



AGENDA

SPECIAL MEETING OF THE BOARD OF DIRECTORS LA PUENTE VALLEY COUNTY WATER DISTRICT 112 N. FIRST STREET, LA PUENTE, CALIFORNIA MONDAY, SEPTEMBER 16, 2019 AT 5:30 PM

1. CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL OF BOARD OF DIRECTORS

President Escalera _____ Vice President Hernandez _____ Director Barajas _____
Director Hastings _____ Director Rojas _____

4. PUBLIC COMMENT

Anyone wishing to discuss items on the agenda or pertaining to the District may do so now. The Board may allow additional input during the meeting. A five-minute limit on remarks is requested.

5. ADOPTION OF AGENDA

Each item on the Agenda shall be deemed to include an appropriate motion, resolution or ordinance to take action on any item. Materials related to an item on this agenda submitted after distribution of the agenda packet are available for public review at the District office, located at the address listed above.

6. APPROVAL OF CONSENT CALENDAR

There will be no separate discussion of Consent Calendar items as they are considered to be routine by the Board of Directors and will be adopted by one motion. If a member of the Board, staff, or public requests discussion on a particular item, that item will be removed from the Consent Calendar and considered separately.

- A. Approval of Minutes of the Regular Meeting of the Board of Directors held on August 26, 2019.
- B. Approval of District Expenses for the Month of August 2019.
- C. Approval of Industry Public Utilities' Water Operation Expenses for the Month of August 2019.
- D. Receive and File the District's Water Sales Report for August 2019.
- E. Receive and File the Industry Public Utilities' Water Sales Report for August 2019.
- F. Receive and File the Water Production and Conservation Report for August 2019.

7. ACTION / DISCUSSION ITEMS

- A. Consideration of Proposal from Geosyntec Consultants to Prepare a Technical Memorandum

to Evaluate Groundwater Nitrate Removal Treatment Systems.

Recommendation: Authorize the General Manager to Enter into a Professional Services Agreement with Geosyntec Consultants (Geosyntec) for the Preparation of a Technical Memorandum to Evaluate Groundwater Treatment Systems for Nitrate Removal at the LPVCWD Treatment Facility, for an Amount not to Exceed \$72,600.

- B. Consideration of a Quote from Tri County Pump Company to Perform Well Casing Maintenance Work to the District's Well No. 5.

Recommendation: Authorize the General Manager to Proceed with the Services as Proposed by Tri County Pump Company for an Amount not to Exceed \$39,000.

- C. Consideration of Quote from Tri County Pump Company to Supply and Install a New Pump Assembly and Motor for the District's Well No. 5.

Recommendation: Authorize the General Manager to Enter into an Agreement with Tri County Pump Company for the Supply and Installation of a New Pump Assembly and Motor for the District's Well No. 5, for an Amount not to Exceed \$138,000.

- D. Consideration of Donation of Water to the Industry Hills Charity Pro Rodeo.

Recommendation: Board Discretion.

8. GENERAL MANAGER'S REPORT

9. OTHER ITEMS

- A. Upcoming Events.
- B. Information Items.

10. ATTORNEY'S COMMENTS

11. BOARD MEMBER COMMENTS

- A. Report on Events Attended.
- B. Other Comments.

12. FUTURE AGENDA ITEMS

13. ADJOURNMENT

POSTED: Friday, September 13, 2019

President John P. Escalera, Presiding.

Any qualified person with a disability may request a disability-related accommodation as needed to participate fully in this public meeting. In order to make such a request, please contact Mr. Greg Galindo, Board Secretary, at (626) 330-2126 in sufficient time prior to the meeting to make the necessary arrangements.

Note: Agenda materials are available for public inspection at the District office or visit the District's website at www.lapuentewater.com.



**MINUTES OF THE REGULAR MEETING OF
THE BOARD OF DIRECTORS OF THE
LA PUENTE VALLEY COUNTY WATER DISTRICT
FOR MONDAY, AUGUST 26, 2019 AT 5:30 PM**

1. CALL TO ORDER

President Escalera called the meeting to order at 5:30 p.m.

2. PLEDGE OF ALLEGIANCE

President Escalera led the meeting in the Pledge of Allegiance.

3. ROLL CALL OF THE BOARD OF DIRECTORS

President Escalera	Vice President Hernandez	Director Barajas	Director Hastings	Director Rojas
Present	Present	Present	Present	Present

OTHERS PRESENT

Staff and Counsel: General Manager & Board Secretary, Greg Galindo; Engineering and Compliance Manager, Roy Frausto and District Counsel, Jim Ciampa.

Public: Alfonso Contreras, Vice President of the Upper San Gabriel Valley Municipal Water District and Maria Contreras, City Treasurer of the City of Baldwin Park.

4. PUBLIC COMMENTS

Mr. Contreras said hello to the Board and also provided information on the water level of the Main San Gabriel Basin.

5. ADOPTION OF AGENDA

Motion: Adopt Agenda as Presented.

1st: Director Rojas

2nd: Director Hastings

	Escalera	Hernandez	Barajas	Hastings	Rojas
Vote	Yes	Yes	Yes	Yes	Yes

Motion carried by a vote of: 5 Yes, 0 No, 0 Abstain.

6. APPROVAL OF CONSENT CALENDAR

Motion: Approve Consent Calendar as Presented.

1st: Director Rojas

2nd: Vice President Hernandez

	Escalera	Hernandez	Barajas	Hastings	Rojas
Vote	Yes	Yes	Yes	Yes	Yes

Motion carried by a vote of: 5 Yes, 0 No, 0 Abstain.

7. FINANCIAL REPORTS

A. Summary of the District's Cash and Investments as of July 30, 2019.

Mr. Galindo provided a summary of the balances in each account provided in the Summary of Cash and Investments as of July 30, 2019.

Motion: Receive and File the Summary of Cash and Investments as of July 30, 2019.

1st: President Escalera

2nd: Director Hastings

	Escalera	Hernandez	Barajas	Hastings	Rojas
Vote	Yes	Yes	Yes	Yes	Yes

Motion carried by a vote of: 5 Yes, 0 No, 0 Abstain.

B. Statement of District's Revenue and Expenses as for July 30, 2019.

Mr. Galindo provided a summary of the Statement of Revenues and Expenses for the District as of July 30, 2019 and explained the budget to date balances for various accounts. He provided some information on proposed amendments to the 2019 Budget that the Board would be considering later in the meeting.

Motion: Receive and File the Statement of the District's Revenue and Expenses as of July 30, 2019.

1st: President Escalera

2nd: Vice President Hernandez

	Escalera	Hernandez	Barajas	Hastings	Rojas
Vote	Yes	Yes	Yes	Yes	Yes

Motion carried by a vote of: 5 Yes, 0 No, 0 Abstain.

C. Statement of the Industry Public Utilities' Water Operations Revenue and Expenses as of July 30, 2019.

Mr. Galindo provided a summary of the Statement of Revenues and Expenses for the Industry Public Utilities' Water Operations and explained the budget to date balances for various accounts.

Motion: Receive and File the Statement of the Industry Public Utilities Water Operations' Revenue and Expenses as of July 30, 2019.

1st: Director Rojas

2nd: Vice President Hernandez

	Escalera	Hernandez	Barajas	Hastings	Rojas
Vote	Yes	Yes	Yes	Yes	Yes

Motion carried by a vote of: 5 Yes, 0 No, 0 Abstain.

8. ACTION / DISCUSSION ITEMS

A. Consideration of Sponsorship of the La Puente Jr. All American Football Opening Day Event on September 14, 2019.

Mr. Galindo reported to the Board that a request was submitted for the District to consider sponsoring the La Puente Jr. All American Football Opening Day Event on September 14, 2019. Mr. Galindo explained that he is not sure if he will have enough staff to support setting up a booth and having staff present at the entire event. Mr. Galindo recommended that the Board consider approving staffing a booth at the event if possible and to approve a donation of \$200 in the form of sporting goods store gift cards and \$100 dollars in the form of bottled water. He also expressed that there was interest by the organizer to have to Board members attend the event if possible. After some discussion a motion was made by Director Rojas.

Motion: Approve staffing a booth at the La Puente Jr. All American Football Opening Day Event, if possible, depending on staff scheduling; and to approve a donation of \$200 in the form of sporting goods store gift cards and \$100 dollars in the form of bottled water.

1st: Director Rojas

2nd: Vice President Hernandez

	Escalera	Hernandez	Barajas	Hastings	Rojas
Vote	Yes	Yes	Yes	Yes	Yes

Motion carried by a vote of: 5 Yes, 0 No, 0 Abstain.

B. Consideration of Notice of Completion for the District’s 5th Street Waterline Improvement Project.

Mr. Frausto provided a summary of the staff report on the item. Mr. Frausto provided some additional information on the cost of the project, paving requirements of the City and the project schedule. He also presented some pictures that were taken of the construction process. After some discussion amongst the Directors and staff, a motion was made by Director Rojas.

Motion: Accept the Work Performed by Doty Bros. Construction Company for the 5th Street Waterline Improvement Project as Complete and Authorize the Filing of the Notice of Completion with the Los Angeles County Registrar Recorder’s Office.

1st: Director Rojas

2nd: Director Hastings

	Escalera	Hernandez	Barajas	Hastings	Rojas
Vote	Yes	Yes	Yes	Yes	Yes

Motion carried by a vote of: 5 Yes, 0 No, 0 Abstain.

C. Consideration to Cast Election Ballot for ACWA’s Region 8 Board of Directors for the 2020-2021 Term.

Mr. Galindo reported that in the Board agenda packet is a ballot for the District to cast for the election of ACWA Region Board of Directors. He explained the voting process and how the Chair and Vice Chair of each ACWA Region serve as members of the ACWA Board of Directors. He stated that a nominating committee has recommended a slate of candidates that the District can either concur with or choose not to concur with and vote for candidates as the Board chooses. Mr. Galindo added that since there is a local candidate from Upper San Gabriel Valley

Municipal Water District that is a candidate for Vice Chair, who is not on the recommended slate, the Board should consider not concurring with the recommended slate and casting the ballot by choosing Steve Blois for the Chair, Anthony Fellows from Upper District for Vice Chair and the five candidates listed for the Board Member positions. After some discussion amongst the Directors, a motion was made by President Escalera.

Motion: Cast Ballot for ACWA’s Region 8 Board of Directors choosing Steve Blois for the Chair, Anthony Fellows for Vice Chair and the five candidates listed for the Board Member positions.

1st: President Escalera

2nd: Director Barajas

	Escalera	Hernandez	Barajas	Hastings	Rojas
Vote	Yes	Yes	Yes	Yes	Yes

Motion carried by a vote of: 5 Yes, 0 No, 0 Abstain.

D. Consideration of Amendments for the District’s 2019 Budget.

Mr. Galindo provided a summary of his staff report on the item. He reviewed the reasons for each proposed Budget amendment. Director Rojas asked why are amendments necessary and why the District doesn’t wait until the end of the year and then report the Budget variances. Mr. Galindo responded that it is good practice to amend the Budget when obvious variances are identified and demonstrates that financial controls are in place. After additional discussion amongst the Directors and staff, a motion was made by President Escalera.

Motion: Approve the Proposed Budget Amendments.

1st: Director Rojas

2nd: Director Hastings

	Escalera	Hernandez	Barajas	Hastings	Rojas
Vote	Yes	Yes	Yes	Yes	Yes

9. ENGINEERING AND COMPLIANCE MANAGER’S REPORT

Mr. Frausto reported on various items that were included in his report. There was some discussion amongst the Board and Staff on some of the items included in the report.

Motion: Receive and File the Engineering and Compliance Manager’s Report.

1st: Director Rojas

2nd: Director Barajas

	Escalera	Hernandez	Barajas	Hastings	Rojas
Vote	Yes	Yes	Yes	Yes	Yes

Motion carried by a vote of: 5 Yes, 0 No, 0 Abstain.

10. GENERAL MANAGER’S REPORT

Mr. Galindo reported on the following items:

- Update on the new billing system upgrade process.
- PVOU Shallow Zone Operations Agreement status.
- Main San Gabriel Basin groundwater levels.

11. OTHER ITEMS

A. Upcoming Events.

Mr. Galindo reviewed upcoming events with the Board and verified what events each member would be attending.

B. Information Items.

Included in Board Packet.

12. ATTORNEY’S COMMENTS

Mr. Ciampa reported upcoming sexual harassment prevention training that his firm is planning. He also provided an update on the AQMD asbestos rule revision process.

13. BOARD MEMBER COMMENTS

A. Report on Events Attended.

President Escalera reported that he attended 3 events: SGVWA Quarterly Meeting; Sexual Harassment Prevention Training at San Gabriel County Water District and the WRD Albert Robles Center for Water Recycling grand opening.

Vice President Hernandez reported that he attended the WRD Albert Robles Center for Water Recycling grand opening.

Director Barajas reported that he attended the SGVWA Quarterly Meeting.

Director Hastings reported that he attended the SGVWA Quarterly Meeting.

B. Other Comments.

No additional comments.

14. FUTURE AGENDA ITEMS

No future items.

15. ADJOURNMENT

President Escalera adjourned the meeting at 6:27 p.m.

Attest:

John P. Escalera, President

Greg B. Galindo, Secretary

La Puente Water District August 2019 Disbursements

Check #	Payee	Amount	Description
7002	CCSInteractive	\$ 54.40	Website Hosting
7003	Consolidated Electrical Distributors	\$ 114.22	Well Maintenance
7004	Coverall North America Inc	\$ 255.00	Cleaning Service
7005	Doty Bros Equipment Co	\$ 45,334.33	5th St Waterline Project
7006	Grainger Inc	\$ 62.51	Safety Supplies
7007	Highroad IT	\$ 402.00	Technical Support
7008	Hunter Electric	\$ 51,925.92	Booster & Well Maintenance
7009	Industry Business Council	\$ 225.00	Membership Dues
7010	Jiffy Lube My Fleet Center	\$ 107.35	Truck Maintenance
7011	Merritt's Hardware	\$ 357.13	Field Supplies
7012	Merritt's Hardware	\$ 126.36	Field Supplies
7013	Platinum Consulting Group	\$ 530.55	Administrative Support
7014	Puente Ready Mix	\$ 577.07	5th St Waterline Project
7015	San Gabriel Valley Water Association	\$ 210.00	Seminar Expense
7016	SC Edison	\$ 5,783.10	Power Expense
7017	Sunbelt Rentals	\$ 216.31	Equipment Rental
7018	Underground Service Alert	\$ 93.45	Line Notifications
7019	USA BlueBook	\$ 1,787.54	Field Supplies - Compliance
7020	Valley Vista Services	\$ 324.16	Trash Service
7021	Vulcan Materials Company	\$ 573.57	Field Supplies - Asphalt
7022	Weck Laboratories Inc	\$ 114.50	Water Sampling
7023	Western Water Works	\$ 4,906.69	5th St Waterline Project & Inventory
7024	Eurofins Eaton Analytical Inc	\$ 400.00	Water Sampling
7025	Konecranes	\$ 329.00	UV Maintenance
7026	McMaster-Carr Supply Co	\$ 413.48	Air Stripper Maintenance
7027	Northstar Chemical	\$ 5,666.42	Chemicals Expense
7028	Tri County Pump Company	\$ 11,775.00	Booster Maintenance
7029	Trojan UV	\$ 24,880.00	Quarterly Service Contract
7030	USA BlueBook	\$ 133.39	UV Maintenance
7031	Weck Laboratories Inc	\$ 1,802.25	Water Sampling
7032	Weck Laboratories Inc	\$ 1,017.50	Water Sampling
7033	United Site Services of Calif Inc	\$ 402.15	Restroom Service @ Treatment Plant
7034	Waste Management of SG Valley	\$ 206.22	Trash Service
7035	Airgas USA LLC	\$ 41.08	Field Supplies
7036	Answering Service Care	\$ 171.68	Answering Service
7037	Aramark Uniform	\$ 264.36	Uniform Service
7038	Chevron	\$ 3,079.88	Truck Fuel
7039	EcoTech Services Inc	\$ 740.00	UHET Program
7040	Ed Butts Ford	\$ 483.37	Truck Maintenance
7041	Ferguson Waterworks	\$ 791.33	Developer Project
7042	Griffith Air Tool	\$ 389.09	Truck Maintenance
7043	Industry Public Utilites	\$ 22,223.14	Web Payments
7044	InfoSend	\$ 927.08	Billing Expense
7045	Jiffy Lube My Fleet Center	\$ 118.34	Truck Maintenance
7046	Lagerlof, Senecal, Gosney & Kruse	\$ 6,630.51	Attorney Fee's
7047	McMaster-Carr Supply Co	\$ 69.81	Safety Supplies
7048	Platinum Consulting Group	\$ 723.15	Administrative Support
7049	Puente Ready Mix	\$ 796.45	5th St Waterline Project
7050	Resource Building Materials	\$ 39.39	Field Supplies
7051	Robinsons Flowers	\$ 175.95	Administrative Expense
7052	S & J Supply Co Inc	\$ 7,563.51	Developer Project & Inventory

La Puente Water District August 2019 Disbursements - continued

Check #	Payee	Amount	Description
7053	Sunbelt Rentals	\$ 454.52	5th St Waterline Project
7054	Time Warner Cable	\$ 281.83	Telephone Service
7055	Vulcan Materials Company	\$ 390.78	Field Supplies - Asphalt
7056	Weck Laboratories Inc	\$ 358.00	Water Sampling
7057	Time Warner Cable	\$ 675.84	Telephone Service
7058	ACWA/JPIA	\$ 1,695.00	Conference Expense
7059	ACWA/JPIA	\$ 32,605.04	Health Benefits
7060	Aramark Uniform	\$ 88.12	Uniform Service
7061	Bank of America-Visa	\$ 1,409.82	Conference & Administrative Expenses
7062	CA-NV Section AWWA	\$ 690.00	Conference Expense
7063	Citi Cards	\$ 2,098.35	Conference & Administrative Expenses
7064	Jack Henry & Associates	\$ 29.88	Web E-Check Fee's
7065	Lincoln National Life Insurance Company	\$ 654.76	Disability Insurance
7066	Main SG Basin Watermaster	\$ 213,924.10	Production Assessments
7067	Premier Access Insurance Co	\$ 3,109.98	Dental Insurance
7069	Red Wing Shoes	\$ 317.52	Boot Allowance
7070	S & J Supply Co Inc	\$ 845.16	Field Supplies - Inventory
7071	San Gabriel Valley Water Company	\$ 162.62	Water Service @ Treatment Plant
7072	Staples	\$ 112.89	Office Supplies
7073	State Water Resources Control Board	\$ 60.00	Certification Renewal - Bowman
7074	Time Warner Cable	\$ 304.97	Telephone Service
7075	Tri County Pump Company	\$ 9,996.00	Well Maintenance
7076	Weck Laboratories Inc	\$ 141.00	Water Sampling
7077	Albert J Vazquez	\$ 151.61	Boot Allowance
7078	Aramark Uniform	\$ 88.12	Uniform Service
7079	Cell Business Equipment	\$ 26.28	Office Expense
7080	Doty Bros Equipment Co	\$ 44,635.60	5th St Waterline Project
7081	Ferguson Waterworks	\$ 950.40	Meter Expense
7082	InfoSend	\$ 2,138.30	Consumer Confidence Reports
7083	Lagerlof, Senecal, Gosney & Kruse	\$ 1,233.95	Attorney Fee's
7084	San Gabriel Basin WQA	\$ 6,782.40	Pumping Right Assessments
7085	SC Edison	\$ 3,053.05	Power Expense
7086	Stetson Engineers Inc	\$ 1,828.25	Engineering Support
7087	Sunbelt Rentals	\$ 243.68	Develper Project
7088	Verizon Wireless	\$ 505.15	Cellular Service
7089	Weck Laboratories Inc	\$ 25.50	Water Sampling
7090	MetLife	\$ 247.36	Life Insurance
7091	SC Edison	\$ 31,956.87	Power Expense
7092	Verizon Wireless	\$ 76.02	Cellular Service
7093	Shaunte L Maldonado	\$ 61.95	Seminar Reimbursement
7094	Petty Cash	\$ 116.44	Office/Field Expense
Online	Home Depot	\$ 528.11	Field Supplies
Autodeduct	Wells Fargo	\$ 319.93	Bank Fee's
Autodeduct	Wells Fargo	\$ 138.42	Merchant Fee's
Autodeduct	First Data Global Leasing	\$ 44.00	Credit Card Machine Lease - Monthly
Autodeduct	First Data Global Leasing	\$ 30.20	Credit Card Machine Lease - Annually
Online	Lincoln Financial Group	\$ 3,820.00	Deferred Comp
Online	CalPERS	\$ 12,895.23	Retirement Program
Online	Employment Development Dept	\$ 4,173.28	California State & Unemployment Taxes
Online	United States Treasury	\$ 25,965.34	Federal, Social Security & Medicare Taxes
Total Payables		\$ 618,776.31	

La Puente Valley County Water District
Payroll Summary
August 2019

	August 2019
Employee Wages, Taxes and Adjustments	
Gross Pay	
Total Gross Pay	106,270.61
Total Deductions from Gross Pay	-5,157.82
Adjusted Gross Pay	101,112.79
Taxes Withheld	
Federal Withholding	-9,677.00
Medicare Employee	-1,543.65
Social Security Employee	-6,600.52
CA - Withholding	-4,144.37
Medicare Employee Addl Tax	0.00
Total Taxes Withheld	-21,965.54
Net Pay	79,147.25
Employer Taxes and Contributions	
Medicare Company	1,543.65
Social Security Company	6,600.52
CA - Unemployment	27.21
CA - Employment Training Tax	1.70
Total Employer Taxes and Contributions	8,362.08

La Puente Water District August 2019 Disbursements

Total Vendor Payables	<u>\$ 618,776.31</u>
Total Payroll	<u>\$ 79,147.25</u>
Total August 2019 Disbursements	<u>\$ 697,923.56</u>

Invoice No. 4- 2019-08

September 1, 2019

BPOU Project Committee Members



RE: BPOU O & M Expense Reimbursement Summary

The following cost breakdown represents O & M expenses incurred by the LPVCWD for the month of August 2019.

