00	-1,547.45	68.74%	27,225.00
8575 · BHFS Legal - Non-Ag Pool	3,365.77	4,950.00	-1,584.23	68.0%	27,225.00
Total BHFS Legal Services	30,623.98	32,850.00	-2,226.02	93.22%	192,713.00
6907.3 · WM Legal Counsel					
6907.31 · Archibald South Plume	0.00	2,185.00	-2,185.00	0.0%	13,125.00
6907.32 · Chino Airport Plume	0.00	2,185.00	-2,185.00	0.0%	13,125.00
6907.33 · Desalter/Hydraulic Control	0.00	3,935.00	-3,935.00	0.0%	23,625.00
6907.34 · Santa Ana River Water Rights	278.10	2,715.00	-2,436.90	10.24%	16,275.00
6907.36 · Santa Ana River Habitat	1,903.95	7,220.00	-5,316.05	26.37%	43,300.00
6907.38 · Reg. Water Quality Cntrl Board	0.00	2,625.00	-2,625.00	0.0%	15,750.00
6907.39 · Recharge Master Plan	14,131.77	7,900.00	6,231.77	178.88%	47,400.00
6907.40 · Storage Agreements	4,386.15	15,400.00	-11,013.85	28.48%	92,400.00
6907.41 · Prado Basin Habitat Sustainability	263.25	2,710.00	-2,446.75	9.71%	16,250.00
6907.42 · Safe Yield Recalculation	40,220.44	19,000.00	21,220.44	211.69%	114,000.00
6907.44 · SGMA Compliance	7,179.63	13,150.00	-5,970.37	54.6%	78,900.00
6907.45 · OBMP Update	0.00	18,030.00	-18,030.00	0.0%	108,200.00
6907.90 · WM Legal Counsel - Unanticipated	0.00	5,325.00	-5,325.00	0.0%	31,950.00
Total 6907 · WM Legal Counsel	68,363.29	102,380.00	-34,016.71	66.77%	614,300.00
Total Brownstein, Hyatt, Farber, Schreck Costs	**192,364.96**	**161,233.00**	**31,131.96**	**119.31%**	**963,028.00**

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

PREVIOUSLY REPORTED ACTIONS (Descending Order)
None

OBMP ENGINEERING SERVICES AND LEGAL COSTS

CURRENT MONTH – AUGUST 2018

Reviewing in total the OBMP Engineering Services and Legal Costs (consolidating the four categories of OBMP Watermaster Staff and SAWPA, OBMP Engineering Services, OBMP Legal Costs, and OBMP Other Expenses) for the two months ending August 31, 2018, the actual expenses of $230,554 were below the budgeted amount of $365,302 by $134,748 or 36.9%. For a detailed discussion, the following is provided.

For August 31, 2018, the accounts 6901-6903 (Optimum Basin Mgmt. Program) section was below the Year-To-Date (YTD) budget by $13,238 or 42.5%. Watermaster utilizes an in-house database time and attendance system to record and document staff's actual hours worked and also allocates those hours to a specific project or activity. Watermaster staff time could be charged to Administrative, OBMP, or Implementation Project categories. Recently, Watermaster staff spent less time on specific OBMP related areas as budgeted. As a result, Watermaster staff allocated less actual time to the OBMP project as budgeted, which resulted in an under budget variance of $12,917 or 53.0%. The remaining expense was the Santa Ana Watershed Project Authority (SAWPA) FY 2018/19 Basin Monitoring Program Task Force Contribution which was budgeted at $6,742 and actual expenses were $321 or 4.8% below budget as of August 31, 2018.

For August 31, 2018, the accounts 6906 (Optimum Basin Mgmt. Program Engineering Services) section was below the Year-To-Date (YTD) budget by $86,425 or 37.5%. The majority of expenses within this OBMP category were under budget (YTD), however, the accounts which were over budget were as follows: the Water Rights Compliance Reporting expenses (6906.22) which were over budget by $8,321 or 194.7%; the OBMP-Data Requests-CBWM Staff Engineering Services expenses (6906.71) which were over budget by $6,055 or 36.3%; and the OBMP-2018 RMPU Master Update expenses (6906.90) which were over budget by $45,112 or 497.6%.

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 $27,452 while some other line item activities were below the budget by $61,469. Above the budget line item was the Recharge Master Plan expenses of $6,232; and the Safe Yield Redetermination and Reset expenses of $21,220. The individual legal projects/activities that were below budget for the Year-To-Date (YTD) period were the Archibald South Plume of $2,185; the Chino Airport Plume of $2,185; the Desalter/Hydraulic Control of $3,935; the Santa Ana River Water Rights of $2,437; the Santa Ana River Habitat of $5,316; the Regional Water Quality Control Board of $2,625; Storage Agreements of $11,014; the Prado Basin Habitat Sustainability of $2,447; SGMA Compliance of $5,970; OBMP Update of $18,030; and the WM Unanticipated legal expenses of $5,325. For the two months ended August 31, 2018, the overall cumulative (YTD) budget was $102,380 and the actual (BHFS) legal expenses totaled $68,363 which resulted in an under budget variance of $34,017 or 33.2%.

The OBMP Other Expenses (6909's) were below the budget for the month. These expenses are typically conference calls, meeting expenses, supplies, annual inspection fees, and other miscellaneous type expenses. As of August 31, 2018 this category of expenses was $1,069 or 75.8% below the budgeted amount of $1,410.

The WEI Support for IEUA expenses are categorized within the category (6910's). The individual general ledger accounts are as follows: IRP Groundwater Modeling-WEI expenses (6910.10); As Needed Support for Obtaining Grant Funding of RMPU Projects expenses (6910.11); Preparation of a Compliance Demonstration for Stormwater Recharge expenses (6910.12); Ground Water Velocity Field for the San Sevaine Improvement Project expenses (6910.13); Truing-Up the 2013 RMPU Estimates expenses (6910.14); WEI Support-HCP Modeling expenses (6910.15); and RMPU-MPI Analysis expenses (6910.20). These expenses are billed directly to IEUA on the following month once the payment has been issued to Wildermuth Environmental, Inc. per the agreement. As of August 31, 2018 this category of expenses was fully invoiced in the amount of $0 to IEUA.

Overall, the Optimum Basin Management Program (OBMP) category was $230,554 compared to a (YTD) budget of $365,302 for an under budget of $134,748 or 36.9% as of August 31, 2018.

The table listed below summarizes the Optimum Basin Management Program (OBMP) expenses as of August 31, 2018 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 '18 - Aug '18 Actual	Jul '18 - Aug '18 Budget	$ Over Budget	% of Budget	FY 2018/19 Annual Budget
6900 · Optimum Basin Mgmt Plan					
6901 · WM Staff Salaries	11,474.16	24,391.00	-12,916.84	47.04%	140,931.00
6903 · OBMP SAWPA Group	6,421.00	6,742.00	-321.00	95.24%	6,742.00
Total 6901-6903 · OBMP WM Staff/SAWPA	17,895.16	31,133.00	-13,237.84	57.48%	147,673.00
6906 · OBMP Engineering Services					
6906.1 · OBMP - Watermaster Model Update	0.00	9,754.00	-9,754.00	0.0%	58,544.00
6906.15 · Integrated Model Mtgs. - IEUA Costs	2,503.50	3,330.00	-826.50	75.18%	19,960.00
6906.21 · State of the Basin Report	0.00	26,402.00	-26,402.00	0.0%	158,422.00
6906.22 · Water Rights Compliance Reporting	12,596.35	4,275.00	8,321.35	294.65%	25,650.00
6906.23 · SGMA Reporting Requirements	0.00	2,250.00	-2,250.00	0.0%	13,500.00
6906.24 · Compliance - SB88 and SWRCB	0.00	1,352.00	-1,352.00	0.0%	8,092.00
6906.26 · 2019 OBMP Update	0.00	26,479.00	-26,479.00	0.0%	158,872.00
6906.27 · HCP Meetings/Tech. Review-IEUA Cost	0.00	2,970.00	-2,970.00	0.0%	17,810.00
6906.28 · Agriculture Prod. & Estimation	0.00	3,742.00	-3,742.00	0.0%	22,452.00
6906.31 · OBMP - Pool, Advisory, Board Mtgs.	13,820.52	16,327.00	-2,506.48	84.65%	97,962.00
6906.32 · OBMP - Other General Meetings	8,628.85	13,513.00	-4,884.15	63.86%	81,093.00
6906.71 · OBMP - Data Requests - CBWM Staff	22,728.79	16,674.00	6,054.79	136.31%	100,044.00
6906.72 · OBMP - Data Requests - Non CBWM	1,686.90	5,388.00	-3,701.10	31.31%	32,348.00
6906.73 · OBMP - Safe Yield Recalculation	21,661.20	67,814.00	-46,152.80	31.94%	406,884.00
6906.74 · OBMP - Mat'l Phy. Injury Requests	513.30	11,997.00	-11,483.70	4.28%	71,967.00
6906.81 · Prepare Annual Reports	2,169.60	3,248.00	-1,078.40	66.8%	19,498.00
6906.9 · OBMP - 2018 RMPU Master Update	54,178.20	9,066.00	45,112.20	597.6%	54,396.00
6906 · OBMP Engineering Services - Other	3,467.20	5,798.00	-2,330.80	59.8%	34,768.00
Total 6906 · OBMP Engineering Services	143,954.41	230,379.00	-86,424.59	62.49%	1,382,262.00
6907 · OBMP Legal Fees					
6907.3 · WM Legal Counsel					
6907.31 · Archibald South Plume	0.00	2,185.00	-2,185.00	0.0%	13,125.00
6907.32 · Chino Airport Plume	0.00	2,185.00	-2,185.00	0.0%	13,125.00
6907.33 · Desalter/Hydraulic Control	0.00	3,935.00	-3,935.00	0.0%	23,625.00
6907.34 · Santa Ana River Water Rights	278.10	2,715.00	-2,436.90	10.24%	16,275.00
6907.36 · Santa Ana River Habitat	1,903.95	7,220.00	-5,316.05	26.37%	43,300.00
6907.38 · Reg. Water Quality Cntrl Board	0.00	2,625.00	-2,625.00	0.0%	15,750.00
6907.39 · Recharge Master Plan	14,131.77	7,900.00	6,231.77	178.88%	47,400.00
6907.40 · Storage Agreements	4,386.15	15,400.00	-11,013.85	28.48%	92,400.00
6907.41 · Prado Basin Habitat Sustainability	263.25	2,710.00	-2,446.75	9.71%	16,250.00
6907.42 · Safe Yield Recalculation	40,220.44	19,000.00	21,220.44	211.69%	114,000.00
6907.44 · SGMA Compliance	7,179.63	13,150.00	-5,970.37	54.6%	78,900.00
6907.45 · OBMP Update	0.00	18,030.00	-18,030.00	0.0%	108,200.00
6907.90 · WM Legal Counsel - Unanticipated	0.00	5,325.00	-5,325.00	0.0%	31,950.00
Total 6907 · WM Legal Counsel	68,363.29	102,380.00	-34,016.71	66.77%	614,300.00
Total 6907 · OBMP Legal Fees	68,363.29	102,380.00	-34,016.71	66.77%	614,300.00
6909 · OBMP Other Expenses					
6909.1 · OBMP Meetings	340.93	250.00	90.93	136.37%	1,500.00
6909.3 · Other OBMP Expenses	0.00	330.00	-330.00	0.0%	2,000.00
6909.6 · OBMP Expenses - Miscellaneous	0.00	830.00	-830.00	0.0%	5,000.00
Total 6909 · OBMP Other Expenses	340.93	1,410.00	-1,069.07	24.18%	8,500.00
6910 · WEI Support for IEUA					
6910.50 · WEI Support for IEUA-Billings	0.00	0.00	0.00	0.0%	0.00
Total 6910 · WEI Support for IEUA	0.00	0.00	0.00	0.0%	0.00
Total 6900 · Optimum Basin Mgmt Plan	**230,553.79**	**365,302.00**	**-134,748.21**	**63.11%**	**2,152,735.00**

PREVIOUSLY REPORTED ACTIONS (Descending Order)
None

ENGINEERING SERVICES - OBMP IMPLEMENTATION PROJECTS COSTS
WILDERMUTH ENVIRONMENTAL, INC.

CURRENT MONTH – AUGUST 2018

As of August 31, 2018, the total (YTD) Engineering Services expenses were $300,007 or 14.0% below

the (YTD) budget amount of $2,137,985. The OBMP Implementation Projects (consolidated accounts 7100's – 7700's) were all under budget as of August 31, 2018, with the exception of the Groundwater Quality-Engineering expenses (7103.3) which were over budget by $10,853 or 32.7%; PE4-Engineering expenses (7402) which were over budget by $29,542 or 169.0%; and PE8&9-Engineering expenses (7602) which were over budget by $1,249 or 1.9%.

Wildermuth Environmental, Inc. provides Watermaster an Estimated Cost at Completion (ECAC) report each quarter. The purpose of this ECAC report is to update Watermaster on whether or not the Engineering Services budget will be above or below budget at the end of the fiscal year. If the Engineering Services budget is expected to be above budget at fiscal year-end, a Budget Amendment or Budget Transfer Form would need to be approved to ensure funding. The first quarter ECAC report (for the months July 2018 – September 2018) is scheduled to be produced by Wildermuth Environmental, Inc. and distributed to Watermaster during the month of October 2018.

The table listed below summarized the Year-To-Date (YTD) Actual Wildermuth Environmental, Inc., (WEI) and other Engineering costs compared to the Year-To-Date (YTD) Budget as of August 31, 2018. 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 '18 - Aug '18 Actual	Jul '18 - Aug '18 Budget	$ Over Budget	% of Budget	FY 2018/19 Annual Budget
6906 · OBMP Engineering Services - Other	3,467.20	5,798.00	-2,330.80	59.8%	34,768.00
6906.1 · OBMP - Watermaster Model Update	0.00	9,754.00	-9,754.00	0.0%	58,544.00
6906.15 · Integrated Model Mtgs-IEUA Cost	2,503.50	3,330.00	-826.50	75.18%	19,960.00
6906.21 · State of the Basin Report	0.00	26,402.00	-26,402.00	0.0%	158,422.00
6906.22 · Water Rights Compliance Reporting	12,596.35	4,275.00	8,321.35	294.65%	25,650.00
6906.23 · SGMA Reporting Requirements	0.00	2,250.00	-2,250.00	0.0%	13,500.00
6906.24 · Compliance - SB88 and SWRCB	0.00	1,352.00	-1,352.00	0.0%	8,092.00
6906.26 · 2019 obmp Update	0.00	26,479.00	-26,479.00	0.0%	158,872.00
6906.27 · HCP Meetings/Technical Review-IEUA Cos	0.00	2,970.00	-2,970.00	0.0%	17,810.00
6906.28 · Agriculture Prod. & Estimation	0.00	3,742.00	-3,742.00	0.0%	22,452.00
6906.31 · OBMP - Pool, Advisory, Board Mtgs.	13,820.52	16,327.00	-2,506.48	84.65%	97,962.00
6906.32 · OBMP - Other General Meetings	8,628.85	13,513.00	-4,884.15	63.86%	81,093.00
6906.71 · OBMP - Data Requests - CBWM Staff	22,728.79	16,674.00	6,054.79	136.31%	100,044.00
6906.72 · OBMP - Data Requests - Non CBWM	1,686.90	5,388.00	-3,701.10	31.31%	32,348.00
6906.73 · OBMP - Safe Yield Recalculation	21,661.20	67,814.00	-46,152.80	31.94%	406,884.00
6906.74 · OBMP - Mat'l Physical Injury Requests	513.30	11,997.00	-11,483.70	4.28%	71,967.00
6906.81 · Prepare Annual Reports	2,169.60	3,248.00	-1,078.40	66.8%	19,498.00
6906.90 · OBMP - 2018 RMPU Master Update	54,178.20	9,066.00	45,112.20	597.6%	54,396.00
7103.3 · Grdwtr Qual-Engineering	44,059.90	33,207.00	10,852.90	132.68%	199,243.00
7103.5 · Grdwtr Qual-Lab Svcs	0.00	12,940.00	-12,940.00	0.0%	38,820.00
7104.3 · Grdwtr Level-Engineering	20,863.33	40,054.00	-19,190.67	52.09%	240,328.00
7104.8 · Grdwtr Level-Contracted Services	0.00	1,670.00	-1,670.00	0.0%	10,000.00
7104.9 · Grdwtr Level-Capital Equipment	0.00	1,330.00	-1,330.00	0.0%	8,000.00
7107.2 · Grd Level-Engineering	8,081.14	37,059.00	-28,977.86	21.81%	98,243.00
7107.3 · Grd Level-SAR Imagery	12,000.00	15,000.00	-3,000.00	80.0%	85,000.00
7107.6 · Grd Level-Contract Svcs	9,370.71	32,647.00	-23,276.29	28.7%	92,227.00
7107.8 · Grd Level-Capital Equipment	0.00	2,112.00	-2,112.00	0.0%	12,692.00
7108.31 · Hydraulic Control-PBHSP	4,558.05	12,859.00	-8,300.95	35.45%	77,159.00
7108.4 · Hydraulic Control-Lab Svcs	1,634.00	2,260.00	-626.00	72.3%	9,038.00
7108.41 · Hydraulic Control-PBHSP	0.00	0.00	0.00	0.0%	15,026.00
7108.6 · Hydraulic Control-Outside Professionals	0.00	1,670.00	-1,670.00	0.0%	10,000.00
7109.3 · Recharge & Well - Engineering	1,448.40	4,208.00	-2,759.60	0.0%	25,248.00
7202.2 · Comp Recharge-Engineering Services	4,070.97	15,270.00	-11,199.03	26.66%	91,640.00
7303 · PE3&5-Engineering - Other	0.00	1,630.00	-1,630.00	0.0%	9,760.00
7402 · PE4-Engineering	47,026.85	17,485.00	29,541.85	268.96%	104,910.00
7402.10 · PE4-MZ1 Pomona Project	1,470,361.18	1,559,137.00	-88,775.82	94.31%	1,703,417.00
7403 · PE4-Contract Svcs	0.00	1,670.00	-1,670.00	0.0%	10,000.00
7502 · PE6&7-Engineering	2,272.30	14,652.00	-12,379.70	15.51%	87,912.00
7510 · PE6&7-IEUA Salinity Mgmt. Plan	0.00	33,718.00	-33,718.00	0.0%	108,178.00
7602 · PE8&9-Engineering	68,276.80	67,028.00	1,248.80	101.86%	105,348.00
Total Engineering Services Costs	1,837,978.04	2,137,985.00	-300,006.96	85.97%	4,524,451.00 *

* Wildermuth and Subcontractor Engineering Budget of $2,929,798 plus Carryover Funds from FY 2017/18 of $1,594,653
Carryover Funds from FY 2017/18 of $1,594,653 = $24,822 (7107.2); $20,727 (7107.6); $1,530,279 (7402.10); and $18,825 (7510)

PREVIOUSLY REPORTED ACTIONS (Descending Order)

July 2018:
The breakdown of the total Task Order amount of $2,929,798 includes direct labor costs for Wildermuth Environmental, Inc. (87.2%) along with other direct charges such as equipment rental, laboratory fees, travel costs, reproduction costs, and outside professional services (12.8%).

The approved "Original" Engineering Services budget of $2,929,798 was increased by "Carry Over" funding in the amount of $1,594,653 to the "Amended" amount of $4,524,451 for FY 2018/19 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 2018/19 timeframe or future years. The Carry-Over amount of $1,594,653 from FY 2017/18 to the FY 2018/19 budget are provided in detail as follows:

1. 7107.2 Ground-Level - Engineering Services of $24,822. The Watermaster's Subsidence Management Plan includes a "long-term pumping test" in the Managed Area to test the Guidance Level that was budgeted for in FY 2017/18. The test was not performed in FY 2017/18. This carryover budget will support the monitoring of injection, production, groundwater levels, and ground motion associated with the test, if it is performed in FY 2018/19.
2. 7107.6 Ground-Level - Contract Services of $20,727. The Watermaster's Subsidence Management Plan includes a "long-term pumping test" in the Managed Area to test the Guidance Level that was budgeted for in FY 2017/18. The test was not performed in FY 2017/18. This carryover budget will support the monitoring of injection, production, groundwater levels, and ground motion associated with the test, if it is performed in FY 2018/19.
3. 7402.1 OBMP Engineering Services Northwest MZ-1 for $1,530,279. The installation of the Pomona Extensometer has been delayed until FY 2018/19 and the monitoring program in Northwest MZ-1 has not yet been fully implemented. The carryover request will support the efforts to drill, construct, equip, test, and document the installation of the Pomona Extensometer, and complete the installation of the monitoring network in Northwest MZ-1.
4. 7510 IEUA - Update Recycled Water Permit-Salinity for $18,825. The Salinity Management effort is a 2.5-year project and is being cost shared with IEUA. FY 2017/18 was the first year of implementation. The unspent budget in FY 2017/18 is necessary to complete the total project.

PRADO BASIN HABITAT SUSTAINABILITY PROGRAM

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

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

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

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

4. Annual license fees for monitoring wells.

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

6. Other costs required to fulfill the requirements of Peace II Subsequent EIR mitigation measure 4.4-3.

Watermaster shall be responsible for the costs associated with the Groundwater Level Monitoring Program, Groundwater Quality Monitoring Program, and Surface Water Monitoring Program.

Watermaster and IEUA shall each have responsibility for its own administrative costs, excluding the tasks and expenses included under Set-Up Costs and Ongoing Costs.

Watermaster and IEUA will meet to review the cost-sharing structure under this agreement and negotiate necessary adjustments in good faith on at least an annual basis.

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

	Wildermuth Environmental, Inc.	50% Billing **"TO"** IEUA	50% Billing **"FROM"** IEUA	Costs For Watermaster
Jul. 2018 - Aug. 2018	$ 9,116.10	$ (4,558.05)	$ -	$ 4,558.05
Totals	**$ 9,116.10**	**$ (4,558.05)**	**$ -**	**$ 4,558.05**
	7108.31	7108.31	7108.31	
Maximum Costs	**$ 174,318.00**	**$ 87,159.00**	**$ 87,159.00**	**$ 87,159.00**

PREVIOUSLY REPORTED ACTIONS (Descending Order)
None:

OTHER INCOME AND EXPENSE

There were no other significant items to report within the category of Other Income and Expenses for the month ending August 31, 2018.

PREVIOUSLY REPORTED ACTIONS (Descending Order)

July 2018:
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 2018/19 annual administrative fee invoice was issued on July 6, 2018 in the amount of $167,712.36 under invoice number 2018-DYY. Payment in the amount of $167,712.36 was received and deposited on August 7, 2018.

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

Once the FY 2017/18 period as of June 30, 2018 was closed, the amount of unfinished capital projects and related engineering costs was calculated and the "Carry Over" funding amount was added to the current FY 2018/19 budget. The Total "Carry Over" funding amount of $4,728,140.07 was posted to the accounts as of July 1, 2018. The total amount of $4,728,140.07 consisted of $3,068,940.82 from Capital Improvement Projects, $1,594,653.00 from Engineering Services, and $64,546.25 from Administration Services ($3,068,940.82 + $1,594,653.00 + $64,546.25 = $4,728,140.07).

CURRENT MONTH – AUGUST 2018

As of August 31, 2018, the total (YTD) amount remaining of the "Carried Over" funding is $2,110,726.45 ($4,728,140.07 - $2,617,413.62 = $2,110,726.45).

The following details are provided:

"Carried Over" Expenses At June 30, 2018

				GL Account		
Blomquist Report - Update	$	7,500.00	A	6061.6	FY 2017/18	ADMIN
Grd Level - MVWD SCADA Reimbursement	$	57,046.25	B	7107.63	FY 2017/18	ADMIN
Ground Level - Engineering Services	$	24,822.00	C	7107.2 [2]	FY 2017/18	ENG
Ground Level - Contract Services	$	20,727.00	D	7107.6 [3]	FY 2017/18	ENG
PE4 - Northwest MZ-1 Area Project	$	1,530,279.00	E	7402.1 [4]	FY 2017/18	ENG
PE6&7-IEUA Salinity Mgmt. Plan	$	18,825.00	F	7510 [5]	FY 2017/18	ENG
Jurupa Pumping Station (TO #5)	$	37,981.33	G	7209.1 [1]	FY 2013/14	PROJ
Wineville Basin Proof of Concept (TO #6)	$	35,397.53	H	7209.2 [1]	FY 2013/14	PROJ
RMPU Amendment (TO #1)	$	589,923.18	I	7690.15	FY 2016/17	PROJ
East Declez Basin (TO #1)	$	1,171.33	J	7690.16 [1]	FY 2016/17	PROJ
Hickory Basin Recharge Improvement Project	$	3,877.00	K	7690.3 [1]	FY 2013/14	PROJ
San Sevaine Recharge Improvement Project (TO #8)	$	106,590.18	L	7690.4	FY 2014/15	PROJ
San Sevaine Recharge Improvement Project (TO #8)	$	1,126,900.00	L	7690.4	FY 2015/16	PROJ
San Sevaine Recharge Improvement Project (TO #8)	$	1,065,600.00	L	7690.4	FY 2016/17	PROJ
CB20 Turnout Noise Abatement Project	$	859.80	M	7690.5 [1]	FY 2013/14	PROJ
GWR SCADA Upgrades (TO #4)	$	36,615.05	N	7690.61	FY 2014/15	PROJ
GWR SCADA Upgrades (TO #4)	$	38,675.00	N	7690.61	FY 2015/16	PROJ
Upper Santa Ana River HCP (TO #7)	$	15,062.88	O	7690.7	FY 2014/15	PROJ
Upper Santa Ana River HCP (TO #7)	$	5,000.00	O	7690.7	FY 2015/16	PROJ
Lower Day Basin RMPU (TO #2)	$	5,287.54	P	7690.8	FY 2016/17	PROJ
Total Balance, June 30, 2018	**$**	**4,728,140.07**				

"Carried Over" Balance, July 1, 2018	$ 4,728,140.07				
Less: (Invoices Received To Date FY 2018/19)					
Ground Level - Engineering Services	$ (8,081.14)	C	7107.2 [2]		
Ground Level - Contract Services	$ (9,370.71)	D	7107.6 [3]		
PE4 - Northwest MZ-1 Area Project	$ (1,470,361.18)	E	7402.1 [4]		
Jurupa Pumping Station (TO #5)	$ (37,981.33)	G	7209.1 [1]	Budget Transfer T-18-07-01 (OUT)	
Wineville Basin Proof of Concept (TO #6)	$ (35,397.53)	H	7209.2 [1]	Budget Transfer T-18-07-01 (OUT)	
RMPU Amendment (TO #1)	$ 690,258.97	I	7690.15	Budget Transfer T-18-07-01 (IN)	
RMPU Amendment (TO #1)	$ (980,182.15)	I	7690.15	Invoice Paid	
Hickory Basin Recharge Improvement Project	$ (3,877.00)	K	7690.3 [1]	Budget Transfer T-18-07-01 (OUT)	
San Sevaine Recharge Improvement Project (TO #8)	$ (106,590.18)	L	7690.4	Budget Transfer T-18-07-01 (OUT)	
San Sevaine Recharge Improvement Project (TO #8)	$ (1,126,900.00)	L	7690.4	Budget Transfer T-18-07-01 (OUT)	
San Sevaine Recharge Improvement Project (TO #8)	$ (1,065,600.00)	L	7690.4	Budget Transfer T-18-07-01 (OUT)	
CB20 Turnout Noise Abatement Project	$ (859.80)	M	7690.5 [1]	Budget Transfer T-18-07-01 (OUT)	
GWR SCADA Upgrades (TO #4)	$ (29,590.05)	N	7690.61		
Lower Day Basin RMPU (TO #2)	$ 414,540.85	P	7690.8	Budget Transfer T-18-07-01 (IN)	
Lower Day Basin RMPU (TO #2)	$ (119,828.39)	P	7690.8	Invoice Paid	
Funds on Hold for Projects	$ 1,272,406.02	Q	7690.9	Budget Transfer T-18-07-01 (IN)	
Updated Balance as of August 31, 2018	**$ 2,110,726.45**				

[1] 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.
[2] Engineering work not completed in FY 2017/18 to perform ground level surveys for the long-term pumping test.
[3] Outside professionals work not completed in FY 2017/18 to perform ground level surveys for the long-term pumping test.
[4] Work not completed in FY 2017/18 for installation of the Pomona extensometer and monitoring program for the Northwest MZ-1 area.
[5] Watermaster's portion of the unused FY 2017/18 budget to finalize the 2.5 year project to Update Recycled Water Permit with IEUA.

Updated Balance as of August 31, 2018						
Blomquist Report - Update	$ 7,500.00	A	6061.6	FY 2017/18	ADMIN	
Grd Level - MVWD SCADA Reimbursement	$ 57,046.25	B	7107.63	FY 2017/18	ADMIN	
Ground Level - Engineering Services	$ 16,740.86	C	7107.2 [2]	FY 2017/18	ENG	
Ground Level - Contract Services	$ 11,356.29	D	7107.6 [3]	FY 2017/18	ENG	
PE4 - Northwest MZ-1 Area Project	$ 59,917.82	E	7402.1 [4]	FY 2017/18	ENG	
PE6&7-IEUA Salinity Mgmt. Plan	$ 18,825.00	F	7510 [5]	FY 2017/18	ENG	
Jurupa Pumping Station (TO #5)	$ -	G	7209.1 [1]	FY 2013/14	PROJ	
Wineville Basin Proof of Concept (TO #6)	$ -	H	7209.2 [1]	FY 2013/14	PROJ	
RMPU Amendment (TO #1)	$ 300,000.00	I	7690.15	FY 2016/17	PROJ	
East Declez Basin (TO #1)	$ 1,171.33	J	7690.16 [1]	FY 2016/17	PROJ	
Hickory Basin Recharge Improvement Project	$ -	K	7690.3 [1]	FY 2013/14	PROJ	
San Sevaine Recharge Improvement Project (TO #8)	$ -	L	7690.4	FY 2014/15	PROJ	
San Sevaine Recharge Improvement Project (TO #8)	$ -	L	7690.4	FY 2015/16	PROJ	
San Sevaine Recharge Improvement Project (TO #8)	$ -	L	7690.4	FY 2016/17	PROJ	
CB20 Turnout Noise Abatement Project	$ -	M	7690.5 [1]	FY 2013/14	PROJ	
GWR SCADA Upgrades (TO #4)	$ 7,025.00	N	7690.61	FY 2014/15	PROJ	
GWR SCADA Upgrades (TO #4)	$ 38,675.00	N	7690.61	FY 2015/16	PROJ	
Upper Santa Ana River HCP (TO #7)	$ 15,062.88	O	7690.7	FY 2014/15	PROJ	
Upper Santa Ana River HCP (TO #7)	$ 5,000.00	O	7690.7	FY 2015/16	PROJ	
Lower Day Basin RMPU (TO #2)	$ 300,000.00	P	7690.8	FY 2016/17	PROJ	
Funds on Hold for Projects	$ 1,272,406.02	Q	7690.9	Budget Transfer T-18-07-01 (IN)		
Updated Balance as of August 31, 2018	**$ 2,110,726.45**					

ADMINISTRATION SERVICES:
Unspent funds related to ongoing projects and associated activities from the Administration Services budget from FY 2017/18 in several accounts totaling $64,546.25 were "Carried Over" into the current FY 2018/19 budget. These funds were from the Blomquist Report-Update [A] in the amount of $7,500 in account (6061.6); and Ground Level – MVWD SCADA Reimbursement [B] in the amount of $57,046.25 in account (7107.63).

