

CRESCENTA VALLEY WATER DISTRICT

**2700 Foothill Boulevard
La Crescenta, California**

**Agenda for the
Adjourned Regular Meeting of the Board of Directors
of the Crescenta Valley Water District
to be held on Tuesday, September 25, 2018 at 7:00 p.m.**

Posted: September 21, 2018 at 3:00 p.m.

Any written materials distributed to the Board in connection with this agenda will be made available at the same time for public inspection at the District office located at the above address.

Call to Order and Determination of Quorum

Pledge of Allegiance

Adoption of Agenda

At this time the public shall have an opportunity to comment on any non-agenda item relevant to the subject matter jurisdiction of the Board. This opportunity is non-transferable and speakers are limited to one three (3) minute comment.

Foothill Municipal Water District Report

1. Report on activities at Foothill Municipal Water District.

Consent Calendar

1. Consideration and approval of Minutes of the Regular Meeting on September 11, 2018.
2. Ratification of disbursements for August 2018.

Action Calendar

The public shall have an opportunity to comment on any action item as each item is considered by the Board prior to action being taken. This opportunity is non-transferable and speakers are limited to one two (2) minute comment.

1. **TTHM Mitigation and Disinfection Process Upgrades, Project E-995** - Consideration and motion to waive the Bid Procurement and Purchasing Policy per Article 18.01 of CVWD's Rules and Regulations and allow the General Manager to select and negotiate with consultants and contractors for the installation of chloramination systems at the Glenwood and Mills Plants at a cost not to exceed \$410,000 and to find said project exempt from provisions of the California Environmental Quality Act (CEQA).

Information Items

Written Communications to District/Board

General Manager's Report

Attorney Report

Reports of Committees

- **Engineering Committee**
- **Finance Committee**
- **Employee Relations Committee**
- **Policy Committee**
- **Community Relations/Water Conservation Committee**
- **Emergency Planning Committee**

Director's Oral Reports

- Report on issues, meetings, or activities attended by Directors.

Board Members' Request for Future Agenda Items

Adjournment

CRESCENTA VALLEY WATER DISTRICT

REGULAR MEETING, BOARD OF DIRECTORS

September 11, 2018

Pursuant to the order of the Board of Directors of the Crescenta Valley Water District, made at the Adjourned Regular Meeting of August 28, 2018, a Regular Meeting was held on September 11, 2018 at 7:00 p.m. at the District office at 2700 Foothill Blvd., La Crescenta, California, with President James D. Bodnar presiding.

At roll call, the following Directors and staff members were present:

Directors:	James D. Bodnar Michael L. Claessens Kerry D. Erickson Kenneth R. Putnam Judy L. Tejeda
Attorney:	Thomas S. Bunn
General Manager:	Nem Ochoa
Secretary-Treasurer:	Ron L. Mitchell
District Engineer:	David S. Gould
Others Present:	Mark Hass, IT Manager Christy Scott, Program Specialist Wendy Holloway, Customer Service Supervisor Dennis Maxwell, Operation & Maintenance Mgr. James Lee, Finance & Accounting Manager Brook Yared, Senior Engineer

PLEDGE OF ALLEGIANCE

President Bodnar opened the meeting by asking Director Claessens to lead the Board and staff in reciting the Pledge of Allegiance.

ADOPTION OF AGENDA

It was moved by Director Tejeda, seconded by Director Erickson and carried by a 5-0 vote that the Agenda for the Regular Meeting of September 11, 2018, be adopted as presented.

PUBLIC COMMENT – None

FOOTHILL MUNICIPAL WATER DISTRICT REPORT – None

CONSENT CALENDAR

It was moved by Director Claessens, seconded by Director Tejeda and carried by a 5-0 vote to approve the Minutes of the Adjourned Regular Board meeting held on August 28, 2018, and approved attendance at the ACWA Fall Conference to be held November 27 – 30, 2018 in San Diego.

ACTION CALENDAR

Appeal of a High Water Bill – Mr. Mitchell reported that Lance & Kristina Luckey own the property at 4650 Marellen Place. While reading for the August 15, 2018 billing cycle, the meter reader noticed 8.14 gpm going through the meter on August 20, 2018. Staff tried to contact the owner; however, they were not at home, so staff turned off the water and left a door hanger. The serviceman was able to help the owner isolate the leak to an irrigation line so the water was on for the home, but off at the irrigation. Staff provided a download of the meter to the customer that showed the leak started on July 23, 2018 and ran until the water was turned off on August 20, 2018. On August 23, 2018, Mr. & Mrs. Luckey brought in a letter requesting an adjustment and staff gave the maximum of \$300.00. On August 29, 2018 they brought in another letter requesting an adjustment above the \$300.00 maximum that staff is allowed to give. The average consumption for this billing period is 26 units. The total consumption was 345 units, which means the extra 319 units would be billed at tier 2 and the difference is \$1,237.72. Since staff has already applied the \$300.00, the additional adjustment would be \$937.72.

Following discussion:

It was moved by Director Tejeda, seconded by Director Claessens and carried by a 5-0 vote to authorize the General Manager to recalculate the excess water usage at tier 2 rates and grant an additional credit adjustment of \$937.72 and set up a two-year amortization schedule.

TTHM Mitigation and Disinfection Process Upgrades, Project E-995 – Mr. Ochoa gave the Board an update on where we are at in terms of the chloramination effort. He said that Dr. Issam Najm's proposal for construction came in higher than staff had anticipated and would like to discuss this more in the Engineering Committee meeting then bring back to the full Board at the September 25, 2018 meeting. The 30% design is under way and staff should have that by the first week of October. Also, the brochures have been mailed out to the customers and the website is updated with information on the chloramination. Office staff was trained so they can provide answers to questions that the public may ask. There is training at the plant on September 19, 2018, by Dr. Issam Najm. There will be a public outreach on September 15, 2018 at the Glenwood Plant facility and at the Crescenta Valley Town Council meeting on September 20, 2018. Mr. Gould gave a power point presentation to the Board regarding the operational changes and the chloramine conversion for the TTHM.

INFORMATION ITEMS – None.

WRITTEN COMMUNICATIONS TO DISTRICT – None.

REPORTS OF PERSONNEL

GENERAL MANAGER- Mr. Ochoa said there are a couple of updates. Christy Scott reported on SB623, a bill aimed at funding safe drinking water solutions for disadvantaged communities by proposing to establish the state's first tax on drinking water. This bill would require water suppliers to include an "opt out" provision on their bills to allow customers to opt out from paying a designated fee of .95 cents per month for a meter of one-inch or smaller. For two weeks they have tried to get this bill passed, which ACWA is absolutely opposed to. This did not succeed, but we may see it again.

Mr. Gould reported on the water production with 133 MG produced for August 1 – 31, which is 4.8% greater than 2017 and 4.3% less than the 5-year average. Well 8 is out of service due to motor failure. The well capacity has dropped from 1.5 MGD to 1.3 MGD. We have two developer jobs, one on at 1940

Waltonia and the other at 2340 Montrose. They have started the work on the medians on Foothill Blvd. Also, City of Glendale is going to be paving Pennsylvania Avenue from the 210 Freeway up to Markridge on both sides of the street beginning in October 2018.

ATTORNEY- MR. Bunn reported on SB998, Discontinuation of Service. This has now passed the legislative office and has been placed on the Governor's desk for signature. This requires that every public water system with more than 200 connections to have a written policy on discontinuing water service. The written policy needs to be translated into Spanish, Chinese, Tagalog, Vietnamese, and Korean. The policy needs to talk about plans for deferred or reduced payments, alternative payment schedule, and a formal mechanism for a customer to contest or appeal a bill with a telephone number for the customer to contact us. A utility cannot disconnect until the bill is past due for 60 days, will need to notify them seven business days before turning off service by phone or letter, give them a copy of the policy and tell them about their options. If for some reason they cannot pay, we can set up an amortization schedule, and they will need to pay it back within 12 months and also keep their current billing paid or service can be discontinued after 5 business days. If the Governor signs this, it will be effective January 1, 2019.

He also reported on a new Supreme Court case regarding Proposition 218. When this passed, there were questions about low income discounts and rate payers subsidizing the cost and that these discounts would need to be covered by non-rate revenue. The Supreme Court agreed with that assessment.

REPORTS OF COMMITTEES

Engineering Committee – Mr. Gould reported that the Committee will meet on September 20, 2018 at 9:00 a.m.

Finance Committee – Director Bodnar reported that the Committee had not met; however, a meeting will be scheduled as needed.

Employee Relations Committee – Director Erickson reported that the Committee had not met; however, a meeting will be scheduled as needed.

Policy Committee – Director Bodnar reported that the Committee had not met; however, a meeting will be scheduled as needed.

Community Relations/Water Conservation Committee – Director Claessens reported that the Committee had not met; however, a meeting will be scheduled as needed.

Emergency Planning Committee – Director Claessens reported that the Committee will meet on October 4, 2018 at 10:00 a.m.

Executive Committee – Director Bodnar reported that the Committee had not met; however, a meeting will be scheduled as needed.

DIRECTORS ORAL REPORT

Director Bodnar reported that he attended two MWD committee meetings. There has been discussion regarding increasing the Local Resources Program target from 68,000 AF per year to 150,000 AF per year. The MWD Board is discussing ways to encourage Stormwater capture projects.

Director Claessens – No Report

Director Tejeda reported that she welcomed back Christina Olmedo from her maternity leave.

Director Putnam – No Report

Director Erickson – No Report

CLOSED SESSION – The Board has authorized the General Manager to enter into a tolling agreement with BKK Working Group lawsuit by a unanimous vote.

ADJOURNMENT

There being no other business to come before the Board, at 8:10 p.m. it was moved by Director Bodnar, seconded by the Full Board and carried by a 5-0 vote to adjourn in remembering the first responders and victims of the terrorist attack on September 11th and that the meeting be adjourned to September 24, 2018 at 7:00 p.m.

APPROVED:

James D. Bodnar
President

Ron L. Mitchell
Secretary-Treasurer

CASH DISBURSEMENTS LIST

AUGUST 2018



<u>Check#</u>	<u>Check Date</u>	<u>Payable To</u>	<u>Description</u>	<u>Water Amount</u>	<u>Wastewater Amount</u>
0	8/7	Los Angeles County Public Works	Excavation permits for 5 job locations	2,675.00	
0	8/14	Los Angeles County Public Works	Excavation permits for 8 job locations	4,280.00	
0	8/28	Los Angeles County Public Works	Excavation permits for 2 job locations and inspect lane closure	1,341.00	
0	8/23	Southern California Edison Co.	Power purchased 08/2018	36,540.58	505.71
0	8/28	CalPERS	Employee contributions 07/2018	24,478.67	14,661.10
37901	8/6	David Gould	Health Reimbursement	64.80	43.20
37902	8/8	David Gould	Health Reimbursement	286.58	191.05
37903	8/8	Direct Connection	Printing and postage for Prop 218 Notice	2,482.31	2,482.30
37904	8/8	Direct Connection	Printing water quality reports 2018	1,597.07	1,597.07
37905	8/9	Eurofins Eaton Analytical Inc.	Water analysis	1,148.00	
37906	8/9	First Choice	Coffee service plant	79.28	79.28
37907	8/9	Foothill Car Wash, Lube & Oil	Oil change for units #51 and #43	292.72	97.57
37908	8/9	Dennis A. Maxwell, Jr	Reimbursement for 16" main break and safety meeting	86.89	19.82
37909	8/9	Spectrum Business	Data Communications 07/2018 Glenwood	2,163.33	721.10
37910	8/9	Spectrum Business	Data Communications 07/2018 Office	2,142.48	714.16
37911	8/9	Sully-Miller Contracting Co.	8.04 tons of cold mix	829.32	
37912	8/9	The Gas Company	Gas purchased at Mills house, Office and Plant 07/2018	41.50	13.83
37913	8/9	Vision Service Plan Co-(CA)	Group Vision 08/2018	278.46	185.64
37914	8/9	Waste Management - Sun Valley	Disposal service office & plant - 08/2018	865.96	288.65
37915	8/13	Wells Fargo Card Services	D. Maxwell - Chlorine pellets	2,317.56	
37916	8/14	ACWA Joint Powers Ins Authority	Group health for 09/2018	38,519.23	24,997.41
37917	8/14	ADS, LLC	Monthly monitoring 07/2018		1,750.00
37918	8/14	Airgas National Carbonation	Carbon dioxide liquidator Well 2	55.00	
37919	8/14	Airgas USA, LLC	Monthly cylinder rental 07/2018	196.51	196.50
37920	8/14	All American Landscape Co.	Landscape maintenance office 08/2018	217.50	72.50
37921	8/14	Allen Pipeline, Inc.	Welding for 16" pumpline repair and D-17-41	4,357.50	
37922	8/14	Ameripride Uniform Services, Inc	Uniform rentals 07/2018	597.25	199.08
37923	8/14	Aqua - Metric Sales, Co.	Touch read handheld device	1,803.43	
37924	8/14	ARC	Monthly MPS billing 07/2018	714.91	238.30
37925	8/14	Associated Soils Engineering	E-956 - Services rendered through 07/24/18	2,698.75	

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37926	8/14	Astra Industrial Services, Inc	Backflow test equipment calibration fee	96.00	
37927	8/14	AT&T	Voice communication 07/2018	198.56	66.19
37928	8/14	Regino Avalos	Landscape maint. and brush clearing @ Ordunio Res and Edmund I Res	2,199.37	125.63
37929	8/14	AW Direct, Inc	Miscellaneous supplies	45.97	
37930	8/14	BC Laboratories, Inc	Water analysis	4,069.50	
37931	8/14	BC Laboratories, Inc	Water analysis	3,564.10	
37932	8/14	Bonnors Equipment Rentals	Well 2 dedication - canopy - podium - chairs	299.75	
37933	8/14	Burke, Williams, & Sorensen, LLP	Legal services through 06/30/2018	851.25	283.75
37934	8/14	California Paving & Grading Co., Inc.	List 2018-18-12 paving at various locations	9,029.70	
37935	8/14	Campbell's Automotive Service	Unit # 38 - R&R air compressor - service - recharge A/C	785.52	261.84
37936	8/14	CCS Interactive, Inc.	Monthly website hosting 08/2018	78.75	26.25
37937	8/14	Cerdant, Inc.	Network security 08/2018	206.25	68.75
37938	8/14	Choice Pest Control	One time service for ants at Glenwood	213.75	71.25
37939	8/14	City of Glendale	Well 16 GWP - February-May 2018	50,118.45	
37941	8/14	City of Glendale Water & Power	Power purchased 07/2018	37,518.19	117.94
37942	8/14	Michael Claessens	Reimbursement for CA Workplace Harassment Training	11.97	3.98
37943	8/14	Colonial Life & Accidents Ins.	Employee paid insurance 07/2018	183.61	
37944	8/14	Dataprose LLC	Printing & Postage for Control 1-4 - 07/2018	1,509.47	1,509.47
37945	8/14	Dell Financial Services	C-988 Network and hardware equipment and supplies	21,459.67	9,810.39
37946	8/14	Dell Financial Services	Monthly lease contract	727.71	242.57
37947	8/14	Do-it Center	Misc hardware 07/2018	360.10	55.23
37948	8/14	Empire Fleetwash, LLC	Monthly fleet wash - 08/2018	241.50	80.50
37949	8/14	Eurofins Eaton Analytical Inc.	Water analysis	586.00	
37950	8/14	Foothill Municipal Water	Glendale/CVWD/FMWD agreement 06/2018 & 07/2018	100.00	
37951	8/14	Grainger	Miscellaneous supplies	124.00	123.98
37952	8/14	Great America Leasing Corp.	Kyoera Copiers lease 08/2018	460.84	460.82
37953	8/14	Gsolutionz Professional Services	Land line support	282.12	94.04
37954	8/14	Home Depot Credit Services	E-956 - Adpaters and bushings	66.79	
37955	8/14	Jensen Instrument Company	Digital pressure gauge for Well # 2	623.46	
37956	8/14	Terry Won Kang	Refund Check	245.11	
37957	8/14	Lagerlof, Senecal, Gosney & Kr	PWAG emergency preparedness coordinator - 06/2018	753.40	251.13
37958	8/14	Lagerlof, Senecal, Gosney & Kr	Legal services 07/2018	2,381.25	793.75
37959	8/14	Leslie Len Meis	Refund Check	46.26	
37960	8/14	LJ's Access Systems, Inc.	Gate track repairs at Glenwood	124.11	41.37
37961	8/14	Los Angeles Times	Final payment for subscription	44.69	44.68
37962	8/14	Mail Finance	Postage machine rental - (Sep-Dec 2018)	184.96	184.95