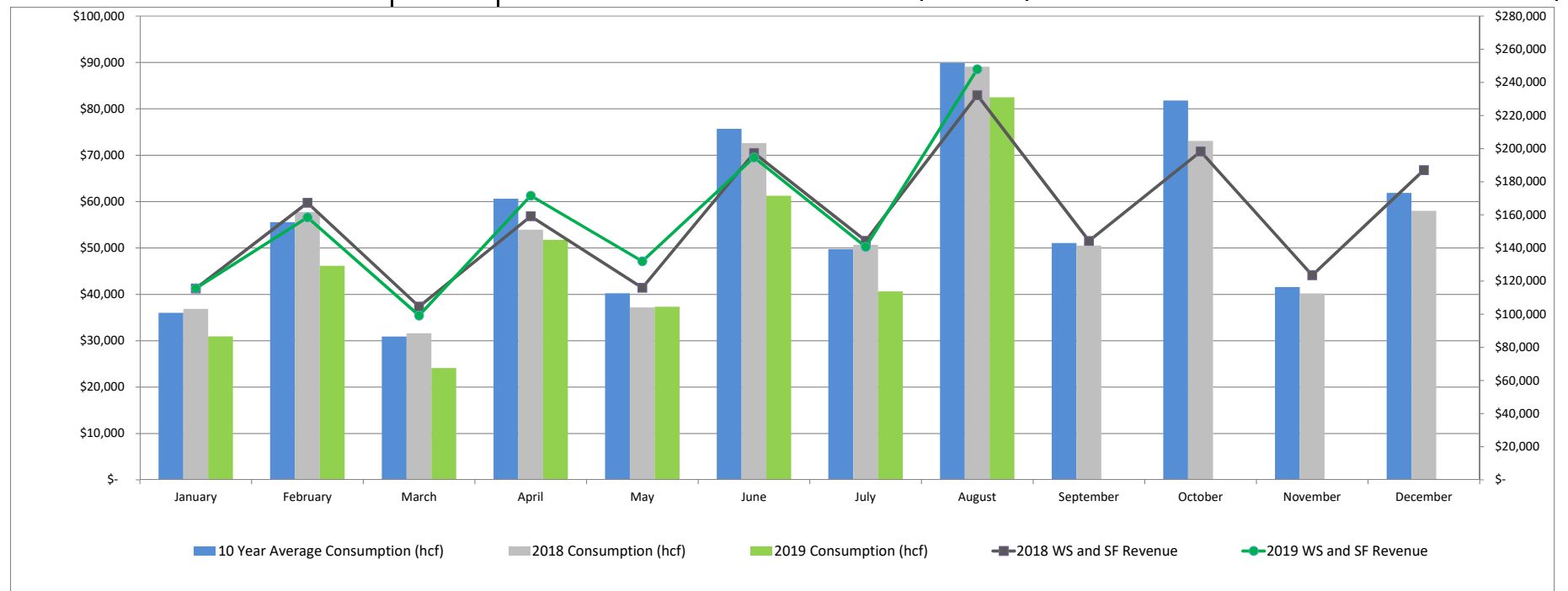
<u>BPOU Acct No.</u>	<u>Description</u>	<u>Invoice No.</u>	<u>Vendor</u>	<u>Amount</u>	<u>Subtotal</u>
LP.02.01.01.00	Power	2-15-629-6188	SC Edison	\$ 23,544.97	
		2-03-187-2179	SC Edison	\$ 8,411.90	\$ 31,956.87
LP.02.01.02.00	Labor Costs	Aug-19	LPVCWD	\$ 24,339.31	\$ 24,339.31
LP.02.01.05.00	Transportation	Aug-19	LPVCWD - 1669 miles @ .58	\$ 968.02	\$ 968.02
LP.02.01.07.00	Water Testing	L0465585	Eurofins	\$ 80.00	
		L0465655	Eurofins	\$ 40.00	
		L0466711	Eurofins	\$ 80.00	
		L0467808	Eurofins	\$ 80.00	
		L0469517	Eurofins	\$ 80.00	
		W9H0108	Weck Labs	\$ 219.50	
		W9H0111	Weck Labs	\$ 56.00	
		W9H0115	Weck Labs	\$ 39.00	
		W9H0223	Weck Labs	\$ 190.75	
		W9H0240	Weck Labs	\$ 928.00	
		W9H0271	Weck Labs	\$ 180.00	
		W9H0277	Weck Labs	\$ 119.00	
		W9H0313	Weck Labs	\$ 149.00	
		W9H0518	Weck Labs	\$ 180.00	
		W9H0519	Weck Labs	\$ 180.00	
		W9H0521	Weck Labs	\$ 180.00	
		W9H0522	Weck Labs	\$ 141.70	
		W9H0696	Weck Labs	\$ 664.00	
		W9H0928	Weck Labs	\$ 190.75	
		W9H0929	Weck Labs	\$ 56.00	
		W9H1018	Weck Labs	\$ 195.00	
		W9H1079	Weck Labs	\$ 87.00	
		W9H1080	Weck Labs	\$ 149.00	
		W9H1290	Weck Labs	\$ 190.75	
		W9H1551	Weck Labs	\$ 87.00	
		W9H1659	Weck Labs	\$ 610.00	
		W9H1660	Weck Labs	\$ 180.00	
W9H1662	Weck Labs	\$ 278.00			
W9H1663	Weck Labs	\$ 180.00			
W9H1773	Weck Labs	\$ 109.00			
W9H1797	Weck Labs	\$ 149.00			
W9H1842	Weck Labs	\$ 278.00	\$ 6,326.45		
LP.02.01.10.00	Operations Monitoring	9462; 08/19	Spectrum Business	\$ 375.84	
		2906; 08/19	Spectrum Business	\$ 300.00	
		9836152336	Verizon	\$ 76.02	\$ 751.86
<u>LP.02.01.12.00</u>	<u>Materials/Supplies</u>				
LP.02.01.12.02	Filter Cartridges	3276702	Pall Corporation	\$ 5,153.43	\$ 5,153.43
LP.02.01.12.05	Hydrogen Peroxide	150504	Northstar Chemical	\$ 2,696.94	\$ 2,696.94
LP.02.01.12.06	Sodium Hypochlorite	150062	Northstar Chemical	\$ 1,972.49	
		151237	Northstar Chemical	\$ 1,855.60	\$ 3,828.09
LP.02.01.12.11	Sodium Hydroxide	151552	Northstar Chemical	\$ 1,329.80	\$ 1,329.80
LP.02.01.12.15	Other Expendables	113486	Merritt's	\$ 58.91	
		6041-1	NJB Soft	\$ 3,730.00	\$ 3,788.91
LP.02.01.12.17	Sulfuric Acid	151719	Northstar Chemical	\$ 1,945.10	\$ 1,945.10
LP.02.01.80.00	Other O & M	20521	Highroad IT	\$ 134.00	
		07/19-08/19	Petty Cash	\$ 33.45	
		114-8889713	United Site Services	\$ 402.15	
		0743902-2519-6	Waste Management	\$ 206.22	\$ 775.82
			Total Expenditures		\$ 83,860.60
	District Pumping Cost Deduction		\$ 16,285.57		
	Total O & M		\$ 67,575.03		
	Capital Cost Reimbursable		\$ -		
	Total Costs Reimbursable		\$ 67,575.03		

Industry Public Utilities August 2019 Disbursements

Check #	Payee	Amount	Description
3675	CCSInteractive	\$ 13.60	Monthly Website Hosting
3676	Grainger Inc	\$ 62.50	Safety Supplies
3677	Highroad IT	\$ 268.00	Technical Support
3678	Hunter Electric	\$ 11,038.68	Booster Maintenance
3679	La Puente Valley County Water District	\$ 10,706.56	Inventory Reimbursement
3680	Merritt's Hardware	\$ 375.42	Field Supplies
3681	Platinum Consulting Group	\$ 105.00	Administrative Support
3682	Time Warner Cable	\$ 76.87	Telephone Service
3683	Underground Service Alert	\$ 93.44	Line Notifications
3684	Weck Laboratories Inc	\$ 122.50	Water Sampling
3685	Western Water Works	\$ 79.42	Field Supplies
3686	Airgas USA LLC	\$ 41.07	Field Supplies
3687	Answering Service Care	\$ 171.67	Answering Service
3688	EcoTech Services Inc	\$ 390.00	UHET Program
3689	Hunter Electric	\$ 276.00	Booster Maintenance
3690	InfoSend	\$ 719.91	Billing Expense
3691	La Puente Valley County Water District	\$ 50,586.48	Labor Costs July 2019
3692	McMaster-Carr Supply Co	\$ 69.81	Field Supplies
3693	Platinum Consulting Group	\$ 218.40	Administrative Support
3694	SC Edison	\$ 3,285.50	Power Expense
3695	SoCal Gas	\$ 18.95	Gas Expense
3696	Time Warner Cable	\$ 281.82	Telephone Service
3697	Vulcan Materials Company	\$ 390.78	Field Supplies - Asphalt
3698	Weck Laboratories Inc	\$ 107.50	Water Sampling
3699	Fannie Wen	\$ 4,500.00	Developer Refund 14050 1/2 Proctor Ave
3700	ACWA/JPIA	\$ 18.00	Insurance Expense
3701	Brilliant Corners	\$ 875.00	Developer Refund 14055 Lomitas Ave
3702	Citi Cards	\$ 116.55	Field Supplies
3703	Jack Henry & Associates	\$ 29.87	Web E-Check Fee's
3704	Locus Technology	\$ 588.00	Technical Support
3705	Main SG Basin Watermaster	\$ 150,618.00	Production Assessments
3706	San Gabriel Valley Water Company	\$ 2,443.55	Purchased Water - Salt Lake
3707	SC Edison	\$ 11,226.14	Power Expense
3708	Staples	\$ 112.89	Office Supplies
3709	Sunbelt Rentals	\$ 216.31	Equipment Rental
3710	Weck Laboratories Inc	\$ 122.50	Water Sampling
3711	Cell Business Equipment	\$ 26.28	Office Expense
3712	Corrpro	\$ 2,025.00	Reservoir Maintenance
3713	Industry Public Utility Commission	\$ 1,260.75	Industry Hills Power Expense
3714	InfoSend	\$ 1,729.30	Consumer Confidence Reports
3715	Raftelis Financial Consultants	\$ 2,090.00	Water Rate Study
3716	San Gabriel Basin WQA	\$ 6,618.00	Pumping Right Assessments
3717	SoCal Gas	\$ 15.29	Gas Expense
3718	Verizon Wireless	\$ 505.14	Cellular Service
Online	Home Depot Credit Services	\$ 45.40	Field Supplies
Online	County of LA Dept of Public Works	\$ 1,650.00	Permit Fee's
Autodeduct	Wells Fargo Merchant Fee's	\$ 81.97	Merchant Fee's
Autodeduct	First Data Global Leasing	\$ 44.00	Credit Card Machine Lease - Monthly
Autodeduct	First Data Global Leasing	\$ 30.20	Credit Card Machine Lease - Annual
Total August 2019 Disbursements		\$ 266,488.02	

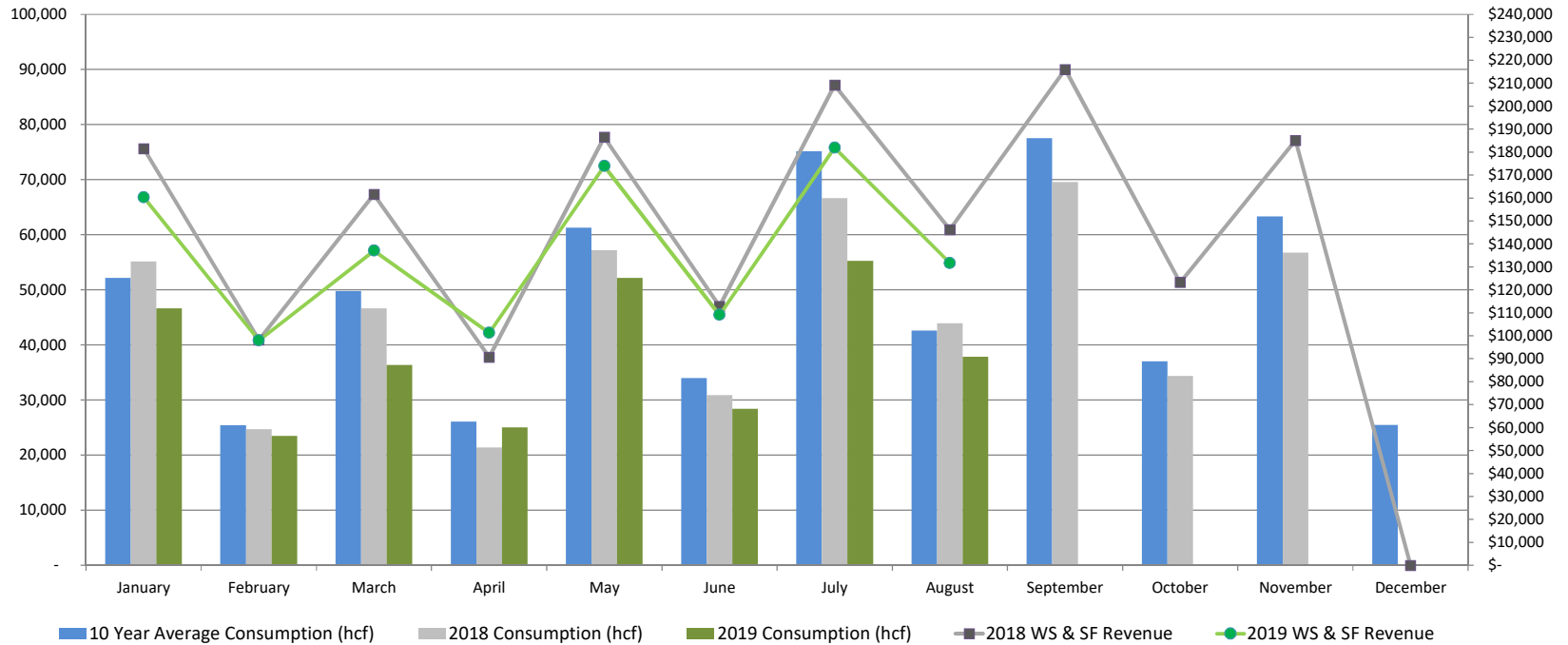
WATER SALES REPORT LPVCWD 2019

LPVCWD	January	February	March	April	May	June	July	August	September	October	November	December	YTD
No. of Customers	1,207	1,216	1,221	1,216	1,224	1,217	1,226	1,223	-	-	-	-	9,750
2019 Consumption (hcf)	30,923	46,152	24,105	51,751	37,307	61,263	40,622	82,473	-	-	-	-	374,596
2018 Consumption (hcf)	36,839	57,769	31,582	53,940	37,166	72,607	50,689	89,071	50,507	73,082	40,207	57,995	651,454
10 Year Average Consumption (hcf)	\$ 36,017	\$ 55,570	\$ 30,912	\$ 60,620	\$ 40,216	\$ 75,695	\$ 49,754	\$ 89,881	\$ 51,043	\$ 81,795	\$ 41,561	\$ 61,868	\$ 674,932
2019 Water Sales	\$ 65,872	\$ 99,793	\$ 49,373	\$ 112,591	\$ 81,601	\$ 135,597	\$ 90,296	\$ 187,941	\$ -	\$ -	\$ -	\$ -	\$ 823,062
2018 Water Sales	\$ 69,913	\$ 112,965	\$ 58,990	\$ 104,919	\$ 70,362	\$ 143,162	\$ 98,276	\$ 177,901	\$ 97,825	\$ 144,055	\$ 76,825	\$ 127,800	\$ 1,282,993
2019 Service Fees	\$ 49,766	\$ 58,668	\$ 49,865	\$ 59,032	\$ 50,396	\$ 59,065	\$ 50,376	\$ 60,011	\$ -	\$ -	\$ -	\$ -	\$ 437,180
2018 Service Fees	\$ 45,632	\$ 54,334	\$ 45,639	\$ 54,197	\$ 45,559	\$ 54,170	\$ 46,022	\$ 54,374	\$ 46,411	\$ 54,214	\$ 46,683	\$ 59,214	\$ 606,450
2019 Hyd Fees	\$ 950	\$ 950	\$ 950	\$ 700	\$ 950	\$ 700	\$ 950	\$ 700	\$ -	\$ -	\$ -	\$ -	\$ 6,850
2019 DC Fees	\$ 434	\$ 7,888	\$ 229	\$ 8,154	\$ 229	\$ 8,145	\$ 229	\$ 8,131	\$ -	\$ -	\$ -	\$ -	\$ 33,439
2018 System Revenue	\$ 117,022	\$ 167,298	\$ 100,417	\$ 180,477	\$ 133,175	\$ 203,507	\$ 141,850	\$ 256,783	\$ -	\$ -	\$ -	\$ -	\$ 1,300,530



WATER SALES REPORT CIWS 2019

CIWS	January	February	March	April	May	June	July	August	September	October	November	December	YTD
No. of Customers	958	893	967	893	967	892	965	890	-	-	-	-	7,425
2019 Consumption (hcf)	46,656	23,510	36,382	25,014	52,169	28,423	55,251	37,850	-	-	-	-	305,255
2018 Consumption (hcf)	55,160	24,734	46,635	21,410	57,209	30,877	66,614	43,940	69,576	34,354	56,777	-	507,286
10 Year Average Consumption (hcf)	52,164	25,421	49,788	26,093	61,262	34,011	75,132	42,630	77,514	37,029	63,302	25,468	569,812
2019 Water Sales	\$ 104,539	\$ 51,588	\$ 80,950	\$ 54,785	\$ 117,646	\$ 62,656	\$ 125,539	\$ 85,198	\$ -	\$ -	\$ -	\$ -	\$ 682,901
2018 Water Sales	\$ 124,508	\$ 54,277	\$ 104,414	\$ 46,762	\$ 129,277	\$ 68,907	\$ 153,224	\$ 99,809	\$ 160,133	\$ 76,780	\$ 129,177	\$ -	\$ 1,147,268
2019 Service Fees	\$ 55,744	\$ 46,354	\$ 56,091	\$ 46,445	\$ 56,273	\$ 46,411	\$ 56,356	\$ 46,484	\$ -	\$ -	\$ -	\$ -	\$ 410,159
2018 Service Fees	\$ 56,999	\$ 43,875	\$ 57,130	\$ 43,906	\$ 57,211	\$ 43,952	\$ 55,964	\$ 46,469	\$ 55,888	\$ 46,461	\$ 55,903	\$ -	\$ 563,756
2019 Hyd Fees	\$ 1,550	\$ 250	\$ 1,550	\$ 250	\$ 1,550	\$ 250	\$ 1,550	\$ 250	\$ -	\$ -	\$ -	\$ -	\$ 7,200
2019 DC Fees	\$ 11,593	\$ 3,695	\$ 11,593	\$ 3,695	\$ 11,566	\$ 3,695	\$ 11,593	\$ 3,695	\$ -	\$ -	\$ -	\$ -	\$ 61,123
2019 System Revenues	\$ 173,426	\$ 101,887	\$ 150,184	\$ 105,175	\$ 187,034	\$ 113,012	\$ 195,039	\$ 135,627	\$ -	\$ -	\$ -	\$ -	\$ 1,161,383



La Puente Valley County Water District

PRODUCTION REPORT - AUGUST 2019

LPVCWD PRODUCTION	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2019 YTD	2018
Well No. 2	0.59	110.18	190.45	184.36	189.14	184.54	190.78	190.49					1240.53	153.22
Well No. 3	0.41	34.02	132.68	131.16	146.37	123.13	137.14	137.52					842.41	54.67
Well No. 5	339.29	85.71	0.00	0.00	0.00	0.00	0.00	0.00					424.99	3463.77
Interconnections to LPVCWD	2.22	0.89	2.40	1.23	2.34	16.88	32.70	30.57					89.23	47.93
Subtotal	342.51	230.79	325.53	316.75	337.85	324.54	360.62	358.58	0.00	0.00	0.00	0.00	2597.17	3719.59
Interconnections to SWS	226.10	149.84	220.43	150.30	168.59	143.71	192.38	185.34					1436.67	2108.97
Interconnections to COI	1.18	9.85	1.83	25.51	40.40	37.97	4.87	5.89					127.50	23.23
Interconnections to Others	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00	0.00
Subtotal	227.28	159.69	222.26	175.81	208.99	181.68	197.25	191.23	0.00	0.00	0.00	0.00	1564.17	2132.20
Total Production for LPVCWD	115.23	71.10	103.27	140.94	128.87	142.87	163.37	167.35	0.00	0.00	0.00	0.00	1033.00	1587.39
CIWS PRODUCTION														
COI Well No. 5 To SGVCW B5	133.72	115.34	118.01	16.99	0.00	78.13	187.64	166.98					816.81	1571.94
Interconnections to CIWS														
SGVWC Salt Lake Ave	1.03	0.84	1.00	1.04	1.04	1.19	1.27	1.13					8.54	9.98
SGVWC Lomitas Ave	81.85	60.65	75.47	77.45	54.18	89.72	158.31	160.26					757.89	1317.18
SGVWC Workman Mill Rd	0.02	0.20	0.01	0.03	0.07	0.04	0.00	0.00					0.37	0.69
Interconnections from LPVCWD	1.18	9.85	1.83	25.51	40.40	37.97	4.87	5.89					127.50	23.23
Subtotal	84.08	71.54	78.31	104.03	95.69	128.92	164.45	167.28	0.00	0.00	0.00	0.00	894.30	1351.08
Interconnections to LPVCWD	2.22	0.89	2.40	1.23	2.34	16.88	32.70	30.57					89.23	47.75
Total Production for CIWS	81.86	70.65	75.91	102.80	93.35	112.04	131.75	136.71	0.00	0.00	0.00	0.00	805.07	1303.33