ENGINEERING SERVICES:
Unspent funds related to ongoing projects and associated activities from the Engineering Services budget from FY 2017/18 in several accounts totaling $1,594,653 were "Carried Over" into the current FY 2018/19 budget. These funds were from the Ground Level - Engineering Services [C] in the amount of $24,822 in account (7107.2); Ground Level - Contract Services [D] in the amount of $20,727 in account (7107.6); PE4 – Northwest MZ-1 Area Project [E] in the amount of $1,530,279 in account (7402.1); and PE6&7-IEUA Salinity Management Plan [F] in the amount of $18,825 in account (7510).

COMPLETED PROJECTS WITH FUNDING AVAILABLE:
Several projects were completed during FY 2017/18 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: Jurupa Pumping Station [G] in the amount of $37,981.33 (account 7209.1); Wineville Basin Proof of Concept [H] in the amount of $35,397.53 (account 7209.2); East Declez Basin [J] in the amount of $1,171.33 (account 7690.16); Hickory Basin Recharge Improvement Project [K] in the amount of $3,877.00 (account 7690.3); and CB20 Turnout Noise Abatement Project [M] in the amount of $859.80 (account 7690.5). The total amount available is $79,286.99 ($37,981.33 + $35,397.53 + $1,171.33 + $3,877.00 + $859.80 = $79,286.99).

ONGOING RECHARGE IMPROVEMENT PROJECTS:
The RMPU Amendment-Task Order #1 [I] has a remaining budget from FY 2016/17 of $589,923.18 in account (7690.15); the San Sevaine Recharge Improvement Project-Task Order #8 [L] has a remaining funded budget balance of $2,299,090.18 in account (7690.4); the GWR SCADA Upgrades-Task Order #4 [N] has a remaining funded budget balance of $75,290.05 in account (7690.61); the Upper Santa Ana River HCP-Task Order #7 [O] has a remaining funded balance of $20,062.88 in account (7690.7); and the Lower Day Basin RMPU-Task Order #2 [P] has a remaining funded budget balance of $5,287.54 in account (7690.8). The total funded budget for these combined projects is $2,989,653.83.

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 August 31, 2019, any remaining balances of the FY 2018/19 and prior years funding (if any), along with any new FY 2018/19 expenses, will then be "Carried Over" into the FY 2019/20 budget.

AUDIT FIELD WORK

FY 2017/18:
The auditors from the audit firm of Fedak & Brown LLP were onsite at the Watermaster offices on April 17, 2018. This was the start of the interim field work for the period of July 1, 2017 through February 28, 2018. The final field work for the period of March 1, 2018 through June 30, 2018 was completed during August 7, 2018 through August 8, 2018. The Annual Financial and Audit Reports are scheduled to be presented to the Watermaster Board by Fedak & Brown LLP at the October 25, 2018 Board meeting. The Annual Financial and Audit Reports for FY 2017/18 are anticipated to be posted to the Watermaster website no later than October 31, 2018.

ASSESSMENT INVOICING

CURRENT MONTH – AUGUST 2018

The FY 2018/19 Assessment Package (Draft) is scheduled for presentation at Workshop #1 on Tuesday, October 23, 2018 at 1:00pm. If needed, the FY 2018/19 Assessment Package (Draft) is also scheduled for presentation at Workshop #2 on Tuesday, October 30, 2018 at 1:00pm.

The FY 2018/19 Assessment Package is scheduled for presentation to the Pools on Thursday, November 8, 2018 and to the Advisory Committee and Board on Thursday, November 15, 2018.

If the FY 2018/19 Assessment Package is approved by the Advisory Committee and adopted by the Board on Thursday, November 15, 2018, the Assessment invoices will be issued by Watermaster no later than Friday, November 16, 2018 with payment due 30-days after invoice date. Payments will be due to Watermaster on Monday, December 17, 2018. 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 payment not received as of 5:00pm on Monday, December 17, 2018.

To date, all assessment invoice payments have been received. No Assessment activity for the month to report.

PREVIOUSLY REPORTED ACTIONS (Descending Order)
None:

ATTACHMENTS
1. Financial Report - B5

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

	1/12th (8.33%) of the Total Budget				2/12th (16.67%) of the Total Budget				100% of the Total Budget			
	For The Month of August 2018				Year-To-Date as of August 31, 2018				Fiscal Year End as of June 30, 2019			
	Actual	Budget	$ Over(Under)	% of Budget	Actual	Budget	$ Over(Under)	% of Budget	Projected	Budget	$ Over(Under)	% of Budget
Income												
4010 · Local Agency Subsidies	0.00	0.00	0.00	0.0%	167,712.36	167,712.00	0.36	100.0%	167,712.00	167,712.00	0.00	100.0%
4110 · Admin Asmnts-Approp Pool	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	8,301,750.00	8,301,750.00	0.00	100.0%
4120 · Admin Asmnts-Non-Agri Pool	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	353,795.00	353,795.00	0.00	100.0%
4700 · Non Operating Revenues	10.25	0.00	10.25	100.0%	20.67	0.00	20.67	100.0%	63,968.00	63,968.00	0.00	100.0%
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%
Total Income	10.25	0.00	10.25	100.0%	167,733.03	167,712.00	21.03	100.01%	8,887,225.00	8,887,225.00	0.00	100.0%
Gross Profit	10.25	0.00	10.25	100.0%	167,733.03	167,712.00	21.03	100.01%	8,887,225.00	8,887,225.00	0.00	100.0%
Expense												
6010 · Admin. Salary/Benefit Costs	89,884.27	92,451.00	-2,566.73	97.22%	188,992.91	181,583.00	7,409.91	104.08%	1,062,695.00	1,062,695.00	0.00	100.0%
6020 · Office Building Expense	9,455.37	10,034.00	-578.63	94.23%	17,808.05	18,818.00	-1,009.95	94.63%	112,399.00	112,399.00	0.00	100.0%
6030 · Office Supplies & Equip.	3,519.06	3,325.00	194.06	105.84%	4,996.19	5,075.00	-78.81	98.45%	50,500.00	50,500.00	0.00	100.0%
6040 · Postage & Printing Costs	3,595.51	3,402.00	193.51	105.69%	6,192.21	6,354.00	-161.79	97.45%	47,142.00	47,142.00	0.00	100.0%
6050 · Information Services	14,074.24	15,208.00	-1,133.76	92.55%	29,967.78	31,136.00	-1,168.22	96.25%	151,656.00	151,656.00	0.00	100.0%
6060 · Contract Services	3,915.91	5,000.00	-1,084.09	78.32%	5,895.21	16,100.00	-10,204.79	36.62%	45,125.00	45,125.00	0.00	100.0%
6070 · Watermaster Legal Services	33,909.78	13,001.00	20,908.78	260.82%	93,377.69	26,003.00	67,374.69	359.1%	156,015.00	156,015.00	0.00	100.0%
6080 · Insurance	9,544.19	0.00	9,544.19	100.0%	35,660.67	28,815.00	6,845.67	123.76%	30,315.00	30,315.00	0.00	100.0%
6110 · Dues and Subscriptions	0.00	250.00	-250.00	0.0%	14,132.50	15,098.00	-965.50	93.61%	34,590.00	34,590.00	0.00	100.0%
6140 · WM Admin Expenses	22.36	50.00	-27.64	44.72%	206.48	250.00	-43.52	82.59%	2,350.00	2,350.00	0.00	100.0%
6150 · Field Supplies	0.00	150.00	-150.00	0.0%	21.29	200.00	-178.71	10.65%	1,550.00	1,550.00	0.00	100.0%
6170 · Travel & Transportation	963.71	2,355.00	-1,391.29	40.92%	2,805.44	4,230.00	-1,424.56	66.32%	24,170.00	24,170.00	0.00	100.0%
6190 · Training, Conferences, Seminars	2,394.56	2,524.00	-129.44	94.87%	5,539.80	6,848.00	-1,308.20	80.9%	37,857.00	37,857.00	0.00	100.0%
6200 · Advisory Comm - WM Board	3,583.64	4,257.00	-673.36	84.18%	8,249.52	8,416.00	-166.48	98.02%	47,539.00	47,539.00	0.00	100.0%
6300 · Watermaster Board Expenses	12,416.15	13,596.00	-1,179.85	91.32%	29,012.39	27,011.00	2,001.39	107.41%	178,980.00	178,980.00	0.00	100.0%
8300 · Appr PI-WM & Pool Admin	12,376.00	12,111.00	265.00	102.19%	25,599.09	24,079.00	1,520.09	106.31%	140,552.00	140,552.00	0.00	100.0%
8400 · Agri Pool-WM & Pool Admin	3,733.98	5,541.00	-1,807.02	67.39%	7,552.41	10,959.00	-3,406.59	68.92%	62,054.00	62,054.00	0.00	100.0%
8467 · Ag Legal & Technical Services	31,716.73	17,083.00	14,633.73	185.66%	67,116.73	34,167.00	32,949.73	196.44%	205,000.00	205,000.00	0.00	100.0%
8470 · Ag Meeting Attend -Special	1,250.00	1,850.00	-600.00	67.57%	2,275.00	3,700.00	-1,425.00	61.49%	22,200.00	22,200.00	0.00	100.0%
8471 · Ag Pool Expense	0.00	0.00	0.00	0.0%	14,018.00	15,000.00	-982.00	93.45%	85,000.00	85,000.00	0.00	100.0%
8485 · Ag Pool - Misc. Exp. - Ag Fund	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	400.00	400.00	0.00	100.0%
8500 · Non-Ag PI-WM & Pool Admin	11,181.72	9,470.00	1,711.72	118.08%	26,509.57	18,857.00	7,652.57	140.58%	109,837.00	109,837.00	0.00	100.0%
9400 · Depreciation Expense	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
9500 · Allocated G&A Expenditures	-15,210.42	-34,935.00	19,724.58	43.54%	-34,628.56	-69,871.00	35,242.44	49.56%	-419,223.00	-419,223.00	0.00	100.0%
6900 · Optimum Basin Mgmt Plan	123,101.29	179,559.00	-56,457.71	68.56%	230,553.79	365,302.00	-134,748.21	63.11%	2,152,735.00	2,152,735.00	0.00	100.0%
9501 · G&A Expenses Allocated-OBMP	3,047.63	10,044.00	-6,996.37	30.34%	5,315.10	20,092.00	-14,776.90	26.45%	120,532.00	120,532.00	0.00	100.0%
7101 · Production Monitoring	2,366.70	5,735.00	-3,368.30	41.27%	7,352.54	11,224.00	-3,871.46	65.51%	64,875.00	64,875.00	0.00	100.0%
7102 · In-line Meter Installation	0.00	31,772.00	-31,772.00	0.0%	0.00	63,465.00	-63,465.00	0.0%	380,107.00	380,107.00	0.00	100.0%
7103 · Grdwtr Quality Monitoring	27,902.49	30,630.00	-2,727.51	91.1%	51,725.83	60,985.00	-9,259.17	84.82%	324,329.00	324,329.00	0.00	100.0%
7104 · Gdwtr Level Monitoring	16,279.17	28,121.00	-11,841.83	57.89%	30,903.73	55,998.00	-25,094.27	55.19%	333,553.00	333,553.00	0.00	100.0%
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	3,592.96	19,736.00	-16,143.04	18.21%	29,451.85	157,046.25	-127,594.40	18.75%	424,094.25	424,094.25	0.00	100.0%

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

	1/12th (8.33%) of the Total Budget				2/12th (16.67%) of the Total Budget				100% of the Total Budget			
	For The Month of August 2018				Year-To-Date as of August 31, 2018				Fiscal Year End as of June 30, 2019			
	Actual	Budget	$ Over(Under)	% of Budget	Actual	Budget	$ Over(Under)	% of Budget	Projected	Budget	$ Over(Under)	% of Budget
7108 · Hydraulic Control Monitoring	4,558.05	8,102.00	-3,543.95	56.26%	6,192.05	18,431.00	-12,238.95	33.6%	120,704.00	120,704.00	0.00	100.0%
7109 · Recharge & Well Monitoring Prog	1,448.40	2,104.00	-655.60	68.84%	1,448.40	4,208.00	-2,759.60	34.42%	25,248.00	25,248.00	0.00	100.0%
7200 · PE2- Comp Recharge Pgm	7,412.36	-59,733.86	67,146.22	-12.41%	306,621.97	320,631.00	-14,009.03	95.63%	1,334,437.00	1,334,437.00	0.00	100.0%
7300 · PE3&5-Water Supply/Desalte	0.00	2,827.00	-2,827.00	0.0%	1,474.40	5,599.00	-4,124.60	26.33%	32,934.00	32,934.00	0.00	100.0%
7400 · PE4- Mgmt Plan	1,492,941.64	25,089.00	1,467,852.64	5,950.58%	1,520,567.20	1,580,425.00	-59,857.80	96.21%	1,830,746.00	1,830,746.00	0.00	100.0%
7500 · PE6&7-CoopEfforts/SaltMgmt	1,416.30	15,702.00	-14,285.70	9.02%	2,272.30	50,190.00	-47,917.70	4.53%	206,603.00	206,603.00	0.00	100.0%
7600 · PE8&9-StorageMgmt/Conj Use	20,216.36	18,946.00	1,270.36	106.71%	70,520.75	70,783.00	-262.25	99.63%	127,048.00	127,048.00	0.00	100.0%
7690 · Recharge Improvement Debt Pymt	1,129,600.59	73,378.86	1,056,221.73	1,539.41%	1,710,185.59	3,649,525.82	-1,939,340.23	46.86%	3,649,525.82	3,649,525.82	0.00	100.0%
7700 · Inactive Well Protection Prgm	0.00	42.00	-42.00	0.0%	0.00	84.00	-84.00	0.0%	500.00	500.00	0.00	100.0%
9502 · G&A Expenses Allocated-Projects	12,162.79	24,891.00	-12,728.21	48.86%	29,313.46	49,781.00	-20,467.54	58.89%	298,691.00	298,691.00	0.00	100.0%
Total Expense	3,078,373.49	593,668.00	2,484,705.49	518.54%	4,555,199.33	6,896,598.07	-2,341,398.74	66.05%	13,615,365.07	13,615,365.07	0.00	100.0%
Net Ordinary Income	-3,078,363.24	-593,668.00	-2,484,695.24	518.53%	-4,387,466.30	-6,728,886.07	2,341,419.77	65.2%	-4,728,140.07	-4,728,140.07	0.00	100.0%
Other Income												
4210 · Approp Pool-Replenishment	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
4220 · Non-Ag Pool-Replenishment	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
4225 · Interest Income	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
4226 · LAIF Fair Market Value	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
4600 · Groundwater Sales	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
4715 · Gain on Sale of Assets	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
Total Other Income	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
Other Expense												
5010 · Groundwater Replenishment	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
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%
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%
9998 · Refund-Recharge Debt-Approp.	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
9999 · To/(From) Reserves	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
Total Other Expense	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
Net Other 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%
Net Income	-3,078,363.24	-593,668.00	-2,484,695.24	518.53%	-4,387,466.30	-6,728,886.07	2,341,419.77	65.2%	-4,728,140.07	-4,728,140.07	0.00	100.0%

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

CHINO BASIN WATERMASTER

II. BUSINESS ITEMS

A. CHINO BASIN STORAGE FRAMEWORK

CHINO BASIN WATERMASTER

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

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: October 25, 2018

TO: Board Members

SUBJECT: Chino Basin Storage Framework (Business Item II.A.)

SUMMARY

Issue: The Chino Basin Storage Framework investigation has been completed and needs to be presented to the Watermaster Board, to be authorized for use in future evaluations of storage.

Recommendation: Receive and file the Final Storage Framework Investigation Report, and authorize the use of the tools and technical information developed by the investigation for storage planning and future evaluations.

Financial Impact: There is no financial impact to Watermaster as a result of the recommendation,

Future Consideration
Watermaster Board - October 25, 2018: Approval [Within WM Duties and Powers]

ACTIONS:
Appropriative Pool - October 11, 2018: Voted unanimously to Recommend that the Advisory Committee recommend to the Watermaster Board to receive and file the Final Storage Framework Investigation Report, and authorize the use of the tools and technical information developed by the investigation for storage planning and future evaluations.
Non-Agricultural Pool - October 11, 2018: Voted unanimously to Recommend that their Advisory Committee and Board representatives receive and file the Final Storage Framework Investigation Report, and authorize the use of the tools and technical information developed by the investigation for storage planning and future evaluations, subject to any changes they deem appropriate.
Agricultural Pool - October 11, 2018: Voted unanimously to Recommend that the Advisory Committee recommend to the Watermaster Board to receive and file the Final Storage Framework Investigation Report, and authorize the use of the tools and technical information developed by the investigation for storage planning and future evaluations.
Advisory Committee - October 18, 2018: Voted unanimously to recommend that the Watermaster Board Receive and file the Final Storage Framework Investigation Report, and authorize the use of the tools and technical information developed by the investigation for storage planning and future evaluations.
Watermaster Board - October 25, 2018:

BACKGROUND

The 2000 Optimum Basin Management Program (OBMP) storage management plan consists of managing groundwater production, replenishment, recharge, and storage such that total storage within the basin ranges from a low of 5,300,000 ac-ft to a high of 5,800,000 ac-ft.

The understanding of Chino Basin has improved considerably since 2000 when the OBMP was first created. Collection of data has allowed the refinement and calibration of the groundwater model, which is now used for many purposes. Since the year 2000 the volume held in storage by the parties has increased to over 500,000 ac-ft, and is projected to increase further in the future.

Considering the time that has passed since the environmental documentation was approved for the OBMP, and the enhanced understanding of the basin an update of the OBMP seems appropriate, including a revision of the storage management plan. A study of the basin response to various levels of storage is helpful as a foundation for updating the Chino Basin storage management plan.

DISCUSSION

The goals of the Storage Framework investigation are to describe how the Basin will respond to varying levels of use of storage space, and identify potential material physical injury and other management challenges.

The investigation was carried out using Watermaster's computer model to simulate groundwater pumping, recharge, storage and withdrawals from storage. Metrics for material physical injury and pumping sustainability were established to compare basin response; existing facilities' capacity was examined to determine whether additional facilities would be required for higher volumes of storage space use; and the effects on storage and net inflow to the basin were calculated.

Various scenarios were evaluated, starting with the volume of storage that will be occupied by parties using their projected water management practices, and then incrementally adding up to 300,000 ac-ft of storage for Storage and Recovery programs.

The Storage Framework investigation was reviewed regularly with stakeholders through workshops, and shared in draft form at various stages for parties' review and comments. The final report is attached (Attachment 1).

The investigation will be used as a tool to inform the development of a storage management plan for Chino Basin, to guide and evaluate future storage and recovery applications, and other storage investigations in the future.

ATTACHMENTS

1. Link to Final Storage Framework Report (click on the link below to access):
   https://cbwm.syncedtool.com/shares/folder/9abb162877b999/?folder_id=1429

Final Storage Framework Report

(click on link below to access):

https://cbwm.syncedtool.com/shares/folder/9abb162877b999/?folder_id=1429

THIS PAGE

HAS

INTENTIONALLY

BEEN LEFT

BLANK

FOR PAGINATION

CHINO BASIN WATERMASTER

II. BUSINESS ITEMS

B. CHINO BASIN WATERMASTER ANNUAL FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2017 AND 2016; AND THE CHINO BASIN WATERMASTER MANAGEMENT REPORT FOR JUNE 30, 2017

CHINO BASIN WATERMASTER

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

PETER KAVOUNAS, P.E.
General Manager

STAFF REPORT

DATE: October 25, 2018

TO: Board Members

SUBJECT: Chino Basin Watermaster Annual Financial Report for the Fiscal Year Ended June 30, 2018; and the Chino Basin Watermaster Management Report for June 30, 2018 (Business Item II.B.)

SUMMARY

Issue: Two reports (Annual Financial Report for the Fiscal Years Ended June 30, 2018 dated October 25, 2018; and Management Report for June 30, 2018 dated October 25, 2018) have been prepared.

Recommendation: Receive and file (1) the Chino Basin Watermaster Annual Financial Report for the Fiscal Year Ended June 30, 2018 dated October 25, 2018; and (2) the Chino Basin Watermaster Management Report for June 30, 2018 dated October 25, 2018.

Financial Impact: There is no financial impact.

Future Consideration
Watermaster Board – October 25, 2018: Receive and File (Normal Course of Business)

ACTIONS:
October 25, 2018 – Watermaster Board:

BACKGROUND

Chino Basin Watermaster is required to have an annual audit every year.

DISCUSSION

Attached is the Chino Basin Watermaster Annual Financial Report for the Fiscal Year Ended June 30, 2018 dated October 25, 2018; and the Chino Basin Watermaster Management Report for June 30, 2018 dated October 25, 2018. Please note that these reports are in draft format and the final version will be distributed several weeks after the Board has received and filed the draft reports. Watermaster does not anticipate or expect any material changes between the draft and final versions. Both the Annual Financial Report and the Management Report was issued by the audit firm of Fedak & Brown LLP, Watermaster's auditor.

The Independent Auditor's Report is detailed on pages 4-6 of the Annual Financial Report. Fedak & Brown LLP audited the financial statements of Chino Basin Watermaster as of and for the year ended June 30, 2018. In the opinion of Fedak & Brown LLP, the financial statements referred to above present fairly, in all material respects, the respective financial position of the Watermaster, as of June 30, 2018, and the respective changes in financial position, and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Furthermore, Fedak & Brown LLP made the following comments with respect to the audit:

1. Performed the audit according to the planned scope and timing requirements as previously communicated to management as stated in the Audit Engagement letter dated March 22, 2018.
2. As described in Note 1 of the financial statements, the Watermaster changed accounting policies related to other post-employment benefit (OPEB) by adopting the provisions of Governmental Accounting Standards Board (GASB) Statement No. 75 – Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions for the fiscal year 2018.
3. Noted no transactions entered into by the Watermaster during fiscal year ended 2018 for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statement in the proper period.
4. Noted no issues with Management's Judgments, Accounting Estimates and Financial Disclosures.
5. Encountered no difficulties in dealing with management in performing and completing the audit.
6. No disagreements with Watermaster management arose during the course of the audit of Watermaster.
7. Watermaster did not consult with other accountants about auditing and accounting matters.
8. There were no other audit findings or issues.
9. Noted eight audit adjustments and or reclassifying journal entries recorded to adjust the original trial balance presented to the auditors at the start of the audit.
    a. Four audit adjustments and or reclassifying journal entries were recorded to book the Deferred Outflows-Pension, Deferred Inflows-Pension, Net Pension Liability, and Employers PERS Expenses for FY 2016/17 and FY 2017/18 at June 30, 2018.
    b. One audit adjustment and or reclassifying journal entry was recorded to book the prior period adjustment for change in accounting principle of GASB 75 as of June 30, 2017.

c. Three audit adjustments and or reclassifying journal entries were recorded to book the Net OPEB Obligations, OPEB Expenses–GASB 75, and the Deferred Outflows-GASB 75 OPEB for FY 2016/17 and FY 2017/18 at June 30, 2018.

ATTACHMENTS

1. The Chino Basin Watermaster Annual Financial Report for the Fiscal Year Ended June 30, 2018 dated October 25, 2018 – Please access this link
   https://cbwm.syncedtool.com/shares/file/a035d4c651db12/

2. The Chino Basin Watermaster Management Report for June 30, 2018 dated October 25, 2018 – Please access this link
   https://cbwm.syncedtool.com/shares/file/e12eafec0f904f/

THIS PAGE

HAS

INTENTIONALLY

BEEN LEFT

BLANK

FOR PAGINATION

The Chino Basin Watermaster Annual Financial Report for the Fiscal Year Ended June 30, 2018 dated October 25, 2018

(click on link below to access):

https://cbwm.syncedtool.com/shares/file/a035d4c651db12/

THIS PAGE

HAS

INTENTIONALLY

BEEN LEFT

BLANK

FOR PAGINATION

The Chino Basin Watermaster Management Report for
June 30, 2018 dated October 25, 2018
(click on link below to access):

https://cbwm.syncedtool.com/shares/file/e12eafec0f904f/

THIS PAGE

HAS

INTENTIONALLY

BEEN LEFT

BLANK

FOR PAGINATION

CHINO BASIN WATERMASTER

III. REPORTS/UPDATES

D. GM REPORT

4. FY 2018/19 First Interim Organization Performance Report

Chino Basin Watermaster: FY 2018-19 First Interim Organization Performance Report

Specific Goals from GM Performance Evaluation

[1] Safe Yield Recalculation: (a) resolve Desalter Induced Recharge; (b) revise prior Assessment Packages; and (c) begin 2020 recalculation
Items (a) and (b) are on hold due to the ongoing Appeal from the April 28, 2017 Order. Item (c) has started.

[2] Chino Basin storage management: develop framework for long term management of storage that avoids MPI
Completed the Storage Framework investigation, including stakeholder outreach and involvement.

[3] Continue progress on the 2013 Recharge Master Plan Update
Approved projects have moved to design stage. San Sevaine project is nearing completion.

[4] Complete 2018 Recharge Master Plan
The 2018 Recharge Master Plan was completed in time to be filed with the Court by the required October 2018 due date.

[5] Begin OBMP Update
The effort, which will include development of a new storage management plan, has started with internal discussions. The proposed process to develop and approve the Update will be shared with all stakeholders in the near term.

GM Activities

- Gave presentation at GRA webinar
- Attended ACWA conference and Western Groundwater Congress
- Attended MWD tour of Imperial Valley
- Continuing outreach to Board and stakeholders
- Held regular meetings with IEUA, CDA, WMWD, and TVMWD

Other Activities

SGMA Compliance: Reviewed and commented on DWR's proposed "very low" priority designation for most adjudicated basins.

Pomona Extensometer: With support from IEUA, coordinated the siting of the extensometer in the City of Pomona. IEUA awarded the contract; construction is expected to begin December 2018.

Reporting: Finalized the 2nd Annual Prado Basin Monitoring Report; compiled the 2018-1 semi-annual OBMP status report; made annual water right permit filing with the CA DFW; filed all required CASGEM data with DWR .

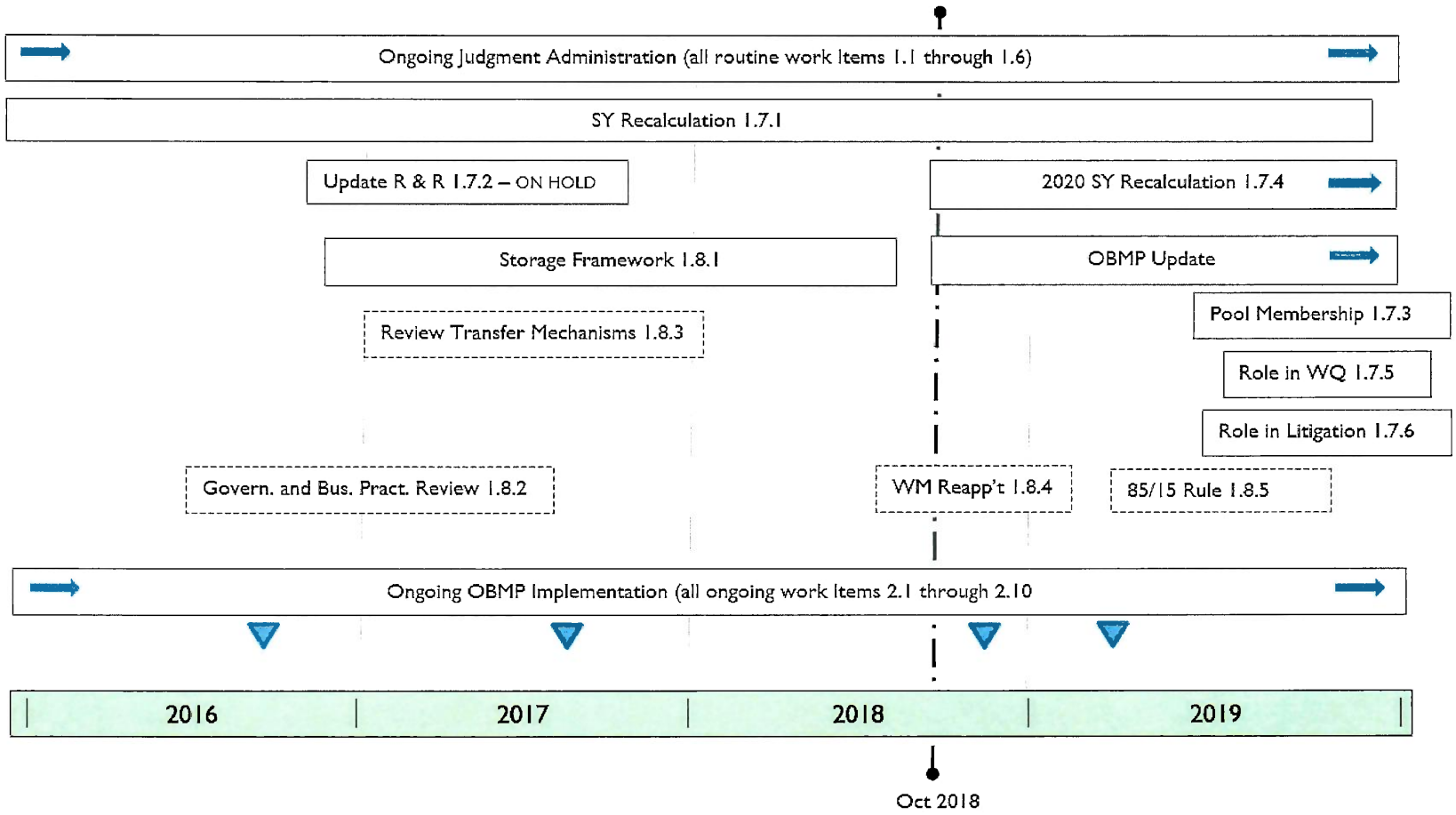
Process Improvements: Continuing evaluation of well status and effectiveness of production metering.; implemented new FTP site to facilitate information sharing, and enhance security.

Pulse of the Organization

Personnel: Replaced Senior Field Operations Specialist (resignation) with two Field Operations Specialists, within approved budget. Provided mid-year performance evaluations for all staff; continuing all-hands meetings, and occasional team-building activities; completed transition of Ops staff supervision to Senior Environmental Engineer.

Processes: Continued creating additional SOPs for various elements of Watermaster work; renewed and modernized the office by creating more functional spaces, replacing old furniture and cubicle partitions, and painting; finalized the Annual Financial Report for FY 2017/18; replaced/upgraded desktop and laptop computers; amended retirement and resignation policies; established Retirement Health Savings account with ICMA-RC.