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37963	8/14	Matt-Chlor Inc	Repair kit for chlorine pump at Glenwood	310.37	
37964	8/14	Dennis A. Maxwell, Jr	Reimbursement - OT meals for crews for 16" line & lateral replacement job	262.42	
37965	8/14	O'Reilly Auto Parts	Misc supplies 07/2018	231.36	77.12
37966	8/14	Office Depot - Credit Plan	Misc supplies 07/2018	107.07	107.06
37967	8/14	Orchard Supply Hardware	Misc hardware 07/2018	833.89	76.43
37968	8/14	Paper Cuts, Inc	Paper shredding 07/2018	26.88	26.87
37969	8/14	Plumbers Depot Inc	Rip saw rebuild kit #6.0		145.09
37970	8/14	Ramco	Bobtail loads for 07/2018	3,450.00	
37971	8/14	Royal Industrial Solutions	600 V midget fuses	67.03	
37972	8/14	SA Associates	E-956 - Services for Well 2 design 4/1/18 to 7/29/18	55,274.90	
37973	8/14	Karamjeet Singh Sandhu	Refund Check	44.54	
37974	8/14	Shell	Gas purchased 08/2018	1,753.66	584.56
37975	8/14	Simpler Systems	Monthly maintenance 08/2018	375.00	125.00
37976	8/14	Spectrum Business	Data Communication Office 08/2018	176.22	58.74
37977	8/14	St Water Resource Control Brd.	Grade T3 renewal - Dave Spain	90.00	
37978	8/14	Sully-Miller Contracting Co.	8.09 tons of cold mix	808.47	
37979	8/14	Tesco Controls, Inc	E-956 - Well 2 plc relocation & program additions	10,680.00	
37980	8/14	Toro's Lawnmower & Garden	Sharpening tools	7.50	7.50
37981	8/14	Underground Service Alert/SC	Underground notification 07/2018	194.36	64.79
37982	8/14	Univar USA Inc	Liquid bleach for Glenwood (430 gals) & Mills (1,000 gals)	2,615.08	
37983	8/14	Vulcan Materials Company	Mixed bobtail	310.00	
37984	8/14	Water Wise Consulting, Inc	Water audit for 5914 Canyonside	175.00	
37985	8/14	Western Water Works	Black weld couplings	49.06	
37986	8/15	Airgas National Carbonation	Well 2 - Carbon dioxide liquidator	256.21	
37987	8/15	City of Glendale	Deposit for temporary water meter for cleaning sewer interceptor		750.00
37988	8/21	Christy Joana Scott	Health Reimbursement	326.76	217.84
37989	8/23	Affordable Generator Services, Inc.	Main office Generator rental 08/2018	1,229.90	
37990	8/23	Aflac	Employee paid insurance 08/2018	1,854.23	
37991	8/23	Airgas USA, LLC	Safety equipment	121.66	40.55
37992	8/23	Allen Pipeline, Inc.	Mills pump line emergency weld repair	1,218.00	156.00
37993	8/23	American Water Works Assoc.	Membership renewal 10/1/18 to 09/30/19	2,018.00	
37994	8/23	AT&T Mobility	Cell phone service 07/2018	855.74	285.24
37995	8/23	Regino Avalos	Landscaping maintenance 07/2018	879.37	125.63
37996	8/23	California Water Environment	Collections System Maint Grade 3 renewal - R. Wood	97.00	
37997	8/23	Campbell's Automotive Service	Unit #6 - Tune up, oil change, flush cooling system, and replace fuel filter	749.35	249.77
37998	8/23	Daewon Choi	E-982- Claim for replacing bush at customer house	258.00	

<u>Check#</u>	<u>Check Date</u>	<u>Payable To</u>	<u>Description</u>	<u>Water Amount</u>	<u>Wastewater Amount</u>
37999	8/23	Choice Pest Control	Monthly service Mills house and Well 9 - 08/2018	90.50	12.50
38000	8/23	Contractor Compliance & Mont Inc.	Well 2 - Labor compliance service 07/2018	1,068.75	
38001	8/23	Cypress Ancillary Benefits	Group Dental 09/2018	2,268.05	1,512.03
38002	8/23	Direct Connection	Postage for Chloramine mailer	576.50	576.50
38003	8/23	First Choice	Coffee service at plant and office	192.09	192.09
38004	8/23	Galpin Raymer Operations	Unit #55 (2) extra key fobs for the Transit Connect	386.22	128.74
38005	8/23	Grainger	Miscellaneous shop supplies	306.09	133.48
38006	8/23	Hach Company	6 foot chlorine probe with cable w/adaptor - for Glenwood analyzer	769.79	
38007	8/23	J's Maintenance	Janitorial service 07/2018	732.00	244.00
38008	8/23	John Robinson Consulting, Inc.	M-965 Grant assistance consulting service 07/2018	3,000.00	
38009	8/23	KR Nida Companies	Install safety lights on Unit #55	2,066.67	688.88
38010	8/23	LA Dept Water and Power	Power purchased 08/2018	52.34	
38011	8/23	Lightning Oil Co. & Vacuum Svc	Removal of booster pump waste oil	430.00	
38012	8/23	Lincoln Financial Group	Disability & life insurance 09/2018	1,187.24	791.50
38013	8/23	Dennis A. Maxwell, Jr	Reimbursement for employee pancake breakfast	93.25	31.08
38014	8/23	Newegg, Inc.	3 Replacement computers with software	2,045.02	681.65
38015	8/23	Northern Safety Co., Inc	Safety equipment	70.02	23.34
38016	8/23	Royal Industrial Solutions	500 ft black wire for Well 2 VFD	146.33	
38017	8/23	Sawyer Petroleum	350 gallons red diesel	2,779.95	926.65
38018	8/23	Spectrum Business	Data communication Glenwood 08/2018	93.74	31.24
38019	8/23	Sully-Miller Contracting Co.	Minimum load charge	24.58	
38020	8/23	The Gas Company	Gas purchased at Office - 08/2018	10.82	3.60
38021	8/23	Brooke Tushinsky Fox	Refund Check	100.00	
38022	8/23	Univar USA Inc	Liquid bleach for Glenwood (600 gals) & Mills (1,030 gals)	3,053.97	
38023	8/23	UPS	Shipping charges plant	7.78	7.77
38024	8/27	David Gould	Health Reimbursement	284.04	189.36
38025	8/28	Burke, Williams, & Sorensen, LLP	Legal services through 07/2018	643.50	214.50
38026	8/28	CA-NV Section AWWA	Chloramines Workshop - Registration for K. Boyce & M. DuRose	370.00	
38027	8/28	Cargill, Inc - Salt Division	25 tons of salt	5,395.13	
38028	8/28	Citibank	Misc supplies (Costco) 08/2018	490.52	490.52
38029	8/28	City of Glendale	Glendale Utilities tax - 07/2018	38,863.10	
38030	8/28	City of Glendale	ULARA services for 08/2018	2,368.77	
38031	8/28	Dunn-Edwards Corporation	Paint for maintenance at Glenwood	107.40	35.80
38032	8/28	Foothill Municipal Water	Purchase water delivery 07/2018	357,209.30	
38033	8/28	Joseph G. Pollard Co., Inc	NP 2-1/2 Pressure gauge	33.11	33.10
38034	8/28	Sun Kim	Refund Check	100.00	

<u>Check#</u>	<u>Check Date</u>	<u>Payable To</u>	<u>Description</u>	<u>Water Amount</u>	<u>Wastewater Amount</u>
38035	8/28	Koppl Pipeline Services, Inc.	Pipe fittings for D-18-34	4,906.39	
38036	8/28	Newegg, Inc.	New laptop for training center at Glenwood	770.24	256.74
38037	8/28	Northern Tool & Equip Co.	Cordless grease gun with battery and case for the plant	102.25	102.24
38038	8/28	Paveco Construction Inc	List 2018-19-02 paving various locations	6,915.65	
38039	8/28	Plate Locks Roadway Safety Products	8 corner plate locks for road plates	85.74	28.57
38040	8/28	Plumbers Depot Inc	Unit #33 - Repairs to the sewer camera van & equipment		2,896.91
38041	8/28	PMC Engineering LLC	PUR cable for Well #2	1,618.04	
38042	8/28	Rassac Air Systems	Install 6 new thermostats at Main office	8,399.82	2,799.94
38043	8/28	So Cal Turf & Tractor	Unit #22 - Replace hose assembly	235.65	78.55
38044	8/28	Spectrum Business	Data Communications 08/2018 Office	2,142.48	714.16
38045	8/28	Spectrum Business	Data Communications 08/2018 Mills Plant	2,163.33	721.09
38046	8/28	Star Ford	Purchase Unit #55 - 2018 Transit Connect cargo van	25,524.03	
38047	8/28	Star Ford	Fuel tube assembly/repairs for fuel leak in unit #43	537.14	179.03
38048	8/28	Sully-Miller Contracting Co.	8 tons of cold patch	812.45	
38049	8/28	Vision Service Plan Co-(CA)	Group vision for 09/2018	278.46	185.64
38050	8/28	Vulcan Materials Company	Crushed Agg base	10,046.34	
38051	8/28	Waste Management - Sun Valley	Disposal service at Plant/Office - 08/2018	865.96	288.65
38052	8/28	Wells Fargo Card Services	Gould: AWWA workshop reg.; logo shirts for office staff; Board meeting dinners; engineering supplies and books	821.01	273.64
38053	8/28	Wells Fargo Card Services	Hass: Monthly recurring charges; GPS software; computer subscriptions & hardware; cellphone supplies and booster kits	1,293.81	382.65
38054	8/28	Wells Fargo Card Services	Maxwell: Door vents for Well 2; flashlights for various trucks; dinner for OT crews	1,169.30	131.56
38055	8/28	Wells Fargo Card Services	Mitchell: CUEMA Summit (reg. & 1st night lodging); CalPERS Ed Forum registration (J. Lee); COBRA webinar (J. Lee); lunch with CV Strategies	939.93	313.32
38056	8/28	Wells Fargo Card Services	Ochoa: Management assessment training tool	360.00	120.00
38057	8/28	Wells Fargo Card Services	Scott: Supplies & refreshments for National Night Out event	741.77	
38058	8/28	Western Water Works	Check valve, flanges, corp stops, and weld nozzles	1,916.09	
38059	8/31	So Cal Water Utilities Assoc.	Registration for Vendor's Fair 09/13/18	270.00	
38060	8/31	Mark Hass	Health Reimbursement	298.74	199.16
Subtotals				\$ 861,281.94	\$ 83,491.10
Total Disbursements for August 2018				\$ 944,773.04	

<u>Check#</u>	<u>Check Date</u>	<u>Payable To</u>	<u>Description</u>	<u>Water Amount</u>	<u>Wastewater Amount</u>
<u>Payroll Report</u>					
		Directors			\$ 1,260.00
		Offie Regular Payroll			\$ 140,530.00
		Office OT			\$ 764.00
		Plant Regular Payroll			\$ 136,705.00
		Plant OT & Standby			\$ 22,774.00
		Employer Payroll Taxes			\$ 20,497.00
		Payroll Service Charges			\$ 379.00
		Total Payroll for August 2018			<u>\$ 322,909.00</u>

CRESCENTA VALLEY WATER DISTRICT

BOARD OF DIRECTORS - STAFF REPORT

Action Item No. 1
September 25, 2018

To: Honorable President and Members of the Board of Directors
From: David S. Gould, P.E. – District Engineer
Subject: TTHM Mitigation and Disinfection Process Upgrades, Project E-995

ACTION ITEM:

TTHM Mitigation and Disinfection Process Upgrades, Project E-995 - Consideration and motion to waive the Bid Procurement and Purchasing Policy per Article 18.01 of CVWD's Rules and Regulations and allow the General Manager to select and negotiate with consultants and contractors for the installation of chloramination systems at the Glenwood and Mills Plants at a cost not to exceed \$410,000 and to find said project exempt from provisions of the California Environmental Quality Act (CEQA).

BACKGROUND:

The District uses chlorine as a disinfectant to treat drinking water. Chlorine can create disinfection by-products during treatment, known as total Trihalomethanes or TTHMs, as it reacts with naturally occurring organic matter in untreated water from imported water supplied by FMWD/MWD from either the Colorado River (CRW) or the State Water Project (SWP). The typical water supply blend for CVWD is 60% groundwater and 40% imported water. The water supply blend is now closer to 30% groundwater and 70% imported water.

CVWD has seen a steady rise in the concentration of TTHMs because CVWD is using more imported water as groundwater levels have not yet recovered from the latest drought. The increase in imported water, coupled with the additional chlorine required to maintain a chlorine residual in the system has led to an increase in TTHMs in the distribution system.

Past Actions:

- o August 14, 2018 – discussion by Dr. Issam Najm of WQTS on TTHMs and Chloramines. Staff awarded a \$10,000 consulting services contract to WQTS for initial study and evaluation.
- o August 28, 2018 – awarded a contract to WQTS for \$99,800 for chloramine conversion, public outreach, staff and operator training, Department of Drinking Water (DDW) permitting support, development of necessary mitigation plans, and preparation of 30% design plans.
- o August 28, 2018 – Staff awarded a contract to Hazen and Sawyer for \$9,971 to perform bench testing of CVWD's source water to determine proper breakpoint chlorination and formation of TTHMs.
- o Staff, WQTS and CV Strategies finalized the brochure and a list of frequently asked questions. Mailed out the brochure, which were received by customers starting on September 10, 2018.
- o Staff posted website information and a press release was sent to CV Weekly and Glendale Newspress.
- o Staff met with WQTS and Carollo Engineering to review the design scope of work and installation for the chloramination system as a design/build project.

DISCUSSION:

Staff and its consultants have been working on two options to bring the TTHM levels to below the target level of 64 ug/L and the following is a summary of tasks and actions taken to date.

Option 1 - Operational changes: Staff focused on three (3) factors that form TTHM in CVWD reservoirs

- 1) Water Age
- 2) Chlorine residual levels
- 3) Water temperature

Operations staff over the last two weeks has performed the following adjustments to the distribution system:

- 1) Water Age – Reduced the amount of water stored in each reservoir. The current water storage available is based upon the ultimate demand requirements for the system, which is shown in Table 1 and Table 2 attached.
- 2) Chlorine residual levels – Reduced the amount of chlorine injected at the Mills and Glenwood Plant to maintain a chlorine level of 1.0 mg/L after breakpoint chlorination. This also based on information provided from the Bench Testing performed by Hazen and Sawyer that is shown in the attached technical memorandum.

- 3) Water Temperature – the Bench Testing performed by Hazen and Sawyer showed that higher temperatures (about 30° C or 86° F) increases the TTHM formation in the water over time.

The results of these changes are shown on the attached TTHM charts for each reservoir site. Overall, the TTHM levels have reduced, however, the upper zones are still above the target level of 64 ug/L.

Staff has discussed with Hazen about the installation of a water aeration system inside Oak Creek Reservoir No. 1 & No. 2 (See Figure 1). Hazen indicated that they have designed these types of systems for various agencies and have seen a TTHM reduction of 30% to 40%. Staff has requested a preliminary proposal for the design of this system from Hazen.

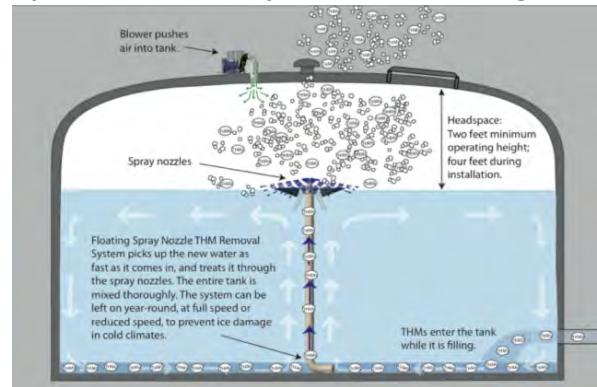


Figure 1
Typical Aeration System inside a reservoir

Option 2 - Chloramine Conversion:

The following is an update of tasks completed by staff and consultants:

- o Office & field staff training on the use of chloramines and anticipated questions from the community
- o Public workshop at the Glenwood Plant on September 15, 2018
- o System Operations training for conversion to chloramines and preventing nitrification of reservoirs including attendance at an AWWA –CA-NV Section - chloramines, colorimeters and sample collection workshop
- o WQTS and staff working on Nitrification Monitoring & Control Plan for submittal to DDW.

Staff had been working with WQTS & Carollo Engineers on a design/build contract to install the new ammonia system at the Mills and Glenwood plants. However, the proposed cost estimate for design/build contract was higher than anticipated.

Staff looked into completing the work by utilizing CVWD staff to coordinate purchasing of equipment & material and coordinating sub-contractors such as an electrical contractor for installation of the electrical system and a system integrator for the SCADA equipment. However, with staff's current workload, a consultant will be needed to assist with contract and construction administration for the chloramine conversion.

Staff requested a proposal from John Robinson Consulting (JRC) to provide contract administration based on the 30% design from Carollo Engineers. Tasks include assistance with the purchase of the ammonia metering pump system, coordinating the electrical work, coordinating the SCADA programming and integration, and assistance with ordering material, coordinating with CVWD crews for installation of on-site piping and project start up. Attached is the proposal from John Robinson Consulting that includes the anticipated hours at a reduced hourly rate for \$45,225.

WQTS provided an amended proposal for the additional design work by Carollo Engineers based on the site visit on September 5, 2018. The attached amendment proposal is requesting an additional \$44,240 for a buildable plan set.

Engineering Committee Recommendation:

Staff discussed the request for additional fees for consultants and the preliminary cost estimate to complete the conversion of the distribution system from free chlorine to chloramines with the Engineering Committee on September 20, 2018. It was the recommendation of the Engineering Committee to provide an overall cost estimate for chloramine conversion project to the Board of Directors. It was suggested by the Committee that the Board provide authorization to the General Manager, a not-to-exceed cost to select and negotiate with consultants and contractors for the installation of chloramination systems at the Glenwood and Mills Plants, thereby allowing the project to continue without the lag time of waiting for Board approval. Staff prepared a preliminary cost estimate as shown below.

Preliminary Cost Estimate:

The table below shows a cost summary of previously approved costs and preliminary cost estimate for the conversion to chloramines for discussion with the Board.