La Puente Valley County Water District - Water System Demand Comparison

Month	2013	2019	Difference 2019-2013 (%)	Accumulative Difference (%)
January	115.58	115.23	-0.3%	-0.3%
February	112.08	71.10	-36.6%	-18.2%
March	135.08	103.27	-23.5%	-20.2%
April	153.73	140.94	-8.3%	-16.6%
May	174.40	128.87	-26.1%	-19.0%
June	185.13	142.87	-22.8%	-19.8%
July	204.48	163.37	-20.1%	-19.9%
August	201.38	198.04	-1.7%	-17.0%
Totals	1281.86	1063.69		

City of Industry Waterworks - Water System Demand Comparison

Month	2013	2019	Difference 2019-2013 (%)	Accumulative Difference (%)
January	90.55	81.86	-9.6%	-9.6%
February	81.62	70.65	-13.4%	-11.4%
March	99.4	75.91	-23.6%	-15.9%
April	115.82	102.80	-11.2%	-14.5%
May	147.93	93.35	-36.9%	-20.7%
June	152.60	112.04	-26.6%	-22.0%
July	141.36	131.75	-6.8%	-19.4%
August	153.97	136.71	-11.2%	-18.1%
Totals	983.25	805.07		

Production data shown in acre feet (AF)

STAFF REPORT



Meeting Date: September 16, 2019

To: Honorable Board of Directors

Subject: Consideration of Proposal from Geosyntec Consultants to Prepare a Technical Memorandum to Evaluate Groundwater Nitrate Removal Treatment Systems

Purpose - *To secure professional engineering services to prepare a technical memorandum to evaluate groundwater treatment systems for Nitrate removal at the LPVCWD Treatment Facility.*

Recommendation - *Authorize the General Manager to enter into a professional services agreement with Geosyntec Consultants (Geosyntec) for the preparation of a technical memorandum to evaluate groundwater treatment systems for Nitrate removal at the LPVCWD Treatment Facility, for an amount not to exceed \$72,600.*

Fiscal Impact - *The District's 2019 Capital Improvement Budget appropriates \$85,000 to complete a preliminary design report for the addition of a Nitrate treatment system at the District's Groundwater Treatment Facility. The 2019 year to date total for this expense category is \$20,000. The cost of \$72,600 for the technical memorandum by Geosyntec exceeds the budget appropriation by \$6,600.*

Background

During Summer of 2018, the District's Nitrate levels where on an abnormal increasing trend that resulted in average treated water near 80% of the 10 mg/l Maximum Contaminant Level (MCL) for Nitrate. LPVCWD formally advised (through a memorandum) Suburban Water Systems (SWS) and the BPOU stakeholders on August 31, 2018, that treated water from the LPVCWD Treatment Facility may continue to be at or slightly above 8 mg/l. In response to the LPVCWD memorandum, SWS sent a letter on September 12, 2018, to the BPOU Distribution list advising that they would not accept water that exceeds 80% of the MCL from LPVCWD's Treatment Facility. At that time, basin levels in the Main San Gabriel Basin were at an all-time low. Specifically, during the month of November 2018, the key well water level was measured at a historic low of 169.4 ft asl.

In December of 2018, staff procured qualifications from 3 firms with respect to completing a preliminary design report (PDR) of a groundwater treatment system. Shortly after receiving the qualification packages, a Request for Proposal (RFP) from these firms was requested by staff. After review of the submitted proposals (and amounts), and discussions with the Cooperating Respondents (CR's) with respect to funding, staff and the CR's mutually concluded that a funding agreement would be the best path forward to fund Nitrate treatment at our Treatment Facility. As a result of this new path forward, staff de-scoped the original RFP from a PDR to a technical

memorandum (TM) and procured a proposal from Geosyntec Consultants for a TM. In addition, on July 22, 2019, the Board approved the groundwater hydraulic modeling evaluation by Stetson Engineer's for an amount not to exceed \$20,000. The results from this groundwater modeling evaluation will identify what the District's wellfield concentration of Nitrate may be in 30 years.

Summary

As the Board is aware, Geosyntec Consultants (Geosyntec) is the consulting Engineer for Northrop Grumman with respect to the Puente Valley Operable Unit Interim Remedy (PVOU IZ). They have experience with past feasibility analysis, design, permitting, and construction services for the groundwater extraction and treatment systems in the San Gabriel Valley Superfund Site, particularly PVOU and El Monte Operable Unit (EMOU). Geosyntec is uniquely qualified to perform groundwater treatment evaluations for Nitrate removal provided the existing working relationships and credibility with the stakeholders of the BPOU project and with the PVOU IZ project. To support the advancement of the District's Nitrate Treatment System Project, staff requested a proposal from Geosyntec to evaluate three different treatment technologies for Nitrate removal at the District's Wellfield.

Staff worked with Geosyntec to refine the proposal to ensure that only feasible treatment technologies would be evaluated to meet the District's need. With that said, the only treatment systems that will be evaluated in the TM is (1) Nitrate specific regenerable ion exchange system by Evoqua Treatment Technologies, (2) retrofitting the existing ion separator (ISEP) by Calgon, and (3) a second Nitrate selective regenerable ion exchange system.

The overall objective of the TM is to screen Nitrate treatment technologies, develop a basis of treatment selection criterion and identify treatment options, and then document the results of the evaluation and identify the top-ranking approach as recommended by Geosyntec. In summary, the TM will include:

- Siting and Layout: a preliminary site plan/layout will be provided to conceptually present the layout/location of the selected treatment system in the Treatment Facility;
- Implementation considerations including discussions on constructability;
- Description of O&M demands, including, but not limited to, waste stream handling and availability of disposal methods, regeneration requirements (for IX), chemical use, and operator training and certification;
- DDW permitting requirements: a flowchart will be provided to present the overall procedure for obtaining permit from DDW for implementing the Nitrate treatment system in the Treatment Facility. The flowchart will assume that the 97-005 process is not required, per the RFP;
- CEQA permitting requirements;
- Pre-design opinion of estimated capital and annual O&M costs; and
- Grant/loan analysis: a general overview of up to three potential grant/loan options available to LPVCWD for consideration for the new Nitrate treatment system.

During the effort of drafting this TM, staff will also provide the results of the groundwater hydraulic modeling evaluation by Stetson Engineer's. Having this information is critical in the evaluation process

to adequately compare the effectiveness of the three treatment technologies provided that certain Nitrate removal technologies may be much more effective and cost efficient at different Nitrate concentrations. Based on the proposed schedule from Geosyntec, it is anticipated that a final draft of the TM will be provided by late 2019 or early 2020.

Recommendation

Staff recommends that the Board authorize the General Manager to proceed with the preparation of a technical memorandum to evaluate groundwater treatment systems for Nitrate removal at the LPVCWD Treatment Facility, as proposed by Geosyntec Consultants (Geosyntec), for an amount not to exceed \$72,600.

Fiscal Impact

The District's 2019 Capital Improvement Budget appropriates \$85,000 to complete a preliminary design report for the addition of a Nitrate treatment system at the District's Groundwater Treatment Facility. The 2019 year to date total for this expense category is \$20,000. The cost of \$72,600 for the technical memorandum by Geosyntec exceeds the budget appropriation by \$6,600.

Respectfully Submitted,

Roy Frausto

Engineering & Compliance Manager

Enclosure(s)

- *Proposal from Geosyntec for a technical memorandum to evaluate groundwater treatment systems for Nitrate removal at the LPVCWD Treatment Facility.*

proposal

LA PUENTE VALLEY COUNTY WATER DISTRICT
Technical Memorandum of a Groundwater
Nitrate Removal Treatment System
August 30, 2019 (Revised September 11, 2019)



Prepared by:

Geosyntec 
consultants

Prepared for:



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I. LETTER OF TRANSMITTAL

Geosyntec Consultants, Inc.
2100 Main Street, Suite 150
Huntington Beach, CA 92648
P 714-969-0800
F 714-969-0820
www.geosyntec.com

September 11, 2019

Roy Frausto, Engineering & Compliance Manager
La Puente Valley County Water District
112 N. First Street
La Puente, California 91744

Re: Proposal for Technical Memorandum of a Groundwater Nitrate Removal Treatment System

Dear Mr. Frausto:

The La Puente Valley County Water District (LPVCWD) is seeking a consultant to provide professional services to for preparing a technical memorandum (TM) to evaluate groundwater treatment systems for nitrate removal at the LPVCWD Treatment Facility (Treatment Facility). The Treatment Facility is part of the Baldwin Park Operable Unit (BPOU) within the San Gabriel Valley Superfund Site. Geosyntec Consultants, Inc. (Geosyntec) is a specialized consulting and engineering firm that works with public and private sector clients to address their new ventures and complex problems involving the environment, natural resources, and the civil infrastructure.

As described in the enclosed Response to Request for Proposal (RFP), LPVCWD will benefit from our team's multi-faceted strengths, including:

- Experience with past feasibility analysis, design, permitting, and construction services for the groundwater extraction and treatment systems in the San Gabriel Valley Superfund Site, particularly the Puente Valley Operable Unit (PVOU) and El Monte Operable Unit (EMOU);
- Strong working relationships and credibility with the stakeholders of the LPVCWD Treatment Facility, including the various federal, state, and regional oversight agencies and the BPOU Cooperating Respondents;
- Experience in evaluating, designing, and incorporating ion exchange systems in complex treatment trains in large-scale groundwater extraction and treatment systems for contaminants including nitrate, perchlorate, and hexavalent chromium;
- Track record in delivering similar projects related to potable water quality assessment, feasibility studies, engineering design, permitting, construction, construction oversight, and pre- and post-construction monitoring and operations under accelerated schedules; and
- An existing consultant to LPVCWD with experience and knowledge of working with LPVCWD and meeting the standards for being responsive and providing high quality products.

We understand LPVCWD's objectives and commit the resources needed to successfully complete the project.

Geosyntec's taxpayer ID is as Federal: 59-2355134 and State: 358-2608. The proposal and cost schedule will be valid and binding for ninety (90) days following the proposal due date and will become part of the contract negotiated with District for the term of the contract.

Sincerely,

Geosyntec Consultants, Inc.



Brian Petty, PE

Senior Principal & Authorized Signatory
BPetty@Geosyntec.com
714-465-1213



Hamid Amini, PhD, PE

Senior Engineer/Project Director
HAMini@Geosyntec.com
714-465-1261

II. PROPOSAL



II-1. Proposal Summary

La Puente Valley County Water District's (LPVCWD's or District's) mission is to provide high quality water for residential, commercial, industrial and fire protection uses that meets or exceeds all local, state and federal standards. LPVCWD currently operates in an area that encompasses approximately 1,600 acres and 2,500 water service connections. The main source of supply of LPVCWD is from three groundwater wells that produce water from the adjudicated Main San Gabriel Basin. Under the Baldwin Park Operable Unit Project Agreement (BPOU), entered by the District and parties potentially responsible for the groundwater contamination known as the Cooperating Respondents (CRs). The water from the District's wellfield is treated for contaminants including volatile organic compounds (VOCs), perchlorate, N-Nitrosodimethylamine (NDMA), and 1,4-dioxane at the Treatment Facility at 1695 Puente Ave, Baldwin Park, California, before it enters LPVCWD's service area. The treated groundwater meets State and Federal drinking water regulations.

Per the Request for Proposal (RFP) issued by LPVCWD, the nitrate concentrations in the source water have been gradually increasing, nearing or exceeding 80% of its Maximum Contaminant Level (MCL) of 10 milligrams per liter (mg/L) as nitrogen (N). No or very minimal nitrate removal has been observed by the existing treatment processes at the Treatment Facility.

Consequently, LPVCWD is seeking a consultant to provide professional engineering services for preparing a technical memorandum (TM) to evaluate groundwater treatment systems for Nitrate removal at the LPVCWD's Treatment Facility.

This service would include the following scope of work items:

- Screening and evaluation of cost-effective nitrate removal technologies from groundwater that are accepted by the California State Water Resources Control Board Division of Drinking Water (DDW) and/or other drinking water regulatory bodies;
- Development of an evaluation criterion to rank the treatment technologies and systems under the guidance of District personnel;
- Scoring and ranking of the treatment technologies and systems in accordance to feasibility, operational complexity, cost and other parameters developed in the evaluation criterion; and
- Preparation of a TM documenting the evaluation process above and describing the basis for the selected approach.

Per the RFP, the nitrate treatment technologies and systems evaluated must meet the following requirements:

- Influent flow rate of 2,500 gallons per minute (gpm);
- Effluent quality of nitrate concentration at less than 7.8 milligram per liter (mg/L); and
- Meet LPVCWD's requirements for other target contaminants.

Geosyntec Consultants (Geosyntec), has assembled a team with extensive experience in evaluating and implementing similar groundwater treatment systems, including systems for nitrate removal, and with familiarity with the particular local, regulatory settings in the San Gabriel Valley Superfund Site. Our proposed team includes the same key members of the team that successfully designed the Puente Valley Operable Unit (PVOU) Interim Remedy treatment system, whose experience and qualifications are described in the details below. The team has a proven track record in providing the engineering services that LPVCWD needs for this project and the potential future detailed design and implementation, from data analysis and technology evaluation to permitting, engineering, and final implementation of the future treatment system, as needed. Our enclosed project descriptions demonstrate our wide range of services and capabilities in project delivery under challenging conditions.

For this particular project, Geosyntec understands LPVCWD's needs for an **accelerated schedule** and assistance in **managing complex technical and regulatory problems** with a **clear path forward**. We plan to meet LPVCWD's desired schedule by committing and front-loading of our resources to prepare early work product in an expedited manner and by sequencing the work components based on the critical path. Due to the local presence of our team, we commit to being available and responsive to LPVCWD at all times. The project team includes seasoned professionals who assist clients in navigating through challenging constraints to meet project goals daily. Working together, the Geosyntec team can develop the most **cost-effective and practical solutions** for LPVCWD.

Finally, Geosyntec has an existing working relationships and credibility with the stakeholders of the BPOU project and is **already a consultant to LPVCWD**. Thus, we have high interest in pursuing this Project and making it a success story for LPVCWD and the local community.

II-2. Approach

According to the RFP, the Treatment Facility's current flow capacity is approximately 2,500 gpm. The District utilizes Well No. 5 as the primary source of water to the Treatment Facility with Wells 2 and 3 used as backup sources. The main treatment processes at Treatment Facility include two air strippers for VOC removal, a Single Pass Ion Exchange (SPIX) treatment system for perchlorate removal consisting of four Ion Exchange (IX) vessels, an advanced oxidation process using UV light and hydrogen peroxide (UVTerra) to remove NDMA and 1,4-dioxane, and sodium hypochlorite disinfection. Per the RFP, nitrate levels in the three wells have increased since 2018 and the average concentrations in 2018 ranged from 7.0 to 8.4 mg/L. The average nitrate effluent concentration of the SPIX effluent was 7.7 mg/L, or just less than 80% of the MCL for nitrate, indicating minimal removal by the SPIX system.

The following sections of the proposal, which have been structured in accordance with the RFP, describe the proposed approaches to assisting LPVCWD in evaluating the nitrate treatment technologies and systems that meet the District's specific needs and regulatory requirements.

Task 1 – Project Kick-Off Meeting and Facility Visit

Geosyntec will conduct a 2-hour kick-off meeting with LPVCWD within approximately one week of the Notice to Proceed (NTP) to facilitate the communications between LPVCWD and the Geosyntec team. The kick-off meeting will be conducted at LPVCWD's office at 112 N. First Street, La Puente, California 91744. A preliminary list of nitrate treatment technologies will be proposed and reviewed at the meeting. Immediately following the kick-off meeting, Geosyntec will conduct a visit to the Treatment Facility. The goal of the Treatment Facility visit is to visually observe the existing treatment infrastructure, including its conditions, physical dimensions, existing constraints, and on-going operations, and obtain available record drawings, reports, studies, operational data, summaries of repairs, maintenance and upgrades, and/or other system information, as needed and made available by LPVCWD.

The kick-off meeting and Treatment Facility visit will be attended by two Geosyntec engineers in person, and up to two additional engineers will join the kick-off meeting via teleconference. The agenda for the kick-off meeting and a preliminary information/document request will be provided electronically to LPVCWD within three days of the NTP, but at least one full workday in advance of the meeting. Within one working day of the kick-off meeting, Geosyntec will prepare and submit the meeting minutes.

Other anticipated meetings (described under following tasks, see below) include:

- First Alternatives Evaluation Review Meeting (Alternatives Review Meeting 1, per Task 3);
- Second Alternatives Evaluation Review Meeting (Alternatives Review Meeting 2, per Task 3); and
- TM Review Meeting to facilitate LPVCWD's review (TM Review Meeting, under Task 4).

For each meeting an agenda will be developed and provided electronically at least one workday in advance. After each meeting is conducted, summary notes/meeting minutes will be prepared and submitted electronically one working day after the meeting.

Task 2 – Screening of Nitrate Treatment Technologies

DDW's nitrate fact sheet (published in 2017) lists distillation, reverse osmosis (RO), IX, electro dialysis, and biological treatment as effective treatment technologies for nitrate removal. LPVCWD has already conducted extensive studies on nitrate treatment technologies. Based on the RFP and communications with LPVCWD, biological treatment, RO, and electro dialysis were ruled out as alternatives for screening and evaluation. Factoring in the District's preference and information provided in the RFP, the preliminary list of technologies for the screening and evaluation include the following:

- Nitrate Specific Regenerable Ion Exchange System by Evoqua Treatment Technologies (identified by LPVCWD)
- Retrofitting the existing Ion Separator (ISEP) by Calgon (identified by LPVCWD)
- A second nitrate selective regenerable IX system (to be proposed)

Geosyntec will present an overview of the nitrate treatment technologies above in the kick-off meeting (See Task 1). We anticipate that during or shortly after the kick-off meeting, LPVCWD will provide feedback finalize the list of treatment technologies (up to three technologies) for further analysis in Task 3. The decision will be documented by an email no later than one week following the kick-off meeting.

Task 3 – Develop Basis of Treatment Selection Criterion & Identify Treatment Options

After the selection of treatment technologies/system for scoring and ranking is completed in Task 2, in coordination with the District, Geosyntec will develop the key criterion upon which the treatment systems and approaches will be evaluated and selected for future implementation.

Per the RFP, the expected range of influent nitrate concentration is expected to be from 8 – 15 mg/l throughout the next 30 years. The selected treatment technology/system must be able to reliably and consistently remove nitrate from the groundwater to (or less than) 7.8 mg/L. The selected nitrate treatment process must not interfere with the existing processes treating VOCs, perchlorate, NDMA, and 1,4-dioxane, and when integrated into the existing Treatment Facility, must produce an effluent that continues to meet the applicable Federal and State drinking water standards. The treatment system must be able to handle at least 2,500 gpm, the capacity of the existing Treatment Facility. It is understood that an electrical analysis has been performed which indicated that the current electrical service can accommodate a new/additional nitrate treatment system.

Geosyntec will develop a ranking system for evaluating the selected treatment systems and approaches. The ranking system will include the criterion relevant and critical to local conditions and the District's requirements. The list of criterion will be incorporated into a scoring system to rank the viable treatment systems and approaches. Additionally, Geosyntec develop a framework for further analyzing and highlighting the advantages and disadvantages of the top two selected approaches and strategies and help the District to identify consequences and effort required for further implementation of the nitrate treatment system. Engineering analysis will include the effects of proposed improvements on existing treatment processes and treated water quality.

At the minimum, the following qualitative evaluations will be included for the ranking of each respective treatment system:

- Needs for pre-treatment and post-treatment;
- Water recovery;
- Generation, management, and disposal of liquid and/or solid waste streams;
- Chemical use;
- Operator skill level and certification requirements;
- Advantages and disadvantages; and
- Opinion of estimated capital and annual operation and maintenance (O&M) costs.

The task will be conducted in the following two steps, with each step followed by an in-person review meeting at the LPVCWD's office.

Step 1: Formulation of alternative evaluation criterion and weight assignment in scoring system:

The treatment technologies/systems selected for evaluation, evaluation criterion, and scoring weights will be discussed and refined with LPVCWD in the Alternatives Review Meeting 1. LPVCWD will provide feedback/approval on the evaluation criterion and scoring weights by the end of the meeting.

Step 2: Performing and presenting the results of the evaluation and ranking:

After LPVCWD's approval of the evaluation criterion and scoring system, Geosyntec will perform the evaluation of the selected treatment technologies/system and ranking. The results will be presented in the Alternatives Review Meeting 2. The meeting will focus on the top two ranked technologies/systems, including a detailed description of advantages and disadvantages for each of them.