CBWM Business Plan Timeline



LEGEND:

CBWM supports ▽: Educational Workshop

October 2018

Prepared by: PK October 2018

CHINO BASIN WATERMASTER

IV. INFORMATION

1. Cash Disbursements for September 2018

CHINO BASIN WATERMASTER
Cash Disbursements For The Month of
September 2018

For Informational Purposes Only

Type	Date	Num	Name	Memo	Account	Paid Amount
Bill Pmt -Check	**09/06/2018**	**ACH 090618**	**CALPERS**	**1394905143**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/14/2018	1394905143		Medical Insurance Premium	60182.1 · Medical Insurance	6,152.76
TOTAL						6,152.76
Bill Pmt -Check	**09/06/2018**	**ACH 090618**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/18/2018	100000015402710		Fees for GASB-68 Reports & Schedules	60180 · Employers PERS Expense	700.00
TOTAL						700.00
General Journal	**09/08/2018**	**09/08/2018**	**Payroll and Taxes for 08/26/18-09/08/18**	**Payroll and Taxes for 08/26/18-09/08/18**	**1012 · Bank of America Gen'l Ckg**	
				Direct Deposits for 08/26/18-09/08/18	1012 · Bank of America Gen'l Ckg	25,972.40
				Payroll Taxes for 08/26/18-09/08/18	1012 · Bank of America Gen'l Ckg	8,783.23
			ICMA-RC	457(b) Employee Deductions for 08/26/18-09/08/18	1012 · Bank of America Gen'l Ckg	4,541.43
			ICMA-RC	401(a) Employee Deductions for 08/26/18-09/08/18	1012 · Bank of America Gen'l Ckg	1,311.76
TOTAL						40,608.82
Bill Pmt -Check	**09/13/2018**	**ACH 091318**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
General Journal	09/08/2018	09/08/2018	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 08/26/18-09/08/18	2000 · Accounts Payable	6,886.20
TOTAL						6,886.20
Bill Pmt -Check	**09/14/2018**	**20989**	**ACCENT COMPUTER SOLUTIONS, INC.**	**123295**	**1012 · Bank of America Gen'l Ckg**	
Bill	09/01/2018	123295		Monthly service - Sept. 2018	6052.4 · IT Managed Services	4,226.00
				Overwatch - Sept. 2018	6052.5 · IT Data Backup/Storage	699.00
				OmniCloud - Sept. 2018	6052.5 · IT Data Backup/Storage	108.00
				Office 365 subscriptions - Sept. 2018	6052.4 · IT Managed Services	58.10
				Image office storage	6052.5 · IT Data Backup/Storage	1,088.75
TOTAL						6,179.85
Bill Pmt -Check	**09/14/2018**	**20990**	**ACWA JOINT POWERS INSURANCE AUTHORI**	**0512818**	**1012 · Bank of America Gen'l Ckg**	
Bill	09/10/2018	0512818		Prepayment - October 2018	1409 · Prepaid Life, BAD&D & LTD	219.87
				September 2018	60191 · Life & Disab.Ins Benefits	217.40
TOTAL						437.27
Bill Pmt -Check	**09/14/2018**	**20991**	**APPLIED COMPUTER TECHNOLOGIES**	**2999**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/30/2018	2999		Database Consulting Services - August 2018	6052.2 · Applied Computer Technol	3,770.80
TOTAL						3,770.80
Bill Pmt -Check	**09/14/2018**	**20992**	**ARION GLOBAL, INC.**		**1012 · Bank of America Gen'l Ckg**	
Bill	08/24/2018			Cost of hauling away old office furniture	6027 · Other Building Expense	1,275.00
TOTAL						1,275.00

P63

Type	Date	Num	Name	Memo	Account	Paid Amount
Bill Pmt -Check	**09/14/2018**	**20993**	**BANK OF AMERICA**	**XXXX-XXXX-XXXX-9341**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/31/2018	XXXX-XXXX-XXXX-9341		50% deposit-AN desktop	6055 · Computer Hardware	895.23
				CVI's for new employee search	6016 · New Employee Search Costs	79.65
				50% deposit-new office furniture	1840 · Capital Assets	5,056.50
				Clear tabs for tabletop for office	6031.7 · Other Office Supplies	3.97
				Replacement Boardroom laptop battery	6055 · Computer Hardware	30.85
				Replacement case for CFO cell phone	6031.7 · Other Office Supplies	17.91
				Toner cartridges for office printers	6031.7 · Other Office Supplies	1,031.79
				File/storage boxes	6031.7 · Other Office Supplies	65.05
				Curtains 4 kitchen, tables/lamps 4 reception area	6031.7 · Other Office Supplies	382.46
				Replacement blender for office	6031.7 · Other Office Supplies	64.35
				Lunch for pre-Ag meeting	8412 · Meeting Expenses	62.42
				PK meeting w/Razak	8312 · Meeting Expenses	25.08
				Miscellaneous office supplies	6031.7 · Other Office Supplies	48.07
				Storage boxes	6031.7 · Other Office Supplies	270.40
				Laminating supplies	6031.7 · Other Office Supplies	8.71
				Replacement keyboard/mouse	6055 · Computer Hardware	20.76
				Registration fee for webinar for AN	6193.2 · Conference - Registration Fee	196.13
				Lunch for 8/23 Board meeting	6312 · Meeting Expenses	108.76
				Lunch for 8/23 Board meeting	6312 · Meeting Expenses	107.04
				Data hubs for meeting room	6031.7 · Other Office Supplies	51.13
				Miscellaneous office supplies	6031.7 · Other Office Supplies	24.55
				Miscellaneous office supplies	6031.7 · Other Office Supplies	96.69
				Miscellaneous office supplies	6031.7 · Other Office Supplies	273.68
				Miscellaneous office supplies	6031.7 · Other Office Supplies	86.37
				Lunch for PK meeting w/Ag Pool	8412 · Meeting Expenses	74.67
				Miscellaneous office supplies	6031.7 · Other Office Supplies	407.00
				Registration fee-CG-attend Outlook seminar	6193.2 · Conference - Registration Fee	293.70
TOTAL						9,782.92
Bill Pmt -Check	**09/14/2018**	**20994**	**BOWCOCK, ROBERT**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/16/2018	8/16 RIPCom Mtg		8/16/18 RIPCom Meeting	6311 · Board Member Compensation	125.00
Bill	08/20/2018	8/20 Water Bank Mtg		8/20/18 Water Bank Stakeholder Meeting #4	6311 · Board Member Compensation	125.00
Bill	08/23/2018	8/23 Board Mtg		8/23/18 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL						375.00
Bill Pmt -Check	**09/14/2018**	**20995**	**CORELOGIC INFORMATION SOLUTIONS**	**80914552**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/31/2018	81914552		80914552	7103.7 · Grdwtr Qual-Computer Svc	62.50
				80914552	7101.4 · Prod Monitor-Computer	62.50

P64

	Type	Date	Num	Name	Memo	Account	Paid Amount
TOTAL							125.00
	Bill Pmt -Check	**09/14/2018**	**20996**	**CUBICLE AND OFFICE, LLC.**	**1044**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/12/2018	1044		File cabinet, bookcases for Ops staff	1840 · Capital Assets	930.75
TOTAL							930.75
	Bill Pmt -Check	**09/14/2018**	**20997**	**DE BOOM, NATHAN**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/09/2018	8/09 Ag Pool Mtg		8/09/18 Ag Pool Meeting	8411 · Compensation	25.00
					8/09/18 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
TOTAL							125.00
	Bill Pmt -Check	**09/14/2018**	**20998**	**DI PRIMIO, ROBERT**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/21/2018	8/21 Board Agenda		8/21/18 Board agenda preview meeting	6311 · Board Member Compensation	125.00
	Bill	08/23/2018	8/23 Board Meeting		8/23/18 Board meeting	6311 · Board Member Compensation	125.00
TOTAL							250.00
	Bill Pmt -Check	**09/14/2018**	**20999**	**EGOSCUE LAW GROUP, INC.**	**12048**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2018	12048		Ag Pool Legal Services - August 2018	8467 · Ag Legal & Technical Services	31,716.73
TOTAL							31,716.73
	Bill Pmt -Check	**09/14/2018**	**21000**	**ELIE, STEVEN**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/23/2018	8/23 Board Mtg		8/23/18 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL							125.00
	Bill Pmt -Check	**09/14/2018**	**21001**	**FEDAK & BROWN LLP**	**Progress Billing - Audit Services**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2018			August 2018	6062 · Audit Services	3,256.00
TOTAL							3,256.00
	Bill Pmt -Check	**09/14/2018**	**21002**	**FEENSTRA, BOB**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/09/2018	8/09 Ag Pool Mtg		8/09/18 Ag Pool meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/16/2018	8/16 Advisory Comm		8/16/18 Advisory Committee meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/16/2018	8/16 RIPCom Mtg		8/16/18 RIPCom meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/23/2018	8/23 Personnel Comm		8/23/18 Personnel Committee meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/23/2018	8/23 Board Mtg		8/23/18 Board meeting	8470 · Ag Meeting Attend -Special	125.00
	Bill	08/30/2018	8/30 Special Ag Mtg		8/30/18 Special Ag Pool meeting	8470 · Ag Meeting Attend -Special	125.00
TOTAL							750.00
	Bill Pmt -Check	**09/14/2018**	**21003**	**FILIPPI, GINO**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/23/2018	8/23 Board Meeting		8/23/18 Board Meeting	6311 · Board Member Compensation	125.00
TOTAL							125.00

Type	Date	Num	Name	Memo	Account	Paid Amount
Bill Pmt -Check	**09/14/2018**	**21004**	**HUITSING, JOHN**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/09/2018	8/09 Ag Pool Mtg		8/09/18 Ag Pool Meeting	8411 · Compensation	25.00
				8/09/18 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
Bill	08/31/2018	7/12 Ag Pool Mtg		7/12/18 Ag Pool Meeting	8411 · Compensation	25.00
				7/12/18 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
TOTAL						250.00
Bill Pmt -Check	**09/14/2018**	**21005**	**JOHN J. SCHATZ**	**Appropriative Pool Legal Services**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/31/2018			Appropriative Pool Legal Services - August 2018	8367 · Legal Service	6,970.00
TOTAL						6,970.00
Bill Pmt -Check	**09/14/2018**	**21006**	**KUHN, BOB**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/09/2018	8/09 Appro Pool Mtg		8/09/18 Appropriative Pool Meeting	6311 · Board Member Compensation	125.00
Bill	08/16/2018	8/16 Advisory Comm		8/16/18 Advisory Committee Meeting	6311 · Board Member Compensation	125.00
Bill	08/21/2018	8/21 Conference Call		8/21/18 Board Agenda Preview conference call	6311 · Board Member Compensation	125.00
Bill	08/23/2018	8/23 Board Mtg		8/23/18 Board meeting	6311 · Board Member Compensation	125.00
Bill	08/30/2018	8/30 Admin Mtg		8/30/18 Administrative meeting	6311 · Board Member Compensation	125.00
TOTAL						625.00
Bill Pmt -Check	**09/14/2018**	**21007**	**LOEB & LOEB LLP**	**1785289**	**1012 · Bank of America Gen'l Ckg**	
Bill	07/31/2018	1785289		Non-Ag Pool Legal Services - July 2018	8567 · Non-Ag Legal Service	11,950.30
TOTAL						11,950.30
Bill Pmt -Check	**09/14/2018**	**21008**	**NELSON, ANNA**	**Employee Reimbursement**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/28/2018			Reimburse for power cords for office	6031.7 · Other Office Supplies	41.57
				Reimburse for admin lunch mtg	6141.3 · Admin Meetings	22.36
TOTAL						63.93
Bill Pmt -Check	**09/14/2018**	**21009**	**PAYCHEX**	**2018083000**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/31/2018	2018083000		August 2018	6012 · Payroll Services	468.21
TOTAL						468.21
Bill Pmt -Check	**09/14/2018**	**21010**	**PIETERSMA, RONALD**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/09/2018	8/09 Ag Pool Mtg		8/09/18 Ag Pool Meeting	8411 · Compensation	25.00
				8/09/18 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
TOTAL						125.00
Bill Pmt -Check	**09/14/2018**	**21011**	**PREMIERE GLOBAL SERVICES**	**26377150**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/30/2018	26377150		Non-Ag Pool meeting call on 8/09	8512 · Meeting Expense	22.01

Type	Date	Num	Name	Memo	Account	Paid Amount
				Service Fee - General	6022 · Telephone	49.00
				Service Fee - Confidential	6022 · Telephone	49.00
				Pomona Extensometer call on 7/30	6909.1 · OBMP Meetings	11.73
				Pools agenda prep call on 7/31	8312 · Meeting Expenses	2.06
				Pools agenda prep call on 7/31	8412 · Meeting Expenses	2.06
				Pools agenda prep call on 7/31	8512 · Meeting Expense	2.06
				HCP call w/IEUA	6909.1 · OBMP Meetings	6.19
				Annual Report kick-off call on 8/03	6909.1 · OBMP Meetings	14.97
				WM coordination call on 8/06	6909.1 · OBMP Meetings	6.55
				HCP call w/IEUA	6909.1 · OBMP Meetings	7.77
				SY Reset update call on 8/06	6909.1 · OBMP Meetings	12.58
				Pool mtgs check call on 8/08	8312 · Meeting Expenses	4.69
				Pool mtgs check call on 8/08	8412 · Meeting Expenses	4.69
				Pool mtgs check call on 8/08	8512 · Meeting Expense	4.69
				Pomona Extensometer call on 8/13	6909.1 · OBMP Meetings	17.90
				WM coordination call on 8/20	6909.1 · OBMP Meetings	19.51
				Board agenda preview call on 8/21	6312 · Meeting Expenses	14.05
				Service Fee	6022 · Telephone	9.55
TOTAL						261.06
Bill Pmt -Check	**09/14/2018**	**21012**	**PURCHASE POWER**	**8000-9090-0016-8851**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/30/2018	8000909000168851		Postage refill	6042 · Postage - General	500.00
TOTAL						500.00
Bill Pmt -Check	**09/14/2018**	**21013**	**R&D PEST SERVICES**	**0233545**	**1012 · Bank of America Gen'l Ckg**	
Bill	09/06/2018	0233545		Pest control	6024 · Building Repair & Maintenance	100.00
TOTAL						100.00
Bill Pmt -Check	**09/14/2018**	**21014**	**READY REFRESH BY NESTLE**	**0023230253**	**1012 · Bank of America Gen'l Ckg**	
Bill	08/30/2018	0023230253		Office Water Bottle - August 2018	6031.7 · Other Office Supplies	46.91
TOTAL						46.91
Bill Pmt -Check	**09/14/2018**	**21015**	**RR FRANCHISING, INC.**	**60835**	**1012 · Bank of America Gen'l Ckg**	
Bill	09/01/2018	60835		Monthly janitorial service - September 2018	6024 · Building Repair & Maintenance	740.00
TOTAL						740.00
Bill Pmt -Check	**09/14/2018**	**21016**	**SOCIETY FOR HUMAN RESOURCE MGMT.**	**9007649844**	**1012 · Bank of America Gen'l Ckg**	
Bill	09/13/2018	9007649844		Membership-Joswiak 12/01/18-11/30/19	6111 · Membership Dues	189.00
TOTAL						189.00

p67

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill Pmt -Check	**09/14/2018**	**21017**	**STATE COMPENSATION INSURANCE FUND**	**1970970-18**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/01/2018	1970970-18		Monthly premium 8/26/18-9/26/18	60183 · Worker's Comp Insurance	552.42
TOTAL							552.42
	Bill Pmt -Check	**09/14/2018**	**21018**	**TELLEZ-FOSTER, EDGAR**	**Employee Reimbursement**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/07/2018			Meetings with candidates for field staff position	6016 · New Employee Search Costs	255.99
TOTAL							255.99
	Bill Pmt -Check	**09/14/2018**	**21019**	**ULLOA, EUNICE**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/09/2018	8/09 Appro Pool Mtg		8/09/18 Appropriative Pool meeting	6311 · Board Member Compensation	125.00
	Bill	08/28/2018	8/28 GRCC Mtg		8/28/18 GRCC meeting	6311 · Board Member Compensation	125.00
TOTAL							250.00
	Bill Pmt -Check	**09/14/2018**	**21020**	**UNION 76**	**7076-2245-3035-5049**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2018	7076224530355049		Fuel - August 2018	6175 · Vehicle Fuel	53.71
TOTAL							53.71
	Bill Pmt -Check	**09/14/2018**	**21021**	**USA-FACT INC**	**Background Checks**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/25/2018	8083027		Background check - field staff positions	6016 · New Employee Search Costs	142.37
	Bill	08/31/2018	8090727		Background check - field staff positions	6016 · New Employee Search Costs	35.95
TOTAL							178.32
	Bill Pmt -Check	**09/14/2018**	**21022**	**VISION SERVICE PLAN**	**00-101789-0001**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/30/2018	001017890001		Vision Insurance Premium - September 2018	60182.2 · Dental & Vision Ins	63.18
TOTAL							63.18
	Bill Pmt -Check	**09/14/2018**	**21023**	**VISTAGE WORLDWIDE, INC.**	**SOPINV00000733083**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/01/2018	SOPINV00000733083		Kavounas Membership-Oct. 2018 to Sept. 2019	1433 · Prepaid Membership Dues	17,053.00
TOTAL							17,053.00
	Bill Pmt -Check	**09/14/2018**	**21024**	**WESTERN MUNICIPAL WATER DISTRICT**	**Board Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/23/2018	8/23 Board Mtg		8/23/18 Board Meeting - Galleano attendance	6311 · Board Member Compensation	125.00
TOTAL							125.00
	Bill Pmt -Check	**09/14/2018**	**21025**	**YUKON DISPOSAL SERVICE**	**08-K2 213849**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/01/2018	08-k2 213849		Disposal Service - September 2018	6024 · Building Repair & Maintenance	117.14
TOTAL							117.14
	Bill Pmt -Check	**09/14/2018**	**21026**	**ACCENT COMPUTER SOLUTIONS, INC.**	**IT Managed Services**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/30/2018	123389		Overwatch (Firewall and 4TB)	6052.5 · IT Data Backup/Storage	1,750.00

P68

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill	08/31/2018	123418		480GB SSD upgrade for auxilliary room laptop	6055 · Computer Hardware	191.80
	Bill	08/31/2018	123425		RAM upgrade for boardroom laptop	6055 · Computer Hardware	99.90
	Bill	08/31/2018	123562		Windows 10 upgrades for various laptops	6054 · Computer Software	597.00
	Bill	08/31/2018	123440		Cloud storage, FTP replacement	6052.5 · IT Data Backup/Storage	225.00
TOTAL							2,863.70
	Bill Pmt -Check	**09/25/2018**	**ACH 092518**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/01/2018	15415406		Annual Unfunded Accrued Liability Plan 3299	60180 · Employers PERS Expense	5,456.55
TOTAL							5,456.55
	Bill Pmt -Check	**09/25/2018**	**21027**	**INLAND EMPIRE UTILITIES AGENCY**		**1012 · Bank of America Gen'l Ckg**	
	Bill	08/01/2018	1800003831		Lower Day Improvement Projects Inv #6	7690.8 · Lower Day Basin RMPU (TO #2)	119,828.39
	Bill	08/09/2018	1800003878		RMPU Yield Enhancements Projects Invoice #8	7690.15 · RMPU Amend. Yield (TO #1)	980,182.15
TOTAL							1,100,010.54
	Bill Pmt -Check	**09/25/2018**	**21028**	**MICHAEL'S #3844**	**Board Room**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/25/2018			Custom matting/framing Annual Report covers	1840 · Capital Assets	2,930.69
TOTAL							2,930.69
	Bill Pmt -Check	**09/25/2018**	**21029**	**SEVEN STAR PAINTING CO.**	**Office Painting**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/25/2018			Deposit for office painting	1840 · Capital Assets	950.00
TOTAL							950.00
	Bill Pmt -Check	**09/27/2018**	**21030**	**ACCENT COMPUTER SOLUTIONS, INC.**	**123802**	**1012 · Bank of America Gen'l Ckg**	
	Bill	10/01/2018	123802		Monthly service - Oct. 2018	6052.4 · IT Managed Services	4,226.00
					Overwatch - Oct. 2018	6052.5 · IT Data Backup/Storage	699.00
					OmniCloud - Oct. 2018	6052.5 · IT Data Backup/Storage	117.00
					Office 365 subscriptions - Oct. 2018	6052.4 · IT Managed Services	91.30
					Image office storage (per GB, per month)	6052.5 · IT Data Backup/Storage	817.73
TOTAL							5,951.03
	Bill Pmt -Check	**09/27/2018**	**21031**	**BLUERIDGE SOFTWARE, INC.**	**9894**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/26/2018	9894		Annual support for 10/25/18-10/24/19	6054 · Computer Software	629.82
TOTAL							629.82
	Bill Pmt -Check	**09/27/2018**	**21032**	**BUSINESS TELECOMMUNICATION SYSTEMS I**	**14128**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/19/2018	14128		ShoreTel IP480 phone-new employee	6022 · Telephone	332.17
TOTAL							332.17

6g

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill Pmt -Check	**09/27/2018**	**21033**	**CENTURYLINK**	**73607985**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/26/2018	73607985		9/17/18-10/16/18	6053 · Internet Expense	1,051.28
TOTAL							1,051.28
	Bill Pmt -Check	**09/27/2018**	**21034**	**CUCAMONGA VALLEY WATER DISTRICT**		**1012 · Bank of America Gen'l Ckg**	
	Bill	09/17/2018			Office lease due October 1, 2018 - annual rent adj	1422 · Prepaid Rent	6,866.54
TOTAL							6,866.54
	Bill Pmt -Check	**09/27/2018**	**21035**	**DE HAAN, HENRY**	**Ag Pool Member Compensation**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/09/2018	8/09 Ag Pool Mtg		8/09/18 Ag Pool Meeting	8411 · Compensation	25.00
					8/09/18 Ag Pool Meeting	8470 · Ag Meeting Attend -Special	100.00
TOTAL							125.00
	Bill Pmt -Check	**09/27/2018**	**21036**	**FIRST LEGAL NETWORK LLC**	**40020648**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2018	40020648		Court filings for August 2018	6061.5 · Court Filing Services	659.91
TOTAL							659.91
	Bill Pmt -Check	**09/27/2018**	**21037**	**FRONTIER COMMUNICATIONS**	**909-484-3890-050914-5**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/18/2018	90948438900509145		Office fax	6022 · Telephone	143.32
TOTAL							143.32
	Bill Pmt -Check	**09/27/2018**	**21038**	**GREAT AMERICA LEASING CORP.**	**23370386**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/26/2018	23370386		Invoice for September 2018	6043.1 · Ricoh Lease Fee	2,605.07
TOTAL							2,605.07
	Bill Pmt -Check	**09/27/2018**	**21039**	**LEGAL SHIELD**	**0111802**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/26/2018	0111802		Employee deductions - September 2018	60194 · Other Employee Insurance	79.70
TOTAL							79.70
	Bill Pmt -Check	**09/27/2018**	**21040**	**LOEB & LOEB LLP**	**1788092**	**1012 · Bank of America Gen'l Ckg**	
	Bill	08/31/2018	1788092		Non-Ag Pool Legal Services - August 2018	8567 · Non-Ag Legal Service	8,071.20
TOTAL							8,071.20
	Bill Pmt -Check	**09/27/2018**	**21041**	**OFFICE & ERGONOMIC SOLUTIONS, INC.**	**17772**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/13/2018	17772		Credenza, bookcase, chairs	1840 · Capital Assets	856.59
TOTAL							856.59
	Bill Pmt -Check	**09/27/2018**	**21042**	**READY REFRESH BY NESTLE**	**0023230253**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/26/2018	0023230253		Office Water Bottle - September 2018	6031.7 · Other Office Supplies	68.45
TOTAL							68.45

P70

	Type	Date	Num	Name	Memo	Account	Paid Amount
	Bill Pmt -Check	**09/27/2018**	**21043**	**SEVEN STAR PAINTING CO.**	**Office Painting**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/26/2018			Balance due for office painting	1840 · Capital Assets	2,550.00
TOTAL							2,550.00
	Bill Pmt -Check	**09/27/2018**	**21044**	**STANDARD INSURANCE CO.**	**Policy # 00-649299-0009**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/26/2018	006492990009		Policy # 00-649299-0009	60191 · Life & Disab.Ins Benefits	775.35
TOTAL							775.35
	Bill Pmt -Check	**09/27/2018**	**21045**	**STAPLES BUSINESS ADVANTAGE**	**8051432222**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/15/2018	8051432222		Miscellaneous office supplies	6031.7 · Other Office Supplies	130.32
TOTAL							130.32
	Bill Pmt -Check	**09/27/2018**	**21046**	**STAULA, MARY L**	**Retiree Medical**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/30/2018			Retiree medical	60182.4 · Retiree Medical	25.17
TOTAL							25.17
	Bill Pmt -Check	**09/27/2018**	**21047**	**UNITED HEALTHCARE**	**052553741745**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/14/2018	052553741745		Dental Insurance Premium - October 2018	60182.2 · Dental & Vision Ins	561.05
TOTAL							561.05
	Bill Pmt -Check	**09/27/2018**	**21048**	**USA-FACT INC**	**Background Investigations**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/08/2018	8091423		Background check-field staff position applicants	6016 · New Employee Search Costs	91.99
	Bill	09/15/2018	8032128		Background check-field staff position applicants	6016 · New Employee Search Costs	3.00
TOTAL							94.99
	Bill Pmt -Check	**09/27/2018**	**21049**	**VERIZON WIRELESS**	**9274013426**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/18/2018	9814013426		Acct #470810953-00001	6022 · Telephone	297.23
TOTAL							297.23
	Bill Pmt -Check	**09/27/2018**	**21050**	**VERIZON WIRELESS**	**9814550558**	**1012 · Bank of America Gen'l Ckg**	
	Bill	09/26/2018	9814550558		Acct #642073270-00001	7103.7 · Grdwtr Qual-Computer Svc	100.06
TOTAL							100.06
	Bill Pmt -Check	**09/27/2018**	**ACH 092718**	**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**	**Payor #3493**	**1012 · Bank of America Gen'l Ckg**	
	General Journal	09/22/2018	09/27/2018	PUBLIC EMPLOYEES' RETIREMENT SYSTEM	CalPERS Retirement for 09/09/18-09/22/18	2000 · Accounts Payable	6,886.20
TOTAL							6,886.20
	General Journal	**09/28/2018**	**09/28/2018**	**Payroll and Taxes for 09/019/18-09/22/18**	**Payroll and Taxes for 09/019/18-09/22/18**	**1012 · Bank of America Gen'l Ckg**	
					Direct deposits for 09/019/18-09/22/18	1012 · Bank of America Gen'l Ckg	25,995.91

P&I

Type	Date	Num	Name	Memo	Account	Paid Amount
				Payroll Taxes for 09/019/18-09/22/18	1012 · Bank of America Gen'l Ckg	8,790.56
			ICMA-RC	457(b) Employee deductions for 09/019/18-09/22/1	1012 · Bank of America Gen'l Ckg	4,541.43
			ICMA-RC	401(a) Employee deductions for 09/019/18-09/22/1	1012 · Bank of America Gen'l Ckg	1,311.76
TOTAL						40,639.66
					Total Disbursements:	**1,346,221.86**

P72

CHINO BASIN WATERMASTER

IV. INFORMATION

2. Plumes Status Reports
   a. Semiannual Report for the Chino Airport Plume
   b. Semiannual Report for the Archibald South Plume
   c. Annual Report for the GE Flatiron Plume
   d. Annual Report for the GE Test Plume
   e. Annual Report for the CIM
   f. Annual Report for former Kaiser Steel
   g. Annual Report for Milliken Landfill
   h. Annual Report for Stringfellow Plume

Semiannual Status Report
Chino Airport Plume
October 2018

Contaminants: The County of San Bernardino Department of Airports (County) identifies four primary contaminants; trichloroethene (TCE), 1,2,3-trichloropropane (1,2,3-TCP), cis-1,2-dichloroethene (cis-1,2-DCE), and 1,2-dichloroethane (1,2-DCA) associated with the Chino Airport groundwater plume. The California maximum contaminant levels (MCLs) for TCE, 1,2,3-TCP, cis-1,2-DCE, and 1,2- DCA, as well as the maximum concentrations detected in groundwater samples collected from wells within the plume area over the five-year period from July 2013 to June 2018 are shown in the table below.

Contaminant	MCL (µgl)	Maximum Concentration (µgl)
TCE	5	830
1,2,3-TCP	0.005	44
cis-1,2-DCE	6	47
1,2- DCA	0.5	1.5

Other contaminants of concern include 1,1-dichloroethene, carbon tetrachloride, and 1,4-dioxane.

Location: The Chino Airport is located in the southwestern portion of the Chino Basin within the City of Chino. As delineated by the Chino Basin Watermaster (Watermaster) in 2017 for the *2016 State of the Basin Report* [1], the extent of the plume with detectable TCE concentrations greater than 0.5 µgl is about 3,500 feet wide and 12,500 feet long, extending southwest from the Chino Airport to just south of Pine Avenue (see Exhibit 1).

Since 2015, the County characterizes two plumes originating from different source areas at the Chino Airport: the West Plume and the East Plume. TCE and 1,2,3-TCP concentrations are the largest in regard to magnitude and lateral extent within the West Plume. The most recent characterization of TCE and 1,2,3-TCP concentrations prepared by the County were part of the *Semiannual Groundwater Monitoring Report Summer and Fall 2017* [2]. Exhibit 1 shows the County's delineation of the West and East Plumes with TCE concentrations greater than or equal to 5 µgl, and the West and East Plumes with 1,2,3-TCP concentrations greater than 0.5 µgl.

TCE Plume. The West TCE Plume extends roughly 9,000 feet towards the southwest from its source area and then extends another 2,400 feet to the southeast towards the Prado Flood Control Basin where the plume terminates near well cluster CAMW16. The change in direction of the plume in this area may be associated with the location of the Central Avenue Fault, the "no-flow" boundary conditions of the Chino Hills, or historical pumping from former production wells. The width of the

[1] Wildermuth Environmental Inc. (2017). *Optimum Basin Management Program - 2016 State of the Basin Report.* Prepared for the Chino Basin Watermaster. June 2017.

[2] Tetra Tech (2018) *Semiannual Groundwater Monitoring Report Summer and Fall 2017.* Chino Airport Groundwater Assessment, San Bernardino County, California. Prepared for County of San Bernardino Department of Architecture and Engineering. January 2018.

West TCE plumes ranges from 1,000 to 2,700 feet averaging 1,700 feet. The East TCE Plume has a significantly smaller footprint than the West Plume and extends approximately 1,650 feet in the south-southeast direction from its source in the area of CAMW33, 34 and 35.

1,2,3-TCP Plume. The West 1,2,3-TCP Plume extends roughly 10,500 feet towards the southwest and then extends another 3,300 feet to the southeast towards the Prado Flood Control Basin, following the same path as the West TCE Plume. The width of the West 1,2,3-TCP Plume ranges from 1,400 to 5,400 feet and averages about 3,300 feet. The East 1,2,3-TCP Plume has a significantly smaller footprint than the West Plume and extends approximately 3,000 feet to the south.

Regional Water Quality Control Board, Santa Ana Region (Regional Board) Regulatory Permits and Orders:

- Cleanup and Abatement Order (CAO) No. 90-134 – Issued to the County to address the groundwater contamination originating from the Chino Airport.
- CAO No. R8-2008-0064 – Required the County to define the lateral and vertical extent of the plume offsite and preparation of a remedial action plan (RAP).
- CAO No. R8-2017-0011 – Required the County to respond to Regional Board comments on the draft Feasibility Study and submit of a final Feasibility Study.