Cost Summary - Previously Approved	
<u>Consultants - Planning, Design & Construction Admin</u>	Cost
WQTS - Planning	\$10,000
WQTS - Design	\$99,800
Hazen & Sawyer	\$9,970
Total - Consultants	\$119,770
<u>Public Notification</u>	
CV Strategies	\$3,500
Printing	\$1,500
Mailing	\$1,500
Total - Public Notification	\$6,500
<u>Sampling</u>	
WQ Sampling - From 7/1/18 to Present	
210 Samples X \$60/EA	\$12,600
24-hr Surcharge - 100%	\$12,600
Total Sampling	\$25,200
Total Cost to Date - Previously Approved	\$151,470

Cost Estimate for Chloramination System Improvements	
<u>Consultants - Planning, Design & Construction Admin</u>	Estimate Cost
WQTS - Design - Additional	\$44,240
John Robinson Consulting (Estimate)	\$45,225
Total - Consultants	\$89,465
<u>Sampling</u>	
Samples - 9/18 to 12/31/18 - 14 Weeks – 238 samples	\$14,280
24-hr Surcharge - 100%	\$14,280
Total Sampling	\$28,560
<u>Glenwood - Ammonia Station</u>	Estimate Cost
Ammonia metering pump skid	\$50,000
Electrical Upgrade	\$15,000
SCADA - Integration/wiring/conduits	\$15,000
Chlorine Analyzer	\$5,000
Ammonia Tank	\$2,500
On-site Piping	\$8,000
Vault	\$5,000
Misc + Welder	\$17,000
Subtotal	\$117,500
<u>Mills - Ammonia Station</u>	Estimate Cost
Ammonia metering pump skid	\$50,000
Electrical Upgrade	\$15,000
SCADA - Integration/wiring/conduits	\$15,000
Chlorine Analyzer	\$5,000
Ammonia Tank	\$2,500
On-site Piping	\$8,000
Misc + Welder	\$17,000
Subtotal	\$112,500
Total Cost Estimate for Ammonia Systems	\$230,000
20% Contingency	\$46,000
Total Cost Estimate for Construction	\$276,000
Misc. Costs (i.e. Chemical)	\$16,415
Total for Chloramination System Improvements	\$410,000
Total Costs and Estimated Cost for Project	\$561,470

Project Schedule:

The attached Table 3 shows the project schedule based on meeting the October 1 deadline of reducing TTHM levels below 64 ug/L. The schedule shows that the new ammonia equipment could be installed by the end of 2018. However, it is dependent on the lead time for procurement of the equipment, which is estimated to be 6 – 8 weeks.

The attached Table 4 shows the project schedule, if the TTHM levels are not below the target of 64 ug/L on October 1, 2018. The schedule includes operational training to shift to 100% imported water, meeting with FMWD on the amount of water needed and the duration, sampling intervals in critical locations to determine if nitrification is occurring, dead-end main flush out schedule and duration, and schedule for boosting chlorine in critical areas.

RECOMMENDATION:

It is staff's recommendation to concur with the Engineering Committee to authorize the General Manager to select and negotiate with consultants and contractors for the installation of chloramination systems at the Glenwood and Mills Plants for a not-to-exceed cost of \$410,000.

ENVIRONMENTAL REVIEW:

This project is exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15301, Existing Facilities, of the CEQA Guidelines. This project is a Class 1, which consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the determination.

FUNDING AVAILABILITY:

The following are options for providing funding for further discussion with the Board:

Option 1: Utilize MTBE reserve fund:

MTBE Reserve Fund Balance as of 7/1/18	\$ 5,300,000
Transfer - Rate Stabilization (\$150k) & OPEB (\$400k)	\$ (550,000)
Revised MTBE Reserve Fund Balance as of 9/21/18	\$ 4,750,000
Additional Funding Required	\$ 561,470
Projected MTBE Reserve Fund Balance	\$ 4,188,530

Option 2: Reduce FY 18/19 CIP Budget and utilizing MTBE fund reserve for the remainder:

Capital Improvement Project Program	Budget FY 18/19	Revised Budget FY 18/19
1. Water Supply (<i>Defer rehabilitation of 3 wells</i>)	\$ 635,000	\$ 410,000
2. Water Storage	\$ 514,800	\$ 514,800
3. Water Distribution	\$ 326,700	\$ 326,700
4. Water Treatment	\$ -	\$ -
5. Technology	\$ -	\$ -
6. Public Safety/Emergency Response	\$ -	\$ -
7. Facilities & Planning	\$ -	\$ -
Capital Improvement Projects - Total	\$ 1,476,500	\$ 1,251,500
CIP Reduction		\$ (225,000)
Total Cost Estimate for Chloramine Conversion		\$ 561,470
Additional Funding Required		\$ 336,470
MTBE Reserve Fund Balance as of 7/1/18		\$ 5,300,000
Transfer - Rate Stabilization (\$150k) & OPEB (\$400k)		\$ (550,000)
Revised MTBE Reserve Fund Balance as of 9/21/18		\$ 4,750,000
Additional Funding Required		\$ (336,470)
Projected MTBE Reserve Fund Balance		\$ 4,413,530

| Prepared by:



David S. Gould, P.E.
District Engineer

Submitted by:



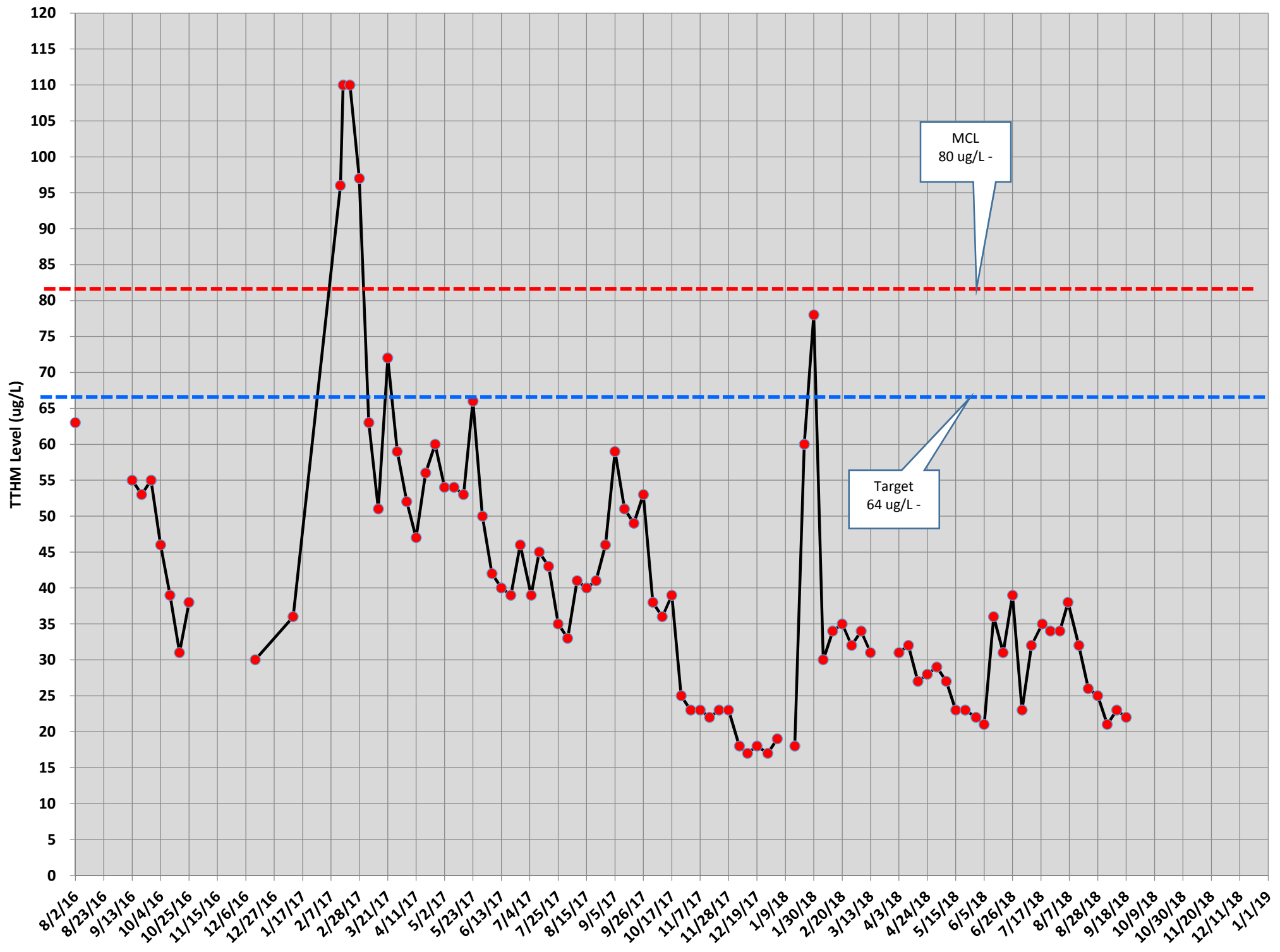
Nem Ochoa
General Manager

Attachments:

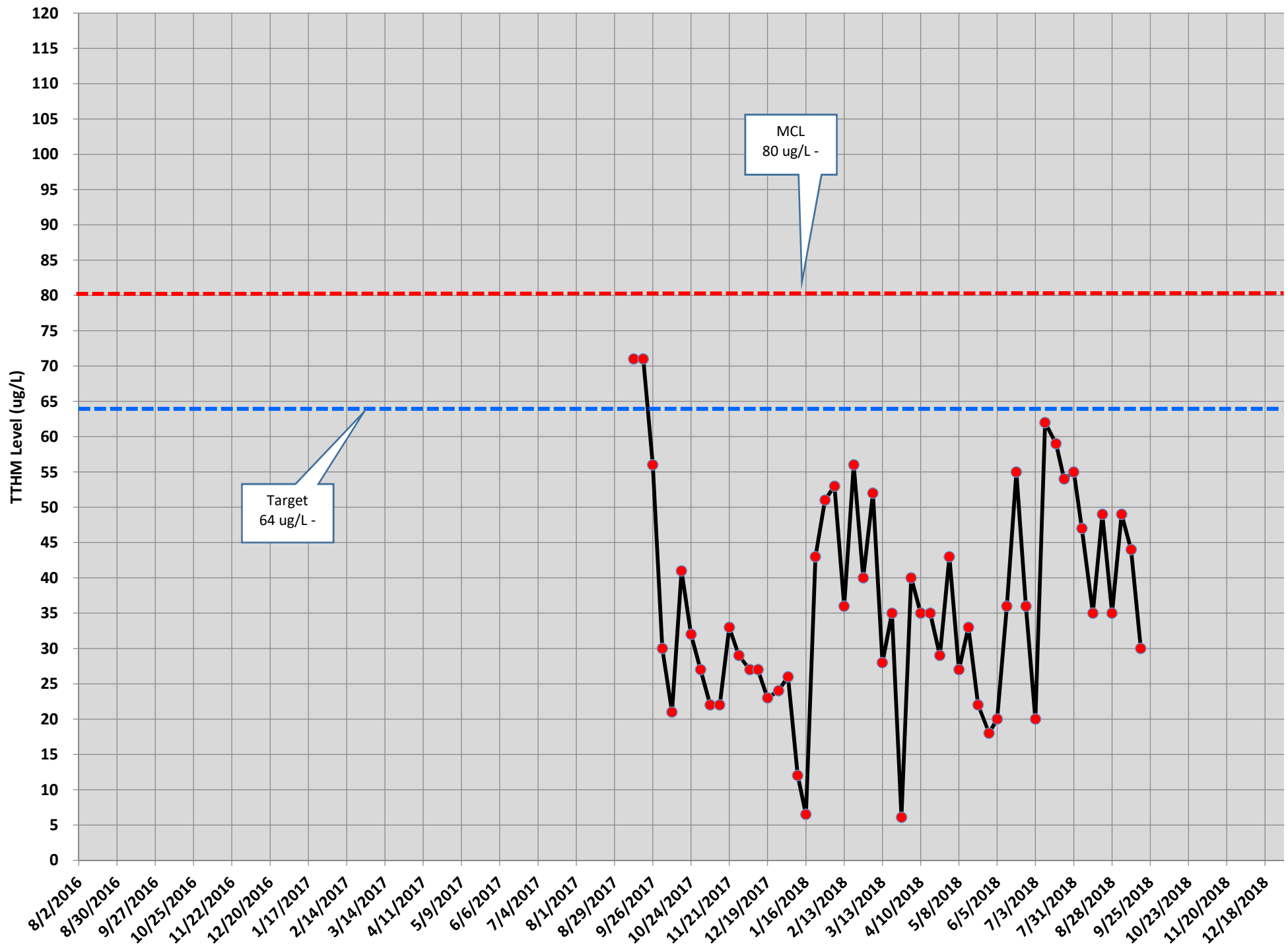
1. TTHM charts for each reservoir site
2. Table 1 - Water Storage - ultimate demand requirements
3. Table 2 – Water Storage – reduced reservoir capacity
4. Hazen and Sawyer – Draft Technical Memorandum
5. John Robinson Consulting Proposal dated September 17, 2018
6. WQTS Amendment Proposal dated September 20, 2018
7. Table 3 – Project Schedule
8. Table 4 – Alternative Project Schedule

g:\management\board meeting staff reports\2018\09-25-18 board memo - e-995 disinfection process upgrades - request for funds.docx

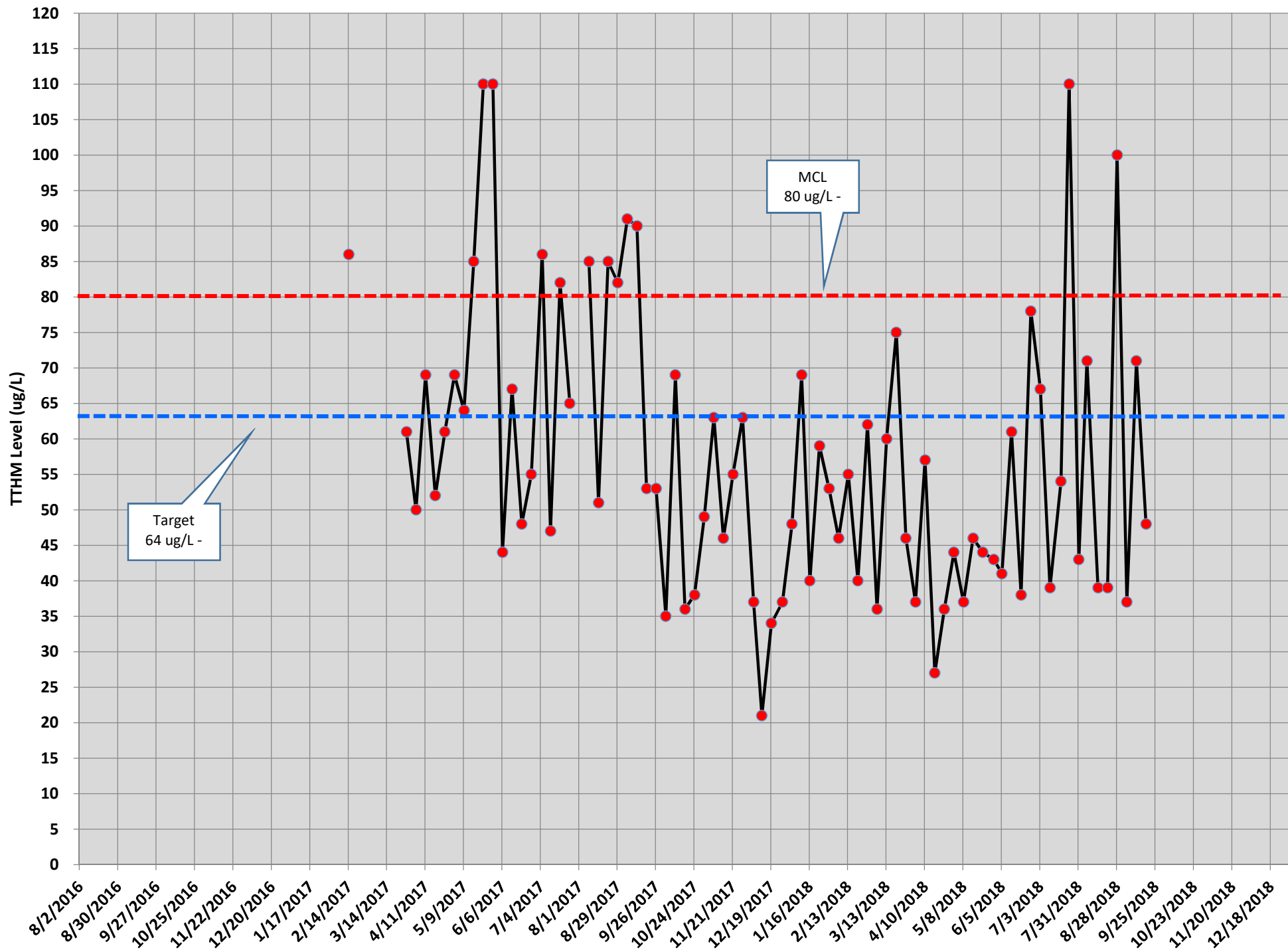
FMWD at Paschall Booster - TTHM's Levels