Task 4 – Technical Memorandum

Under this Task, Geosyntec will prepare a Technical Memorandum (TM). The purpose of the TM is to document the process and results of the evaluation of the nitrate treatment processes (Tasks 2 and 3), and to describe the treatment approach recommended by Geosyntec and selected by LPVCWD.

At the minimal, the TM will include the following information on the selected treatment approach:

- Modifications needed to existing treatment systems: a conceptual Process Flow Diagram (PFD) and Process and Instrumentation Diagram (P&ID) will be provided. It is assumed that modifications to the extraction wells are not necessary and that the electrical systems can handle the new nitrate treatment system (per the RFP);
- Siting and Layout: a preliminary site plan/layout will be provided to conceptual present the layout/location of the selected treatment system in the Treatment Facility;
- Implementation considerations including discussions on constructability;
- Description of O&M demands, including but not limited to waste stream handling and availability of disposal methods, regeneration requirements (for IX), chemical use, and operator training and certification;

- DDW permitting requirements: a flowchart will be provided to present the overall procedure for obtaining permit from DDW for implementing the nitrate treatment system in the Treatment Facility. The flowchart will assume that the 97-005 process is not required, per the RFP;
- CEQA permitting requirements;
- Pre-design opinion of estimated capital and annual O&M costs; and
- Grant/loan analysis: a general overview of up to three potential grant/loan options available to LPVCWD for consideration for the new nitrate treatment system.

Geosyntec proposes to conduct an in-person at meeting LPVCWD's office approximately one week after the submittal of the draft TM to facilitate LPVCWD's review. Geosyntec will incorporate LPVCWD's review comments provided during the meeting and in writing during the review period and prepare a final TM to the District. One round of revision will be provided.

II-3. Positioning for Scope of Work

LPVCWD will benefit from Geosyntec's effective and efficient approach to executing this project, which will be based on our understanding of LPVCWD's needs and elements of our project plan that include:

- Collaborative processes that integrate LPVCWD's technical and strategic feedback throughout the project;
- Front-loading of resources to prepare early work product in an expedited manner, thereby allowing time for detailed review and discussions when the most significant decisions are being made in Task 3;
- Routine communications that facilitate decision-making; and
- Structured project meetings that will provide LPVCWD with confidence in the project outcome by including recurring agenda items addressing technical analyses and recommendations, draft/final deliverable review and planning, and project budget and schedule controls.

Of particular note in our project plan, is that we intend to begin developing the preliminary list of nitrate treatment technologies upon receipt of NTP and present them during the kick-off meeting to afford LPVCWD with early input into the selection of treatment processes. By initiating this task early in the project, our proposed schedule conforms to LPVCWD's RFP requirements and allows for appropriate time for LPVCWD's review and discussion regarding the contents of the TM.

Table II-3. Relevant Experience to Scope of Work

The following matrix of expertise presents a general overview of our team’s experience as it related to the scope of this Project. Supporting the core team members and technical experts is a group of over 200 engineers and scientists in southern California, which we will bring to bear along with key Geosyntec experts worldwide.

Table II-3	Years of Experience	RELEVANT EXPERIENCE TO SCOPE OF WORK								
		NITRATE TREATMENT TECHNOLOGIES				Feasibility Studies / Treatability Testing	Engineering & Design	Drinking Water Permitting Support	LPVCWD	Other Stakeholders & Regulatory Agencies
		Ion Exchange	Reverse Osmosis	Electrodialysis	Biological Treatment					
Brian Petty, PE Senior Advisor Design Implementation	18	●	●		●	●	●	●	●	●
Kirk Craig, PE Senior Advisor Treatment Process	23	●	●		●	●	●	●	●	●
Hamid Amini, PhD, PE Project Director	16	●	●	●	●	●	●	●	●	●
Chao Zhou, PE Project Manager	10	●	●	●	●	●	●	●		●
David Oliver, CCM Constructability Advisor	35	●	●			●	●	●		●

II-4. Client References

Below are Geosyntec's client references for whom similar services have been provided within the past four years. We have also provided detailed descriptions of these relevant projects in **Appendix A** of this proposal.

1. Client Name	Northrop Grumman - Puente Valley Operable Unit		
Client Project Manager	James L'Esperance	Phone:	(310) 332-9348
Client Address	101 Continental Boulevard, El Segundo, CA 90245		
Staff assigned to reference engagement that will be designated to work on this RFQ	Brian Petty, PE Kirk Craig, PE Hamid Amini, PhD, PE	E-mail:	James.L'Esperance@ngc.com
Project Dates	Start date: July 2015	Completion date:	On-going
Project Description	The Puente Valley Operable Unit (PVOU) is a Superfund site in the San Gabriel Basin, with deep groundwater impacts that are being addressed through an extraction and treatment system that will supply the treated groundwater for potable use. Geosyntec assisted the client with data analysis; prepared detailed groundwater models; designed the extraction, conveyance, and treatment system; and managed the construction of multiple pipeline segments installed on an expedited schedule. Geosyntec is also assisting the Client on various permitting tasks as well as bid support and equipment procurement. The project is being implemented in coordination with La Puente County Valley Water District and under the oversight of the United States Environmental Protection Agency, DDW, and numerous local agencies and stakeholders. The extracted groundwater contains about 10 mg/L of nitrate, which will be treated to under 8 mg/L by reverse osmosis.		
Number of Users	~8,000 residents		

2. Client Name	City of El Monte - El Monte Operable Unit		
Client Project Manager	Mike Rodriguez	Phone:	(626) 580-2250
Client Address	11333 Valley Boulevard, El Monte, CA 91731		
Staff assigned to reference engagement that will be designated to work on this RFQ	Brian Petty, PE David Oliver, CCM	E-mail:	mrodriguez@elmonteca.gov
Project Dates	Start date: April 2017	Completion date:	On-going
Project Description	Design, construction management, community outreach, and permitting services on the El Monte Operable Unit Superfund site. Recently, Geosyntec successfully completed the construction of the pumping, conveyance, and treatment systems for both the shallow and deep groundwater zones. The treated water from the deep zone will be supplied as drinking water to the City of El Monte water system.		

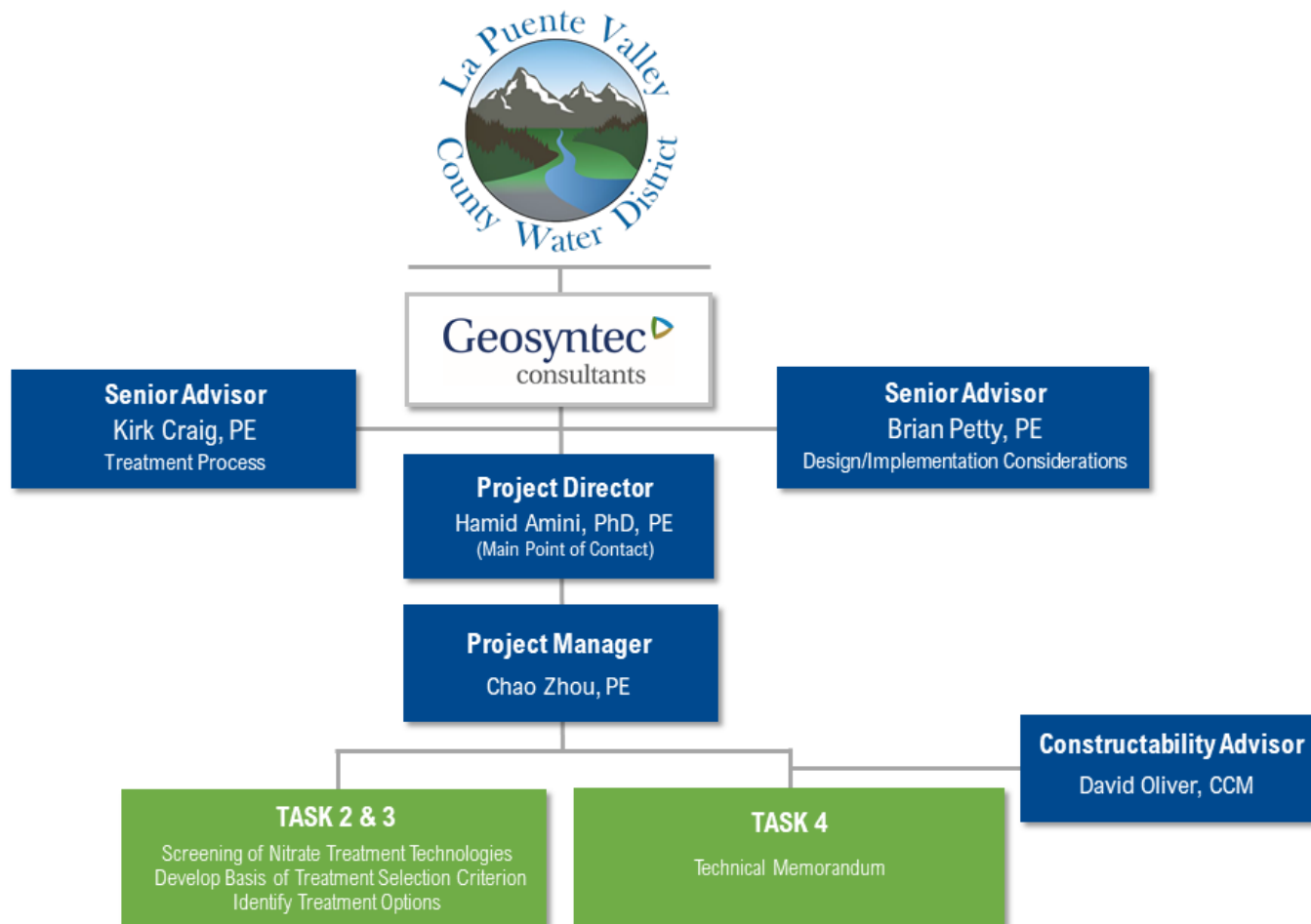
3. Client Name	Southern California Edison – Catalina Island Water Utility		
Client Project Manager	David Van Horsen	Phone:	(213) 663-9959
Client Address	2244 Walnut Grove Ave, Rosemead, CA 91770		
Staff assigned to reference engagement that will be designated to work on this RFQ	Brian Petty, PE Hamid Amini, PhD, PE Chou Zhou, PE	E-mail:	davidmvh78@gmail.com
Project Dates	Start date: September 2014	Completion date:	September 2017
Project Description	As the water utility for Catalina Island, Southern California Edison was facing historic drought conditions and needed to address aging water treatment, storage, and conveyance infrastructure. Geosyntec assisted Edison by modeling water quality conditions, designing new treatment systems to address organic and inorganic constituents, developing plans for upgrading water storage and distribution systems, and rapidly bringing new water sources on-line consistent with California Division of Drinking Water (DDW) requirements.		
Number of Users	~4,000 year-round residents and over 700,000 visitors		

II-5. Staffing Resources

Geosyntec’s water treatment experts have extensive experience with municipal projects and treatment methods for drinking water supply projects. We provide municipal and private clients with access to a broad range of technical expertise and services related to water quality assessments, feasibility studies, engineering design, permitting, construction support, and pre- and post-construction monitoring and operations.

II-5a. Team Structure Organizational Chart

Our proposed organization chart depicting our key project team members is shown below. The structure of our project team has been developed to clearly identify our **Single Point of Contact/Project Director, Dr. Hamid Amini, PE, and Project Manager, Chao Zhou**. These leads will be heavily leveraged by the efficiency of work performed by other senior, mid-level, and junior staff. Short biographies introducing our key project leaders are provided in the following **Section II-5b** and we have included their full resumes in **Appendix B**.



11-5b. Key Staff Bios



Huntington Beach,
California Office

Brian Petty, PE – Senior Advisor Design/Implementation Considerations

Mr. Petty is a Senior Principal chemical and civil engineer with 18 years of professional engineering experience. Mr. Petty manages Geosyntec Consultant's Huntington Beach operations and leads Geosyntec's nationwide process engineering practice group. Mr. Petty is the Geosyntec team's senior advisor for planning, organizing, leading, and controlling the project and regularly communicating project status updates to LPVCWD. As part of his process engineering and water system experience, Mr. Petty has designed, implemented, and operated numerous water production, conveyance, and treatment systems. Mr. Petty also has extensive experience in conducting treatability studies, preparing detailed cost analyses, and performance and compliance monitoring.



San Diego,
California Office

Kirk Craig, PE – Senior Advisor Treatment Process

Mr. Craig is a Senior Principal at Geosyntec with over 23 years of professional engineering experience. He has overseen operations and activities associated with the assessment and remediation of a variety of sites throughout the United States. His expertise includes optimization, design, construction, and operation of a variety of remediation technologies including pump and treat, multi-phase extraction, soil vapor extraction, air/bio/ozone sparging, and groundwater hydraulic containment. He also designed ventilation and vapor phase treatment systems such as sub-floor aeration, granular activated carbon, packed bed scrubbers, and thermal oxidizers.



Huntington Beach,
California Office

Hamid Amini, PhD, PE – Project Director (Main Point of Contact)

Dr. Amini is a Senior Engineer at Geosyntec with over 16 years of experience in design and construction. He has served as Project Manager or Assistant Project Manager on several feasibility studies, treatability testing, design, and construction support/oversight of potable water, wastewater, and stormwater projects in the Western US. Dr. Amini also has experience in permitting support, compliance monitoring, energy sustainability studies, and construction quality assurance services. Dr. Amini managed the design of the PVOU Interim Remedy, with extensive collaboration with LPVCWD. Dr. Amini is part of the proposed Project Management Team and will be Geosyntec's single point of contact with the LPVCWD.



Huntington Beach,
California Office

Chao Zhou, PE – Project Manager

Mr. Zhou is a Project Engineer in the Process Engineering Group of Geosyntec Consultants with over 10 years of research and professional engineering experience in drinking water treatment. He managed the Catalina Island drinking water treatment system feasibility study project. Mr. Zhou specializes in the evaluations of water and wastewater treatment technologies (physical/chemical and biological), feasibility studies, treatability studies, and process design. Mr. Zhou will be part of the proposed Project Management Team and serve as the project manager.



Santa Barbara,
California Office

David Oliver, CCM – Constructability Advisor

Mr. Oliver is a Senior Construction Manager at Geosyntec with over 35 years of experience in general construction, design build/value engineering, and design review for constructability. He is currently serving as the Construction Manager at El Monte Operable Unit and manages construction and general construction for the groundwater remediation pipeline and treatment system installation. His overall experience includes: projects in public utilities, soil and groundwater remediation, negotiating and coordinating with regulatory agencies, design and construction services for groundwater, leachate, and semi-conductor manufacturer wastewater treatment systems, building demolition, excavation and disposal of PCBs, VOC- and hydrocarbon-laden soils; installation of underground utility systems, mechanical and electrical system installation, and building construction. Mr. Oliver will utilize his extensive construction management experience as part of the Advisory Team and serve as Constructability Advisor for the LPVCWD project.

II-6. First Tier Subcontractors

Due to the wide range of professional services that we can provide, Geosyntec can be LPVCWD's one-stop-shop for this important and interesting Project, from data analysis and feasibility studies, to treatment screening, and engineering design. Currently, we do not anticipate needing subcontractors for performing the proposed scope of work.

II-7. Conflicts of Interest

Geosyntec has investigated potential conflicts of interest related to this scope of work. As the District is aware, Geosyntec is actively performing work in the BPOU on water quality analysis and groundwater modeling on behalf of the BPOU CRs. However, Geosyntec has been given permission by the CRs to work on the nitrate treatment project for LPVCWD. Furthermore, none of the team members we proposed is working for the CRs in the BPOU. Therefore, we declare no conflicts of interest that would prohibit us from performing scope of work described herein.

II-8. Project Schedule

The preliminary project schedule is presented in the below table. This preliminary project schedule is prepared based on the guidelines and scope of work presented in the RFP and this proposal. Geosyntec will collaborate with LPVCWD to identify potential tasks/subtasks that could be accelerated. The proposed schedule assumes that the NTP will be received in the third week of September. Based on this schedule, the TM is expected to be finalized by November 30, 2019.

TABLE II-8: PRELIMINARY PROJECT SCHEDULE

NO.	TASK	MONTH											
		SEP 2019				OCT 2019				NOV 2019			
	DESCRIPTION												
	Notice to Proceed			■									
1	Kick-off Meeting/Facility Visit				■								
2	Screening of Nitrate Treatment Technologies			■	■								
3	Formulation of evaluation criterion and weight assignment in scoring system				■	■							
	Alternatives Review Meeting 1						■						
	Performing Evaluation & Ranking						■	■					
	Alternatives Review Meeting 2							■					
4	Preparing Draft TM							■	■	■			
	Draft TM Review Meeting										■		
	LPVCWD Review of Draft TM									■	■	■	■
	Finalizing TM												■

* Each task presents a schedule-driven milestone

III. COST OF SERVICES

Geosyntec proposes to perform the work on a time and material basis in accordance to our Master Service Agreement with LPVCWD dated June 13, 2018 with a not-to-exceed amount of \$72,600. The cost breakdown by task and rate schedule are presented below. We have provided a copy of our current MSA with LPVCWD in **Appendix C**.

TABLE III-A: COST ESTIMATE BREAKDOWN BY TASK

LABOR SUMMARY	2019 RATE	TASK 1		TASK 2		TASK 3		TASK 4		TOTAL	
		Kick-Off Meeting & Facility Visit		Screening of Treatment Technology		Develop Basis of Treatment Selection Criterion & Identify Treatment Options		Technical Memorandum			
		(HRS)	COST (\$)	(HRS)	COST (\$)	(HRS)	COST (\$)	(HRS)	COST (\$)	(HRS)	(COST (\$))
Senior Principal	\$256	4	\$1,024	2	\$512	6	\$1,536	6	\$1,536	18	\$4,608
Principal	\$236		\$0		\$0		\$0		\$0	0	\$0
Senior Professional	\$215	8	\$1,720	8	\$1,720	16	\$3,440	16	\$3,440	48	\$10,320
Project Professional	\$192	8	\$1,536	6	\$1,152	32	\$6,144	12	\$2,304	58	\$11,136
Professional	\$169		\$0		\$0		\$0		\$0	0	\$0
Senior Staff Professional	\$148		\$0	24	\$3,552	28	\$4,144	48	\$7,104	100	\$14,800
Staff Professional	\$128	8	\$1,024	24	\$3,072	60	\$7,680	64	\$8,192	156	\$19,968
Construction Manager II	\$124		\$0		\$0		\$0	8	\$992	8	\$992
Designer	\$138		\$0		\$0		\$0	48	\$6,624	48	\$6,624
Senior Drafter/Senior CADD	\$125		\$0		\$0		\$0		\$0	0	\$0
Drafter/CADD	\$114		\$0		\$0		\$0		\$0	0	\$0
Project Administrator	\$70	2	\$140		\$0	2	\$140	2	\$140	6	\$420
Clerical	\$56	1	\$56		\$0		\$0	2	\$112	3	\$168
LABOR SUBTOTAL		31	\$5,500	64	\$10,008	144	\$23,084	206	\$30,444	445	\$69,036
OTHER DIRECT COSTS											
Travel											
Geosyntec Field Vehicle	\$80	1	\$80		\$0	2	\$160	1	\$80	4	\$320
Meals & Incidentals	\$55	1	\$55		\$0	2	\$110	1	\$55	4	\$220
Computer applications	\$15		\$0		\$0		\$0	48	\$720	48	\$720
ODC SUBTOTAL			\$135		\$0		\$270		\$855		\$1,260
SUBCONTRACTOR MANAGEMENT COSTS & FEES											
Communication Fee (% of labor)	3%	\$5,500	\$165	\$10,008	\$300	\$23,084	\$693	\$30,444	\$913	\$69,036	\$2,071
Subcontractor/Vendor Management Costs (% of Subs Cost)	12%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Misc. Costs (% of ODC Cost)	12%	\$135	\$16	\$0	\$0	\$270	\$32	\$855	\$103	\$1,260	\$151
TOTAL:			\$5,816		\$10,308		\$24,079		\$32,315		\$72,600

CONFIDENTIAL

**GEOSYNTEC CONSULTANTS
2019 RATE SCHEDULE**

Staff Professional	\$128
Senior Staff Professional	\$148
Professional	\$169
Project Professional	\$192
Senior Professional	\$215
Principal	\$236
Senior Principal	\$256
Technician I	\$ 65
Technician II	\$ 71
Senior Technician I	\$ 78
Senior Technician II	\$ 85
Site Manager I	\$ 90
Site Manager II	\$100
Construction Manager I	\$114
Construction Manager II	\$124
Designer	\$138
Senior Drafter/Senior CADD Operator	\$ 125
Drafter/CADD Operator/Artist	\$ 114
Project Administrator	\$ 70
Clerical	\$ 56
Direct Expenses	Cost plus 12%
Subcontract Services	Cost plus 12%
Technology/Communications Fee	3% of Professional Fees
Specialized Computer Applications (per hour)	\$ 15
Personal Automobile (per mile)	Current Gov't Rate
Photocopies (per page)	\$.09

Rates are provided on a confidential basis and are client and project specific.
Unless otherwise agreed, rates will be adjusted annually based on a minimum of the Produce Price Index
for Engineering Services.

Rates for field equipment, health and safety equipment, and graphical supplies presented upon request.
Construction management fee presented upon request.