Regulatory and Investigation History: In 1990, the Regional Board issued CAO No. 90-134 to address groundwater contamination originating from the Chino Airport. From 1991 to 1992, ten inactive underground storage tanks and 310 containers of hazardous waste were removed, and 81 soil borings were drilled and sampled on the airport property. During 2003 to 2005, nine onsite monitoring wells were installed and used to collect groundwater quality samples. In 2007, the County conducted its first offsite groundwater characterization effort, which included 22 cone penetrometer tests (CPT) and direct push borings from which water quality samples were collected. In 2008, the Regional Board issued CAO No. R8-2008-0064 requiring the County to define the lateral and vertical extent of the plume and to prepare a remedial action plan. From 2009 to 2012, 33 offsite monitoring wells were installed at 15 locations to characterize the extent of the contamination downgradient from the airport property.

From 2013 to 2014 the County conducted an extensive investigation of several areas identified for additional characterization of the soil and groundwater contamination associated with the Chino Airport. The investigative work included: piezocone-penetrometer tests; vertical-aquifer-profiling (VAP) borings with depth-discrete groundwater sampling; soil-gas probe sampling; high-resolution soil sampling and analysis; real-time data analysis; and three-dimensional contaminant distribution modeling. When investigative work was complete, 33 groundwater monitoring wells were installed in 17 locations on and adjacent to the Airport property from September 2014 through February 2015.

The County completed a Draft Feasibility Study[3] for the Chino Airport in August 2016. The Feasibility Study identifies remedial action objectives (RAOs) for contaminated groundwater originating from the Chino Airport and evaluates remediation alternatives for mitigation. On January 11, 2017, the Regional Board issued CAO R8-2017-0011 to the County, which supersedes CAO R8-2008-0064. The order requires that the County: (1) submit a Final Feasibility Study within 60 days of receiving the Regional Board's comments on the Draft Feasibility Study; (2) submit a Final Remedial Action Plan (RAP) within 60 days of the Regional Board approval of the Final Feasibility Study; (3) implement the RAP in accordance with a Regional Board-approved schedule; and (4) prepare and submit technical reports and work plans as the Regional Board deems necessary. The Regional Board submitted final comments on the Draft Feasibility Study via email on February 8, 2017[4]. The County submitted responses to the Regional Board's comments along with a revised Draft Feasibility Study on March 20, 2017[5]. The Regional Board reviewed the revised Draft Feasibility Study and accepted the proposed changes and responses but submitted three additional comments on March 30, 2017.[6]

The County submitted a Final Feasibility Study[7] for the Chino Airport in May 2017. The preferred remedial action identified in the Feasibility Study is a groundwater pump-and-treat system to provide hydraulic containment and treatment of both the West Plume and the East Plume. The Regional Board approved the Feasibility Study on June 7, 2017 and requested that a Remedial Action Plan (RAP) be prepared. The County submitted a *Preliminary Draft Remedial Action Plan* to the Regional Board on August 7, 2017. The Regional Board submitted comments on the Preliminary Draft RAP via email on October 17, 2017. The County submitted responses to the Regional Board's comments along with a revised Draft RAP on November 28, 2017. The Regional Board reviewed the revised Draft RAP and accepted the proposed changes and responses on December 14, 2017. The County submitted a *Draft Interim Remedial Action Plan* (IRAP)[8] for public review and comment on December 18, 2017. In March 2018, the Regional Board extended the public comment period until April 18, 2018.

Remedial Actions: The preferred remedial action identified in the Final Feasibility Study and Draft IRAP is a groundwater pump-and-treat system consisting of ten extraction wells and an on-site granular activated carbon treatment system. The extraction wells are intended to produce approximately 900 gallons per minute (1,450 acre-feet per year) of groundwater. Included among the 10 extraction wells is the CDA's well I-18, which is no longer planned for use by the CDA. An air stripper may be added to the pump-and-treat system if deemed necessary. Once treated, the preferred

[3] Tetra Tech (2016) Draft Feasibility Study Chino Airport San Bernardino County, California. Prepared for the County of San Bernardino, Department of Architecture and Engineering. August 2016.
[4] https://geotracker.waterboards.ca.gov/view_documents?global_id=SL208634049&enforcement_id=6316113
[5] https://geotracker.waterboards.ca.gov/view_documents?global_id=SL208634049&document_id=5916631
[6] https://geotracker.waterboards.ca.gov/view_documents?global_id=SL208634049&enforcement_id=6316116

[7] Tetra Tech (2017) *Final Feasibility Study Chino Airport San Bernardino County, California.* Prepared for the County of San Bernardino, Department of Architecture and Engineering. May 2017.
[8] Tetra Tech (2017). *Draft Interim Remedial Action Plan.* Chino Airport, San Bernardino County, California. Prepared for County San Bernardino Department of Airports. December 2017.

option is to discharge the treated groundwater to the CDA's Chino-I Desalter influent pipeline. If this discharge option is not available at the time the groundwater pump and treat system is completed, the alternative options are to discharge the treated groundwater to either the local surface-water channels or wastewater treatment plants, or to inject the treated groundwater back into the basin with six injection wells at the northeast corner of the Chino Airport. Currently, the County is in discussions with the CDA to discharge the treated water from the extraction system to the CDA's influent pipeline. The pump and treat system design and remedial action work plan is anticipated to be complete by spring 2019. Once constructed, operations are projected to begin in 2021.

The *Groundwater Well Installation and Aquifer Pumping Test Work Plan*[9] was submitted to the Regional Board in July 2017. The work plan provides the details for the construction of two sets of pumping well clusters and 12 piezometers to perform aquifer pumping tests. Extracted groundwater generated during the aquifer pumping tests will be treated using granular activated carbon to remove contaminants, held temporary on-site in 20,000-gallon tanks until profiled, and then discharged directly to the ground surface via agricultural irrigation on the Chino Airport property. The data obtained from the aquifer pumping tests will be used to support the design of the full-scale groundwater pump and treat system proposed in the final Feasibility Study. The work plan also includes the plan for the construction of ten additional monitoring wells at select locations along the plume boundaries.

Monitoring and Reporting: The County conducts quarterly, annual, or biennial water-quality monitoring, and quarterly water-level monitoring, at the 75 monitoring wells constructed to date. The sampling frequency is determined by well classification, i.e. background wells, horizontal or vertical extent wells, remedial monitoring wells and guard wells. The purpose of the groundwater monitoring program is to collect data to track detections of VOCs in groundwater, monitor temporal trends of contaminants, and evaluate changes in each groundwater plume. All the data collected by the County is posted on the Regional Board's GeoTracker website[10]. Conclusions from the monitoring program can be found in the semi-annual reports posted on GeoTracker. The most recent monitoring report *Semiannual Groundwater Monitoring Report Summer and Fall 2017*[11] was submitted to the Regional Board in January 2018.

Watermaster collects groundwater-quality samples from private wells in the plume area, and at its HCMP-4 monitoring well, located in the southern portion of the plume. The Chino Basin Desalter Authority (CDA) collects groundwater-quality samples from its production wells located in the plume area. Watermaster uses data from the County, CDA, and its own sampling to perform an independent

[9] Tetra Tech (2017). *Groundwater Well Installation and Aquifer Pumping Test Work Plan.* Prepared for the County of San Bernardino. July 2017.

[10] http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL208634049

[11] Tetra Tech (2018). *Semiannual Groundwater Monitoring Report Summer and Fall 2018.* Prepared for County of San Bernardino. January 2018.

characterization of the areal extent and concentration of the TCE plume. The most recent characterization of the plume completed by Watermaster was in 2017 for the *2016 State of the Basin* Report[12] and is shown in Exhibit 1. The plume color ramp represents the most recent characterization of TCE and was delineated based on the five-year maximum concentrations from July 2011 to June 2016.

Recent Activity: In February 2018, the County began the installation of extraction wells and piezometers pursuant to the *Groundwater Well Installation and Aquifer Pumping Test Work Plan*. Between March and June 2018 pumping well clusters PW-1(A/B) and PW-2(A/B/C) and four piezometer wells clusters, PZ1(A/B), PZ2(A/B), PZ3(A/B) and PZ4(A/B) were installed. PW-1(A/B) and piezometer wells clusters PZ1(A/B) and PZ2(A/B) were completed within the center of the East Plume. PW-2(A/B/C) and piezometer wells clusters PZ3(A/B) and PZ4(A/B) were completed in the center of the West Plume approximately 400 feet north of CDA well I-2. Additionally, four monitoring well clusters (ten casings) were installed in March and April 2018. Exhibit 1 shows the locations of the new extraction wells, new piezometers, and new monitoring wells. Aquifer pumping tests at the extraction wells began in August 2018.

In April 2018 the following CEQA documents for the proposed remedial strategy were published: *Notice of Availability/Notice of Intent to Adopt a Mitigated Negative Declaration Chino Airport Groundwater Contamination Remedial Action Plan* and the *Initial Study Environmental Checklist Form*.[13,14] The public review period for these documents ended on May 10, 2018. The County's response to comments is pending.

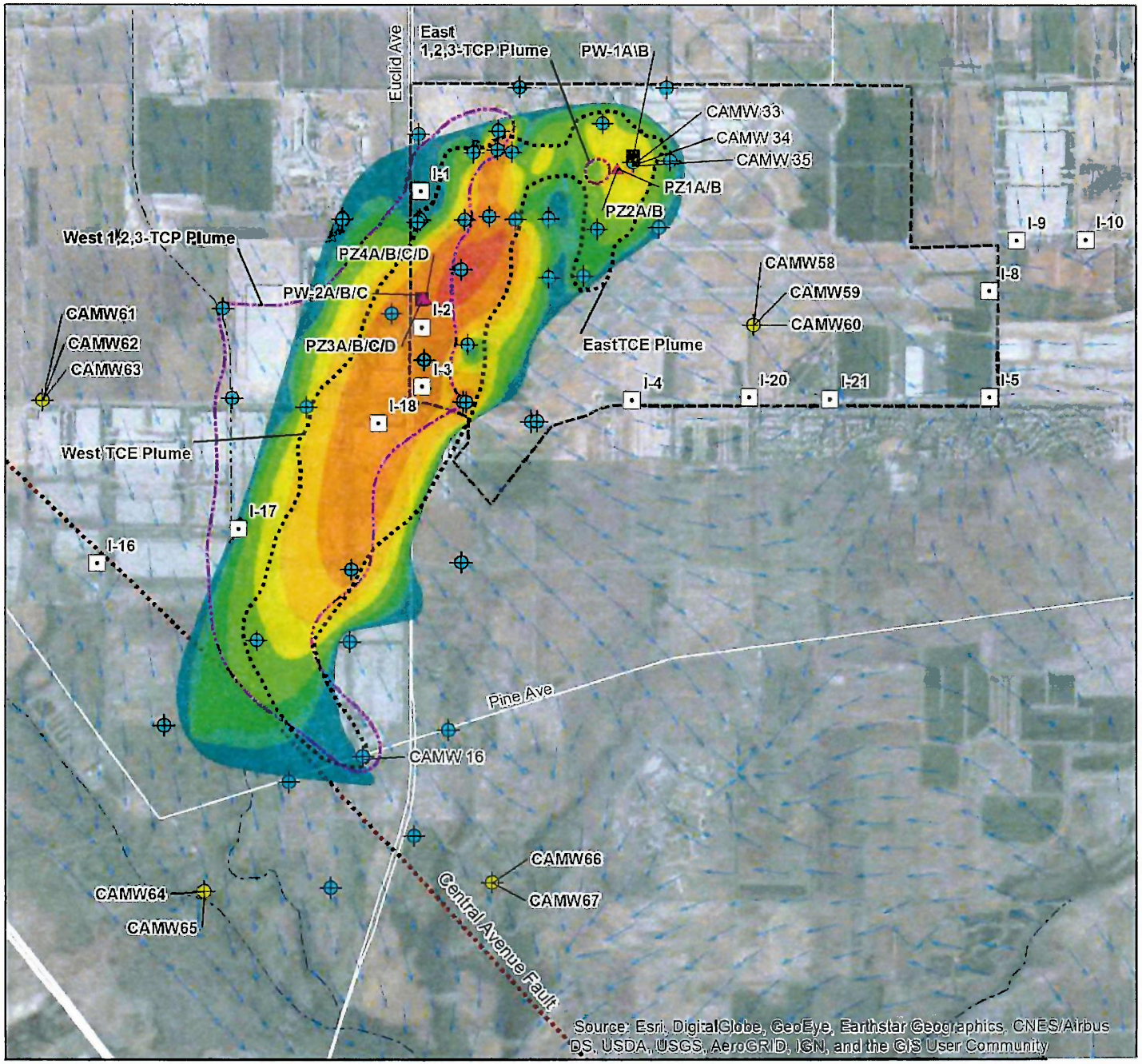
The County submitted a *Former Agricultural Well Destruction Work Plan*[15] to the Regional Board in July 2018. The document detailed the procedures for destroying five abandoned/inactive agricultural wells located in the western portion of the airport property. As of September 21, 2018, three of the five wells had been destroyed, and destruction activities for the fourth well had begun. The fifth well is being considered for use in irrigating a sod far. A determination of whether to use the well or proceed with destruction is on hold until the County completes the calibration of the transient flow model in early 2019 and performs modeling of pumping scenarios to evaluate the impact of its use on the plume footprint. Upon completion of this evaluation the County will discuss the proposed plans for destruction of this well with the Regional Board.

---

[12] Wildermuth Environmental Inc. (2017). *Optimum Basin Management Program - 2016 State of the Basin Report*. Prepared for the Chino Basin Watermaster. June 2017.
[13] https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7323769629/SL208634049.PDF
[14] https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5682043671/SL208634049.PDF
[15] Tetra Tech (2018). *Former Agricultural Well Destruction Work Plan*. Prepared for the County of San Bernardino. July 2018.

In August 2018, the County submitted a *Human Health and Screening Ecological Risk Assessment*[16] (HERRA) to the Regional Board. The HERRA was conducted to evaluate the potential human health and ecological risks from potential exposures to chemicals detected in soil, soil gas, and groundwater associated with the Chino Airport.

[16] Tetra Tech (2018). *Final Human Health and Screening Ecological Risk Assessment.* Prepared for the County of San Bernardino. August 2018.



Maximum TCE Concentration (µgl)
July 2011 to June 2016
(Delineated by Watermaster in the 2016 State of the Basin Report)

- ≤ 5
- > 5 to ≤ 10
- > 10 to ≤ 20
- > 20 to ≤ 50
- > 50 to ≤ 100
- > 100 to ≤ 200
- > 200 to ≤ 500
- > 500

Extent of Plume as Delineated by the County in 2017 Winter and Spring Semiannual Monitoring Report

TCE ≥ 5 µgl

1,2,3-TCP ≥ 0.5 µgl

County Monitoring Wells Constructed from 2003-2015

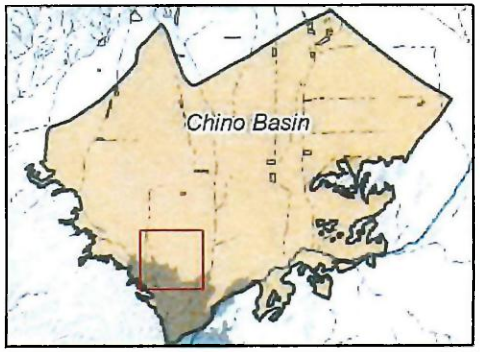
County Wells Constructed in 2018

- Monitoring
- Piezometer
- Production

Chino Basin Desalter Authority Production Well

2017 Model-Generated Groundwater Flow Direction (Model Layer 1)

Chino Airport Property Boundary



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: SO
Date: 10/2/2018
Name: ChinoAirport_20181002

0 0.25 0.5 1 Miles

CBWM Semi-Annual Status Report

Chino Airport Plume

Exhibit 1

THIS PAGE

HAS

INTENTIONALLY

BEEN LEFT

BLANK

FOR PAGINATION

Semiannual Status Report
South Archibald Plume
October 2018

Contaminant: The primary contaminant is trichloroethene (TCE). The maximum contaminant level (MCL) for TCE is 5 micrograms per liter (µgl). The maximum TCE concentration detected in a groundwater sample collected from wells within the plume during the last five years (2013 to 2018) is 90 µgl. Other contaminants of concern include: acetone, cis-1,2-dichloroethene, chloroform, and bromodichloromethane.

Location: The South Archibald TCE plume is in the southern Chino Basin within the City of Ontario. As delineated by the Chino Basin Watermaster (Watermaster) in 2017 for the *2016 State of the Basin Report*[1], the extent of the plume with detectable TCE concentrations is about 11,000 feet wide and 22,400 feet long, extending from State Route 60 on the north to Bellegrave Ave. to the south, between Haven and Turner Avenues on the east, and Grove Avenue on the west. The spatial extent of the TCE contamination was delineated based on the five-year maximum concentration measured over the period of July 2011 to June 2016. In December 2017, the Cities of Ontario and Upland delineated the extent of the plume with TCE concentrations greater than or equal to 0.5 µgl based on sampling events that occurred between September and November 2017. Both plume delineations are shown in Exhibit 1.

Regional Water Quality Control Board, Santa Ana Region (Regional Board) Regulatory Orders:

- 2005 Draft Cleanup and Abatement Orders (CAOs)– Six CAOs were issued, one each to the following parties: the Aerojet-General Corporation, The Boeing Company, Northrop Grumman Corporation, Lockheed Martin Corporation, General Electric Corporation and the United States Department of Defense.
- 2012 Draft CAO – This CAO was issued jointly to City of Ontario, City of Upland, and Inland Empire Utilities Agency (IEUA)
- Stipulated Settlement and CAO No. R8-2016-0016[2] - Final CAO issued to all parties previously issued draft CAOs in 2005 and 2012, excluding Northrop Grumman.

Regulatory and Monitoring History: In the mid-1980s, the Metropolitan Water District of Southern California determined that TCE was present in private wells in the southern Chino Basin as part of its work associated with the Chino Basin Storage Program. The Regional Board confirmed this with subsequent rounds of sampling.

The Regional Board issued Draft CAOs in 2005 for six different parties who were tenants on the Ontario Airport property. On a voluntary basis, four of the parties—Aerojet-General Corporation,

[1] Wildermuth Environmental, Inc. (2017). Optimum Basin Management Program – 2016 State of the Basin Report. Prepared for the Chino Basin Watermaster. June 2017.

[2] California Regional Water Quality Control Board Santa Ana Region (2016). Stipulated Settlement and Cleanup and Abatement Order No. R8-2016-0016. City of Ontario, City of Upland and Inland Empire Utilities Agency, Aeroject Rocketdyne Inc., The Boeing Company, General Electric Company, Lockheed Martin Corporation and the United States of America, Former Ontario-Upland Sewage Treatment Plant (Regional Recycling Plant No. 1) City of Ontario.

The Boeing Company, General Electric Company, and Lockheed Martin Corporation, collectively the ABGL parties, worked together, along with the U.S. Department of Defense, to investigate the source of the contamination. Part of the investigations included collecting water-quality samples from private wells and taps at residences, and the construction and sampling of four triple-nested monitoring wells. Alternative water systems were provided at private residences in the area where groundwater was contaminated with TCE.

In 2008, Regional Board staff conducted research pertaining to the likely source of the TCE contamination and identified discharges of wastewater that may have contained TCE to the RP-1 treatment plant and associated disposal areas to be a potential source. The Regional Board identified several industries, including some previously identified tenants of the Ontario Airport property, that likely used TCE solvents before and during the early-1970s, and discharged wastes to the Cities of Ontario and Upland sewage systems tributary to the RP-1 treatment plant and disposal areas. In 2012, an additional Draft CAO was issued by the Regional Board jointly to the City of Ontario, City of Upland, and the IEUA as the previous and current operators of the RP-1 treatment plant and disposal area (collectively the RP-1 parties).

Under the Regional Board's oversight from 2007 to 2014, the ABGL parties and/or the RP-1 parties conducted sampling at private residential wells and taps approximately every two years in the region where groundwater is potentially contaminated with TCE. By 2014, all private wells and/or taps in the area of the plume had been sampled at least once since 2007. The report documenting this data was published in November 2014[3]. Both the ABGL and RP-1 parties provided water tank systems where water is delivered from the City of Ontario's potable supply via truck deliveries, to residences in the area where well water contains TCE at or above 80 percent of the MCL for TCE (e.g. equal to or greater than 4 µgl). Residents who declined tank systems were provided bottled water service.

In July 2015, the RP-1 parties completed a draft feasibility study report for the South Archibald plume (Feasibility Study)[4]. The Feasibility Study established clean-up objectives for both domestic water supply and plume remediation and evaluated alternatives to accomplish these objectives. In August 2015, a draft remedial action plan (RAP) was concurrently prepared by the RP-1 parties[5] to present the preferred plume remediation and domestic water supply alternatives. A public review period followed along with two community meetings in September 2015 to educate the public about the plume, the Feasibility Study and the RAP, and to solicit comments on these reports. In November

[3] Erler & Kalinowski, Inc. (2014). Supplemental Data Report Trichloroethene Plume Central Chino Basin. Prepared for Aeroject Rocketdyne, Boeing, General Electric, and Lockheed Martin. November 19, 2014.

[4] Dudek (2015). Draft Feasibility Study Report South Archibald Plume, Ontario, California. Prepared for City of Ontario, City of Upland, and Inland Empire Utilities Agency. July 2015.

[5] Dudek (2015). Draft Remedial Action Plan South Archibald Plume, Ontario, California. Prepared for City of Ontario, City of Upland, and Inland Empire Utilities Agency. August 2015.

2015, a revised Draft Feasibility Study[6], RAP[7], and responses to comments were completed to address input from the public, ABGL, and other parties.

In September 2016, the Regional Board issued the Final Stipulated Settlement and CAO R8-2016-0016 (Stipulated CAO) collectively to the RP-1 parties and the ABGL parties (excluding Northrop Grumman). The Stipulated CAO was adopted by all parties in November 2016, thus approving the preferred *Plume Remediation* and *Domestic Water Supply* alternatives identified in the RAP. The parties also reached a settlement agreement that aligns with the Final CAO and authorizes funding to initiate implementation of the plume remediation alternative.

Remedial Action Plan:

Plume Remediation. The plume remediation alternative identified in the Feasibility Study, RAP and Final CAO involves the use of existing and proposed Chino Basin Desalter Authority (CDA) wells and treatment facilities. The RP-1 parties and the CDA reached a Joint Facility Development Agreement[8] for implementation of a project designed to remediate the South Archibald plume. The proposed project includes the construction and operation of three new CDA wells (II-10, II-11, and II-12) a dedicated pipeline to convey groundwater produced from these wells to the Desalter II treatment facility that removes TCE and other VOCs via air stripping. Existing CDA well I-11 would also be plumbed into the air-stripping treatment facility as part of the project. The CDA completed construction of Wells II-10 and II-11 in 2015 and the wells were equipped for operation in mid-2018. Both the dedicated raw water pipeline construction and the property acquisition for Well II-12 are underway. The overall project is anticipated to be completed and operational by 2020.

Domestic Water Supply. The domestic water supply alternative identified in the Feasibility Study and RAP is a hybrid between the installation of tank systems for some residences where water is delivered from the City of Ontario potable supply, and the installation of a pipeline to connect some residences to the City of Ontario potable water system. Pursuant to the Stipulated CAO, the Cities of Ontario and Upland have assumed the responsibility for implementing the domestic water supply alternative for those private residences affected by the TCE groundwater contamination (TCE greater than 4 µgl) who are currently receiving bottled water. In February 2017, the Cities of Ontario and Upland submitted a *Domestic Water Supply Work Plan*[9] to the Regional Board that outlined the approach to provide water tank systems or a connection to the City of Ontario's municipal water supply system

[6] Dudek (2015). Draft Feasibility Study Report South Archibald Plume, Ontario, California. Prepared for City of Ontario, City of Upland, and Inland Empire Utilities Agency. November 2015.

[7] Dudek (2015). Draft Remedial Action Plan South Archibald Plume, Ontario, California. Prepared for City of Ontario, City of Upland, and Inland Empire Utilities Agency. November 2015.

[8] Agreement dated June 22, 2015

[9] Dudek (2017). *Domestic Water Supply Work Plan South Archibald Plume, Ontario, California.* Prepared for the City of Ontario, City of Upland. February 2017.

for affected residences currently receiving bottled water. The Regional Board approved[10] the work plan on March 3, 2017. At the time of the work plan approval, 32 residences were already using tanks systems that were previously installed and 21 residences were receiving bottled water. The work plan addressed providing new offers for alternative water supply remedies for the 21 residences that were receiving bottled water. The alternative water supply options included: installation of a tank system; connection to an existing City of Ontario water main; connection to a future City of Ontario water main; or remain on bottled water. In accordance with the schedule in the Stipulated CAO and the work plan, tank systems will be installed within six months of resident consent, connections to Ontario's existing municipal water system will be constructed within three months of resident consent, and construction and connection to a new water main will occur within 18 months of resident consent. Additionally, bottled water will be supplied to any newly affected residents immediately upon determining that TCE is present at concentrations greater than 4 µgl.

Monitoring and Reporting: Pursuant to the Stipulated CAO, the Cities of Ontario and Upland are responsible for coordinating and conducting ongoing monitoring of the plume and submittal of an annual plume monitoring report to Regional Board by December 31 of each year. Pursuant to the November 2016 Stipulated CAO, a *Private Water Supply Well Sampling Work Plan*[11] was submitted to the Regional Board in February 6, 2017 and approved on February 14, 2017.[12] The purpose of the sampling is to track the plume extent, and potentially affected residences, to ensure that that an alternative water supply is provided to residences where TCE concentrations are greater than 4 µgl. Pursuant to the February 2017 work plan, the first round of sampling occurred in February and March 2017 and the results were reported in the *Annual Groundwater Monitoring Report*[13] submitted to the Regional Board on May 15, 2017.

In December 2017, the Cities of Ontario and Upland submitted results from the second round of sampling in the *Annual Groundwater Monitoring Report*[14] for monitoring conducted between September and November 2017. Forty-two samples were collected from 41 residential or agricultural locations located within and or downgradient of the historical footprint of the plume. Samples were collected

[10] Regional Board. Letter from Kurt Berchtold to the City of Ontario. *Domestic Water Supply Workplan – South Archibald Trichloroethylene Plume, Ontario, California.* March 3, 2017.
[14] Dudek (2017). Annual Groundwater Monitoring Report South Archibald TCE Plume Ontario, California. Prepared for the City of Ontario and City of Upland. May 2017.
[11] EEC Environmental (2017). Workplan – Private Water Supply Well Sampling. Ontario California. Prepared for the City of Ontario. February 6, 2017.
[12] Regional Board. Letter from Kurt Berchtold to the City of Ontario. *Private Water Supply Sampling Work Plan – Selected Private Groundwater Wells and Taps, Ontario, California.* February 14, 2017.
[13] Dudek (2017). Annual Groundwater Monitoring Report South Archibald TCE Plume Ontario, California. Prepared for the City of Ontario and City of Upland. May 2017.
[14] Dudek (2017). *Annual Groundwater Monitoring Report.* Prepared for the City of Ontario and City of Upland. December 2017.

from an outside tap, an inside faucet, or from the supply well. The report also included 2017 water quality data obtained from CDA's routine quarterly sampling at wells I-9, I-10, I-11, II-10 and II-11.

Additionally, Watermaster routinely collects groundwater samples at private wells in the plume area. Watermaster uses data obtained from their own monitoring efforts together with other sources of publicly available data to independently delineate the South Archibald TCE plume as part of the Chino Basin State of the Basin Reports that are prepared every two years.

Recent Activity: The most recent monitoring event was conducted by the RP-1 Parties from September to November 2017. The next annual monitoring event is scheduled for Fall 2018.

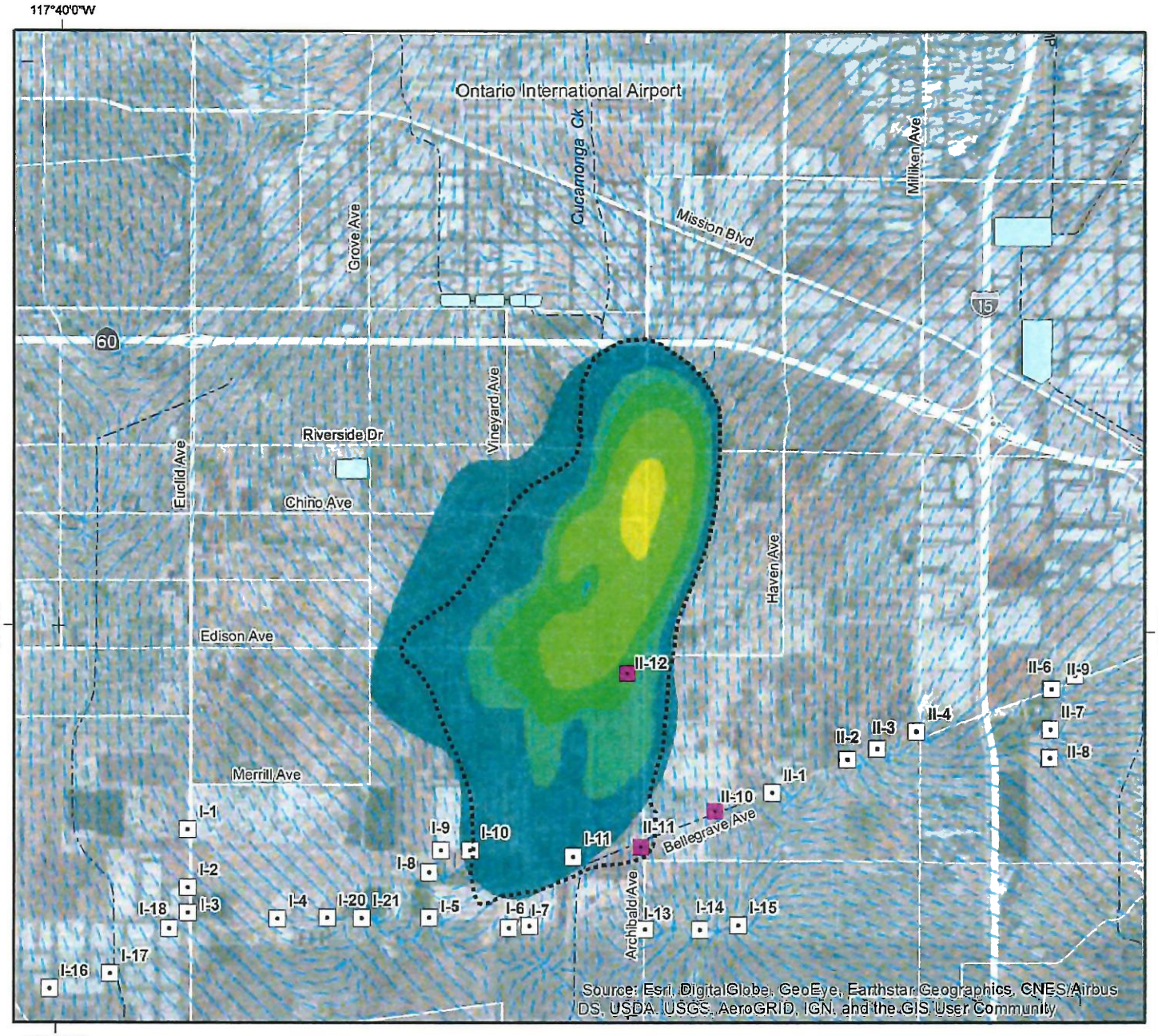
Domestic Water Supply. As of December 2017, 37 residences are supplied water by tank systems. Seven of these tanks are located at the western edge of the plume, where TCE concentrations have declined over time and are less than 80 percent of the MCL. Multiple residences remain on bottled water supply and the need for another offer of an alternative water supply for these residences will be evaluated following the next sampling event scheduled for Fall 2018.