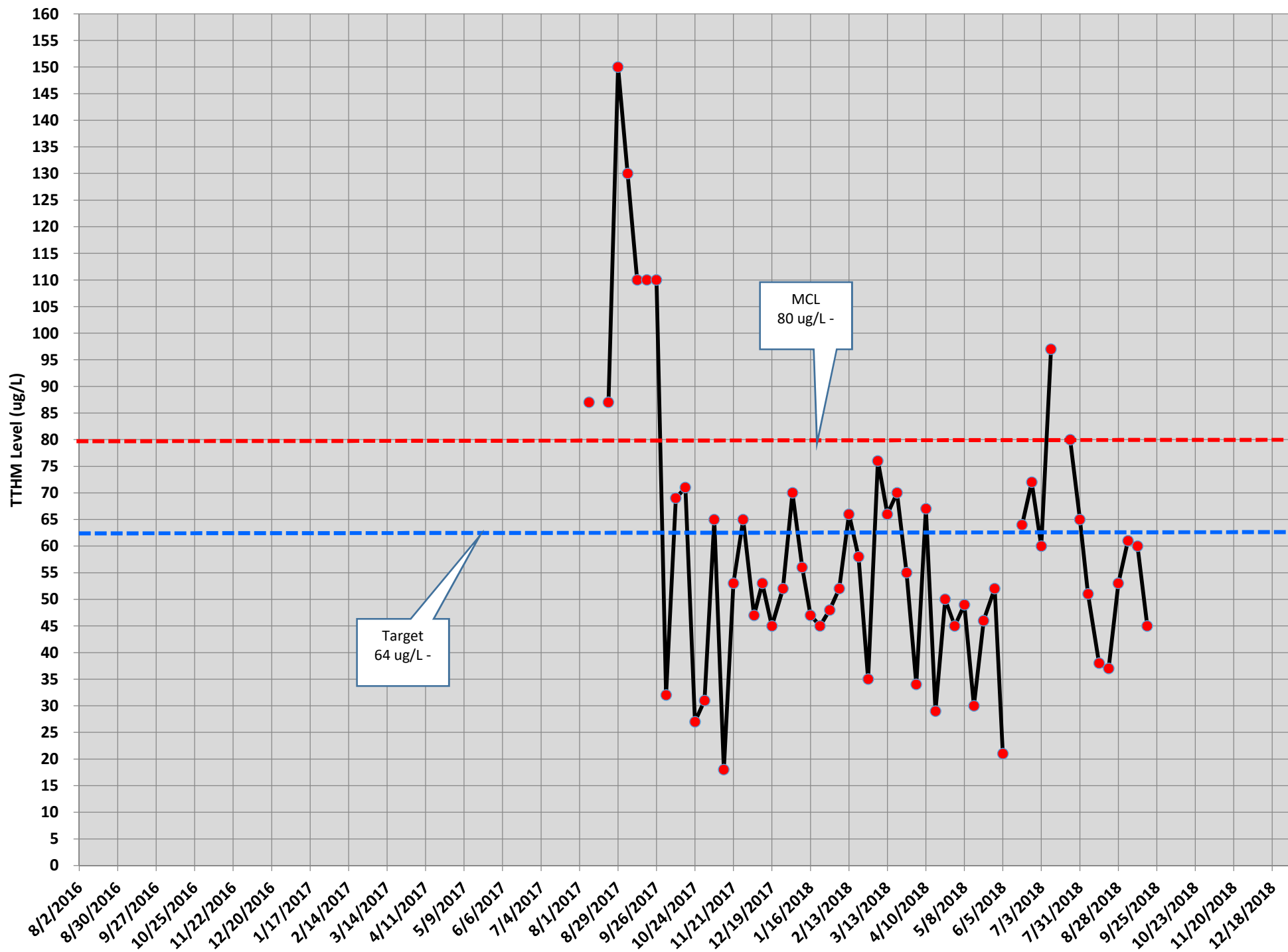
Encinal Reservoir (Zone 1) - TTHMs Levels



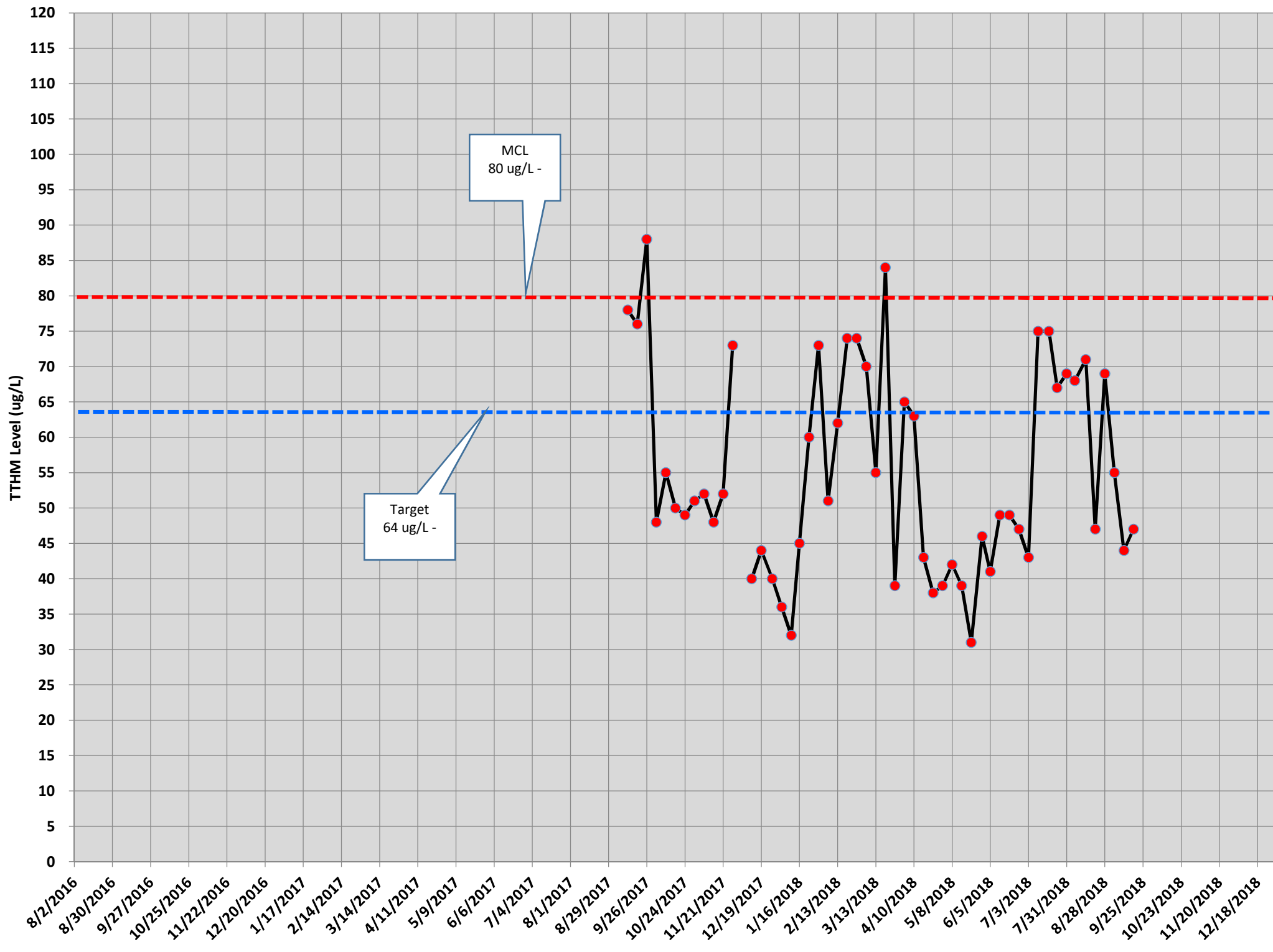
Williams Reservoir (Zone 2) - TTHMs Levels



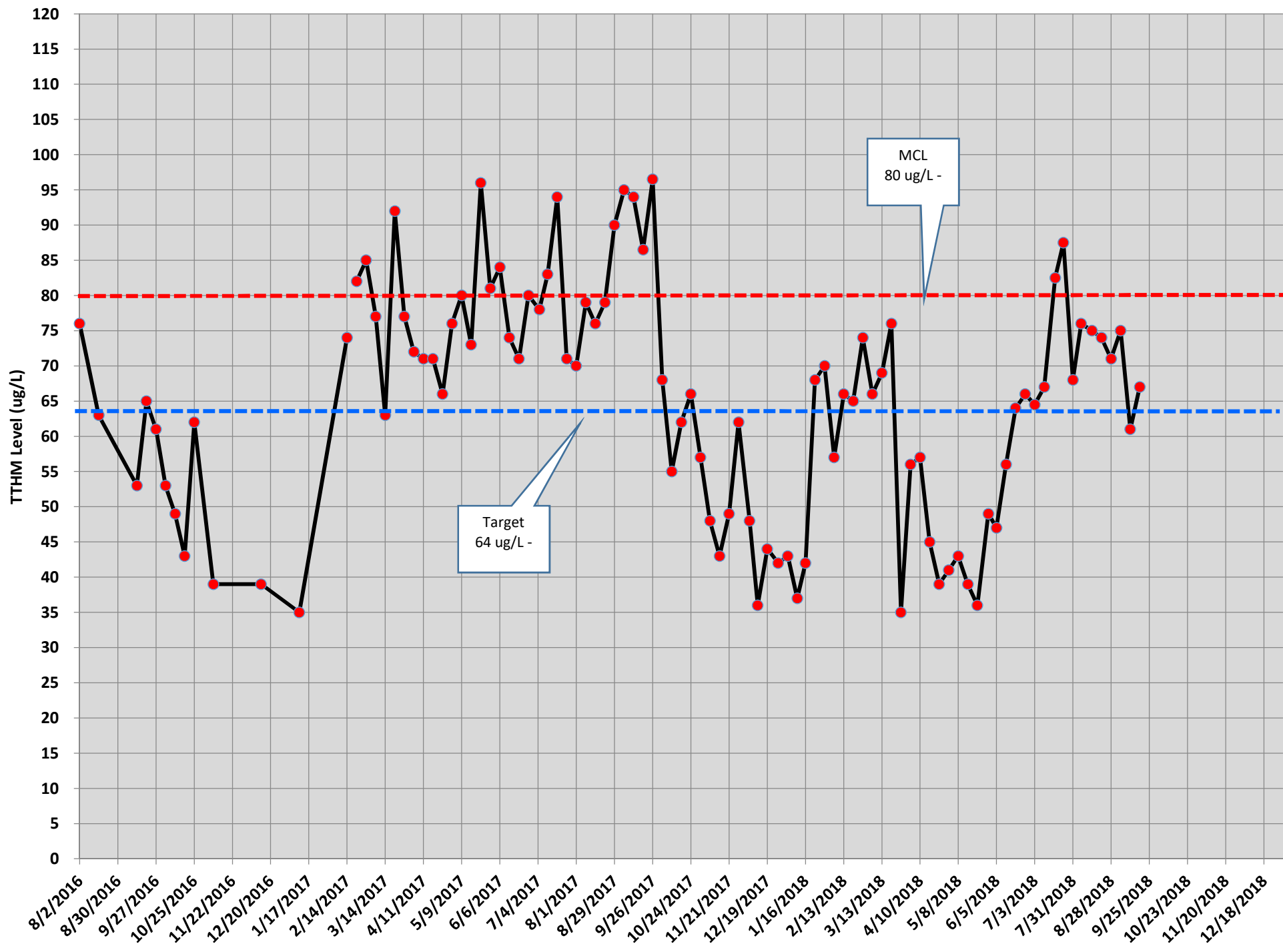
Ordunio Reservoir (Zone 2) - TTHMs Levels



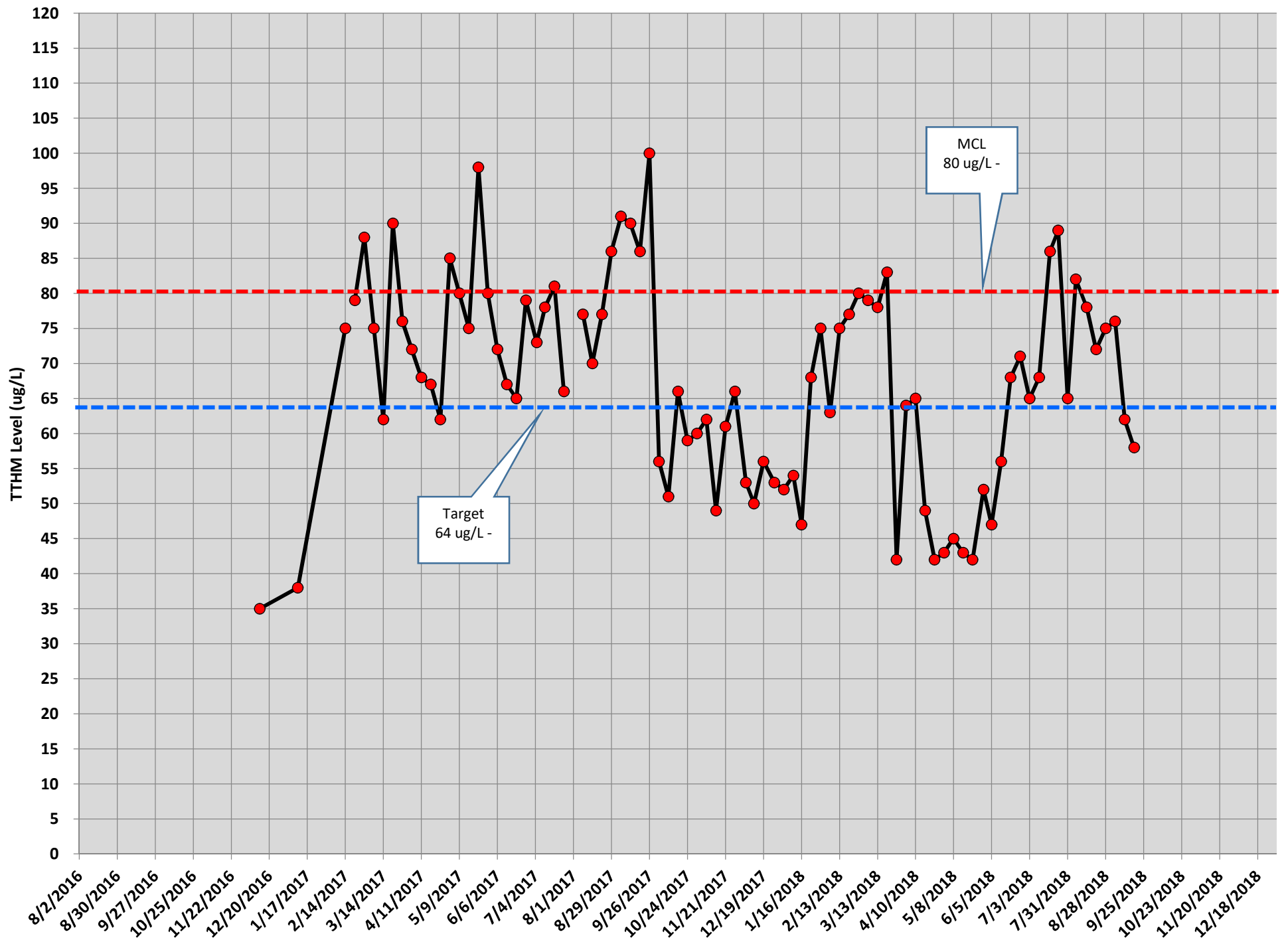
Rosemont Rreservoir (Zone 3) - TTHMs Levels



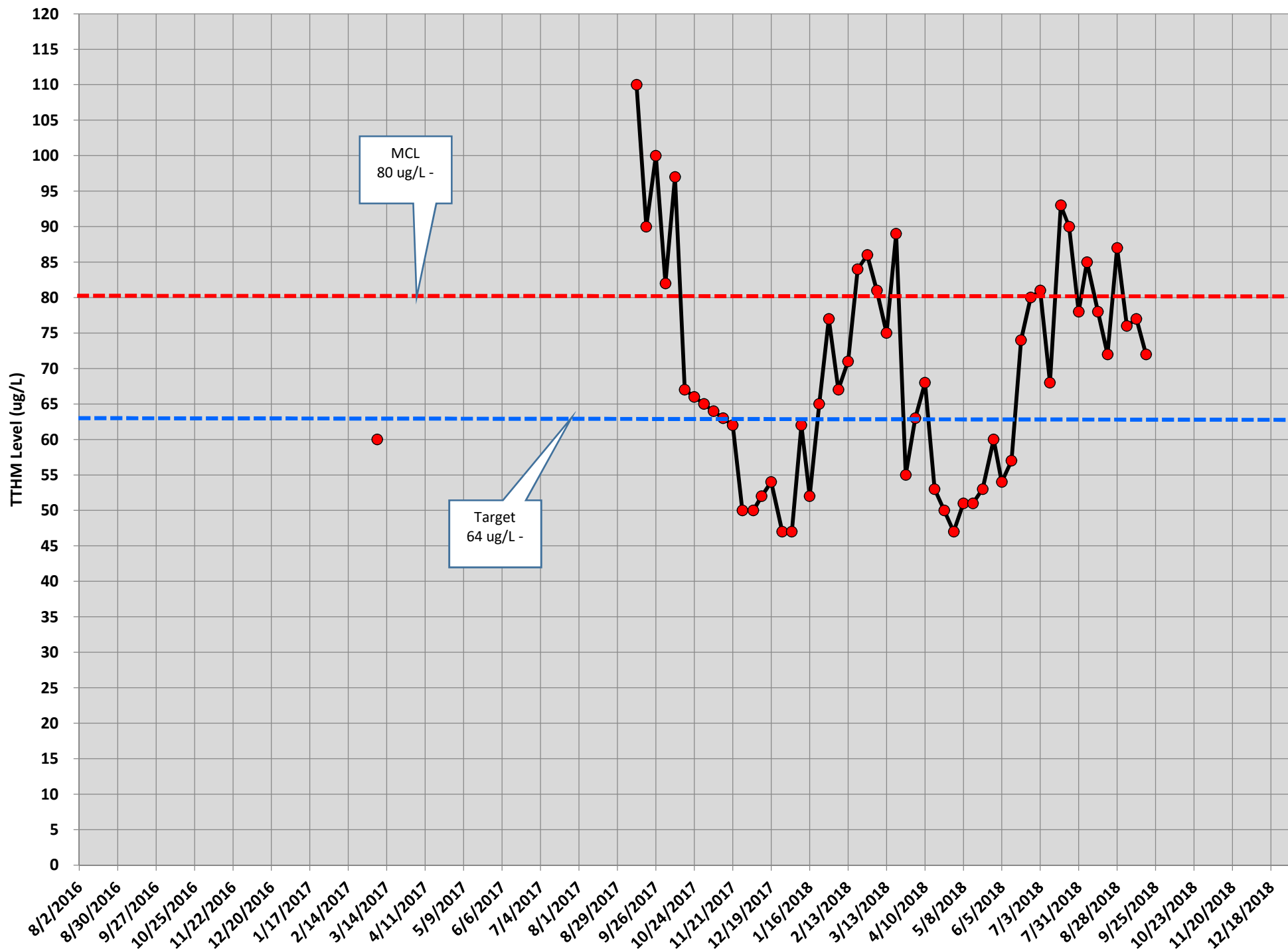
Oak Creek Reservoir (Zone 4) - TTHMs Levels