APPENDIX A – RELEVANT PROJECT EXPERIENCE

Puente Valley Operable Unit Intermediate Zone Interim Remedy – San Gabriel Valley, California

Client: Northrop Grumman Systems Corporation (NGSC)



Project Objective: NGSC was seeking to improve their working relationship with regulatory agencies, reduce and minimize business risk, and synthesize and integrate multiple contractors developing multiple remedies as part of the Puente Valley Operable Unit (PVOU) of the San Gabriel Valley Superfund Site located east of Los Angeles. Beyond the benefit of cleaning up contaminated groundwater, the treated water will create a valuable new potable water supply that will decrease the region's reliance on imported water. Among the numerous local, state and federal permitting requirements associated with this project, the design and operation of the treatment system requires permitting under the California Division of Drinking Water's 97-005 Policy because the end-use of the treatment is potable use. The San Gabriel Basin is adjudicated, so the project also requires approval from the Watermaster and local stakeholders.

Scope of Services: Geosyntec is the lead consultant for development of the groundwater model and charged with supervising, designing, and implementing the extraction and treatment of contaminated groundwater at the PVOU. The groundwater model is a key component of the remedy development and implementation; it is used for designing the remedy, evaluating remedy performance, performing assessment for the California Division of Drinking Water's 97-005 Policy and for approval from Watermaster. Geosyntec developed a three-dimensional groundwater model in FEFLOW, which extends over the entire San Gabriel Basin. The groundwater model includes all significant features that influence the groundwater flow at the regional scale; spreading basins used for water recharge, water supply wells screened in multiple layers, inflow and outflow at the Basin's boundaries, and rainfall recharge. One of the major features of this regional-scale model included simulating excess of 100 ft water level changes in the Basin due to multi-year climatic El Nino/La Nina cycles. The groundwater model was calibrated to multiple datasets, including 35-year water level data at the regional scale, and several pumping tests at the Site scale. The model is used for assessing well location and extraction rates for design of the pump and treat system, assessing groundwater capture zone and supporting assessment of raw water quality for the California Division of Drinking Water's 97-005 Policy.

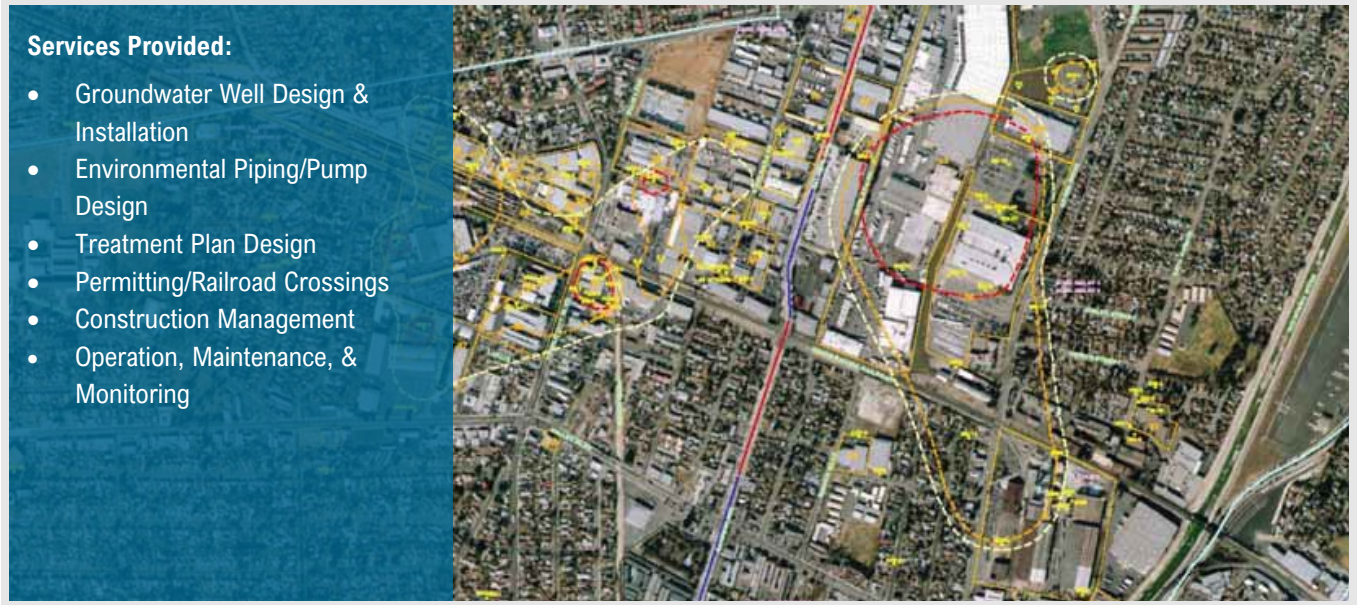
Notable Accomplishments: In its supervisory capacity, Geosyntec has effectively integrated multiple remedies into an overall PVOU strategy for Northrop Grumman, with consideration and incorporation of Northrop Grumman business and strategic interests. Geosyntec has reduced business risk by providing ongoing change management to minimize schedule impacts and associated cost increases; by defining opportunities for improved control over activities of the team, agencies, and contractors; and by aligning and distributing responsibilities to promote efficiency and limit redundancy of effort.

El Monte Operable Unit Groundwater Remedy – El Monte, California

Client: East Side Performing Settling Defendants (Multi-Party RP Group)

Services Provided:

- Groundwater Well Design & Installation
- Environmental Piping/Pump Design
- Treatment Plan Design
- Permitting/Railroad Crossings
- Construction Management
- Operation, Maintenance, & Monitoring



Site necessitated the design and construction of a pipeline collection network to deliver collected groundwater to the treatment plant.

Project Objective: The San Gabriel Basin has been the subject of environmental investigation since 1979 when groundwater contaminated with volatile organic compounds (VOCs) was first detected. In May 1984, four areas of groundwater contamination within the San Gabriel Valley were listed on the EPA National Priorities List. To address the groundwater impacts which had migrated to the drinking water aquifer, Geosyntec prepared robust groundwater models that were used to design groundwater pump-and-treat systems installed to contain further migration of the shallow zone impacts and test deeper zone impacts to drinking water standards. The project is being conducted under the oversight of EPA Region 9 and numerous state and local agencies. Geosyntec provided concept-to-completion services on the project including:

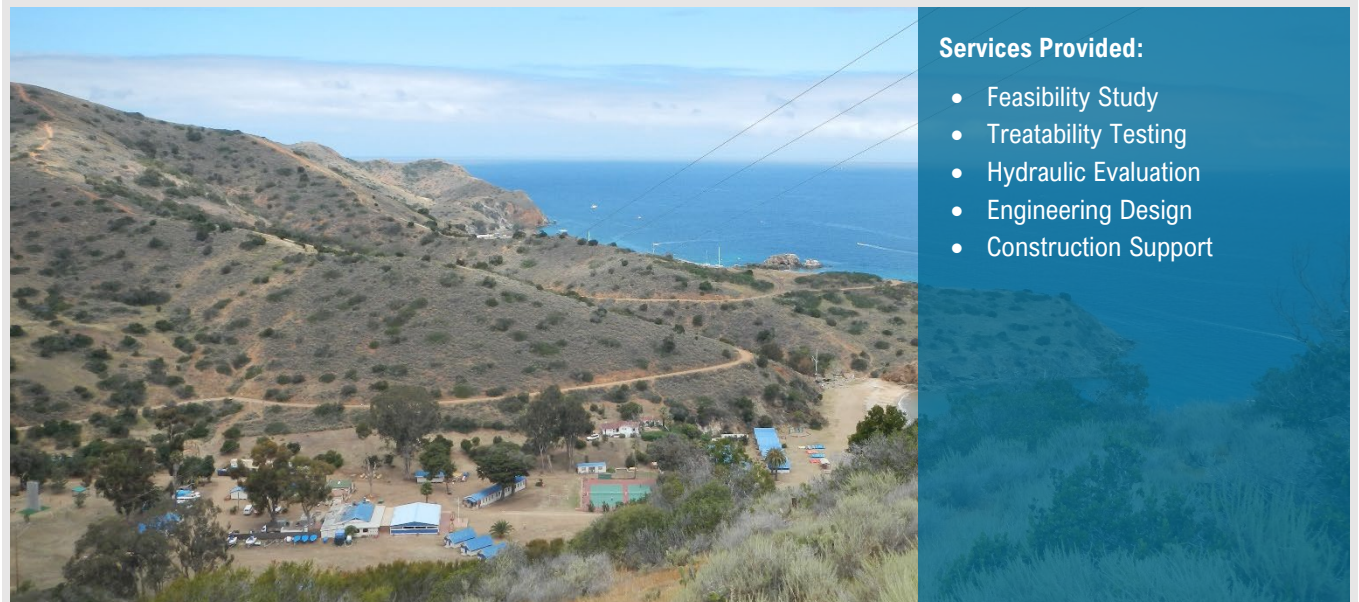
- | | | |
|---|---|------------------------------------|
| • Site Conceptual Model Preparation | • Extraction & Injection Well Design & Optimization | • Construction Management |
| • Site Characterization & Investigation | • Engineering Design | • Startup & Commissioning |
| • Groundwater Modeling | • Permitting & Compliance Monitoring | • Operation of Groundwater Systems |
| | | • Maintenance & Monitoring |

Scope of Services: Since 2006, Geosyntec has prepared detailed designs of the environmental infrastructure for the site which included the engineering design of the extraction and reinjection piping throughout. Due to the site's location, extensive surveying and investigation was required to design pipeline routes around existing utilities. The groundwater system includes over 9,500' of below-grade, double-walled, high-density polyethylene conveyance piping for the shallow system and over 10,000' of ductile iron piping for the deep system. Geosyntec prepared the design of the railroad crossing and suspended pipeline for the bridge crossing as part of the pipeline project. Detailed design drawings included preparation of plan and profile drawings; electrical and single line diagrams; civil, mechanical and structural details; as well as detailed specifications for procurement and installation. In addition, Geosyntec designed the treatment plant and pump stations which involved pumping and treatment for both shallow and deep aquifers as separate systems. Groundwater from both the shallow and deep aquifer is pumped to the treatment plant where it is treated by a granular activated carbon (LGAC) system, then re-injected into the aquifer, and is then introduced into the City's water distribution system for domestic use.

Notable Accomplishments: Geosyntec developed multiple routing options for conveyance piping and led agency negotiations and community outreach efforts to gain approval for the final pipeline routing which saved the clients significant time and construction costs. Geosyntec assisted in negotiating for an optimized groundwater extraction and injection well network that decreases the costs and community impacts while enhancing the capture of VOC's. Geosyntec's Construction Management team finished the project within schedule and under budget despite numerous construction challenges. The result is a finished project that is robustly designed, protective of groundwater resources, and embraced by the community.

Catalina Drinking Water Disinfection Byproduct Treatment System – Avalon, California

Client: Southern California Edison (SCE)



Services Provided:

- Feasibility Study
- Treatability Testing
- Hydraulic Evaluation
- Engineering Design
- Construction Support

Howlands Landing - Catalina Island, California

Project Objective: Southern California Edison (SCE) owns and operates the drinking water treatment and distribution systems on the island. Catalina's drinking water system is subject to the USEPA Stage 2 Disinfectants and Disinfection Byproducts (DBPs) Rule, requiring water systems to meet certain maximum contaminant levels (MCLs) for two groups of DBPs. Routine monitoring on the island reported concentrations of a certain DBP (i.e., trihalomethanes – TTHM) that exceeded the MCLs in a section of the distribution system delivering water from the Middle Ranch Wells, through a booster pump house (i.e., Pump House 2), to one of the communities in Avalon, Catalina. Geosyntec worked with SCE to identify the source and cause of the DBPs, evaluate and recommend effective mitigation options, and implement a solution to meet regulatory requirements and improve drinking water quality.

Scope of Services: Geosyntec began the evaluation of water treatment options by analyzing data from HL-3 and conducting a focused feasibility study of the effectiveness, practicality, operational requirements and estimated costs for applicable treatment technologies. Groundwater samples were collected repeatedly, and water quality parameters were compared to the applicable state and national regulations. Based on the test results, several potentially viable treatment technologies were evaluated, including Oxidation/Filtration, Lime Softening, Ion Exchange, Membrane Filtration, Iron Sequestration via Phosphate, and Biofiltration. SCE elected to move forward with the installation of an Oxidation/Filtration treatment system. At the time, because of approaching high-demand season, SCE decided to install a temporary treatment system, while going through the design, permitting, and construction phase of the permanent treatment system. Geosyntec assisted SCE in the rapid permitting, procurement, delivery, installation, and startup of the temporary treatment system.

Notable Accomplishments: Geosyntec was able to narrow the location of the majority of the TTHM's down to one reservoir, and effectively identify the causes of the high concentrations. Pinpointing the problem allowed Geosyntec to offer the client targeted and cost-effective solutions to solve the issue, including longer-term operational changes and short-term treatment solutions.

APPENDIX B – KEY PERSONNEL FULL RESUMES

Brian Petty, PE

process engineering/water treatment
industrial wastewater design, permitting, and compliance
remedial design, optimization, and permitting
site investigations and feasibility studies

EDUCATION

- B.S., Chemical Engineering, University of Nevada, Reno, 2001
- M.B.A., California State University, Fullerton, 2007

REGISTRATIONS AND CERTIFICATIONS

- Professional Civil Engineer, California No. C68707
- Professional Civil Engineer, Washington No. 42563
- Hazard and Operability Studies (HAZOP), 2011

CAREER SUMMARY

Mr. Petty is a Senior Principal in Geosyntec Consultants' southern California operations as well as the leader of Geosyntec's nationwide process engineering group which provides services in process engineering, water and wastewater treatment, site assessment, field investigations, remediation system design, and remediation system monitoring, installation, optimization, and operation. Mr. Petty is Engineer of Record of multiple groundwater remedies in southern California, including the Puente Valley Operable Unit, El Monte Operable Unit, and the Glendale Chromium Operable Unit feasibility study.

RELEVANT PROJECT EXPERIENCE

Northrop Grumman, Puente Valley Superfund Site Intermediate Zone, CA. Mr. Petty managed the design and permitting of the 1500-gpm Intermediate Zone Interim Remedy which includes extraction wells, treatment by activated carbon, ion exchange, media filtration, advanced oxidation, and reverse osmosis prior to drinking water end use. As Engineer of Record during design and construction, Mr. Petty was responsible for delivering high quality documents to meet the client's needs and allow relatively rapid approval by USEPA.

El Monte Superfund Site, San Gabriel Valley, CA. This project involves the extraction and treatment of an extensive plume of contaminated groundwater. Mr. Petty is the Engineer of Record for this project and has helped to evaluate potential add-on treatment technologies being contemplated to address chemicals of emerging concern.

Glendale Chromium Operable Unit, Glendale, CA. Geosyntec is performing the feasibility study for addressing the hexavalent chromium that is impacting the 5000-gpm Glendale water treatment plant. Mr. Petty is providing technical oversight of the treatment technology assessments and evaluating ways to optimize the wellfield while maintaining compliance.

Southern California Edison, Catalina Disinfection Byproducts (DBPs), CA. Geosyntec prepared a numerical model used to simulate and predict DBP concentrations under a variety of conditions and evaluated an extensive list of mitigation options. Mr. Petty is the Engineer of Record for the selected DBP mitigation strategy which involves raw water treatment.

Southern California Edison, Catalina Howlands Landing Well 1, CA. Geosyntec pilot-tested an oxidation/filtration system to remove iron, manganese, and hydrogen sulfide from groundwater so that it could be used as drinking water. Geosyntec designed and implemented a full-scale oxidation/filtration treatment plant for which Mr. Petty is Engineer of Record.

BKK Landfill Leachate Treatment Plant, West Covina, CA. This project involves performing an engineering evaluation/cost analysis (EE/CA) for the Class I Landfill systems, including the leachate conveyance systems and treatment plant. Mr. Petty is analyzing the treatment plant performance and implementing solutions to address performance issues and streamline the treatment plant for future operations.

Oil Superfund Site, Monterey Park, CA. This project involved the engineering review of the design for a groundwater/leachate collection and treatment system. Mr. Petty is the Engineer of Record and was responsible for reviewing and sealing the construction documents, including the plans and specifications and as-built drawings.

SMC Groundwater Treatment, Carson, CA. Geosyntec completed the full-scale design of the EISB system in 2010 which uses 25 injection and 16 extraction wells to recirculate groundwater at a combined rate of about 370 gpm. Mr. Petty is the Engineer of Record for the design, and he led the team of engineers who performed construction monitoring.

Dinuba Gas 'N Save MTBE Treatment Systems, Dinuba, CA. This project involves the design and installation of an innovative biosparging system to treat gasoline oxygenates (e.g., MTBE, TBA) in groundwater. Mr. Petty designed the treatment system and developed the monitoring plan for the system. The construction drawings were approved without comment by the Central Valley Regional Water Quality Control Board.

Lehigh Hanson Permanente Cement Plant, Cupertino, CA. This project involved multi-disciplined support for this operating cement plant and quarry. Mr. Petty managed the screening and treatability analysis for selenium which was present in the groundwater and quarry dewatering water.

PROFESSIONAL EXPERIENCE

- Geosyntec Consultants, Huntington Beach, California, 2001 - Present

C. Kirk Craig, PE

**environmental compliance and permitting
active remediation/treatment systems**

EDUCATION

- M.S., Environmental Science and Engineering, Colorado School of Mines, Golden, 2001
- B.S., Zoology, Environmental Engineering Studies, University of Florida, Gainesville, 1996 Undergraduate Geological Studies, Colorado School of Mines, Golden, 1992

REGISTRATIONS AND CERTIFICATIONS

- Professional Engineer, Colorado No. 38402
- Professional Engineer, Arizona No. 44191
- General Engineering Contractor's License, Arizona Class A No. 278710

CAREER SUMMARY

Mr. Craig has worked in the professional engineering and environmental fields since 1996. He has overseen operations and activities associated with the assessment and remediation of a variety of sites throughout the United States. His expertise includes optimization, design, construction, and operation of a variety of remediation technologies including pump and treat, multi-phase extraction, soil vapor extraction, air/bio/ozone sparging, and groundwater hydraulic containment. He also designed ventilation and vapor phase treatment systems such as sub-floor aeration, granular activated carbon, packed bed scrubbers, and thermal oxidizers.

RELEVANT PROJECT EXPERIENCE

Remediation Management, Puente Valley Operable Unit, San Gabriel Valley, CA. Engineering Manager providing engineering management services to support the ongoing treatment system design, permitting, procurement, and planning for construction activities. Responsibilities have included: providing communication, coordination, scheduling and client representation with project team, cities, agencies, and stakeholders; and providing senior support with design packages and construction related contractor selection and procurement.

Remediation Management, Nammo Talley, Inc., Mesa, AZ. Project Manager/Senior Engineer responsible for assessing/remediating perchlorate and VOC impacted soil/groundwater, including design, installation, and operation of a 400 gpm pump and treat system with fluidized bed bioreactors and re-infiltration.

Phoenix-Goodyear Airport-North CERCLA Site, Crane Company, Goodyear, AZ. Project Manager/Senior Engineer in charge of investigations, feasibility studies, and active remediation. Applicable aspects include: O&M of four P&T systems (>2,000 gallon-per-minute) utilizing IX for perchlorate and air stripping/LGAC for VOC removal; source area investigations, remedial investigations and feasibility studies; sampling/monitoring of over 100 wells; installation of 12 wells/year; development of groundwater flow and fate/transport models; and design/install of extraction/injection wells, significant treatment system modifications, and 29,000 feet of conveyance piping through two cities.

Remediation Management, Confidential Client, Mesa, AZ. Project Manager/Senior Engineer. Developed a Perchlorate Remedial Action Plan for source area groundwater hydraulic containment, groundwater treatment, treated groundwater discharge/infiltration, and in-situ vadose zone soil bioremediation. Currently managing the site wide groundwater monitoring and reporting, as well as the design/construction of a perchlorate remediation system for the treatment of highly impacted groundwater and soil. Remediation system design includes two to three large

groundwater extraction wells (~ 250 gpm each), a 500 to 800 gpm fluidized bed reactor, infiltration basins, drinking water canal outfall, as well as a surface irrigation and vadose zone injection system for the in-situ bioremediation of vadose zone soils. Provide ongoing regulatory response to the Arizona Department of Environmental Quality in regard to perchlorate impacted soil and groundwater.

Remediation Management, Pemaco Superfund Site, Maywood, CA. Project Manager. Development a remedial alternative cost evaluation for the treatment of 1,4-dioxane impacted water associated with a surface water remedial system discharge alternative.

Remediation Management, Confidential Client, Chandler, AZ. Senior Engineer. Prepared and submitted an agency approved groundwater Remedial Action Plan for the treatment of VOC impacted groundwater both on and off site. Managed the design, installation, and operation and maintenance of a limited groundwater pump and treat system with liquid phase granular activated carbon to remediate impacted groundwater containing chlorinated organic compounds. Design, installation and operation of system upgrades and expansion to incorporate the treatment of 1,4-Dioxane in the groundwater using ultraviolet and chemical oxidation.

Environmental Compliance, Statewide, AZ. Department/Senior Manager. Prepared multiple site investigations and Remedial Action Plans for water and soil treatment systems throughout Arizona.

Environmental Compliance, NASA White Sands Test Facility, Las Cruces, NM. Project Manager. In response to comments from the New Mexico Environmental Department, completed a soil gas source analysis to support the conclusion that volatile organic compounds (VOCs) are off-gassing from the groundwater.