Plume Remediation. CDA and IEUA continue to negotiation property access for construction of well II-12 with the private land owner of the selected construction site. The property access agreement has taken longer than expected due to extenuating circumstances and has caused delays in the advancement of various project activities in the Stipulated CAO that are dependent on acquiring the well II-12 site. These tasks include: design and construction of well II-12; design and construction of the raw water pipeline to connect well II-12 to the Desalter II treatment facility; and design and construction of the decarbonator modification. In June 2018, a request[15] to modify the project schedule was submitted to the Regional Board for these project tasks. The Regional Board approved the request in July 2018.[16,17]

The construction of well II-12 is expected to begin in 2019 and completed by mid-2020. The completion of the dedicated pipeline to convey groundwater from the three new wells and existing well I-11 is on hold until the land acquisition process for well II-12 and its pipeline is complete. The overall project is anticipated to be operational by 2020.

---

[15] IEUA (2018). Letter from IEUA to the Regional Board - Project *Deadline Extension Request – Stipulated Settlement and Cleanup and Abatement Order No. R8-2016-0016.* June 21, 2018.
[16] Regional Board (2018). Letter from Hope Smythe to IEUA – *Approval of Project Deadline Extension Request – Stipulated Settlement and Cleanup and Abatement Order (Stipulated CAO) No. R8-20016-0016.* July 12, 2018
[17] Regional Board (2018). Letter from Hope Smythe to IEUA – *Update to Project Deadline Extension – Stipulated Settlement and Cleanup and Abatement Order (Stipulated CAO) No. R8-20016-0016.* July 17, 2018



Maximum TCE Concentration (µgl)
July 2011 to June 2016
(Delineated by Watermaster in the 2016 State of the Basin Report)

- > 0 to ≤ 5
- > 5 to ≤ 10
- > 10 to ≤ 20
- > 20 to ≤ 50
- > 50 to ≤ 100

Extent of the City of Ontario/Upland TCE Plume with Concentrations Greater than or Equal to .5 µgl (Delineated in the December 2017 Annual Groundwater Monitoring Report)

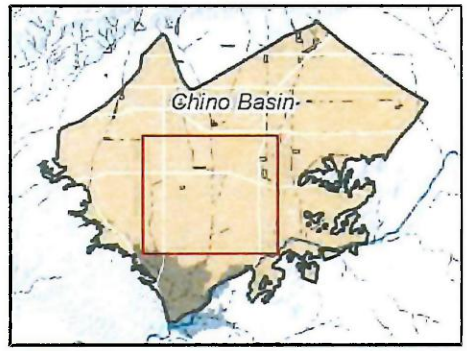
Chino Basin Desalter Authority Production Wells:

- Existing (Constructed Between 1999 to 2012)
- New Wells to Comply with Stipulated Settlement and CAO

2017 Model-Generated Groundwater Flow Direction (Model Layer 1)

Streams & Flood Control Channels

Flood Control & Conservation Basins



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: SO
Date: 10/2/2018
Name: SouthArchibald_20181002

0 0.5 1 2 Miles

CBWM Semi-Annual Status Report

South Archibald TCE Plume

Exhibit 1

Contaminants: The primary contaminant is trichloroethene (TCE). The maximum contaminant level (MCL) for TCE is 5 micrograms per liter (µgl). The maximum TCE concentration detected in groundwater samples collected from wells within the plume from July 2013 to June 2018 was 20,000 µgl (measured at well MW-22A in April 2018). Other contaminants of concern (COCs) include tetrachloroethylene (PCE), total chromium, hexavalent chromium, 1,1,1-trichloroethane and 1,1,2-trichloroethane.

Location: The General Electric (GE) Flatiron TCE plume is in the northern Chino Basin within the City of Ontario. It extends south-southwest from the historical footprint of the GE Flatiron Facility, which was located at 234 East Main Street. As delineated by the Chino Basin Watermaster (Watermaster) in the *2016 State of the Basin Report*,[1] the extent of the plume with TCE concentrations greater than 5 µgl measures approximately 3,150 feet wide and extends 9,000 feet south-southwest (hydraulically downgradient) from the Flatiron Facility. Exhibit 1 shows the location and extent of the TCE plume as delineated by Watermaster and by GE in 2016[2]. Note that both delineations do not include data from newly installed well clusters MW-19A/B/C, MW-20A/B/C, MW-21, MW-22A/B, MW-23A/B, and MW-24A/B. Incorporation of this data for an updated delineation of the plume extent will be prepared by the Watermaster for the upcoming *2018 State of the Basin Report* and will demonstrate the TCE plume extends downgradient of the 2016 delineations towards well cluster MW-20A/B/C based on the data collected at the newly installed wells.

Site History: GE manufactured clothes irons at the Flatiron Facility from the early 1900s to 1982. During World War II, the facility was also used to manufacture equipment to support the war effort for the U.S. War Department. GE closed the facility and sold the property in 1982; since then, ownership has changed several times. The property is currently owned by Oakfield Realty Partners, LLC and is part of an industrial park.

Regional Water Quality Control Board, Santa Ana Region (Regional Board) Regulatory Permits and Orders:

- Investigative Order No. 87-146 – Requiring characterization of on-site conditions and groundwater beneath and down-gradient of the GE Flatiron site using gas surveys, soil boring installation and sampling, and groundwater monitoring well installation and sampling.
- Waste Discharge Requirements (WDRs) and Monitoring and Reporting Programs (M&RPs) Order No. 95-62 and R8-2011-0019 (current) – General WRDs and M&RPs for the discharge of treated water from the pump and treat system.

Regulatory and Investigation History: In 1987, groundwater-quality samples collected from an inactive City of Ontario municipal production well downgradient of the site had TCE and chromium concentrations above drinking water standards, prompting the Regional Board to request that GE

[1] Wildermuth Environmental, Inc. (2017). *Optimum Basin Management Program – 2016 State of the Basin Report.* Prepared for the Chino Basin Watermaster. June 2017.

[2] Amec Foster Wheeler (2016). *2016 Conceptual Site Model Former General Electric Company Housewares Site 234 East Main Street, Ontario, California.* Prepared for General Electric Company. October 4, 2016.

prepare a Phase I investigation to determine if the Flatiron Facility was the source of the contaminants detected. The results of the Phase I investigation prompted the Regional Board to issue Investigation Order No. 87-146, requiring GE and West End Investments (the property owner at the time) to characterize on-site conditions and the groundwater flow gradient beneath the Flatiron Facility. The Phase II through V [3, 4, 5, 6] investigations included soil gas surveys, soil boring installation and sampling, and groundwater monitoring well installation and sampling to define the extent of COCs in groundwater both on and offsite. These investigations conducted from 1987 to 1992, indicated that a contaminant plume was present beneath and downgradient of the Flatiron Facility and showed that concentrations of TCE and total chromium in groundwater were above the California primary MCLs of 5 and 50 µgl, respectively.

The results from the multi-phase investigation prompted the proposal of an interim remedial measure (IRM) in 1993. The IRM was based on the conceptual site model in the *Interim Measure-Preliminary Design Report.*[7] Local and regional numerical groundwater models were constructed to provide a basis for the design of the IRM and extraction well options for containment near the downgradient extent of the plume. Extraction well (EW-01) was installed in December of 1993, and one monitoring well and three piezometers were installed nearby to provide observation points during aquifer testing at EW-01. The IRM began in 1996 and included pumping groundwater from EW-01, treating for TCE and other contaminants, and discharging the treated groundwater to the Ely Basins for recharge.

A Feasibility Study[8] was completed in 1995 prior to the start of the IRM to evaluate groundwater and soil remediation alternatives. In October of 1997, the Regional Board approved a remediation alternative that included the ongoing use of extraction well EW-01 and the installation of an additional extraction well (EW-02) near the center of the contaminant plume to pump and treat contaminated groundwater. Extraction well EW-02 was constructed in 1999 and went online in 2002.

The Regional Board issued WDR Order No. 95-62 in 1995 to regulate the discharge of treated water from the pump and treat system to Ely Basin. This order was replaced with WDR Order R8-2011-0019[9] in 2011 to discharge the treated groundwater to the Chino Basin via injection wells. The 2011

---

[3] Bechtel Environmental, Inc. (1989). *Phase II Soil and Groundwater Investigation, Former GE Flatiron Manufacturing, Ontario, California.* January 1989.
[4] Bechtel Environmental, Inc. (1990). *Phase III Investigation Report, Former GE Flatiron Manufacturing, Ontario, California.* August 1990.
[5] Geomatrix Consultants, Inc., and Beak Consultants Ltd. (1992). *Phase IV Investigation Report 234 East Main Street and Vicinity, Ontario, California.* January 1992.
[6] Geomatrix Consultants, Inc., and Beak Consultants Ltd. (1993). *Phase V Investigation Report 234 East Main Street and Vicinity, Ontario, California.* January 1993.
[7] Geomatrix Consultants, Inc. and Beak Consultants Ltd. (1993). *Interim Remedial Measure – Preliminary Design Report, 234 East Main Street and Vicinity, Ontario, California.* October 5, 1993.
[8] Geomatrix Consultants, Inc. (1995). *Feasibility Study Report, 234 East Main Street and Vicinity, Ontario, California.* November 1995.
[9] Santa Ana Regional Water Quality Control Board. (2011). *Issuance of Waste Discharge Requirements for General Electric Company, GE Francis Water Treatment Plant, San Bernardino County*, Order No. R8-2011-0019. April 22, 2011.

WDR outlines the current discharge prohibitions, effluent limitations, and required monitoring and reporting program.

In 2015, GE submitted a Work Plan[10] to the Regional Board to outline a program for evaluating the effectiveness of existing remedial measures and to provide recommendations for additional investigation or remediation. Implementation of the Work Plan began in 2016 with the installation of four borings to collect discrete-depth soil and groundwater samples that were tested for TCE, PCE, chromium, and hexavalent chromium.

The Regional Board required the development of a Conceptual Site Model[11] in 2016 to incorporate the information from the recent investigations with all historical information to develop a framework to be used to identify data gaps and guide future decisions on investigation, monitoring, and remedial actions. One critical component of the Conceptual Site Model, as highlighted by the Regional Board, is the installation of a sentinel well downgradient of the plume.

On June 22, 2016, a Work Plan[12] was submitted to the Regional Board, outlining the installation of a new-multi-depth well cluster (MW-19A/B/C), to further assess the dissolved-phase chromium and VOC concentrations in the downgradient direction. The first sampling event at well cluster MW-19A/B/C indicated that the TCE concentration in the shallow casing (MW-19A) was greater than the MCL. This finding prompted the Regional Board to request that an additional monitoring well cluster be constructed downgradient of MW-19 and upgradient of the City of Chino's municipal production well Chino-11 to allow for further evaluation of the plume extent. On November 14, 2016, GE submitted the Work Plan[13] for the construction of well cluster MW-20A/B/C about 420 feet upgradient from Chino-11. Construction was completed in May 2017. The first sampling event at well cluster MW-20A/B/C in July 2017 indicted that TCE in the intermediate casing (MW-20B) was greater than the MCL.

From May 2016 to March 2017, four additional monitoring well clusters (MW-21, MW-22A/B, MW-23A/B and MW-24A/B) were constructed in the upgradient area of the plume as part of the supplemental remedial investigation activities.

Remedial Action Plan: In 1996 GE began operation of a groundwater extraction and treatment system to contain and treat the contaminated groundwater. In 1996, GE began operating extraction well EW-1 at the leading edge of the contaminant plume to prevent further migration of the plume. In 2002, GE began operating extraction well EW-2 located in the center of the plume to prevent migration of the contaminants past the mid-point of the plume. Groundwater pumped from EW-1

[10] Amec Foster Wheeler (2015). *Work Plan for Supplemental Remedial Investigation. 234 East Main Street and Vicinity, Ontario California. Prepared for General Electric Company.* March 30, 2015.
[11] Amec Foster Wheeler (2016). *2016 Conceptual Site Model. Former General Electric Company Housewares Site 234 East Main Street, Ontario, California. Prepared for General Electric Company.* October 4, 2016.
[12] Amec Forster Wheeler (2016). *Work Plan for Installation of Cross-Gradient Monitoring Well Clusters. General Electric Company Former Flatiron Facility.* Prepared for General Electric Company. August 15, 2016.
[13] Amec Forster Wheeler (2016). *Work Plan for Installation of Additional Sentinel Monitoring Well Cluster. General Electric Company Former Flatiron Facility. Prepared for General Electric Company.* November 14, 2016.

and EW-2 is conveyed by separate pipelines to the GE Flatiron Facility treatment system located at 501 W. Francis Street. The groundwater is treated first with an ion exchange resin and then with liquid-phase granular activated carbon to reduce chromium and VOC concentrations before being discharged. As detailed in WDR Order No. R8-20011-0019, discharged water from the treatment system is required to maintain average monthly concentrations of TCE, PCE, 1,1,1-trichloroethane, and chromium below their respective MCLs of 5, 5, 200 and 50 µgl. From 1996 to 2011, the treated groundwater was discharged via a pipeline to the Ely Basins flood control and groundwater recharge facility. In 2005, long term recharge plans by the Watermaster and Inland Empire Utilities Agency placed a priority on the use of the Ely Basins for recharge of storm water, recycled water and imported water. It was expected that the Ely Basins would be fully allocated to these sources of recharge waters in the future. In 2005, GE began evaluating alternative discharge options for the treated groundwater. A site was selected at 2025 South Bon View Avenue to install injection wells to accept the treated groundwater. Three injection wells (IW-01, IW-02, and IW-03) and conveyance pipelines were completed in July 2011 and began receiving treated waters from the treatment system.

Exhibit 1 shows the locations of the extraction and injection wells. As of August 2018, approximately 17,539 acre-feet of water has been treated at the treatment system.[14]

Monitoring and Reporting: There are two interlinked monitoring and reporting programs for the GE Flatiron site: one for groundwater and one for the remediation system. The objectives of the respective programs are: 1) to monitor groundwater elevations and concentrations/extents of the dissolved-phase plume over time, and 2) track and evaluate the performance of the remediation system. The groundwater monitoring program includes measuring groundwater levels and collecting groundwater-quality samples for chemical analysis from site wells at a quarterly frequency. Currently, the depth to groundwater is measured in 31 wells and three piezometers every quarter. Groundwater-quality samples are collected from between 21 and 34 monitoring wells and piezometers, dependent on the specific quarter's monitoring plan and analyzed primarily for dissolved metals and VOCs. Reports summarizing the results of the monitoring and remediation efforts are published semiannually in January and July each year.

The remediation system monitoring program consists of operations and maintenance activities performed in conjunction with the entire system, and at a minimum, monthly sampling and analyses of the treatment plant influent and treated effluent pursuant to WDR Order No. R8-2011-0019. In addition to the semiannual summaries included in the groundwater monitoring reports, treatment system monitoring results are reported monthly to the Regional Board. Semiannual groundwater monitoring and remediation reports, monthly treatment system summary reports, and other relevant documents/data can be found on the Regional Board's GeoTracker website.[15]

Recent Activity: The six new monitoring well clusters (13 wells) installed during 2016 and 2017 either onsite in the northern extent of the plume or downgradient of the plume (see Exhibit 1) were

[14] General Electric (2018). *GE Flatiron Facility Treatment System Summary*- August 2018. E-mail prepared for Santa Ana Regional Water Quality Control Board. August 30, 2018.

[15] https://geotracker.waterboards.ca.gov/profile_report?global_id=SL0607132486

monitored quarterly for groundwater quality from January 2017 to April 2018. The monitoring results show that TCE was present at concentrations above the MCL in at least one well in all six well cluster locations The table below summarizes the highest TCE concentrations from January 2017 to April 2018 for these wells:

New Monitoring Wells with TCE concentrations Above the MCL of 5 µg/L

Well Name	Well Location	Sample Date	TCE (µg/L)
MW-21	Northern Extent of Plume	1/31/2018	4,200
MW-22A	Northern Extent of Plume	4/27/2018	20,000
MW-22B	Northern Extent of Plume	4/27/2018	15
MW-23A	Northern Extent of Plume	1/31/2018	12,000
MW-23B	Northern Extent of Plume	4/27/2018	75
MW-24A	Northern Extent of Plume	8/2/2017	15,000
MW-19A	Downgradient of Southern Extent of Plume	3/22/2017	8.7
MW-20B	Downgradient of Southern Extent of Plume	1/30/2018	36

GE has not prepared an updated plume delination since their 2016 conceptual site model[16] to include analytical results from the new monitoring wells. Updated delinations of the TCE plume are expected to extend approximately 2,800 feet downgradient from the 2016 extent towards well cluster MW-20A/B/C.

On June 21, 2018 GE submitted a work plan to the Regional Board for an expansion of the soil vapor extraction system currently being implemented at the site.

The most recent groundwater monitoring report[17] was submitted to the Regional Board on July 24, 2018. This report summarizes the groundwater monitoring and remediation activities performed between January 1 and June 30, 2018. The following describes the key findings presented in the document:

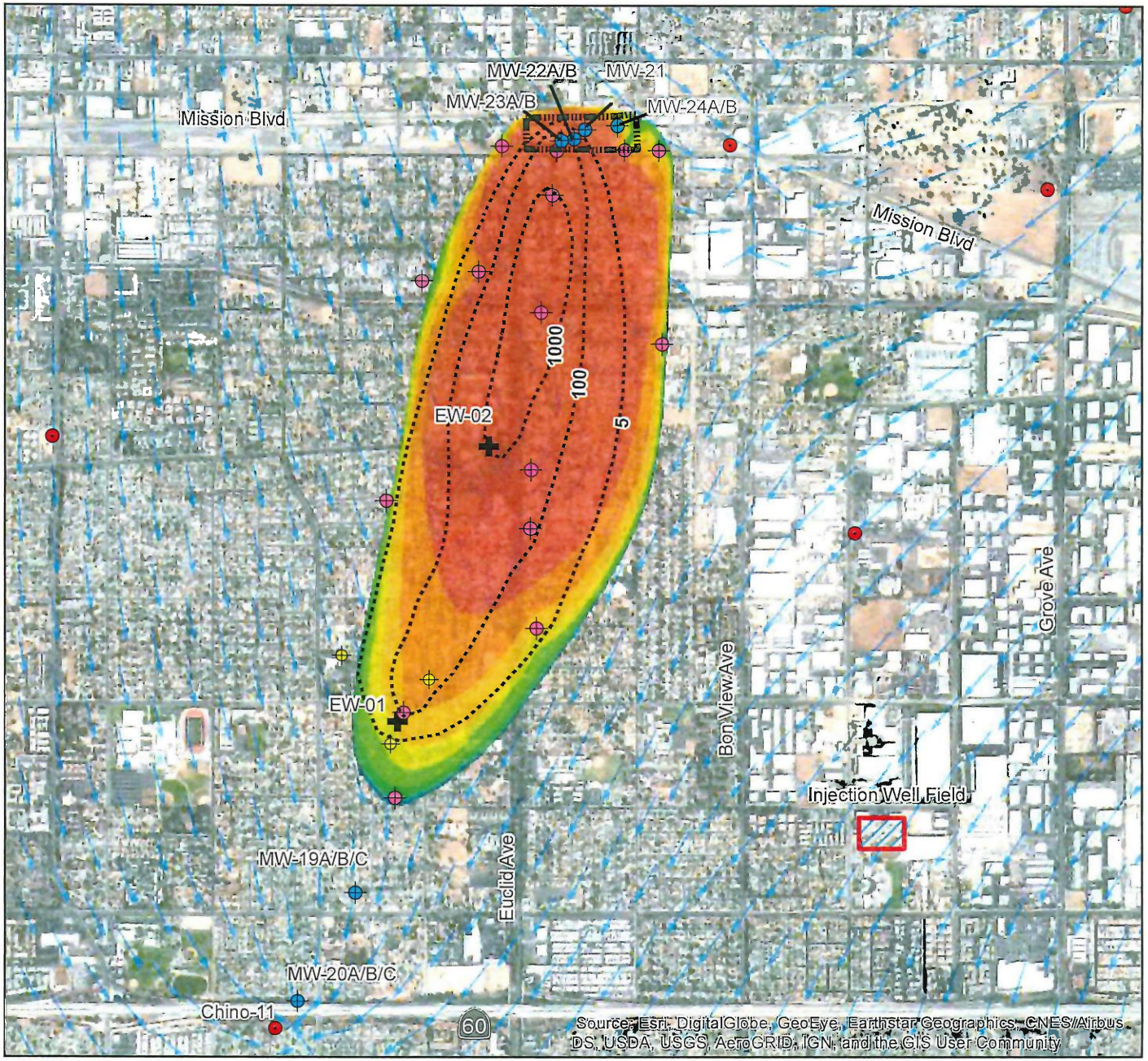
- Groundwater elevations appear to be increasing in the vicinity of the site.
- Except for wells MW-06 and MW-09, VOC and dissolved metals concentrations in samples collected from the site monitoring wells during the reporting period were consistent with historical data.
- The highest TCE, PCE, total chromium and hexavalent chromium concentrations detected during the monitoring period were: 20,000 µg/L (MW-22A), 970 µg/L (MW-21), 1,490 (MW-23A), and 1,600 µg/L (MW-23A), respectively.
- The extraction wells have been generally effective at meeting the remedial action objectives.

[16] Amec Foster Wheeler (2016). *2016 Conceptual Site Model Former General Electric Company Housewares Site 234 East Main Street, Ontario, California.* Prepared for General Electric Company. October 4, 2016

[17] Wood Environment & Infrastructure Solutions, Inc. (2018). *First Semiannual 2018 Groundwater Monitoring and Remediation Report. Prepared for General Electric Company.* July 24, 2018.

- The injection well field has been effective in returning treated groundwater to the upper aquifer of the Chino Subbasin.
- The results of compliance monitoring indicate the groundwater treatment system was in compliance with discharge limitations described in the WDRs.

GE will continue monitoring at the Flatiron Facility pursuant to the Regional Board Clean-up Status of *Open – Assessment & Interim Remedial Action.*



Maximum TCE Concentration (µgl) July 2011 to June 2016 (Delineated by Watermaster in the 2016 State of the Basin Report)

- ≤ 5
- > 5 to ≤ 10
- > 10 to ≤ 20
- > 20 to ≤ 50
- > 50 to ≤ 100
- > 100 to ≤ 200
- > 200 to ≤ 500
- > 500

Contours of TCE Concentration (µgl) delineated by GE in 2016

Active/Inactive Potable Municipal Water Supply Wells

GE Monitoring Wells (some locations have mutliple wells at various depths) *

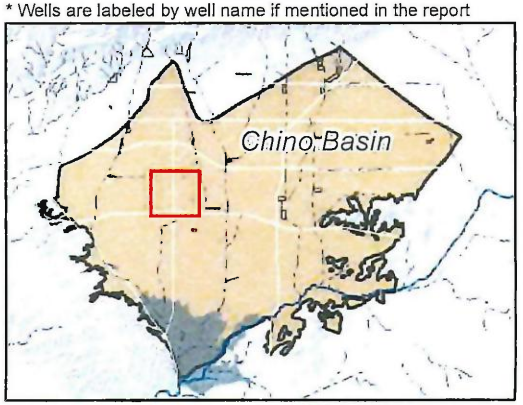
- Constructed Between 2016 - 2017
- Constructed Prior to 2016
- GE Piezometers
- GE Extraction Wells

GE Flatiron Property Boundary

2017 Model-Generated Groundwater Flow Direction (Model Layer 1)

Streams & Flood Control Channels

* Wells are labeled by well name if mentioned in the report



Prepared by:

WEI
Wildermuth Environmental, Inc

Author: LG
Date: 10/3/2018
Name: 20181002_GEFlatPlumeStatus_Ex1

0 0.125 0.25 0.5 Miles

Plume Status Report

GE Flatiron TCE Plume

Exhibit 1

P93

THIS PAGE

HAS

INTENTIONALLY

BEEN LEFT

BLANK

FOR PAGINATION

Contaminants: The primary contaminant is trichloroethene (TCE). The maximum contaminant level (MCL) for TCE is 5 micrograms per liter (µgl). The maximum TCE concentration detected in a groundwater sample collected from wells within the plume during the from the last five years (July 2013 to June 2018) is 1,500 µgl (measured at well OW-15pi in January 2018), which is the highest concentration of TCE ever measured at a well within the plume. Other contaminants of concern include: tetrachloroethene (PCE), 1,1-dichloroethene, 1,2-dichloroethane, and cis-1,2-dichloroethene.

Location: The General Electric (GE) Test Cell plume is in the northern Chino Basin within the City of Ontario. The plume is elongated in shape and extends downgradient in a southwest direction from the former GE Jet Engine Test Cell Facility (Test Cell Facility), located at 2264 Avion Street. The site is located approximately a mile northeast of the Ely recharge basins. The land uses overlying the plume are predominately industrial and commercial. As delineated by the Chino Basin Watermaster (Watermaster) in the *2016 State of the Basin Report*,[1] the extent of the plume with TCE concentrations greater than or equal to 0.5 µgl measures approximately 2,300 feet wide and 9,800 feet long. Exhibit 1 compares the location and extent of the plume as delineated by Watermaster, and by GE per their most recent characterization published in the second quarter of 2018[2].

Site History: From 1956 to 2011, the Test Cell Facility was predominately used to test and maintain commercial and military aircraft engines. Solvents used at the facility included TCE, PCE, 1,1,1- trichloroethane (1,1,1-TCA), methyl ethyl ketone, and isopropyl alcohol, which were stored in 55- gallon drums and an aboveground storage tank. In the early 1970s, TCE was replaced with the use of 1,1,1-TCA, which in 1981 was replaced with isopropyl alcohol—the only solvent used onsite until 1996. Prior to 1974, wastewater from manufacturing processes flowed into the natural wash along the north side of the facility until two dry wells were constructed on the northwest side of the former Test Cell Facility. From 1974 to 2011, wastewater from manufacturing was disposed of by discharging to the onsite dry wells. The Test Cell Facility ceased operation in 2011, and the site is currently vacant.

Consent Order: State of California Department of Health Services (CDHS) Docket No. 88/89-009CO. Consent Order Health and Safety Code Section 25355.5(a)(1)(B) and 25355.5 (a)(1)(C). In the Matter of: General Electric Engine Maintenance Center. September 1998.

Regulatory and Monitoring History: An investigation performed by C.H.J, Inc. soil engineers in 1984 detected TCE, PCE, dibromochloromethane, and 1,1,1-TCA in soil samples taken from the dry wells. Results from this investigation were deemed invalid due to inappropriate analytical

[1] Wildermuth Environmental, Inc. (2017). *Chino Basin Optimum Basin Management Program, 2016 State of the Basin Report.* June 2017.
[2] Geosyntec Consultants (2018). *Second Quarter 2018 Groundwater Monitoring Report. Prepared for GE Engine Services Test Cell Facility.* July 31, 2018.

methods.[3] In 1985, another consulting firm retained by GE detected 1,1,1-trichloroethane, TCE, and PCE in subsurface soils onsite.[4] An investigation performed in 1987 revealed the presence of volatile organic compounds (VOCs) in the soil near the disposal sites.[5] In 1988, the Consent Order was signed between GE and the CDHS to initiate the investigation of soil, surface water, and groundwater contamination, and the appropriate remedial actions. The Santa Ana Regional Water Quality Control Board (Regional Board) oversees the groundwater investigation and remediation efforts.

Pursuant to the Consent Order, GE began groundwater investigations in 1991 with the installation of onsite monitoring wells adjacent to the two dry wells used to discharge untreated wastewater. The monitoring performed at these wells indicated the presence of VOCs in the groundwater beneath the Test Cell Facility and that the contamination had possibly migrated offsite. The Regional Board requested an offsite investigation to determine the extent of the contamination. An extensive offsite investigation was completed in multiple phases from 1995 to 1998. The initial phase was completed in March 1995 and included the installation of three offsite monitoring wells. Moreover, in late 1995, five borings where drilled to determine the horizontal and vertical limits of VOCs in groundwater, and three of the five borings were completed as monitoring wells. Monitoring at these offsite monitoring wells indicated that the VOC plume extended about 4,000 feet offsite. Between 1996 and 1998, seven additional monitoring wells and seven piezometers were constructed offsite.

Following the initial groundwater investigation, two offsite multi-depth well clusters were installed between 2001 and 2002 to provide information on the vertical distribution of VOCs. Monitoring of these multi-depth wells indicated that TCE concentrations were highest in the intermediate and deep interval zones. In 2003, GE submitted a groundwater feasibility study to the Regional Board (Feasibility Study),[6] followed by a draft remedial action plan (RAP)[7] in 2006. The Feasibility Study and RAP identified pump and treat and monitored natural attenuation as remediation alternatives.

In 2009, additional multi-depth well clusters were installed at two locations offsite and one location onsite.[8] And, pursuant to a 2014 work plan approved by the Regional Board, GE destroyed six

[3] Investigation described in State of California Department of Health Services. (1998). Docket No. 88/89-009CO. Consent Order Health and Safety Code Section 25355.5(a)(1)(B) mad 25355.5 (a)(1)(C). In the Matter of General Electric Engine Maintenance Center. September 1998.
[4] 4 Ibid.
[5] Dames & Moore. (1987). *Subsurface Investigation, Ontario California, for General Electric Aviation Services Operations.* February 4, 1987.
[6] Geosyntec. 2003. *Groundwater Feasibility Study – GE Engines Test Cell Facility, Ontario, California.* December 3, 2003.
[7] Geosyntec. 2006. *Draft Groundwater Remedial Action Plan, GE Engine Services Test Cell Facility, 2264 Avion Place, Ontario, California.* November 17, 2006.
[8] Geosyntec Consultants. (2009). *Monitoring Well Installation Work Plan. GE Engines Services Test Cell Facility.* Prepared for GE Engine Services. July 2, 2009.

monitoring wells that were dry and replaced them with an additional onsite multi-depth well cluster.

Remedial Action Plan: The 2003 Feasibility Study[9] and 2006 draft RAP[10] identified two groundwater remediation alternatives: (1) extraction and treatment of groundwater for areas that have VOC concentrations approximately ten times the MCL and (2) monitored natural attenuation of groundwater for areas that have VOC concentrations less than ten times the MCL. Plans to implement a groundwater pump-and-treat system were put on hold after the draft RAP was submitted because the only suitable location for discharging the treated effluent was the nearby Ely recharge basins, and GE could not obtain capacity at the recharge basin from the San Bernardino Flood Control District. Monitored natural attenuation is the only remedial action that has been implemented.[11]

From 2003 to about 2012, TCE concentrations in samples collected from monitoring wells across the extent of the plume generally decreased; this trend was attributed to natural attenuation. In 2002, TCE concentrations above 50 µgl were measured as far as about 4,000 feet downgradient of the facility. By 2008, groundwater with TCE concentrations above 50 µgl only extended about 2,600 feet downgradient. GE met with the Regional Board in 2008 to discuss the status of the plume and to reevaluate the RAP to consider monitored natural attenuation (MNA) as the primary remedial action. Based on this discussion, GE agreed to install additional monitoring well clusters between the former GE facility and well cluster OW-16, located in the center of the plume. This well was selected because it had the highest historical offsite TCE concentrations in the intermediate and deep intervals. Pursuant to this agreement, two offsite well clusters (OW-17 and OW-18) and one onsite well cluster (MW-8) were installed in August and September 2009 as part of ongoing activities to evaluate MNA. The 2006 Draft RAP was withdrawn in in February 2010 and evaluation of MNA continued.