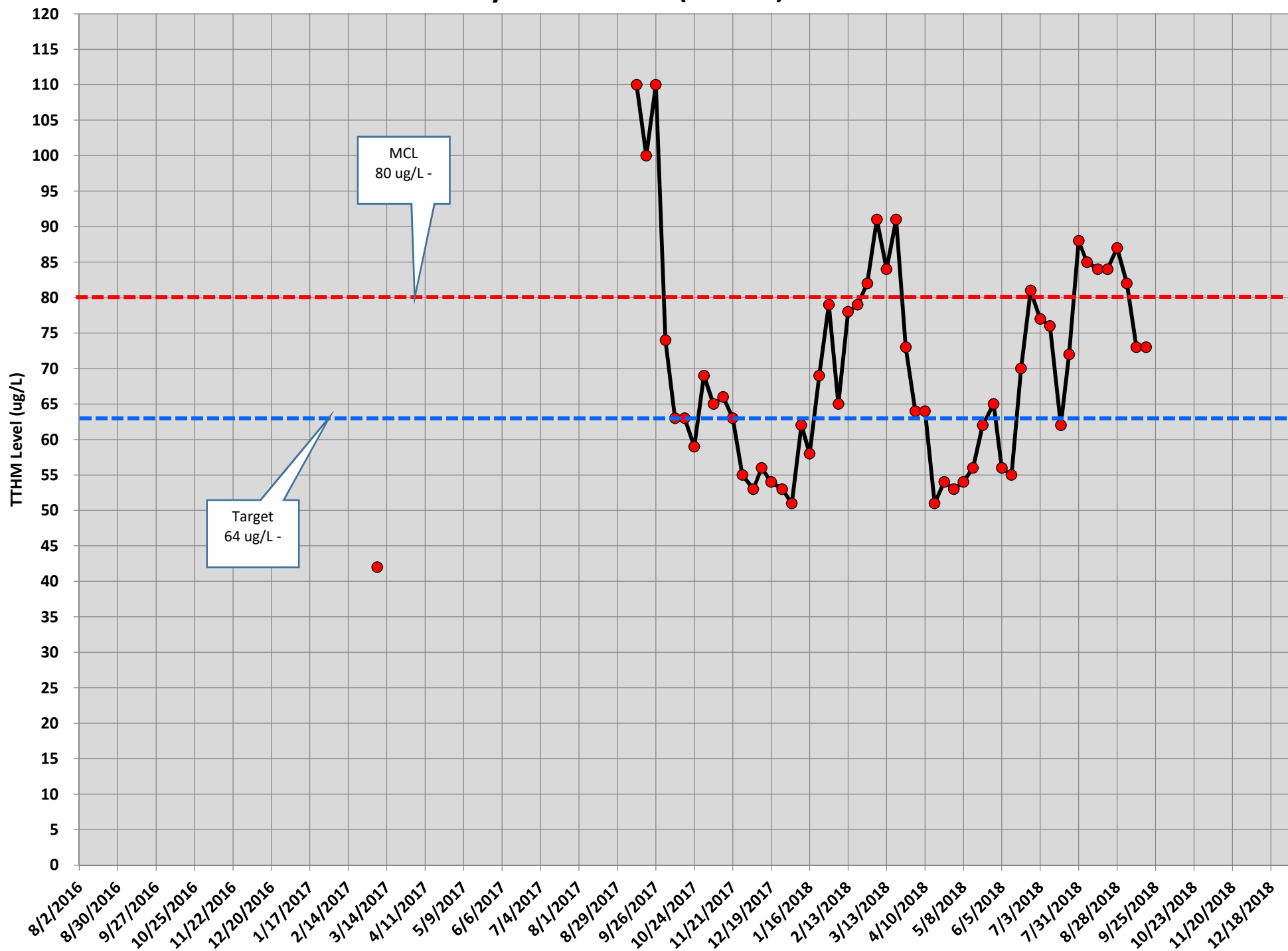
Markridge Reservoir (Zone 5) - TTHMs Levels



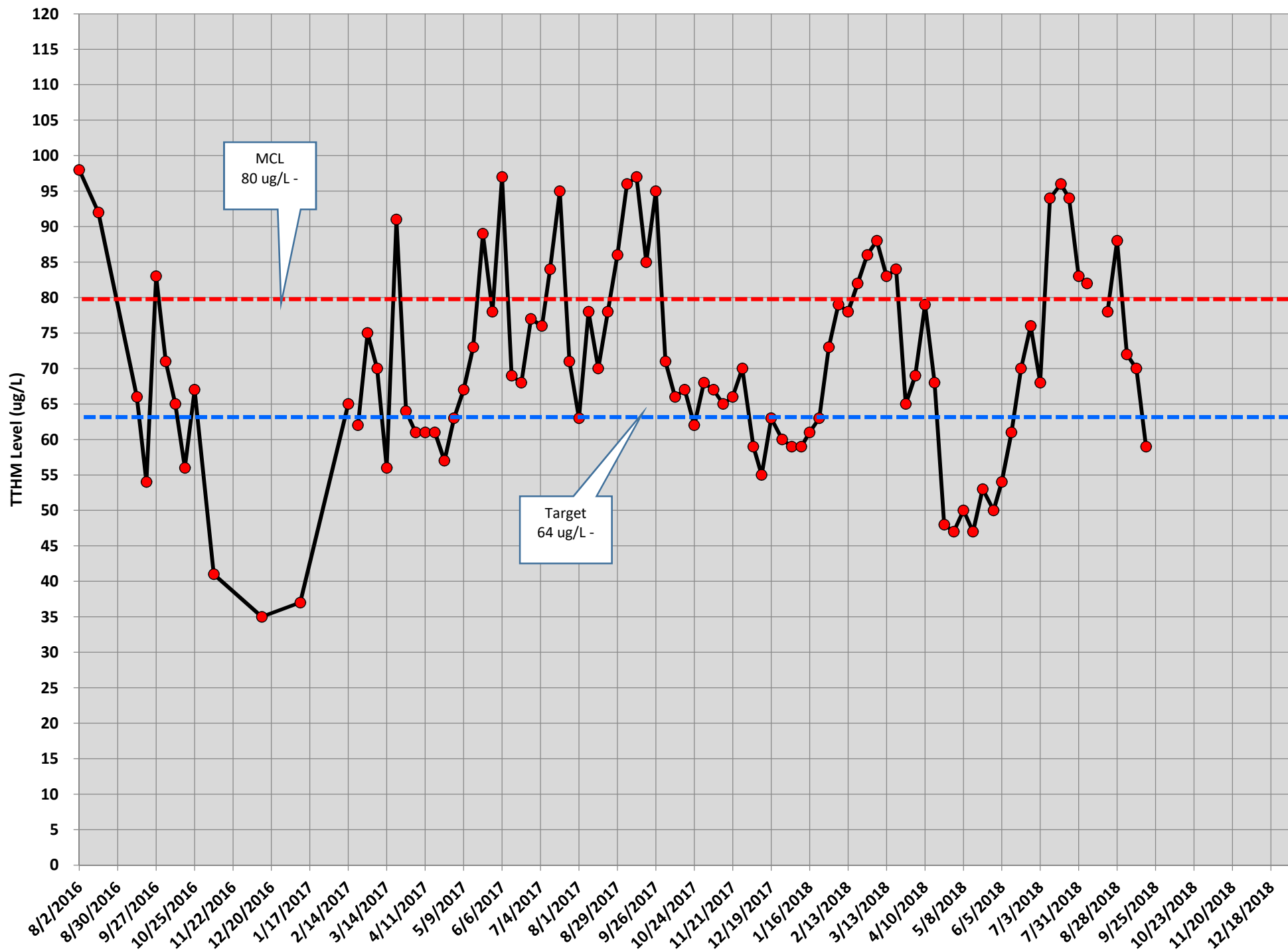
Eagle Canyon Reservoir (Zone 5) - TTHMs Levels



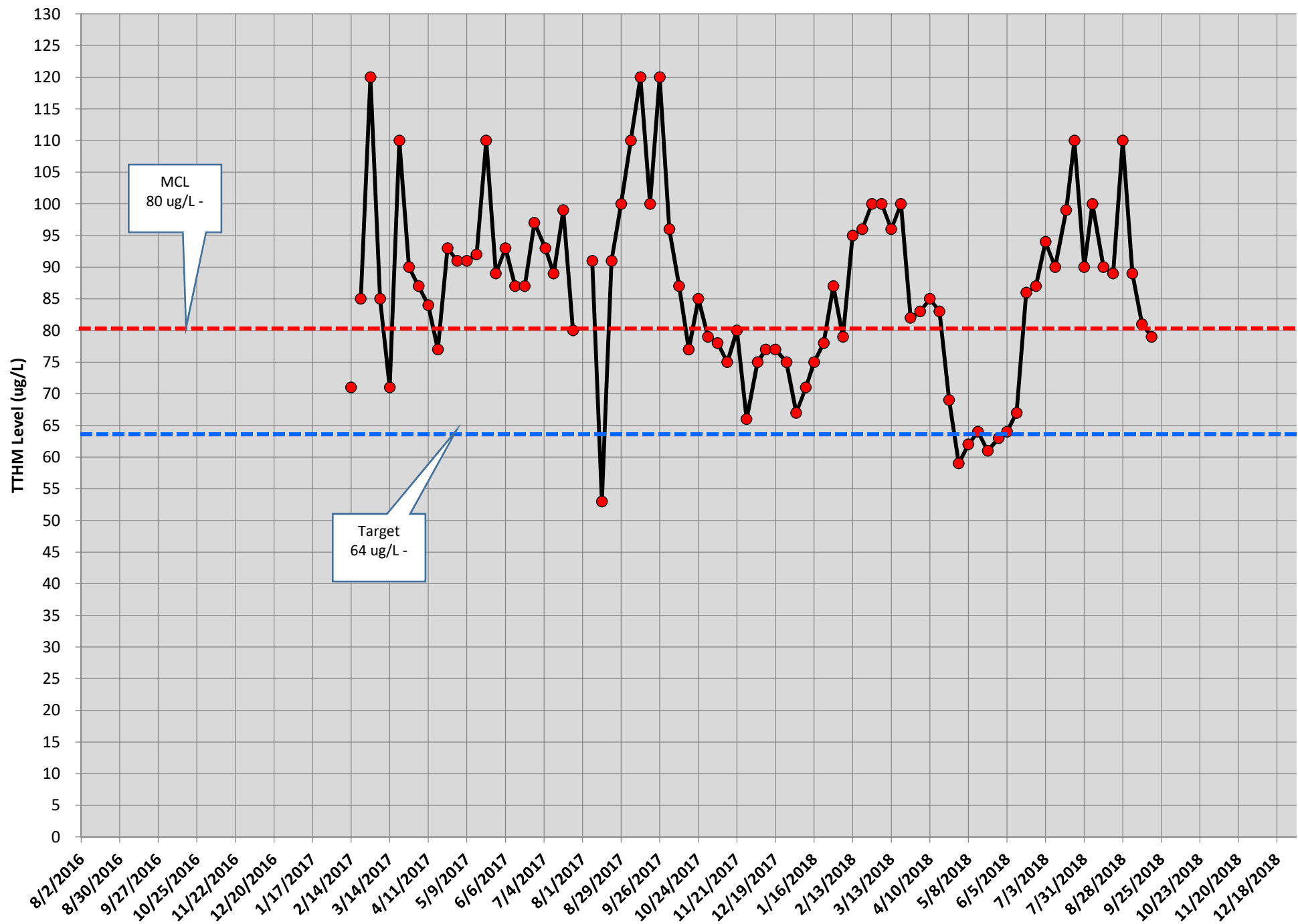
Goss Canyon Reservoir (Zone 6) - TTHMs Levels



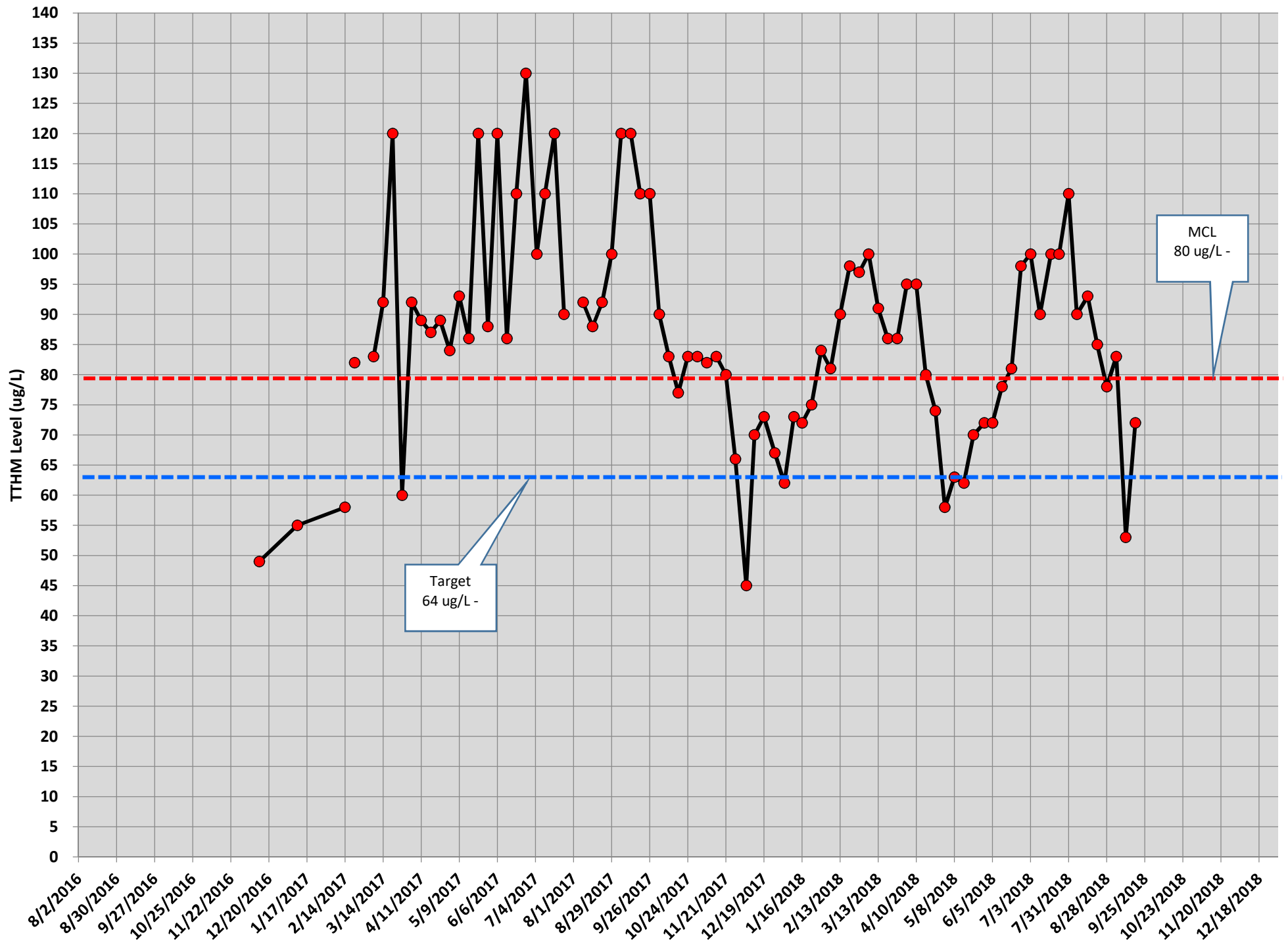
Dunsmore Reservoir (Zone 7) - TTHMs Levels



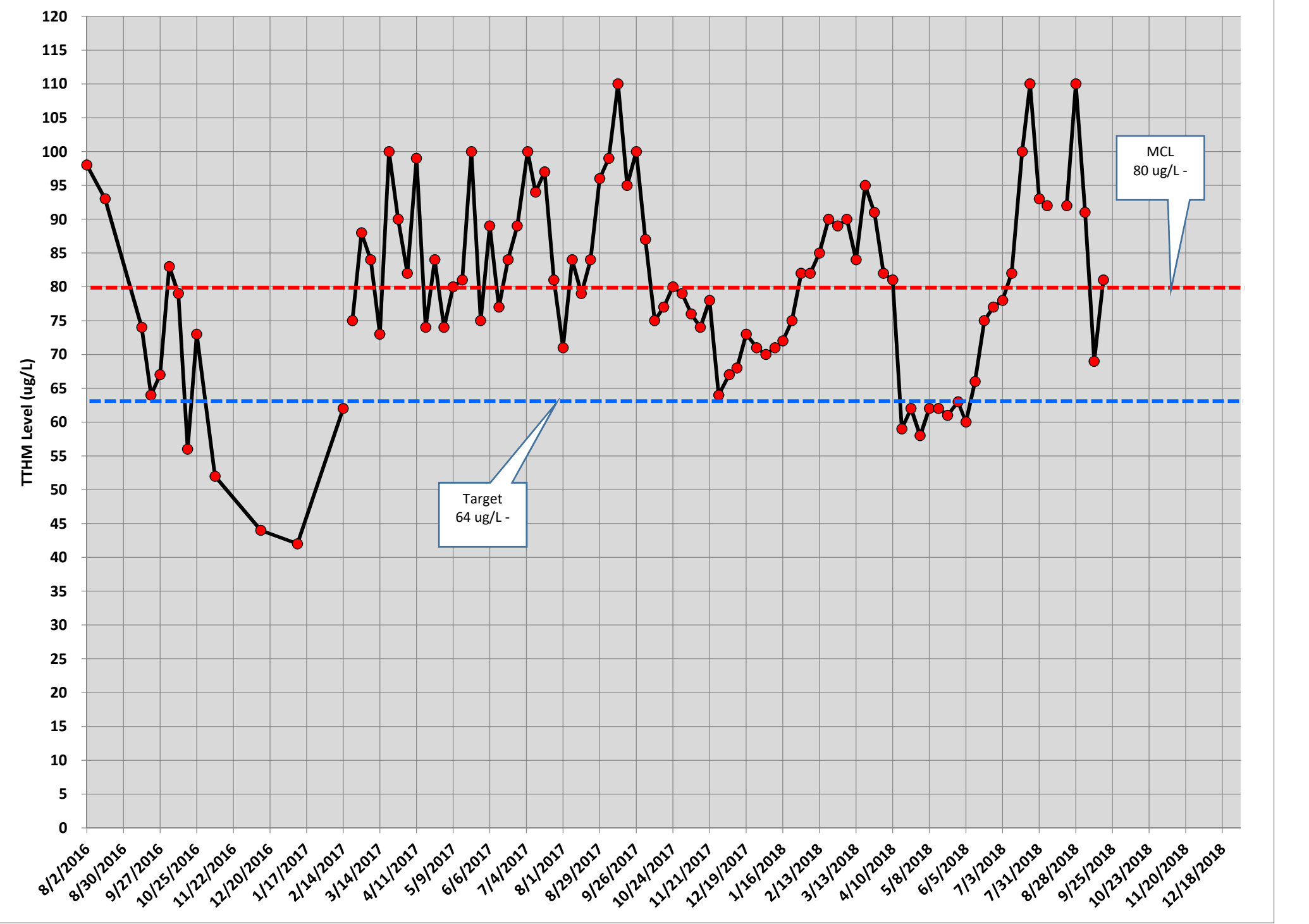
Cresta Heights Reservoir (Zone 8) - TTHMs Levels