Environmental Compliance, Statewide, AZ. Department/Senior Manager. Prepared multiple air quality control permits and subsequent emissions inventories for remediation systems utilizing granular activated carbon and thermal / catalytic oxidation.

PROFESSIONAL EXPERIENCE

- Geosyntec Consultants, San Diego, California, 2010 - Present

AWARDS, RECOGNITION AND AFFILIATIONS

- American Society of Civil Engineers
- National Association of Environmental Professionals
- U.S. Green Building Council, Arizona Chapter Environment & Water Resources Institute

Hamid Amini, PhD, PE

water/wastewater management process engineering
renewable energy generation
civil and environmental engineer

EDUCATION

- PhD Environmental Engineering, University of Central Florida, Orlando, FL, 2011
- MSc, Environmental Engineering, Iran University of Science & Technology, Tehran, Iran, 2006
- BSc, Civil Engineering, Iran University of Science & Technology, Tehran, Iran, 2002

REGISTRATIONS AND CERTIFICATIONS

- Professional Engineer, California No. C85896
- 40-Hour HAZWOPER Training in accordance with OSHA 29 CFR 1910.120(e)

CAREER SUMMARY

Dr. Amini is currently a Project Engineer in the process engineering and geo-environmental groups of Geosyntec Consultants. Dr. Amini has provided his technical knowledge and experience to a wide range of projects in his years of experience. These projects have involved water, wastewater, and stormwater management process engineering design and construction, as well as sustainable solid waste management design and construction, leachate management, compliance monitoring, renewable energy generation, hydroelectric power plant design, onshore oil drilling platforms construction quality assurance. Dr. Amini also has experience in conducting feasibility studies, preparing detailed cost analyses, and technical specifications.

RELEVANT PROJECT EXPERIENCE

Puente Valley Operable Unit, Design of the Drinking Water Treatment System, Northrop Grumman, Los Angeles, CA. Project Engineer and Assistant Project Manager for designing, permitting, and bid support for construction of a 3 MGD treatment plant to produce drinking water for the La Puente Valley County community. The main treatment processes of the system include liquid granular activated carbon (LGAC) for treatment of VOCs and 1,2,3-trichloropropane, ion exchange (IX) resin for treatment of perchlorate, ultraviolet light/hydrogen peroxide advanced oxidation (UV/Ox) for treatment of 1,4-dioxane, and reverse osmosis (RO) polishing for treatment of inorganics to meet drinking water standards.

Avalon Canyon Bedrock Wells Extraction and Treatment System, Design of the Groundwater Extraction System and the Iron and TDS Removal Treatment System on Drinking Water Network, Santa Catalina Island Company, Catalina Island, CA. Project Manager and Engineer for analyzing alternatives, and performing conceptual and detailed design of the treatment system on the Catalina drinking water network.

Catalina DBP Mitigation System, Design of the Disinfectant Byproduct (DBP) Mitigation System on Drinking Water Network, Southern California Edison, Catalina Island, CA. Project Manager and Engineer performing technology analysis and feasibility study, designing and preparing bid documents, and coordinating and overseeing construction and installation work of the DBP mitigation system on the Catalina drinking water network.

Catalina Howlands Well Treatment System, Design of the Iron and Manganese Removal Treatment System on Drinking Water Network, Southern California Edison, Catalina Island, CA. Project Manager and Engineer for designing, preparing bid documents, and coordinating and overseeing construction and installation work of the Iron and Manganese Removal treatment system on the Catalina drinking water network.

Palm Springs Ariel Tramway, Wastewater Treatment System, Palm Springs, CA. Project Manager for feasibility study, treatability testing, and design of two wastewater treatment systems at the Valley Station and Mountain Station facilities for removal of organic loadings.

Turano Baking Co., Wastewater Treatment System Design, Henderson, NV. Project Manager for feasibility study and design of a wastewater treatment systems at the production facility for removal of organic loadings.

Swire Coca-Cola, Fruitland, Idaho, Wastewater Treatment System, Fruitland, ID. Project Manager for designing and building a \$2 million wastewater treatment system for pH adjustment prior to discharge to the POTW.

- Weber Metals Stormwater Treatment System, Stormwater Collection, Control, and Treatment System Design, Weber Metals Inc., Long Beach, CA.
- Sunshine Canyon Landfill, Leachate Treatment System Design, Los Angeles, CA.
- BKK Landfill Leachate Treatment System, Leachate Treatment System Feasibility Study, Los Angeles County, CA.
- Seminole Road Landfill, DeKalb County, GA.
- Statesville Landfill Solar Project, Charlotte, NC.
- Onondaga Lake Remediation Project, Syracuse, NY.
- Dalton-Whitfield Westside Landfill, Rocky Face, GA.
- Seymareh Hydroelectric Power Plant, Ilam, Iran.
- Dorood On-Shore Oil Well Drilling Platforms, Khark Island, Iran.

PROFESSIONAL EXPERIENCE

- Geosyntec Consultants, Huntington Beach, California, 2011 – Present
- University of Central Florida, Orlando, FL, Department of Civil and Environmental Engineering, Graduate Research Assistant, August 2007 – November 2011
- Jyane Construction Company, Tehran, Iran, January 2007 – August 2007
- Tablieh & Parhoon-Tarh JV, Tehran, Iran, January 2006 – January 2007
- Boland Payeh Construction Company, Tehran, Iran, September 2003 – January 2006
- Alisaz Construction Company, Khark Island, Iran, September 2001 – September 2002

AWARDS, RECOGNITIONS AND AFFILIATIONS

- American Society of Civil Engineers (ASCE)
- American Water Works Association (AWWA)
- Solid Waste Association of North America (SWANA)

Chao Zhou, PE

**process engineering/water treatment
industrial wastewater treatment**

EDUCATION

- M.S., Environmental Engineering, Arizona State University, Tempe, Arizona, 2011
- B.S., Environmental Science, Nanjing University, Nanjing, China, 2007

REGISTRATIONS AND CERTIFICATIONS

- Professional Engineer, California No. C86127
- 40-Hour HAZWOPER Training in accordance with OSHA 29 CFR 1910.120(e)

CAREER SUMMARY

Mr. Zhou is a Project Engineer in the Process Engineering Group of Geosyntec Consultants in Huntington Beach, California. He has six years of experience in performing and managing evaluations of water and wastewater treatment technologies (physical/chemical and biological), feasibility studies, treatability studies, and process design. Over the years, he has expanded his practice area to construction quality assurance and O&M optimization. He is also one of the technical leaders within Geosyntec in applied research and development in innovative biological treatment/bioremediation of emerging contaminants, such as 1,4-dioxane. Before joining Geosyntec, Mr. Zhou conducted advanced research on photobioreactors, or microalgae cultivation systems, for biofuel production, at Arizona State University. Among other contributions, he built a novel and sophisticated mathematical process model to help the large interdisciplinary project team of world-leading biologists, environmental engineers, and chemical engineers to understand the physical, chemical, and biological processes that control the production of microalgal biomass and biofuels in photobioreactors.

RELEVANT PROJECT EXPERIENCE

Disinfectant Byproduct (DBP) Mitigation Feasibility Study, Southern California Edison, Catalina Island, CA. Project Manager and Engineer performing the analysis of the root cause of the DBP issue, and evaluation of mitigation options. Mr. Zhou adapted an EPA-published model and developed it to a user-friendly Excel spreadsheet to quantitatively evaluate the effects of multiple environmental and operational factors, some of them unique to an island setting, on the formation of DBPs. The feasibility studies identified operational changes and removing DBP precursors as potential DBP mitigation options.

Howlands Well-3 Treatment Feasibility Study, Southern California Edison, Catalina Island, CA. Project Manager and Engineer for the feasibility evaluation and pilot testing of groundwater treatment technologies to produce drinking water at a remote location on the Catalina Island. The feasibility study identified iron as the constituent that needs treatment, and recommended oxidation/filtration as the treatment technology. A pilot test of the oxidation/filtration technology was conducted prior to the design and construction.

Groundwater Development and Treatment Feasibility Study, Western Municipal Water District, Riverside, CA. Project Engineer for the preliminary feasibility evaluation of groundwater treatment technologies to supply drinking water from groundwater wells that are adjacent to a Superfund site and may contain elevated levels of nitrate, total dissolved solids (TDS), and volatile organic compounds (VOCs). The preliminary feasibility study identified treatment

technologies for nitrate and TDS, and information needed for the further evaluation of the feasibility of these technologies and overall project.

Chromium Treatment Feasibility Study, Confidential Respondent Group, CA. Project Engineer for the feasibility evaluation of groundwater treatment technologies for the treatment of chromium for an existing pump and treatment system treating VOCs at a Superfund site. The end use of the treated groundwater is drinking water. The ongoing project reviewed a wealth of information collected from various chromium treatability studies conducted by researchers over more than a decade at the Site and evaluated the performance of an existing well-head weak-base anion exchange (WBA) treatment system.

BKK Landfill Leachate Treatment Pilot Test, BKK Working Group, West Covina, CA. Phase Manager, Project Engineer, and system lead operator for the on-site pilot testing of two biological leachate treatment technologies. Two pilot test units, including a membrane bioreactor (MBR) and a moving-bed biofilm reactor (MBBR), were tested side by side over 10 months on three representative liquids streams of the landfill. Mr. Zhou also managed the vendor who provided the testing skids as well as field operation personnel employed by the Landfill operator.

BKK Landfill Leachate Treatment Plant Arsenic Coagulation Treatability Study, BKK Working Group, West Covina, CA Phase Manager and Project Engineer of a treatability study evaluating the enhancement of arsenic removal from the existing aerobic biological treatment process by adding ferric chloride as a coagulant. Preliminary results indicated promising trends in meeting the arsenic discharge limit and a full-scale pilot test are being planned.

BKK Landfill Leachate Treatment Plant PAC Reduction Study, BKK Working Group, West Covina, CA. Designed and implemented a step-wise study in which the dose of the powdered activated carbon (PAC) added to the treatment process was optimized. After a few months, the PAC dose was decreased to zero, making the leachate treatment process rely on biological treatment only, which saved operating costs from both the purchase and disposal of the PAC. The system's performance was not affected.

BKK Landfill Leachate Treatment Plant 1,4-Dioxane Treatment Evaluation, BKK Working Group, West Covina, CA. Phase Manager and Technical Lead for the evaluation of improving 1,4-dioxane removal from the leachate treatment system in order to meet the anticipated discharge limit. A number of treatability studies, including the initial data evaluation, modeling, advanced oxidation process (AOP) treatability testing, synthetic media adsorption pilot testing, bench- and pilot-scale biological treatability testing, were conducted. Mr. Zhou managed various vendors and a university lab during the comprehensive treatability evaluation.

Grease Interceptor Evaluation, Genentech, Oceanside, CA. Technical Lead in the evaluation of the performance and odor issues of the 4000-gallon on-site grease interceptor receiving grey water from the cafeteria kitchen wastewater.

PROFESSIONAL EXPERIENCE

- Geosyntec Consultants, Huntington Beach, California, 2013 - Present
- Arizona State University, Tempe, Arizona, Graduate Research Assistant, 2007 – 2012

AWARDS, RECOGNITION AND AFFILIATIONS

- Science Foundation Arizona Fellow, 2007 – 2009

David Oliver, CCM

**construction management
environmental remediation
contract administration**

EDUCATION

- B.S., Construction Management, California Polytechnic State University, San Luis Obispo, 1982

REGISTRATIONS AND CERTIFICATIONS

- Certified Construction Manager (CCM), Construction Management Association of America
- 40-hour OSHA training in compliance with 29 CFR 1910.120
- 8-hour OSHA Supervisor Training in compliance with 29 CFR 19 10.120
- 8-hour OSHA Excavation, Safety, Competent Person Training
- 8-hour OSHA Refresher Course in Health and Safety for Hazardous Waste Site Operations

CAREER SUMMMARY

Mr. Oliver has over 35 years of experience in general construction, demolition and environmental remediation, specializing in management, design build/value engineering, design review for constructability, problem resolution, contract administration, project controls, quality assurance/quality control (QA/QC). His experience includes projects in public utilities, soil and groundwater remediation under CERCLA and RCRA, landfill leachate and landfill gas controls, landfill closure, the space and defense industries, and in dealing with local, state, and federal regulatory agencies. Past projects have included design and construction services for groundwater, leachate, and semi-conductor manufacturer wastewater treatment systems, building demolition, excavation and disposal of PCBs, VOC- and hydrocarbon-laden soils; installation of underground utility systems, mechanical and electrical system installation, and building construction. Mr. Oliver has managed construction projects and coordinated Brownfield redevelopment projects. He has supervised the preparation of project schedules and cost estimates and managed project cost tracking. In addition, Mr. Oliver has supervised subcontractors, monitored on-site health and safety, managed field construction, operation and maintenance and contract administration staff.

RELEVANT PROJECT EXPERIENCE

Design/Build Groundwater Remedial Construction Project, Gould Electronics, El Monte, CA. Managing the construction and general construction effort for the groundwater remediation pipeline and treatment system installation. Work included the installation of 16,500 linear feet of 8" and 10"x6" double contained recovery well pipeline and 4,000 linear feet of reinjection piping. Work includes included installation of 8 recovery wells and 3 reinjection wells, installation of a 350 gpm and 700 gpm groundwater treatment system with PLC based control system and offsite well management telemetry system, control building, site landscaping and final grading for SWPPP compliance. The 700 gpm treatment system treats the water for delivery to the City of El Monte water drinking supply. Work included complete Construction Management oversight of multiple subcontractors, preparation of cost estimates, project schedules, value engineering proposals and project cost controls for this 18-month, \$12.8 million project.

Design/Build Groundwater Remedial Construction Project, Olin Corporation, Morgan Hill, CA. Managed the construction and general construction effort for the groundwater remediation pipeline and treatment system installation. Work included the installation of 6,500 linear feet of 8" recovery well pipeline via directional boring and

4,500 linear feet of reinjection piping. Work also included demolition of the former treatment system, installation of a 750 gpm groundwater treatment system with PLC based control system and offsite well management telemetry system, control building, site landscaping and final grading for SWPPP compliance. Work included complete Construction Management oversight of multiple subcontractor, preparation of cost estimates, project schedules, value engineering proposals and project cost controls for this 8-month, \$4.6 million project.

Demolition, Former Fairchild Semiconductor Corporation Site, Mountain View, CA. Served as managing contractor for the successful demolition of eight former Fairchild manufacturing and two waste water treatment facilities. Projects included the removal and disposal of asbestos and lead-laden building products, underground concrete encased transite piping, and underground chemical storage and acid neutralization vaults. Work also included soil excavation, soil sampling, on-site soil aeration, off-site disposal and import backfill and compaction of 23,000 yards of soil to allow site redevelopment. Work included subcontractor management and cost controls for these projects totaling \$8.8 million over a 3-year period.

Design/Build Regional Groundwater Remedial Construction-North and South, Middlefield-Ellis Whisman Superfund Site, Mountain View, CA. Managed the construction of the Regional Groundwater Remediation Project (“RGRP”) groundwater treatment system installation. Work included the installation of 25 groundwater recovery wells, installation of more than 31,500 linear feet of double-contained and discharge piping, 55,000 linear feet of electrical conduit and installation of PLC based automation system. Work included complete Construction Management services for this multi-year, \$6.6 million project.

Design/Build Former Fairchild Semiconductor Brownfield Site Redevelopment, Mountain View, CA. Managed the design build and construction activities for modifications to the six groundwater treatment systems at the former Fairchild facilities during the site redevelopment. Work included destruction and reinstallation of 23 recovery wells and monitoring wells, installation of 18,000 linear feet of double contained piping and electrical conduits, installation of new PLC based automation systems, and modification of existing treatment system. Worked extensively with the site developer to coordinate the design and construction of the new facilities with the site environmental infrastructures. Performed Construction Management and developer coordination for this multi-year, \$9.8 million project.

PROFESSIONAL EXPERIENCE

- Geosyntec Consultants, Santa Barbara, California, 2006-Present
- Locus Technologies, Vice President, Construction Services, 1997 to 2006
- Canonie Environmental Services Corp., Project Manager, 1992 to 1997
- R.P. Richards Construction, Project Manager/Estimator, 1982 to 1992

APPENDIX C – GEOSYNTEC & LPVCWD MSA

MASTER PROFESSIONAL SERVICES AGREEMENT
BETWEEN
GEOSYNTEC CONSULTANTS, INC.
AND
LA PUENTE VALLEY COUNTY WATER DISTRICT

This Professional Services Agreement ("Agreement") is made effective June 13, 2018 by and between LA PUENTE VALLEY COUNTY WATER DISTRICT ("Client") with the address of 112 N 1st Street, La Puente, California 91744 and the consultant and/or engineer GEOSYNTEC CONSULTANTS, INC. and its subsidiaries and affiliates¹ (collectively "C/E") with the registered address of 2100 Main Street, Suite 150, Huntington Beach, California 92648. The Client and C/E are referred to herein individually as "Party" and collectively as "Parties".

NOW, THEREFORE, in consideration of the promises set forth below, the Parties hereby agree as follows:

1. SERVICE ORDERS: The services to be provided by C/E pursuant to this Agreement ("Services") shall be described in written orders ("Service Orders") agreed to and executed by the Parties. Service Orders shall set forth the schedule and estimated charges for the Services. If Services are to be rendered in connection with a specific location, the Service Order shall also describe the site ("Project Site"). The terms and conditions of this Agreement shall apply to and be incorporated by this reference into each Service Order and any Purchase Order issued by Client and to all Services to be rendered pursuant thereto. Any terms introduced or proposed by Client which are not expressly incorporated into this Agreement or a Service Order are rejected.

2. COMPENSATION, INVOICING AND PAYMENT: The method of compensation shall be identified in the Service Order. When the method of compensation is on a time and materials basis C/E shall submit invoices to Client reflecting the number of hours worked multiplied by the hourly rate reflected in C/E's rate schedule attached to the Service Order, along with any pre-approved expenses for reimbursement. The rates and rate schedule for projects lasting more than one year may be adjusted annually with the Client's consent. The rates are inclusive of all taxes except such value added, sales, service or withholding taxes that are imposed by some jurisdictions. Any applicable taxes will be added to the invoice and shall be paid by the Client. Where compensation is subject to an agreed "not to exceed" budget, C/E shall notify Client before the "not to exceed" limit is exceeded and shall not continue to provide the Services beyond the limit unless Client authorizes an increase to the limit. The "not to exceed" limit shall only apply to the total approved budget. Any amount allocated to a task or milestone may be exceeded without Client authorization as long as the total budget limit is not exceeded. Any adjustment to the Services, authorized tasks, milestones, schedule or assumed responsibilities will not be effective until the Parties have mutually agreed to an equitable adjustment of the "not to exceed" budget in writing. Rates for days of actual testimony at depositions, trials, or hearings will be two times the rate shown on the rate schedule. All costs incurred and time spent by C/E responding to subpoenas related to litigation for which C/E is not a named party shall be reimbursable in accordance with C/E's then current rate schedule. Where a fixed price is agreed upon, a change in the anticipated conditions or the assumptions set forth in the Service Order shall be grounds for an equitable adjustment of the schedule and/or compensation.

Regardless of the compensation method, C/E shall periodically submit invoices to Client. Client shall pay each invoice within thirty (30) days of the date of the invoice. If Client objects to all or any portion of any invoice, Client shall notify C/E of the objection within fifteen (15) days from the date of the invoice, give reasons for the objection, and pay that portion of the invoice not in dispute. C/E may invoice Client for any reimbursable expense exceeding \$5,000 before the expense has been incurred by C/E. Client shall pay an additional charge of one percent (1%) of the amount of the invoice per month or the maximum percentage allowed by law, whichever is the lesser, for any payment received by C/E more than thirty (30) days from the date of the invoice. Payment thereafter shall first be applied to accrued interest and then to the unpaid principal. The additional charge shall not apply to any disputed portion of any invoice resolved in favor of Client. In the event of a legal action brought by C/E against Client for invoice amounts not paid, attorneys' fees, court costs, and other related expenses shall be paid to the prevailing party by the other Party.

In addition to the above, if payment of C/E invoices is not maintained on a thirty (30) day current basis, C/E may, by ten (10) days' written notice to Client, suspend further performance and withhold any and all deliverables and data from Client until such invoice payments are restored to a current basis.

¹ Services rendered: in Michigan are performed by Geosyntec Consultants of Michigan, Inc.; in New York by Beech and Bonaparte Engineering P.C.; in Puerto Rico by Geosyntec Consultants of Puerto Rico, P.C.; in North Carolina by Geosyntec Consultants of North Carolina, P.C.; and in Canada by Geosyntec Consultants International, Inc. Services of such affiliate(s) may be billed by Geosyntec Consultants, Inc. on behalf of the affiliate.

3. CONSTRUCTION PROCEDURES: C/E shall not be responsible for the acts or omissions of other parties engaged by Client, including Client's employees, representatives, agents, other consultants or other contractors, and shall not have control or charge of and shall not be responsible for their construction means, methods, techniques, sequences, training or procedures, or for their safety precautions or programs.

4. RECOGNITION OF RISK: Client recognizes that services and opinions relating to environmental, geologic, and geotechnical conditions are based on limited data and that actual conditions may vary from those encountered at the times and locations where data are obtained, and that the limited data results in uncertainty with respect to the interpretation of these conditions, despite the use of due professional care.

5. STANDARD OF CARE: C/E shall render its Services in a manner consistent with the level of care and skill ordinarily exercised by other qualified and reputable firms rendering the same services under similar circumstances at the time the Services are performed.