In November 2010, GE met with the Regional Board again to reevaluate MNA and as a result the Regional Board required that GE prepare a work plan to destroy and/or replace monitoring wells that had gone dry since their construction. GE submitted a work plan[12] for the destruction of five onsite wells and one offsite well and the construction of a well cluster onsite to replace the

[9] Geosyntec. (2003). *Groundwater Feasibility Study – GE Engines Test Cell Facility, Ontario, California.* December 3, 2003.
[10] Geosyntec. (2006). *Draft Groundwater Remedial Action Plan, GE Engine Services Test Cell Facility, 2264 Avion Place, Ontario, California.* November 17, 2006.
[11] Phone Correspondence with Mr. Kamron Saremi at the Regional Board on December 14, 2017.
[12] Geosyntec Consultants. (2014). *Monitoring Well Installation and Destruction Report. Prepared for Regional Water Quality Control Board, Santa Ana Region.* June 10, 2014.

monitoring wells that had gone dry. The work plan was approved by the Regional Board in 2011 and implemented in 2014.

Monitoring and Reporting: The objectives of the monitoring program are to evaluate the extent and magnitude of the VOC plume emanating from the Test Cell Facility and to support the ongoing evaluation of MNA as a remedy. Groundwater monitoring is performed quarterly and consists of measuring groundwater levels and collecting groundwater samples at all accessible onsite and offsite monitoring wells and piezometers. This includes 13 single casing monitoring wells, 17 multi-nested monitoring wells in six locations, and seven piezometers. Exhibit 1 shows the locations of all monitoring sites. Quarterly groundwater-quality samples are analyzed for VOCs, including TCE, PCE, chloroform, benzene, and others. Reports summarizing the results of the monitoring are published each quarter. All data that have been collected by GE since 2005 are posted on the Regional Board's GeoTracker website.[13] Conclusions from the monitoring program can be found in the quarterly reports posted on GeoTracker.

Recent Activity: During the second quarter of 2018, groundwater quality samples were collected at 31 monitoring wells, and groundwater-level measurements were obtained from 35 monitoring wells. The monitoring event was conducted in April 2018 and the report documenting the sampling event and results was submitted to the Regional Board in July 2018[14]. The following summarizes some of the key results and conclusions contained in the second quarter report:

- Variations in the IEUA's timing and volumes of recharge at the Ely Basins influence the local horizontal hydraulic gradient and groundwater flow direction, including the area that comprises the central portion of the plume that is directly north of the Ely Basins. However, in any given year, the general horizontal hydraulic gradients remain relatively constant despite long-term changes in groundwater levels and seasonal changes in recycled water recharge at the Ely Basins of up to five feet.
- Over the last four years, significant increases in TCE concentrations have been observed in well OW-6 and well cluster OW-15, located near the center of the plume, north of the Ely Basins where large fluctuations of hydraulic gradient have also occurred.
- There are increasing trends in TCE concentrations at monitoring wells OW-8, OW-9p and OW-17-S. These wells are primarily located in the central and northern portions of the plume and downgradient of the former Test Cell Facility.
- The highest TCE concentration measured is at the intermediate interval of well cluster OW-15 located in the center of the plume. The TCE concentration at this well showed a increasing trend from the fourth quarter of 2013 to the second quarter of 2018, increasing

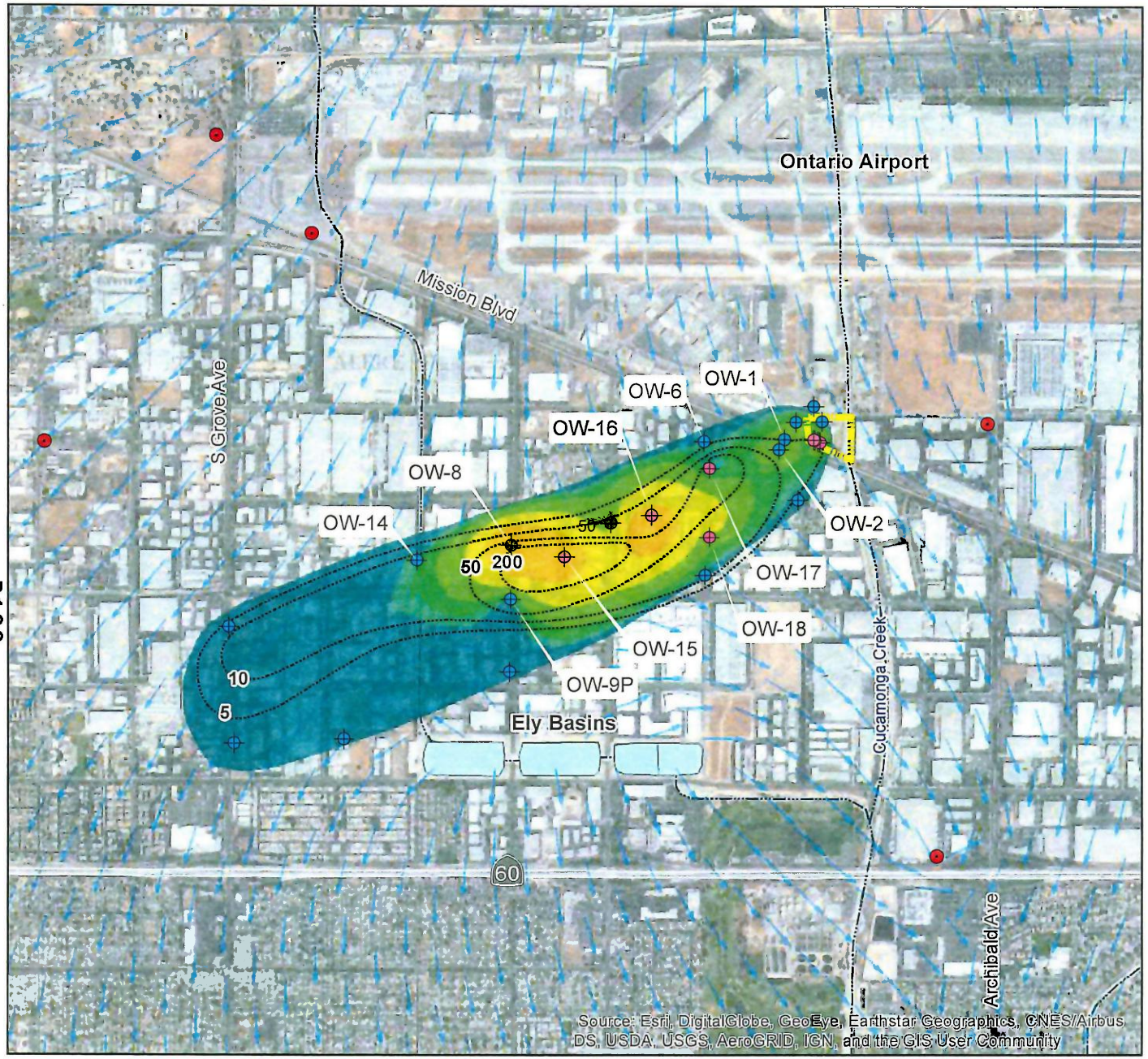
[13] http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL208634049
[14] Geosyntec Consultants. (2017). *Third Quarter 2017 Groundwater Monitoring Report. Prepared for GE Global Operations, Environment, Health and Safety.* October 2017.

from 140 µgl to 1,400 µgl. The maximum peak concentration of 1,500 µgl was observed in the first quarter of 2018.

- Over the last year, increasing TCE concentrations have been observed at OW-14 and OW-16i, also located in the center of the plume.
- Over the past six years, TCE concentrations at the two monitoring wells just downgradient of the former Test Cell facility (OW-1 and OW-2) have gradually declined and are significantly lower than historical concentrations observed in these monitoring wells.
- Approximately 71 percent of the wells that are being monitored have TCE concentrations above the MCL.

GE will continue monitoring pursuant to the Regional Board Clean-up Status of *Open – Verification Monitoring*. The third quarter 2018 monitoring event was performed in July 2018 and the monitoring report will be submitted to the Regional Board by GE in October 2018. Upon review of the third quarter 2018 monitoring report, the Regional Board will schedule a time to meet with GE and evaluate if remediation actions other than MNA are required to address the increasing TCE concentrations found in wells at the center of the plume.[15]

[15] Phone Correspondence with Mr. Kamron Saremi at the Regional Board on August 27, 2018.



P100

Maximum TCE Concentration (µgl) July 2011 to June 2016 (Delineated by Watermaster in the 2016 State of the Basin Report)

- ≤ 5
- > 5 to ≤ 10
- > 10 to ≤ 20
- > 20 to ≤ 50
- > 50 to ≤ 100
- > 100 to ≤ 200
- > 200 to ≤ 500

Contours of TCE Concentration (µgl) delineated by Geosyntec Consultants in 2018 Quarter 2 Groundwater Monitoring Report

Active/Inactive Potable Municipal Water Supply Wells

General Electric Monitoring Wells*

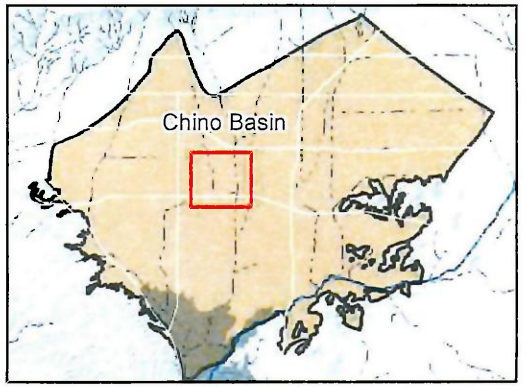
- Single Casing
- Multi-Depth Cluster

2017 Modeled Groundwater Flow Direction (Model Layer 1)

GE Test Cell Property Boundary

Streams & Flood Control Channels

* Wells are labeled by well name if mentioned in the Report



Prepared by:

WEI
Wildermuth Environmental, Inc

Author: SO
Date: 10/3/2018
Name: 20181002_GETestPlume_Status_Ex1

0 0.25 0.5 1 Miles

Plume Status Report

GE Test Cell TCE Plume

Exhibit 1

Contaminants: The primary contaminant is tetrachloroethene (PCE). The maximum contaminant level (MCL) for PCE is 5 micrograms per liter (µgl). The highest concentration of PCE historically measured at a well within the plume is 1,990 µgl (MW-7 in 1998). Other contaminants of concern include the following volatile organic compounds (VOCs): trichloroethene (TCE), 1,2-dichloroethene, bromodichloromethane, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, and toluene.

Location: The California Institution for Men (CIM) is a state correctional facility located in the City of Chino. The property occupies approximately 1,500 acres. CIM is located approximately 2.5 miles east of the City of Chino Hills and approximately seven miles north of Prado Dam. As delineated by the Chino Basin Watermaster (Watermaster) in the *2016 State of the Basin Report*,[1] the extent of the plume with detectable PCE concentrations greater than 0.5 µgl is about 4,000 feet long and 3,000 feet wide, and it is located predominantly beneath the CIM property (Exhibit 1).

Site History: Since 1939, the State of California Department of General Services (State) has operated the Chino Institution for Men (CIM), a correctional facility in the City of Chino. The property is bounded by Eucalyptus Avenue to the north, Euclid Avenue to the east, Kimball Avenue to the south, and Central Avenue to the west. The primary uses of the CIM property include agricultural operations, inmate housing, and correctional facilities. The Heman G. Stark Youth Correctional Facility occupies the eastern portion of the CIM property. CIM provides potable water to both the nearby Youth Correctional Facility and Chino Institution for Women as well as the CIM facilities. CIM operates multiple supply wells, a distribution system, and a water treatment plant. The land surrounding the CIM property was historically used for agriculture and dairy activities, but it has rapidly developed in recent years to residential and commercial uses.

Regulatory Orders:

- No regulatory Orders for site remediation and monitoring. The State conducted voluntary cleanup and monitoring under direction from Santa Ana Regional Water Quality Control Board (Regional Board). On December 17, 2009, the Regional Board determined "No Further Action" was required for remediation or monitoring.

Regulatory and Monitoring History: In 1990, PCE was detected at a concentration of 26 µgl at CIM drinking water supply Well 1. This prompted the California Department of Health Services (CDHS), now the California State Board Division of Drinking Water (DDW), to direct CIM to stop using the well as a source of drinking water. The detection of elevated PCE concentrations in two other CIM drinking water supply wells (1A and 11A) triggered the Regional Board to request an investigation of the source and extent of the onsite PCE contamination.

[1] Wildermuth Environmental, Inc. (2017). *Chino Basin Optimum Basin Management Program, 2016 State of the Basin Report.* Prepared for Chino Basin Watermaster. June 2017.

The Phase I Initial Site Assessment[2] was performed at the CIM site in 1992 and included a review of CIM's history, operations, and chemical use. The investigation identified five potential sites where VOCs were used and could have impacted soil and groundwater. These areas included: the old laundry building, the furniture factory, the vocational shops, the state garage, and the powerhouse.

The Phase II Site Assessment[3] was performed from 1992 to 1994 and included a soil vapor survey, soil sampling analysis, groundwater quality analysis, and vapor extraction testing. Seven groundwater monitoring wells were installed and sampled as part of this investigation. The results from the soil vapor investigation and the groundwater quality analysis showed low concentrations of contaminants throughout the site. The old laundry facility and nearby areas were identified as the most likely principal source of VOCs at CIM.

An interim remedial measure, which included the extraction and treatment of groundwater from Well 1, was implemented in 1997. In 2001, construction began on two CIM water supply wells and associated piping to prevent VOC-impacted groundwater at the southern end of the plume from migrating away from the site.

Between August 1994 and May 2001, a network of approximately 43 monitoring wells at varying depths in the shallow, intermediate, and deep aquifer zones below the site were constructed. The wells were sampled intermittently through 2007 to analyze the extent and concentrations of VOCs in the groundwater beneath the CIM property. The VOC impacts to groundwater were limited to the source area and immediately downgradient and had not and were not expected to migrate off the property. A final monitoring event[4] was conducted by the State during January 2007, which included groundwater quality sampling at 39 water supply and monitoring wells at the CIM property. Based on this monitoring event and data from previous monitoring efforts, it was concluded that PCE concentrations in groundwater beneath the site had substantially diminished. All samples collected from the potable water supply wells during this sampling event did not test above the MCL for PCE or any other VOCs. However, PCE concentrations above the MCL of 5 µgl were present in three monitoring wells in the shallow aquifer zone, ranging from about 8 to 27 µgl.

In February 2007, the State submitted a request to the Regional Board for a No Further Action (NFA) finding for groundwater remediation and monitoring at CIM. On December 17, 2009, the Regional Board issued a determination of NFA for the CIM site.[5]

---

[2] Geomatrix. (1992). *Report of Phase I Investigation, VOCs in Soil and Groundwater, Department of Corrections California Institution for Men, Chino.* April 20, 1992.

[3] Geomatrix. (1994). *Phase II Assessment of VOCs in Soil and Groundwater, California Institution for Men Chino, California.* Prepared for Department of General Services. October 4, 1994.

[4] Geomatrix. (2007). *January 2007 Groundwater Monitoring PCE Remediation Project California Institution for Men Chino, California.* Prepared for Department of General Services Real Estate Services Division Project Management Branch. May 17, 2007

[5] California Regional Water Quality Control Board, Santa Ana Region. Determination of No Further Action (NFA), Tetrachloroethylene Remediation Project, California Institution for Men, Chino. December 17, 2009.

Remedial Action: In July 1997, the State implemented remediation activities termed *The PCE Remediation Project*[6], with an interim remedial measure where groundwater pumped from Well 1 was treated for VOCs using air stripping. Operation of the air stripper at Well 1 continued until 2004, when the permeability of the air stripper packing was compromised by the accumulation of mineral precipitates. The pump-and-treat process at Well 1 removed 57.9 pounds of PCE and TCE collectively. Groundwater production from Well 1 resumed without treatment in 2004 with approval from the CDHS and Regional Board. A supplemental remedial measure began in 2001 which included the construction of two new CIM water supply wells (Well 14 and Well 15), located in an area to intercept the toe of the VOC plume, promoting hydraulic control of the VOCs in groundwater beneath the CIM. Wells 14 and 15 operated without treatment, and from January 2003 to December 2008, these two wells removed an additional 13.8 pounds of PCE and TCE collectively.

Remediation requirements at CIM ended in December 2009 with the Regional Board's determination of NFA. CIM water supply Wells 1, 14, and 15 continue to be active production wells.

Monitoring and Reporting Program: The State conducted voluntary monitoring at CIM pursuant to the Regional Board from 1992 to 2007 at 31 monitoring wells and 14 water supply wells. Voluntary monitoring ended in December 17, 2009 with the Regional Board's approval of the 2009 determination of NFA. As part of the NFA the State was required to decommission monitoring wells located onsite in accordance with California Well Standards (DWR Bulletin No. 74-81). It was agreed amongst the consultants, counsel, the State, and the Watermaster to preserve some of the CIM monitoring wells for the Watermaster's groundwater-level monitoring program pursuant to the Optimum Basin Management Program (OBMP). Watermaster and the State agreed to preserve the following 16 wells:

B2B	MW-21S	MW-28S	MW-34S
B4B	MW-24I	MW-28I	P-23S
MW-20I	MW-24S	MW-31I	P-23I
MW-21I	MW-22DR	MW-33S	P-23D

Groundwater-quality monitoring of the CIM potable supply wells continues as part of its water supply operations under the DDW regulations. The State samples the potable supply wells monthly for PCE and TCE and reports to the DDW. Watermaster routinely collects all groundwater-quality data from the DDW's Water Quality Analyses Database[7] for the CIM potable supply wells as part of the OBMP groundwater-quality monitoring program and uses this data to characterize the areal extent and concentration of the PCE plume every two years.

Recent Activity: There is no further regulatory activity associated with the CIM Cleanup Program Site since case closure pursuant to the December 17, 2009 determination of NFA.

---

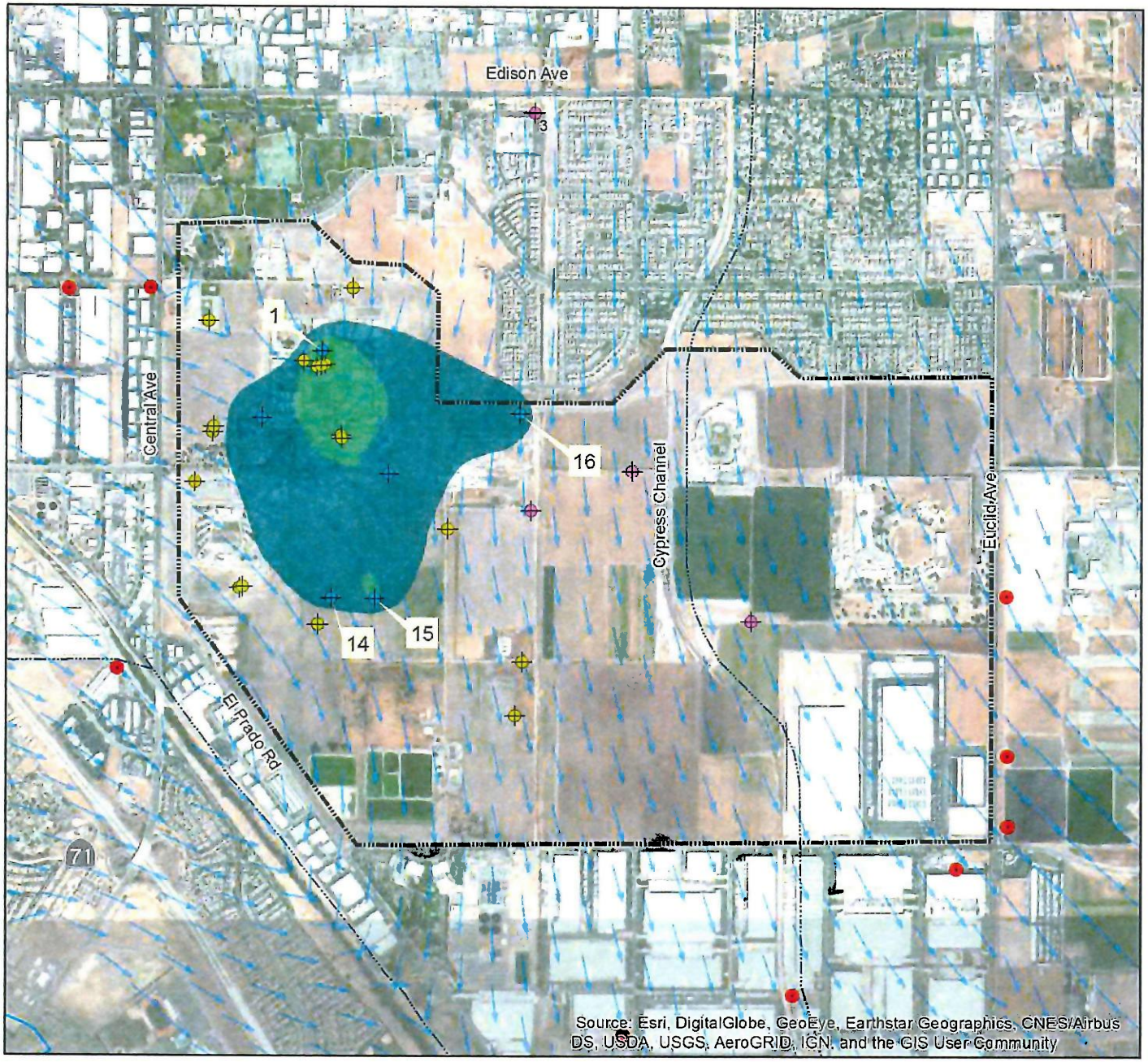
[6] Geomatrix Consultants, Inc. (2005). *PCE Remediation Project Report. California Institution for Men. Prepared for California Department of General Services.* July 2005

[7] https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/EDTlibrary.shtml

The most recent characterization of the plume was completed by Watermaster in the *2016 State of the Basin Report* (Exhibit 1). Since case closure in 2009, the PCE plume has shown no significant change, based on available data. The following table summarizes the five-year maximum PCE concentration (October 2013 to June 2018) for wells within the plume based on monthly DDW sampling:

Maximum Five-Year PCE Concentration in CIM Wells
(October 2013 – June 2018)

Well	Maximum PCE (µgl)
1	15
1A	3.4
11A	1
14	1.25
15	8.5
16	2.2



P105

Maximum PCE Concentration (µgl)
July 2011 to June 2016
(Delineated by Watermaster in the 2016 State of the Basin Report)

- ≤ 5
- > 5 to ≤ 10
- > 10 to ≤ 20

CIM Monitoring Wells Preserved for the Watermaster Groundwater-Level Monitoring Program (some locations have mutliple wells at various depths)

CIM Potable Water Supply Wells*

- Active as of Fiscal Year 2018
- Inactive as of Fiscal Year 2018

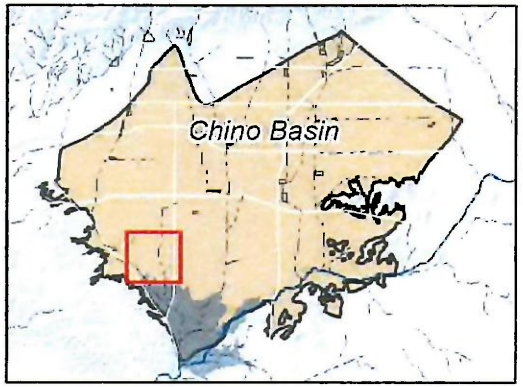
Other Potable Municipal Water Supply Wells

2017 Model-Generated Groundwater Flow Direction (Model Layer 1)

CIM Property Boundary

Streams & Flood Control Channels

* Wells are labeled by well name if mentioned in the report



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: SO
Date: 10/2/2018
Name: 20181002_CIM_PlumeStatus_Ex1

0 0.25 0.5 1 Miles

Plume Status Report

CIM PCE Plume

Exhibit 1

THIS PAGE

HAS

INTENTIONALLY

BEEN LEFT

BLANK

FOR PAGINATION

Status Report
Former Kaiser Steel Mill Plume and CCG Ontario Monitoring and Remediation
October 2018

Contaminants of Concern: From 1983 to 1993 the primary contaminants of concern (COC) for the former Kaiser Steel Mill site were total dissolved solids (TDS) and total organic carbon (TOC). In 2008, additional investigations commenced to identify other COCs. Currently, COCs associated with the site include: hexavalent chromium, carbon tetrachloride, and chloroform. TDS and TOC are no longer considered contaminants of concern.

Location: The former Kaiser Steel Mill site is a 1,200-acre parcel in an unincorporated area of San Bernardino County between the Cities of Fontana and Ontario. The site is bounded by Whittram Avenue to the north, Interstate 10 to the south, and Etiwanda and Cherry Avenues to the west and east, respectively. The last delineation of the Kaiser TDS/TOC plume extent was completed in 2008 by the Chino Basin Watermaster (Watermaster),[1] and at that time, the plume was approximately 7,000 feet wide and extended 18,500 feet southwest from the site. Exhibit 1 shows the location of the site and the extent of the TDS plume in 2008. No plume delineations for the other contaminants of concern have been prepared.

Site History: The Kaiser Steel Corporation operated the Kaiser Steel Mill from 1943 to 1983, and during peak production, the facility was the largest steel producer in the western United States. For the first 30 years, solid and liquid wastes produced from the manufacturing processes were disposed of in waste pits and unlined surface impoundments throughout the site, which allowed for evaporation and percolation. In the early 1970's, the surface impoundments were lined to eliminate percolation to groundwater. In 1987, the Kaiser Steel Corporation filed for bankruptcy and re-organized into Kaiser Resources Inc., which later became Kaiser Ventures Inc.

After the Kaiser Steel Corporation ceased steel operations in 1983, portions of the property were divided and leased or sold to the following corporations:

- Chemwest Industrial Inc., a chemical manufacturing company, leased land in the southwest portion of the property (East Slag Pile Area in Exhibit 1), but no longer operates on-site.
- California Steel Industries (CSI) – Purchased 458 acres to continue operations as a steel rolling mill.
- The Auto Club Speedway (formerly California Speedway) was constructed by the Penske Corporation on 500 acres in the northern corner of the site in 1995.
- CCG Ontario, LLC (CCG),[2] purchased 592 acres along the western and southern portions of the property in 2000 and inherited responsibility for remediation and monitoring of site contamination from Kaiser Ventures Inc.

Regulatory Orders:

- Regional Water Quality Control Board Santa Ana Region (Regional Board) Cleanup and

[1] Wildermuth Environmental, Inc. (2008) *Chino Basin Management Zone 3 Monitoring Program Final Report.* Prepared for Chino Basin Watermaster and Inland Empire Utilities Agency. December 2008.
[2] CCG Ontario is a subsidiary of Prologis a real-estate and supply chain logistics company.

Abatement Order (CAO) No. 87-121 – Required Kaiser Steel Corporation to initiate a Phase IV groundwater investigation and implement a remediation action alternative for groundwater contamination.

- Regional Board CAO No. 91-40 – Required a feasibility study for a salt-offset remediation alternative for groundwater contamination.
- California Department of Health Services (now Department of Toxic Substance Control [DTSC]) Consent Order with Kaiser Resources Inc. (August 1988) – Required Kaiser Resources Inc. to investigate any release of contamination to air, soil, surface water, and groundwater and ensure appropriate remedial measures were taken.
- DTSC Imminent and Substantial Endangerment Determination Consent Order with CCG (August 2000) – Transferred responsibility of investigation and remedial activities associated with the 592 acres purchased by CCG and the Coal Tar Pits Parcel to CCG.

Regulatory and Investigation History: In July 1983, a phased investigation of potential groundwater contamination, resulting from the disposal of high-salinity wastewater to unlined ponds during the early years of operation, was performed at the former Kaiser Steel Mill site. The Phase I and II studies[3] were completed in December 1983 and identified 28 waste sites and four likely point-sources that contributed to TDS and TOC contamination of groundwater beneath the facility. Groundwater samples were collected at existing on-site and off-site wells to determine the preliminary extent of groundwater contamination and to assess groundwater quality downgradient from the site. The Phase III investigation[4], completed in March 1986, resulted in the construction of monitoring wells at six additional locations (five single-point and a quadruple-nested. Based on the data three separate TDS plumes were identified: one on-site extending to a depth of 770 feet below ground surface (ft-bgs), and two that migrated off-site. Additionally, one TOC plume was identified on-site extending to a depth of approximately 100 (ft-bgs). The Phase III investigation determined that the TDS plumes were moving downgradient at a rate of 100 to 300 feet per year with the potential to impact downgradient municipal production wells.

In 1987, the Regional Board issued CAO No. 87-121[5] to the Kaiser Steel Corporation in response to the findings of the phased investigations, which required a Phase IV groundwater investigation to further characterize the plume extents and evaluate remediation strategies, such as groundwater extraction and treatment.

On August 22, 1988 a Consent Order[6] was signed between Kaiser Resources Inc. and the California Department of Health Services, Toxic Substances Division (later known as the DTSC) to assess the

[3] James M. Montgomery and Associates (1983). *Final Report, Kaiser Steel Corporation Groundwater Evaluations*. December 1983.
[4] James M. Montgomery and Associates (1986). *Kaiser Steel Corporation Phase III Groundwater Investigation*. Prepared for Kaiser Steel Corporation. March 1986.
[5] California Regional Water Quality Control Board (1987). Cleanup and Abatement Order No. 87-121 for Kaiser Steel Corporation Fontana, San Bernardino County. August 26, 1987.
[6] Department of Toxic Substances Control Docket No. HAS 87/88-032CO. Consent Order (Health and Safety code sections 205,25355.1(a)(1)) August 22, 1988.

extent of soil and groundwater contamination at the site and prescribe any necessary remedial actions. Two preliminary assessment and site inspection reports were published (August 1988 and January 1989[7]) to identify areas of contamination that required further investigation. A Remedial Investigation and Feasibility Study of the identified areas was completed in 1990. The investigation concluded the following:

- three areas of the former Kaiser Steel Mill site required remediation and further investigation—the tar pits, the by-products plant area, and the east slag pile, and
- two areas required removal of contaminated materials—the cooling tower sludge pit and the furnace dust and mill scale piles. Remediation of the by-products plant area and cooling tower sludge pit began in 1995 prior to the construction of the Auto Club Speedway.