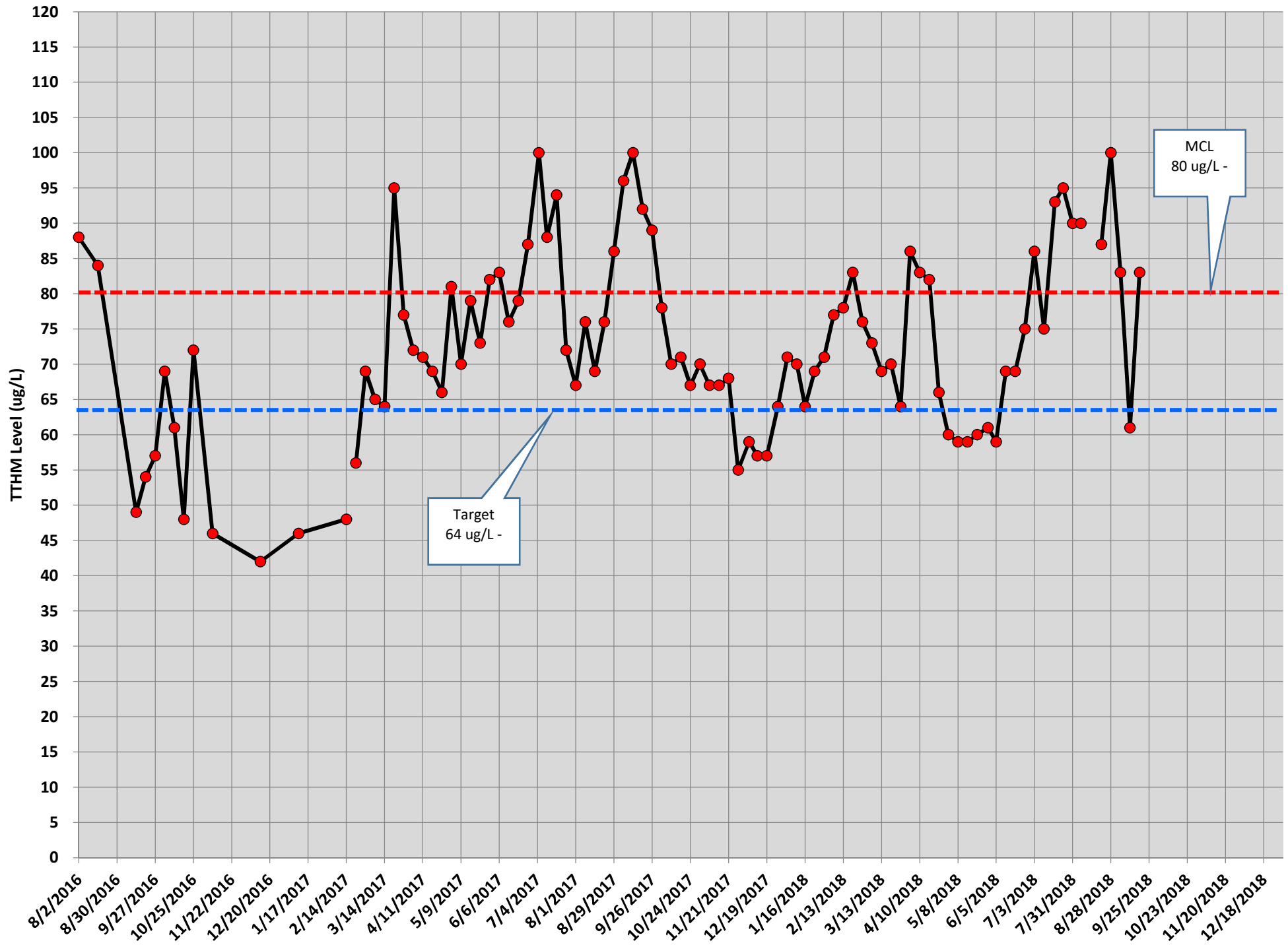
Edmund No. 1 Reservoir (Zone 9) - TTHMs Level



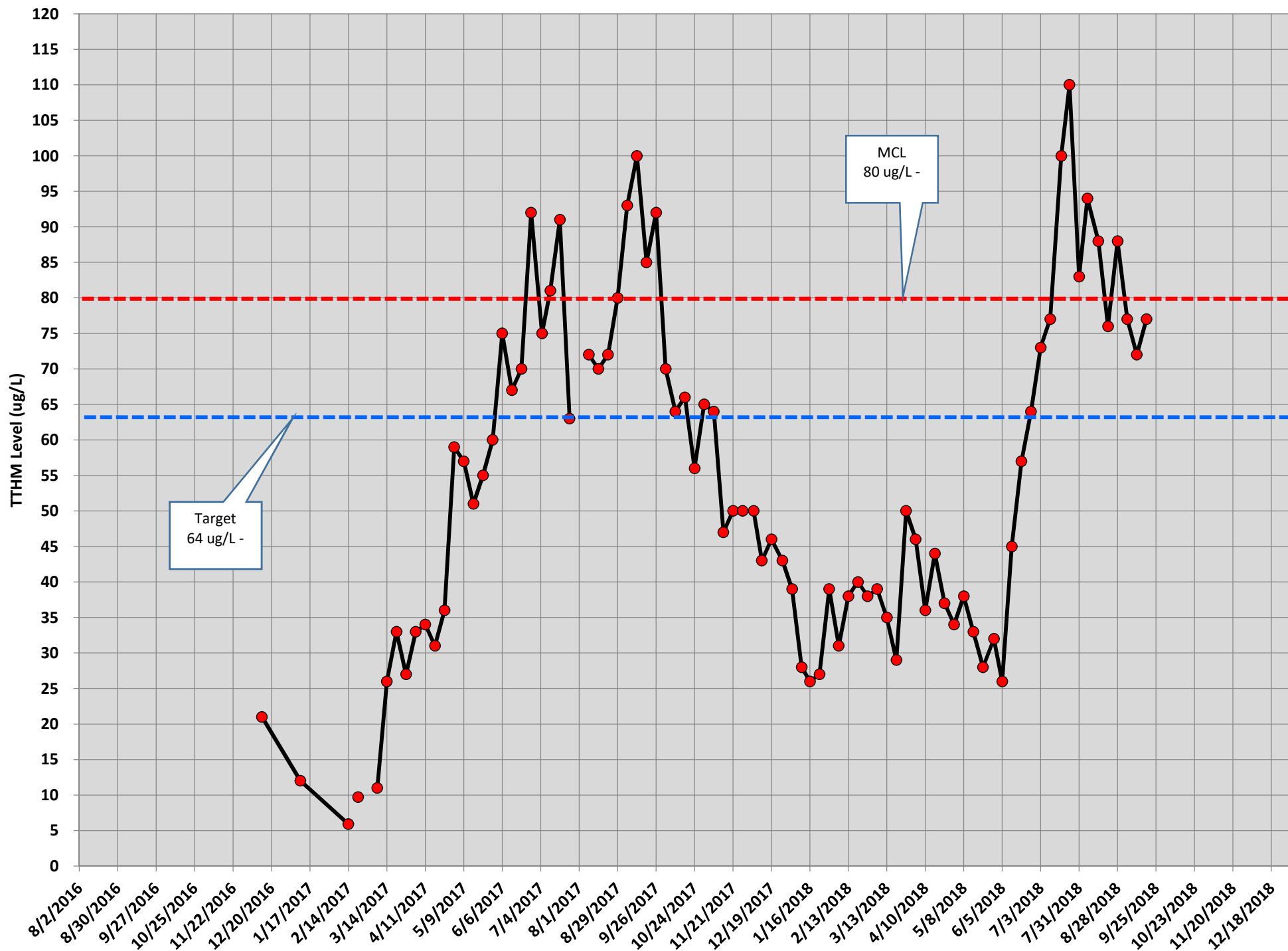
Edmund No. 2 (Zone 9) - TTHMs Levels



Shields Reservoir (Zone 10) - TTHMs Levels



Pickens Reservoir (Zone 11) - TTHMs Levels



Crescenta Valley Water District

Table 1 - Analysis of Water Storage with Ultimate Demand Requirements

Site	Zone	Capacity (MG)	ADD (mgd)	MDD (mgd)	Fire Flow (gpm)	Duration (hrs)	Volume (MG)	Operational Storage (MG) (30% ADD)	Emergency Storage (MG) (1.75 X ADD)	Total Required Storage (MG)	Surplus/ Defect
Encinal	1	2.96	0.58	1.02	5,000	4.0	1.20	0.31	1.02	2.53	0.43
Ocean View/ Ordunio	2	5.93	1.17	2.05	5,000	4.0	1.20	0.61	2.05	3.86	2.07
Rosemont	3	0.45	0.09	0.15	5,000	4.0	1.20	0.05	0.15	1.40	(0.95)
Oak Creek #1 & 2	4	2.27	0.45	0.79	3,500	3.0	0.63	0.24	0.79	1.65	0.62
Markridge/Eagle Canyon	5	1.61	0.32	0.56	1,500	2.0	0.18	0.17	0.56	0.90	0.71
Goss Canyon #1 & 2	6	0.84	0.17	0.29	1,500	2.0	0.18	0.09	0.29	0.56	0.28
Dunsmore	7	0.38	0.07	0.13	1,500	3.0	0.27	0.04	0.13	0.44	(0.06)
Cresta Heights # 1 & 2	8	0.96	0.19	0.33	1,500	2.0	0.18	0.10	0.33	0.61	0.35
Edmund #1 & 2	9	1.11	0.22	0.38	1,500	2.0	0.18	0.12	0.38	0.68	0.43
Shields	10	0.59	0.12	0.20	1,500	2.0	0.18	0.06	0.20	0.45	0.15
Pickens	11	0.44	0.09	0.15	1,500	2.0	0.18	0.05	0.15	0.38	0.06
Total		17.55	3.47	6.06			5.58	1.82	6.06	13.46	4.09

Crescenta Valley Water District

Table 2 - Analysis of Water Storage with Reduced Water Storage Capacity

Site Information					Reservoir Capacity					Existing Reservoir Level Set Points					Proposed Reservoir Level Set Points				
No.	Site	Zone	Material	Year Installed	Dia (ft.)	Depth Total (ft.)	Design Capacity (MG)	Actual Depth based on location of overflow outlet (ft.)	Calculated Capacity based on Actual Depth (MG)	Depth Low Level (ft)	Capacity Low Level (MG)	Depth High Level (ft)	Capacity High Level (MG)	Total Usage (MG)	Proposed Depth Low Level (ft)	Proposed Capacity Low Level (ft)	Proposed Depth High Level (ft)	Proposed Capacity High Level (ft)	Total Proposed Usage (MG)
1	Encinal	1	Concrete	1983		23.5	3.00	22.5	2.96	9.0	1.02	18.0	2.05	1.02	7.0	0.80	16.0	1.82	1.02
2	Ocean View	2	Concrete	1985		26.0	3.60	26.0	3.62	16.0	1.87	22.0	2.57	0.70	14.0	1.63	20.0	2.33	0.70
3	Ordunio	2	Steel	1970	123	26.0	2.75	26.0	2.31	7.0	0.62	16.0	1.42	0.80	5.0	0.44	14.0	1.24	0.80
4	Rosemont	3	Steel	1949	65	18.0	0.50	18.0	0.45	8.0	0.20	15.0	0.37	0.17	6.0	0.15	13.0	0.32	0.17
5	Oak Creek #1	4	Steel	1958	110	16.0	1.60	16.0	1.14	11.0	0.78	16.0	1.14	0.36	9.0	0.64	14.0	1.00	0.36
6	Oak Creek #2	4	Steel	1961	110	16.0	1.60	16.0	1.14	11.0	0.78	16.0	1.14	0.36	9.0	0.64	14.0	1.00	0.36
7	Eagle Canyon	5	Steel	1961	90	25.0	1.50	25.0	1.19	13.0	0.62	17.0	0.81	0.19	10.0	0.48	14.0	0.67	0.19
8	Markridge	5	Steel	1951	65	17.0	0.50	17.0	0.42	10.0	0.25	16.5	0.41	0.16	7.5	0.19	14.0	0.35	0.16
9	Goss Canyon #1	6	Steel	1954	54	22.0	0.42	22.0	0.38	14.0	0.24	18.0	0.31	0.07	12.0	0.21	16.0	0.27	0.07
10	Goss Canyon #2	6	Steel	1961	60	22.0	0.50	22.0	0.47	14.0	0.30	18.0	0.38	0.08	12.0	0.25	16.0	0.34	0.08
11	Dunsmore	7	Steel	1954	54	22.0	0.42	22.0	0.38	12.0	0.21	17.0	0.29	0.09	10.0	0.17	15.0	0.26	0.09
12	Cresta Heights # 1	8	Steel	1966	61	22.0	0.50	22.0	0.48	14.0	0.31	18.0	0.39	0.09	12.0	0.26	16.0	0.35	0.09
13	Cresta Heights # 2	8	Steel	1965	61	22.0	0.50	22.0	0.48	14.0	0.31	18.0	0.39	0.09	12.0	0.26	16.0	0.35	0.09
14	Edmund #1	9	Concrete	1956	70	22.0	0.50	22.0	0.63	6.0	0.17	10.0	0.29	0.12	5.0	0.14	9.0	0.26	0.12
15	Edmund #2	9	Steel	1966	61	22.0	0.50	22.0	0.48	14.0	0.31	17.0	0.37	0.07	12.0	0.26	15.0	0.33	0.07
16	Shields	10	Steel	1967	58	30.0	0.60	30.0	0.59	13.0	0.26	15.0	0.30	0.04	11.0	0.22	13.0	0.26	0.04
17	Pickens	11	Steel	1962	55	25.0	0.50	25.0	0.44	15.0	0.27	21.0	0.37	0.11	12.0	0.21	18.0	0.32	0.11
	Total Storage						19.49		17.55	48%	8.50	74%	13.00	4.50	40%	6.96	65%	11.46	4.50

Hazen *Technical Memorandum*

September 18, 2018

To: David Gould, Crescenta Valley Water District

From: Nicole Blute, PhD, PE
Vivy Dong, PhD, PE
Michelle Chebeir, PhD

Reviewed: William Becker, PhD, PE
Lynn Grijalva, PE

cc: Christy Scott, Crescenta Valley Water District

Re: Bench Testing of Disinfectant By-Product (DBP) Formation **DRAFT**

1. Introduction

Crescenta Valley Water District (CVWD) is using approximately 70% imported surface water from Foothill Municipal Water District (FMWD) and 30% groundwater for its potable water system. An increase in surface water from past percentages (40% FMWD and 60% groundwater) has resulted in elevated total trihalomethane (TTHM) levels, necessitating action by CVWD to decrease TTHM concentrations to continue meeting the regulatory limit of 80 µg/L TTHM.

CVWD is currently conducting an evaluation of chloramination as an approach to decrease DBPs as a separate effort. Hazen was retained by CVWD to assess chlorine dosing and time dependence of DBP formation to provide information on which to base operational decisions. This technical memorandum provides the results of the latter analysis, including necessary dosing for breakpoint chlorination and time dependency of TTHM formation.

Table of Contents

1. Introduction	1
2. Testing Objectives	3
3. Methodology	3
4. Results.....	4
4.1 Breakpoint Chlorination.....	4
4.2 Groundwater Chlorine Demand	7
4.3 Time Dependence of DBP Formation	8
5. Summary and Next Steps	10

DRAFT

2. Testing Objectives

Water sources currently used by CVWD include:

- FMWD water from three turnouts (Paschall, Oceanview, and Briggs)
- Groundwater from wells 1, 5, 7, and 9 routed through the Mills Plant and Forebay
- Groundwater from wells 6, 8, 10, 12, 14, 15, and 16 routed through the Glenwood Plant and Forebay
- Groundwater from well 11 added to the treated water from the Glenwood Plant after the forebay

FMWD water contains chloramines for secondary disinfection. CVWD adds a high dose of chlorine (approximately 10 mg/L or more) at the Mills and Glenwood Plants to breakpoint chlorinate the FMWD water and convert chloramines to free chlorine. CVWD operates the distribution system with free chlorine residual.

CVWD has experienced elevated DBPs in the distribution system and initiated the first step of bench testing to evaluate potential operational modifications. This first step involves:

1. Characterization of the breakpoint curve,
2. Determination of groundwater chlorine demand, and
3. Evaluation of time dependence in DBP formation.

Additional work could be conducted to test the impact of lower chlorine doses (if feasible).

3. Methodology

Water for this study was collected on Tuesday, September 4, 2018 from the following locations. The approximate percentages of water contributions to the system flow are provided in parentheses:

- FMWD Paschall (70%)
- Groundwater (30%), with relative proportions of the three reflecting their flow rates below:
 - Mills Plant (420 gpm) – prior to aeration and disinfection
 - Glenwood Plant (344 gpm) – prior to aeration and disinfection
 - Well 11 (57 gpm) – prior to disinfection

Raw groundwater samples were collected in clean plastic 1-gallon containers. Chloraminated FMWD water was collected in 1-liter amber glass bottles to minimize any reaction of disinfectant with plastic

surfaces. All bottles were rinsed three times with the water before collecting the sample and were obtained from BC Labs.