6. RISK ALLOCATION: To the fullest extent permitted by law, the liability of C/E, its employees, agents, and subcontractors (hereinafter for purposes of this Section 6 referred to collectively as "C/E"), for claims of loss, injury, death, damage, or expense incurred by the Client, including, without limitation, third party claims for contribution and indemnification, arising out of or relating to Services rendered or obligations imposed under this Agreement or any Service Order issued hereunder, shall not exceed, in the aggregate, the greater of \$100,000 or the amount paid to C/E under the applicable Service Order (the "Limit"). If Client seeks recovery of damages in excess of the Limit from third parties, Client shall defend and indemnify C/E against any resulting claims by such third parties back against C/E with respect to such excess.

In addition, neither Party shall be entitled to recover consequential damages, including, without limitation, loss of use or loss of profits, from the other Party, their employees, representatives, agents, subsidiaries, affiliates, successors or assigns. The foregoing limitations of liability shall apply regardless of whether the allegation is based on a theory of breach of contract, negligence or other wrongful act, but shall not apply if caused by gross negligence or willful misconduct.

7. INDEMNIFICATION: If any claim is brought against Client and/or C/E, their employees, agents, and subcontractors (hereinafter for purposes of this Section 7 referred to collectively as "C/E"), by a third party, relating in any way to the Services or this Agreement, including all Service Orders, then, subject to the allocation of risk under Section 6 above, C/E and Client shall each indemnify the other against any loss or judgment on a comparative responsibility basis determined using comparative negligence principles. Client responsibility includes that of its agents, employees, and other contractors.

8. INSURANCE: C/E shall maintain during the term of this Agreement the following minimum insurance coverage:

- | | | |
|-------|---|-------------------------------------|
| (i) | Workers' Compensation | Statutory |
| | Employer's Liability | - \$1,000,000 per occurrence |
| (ii) | Commercial General Liability or
Public Liability Insurance | - \$2,000,000 per occurrence |
| (iii) | Comprehensive Automobile Liability | - \$1,000,000 combined single limit |
| (iv) | Professional Liability | - \$1,000,000 per claim |

C/E shall provide Client with an insurance certificate upon Client's request.

9. DISPUTES: The Parties agree to endeavor to promptly resolve their differences through good faith negotiations as a condition precedent to any other dispute resolution process. In order to support the good faith negotiations, the Parties agree the negotiations will include individuals that are aware of the circumstances giving rise to the dispute and that have the proper decision-making authority to enter into an agreement resolving the dispute. If negotiations alone do not result in a resolution of the dispute than the Parties agree that, as a condition precedent, the next step in the process will be to submit the matter to mediation using the services of an independent mediator. In the event that a negotiation or mediation process does not lead to a resolution of the dispute within 90 days from the first notice of the issue in dispute, the Parties may then pursue their respective remedies at law or equity.

10. RIGHT OF ENTRY: Client grants to C/E, and, if the Project site is not owned by Client, warrants that permission has been, or will be obtained, by Client for a right of entry from time to time by C/E, its employees, agents, and subcontractors for the purpose of providing the Services. If C/E is required to enter into access agreements with third parties to obtain access to property to perform the Services, such agreements must be consistent with the obligations imposed on C/E under this Agreement, and the Compensation,

Schedule and terms and conditions of this Agreement shall be subject to equitable adjustment to reflect additional obligations imposed thereunder. If the provisions of any written access agreement between Client and the property owner require the Client's agents, such as C/E, name the property owner as an additional insured than the obligation shall be incorporated into this Agreement.

11. HAZARDOUS SUBSTANCES: All nonhazardous samples and by-products from sampling processes in connection with the Services shall be disposed of by C/E in accordance with applicable law. All hazardous wastes, radioactive wastes, hazardous materials, or hazardous substances or other materials which cannot be introduced back into the environment under existing law without additional treatment ("Hazardous Substances") encountered by C/E as a result of the Services, shall be packaged in accordance with applicable law by C/E and turned over to Client for handling and disposal. C/E shall not arrange or otherwise dispose of Hazardous Substances in connection with this Agreement. C/E, at Client's request, may assist Client in identifying appropriate alternatives for off-site treatment, storage or disposal of the Hazardous Substances, but C/E shall not make any independent determination relating to the selection of a treatment, storage, or disposal facility nor subcontract such activities through transporters or others. Client shall sign all necessary manifests for the disposal of Hazardous Substances. If Client insists upon the signing of such manifests by C/E's agents or employees, such signing shall be as Client's agent so that C/E will not be considered to be a generator, transporter, or disposer of such Hazardous Substances, and Client shall indemnify C/E against any claim or loss resulting from such signing and from C/E's non-negligent handling of Hazardous Substances. If unanticipated Hazardous Substances or conditions are encountered, C/E may suspend work for safety reasons until mutually agreeable arrangements are made, which may involve amendments to this Agreement.

12. CONFIDENTIALITY: C/E will maintain as confidential any documents or information provided by Client and will not release, distribute, or publish same or C/E's test results to any third party without prior permission from Client, unless compelled by law or order of a court or regulatory body of competent jurisdiction. Such release will occur only after prior notice to Client.

13. USE OF DOCUMENTS: Provided that C/E has been fully paid for the Services, Client shall have the right to use the documents, maps, photographs, drawings, and specifications resulting from C/E's efforts on the Project. Reuse of any such materials by Client on any extension of this Project or any other Project without C/E's written authorization shall be at Client's sole risk. C/E shall have the right to retain copies of all such materials. C/E retains the right of ownership with respect to any intellectual property rights such as, but not limited to, patentable concepts or copyrightable materials arising from its Services. Work products delivered in electronic form are subject to anomalies, errors, misinterpretation, deterioration, and unauthorized modification, or may be draft or incomplete work products, electronic documents provided by C/E are furnished solely for convenience and only those professional work products in hard-copy format bearing C/E's signature or professional stamp may be relied upon by Client or other recipients. Client may perform acceptance tests or procedures regarding electronic versions of final documents (not drafts) for a period of sixty (60) days after transmission. Any errors detected on electronic versions of such final documents within the 60-day acceptance period will be corrected by C/E at no additional charge to Client. If the Services include the use of a GIS database Client acknowledges that any changes to the information contained in the database will result in different results. The Client will be solely responsible for any modifications to the database made by Client.

14. CLIENT RESPONSIBILITY: In a timely manner Client shall provide C/E, in writing, all information relating to Client's requirements for the Project, give C/E prompt written notice of any suspected deficiency in the Services and, with reasonable promptness to avoid impacts to the progress of the Project, provide C/E with approvals and decisions. When the Services include on-site activities, Client shall also correctly identify the location of subsurface structures, such as pipes, tanks, cables, and utilities and notify C/E of any potential hazardous substances or other health and safety hazards or conditions known to Client existing on or near the Project site. Client shall be responsible for applying for all necessary permits required to execute the Services and Project work. If included in the Services, C/E will assist Client with permit applications, however all impacts and obligations will be the responsibility of the Client. In addition, Client agrees to hold C/E harmless from any claim related to or arising from circumstances, acts or omissions in connection with the Project Site which occurred prior to C/E providing any Services under this Agreement.

15. DELAYS AND FORCE MAJEURE: In the event that C/E field or technical work is interrupted due to causes outside of its control, C/E's schedule for performance and compensation shall be equitably adjusted (in accordance with C/E's current Rate Schedule) for the additional labor, equipment, time, and other charges associated with maintaining its work force and equipment available during the interruption, and for such similar charges that are incurred by C/E for demobilization and subsequent remobilization.

Except for the foregoing provision, neither Party shall hold the other responsible for damages or delays in performance caused by force majeure, acts of God, or other events beyond the reasonable control of the other Party. Delays within the scope of this Section which cumulatively exceed forty-five (45) days shall, at the option of either Party, make the applicable Service Order subject to termination for convenience or to renegotiation.

16. TERMINATION: Client may terminate all or any portion of the Services for convenience, at its option, by sending a written

notice to C/E ("Notice of Termination"). Either Party can terminate this Agreement for cause if the other commits a material, uncured breach of this Agreement or becomes insolvent, has a receiver appointed, or makes a general assignment for the benefit of creditors. Termination for cause shall be effective twenty (20) days after receipt of a Notice of Termination, unless a later date is specified in the Notice of Termination. The Notice of Termination for cause shall contain specific reasons for termination, and both Parties shall cooperate in good faith to cure the causes for termination stated in the Notice of Termination. Termination for cause shall not be effective if reasonable action to cure the breach has been taken before the effective date of the termination. Client shall pay C/E upon invoice for services performed and charges incurred prior to termination, plus termination charges. Termination charges shall include, without limitation, the putting of Project documents and analyses in order and all other related charges incurred which are directly attributable to termination. In the event of termination for cause, the Parties shall have their remedies at law as to other rights and obligations between them, subject to the other terms and conditions of this Agreement

17. ASSIGNMENTS: Neither Party to this Agreement shall assign its duties and obligations hereunder without the prior written consent of the other Party.

18. VALIDITY, SEVERABILITY AND GOVERNING LAW: The provisions of this Agreement shall be enforced to the fullest extent permitted by law. If any provision of this Agreement is found to be invalid or unenforceable, the provision shall be construed and applied in a way that comes as close as possible to expressing the intention of the Parties with regard to the provisions and that saves the validity and enforceability of the provision. This Agreement shall be governed by the laws of the place of the Project Site unless expressly provided otherwise in the Service Order. In the event that any provision or portion of this Agreement is held to be unenforceable or invalid the remaining provisions or portions shall remain in full force and effect.

19. NO THIRD-PARTY RIGHTS: This Agreement shall not create any rights or benefits to Parties other than Client and C/E. No third party shall have the right to rely on C/E's opinions rendered in connection with the Services without C/E's written consent which may be conditioned on the third party's agreement to be bound to acceptable conditions and limitations similar to this Agreement.

20. INTEGRATED WRITING: This Agreement constitutes a final and complete repository of the agreements between Client and C/E. It supersedes all prior or contemporaneous communications, representations, or agreements, whether oral or written, relating to the subject matter of this Agreement. Modifications of this Agreement shall not be binding unless made in writing and agreed to by both Parties.

21. NOTICES, SIGNATURES, AND AUTHORIZED REPRESENTATIVES: The following signatories of this Agreement are the authorized representatives of Client and C/E for the execution of this Agreement. Each Service Order shall set forth the name and address of the respective authorized representatives of the Parties for the administration of that Service Order. Any information or notices required or permitted under this Agreement or any Service Order shall be deemed to have been sufficiently given if in writing and delivered to the authorized representative identified in the applicable Service Order. Notice given by mail may also be transmitted electronically at the time of mailing.

IN WITNESS WHEREOF, the Parties hereby consent to the use and enforceability of electronic signatures in the course of their doing business and they have caused this Agreement to be executed by their duly authorized representatives, as follows:

For LA PUENTE VALLEY COUNTY WATER DISTRICT:

For GEOSYNTEC CONSULTANTS, INC.:

By: 

Name: Roy Frausto
Title: Engineering & Compliance Manager
Date of Signature: 6-15-18

By: 

Name: Brian Petty
Title: Senior Principal
Date of Signature: 13 June 2018

NON-DISCRIMINATION AND AFFIRMATIVE ACTION - Required Disclosure for Projects Performed in US C/E is an Equal Opportunity (EO) and Affirmative Action Employer and unless exempt, shall abide by the EO clauses set forth at 41 CFR §60-1.4(a), 41 CFR §60-250.5(a), 41 CFR §60-300.5(a), and 41 CFR §60-741.5(a). **These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, creed, religion, color, sex, physical or mental disability, medical condition, genetic information, national origin, age, marital status, domestic partner status, sexual orientation, gender identity, citizenship status, weight, height, arrest record, protected veteran status or any other group status protected by law. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, creed, religion, color, sex, physical or mental disability, medical condition, genetic information, national origin, age, marital status, domestic partner status, sexual orientation, gender identity, citizenship status, weight, height, arrest record, protected veteran status or any other group status protected by law.** We shall also abide by the provisions of, 41 CFR §61-250.10 and 41 CFR §61-300.10 (which relate to veterans' employment reports); and of 29 CFR Part 471, Appendix A to Subpart A (posting of employee notice). All of these clauses are incorporated by reference as terms and conditions of this agreement and are binding to Subcontractors/Vendors. Subcontractors/Vendors may be required to develop their own written affirmative action programs and/or otherwise comply with the regulations of 41 CFR Part 60.



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STAFF REPORT



Meeting Date: September 16, 2019

To: Honorable Board of Directors

From: Greg B. Galindo, General Manager

Subject: Well No. 5 Casing Maintenance Work and Replacement of Pumping Equipment

Purpose - *To perform needed maintenance work to the District's Well No. 5 casing and to replace its pumping equipment with a new pump assembly and motor.*

Recommendation - *1) Authorize the General Manager to proceed with the well casing work as proposed by Tri County Pump Company for an amount not to exceed \$39,000 (includes contingency). 2) Authorize the General Manager to enter into an agreement with Tri County Pump Company for the supply and installation of a new pump assembly and motor for the District's Well No. 5, for an amount not to exceed \$138,000 (includes contingency).*

Fiscal Impact - *1) The District's 2019 Amended Budget appropriates \$45,000 for Well & Pump Maintenance. The year to date balance for this expense category is \$9,996.00. The cost of Well No. 5's casing maintenance work will exceed the Budget appropriation for this category. 2) The District's 2019 Amended Capital Budget appropriates \$165,000 for the Well No. 5 rehabilitation project. The current year to date balance for this project is \$53,533.74. The cost for the new pump assembly and motor will exceed the Budget appropriation.*

Summary

The District's Well No. 5 was drilled in 2008 and was equipped in 2009. When completed, Well No. 5 became the primary source for the District's groundwater treatment facility. The cost to construct Well No. 5 was 50% funded by the Cooperating Respondents and 50% by Federal Title 16 Program funds that were administered by the San Gabriel Basin Water Quality Authority.

On February 11, 2019, an equipment failure occurred at the District's Well No. 5. Upon investigation/troubleshooting by the District's Treatment and Supply Supervisor it was determined that the equipment failure rendered Well No. 5 temporarily inoperable. At that time District staff activated Well No. 2 and No. 3 as sources for the District's Groundwater Treatment Facility. These wells have been in operation since this date without any operational issues. After investigation and consultation with the VFD panel manufacturer and the District's preferred electrical services contractor, Hunter Electric, it was determined that the variable frequency drive (VFD) that controls the speed of the motor was the most likely cause of the failure.

In May of this year, the Board approved a proposal from Hunter Electric to replace Well No. 5's VFD. This work has been completed and testing of the new VFD as conducted in July. During this testing Well No. 5 operated for approximately five minutes before shutting down. Additional testing identified that there was a problem either in the electrical cabling or in the submersible motor and that the pump assembly

would need to be pulled for inspection. Staff authorized Tri County Pump Company, the District's preferred well and pump contractor, to pull the pump assembly for inspection. After the pump assembly was pulled, the well casing was also video inspected.

The video inspection of the well casing identified that the casing louvers (from 637 feet to approximately 725 feet below grade surface) are plugged by scale encrustation. Over time this type of plugging can have significant impacts on the well's specific capacity (e.g., reduced pumping rate and greater draw down). In reviewing the operational data, I see minimal impact to the specific capacity of this well over the last several years. The well casing is 20-inch in diameter and was originally designed for a capacity of 3,000 gallons per minute (gpm).

The pump and motor assembly is comprised of a 12-inch by 12-inch pump discharge head, 290 feet of 12-inch steel pump column, a 3-stage enclosed impeller pump bowl assembly, a 300 HP submersible motor and 300 feet of electrical cabling. The inspection of the pump equipment found that the motor required rehabilitation, the electrical cabling needed replacing and several sections of the pump column required replacement.

Upon reviewing the results of the inspections, staff consulted with Tri County Pump Company to identify what type of well casing maintenance work was required and the best option to address the pump assembly deficiencies. The recommended work is summarized below:

Recommended Casing Maintenance Work (non-capital expenditure)

The recommendation for the maintenance work on the well casing is summarized below:

- Mechanical brushing of the casing to remove scale encrustation.
- Mechanical dual swab of the casing with airlifting to further remove scale encrustation and clear louvers.
- Video inspection of the casing after maintenance work.

Recommended Pump and Motor Assembly Work (Capital Improvement)

The recommendation for pump and motor assembly work is summarized below:

- Replace the pump bowl assembly Goulds pump bowl (4-stage).
- Replace the pump column with new pump column and line shaft (approx. 290 feet).
- Replace the pump discharge head to allow for vertical line shaft and motor mount.
- Replace the submersible 300 HP motor with an above ground 300 HP motor.
- Add 300 feet of 1/4-inch stainless steel airline. This will allow for easier water level monitoring.

Separate quotes from Tri-County Pump, for the work summarized above, is enclosed for your consideration. Since the work that is being proposed results in the 300 HP motor, that will drive Well No. 5's pump, being above ground, a structure around the wellhead may be required to mitigate noise impacts to the adjacent neighbors. At the September 16, 2019 Board of Directors meeting, staff will present supplemental information to assist the Board in making their decision on these items.

Recommendation

- 1) Authorize the General Manager to proceed with the well casing work as proposed by Tri County Pump Company for an amount not to exceed \$39,000 (includes contingency).
- 2) Authorize the General Manager to enter into an agreement with Tri County Pump Company for the supply and installation of a new pump assembly and motor for the District's Well No. 5, for an amount not to exceed \$138,000 (includes contingency).

Fiscal Impact

1) The District's 2019 Amended Budget appropriates \$45,000 for Well & Pump Maintenance. The year to date balance for this expense category is \$9,996.00. The cost of Well No. 5's casing maintenance work will exceed the Budget appropriation for this category by approximately \$4,000.

2) The District's 2019 Amended Capital Budget appropriates \$165,000 for the Well No. 5 rehabilitation project. The current year to date balance for this project is \$53,533.74. The cost for the new pump assembly and motor will exceed this Budget appropriations by approximately \$26,500

If you have any questions on the information provided, please feel free to contact me.

Respectfully Submitted,

Greg B. Galindo

General Manager

Enclosure(s)

- Quotes from Tri County Pump Company



TRI COUNTY PUMP COMPANY
WATERWELL AND PUMP SERVICE
 241 SOUTH ARROWHEAD - SAN BERNARDINO, CA 92408
 PHONE 909-888-7706 - FAX 909-888-3653
 LICENSE # 744742

September 11, 2019

La Puente Valley County WD
 112 N. First St.
 La Puente, CA 91744

Quote Number: 091119-1DS

Attention: Mr. Greg Galindo

Subject: Well 5

Tri County Pump Company is pleased to offer the following for your consideration. After reviewing the video log, the well needs to be brushed. Swabbed and airlifted. There is heavy scale build up in various locations throughout the well casing. The following estimate is for brushing, bailing, swabbing, airlifting and video logging the well. Suppling and connect 3 - 21,000 gallon tanks to capture discharge water to meet NPDES requirements.

Estimated Field Labor:

Travel to and from jobsite; Brush and bail.	\$9,288.00
Travel to and from jobsite; Swab.	\$9,288.00
Travel to and from jobsite; 2 Video logs.	\$2,000.00

Estimated Material and Rental:

Wire Brush Rental.	\$735.00
Roll off and Disposal.	\$900.00
Swab Rental.	\$735.00
Compressor Rental.	\$2,000.00
3 - Tank Rentals and Piping.	\$10,000.00

Estimated Labor	\$20,576.00
Estimated Material	\$14,370.00
Estimated Tax @ 9.50%	\$1,365.15
Total Estimate	\$36,311.15

We appreciate this opportunity to be of service and look forward to working with you. We trust that this estimate will suffice for your needs, and should any additional information be required, please do not hesitate to contact us.

This estimate is valid for thirty (30) days from the above date, and subject to review thereafter.

Sincerely,



Dennis Skinner

Use PO # _____ Signed _____ Date: _____

Please fax this authorization to 909 888-3653 or email dennis@tricitypump.net



TRI COUNTY PUMP COMPANY
WATERWELL AND PUMP SERVICE
 241 SOUTH ARROWHEAD - SAN BERNARDINO, CA 92408
 PHONE 909-888-7706 - FAX 909-888-3653
 LICENSE # 744742

September 11, 2019

La Puente Valley County Water District
 112 N. First Street
 La Puente, CA 91744

Quote Number: 091119-2DS

Attention: Mr. Greg Galindo

Subject: Well 5

Tri County Pump Company is pleased to offer the following for your consideration. Supply and install new water lube pump, motor, install and start up. All equipment and installation comes with a one year warranty. The following is our estimate for the following.