In 1990, Kaiser Resources Inc. initiated plans for a 'salt-offset' as an alternative to groundwater extraction and treatment of the TDS and TOC plumes. In March 1991, the Regional Board rescinded CAO No. 87-121 and issued CAO No. 91-40, which allowed Kaiser Resources Inc. to complete a feasibility study for a salt-offset program. The Draft Phase IV Groundwater Remediation and Feasibility Study[8] was published in 1991 which analyzed a salt-offset alternative and nine other groundwater remediation alternatives. In 1993, CAO No. 91-40 was rescinded when Kaiser Resources Inc. and the Regional Board entered into a settlement agreement (known as the Salt Offset Agreement). Under the Agreement, Kaiser Resources Inc. would contribute financial resources and dedicate its Chino Basin water rights to support the construction and operation of the Chino Basin Desalters in exchange for release from any future liability for TDS and TOC contamination. Kaiser Resources Inc. made a one-time contribution of $1.5 million and 25,000 acre-feet of its water rights established under the Chino Basin Judgement.

Between 1986 and 1994, an interim groundwater-quality monitoring program was implemented to further characterize the extent of the TDS and TOC groundwater contamination. The monitoring program consisted of sampling a network of 30 on-site and off-site monitoring and production wells, including newly constructed monitoring wells (KOSF-1 and MP-2). The maximum TDS and TOC concentrations detected in groundwater samples during this time were 1,600 milligrams per liter (mgl) and 70 mgl, respectively.

In 2000, CCG purchased 592 acres of the former Kaiser Steel Mill site and entered into a Consent Order[9] with the DTSC that transferred responsibility for remediation of site related contamination from Kaiser Ventures Inc. (formerly Kaiser Resources) to CCG. The 2000 Consent Order also

[7] JMM (1989) RCRA Facility Assessment Report. Prepared for Kaiser Steel Resources Inc. January 1989.
[8] Mark J. Wildermuth (1991) Phase IV Groundwater Remediation Feasibility Draft Report. Prepared for Kaiser Steel Resources Inc. November 1991.
[9] Department of Toxic Substances Control Docket No. I&SE -CO 00/01-001 Imminent and Substantial Endangerment Determination and Consent Order (Health and Safety Code Sections 25355.5(a)(1)(B) and (C), 25358.3 (a), 58009 and 58010.) August 10, 2000.

required CCG to perform groundwater investigations and, if necessary, develop remediation alternatives for additional contaminates of concern, other than TDS and TOC.

Remedial Action: As previously noted, remediation activities associated with the TDS and TOC plumes ended with the adoption of the 1993 Salt Offset Agreement. The 2000 Consent Order between the DTSC and CCG divided the site into four 'Operable Units' (OU's) (see Exhibit 1 for OU boundaries) and required continued remediation of each OU. The following describes the Remedial Action Plans (RAP) implemented for each OU:

- **OU-1 - Tar Pits.** DTSC approved the final amended RAP in 2000 which prescribed the construction of a cap over the tar pits parcel.
- **OU-2 – Auto Club Speedway/By-Products Area.** DTSC approved the final RAP on May 2, 1995, which prescribed material removal and the construction of a 12.84-acre cap over the contaminated soil. Prior to the construction of the cap 9,212 tons of sludge waste were excavated and treated via chemical fixation and 21,200 tons were removed completely from the site[10].
- **OU-3 – East Slag Pile Landfill Area.** DTSC approved the final RAP on October 31, 2007, which documented the construction of a four-foot thick monolithic soil cover, landfill gas collection and control system/monitoring probes, surface water drainage system, groundwater monitoring, and long-term operation and maintenance.
- **OU-4 – Chemwest Upper Ponds/Consolidated Waste Cell/Aboveground Storage Tanks/Chrome Ponds and Adjacent Areas (CCAC)**. DTSC approved the final RAP on February 13, 2009, which prescribed the construction of a cap over the CCAC[11], groundwater monitoring, and long-term operation and maintenance.

The above remedial activities specified for OU-1 through OU-4 have been implemented. Long-term monitoring and inspection reports for each OU are published on an annual or semi-annual basis to ensure the completed remedies are operating properly.

In 2008, an additional operable unit (OU-5) (not a geographical area) was established to conceptually describe site-wide groundwater monitoring in accordance with a *Groundwater Remedial Investigation Work Plan*[12] (2008 Work Plan) published the same year. The 2008 Work Plan aimed to address data gaps in assessing groundwater contamination other than TDS and TOC, and to develop a long-term groundwater-quality monitoring program. The resulting Site-Wide Groundwater Monitoring Program was approved by DTSC on November 3, 2008 and commenced with the installation of 32 groundwater monitoring wells at 24 locations over a five-month period in 2009. Eight quarterly groundwater sampling events were performed from 2009 to 2011. Data collected from the sampling

[10] Iris Environmental. (2014) *Third Five-Year Review Report Auto Club Speedway Operable Unit No. 2, By-Products Area Former Kaiser Steel Mill Facility San Bernardino County, California. Prepared for CCG-Ontario LLC.* June 2014
[11] Shaw Environmental (2009). *Final Remedial Action Plan OU-4.* January 2009.
[12] Shaw Environmental Inc. (2008). *Groundwater Remedial Investigation Work Plan; Former Kaiser Steel Mill. Prepared for CCG Ontario LLC.* October 2008

effort were used to perform a health risk assessment of off-site groundwater by comparing measured constituent concentrations with EPA regional screening levels (RSL's). Hexavalent chromium, carbon tetrachloride, and chloroform were detected at concentrations above the risk-based screening concentrations and were therefore determined to be site-wide constituents of concern that warranted continued monitoring.

On September 1, 2016, CCG completed the *Final Groundwater Remedial Investigation Report/Feasibility Study and Remedial Action Plan*[13] (Final RI/FS/RAP) which included the results of the Site-Wide Groundwater Monitoring Program. The selected RAP for OU-5 was continued groundwater monitoring and was approved by the DTSC on September 13, 2016. The site-wide groundwater monitoring will include annual sampling of 20 monitoring wells (11 well sites), and annual reporting to the DTSC.

Monitoring and Reporting: Current groundwater monitoring efforts are performed pursuant to the Operations and Maintenance plans for OU-2, OU-3, and OU-4. Initial groundwater monitoring for OU-5 ceased in 2011 following completion of the eight consecutive sampling events prescribed in the 2008 Work Plan. Continued groundwater monitoring and reporting on an annual basis for OU-5 was proposed in the *Sitewide Water Quality Sampling and Analysis Plan* included as Appendix M of the Final RI/FS/RAP but does not appear to have been implemented to date.

Exhibit 1 shows the location of the 24 well sites currently and historically monitored for OU's 1 through 5. The table below summarizes the number of wells, sampling frequency, and duration of sampling for each monitored OU.

Operable Unit	# of Wells	Sampling Frequency (Duration)
OU-2	5	Quarterly (1995-2015); Semi-Annual (2015-present)
OU-3	9	Quarterly (2011-2015); Semi-Annual (2015-present)
OU-4	11	Quarterly (2011-present)
OU-5 (work plan)	34	Quarterly (2009-2011)
OU-5 (final RAP)	20	Annually (pending)

Groundwater monitoring reports for OU-2, OU-3, and OU-4 are published on a quarterly or semi-annual basis. Site-Wide Five-Year Reports are prepared and submitted to the DTSC to determine if the implemented remedial actions remain protective of human health and the environment.

[13] Iris Environmental Inc. (2016). *Final Groundwater Remedial Investigation Report/Feasibility Study and Remedial Action Plan. Prepared for CCG Ontario, LLC.* September 2016

Currently, Watermaster samples eleven monitoring wells annually at four down-gradient locations (Exhibit 1) for the Key Well Groundwater Quality Monitoring Program (KWGWQMP) and provides monitoring results to CCG upon request.

Recent Activity: The most recent groundwater monitoring reports published for OU-2, OU-3, and OU-4 are summarized below:

- **OU-2** – The *Second Semi-Annual 2017 Groundwater Monitoring Report for OU-2*[14] was completed February 15, 2018 and describes results from sampling that occurred on August 16 and 21, 2017. Nitrate (up to 44 mg]) and sulfate (up to 550 mgl) were detected at concentrations above their respective Maximum Contaminant Levels (MCLs) of 10 mgl and 250 mgl. Hexavalent chromium (up to 6.0 micrograms per liter [µgl]), lead (up to 4.9 µgl), and arsenic (up to 1.5 µgl) were detected at concentrations above their respective Public Health Goals (PHG) of 0.02 µgl, 0.2 µgl, and 0.004 µgl.
- **OU-3** – The revised *Second Semi-Annual 2017 Groundwater Monitoring Report for OU-3*[15] was completed June 18, 2018 and describes results from sampling that occurred from August 16 through 23, 2017. Hexavalent chromium was detected at concentrations up to 8.0 µgl but did not exceed the MCL.
- **OU-4** – The revised *Fourth Quarter 2017 Groundwater Monitoring Report for OU-4*[16] was completed June 15, 2018 and describes results from sampling that occurred from November 15 through 21, 2017. Nitrate (up to 17 mgl), sulfate (up to 310 mgl), carbon tetrachloride (up to 1.4 µgl), total chromium (up to 73 µgl), and hexavalent chromium (up to 76 µgl) were detected at concentrations above their respective MCL's of 10 mgl, 250 mgl, 0.5 µgl, 50 µgl, and10 µgl[17].

A *Site-Wide Five-Year Review Report*[18] was submitted to the DTSC on April 1, 2016. The report concluded that the remedial actions for all OUs are functioning as intended. The next Site-Wide Five-Year Report is scheduled to be published in 2021.

Watermaster performed their most recent annual sampling event at the eleven Kaiser and MZ3 monitoring wells for the KWGWQMP during September 2018 (analytical results are pending). Over the last five years (2012-2017) data from these wells have shown MCL exceedances for the following constituents: nitrate as nitrogen, sulfate, arsenic, and hexavalent chromium[17], with maximum

[14] RPS Iris Environmental (2018). *Second Semi-Annual 2017 Groundwater Monitoring Report Operable Unit No. 2 By-Products Area (Auto Club Speedway).* Prepared for CCG Ontario LLC. February 2018.

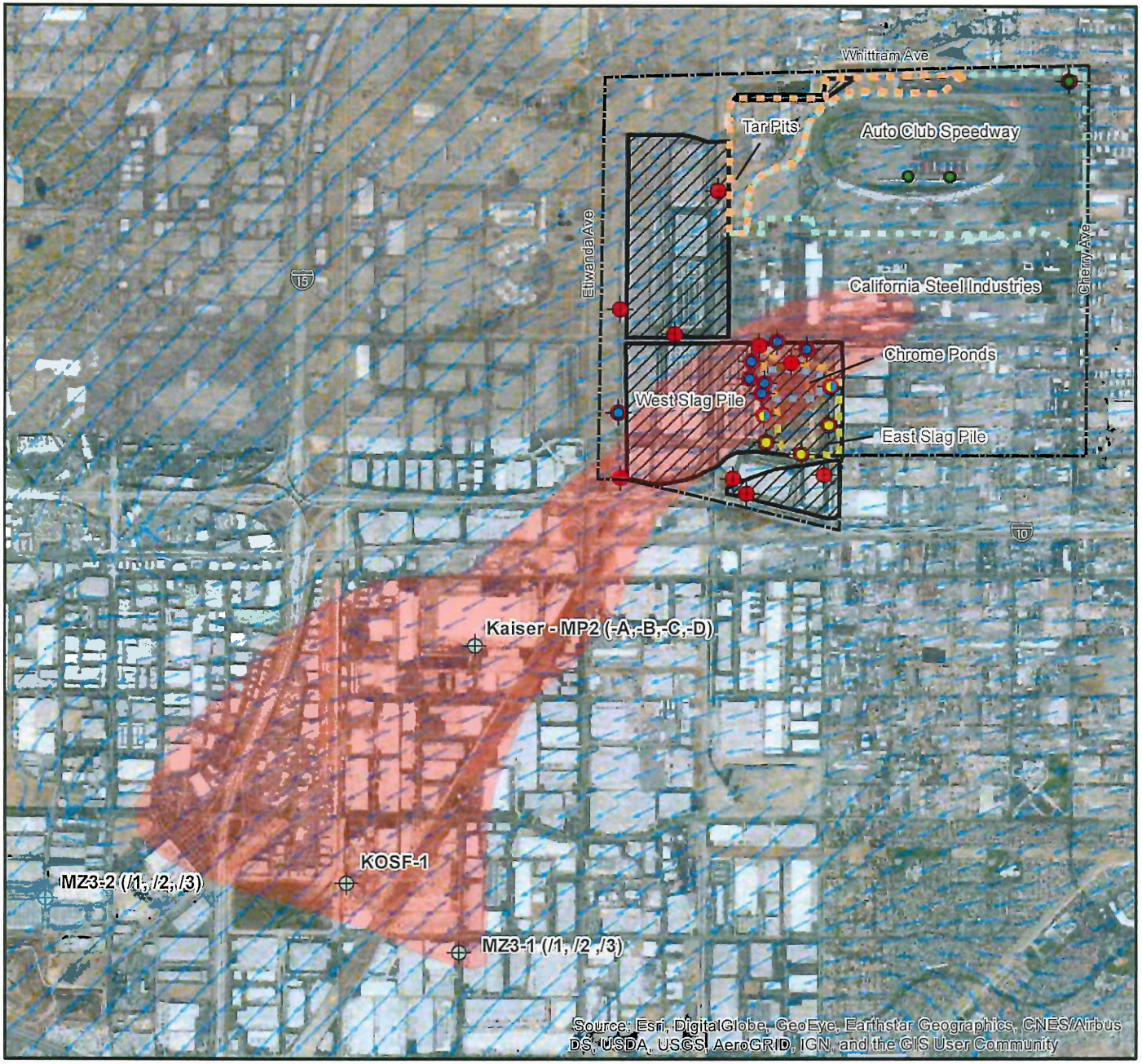
[15] RPS Iris Environmental (2018). *Groundwater Monitoring Report Third Quarter 2017 Chemwest Upper Ponds/ Consolidated Waste Cell, Aboveground Storage Tanks, Chrome Ponds and Adjacent Areas (CCAC) and Second Semi-Annual 2017 East Slag-Pile Landfill Area (ESPLA). Prepared for CCG Ontario, LLC.* June 2018.

[16] RPS Iris Environmental (2018). *Groundwater Monitoring Report Fourth Quarter 2017 Chemwest Upper Ponds/ Consolidated Waste Cell, Aboveground Storage Tanks, Chrome Ponds and Adjacent Areas (CCAC) and CCAC Annual Report. Prepared for CCG Ontario, LLC.* June 2018.

[17] As of September 11, 2017 the MCL for hexavalent chromium that was established in 2014 is no longer in effect; the Superior Court of Sacramento County issued a judgement invalidating the MCL and ordering State Water Resources Control Board (State Board) to overturn the MCL. As of September 11, 2017 there is no MCL for hexavalent chromium but the State Board does plan on establishing a new MCL in the near future.

[18] RPS Iris Environmental (2016). *Final Site-Wide Five-Year Review Report.* Prepared for CCG Ontario LLC. April 2016.

concentrations of 12 mgl (well MZ3-1/1), 270 mgl (well MP2-B), 18 µgl (well MZ3-2/2), and 17 µgl (well MP2-A) respectively. Other constituents in exceedance of MCLs in at least one of the wells over the last five years include: chromium, 1,2,3-trichloropropane, trihalomethanes, perchlorate, 1,1-dichloroethene, 1,2-dichloroethane, and trichloroethene (TCE).



Original Property Extent of Kaiser Steel Mill

Property Extent Purchased by CCG Ontario From Kaiser Ventures Inc. in 2000 (592 acres)

Operable Unit (OU) Boundaries

- OU-1
- OU-2
- OU-3
- OU-4

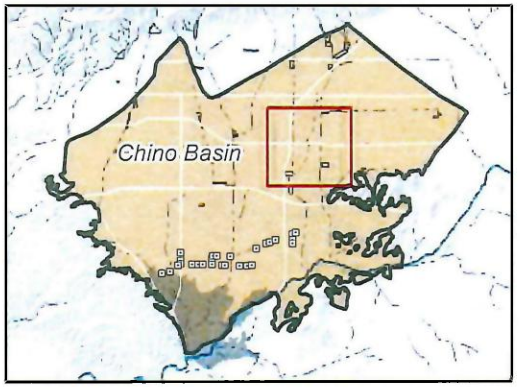
CCG Site Monitoring Wells (some locations have multiple wells at various depths)

- OU-2
- OU-3
- OU-3 and OU-4
- OU-4
- OU-5

Monitoring Wells Sampled Annually by Watermaster for the KWGWMP (some locations have wells at various depths)

Extent of the Kaiser TDS plume in 2008 as Delineated by Watermaster

2017 Model-Generated Groundwater Flow Direction (Model Layer 1)



Prepared by:

WEI
Wildermuth Environmental, Inc

Author: RT
Date: 10/1/2018
Name: 20180926_KaiserPlumeStatus

0 0.25 0.5 1 Miles

Plume Status Report

Former Kaiser Steel/ CCG Ontario Contaminant Site

Exhibit 1

Contaminant: The primary contaminant is trichloroethene (TCE). The maximum contaminant level (MCL) for TCE is 5 micrograms per liter (µgl). The maximum TCE concentration detected in groundwater samples collected from wells within the plume area during the last five years (July 2013 to June 2018) is 16 µgl (measured at well M-08B in October 2013). The highest concentration of TCE ever measured on site is 178 µgl (measured at well M-2B in April 1997). Other contaminants of concern include the following volatile organic compounds (VOCs): tetrachloroethene (PCE), dichlorodifluoromethane, trichlorofluoromethane, 1,1-dichloroethane, and cis-1,2-dichloroethene.

Location: The Milliken Sanitary Landfill (MSL) is located in the City of Ontario along the northwest intersection of Milliken Avenue and Mission Boulevard. The MSL occupies an area of approximately 196 acres about one mile west of Interstate 15 and 1.2 miles southeast of Ontario International Airport. The MSL is owned and managed by the County of San Bernardino Solid Waste Management Division (County). The MSL TCE plume extends downgradient in a southwestern direction from the MSL site. As delineated by the Chino Basin Watermaster (Watermaster) in the *2016 State of the Basin Report*,[1] the extent of the plume with detectable TCE concentrations greater than 0.5 µgl is about 2,500 feet at its widest point and 1,500 feet long. Exhibit 1 compares the location and extent of the TCE plume delineated by Watermaster (WEI, 2017) and by the County in its most recent (2015) delineation of the plume for total VOCs.[2]

Site History: The MSL was operated as a Class III Municipal Solid Waste Management Unit accepting non-hazardous waste from 1958 to March 1999. Since its closure, the County maintains the MSL drainage and erosion control systems to ensure, to the greatest extent possible, that ponding, infiltration, inundation, erosion, slope failure, and washout are prevented during peak storm flows. The drainage control facilities consist of a network of earthen berms, benches, asphalt down drains and V-channels, concrete channels, reinforced concrete pipes, and sedimentation basins.

As of 2017, the County leases a portion of the MSL property to PVN Milliken, LLC for a photovoltaic solar facility. The three-megawatt power generating solar facility consist of about 14.5 acres of solar panels located on the top and intermediate decks of the closed landfill. The footprint of the facility is shown on Exhibit 1.

Regional Water Quality Control Board, Santa Ana Region (Regional Board) Regulatory Orders:

- Waste Discharge Requirements (WDR) and Monitoring and Reporting Program (M&RP) Order No. 81-3 and subsequent WDRs and M&RPs Order Nos. 93-57, 94-17, 96-40, 98-89, and R8-2015-0040 (current). Requirements for the design, construction, and maintenance of run-on runoff drainage control systems at the landfill and the supportive monitoring and

[1] Wildermuth Environmental Inc. (2017). *Chino Basin Optimum Basin Management Program, 2016 State of the Basin Report. Prepared for Chino Basin Watermaster.* June 2017.

[2] Geo-Logic Associates. (2015). *County of San Bernardino Workplan: Investigation of Off-Site Impacts to Groundwater at the Milliken Sanitary Landfill.* Prepared for County of San Bernardino Solid Waste Management Division. July 2015.

reporting requirements. Orders Nos. 93-57, 94-17, 96-4, and 98-99 are combined WRDs and M&RPs for all landfills in the Santa Ana Region.

- Cleanup and Abetment (CAO) Order No. 91-92. Required the MSL to correct drainage and erosion control deficiencies that existed on the landfill property.
- Cease and Desist Order No. 96-41. Required the MSL to submit a workplan with a schedule for the design and construction of a permanent and effective drainage and erosion control system and implemention of said workplan.
- WDRs R8-2002-0033, R8-2002-0085, R8-2013-0020 (current). General WDRs for the re-injection/percolation of extracted and treated groundwater within the Santa Ana Region.

Regulatory and Monitoring History: On February 26, 1981, the Regional Board adopted WDR No. 81-3 for the discharge of municipal solid wastes to land at the MSL. The WDR addressed the placement, monitoring, and reporting of waste at the landfill; however, it did not require groundwater monitoring. In 1987, groundwater monitoring began with the installation of five monitoring wells as part of the Solid Waste Assessment Test (SWAT) investigation[3] at the MSL. Results from the initial monitoring indicated that there were multiple contaminants at concentrations significantly above background levels in the groundwater underlying and adjacent to the facility. The contaminants included multiple VOCs: dichlorodifluoromethane, 1,1-dichloroethene, PCE, and TCE. In 1989, the Regional Board requested that the County investigate the nature and extent of the VOC contamination. As a result, the County completed the Phase I Evaluation Monitoring Program (EMP)[4,5] in 1994, which included the installation of ten additional monitoring wells; eight wells were installed downgradient from the facility, and two wells were installed upgradient. Elevated concentrations of TCE and PCE were detected in the new monitoring wells.

On June 24, 1991, the Regional Board issued CAO No. 91-92 to the County and other landfill operators in the region. The order required the correction of the drainage and erosion control deficiencies on the landfill property that could potentially cause the discharge of pollutants to groundwater. In 1994, the CAO was rescinded when the landfills achieved compliance, and concurrently, Order No. 94-17 was adopted to amend the WRDs for all landfills in the Santa Ana Region and combine them under one WRD and M&RP. In 1996, the Regional Board issued Cease and Desist Order No. 96-41[6] for the MSL for failure to maintain the drainage and erosion control systems. In October 1999, the Regional Board approved the *Final Closure and Post Closure Maintenance Plan*[7] for the MSL. The MSL began its multiphase closure process while still accepting waste. Phase one, termed the "East Mound Closure," was completed in March 1997, and was a pilot project to aid

[3] IT Corporation. (1989). *Final Report Solid Waste Assessment Test Milliken Sanitary Landfill, Project No. 240275*. Prepared for County of San Bernardino Environmental Public Works Agency Solid Waste Management Department. June 1898.
[4] Converse Consultants Inland Empire. (1994). *Groundwater Contamination Evaluation, Milliken Sanitary Landfill.*
[5] Dames & Moore. (1995). *Report, Phase I of Workplan Investigation of Groundwater Contamination Plume, Milliken Sanitary Landfill, Ontario California.* Prepared for of San Bernardino Solid Waste Management Division. September 1995.
[6] Regional Board. (1996). *Tentative Cease and Desist Order No. 96-41, for Violations of WDRs (Order No. 81-3, as Amended by Order No. 93-57, Order No. 94-17, and Order No. 96-40) at the Milliken Sanitary Landfill, San Bernardino County.* April 5, 1996.
[7] Project Navigator, Ltd. (1999). *Final Postclosure Maintenance Plan, Milliken Sanitary Landfill.* Prepared for the County of San Bernardino, Solid Waste System Division. September 1999.

in the design of a soil cover for the rest of the landfill to prevent further contamination. Phase two, termed the "North and East Slope Closure," was completed in 1997 and included the construction of a six-foot thick monolithic cover over 45 acres of the landfill. The final phase of the landfill closure was completed in March of 2005 when the remaining 72 acres of the landfill were covered with a four-foot monolithic cover.

In response to the findings from the Phase I Evaluation Monitoring Program, 14 additional monitoring wells were constructed from 1994 to 1997 to further investigate the extent of contamination from the MSL. Under the direction of the Regional Board, the County completed a Phase II Evaluation Monitoring Program[8] and an Engineering Feasibility Study[9] in 1998. Groundwater flow modeling[10] was also performed to support the selection of an appropriate remediation strategy. The Regional Board approved a remediation alternative that included (1) a pump and treat system for onsite contaminated groundwater and (2) monitored natural attenuation for offsite contaminated groundwater. Construction of the pump and treat system was completed on March 4, 1999 and consisted of 13 groundwater extraction wells located at the downgradient edge of the MSL site. Offsite monitoring for natural attenuation began at four offsite wells in 1998.

Beginning in 2000, groundwater-levels declined monotonically in the vicinity of the MSL, and by 2007, the groundwater-level dropped below the total depths of all 13 of the onsite extraction wells and five of the offsite monitoring wells. In response, the Regional Board requested that the County complete an updated feasibility study to update the evaluation of the effectiveness of the remediation strategy and the extent of the contaminant plume. In March 2013, the County finalized the *Updated Engineering Feasibility Study*[11] for the MSL (2013 Feasibility Study). The 2013 Feasibility Study evaluated several potential alternative treatments to mitigate the plume. The County concluded that monitored natural attenuation was the appropriate remediation alternative. This revised remediation alternative was approved by the Regional Board on May 15, 2013.

In 2015, the County submitted a work plan[12] to investigate the offsite impacts to groundwater near the landfill, which addressed the following requests from the Regional Board: collect gas samples to evaluate human health risks for commercial developments south of the landfill, update the 1998 groundwater flow model to incorporate current data and the fact that the groundwater pump-and-treat system is not in use, evaluate the need for additional corrective actions, and install additional downgradient monitoring wells. The County proposed (1) to model the plume using the computer

[8] Geo-Logic Associates. (1998). *Phase II Evaluation Monitoring Report, Milliken Sanitary Landfill.* Prepared for the County of San Bernardino, Solid Waste System Division. May 1998.
[9] Geo-Logic Associates. (1998). *Engineering Feasibility Study, Milliken Sanitary Landfill.* Prepared for the County of San Bernardino, Solid Waste System Division. May 1998.
[10] Geo-Logic Associates. (1999). Groundwater Flow Model, Milliken Sanitary Landfill. Prepared for the County of San Bernardino, Solid Waste System Division. February 1999.
[11] Geo-Logic Associates. (2013). *Updated Engineering Feasibility Study for Corrective Action. Milliken Sanitary Landfill County of San Bernardino, California.* Prepared for the County of San Bernardino, Solid Waste System Division. March 2013.
[12] Geo-Logic Associates. (2015). *County of San Bernardino Workplan: Investigation of Off-Site Impacts to Groundwater at the Milliken Sanitary Landfill.*

software BIOCHLOR[13] and (2) to increase the frequency of soil-gas monitoring from quarterly to four times per quarter to evaluate the feasibility of expanding the landfill gas collection system and converting the dry groundwater extraction wells to soil-vapor-extraction wells.

The County and PVN Milliken, LLC. submitted a revised *Final Postclosure Maintenance Plan*[14] in November 2016 and a land use plan[15] in December 2016 to modify the MSL's end use plan to include the solar plant on the landfill surface. The Regional Board approved the plans in January 2017.[16] The revised post-closure maintenance plan provides a basis for plan inspection, maintenance, and monitoring of the MSL during the post closure maintenance period. The revised land use plan describes PVN Milliken's modification to the landfill, and its responsibility to maintain and monitor the land in a way that does not impact water quality.

Remedial Action Plan: As previously noted, the original remedial action plan that consisted of pump and treat and monitored natural attenuation had to be revised due to declining water levels. All 13 onsite extraction wells and five of the eight offsite monitoring wells dried up as groundwater elevations declined below well depths. This also caused the pump and treat system to halt operations beginning in 2007. The 2013 Feasibility Study identified monitored natural attenuation as the preferred remedial alternative and included certain 'trigger points' that would require additional mitigation measures to be initiated. Action is triggered:

1) when the total VOC concentration[17] in samples from downgradient monitoring well M-8B exceeds the 1998 model-predicted VOC concentrations for two consecutive quarters, or

2) when a "statistically significant" increasing VOC concentration trend is identified over a one-year period after the landfill gas improvements have been implemented.

The trigger points were approved by the Regional Board in 2013.[18] If additional remedial action is deemed necessary based on these trigger points, the most appropriate and cost-effective remediation measure will be evaluated at the time.

The 2013 Feasibility Study specified that if VOC concentrations increase to one-half of the 1998 model-predicted VOC concentrations in wells at the center of the plume, an additional off-site

[13] Fate-and-transport natural attenuation modeling developed by the United States Environmental Protection Agency
[14] Project Navigator, Ltd. (2016). *Final Postclosure Maintenance Plan Milliken Sanitary Landfill 36-AA-0054 Ontario, California.* Prepared for the County of San Bernardino Department of Public Works – Solid Waste Management Division. on behalf of PVN Milliken, LLC. September 10, 1999. Revised June 2004. Revised 2014. Revised November 2016.
[15] Project Navigator, Ltd. (2016*). Land Use Plan for the Milliken Sanitary Landfill 36-AA-0054 Ontario, California, County of San Bernardino.* Prepared on behalf of PVN Milliken, LLC for the County of San Bernardino Department of Public Works – Solid Waste Management Division. December 2016.
[16] Santa Ana Regional Water Quality Control Board (2017). *Approval of the Revised Final Post Closure Maintenance Plan and Land Use Plan for Milliken Landfill, Ontario, San Bernardino County.* January 19, 2017.
[17] Total VOC load equals the sum of all detected VOC concentrations in a given sample [µgl].
[18] Santa Ana Regional Water Quality Control Board. (2013). *Identification of Triggers for Additional Corrective Action System for the Milliken Landfill, San Bernardino County.* Letter dated May 15, 2013.

monitoring well would be necessary near well M-19 to monitor the attenuation of the plume in the lower aquifer as it moves away from the site.

Monitoring and Reporting: The County conducts groundwater, surface water, and soil monitoring at the MSL pursuant to a Corrective Action Program to address impacts to groundwater. The monitoring program consists of 26 groundwater monitoring wells, two piezometers, five soil-pore gas monitoring probes, three surface water monitoring stations, and one landfill gas condensate station. All monitoring wells that are not dry are sampled quarterly for groundwater quality and measured for groundwater levels. Surface-water quality sampling at three stations is conducted semi-annually in the first and third quarters. Soil-gas screening is performed quarterly, and landfill gas condensate sampling is conducted annually in the fourth quarter.

The groundwater data collected during the quarterly sampling events is statistically analyzed to identify increasing or decreasing trends of VOCs and other constituents of concern.

The quarterly groundwater monitoring data are also used to assess natural attenuation of the off-site extent of the plume. Monitoring well M-8B was used to calibrate the model and to determine the trigger point concentrations that would necessitate further corrective actions. Exhibit 1 shows the location of well M-8B. The model-predicted VOC concentrations over time are shown in the following table:

Trigger Points for Additional Corrective Action Measures (µgL)					
Year	Total VOC Load at M-8B*	Year	Total VOC Load at M-8B*	Year	Total VOC Load at M-8B*
2013	120	2027	123	2041	50
2014	123	2028	117	2042	45
2015	125	2029	112	2043	40
2016	128	2030	106	2044	35
2017	130	2031	101	2045	30
2018	130	2032	96	2046	25
2019	129	2033	90	2047	20
2020	128	2034	85	2048	18
2021	127	2035	80	2049	16
2022	126	2036	75	2050	14
2023	125	2037	70	2051	13
2024	124	2038	65	2052	12
2025	124	2039	60	2053	11
2026	123	2040	55	2054	10

*Total VOC load equals the sum of all detected VOC concentrations in a given sample [ugl].