Samples were transported in coolers to the Hazen office, where they were analyzed for chlorine decay and breakpoint chlorination the same day or the next. If not sampled on the day collected, water was stored at 4° C.

Testing was conducted using 4% as chlorine sodium hypochlorite (NaOCl), which was diluted with distilled water to 1 g/L for addition to samples. Chlorine strength and residuals, and total ammonia, were analyzed using a Hach 1900 instrument.

DBP samples for laboratory analysis were collected in 125 mL amber glass bottles with sodium thiosulfate preservative (BC Labs, Bakersfield, CA).

4. Results

Bench tests were conducted to assess the chlorine dose necessary to achieve breakpoint chlorination in FMWD water and the FMWD/groundwater blend (Section 4.1), chlorine demand of the groundwater (Section 4.2), and the time dependence of DBP formation (Section 4.3).

4.1 Breakpoint Chlorination

Figures 4-1 and 4-2 provide plots from bench testing that show (1) the total chlorine and total ammonia concentrations with a series of chlorine doses (i.e., additions to chlorine already present), and (2) the ratio of chlorine dose to initial ammonia concentration. The theoretical breakpoint ratio is 7.6:1, but chlorine demand in the water typically increase this ratio to between 8:1 to 11:1. As shown in Figures 4-1 and 4-2, breakpoint (i.e., where ammonia is zero) was observed at 9:1.

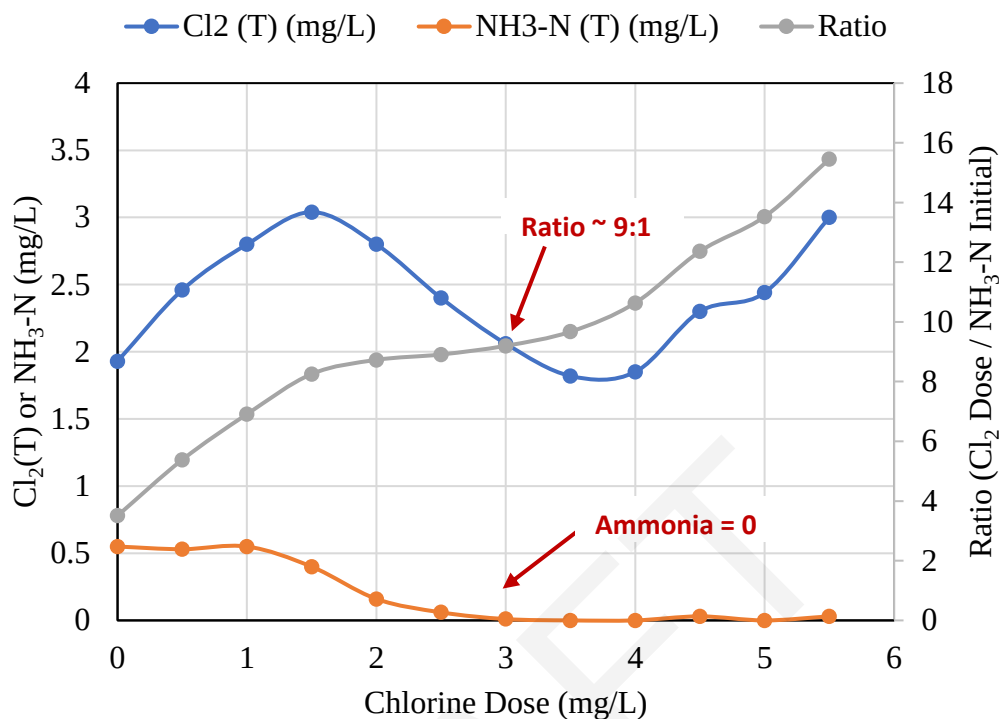


FIGURE 4-1: Breakpoint Chlorination Curve for 100% FMWD Water

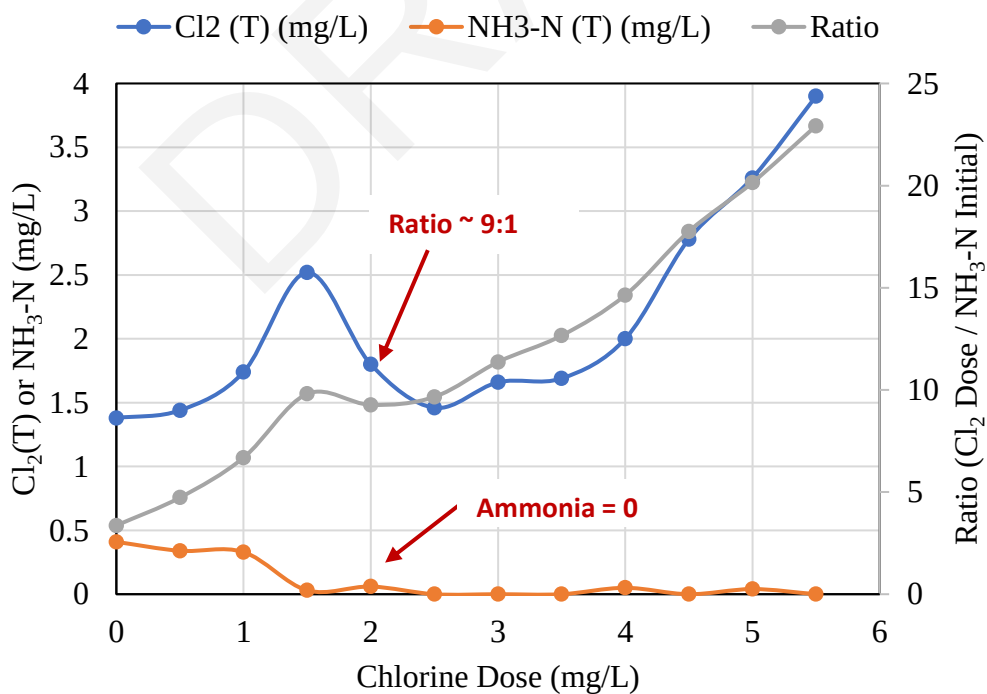


FIGURE 4-2: Breakpoint Chlorination Curve for 70% FMWD Water and 30% Groundwater

The samples collected for Figures 4-1 and 4-2 were analyzed for total chlorine and total ammonia after approximately 1 minute of rapid mixing. It was observed that the breakpoint did not reach a low total chlorine residual as has often been observed by our team in the past (i.e., approximately 0.5 mg/L) within that time. A follow up test was conducted to evaluate whether kinetics (time dependency) impacted residual chlorine. As shown in Figure 4-3, rapid total chlorine decay was observed after breakpoint in the first several hours, reaching 0.5 mg/L after 18 hours. This was an unusual finding, as typically the chloramine breakpoint reaction is rapid. Nevertheless, breakpoint is identifiable from the curves produced by evaluating ammonia concentrations and the shape of the curves.

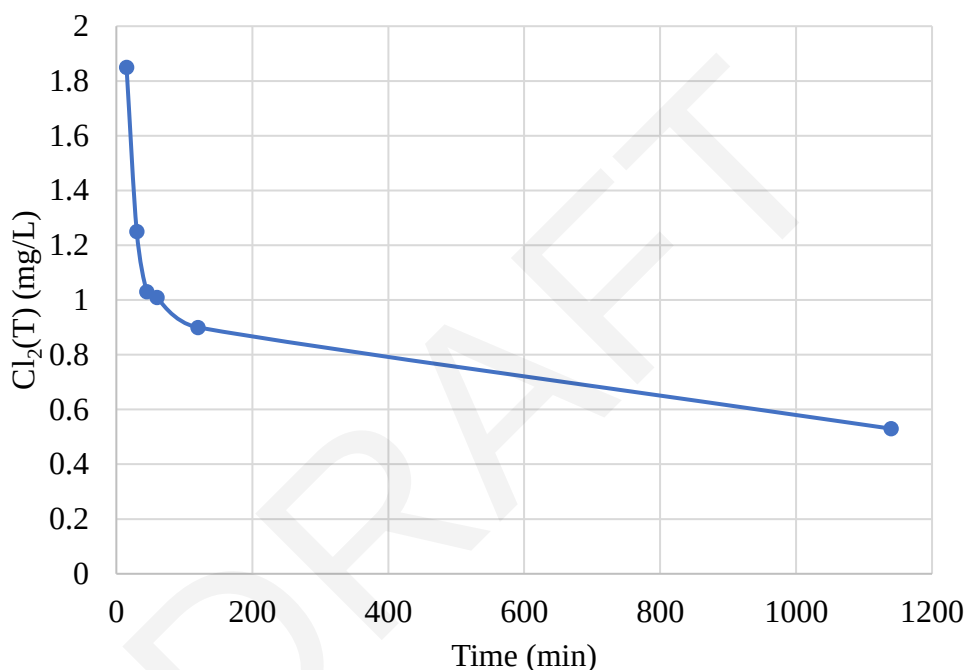


FIGURE 4-3: Chlorine Decay Curve for 100% FMWD Water with 3.5 mg/L Chlorine Dose Added

CVWD currently breakpoint chlorinates FMWD water by adding more than 10 mg/L free chlorine to the groundwater. Mass balance provides the following calculation of approximate breakpoint and remaining residual, demonstrating that the chlorine dose is beyond the 9:1 breakpoint ratio and may be able to trim the dose to simultaneously breakpoint and yield a sufficient residual:

Total chlorine:

FMWD total chlorine x % flow		GW total chlorine x % flow		Total chlorine in blend
2.0 mg/L x 70%	+	10 mg/L x 30%	=	4.4 mg/L

Total ammonia:

FMWD total ammonia x % flow		GW total ammonia x % flow		Total ammonia in blend
0.5 mg/L x 70%	+	0 mg/L x 30%	=	0.35 mg/L

Ratio: 4.4 mg/L total chlorine / 0.35 mg/L total ammonia = 12.5 (past breakpoint)

Total chlorine in blend to reach breakpoint = 0.35 mg/L x 9 = 3.2 mg/L

Assuming breakpoint has a total chlorine concentration of 0.5 mg/L, addition of approximately 1.2 mg/L (4.4 mg/L – 3.2 mg/L = 1.2 mg/L) would yield 1.7 mg/L free chlorine (1.2 mg/L + 0.5 mg/L breakpoint residual = 1.7 mg/L).

The calculations above show that CVWD may be able to trim the chlorine dose to simultaneously breakpoint chlorinate and yield a sufficient secondary disinfectant residual. Further, some data reveals that FMWD water may be higher than 2 mg/L and groundwater doses may exceed 10 mg/L at times, which would only increase the residual in the above calculations. CVWD will need to determine the necessary dose to provide a lasting residual in the distribution system for bacteriological control, but may be able to decrease the dose from current practice by 0.5 mg/L – 0.7 mg/L or more (yielding approximately 1 mg/L free chlorine) based on these calculations. If CVWD reduces applied chlorine dose, the distribution system should be carefully monitored to ensure that desired residuals are maintained.

4.2 Groundwater Chlorine Demand

Naturally occurring substances in the groundwater, such as iron, manganese, ammonia, sulfide, and organic carbon, can exert a chlorine demand when a chlorine dose is applied. The chlorine demand of CVWD's groundwater was evaluated in this bench test.

Figure 4-4 shows that chlorine concentration was stable after 20 hours, indicating that the chlorine demands for Glenwood Plant, Mills Plant, and Well 11 are all minimal and similar to the demand observed for the control, which was distilled water. This information is useful in evaluating the chlorine dose that should be applied to a groundwater and surface water blend.

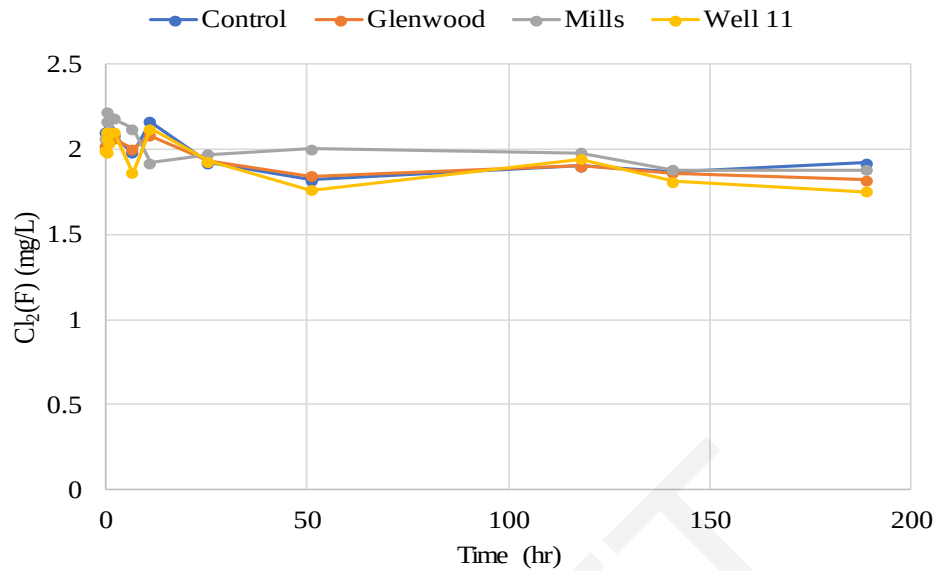


FIGURE 4-4: Chlorine Residual for 100% Groundwater with 2.0 mg/L Chlorine Dose Added

4.3 Time Dependence of DBP Formation

Bench testing was conducted to evaluate the time dependence of DBP formation in the 70% FMWD and 30% groundwater blend. Samples were held at either 20° C or 30° C to determine the impact of temperature on DBP formation. A duplicate of the 20° C run was included to evaluate variability.

A chlorine dose of 6 mg/L was used to ensure that a detectable total chlorine residual was present at the end of a week of hold time. This residual is higher than is necessary to achieve breakpoint (approximately 2.5 mg/L dose as shown in Figure 4-2). Figure 4-5 depicts the total chlorine residual measured during the week of DBP sampling.

Figure 4-6 shows that the development of DBPs was not instantaneous for the 6 mg/L chlorine dose applied to the blend. However, the TTHM MCL was exceeded in approximately 3 days for the 20° C condition and 1 ½ days for the 30° C condition, providing evidence of that warmer temperatures can result in higher TTHM development, as observed by CVWD.

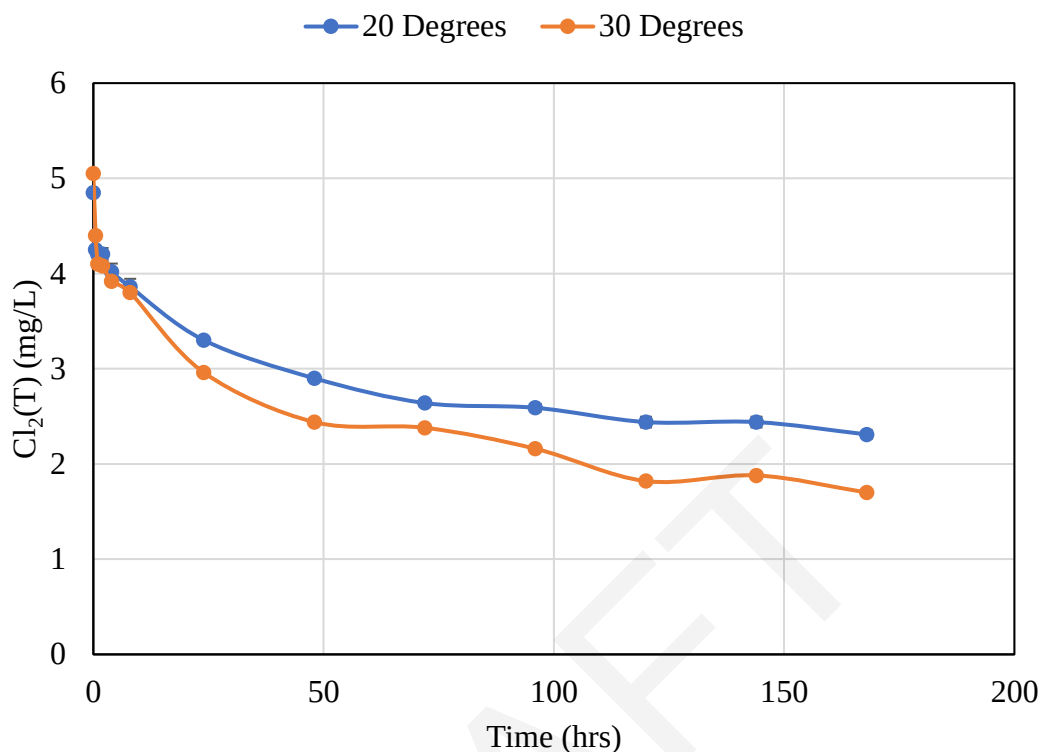


FIGURE 4-5: Chlorine Residual for 100% Groundwater with 2.0 mg/L Chlorine Dose Added

Additional testing is recommended using a lower chlorine dose, such that CVWD could evaluate TTHM formation under more optimized conditions. At this time, only one dose was included in the current scope but CVWD may find value in determining if lower DBPs would be expected from a lower dose.