Estimated Field Labor:

Travel to and from jobsite; Install pump and perform start up. \$12,032.00

Estimated Shop Labor:

Prep and load equipment. \$800.00

Estimated Material:

1 - 12" 304 SS Cone Strainer	\$865.00
1 - 12" x 10' TOE Taper Suction Pipe	\$680.00
1 - 14RHMC 4 Stage Bowl Assembly Designed for 2500GPM @ 310'TDH	\$10,864.00
2 - 12" x 59-1/4" T&C Butt Column Pipe	\$1,090.00
28 - 12" x 119-1/4" T&C Butt Column Pipe	\$19,040.00
1 - 12" x 36" TOE Butt Column Pipe	\$280.00
1 - 1-15/16" x 5' 416SS Line Shaft	\$1,400.00
28 - 1-15/16" x 10' 416 SS Line Shaft	\$34,020.00
31 - 1-15/16" 304SS Line Shaft Couplings	\$1,860.00
3 - 1-15/16" x 12' retainer with rubber insert	\$9,000.00
1 - 12" x 12" Fab Discharge Head	\$5,760.00
1 - New US 300HP Motor	\$21,756.00
1 - 1-15/16" x 50-3/8" 416 SS Head Shaft	\$800.00
300' of 1/4" SS Airline	\$775.00
1 - 1-15/16" New Packing Box	\$1,000.00
1 Lot; Miscellaneous Shop Supplies (Bolts, Paint, Gaskets, Oil, Coating, Electrical Connection, Etc.)	\$1,835.00
1 Lot; Estimated Incoming Freight	\$500.00

Estimated Labor	\$12,832.00
Estimated Material	\$111,525.00
Estimated Tax @ 9.50%	\$10,594.88
Total Estimate	\$134,951.88

We appreciate this opportunity to be of service and look forward to working with you. We trust that this estimate will suffice for your needs, and should any additional information be required, please do not hesitate to contact us.



TRI COUNTY PUMP COMPANY

WATERWELL AND PUMP SERVICE

241 SOUTH ARROWHEAD - SAN BERNARDINO, CA 92408

PHONE 909-888-7706 - FAX 909-888-3653

LICENSE # 744742

This estimate is valid for thirty (30) days from the above date, and subject to review thereafter.

Sincerely,

Dennis Skinner

Use PO # _____ Signed _____ Date: _____

Please fax this authorization to 909 888-3653 or email dennis@tricitypump.net

Memo



To: Honorable Board of Directors
From: Gina Herrera, Office Manager
Date: 9/13/2019
Re: Donation of Water for the Industry Hills Charity Pro Rodeo

The District recently received a request for a donation of water for the upcoming Industry Hills Charity Pro Rodeo. This event is being held on Saturday and Sunday, October 12 and 13, 2019 at Industry Hills Expo Center.

The District's Resolution 184 establishes a policy for sponsorship of community activities and recognized the value and need for District sponsorship of community activities which are consistent with the mission of the District. In short, the policy states that participation in education and water conservation activities within its service area is for a public purpose and provides both direct and indirect benefits to the District.

Staff would like to further discuss donating water for this event at the upcoming Board of Directors meeting.

I hope you find this information useful. If you have any questions, please contact me.

Upcoming Events



To: Honorable Board of Directors

Date: 09/16/2019

Re: Upcoming Meetings, Conferences and Community Events for 2019

Day/Date	Event	<u>Barajas</u>	<u>Escalera</u>	<u>Hastings</u>	<u>Hernandez</u>	<u>Rojas</u>
Wednesday – Thursday October 2 – 3, 2019	Watersmart Innovations at the South Point Hotel and Conference Center in Las Vegas, NV.	X	X	X	X	
Thursday, October 17, 2019	SCWUA – Lunch Meeting 11:30 am					
Monday – Thursday October 21 – 24, 2019	AWWA CA/NV Annual Fall Conference at the Town and Country Hotel, in San Diego, CA.		X			
Thursday, November 14, 2019	SCWUA – Doctor of Water Meeting					
Tuesday - Friday, December 3 - 6, 2019	ACWA 2019 Fall Conference Conference at the Manchester Grand Hyatt in San Diego, CA.					
Friday, December 6, 2019	City of La Puente Holiday Parade. (non-compensable)					
Thursday, December 12, 2019	SCWUA – Christmas Luncheon					
Friday, December 13, 2019	LPVCWD Annual Christmas Luncheon 12 pm					

Board Meetings typically held on the 2nd and the 4th Monday of each Month.




SEPTEMBER 11, 2019

REPORT OF THE WATERMASTER ENGINEER
ON HYDROLOGIC CONDITIONS

 **Baldwin Park Key Well (see attached graph)**

- Located in the central portion of the San Gabriel Valley within the City of Baldwin Park and used as a general indication of water elevations throughout the San Gabriel Valley
- One vertical foot is equivalent to about 8,000 acre-feet of groundwater in the Main Basin
- On July 26, 2019, the Baldwin Park Key Well groundwater elevation was 197.5 feet.
- On August 30, 2019, the Baldwin Park Key Well groundwater elevation was 207.6 feet, **an increase of 1.8 feet** from the prior week. **The historic low was 169.4 feet on November 21, 2018.**
 - ❖ An increase of about 10 feet from the prior month.
 - ❖ About 34 feet higher than one year ago (represents 272,000 acre-feet). Includes an estimated 184,800 acre-feet of untreated imported water in cyclic storage accounts, which represents about 23 feet of groundwater elevation at the Key Well.
 - Producer Cyclic Storage – 46,500 AF
 - MWD Cyclic Storage (for UD RDA delivery) – 73,700 AF
 - Other Cyclic Storage – 64,600 AF

 **Rainfall (see attached graphs)**

- Data are readily available on a daily basis and are indicative of comparative amount of rainfall in the San Gabriel Valley (percent of average)
- Puddingstone Dam as of August 31, 2019
 - ❖ Average rainfall from July 1st through August 31st of each year is 0.10 inches
 - ❖ Rainfall during July 1, 2019 through August 31, 2019 is 0.00 inches
 - ❖ Rainfall during July 1, 2018 through August 31, 2018 was 0.00 inches
 - ❖ Rainfall during July 1, 2018 through June 30, 2019 was 23.60 inches, which was 130 percent of average
- Los Angeles Civic Center as of August 31, 2019
 - ❖ Average rainfall from July 1st through August 31st of each year is 0.05 inches
 - ❖ Rainfall during July 1, 2019 through August 31, 2019 is 0.00 inches
 - ❖ Rainfall during July 1, 2018 through August 31, 2018 was 0.00 inches

- ❖ Rainfall during July 1, 2018 through June 30, 2019 was 18.82 inches, which was 124 percent of average

Reservoir Storage and Releases

- There are three dams and reservoirs located along the San Gabriel River above San Gabriel Canyon. Their primary function is for flood control and also used to store watershed runoff for subsequent groundwater replenishment.
 - ❖ Cogswell Reservoir is located highest in the watershed and has a maximum storage capacity of 10,438 acre-feet
 - ❖ San Gabriel Reservoir is located downstream of and receives releases from Cogswell Reservoir, and has a maximum storage capacity of 44,106 acre-feet
 - ❖ Morris Reservoir is located downstream of and receives releases from San Gabriel Reservoir, and has a maximum storage capacity of 29,944 acre-feet. Releases from Morris Reservoir and San Gabriel Reservoir are used at local surface water treatment plants and used for groundwater replenishment
 - ❖ Total storage capacity is 83,255 acre-feet
 - ❖ The combined minimum pool behind Cogswell, San Gabriel and Morris Reservoirs is about 10,500 acre-feet.
 - ❖ Combined storage as of August 27, 2019 was 23,926 acre-feet (about 29 percent of capacity). **Excluding minimum pool storage, about 13,400 acre-feet is available for direct use or groundwater replenishment.**
 - ❖ About 34,000 acre-feet was released from Morris between May 28, 2019 and June 30, 2019 with about 50 percent allocated to Main Basin.
 - ❖ About 14,000 acre-feet was released from Morris between July 12, 2019 and July 31, 2019 and conserved entirely in the Main Basin
 - ❖ About 17,000 acre-feet was released from Morris between August 1, 2019 and August 31, 2019 and conserved entirely in the Main Basin
 - ❖ San Gabriel Reservoir inflow was 35 cfs and release was 0 cfs as of August 27, 2019.
 - ❖ Morris Reservoir inflow was 58 cfs and release was 310 cfs as of August 27, 2019.

Untreated Imported Water Deliveries

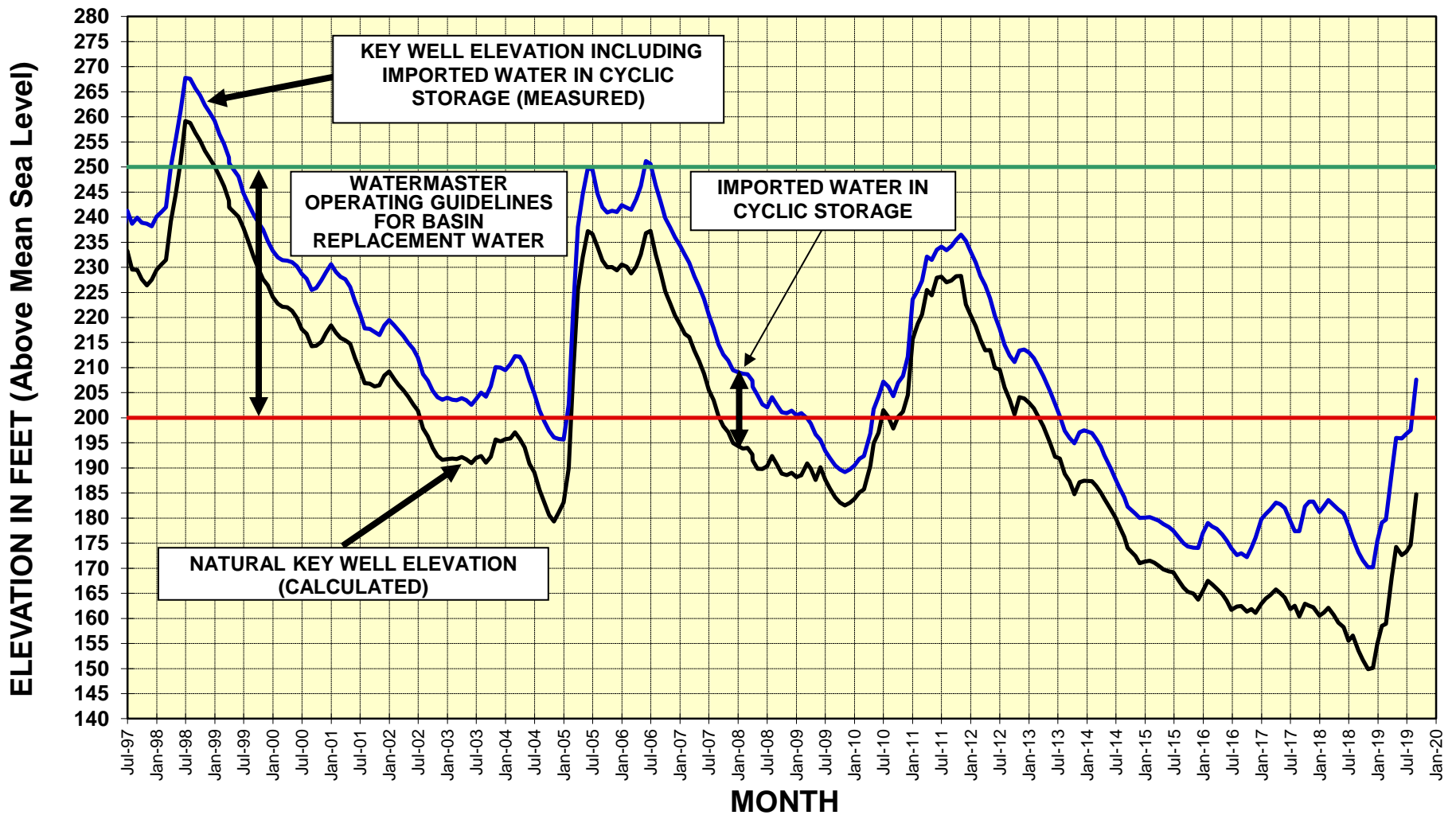
- Upper District
 - ❖ USG-3 is located in San Gabriel Canyon just below Morris Dam, it represents Upper District's primary point of delivery of untreated imported water for groundwater replenishment to the San Gabriel Valley. The typical delivery rate is about 190 cfs (or about 375 acre-feet per day)

Report of the Watermaster Engineer on Hydrologic Conditions – September 11, 2019
(continued)

- ❖ Upper District/MWD requested about 50,000 acre-feet to be delivered through USG-3 into cyclic storage account. Of the 50,000 acre-feet, about 10,000 acre-feet was delivered in May 2019 and about 16,206 acre-feet was delivered in July 2019. An estimated 17,500 acre-feet will be delivered in August 2019.
- Three Valleys District
 - ❖ Three Valleys District/MWD requested about 8,800 acre-feet to be delivered through USG-3 and PM-26 into cyclic storage account. Of the 8,800 acre-feet, about 1,665 acre-feet was delivered in May 2019 and the remaining 7,135 acre-feet will begin after Upper District's request has been fulfilled.
- San Gabriel District
 - ❖ During August 2019, San Gabriel District delivered about 400 acre-feet to the San Gabriel Canyon, about 1,500 acre-feet to San Dimas, about 400 acre-feet to the River and about 600 acre-feet transferred from Three Valleys District.

 **Landfill Report**

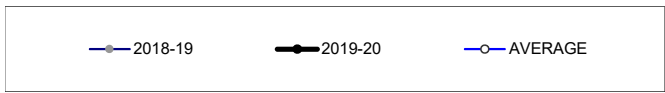
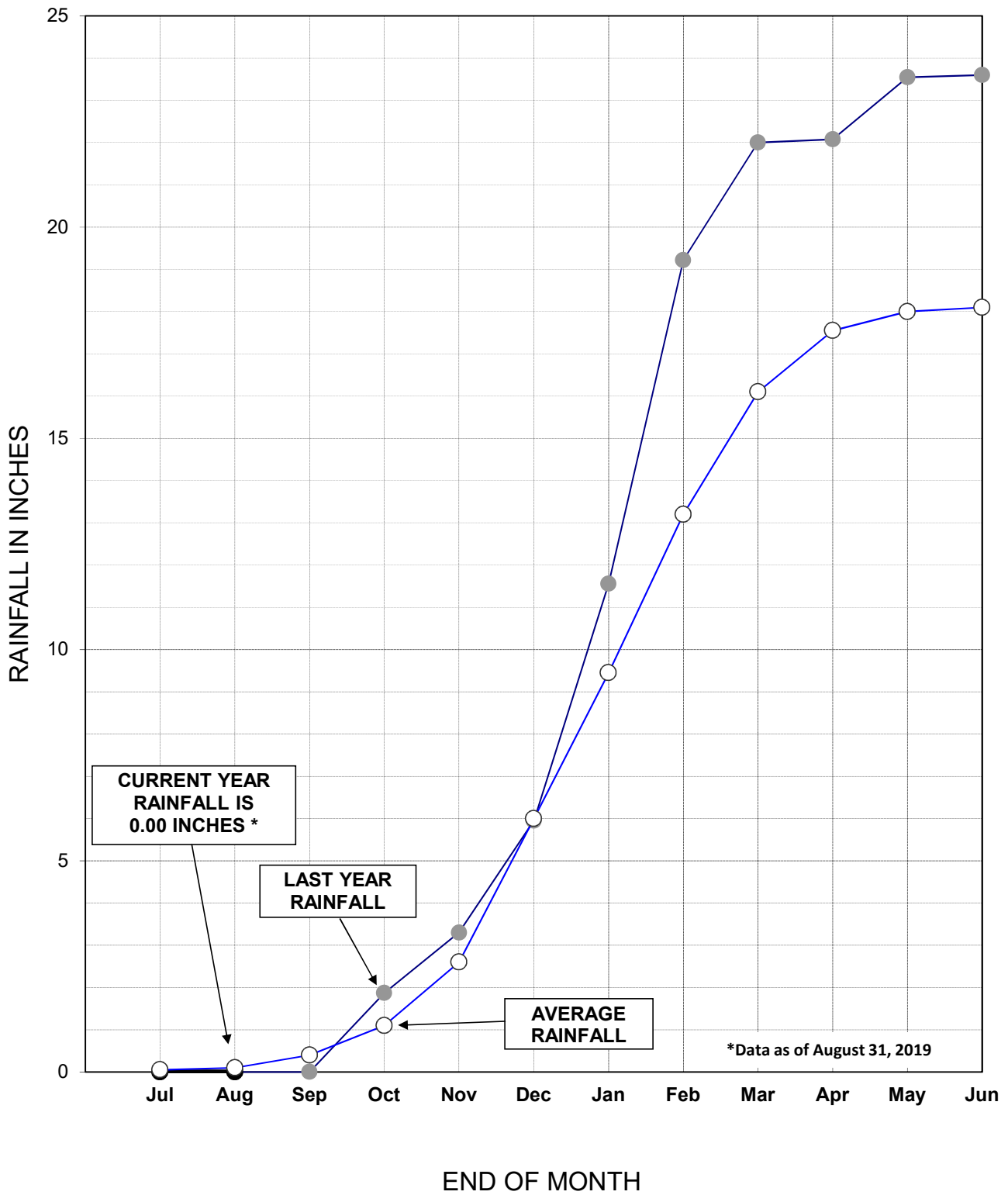
- Watermaster staff toured the following landfills during the month of August 2019:
 - ❖ Azusa Land Reclamation
 - ❖ Peck Road
 - ❖ Arcadia Reclamation Inc. (formerly Nu Way – Arrow)
 - ❖ Manning Pit
- During the tour, Watermaster staff found that each landfill appeared to operate consistent with the conditions under each landfill's permit.



MAIN SAN GABRIEL BASIN WATERMASTER



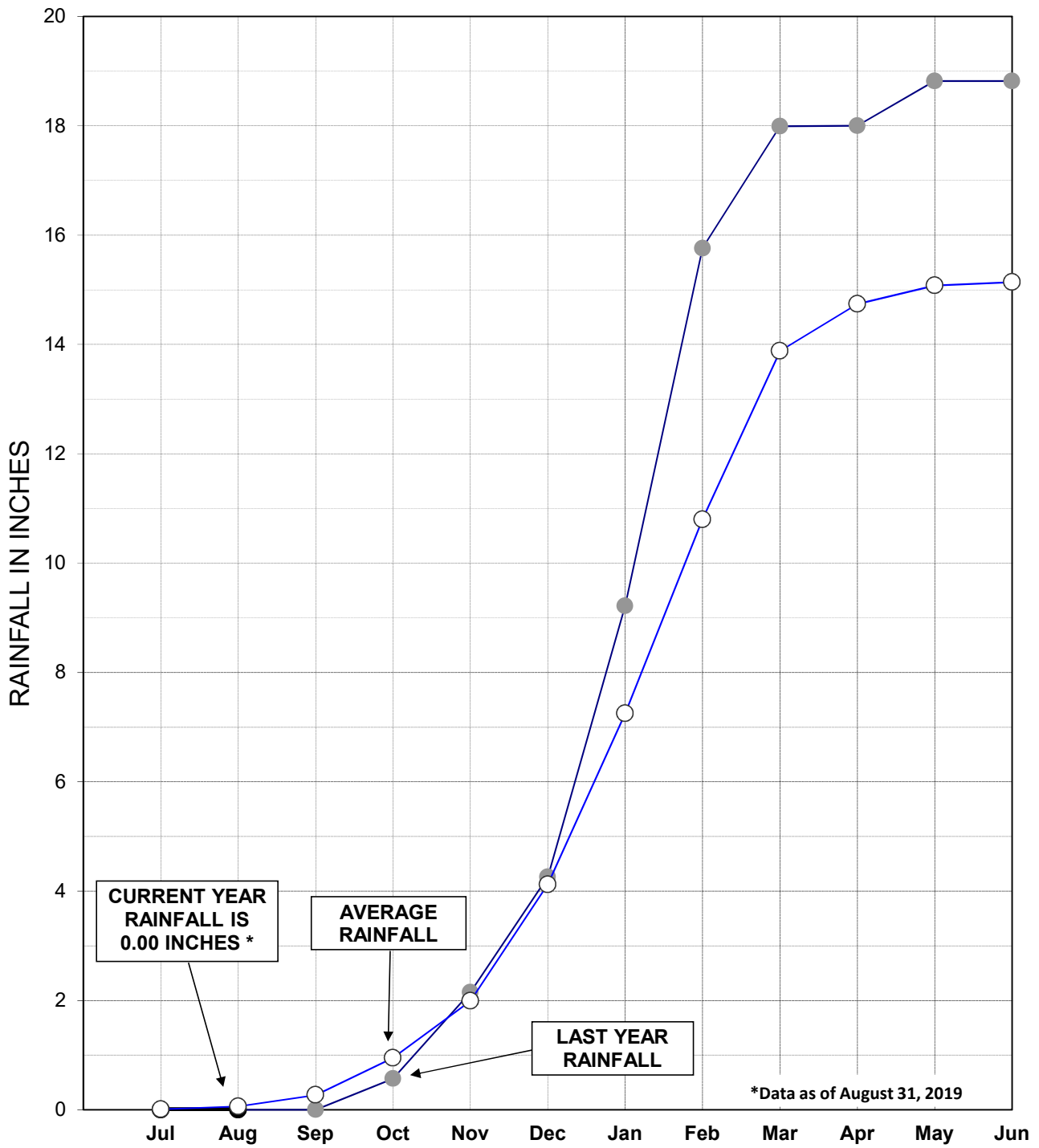
**BALDWIN PARK KEY WELL
GROUNDWATER ELEVATION**



STETSON ENGINEERS INC.
 Covina San Rafael Mesa, Arizona
 WATER RESOURCE ENGINEERS

MAIN SAN GABRIEL BASIN WATERMASTER

**ACCUMULATED RAINFALL
 AT PUDDINGSTONE DAM (STATION NO. 96-C)**



*Data as of August 31, 2019



STETSON ENGINEERS INC.
 Covina San Rafael Mesa, Arizona
 WATER RESOURCE ENGINEERS

MAIN SAN GABRIEL BASIN WATERMASTER

**ACCUMULATED RAINFALL
 AT LOS ANGELES CIVIC CENTER**