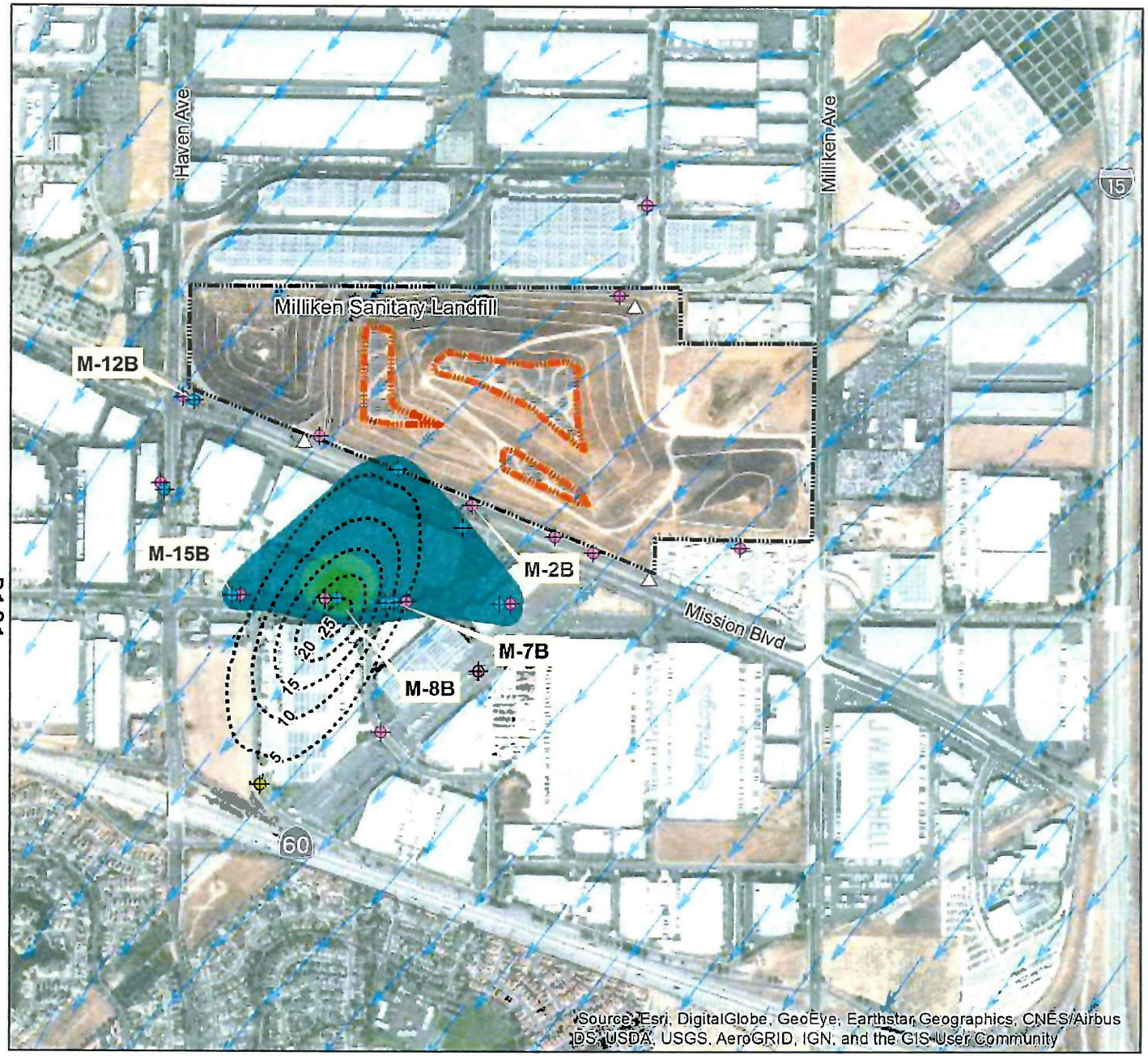
Recent Activity:

The County's most recent monitoring event occurred in April 2018. The results of the monitoring event were reported in the second quarter of 2018 monitoring report submitted to the Regional Board in July 2018.[19] During the 2018 second quarter sampling event groundwater-levels were measured at nine wells, and groundwater-quality samples were collected at eight wells. Fifteen monitoring wells, one piezometer, and all three surface water monitoring stations were dry. There was no methane detected in the soil-pore gas samples. The following summarizes the main results from the monitoring event:

- The TCE concentrations in all active monitoring wells have remained below the MCL as of April 2018 with the exception of M-8B, which exceeded the MCL with a concentration of 9.9 µgl on April 10, 2018.
- The total VOC concentration at well M-8B was 22 µgl, which is below the trigger threshold of 130 µgl. Thus, no additional correction action has been triggered.
- There were no significant changes in groundwater chemistry beneath the MSL, compared to the previous monitoring event, but there were three higher than historical maximum concentrations: nitrate as nitrogen at M-7B (24 milligrams per liter [mgl]), nitrate as nitrogen at M-15B (5 mgl respectively), and chloroform at well M-12B (0.51 µgl).
- No additional corrective actions have been triggered and monitoring for natural attenuation will continue under the existing approved protocols.

On March 9, 2018, the County submitted the *Evaluation of Off-Site Impacts to the Groundwater at the MSL*[20] to the Regional Board pursuant to the 2015 workplan. The report included an update of the 1998 groundwater-flow model to incorporate the non-operating groundwater pump-and-treat system and current monitoring data, and a summary of the soil-pore gas sampling at the dry extraction wells for the pump-and-treat system. Based on the results of the modeling and monitoring, the County proposes: 1) the installation of a new downgradient monitoring well (see Exhibit 1), and 2) a focused soil-gas investigation to determine whether soil gas mitigation is necessary. The Regional Board accepted the proposed actions on March 29, 2018.[21]

[19] Geo-Logic. (2018). *County of San Bernardino Water Quality Monitoring Report, Second Quarter 2018 Monitoring Period, Milliken Sanitary Landfill.* Submitted by County of San Bernardino Solid Waste Management Division, July 2018.
[20] Geo-Logic. (2018). *Evaluation of Off-Site Impacts to Groundwater at the Milliken Sanitary Landfill County of San Bernardino, California.* Prepared for County of San Bernardino Solid Waste Management Division. March 2018.
[21] Regional Board (2018). *Evaluation of Off-Site Impacts to Groundwater at the Milliken Sanitary Landfill, San Bernardino County Global ID:L1000745844.* March 29, 2018. Letter from Keith Person on behalf of Cindy Li.



Maximum TCE Concentration (µg/l)
July 2011 to June 2016
(Delineated by Watermaster in the 2016 State of the Basin Report)

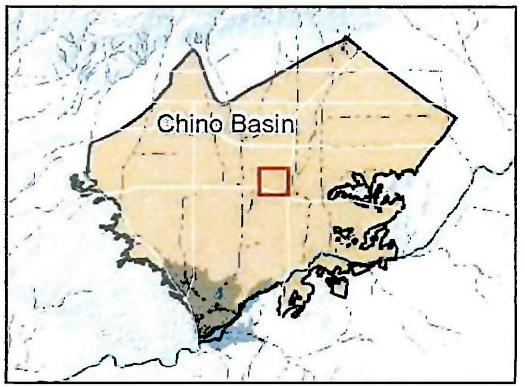
- ≤ 5
- > 5 to ≤ 10
- > 10 to ≤ 20
- > 20 to ≤ 50

Contours of Total VOCs Concentrations (µgl) as delineated by the County in 2015

County of San Bernardino Monitoring Wells

- Sampled in 2018*
- Dry in 2018*
- Proposed New Well Location
- Surface Water Monitoring Station (Dry)
- Extent of Solar Facility - Installed in 2017
- 2017 Model-Generated Groundwater Flow Direction (Model Layer 1)
- Milliken Sanitary Landfill Property Boundary

* Wells are labeled by well name if mentioned in the report



P121

Prepared by:

WEI
Wildermuth Environmental, Inc

Author: SO
Date: 10/4/2018
Name: 20181002_MillikenPlume_Status_Ex1

0 0.125 0.25 0.5 Miles

Plume Status Report

Milliken Sanitary Landfill TCE Plume

Exhibit 1

THIS PAGE

HAS

INTENTIONALLY

BEEN LEFT

BLANK

FOR PAGINATION

Annual Status Report
Stringfellow Contaminant Plume
October 2018

Contaminants: The primary contaminants at the Stringfellow site are perchlorate, trichloroethene (TCE), and chloroform. The maximum contaminant level (MCL) for perchlorate and TCE are 6 micrograms per liter (µgl), and 5 µgl, respectively. Chloroform does not have a MCL but is assessed to a cleanup level[1] of 6 µgl for the Stringfellow site. The maximum concentrations detected in groundwater samples collected from site wells over the five-year period from July 2013 to June 2018 for perchlorate, TCE, and chloroform and are shown in the table below. The data are reported in two general groups: 1) an aggregate of wells in Zones 1-3 (i.e. zones within Pyrite Canyon) and 2) wells within Zone 4 (i.e. downgradient of Pyrite Canyon).

Contaminant	MCL or Cleanup Level (µgl)	Maximum Concentration 2013-2018 (µgl)
Zones 1-3		
Perchlorate	6	14,000
TCE	5	330,000
chloroform	6	11,000
Zone 4		
Perchlorate	6	1,600
TCE	5	22
chloroform	6	21

Other contaminates at the site include, other volatile organic compounds (VOCs), semi-volatile organic compounds (SOCs), pesticides, para-chlorobenzenesulfonic acid, n-nitrosodimethylamine, and selected heavy metals. Additionally, the groundwater under the former evaporation ponds has a pH of <4.

Location: The former Stringfellow Landfill site is located within the eastern portion of the Chino Basin in Pyrite Canyon about one mile north of the community of Glen Avon in the Jurupa Valley. Pyrite Canyon overlies Holocene and Pleistocene unconsolidated alluvium and alluvial fan deposits, and bound by the granodiorite and metasedimentary units of the Jurupa Mountains.[2] The site is geographically divided into four groundwater zones in consideration of various operational and remediation activities. These zones include:

- *Zone 1.* On-site/Upper Mid-Canyon Area. Includes the original 17-acre disposal facility in the northern most part of Pyrite Canyon upgradient of a clay barrier (Zone 1A) and an area extending 600 feet south of the clay barrier (Zone 1B). The clay barrier was constructed in 1980 downgradient of the evaporation ponds to mitigate migration of subsurface liquids.

[1] Cleanup levels were established for TCE (5 µgl and equal to the MCL) and chloroform (6 µgl) in the Interim Records of Decision 4 by the United State Environmental Protection Agency

[2] Dibblee, T.W., and Minch, J.A. (2004). *Geologic map of the Riverside West/south 1/2 of Fontana quadrangles, San Bernardino and Riverside County, California*: Dibblee Geological Foundation, Dibblee Foundation Map DF-128, scale 1:24,000

- *Zone 2.* Mid-Canyon Area. Includes the middle portion of the Pyrite Canyon. Contains a line of extraction wells and the Pretreatment Plant
- *Zone 3.* Lower Canyon Area. Extends southward from just south of the mid-canyon extraction wells to just north of Highway 60. Includes the Lower Canyon Treatment Facility
- *Zone 4. A* Residential community and light industrial area in the City of Jurupa Valley, extending from Highway 60 to immediately north of the Santa Ana River (approximately 22,000 to 24,500 feet southwest of the former disposal facility in Zone 1A). Includes the Community Well Head Treatment System

The general extent of plumes originating from the Stringfellow site with detectable concentrations of perchlorate, TCE, and chloroform greater than their MCLs or cleanup levels are shown in Exhibit 1. These delineations are based on the 2016 *Annual Groundwater Monitoring and Remedy Effectiveness Evaluation Report*[3]. The TCE and chloroform plumes are significantly less extensive than the perchlorate plume and have the following approximate extents:

- The perchlorate plume ≥ 6 µgl extends from Zone 1 approximately 24,000 feet to the south/southwest to Zone 4. The perchlorate plume varies in width between approximately 250 and 3,200 feet. Two smaller perchlorate plumes are also shown on Exhibit 1. The first is approximately 1,400 feet long and 200 feet wide and is located near the midpoint and slightly east of the main plume. The second is located slightly west of the distal end of the main plume and is approximately 3,900 feet long and 1,000 feet wide.
- The TCE plume ≥ 5 µgl is approximately 3,100 feet long and 300 feet wide and extends from Zone 1 to the midpoint of Zone 3 near the Lower Canyon Treatment Facility. A smaller (approximately 1,000 feet by 250 feet) disconnected TCE plume is approximately 3,400 feet further downgradient in Zone 4.
- The chloroform plume ≥ 6 µgl is approximately 2,000 feet long and 300 feet wide and is primarily restricted to Zones 1 and 2.

Site History: Stringfellow Quarry Company Inc. operated the site as a 'Class I' hazardous waste disposal facility from 1956 to 1972 pursuant to the issuance of a land use variance by the Riverside County Planning Commission in 1952. During this time, approximately 34 million gallons of industrial liquid waste—derived primarily from electroplating, metal finishing, pesticide production, and aerospace propulsion industries—were deposited in unlined evaporation ponds, occupying 17 acres

[3] Kleinfelder. (2017). *2016 Annual Groundwater Monitoring and Remedy Effectiveness Evaluation Report Stringfellow Superfund Site. Prepared for California Environmental Protection Agency.* November 2017.

of the site[4] (located within *Zone 1a* on Exhibit 1). In addition to evaporation ponds, liquid wastes were sprayed into the air to expedite evaporative processes.

In 1975, following cessation of operations at the Stringfellow site, the California Regional Water Quality Control Board, Santa Ana Region initiated response actions and site investigation studies. Since that time, over 45 phases of investigation, feasibility testing, and remedial actions have been performed by various entities at the site. A record of these activities and associated reports can be found on the Department of Toxic Substances Control (DTSC) Envirostor website (https://www.envirostor.dtsc.ca.gov/public/).

Key Regulatory Decisions and Orders: In October 1981, the Stringfellow site was placed on the United States Environmental Protection Agency (USEPA) Interim Priorities List of Hazardous Waste Sites. An Initial Record of Decision (ROD 1) was published by USEPA on July 22, 1983. On September 8, 1983, the Stringfellow site was placed on the USEPA's final National Priorities List (NPL) as a Superfund site. Three additional RODs were published in 1984, 1987, and 1990. The following is a summary of the four RODs and major remedial actions or objectives set forth therein.

ROD 1 (USEPA 1983).[5] The remedial activities assigned to the DTSC for oversight included: fencing of the site, erosion control, hauling and disposal of hazardous material, continued offsite groundwater mitigation, and completion of a Remedial Investigation/Feasibility Study (RIFS). In conjunction with the DTSC-led activities, the EPA assumed oversight of the following Superfund management activities: i) preliminary groundwater sampling, ii) installation of new monitoring wells, and iii) the creation of a Fast Track RIFS.

ROD 2 (USEPA 1984).[6] The remedial action implemented as part of ROD 2 included the construction of a groundwater pre-treatment plant. Construction of the Pre-Treatment Plant in the mid-canyon area (located within *Zone 2* on Exhibit 1) began in January 1985 and was completed in November 1985. The remedial action also required the evaluation of treatment technologies that are associated with the removal of heavy metals and organics in groundwater.

ROD 3 (USEPA 1987).[7] Two additional remedial actions were implemented as part of ROD 3. The first remedial action consisted of the construction of an up-gradient surface-water diversion north of the original contamination site (within *Zone 1A* on Exhibit 1). The second consisted of the construction of groundwater extraction wells to serve as a barrier to groundwater-flow and an

[4] U.S. Army Corps of Engineers. (2016). *Fifth Five-Year Review Report for Stringfellow Superfund* Site Riverside *County, California.* September 2016

[5] United States Environmental Protection Agency. (1983). *EPA Superfund, Record of Decision: Stringfellow Acid Pits Site. USEPA ID: CAT080012826, OU01*, Mira Loma, California. July 22.

[6] United States Environmental Protection Agency (USEPA). (1984). *Record of Decision, Stringfellow Acid Pits, Summary of Remedial Alternative Selection.* July 1984

[7] United States Environmental Protection Agency (USEPA). (1987). *Record of Decision: Stringfellow Acid Pits, Summary of Remedial Alternative Selection (Early Implementation Action).* June 1987

accompanying treatment facility in the southern portion of the canyon, the Lower Canyon Treatment Facility (located within *Zone 3* on Exhibit 1).

ROD 4 (USEPA 1990).[8] The fourth ROD delineated the site into four geographic zones: *Zone 1* is the upper-canyon area, including the original 17-acre disposal area; *Zone 2* is the mid-canyon area; *Zone 3* is the lower-canyon area; and *Zone 4* is the community of Glen Avon (general area below the 60 freeway). The remedial action consisted of the installation of a groundwater extraction and treatment system, the Community Wellhead Treatment Facility in *Zone 4*, and the dewatering of *Zone 1* using extraction wells.

A final ROD outlining final remedial action objectives for *Zones 1, 2, ,3* and *4* is expected to be published in 2021.

Remedial Action: The primary remedial action implemented for the RODs is groundwater extraction and treatment system, consisting of a network of over 70 extraction wells throughout Zones 1-4 and four treatment plants. The treatment plants include the Pre-Treatment Plant, the Lower Canyon Treatment Facility, and the Lower Canyon Treatment Facility, and the Pyrite Canyon Treatment Facility. Exhibit 1 shows the location of the four treatment plants for the groundwater extraction and treatment system

Pre-Treatment Plant/ Pyrite Canyon Treatment. The Pre-Treatment Plant treats contaminated groundwater recovered from extraction wells located in *Zone 1* and *Zone 2*. Groundwater is treated for low pH, pesticides, metals, and VOCs. The plant treats and average of about 45,000 gallons per day (gpd) or 50 acre-feet per year (afy). Treated water is stored and then released to the Inland Empire Brine Line and the Orange County Sanitation Districts wastewater collection, treatment, and disposal facilities. Some of the treated effluent is used for utility water at the plant. In 2017 the Pre-Treatment Plant was replaced by the newly constructed Pyrite Canyon Treatment Facility located just north of the Pre-Treatment Plant in *Zone 1B*. The new Pyrite Canyon Treatment was designed to replace the aging infrastructure of the existing Pre-Treatment Plant and to provide better reliable long-term treatment capabilities.

Lower Canyon Treatment Facility. This plant treats contaminated groundwater from extraction wells in *Zone 3* and *Zone 4* for VOCs. Effluent from the Lower Canyon Treatment Facility is piped to, and stored at the Pre-Treatment Plant, than released to the Inland Empire Brine Line. The plant treats and average of about 90,700 gpd (102 afy).

Community Wellhead Treatment System. This plant treats for VOCs and perchlorate in extracted groundwater from two wells in *Zone 4*. Effluent from the treatment system is discharged to Pyrite

[8] United States Environmental Protection Agency (USEPA). (1990). *Record of Decision: Stringfellow Hazardous Waste Site.* September 30.

Creek for used for irrigation by local residents. The plant treats and average of about 15,000 gpd (17 afy).

Monitoring and Reporting Program: Currently, 579 wells are actively monitored in Zones 1 through 4 at the Stringfellow site. The number and type of wells monitored in each zone, along with the depth of sampling, is summarized below in Table 1. The groundwater monitoring program is implemented in accordance with the 2001 *Groundwater Monitoring Program Work Plan*[9] and the 2015 *Final Quality Assurance Project Plan: Routine Groundwater Monitoring and Zone 4 DGI Investigation*[10]. In general, new wells are sampled quarterly for two years and then incorporated into the annual sampling schedule.

Table 1. Summary of Stringfellow Monitoring Sites by Zone, Well Type, and Screened Interval

Excerpted from: *2016 Annual Groundwater Monitoring and Remedy Effectiveness Evaluation Report*[2]

		Well Type					Screened In		
	Sub-Total	MW	EW	PZ	ES	WS	A	D	B
Zone 1A	130	84	39	0	7	-	32	72	26
Zone 1B	57	36	10	11	0	-	18	21	18
Zone 2	35	27	8	0	0	-	15	15	5
Zone 3	130	118	12	0	0	-	52	62	16
Zone 4	191	147	4	36	0	4	155	30	6
USEPA Areas 1/2	36	36	0	0	0	0	2	20	14
Total	**579**	**448**	**73**	**47**	**7**	**4**	**274**	**220**	**85**

Notes:
EW = extraction well, MW = monitoring well, PZ = piezometer, ES = extraction sump, WS = water supply well, A = alluvium, D = weathered (decomposed) bedrock, B = unweathered bedrock

DTSC initiated surface water sampling in 2005 to evaluate perchlorate concentrations in storm water runoff in Pyrite Creek and tributary channels. Currently, surface water sampling and reporting is executed pursuant to the *Final Surface Water Sampling and Analysis Plan*[11] and is performed during

[9] Geo-Logic Associates (2001). *Groundwater Monitoring Program Work Plan.* April 2001.
[10] Laboratory Data Consultants (2015). *Final Quality Assurance Project Plan: Routine Groundwater Monitoring and Zone 4 DGI Investigation.* November 2015.
[11] Geo-Logic Associates (2016). *Final Surface Water Sampling and Analysis Plan Stringfellow Superfund Site. Prepared for California Department of Toxic Substances Control.* July 2016

qualifying storm events which are classified using the following criteria; i) at least 72 hours of dry weather have elapsed since a previous storm event, and ii) a storm event produces sufficient runoff during daylight hours to perform sampling.

DTSC reports on the monitoring and remediation efforts in Annual Groundwater Monitoring Reports, Quarterly/Non-Routine Monitoring Reports, Monthly Operation and Maintenance Reports, Biennial and Annual Groundwater Remedy Effectiveness Evaluation Reports, and other technical memoranda and non-routine reports.

A final *Site-Wide Groundwater and Surface Water Monitoring Plan*[12] was published on July 19, 2016. The plan was created pursuant to section 3.3 of the *Statement of Work, Agreement to Perform Response Action*[13] between the DTSC and the EPA under CERCLA (Docket No. 09-2014-0003). It outlines a comprehensive protocol for ongoing data collection and analysis of groundwater and surface water samples, including scheduled updates to the plan in five-year intervals.

The Chino Basin Watermaster (Watermaster) collects all relevant groundwater and surface water data from the DTSC's Stringfellow Interface for Data and Documents (SIDD database) on an annual basis as part of its Chino Basin Data Collection effort. These data are periodically used by Watermaster to support its basin management initiatives.

Recent Activity: The following is a summary of recent key activities that have occurred since July 1, 2017:

- On September 8, 2017 DTSC submitted a proposal to USEPA and approved September 15, 2018 to modify extraction wells OW-50A1 and OW-55A located in Zone 1A to complete dewatering of alluvium pursuant to ROD 4. The proposal also included plans to install 17 new nested monitoring wells in the following zones: 1B (OW-111A, OW-111D, OW-111B, OW-112D, OW-112B, OW-113D, OW-113B, OW-114D, and OW-114B), 3 (OW-65D2), and 4 (FC-1015A, FC-1015D, FC-1054A, FC-1054D, FC-1110A, and FC-1213A). At the time of this report, all modifications and installations have been completed.
- The *Final 2016 Annual Groundwater Monitoring and Remedy Effectiveness Evaluation Report*[17] was submitted to DTSC on November 30, 2017 and concludes that the remedial actions have been successful in meeting the RAOs and the spatial extent of migration of all contaminants of concern in groundwater is not increasing.
- In March 2018, Geo-Logic Associates submitted the *Data Gap Investigation Monitored Natural Attenuation (MNA) January 2017 Sampling Report*[14]. Groundwater samples were collected from

[12] Kleinfelder. (2016). *Final Sitewide Groundwater and Surface Water Monitoring Plan and Sampling and Analysis Plan Stringfellow Superfund Site. Prepared for California Environmental Protection Agency.* July 2016
[13] US EPA (2014). *Statement of Work Agreement to Perform Response Action Stringfellow Acid Pits Superfund Site, Jurupa Valley, California.* March 10, 2014.
[14] Geo-Logic Associates (2018). *Data Gap Investigation Monitored Natural Attenuation (MNA) January 2017 Sampling Report.* March 2018.

16 new and existing Zone 4 wells to evaluate the effectiveness of MNA as a remedial approach. No evaluation of the data was presented in the document.

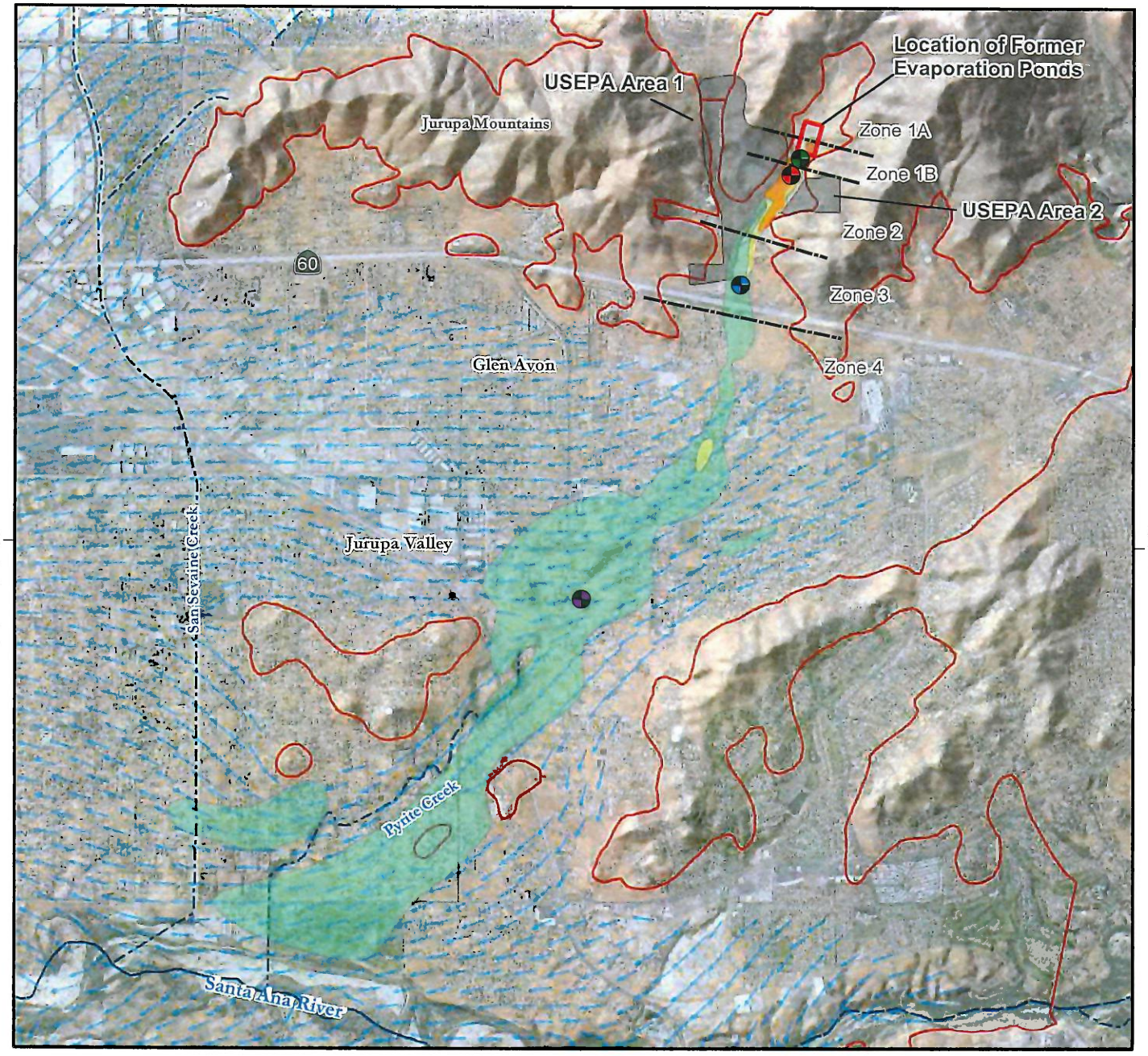
- The *2017-2018 Annual Surface Water Sampling and Analysis Report*[15] was completed June 2018. The maximum perchlorate concentration at a surface water site from January-March 2018 was 9.8 µgl.
- On June 15, 2018 Ramboll submitted a technical memorandum[16] proposing a dye tracer study of the Zone 1 barrier system. The study is designed to address the recommendation in the *Fifth Five Year Review Report*[17] for further evaluation of the apparent hydraulic connection under the clay barrier dam and to assess the magnitude of groundwater flow through interconnected bedrock fracture zones beneath said barrier.
- The USEPA is currently engaged in two groundwater and soil investigations, referred to as the Area 1 and Area 2 investigations (see Exhibit 1). The objective of these investigations is to identify additional sources of perchlorate contamination in Pyrite Canyon. Field work for both projects has commenced and the investigation is ongoing.
- The Lower Canyon Treatment Facility and Pretreatment Plant are currently non-operational but can be re-activated if needed. The Pyrite Canyon Treatment Facility and Community Wellhead Treatment System are fully operational and have treated a combined total flow of 23,537,499 gallons of water from site extraction wells.

---

[15] Geo-Logic Associates (2018). *2017-2018 Annual Surface Water Sampling and Analysis Report Stringfellow Superfund Site. Prepared for United States Environmental Protection Agency.* June 2018

[16] Ramboll (2018). *Recommended Zone 1 Barrier System Tracer Study, Stringfellow Superfund Site.* June 2015.

[17] US Army Corps of Engineers (2016). *Fifth Five-Year Review Report for Stringfellow Superfund Site.* September 2016.



Plume Delineations from the 2016 Annual Groundwater Monitoring and Remedy Effectiveness Evaluation Report (Kleinfelder, 2017)

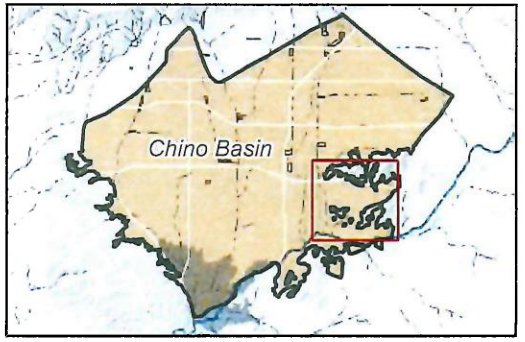
- Extent of perchlorate plume (≥ 6 µgl)
- Extent of TCE plume (≥ 5 µgl)
- Extent of chloroform plume (≥ 6 µgll)

Groundwater Extraction and Treatment Facilities

- Pyrite Canyon Treatment Facility
- Pre-Treatment Plant
- Lower Canyon Treatment Facility
- Community Wellhead Treatment System

34°0'0"N

- 2017 Model-Generated Groundwater Flow Direction (Model Layer 1)
- Streams & Flood Control Channels
- Chino Basin Hydrologic Boundary



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: RT
Date: 10/3/2018
Name: 20181002_SFPlume_Status_Ex1_2

0 0.25 0.5 1 Miles

Plume Status Report

Stringfellow Contaminant Plume

Exhibit 1