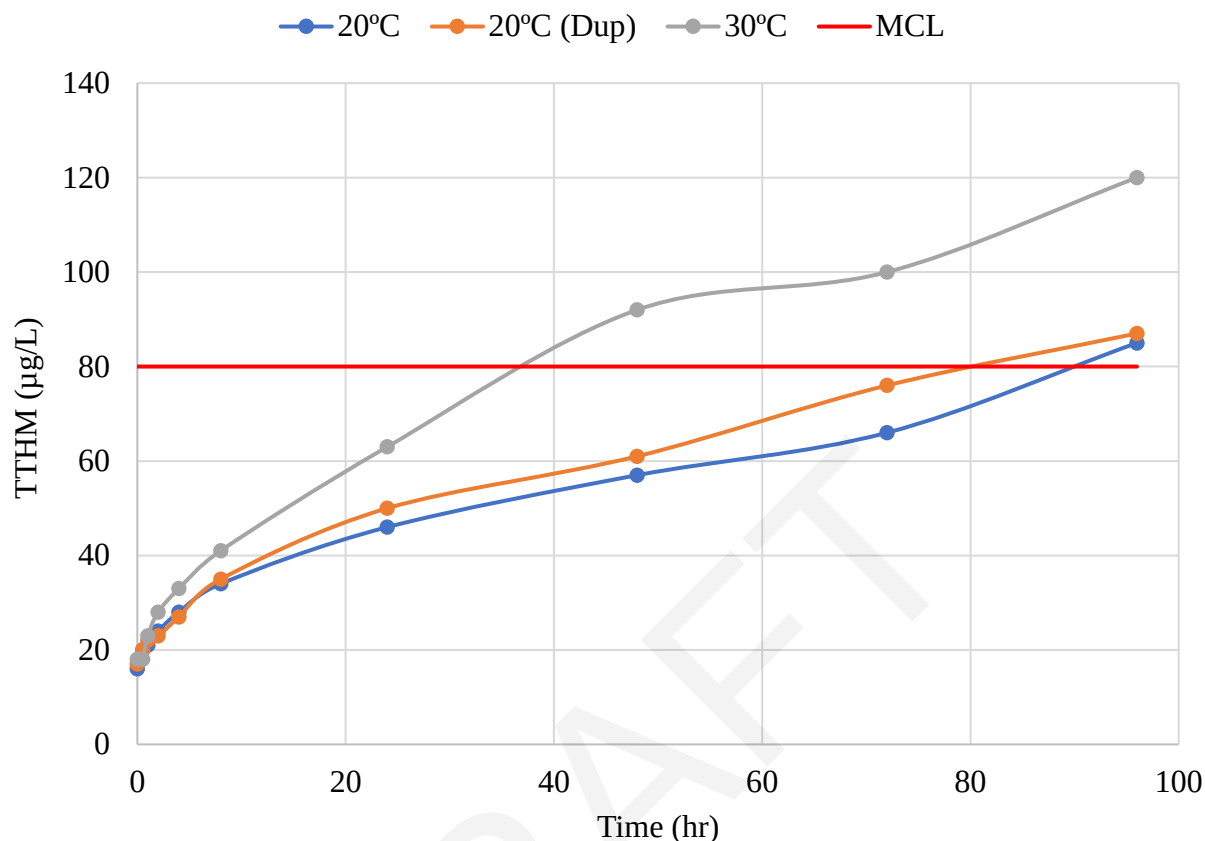


FIGURE 4-6: Time Dependency of DBP Formation with 6 mg/L Chlorine Dose Added to 70% FMWD and 30% Groundwater Blend

5. Summary and Next Steps

The results of this bench testing will allow CVWD operations staff to more closely refine the breakpoint chlorination dose. Measurements and calculations indicate that CVWD may be able to decrease the chlorine dose by 0.5 to 0.7 mg/L or more to simultaneously breakpoint chlorinate and yield a sufficient secondary disinfectant residual. However, the findings from the time dependency test show that even a relatively low water age of 3 to 4 days results in problematic TTHM levels. If CVWD reduces applied chlorine dose, the distribution system should be carefully monitored to ensure that desired residuals are maintained.

The findings of these tests support CVWD's actions to evaluate alternate approaches for TTHM control, since the current practice of breakpoint chlorination and use of 70% FMWD is unlikely to yield consistently low enough DBPs within several days of water age, particularly during warmer months. Potential alternative approaches being investigated include spray aeration to remove DBPs from reservoirs if breakpoint chlorination is continued and use of chloramines if breakpoint chlorination is not continued.



September 17, 2018

Mr. David Gould
District Engineer
Crescenta Valley Water District
2700 Foothill Boulevard
La Crescenta CA 91214

Subject: Letter Proposal to Provide Ammonia Feed Systems Project Management

Dear Mr. Gould:

John Robinson Consulting, Inc. (JR Consulting) is pleased to offer this letter proposal to Crescenta Valley Water District (CVWD) based on information provided on September 14th and per our discussion on September 17th which provided the overall ammonia feed system project goals for Glenwood Plant and Mills Plant. Our firm is a California S Corporation, is certified as Small Business Enterprise (SBE) by Metropolitan Water District and California Department of General Services and is located locally in Pasadena.

This letter proposal outlines our recommended scope of service, time schedule and compensation.

SCOPE OF SERVICES

Planning Assistance - JR Consulting will assist CVWD by completing the following services:

- Conduct a site visit at Glenwood Plant and Mills Plant.
- Reviewing the 30-percent plans being prepared by Engineer of Record.
- Develop a Request of Qualifications in order to obtain three quotes from Ammonia Pump Skid vendors.
- Evaluate Ammonia Pump Skid vendor quotes and coordinate with CVWD staff to order the equipment.
- Coordinate with the Engineer of Record to evaluate Ammonia Pump Skid shop drawings.
- Research and confirm Liquid Ammonia Sulfate is the best source of chemical for the project.
- Investigate with CVWD's staff the electrical requirements at the two locations and develop electrical specifications in order for power supply to the new equipment.
- Develop a Request of Qualifications in order to obtain quote from Tesco Controls Inc. for programming and potential installation of a new subpanel at Glenwood to support RTU 20 and programming at Mills Plant for RTU 1.
- Develop a Request of Qualifications in order to obtain quote from Apex Controls Inc. for the screen updates and alarms at the Human-Machine Interface (HMI).
- Assist with City of Glendale Fire Department permitting after completion of the 30% plans.

- Assist with State Water Resource Control Board Division of Drinking Water permitting which might include Application for Domestic Supply Permit Amendment and Water Supply Permit Environmental Information.
- Assist with environmental documentation (i.e. Class 1 Exemption or Notice of Exemption).

Construction Assistance - JR Consulting will assist CVWD by completing the following services:

- Coordinate with a contractor for a new concrete pad at Mills Plant for the equipment.
- Coordinate with CVWD staff and Engineer of Record to repurpose existing fiberglass shelters for vertical turbine pumps to cover the new equipment.
- Coordinate with CVWD to purchase the necessary piping and valves then review the installation.
- Coordinate the installation of 1 or 2 new eye washes for the project.
- Coordinate the installation of electrical conduits by CVWD staff.
- Determine size and coordinate with CVWD to order the injection vault for the Glenwood Plant. Significant water pipeline depth issues will need to be taken into consideration.
- Coordinate with welder for the two points of connection required (one at Glenwood Plant and one at Mills Plant).
- Coordinate with an electrical subcontractor in order to install required electrical.
- Coordinate and supervise Tesco integration of the RTU programming and installation.
- Coordinate and supervise Apex integration of the HMI equipment including signals from chlorine analyzers, metering, tank levels and other project signals.
- Confirm chlorine analyzer locations and supervise relocation, if necessary.
- Coordinate the chlorine analyzer system interface at both Glenwood and Mills Plants.
- Coordinate the installation of new chlorine analyzer probes (free to total).

Post Construction Assistance - JR Consulting will assist CVWD by completing the following services:

- Coordinate Project Start-up with CVWD staff.
- Coordinating as-built drawings with Engineer of Record.
- Review modified Operations and Maintenance Manual.
- Coordinate Operational Training with the Ammonia Pump Skid vendor.

TIME SCHEDULE

JR Consulting will commence with the proposed scope of services after the Professional Services Agreement (PSA) has fully been executed. JRC will provide a copy of our Certificate of Insurance per the PSA requirements and will keep the insurance valid throughout the project. JR Consulting has discussed the project schedule with CVWD staff who has developed an estimated project schedule of approximately September 21 through November 24, 2018 but might extend to the end of 2018 which has the rough completion of the project in approximately 3 months.

COMPENSATION

JR Consulting will provide the scope of services with the proposed schedule as set forth in this proposal to CVWD on a time and material basis. Based on JR Consulting's present knowledge of the services described above, it is recommended that \$45,225 and is based on 335 hours at \$135 per hour which is \$15,075 per month but hours will only be charged for those hours worked as this is a not a lump sum proposal.

JR Consulting has decreased the hourly rate for John Robinson from \$150 per hour to \$135 per hour (10-percent reduction) in order to assist CVWD with additional hours and to support CVWD for requesting JR Consulting to assist with this important project.

JR Consulting commits to timely, responsive services, and to deliver excellence in the offered services. If there are any questions, please feel free to contact me at (626) 375-9389 or jrobinson@johnrobinsonconsulting.com

Very truly yours,

John Robinson Consulting, Inc.

A handwritten signature in blue ink, appearing to read "John Robinson", is positioned above the printed name.

John Robinson, Principal

September 20, 2018

Mr. Nemesciano Ochoa
General Manager
Crescenta Valley Water District
2700 Foothill Blvd.
La Crescenta, California 91214

Subject: *Proposal for Technical & Engineering Support Services in Preparation for Chloramine Conversion in the District's Distribution System*

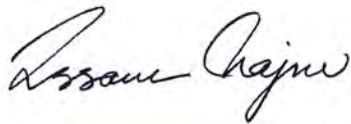
Dear Mr. Ochoa:

On behalf of Water Quality & Treatment Solutions, Inc. (WQTS) and Carollo Engineers, I am pleased to submit to you this proposal to provide the Crescenta Valley Water District (CVWD) staff with technical and engineering support in preparation for the conversion of the District's distribution system from free chlorine to chloramine. The objective of this conversion is to reduce the formation of disinfection by-products, primarily trihalomethanes (THMs), which have been on the rise and are threatening to exceed their regulatory limit.

Attached is our proposed scope of work, budget cost, and anticipated schedule. The goal is to complete the technical activities (excluding Task 7) and be prepared to convert the system on or before October 1, 2018, and then continue with the engineering and construction support services during the initial months of operation.

Thank you for considering WQTS and Carollo Engineers for your project, and we look forward to working with you on this important effort.

Respectfully Yours,
Water Quality & Treatment Solutions, Inc.



Issam Najm, Ph.D., P.E.
President

TECHNICAL & ENGINEERING SUPPORT SERVICES IN PREPARATION FOR CHLORAMINE CONVERSION IN THE DISTRICT'S WATER DISTRIBUTION SYSTEM

Technical Proposal

BACKGROUND

The Crescenta Valley Water District (CVWD) serves a blend of local groundwater and treated surface water purchased from the Metropolitan Water District of Southern California (MWD) through the Foothill Municipal Water District (FMWD). The District's groundwater is chlorinated, while the purchased MWD water contains chloramine. Unfortunately, blending of chloramine with chlorine would result in the rapid loss of disinfectant residual (both chlorine and chloramine) in the distribution system. For this reason, the District either has to add chloramine to its groundwater to blend with the chloraminated MWD water or convert the chloraminated MWD water to chlorine to blend with the chlorinated groundwater. The District has thus far chosen the latter and implemented breakpoint chlorination of the MWD water to destroy the chloramine and convert it to chlorine, which allowed the District to maintain free chlorine in its distribution system.

Unfortunately, free chlorine contact with water containing elevated levels of natural organic matter (NOM) results in the formation of elevated levels of disinfection by-products, DBPs, including two regulated DBPs: trihalomethanes, THMs, and haloacetic acids, HAAs. While the District's groundwater is low in organic content, the NOM levels in the imported MWD water are significantly higher. The MWD water also contains elevated levels of bromide, Br^- , which is a benign ion. However, bromide enhances the formation of THMs and HAAs in chlorinated water.

In past years, the District relied more heavily on its groundwater supply than on the imported MWD supply. Unfortunately, due to the continued drought conditions, the District has been increasing its reliance on MWD water to the point where it currently represents approximately 70% of the District's water supply. With the increase proportion of MWD water in the system, the levels of DBPs, primarily THMs, have been increasing. Figures 1 and 2 show the compliance levels of THMs in the District's drinking water at two compliance sampling locations as compared to the regulatory limit of 80 $\mu\text{g/L}$. As shown in both figures, it is industry standard to utilize 80% of the regulatory limit, which is 64 $\mu\text{g/L}$, as the maximum desired operational goal in order to maintain a sufficient distance between the occurrence of THMs and the regulatory limit. While the District has not – to our knowledge – adopted such an operational goal, it is recommended as a criterion moving forward.

Based on the results to-date and the apparent increasing trend in THM levels, there is a real possibility that the District's drinking water may exceed the THM regulatory limit in the 4th quarter when the next round of sampling is conducted. This would be a violation and require public notification. For this reason, the District needs to implement mitigation strategies sooner than later aimed at lowering the THM levels in the distribution system.

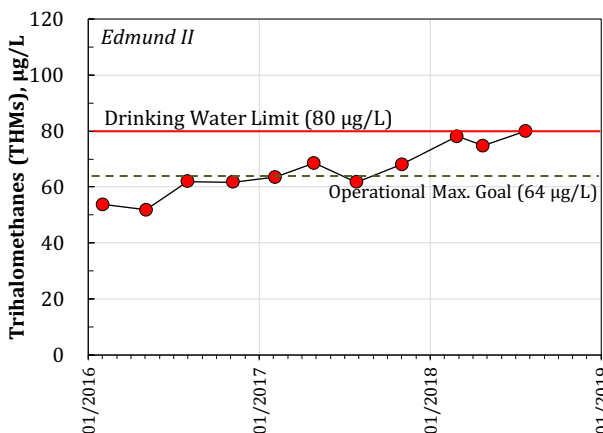


Figure 1 – THM Profile for the Edmund II Compliance Point

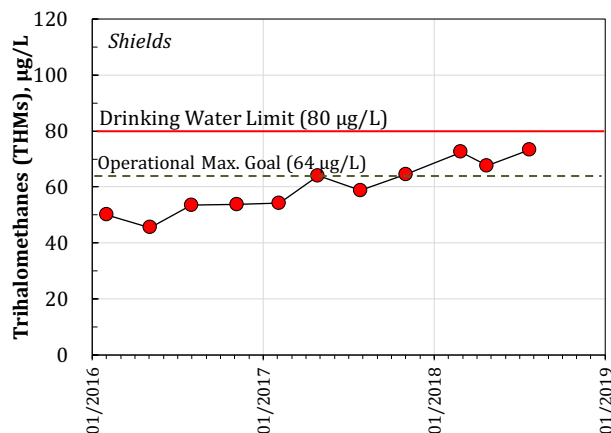


Figure 2 – THM Profile for the Shields Compliance Point

Based on discussions with District staff, there are two options being considered for implementation before the start of the 4th quarter (i.e., October 1) or during the first month of the quarter:

- Option 1 – Continue breakpoint chlorination of the MWD water and keep the system on chlorine while implementing operational changes to help lower the formation of THMs.
- Option 2 – Convert the distribution system from chlorine to chloramine by terminating the breakpoint chlorination of the MWD water and converting the well water to chloramine.

Option 1 includes lowering the chlorine dose applied to achieve breakpoint chlorination and increasing the cycling of water in the reservoirs to reduce stagnation time, thus reducing the THM levels. Activities under this option are being undertaken by District staff. If these activities result in a satisfactory reduction in THM formation, then the District will likely continue with this option. The criterion for “satisfactory” reduction is discussed in the next section.

Under Option 2, the District would convert its distribution system to chloramine. To implement this option, the District needs to undertake a number of steps to prepare for chloramine conversion, which are time-consuming. These include:

1. Issue public notification and conduct a public information campaign.
2. Purchase a set of hand-held instruments needed to measure chloramine and ammonia in the distribution system.
3. Develop a Nitrification Monitoring & Control Plan (NMCP).
4. Train water quality and operations staffs on understanding and troubleshooting chloramine chemistry.
5. Train water quality and operations staffs on understanding and managing nitrification occurrence and control in the distribution system.

6. Support the District's permit application process to DDW
7. Design ammonia-feed systems to be installed at three locations of groundwater entry into the distribution system.
8. Install three ammonia feed systems and integrate them into the District's SCADA system.
9. Apply for and obtain an amended Water System Operating Permit to account for the installation and operation of the new ammonia feed systems.

Steps 1 through 5 need to be implemented before the system can receive chloraminated water. If Option 1 is deemed unsuccessful and the system needs to be converted to chloramine quickly, it would be advantageous to have these steps already completed. WQTS has already completed and submitted to the District the various communication documents to be submitted to the District's customers and businesses; including a Press Release, and a Q&A document to answer customers' questions about chloramine. This completes the material needed for Item 1. WQTS will assist the District with identifying the instruments to be purchased by the District under Item 2. The activities proposed in this scope of work cover items 2 through 7 in the above list. WQTS staff will conduct items 2 through 6, while item 7 will be subcontracted to an engineering design firm. It should be emphasized that even if chloramine conversion is implemented, other long-term THM mitigation strategies, such as spray aeration, may be implemented, which would allow the District to go back to chlorine if so desired.

TIMELINE & DECISION CRITERIA

As noted above, there are many moving parts to the decision to implement Option 1 or 2, and a number of activities have to be completed before others can begin. Figure 3 provides a comprehensive flowchart of the recommended timeline, milestones, and activities to be conducted beginning the first week of September. The following is a chronological summary of the activities.

- During the month of September, activities under Options 1 and 2 will proceed in parallel.
- Under Option 1, District staff will implement operational changes during the first two weeks, and then conduct weekly THM sampling from non-compliance points to determine if the changes have lowered THM formation.
- During the same period, Option 2 activities will be conducted, including public notification about the pending chloramine conversion, the development of the Nitrification Monitoring and Control Plan, purchase of field instruments, Staff training, and preparation of a chloramine boosting plan.
- On October 1, if the average of the THM samples collected from each individual location during the last two weeks of September is less than 64 µg/L (i.e., less than 80% of the regulatory limit of 80 µg/L), then chloramine conversion will be held off to see how the October results come out as shown in Figure 3.
- If the average is higher than 64 µg/L, then the decision will be made to switch to chloramine at that time. However, since no ammonia feed systems will be in place by then, the conversion will take place by shutting off the District's groundwater supply and serving 100% chloraminated MWD water into the system. At that time, the design, construction, and programming of the ammonia feed systems will be initiated.

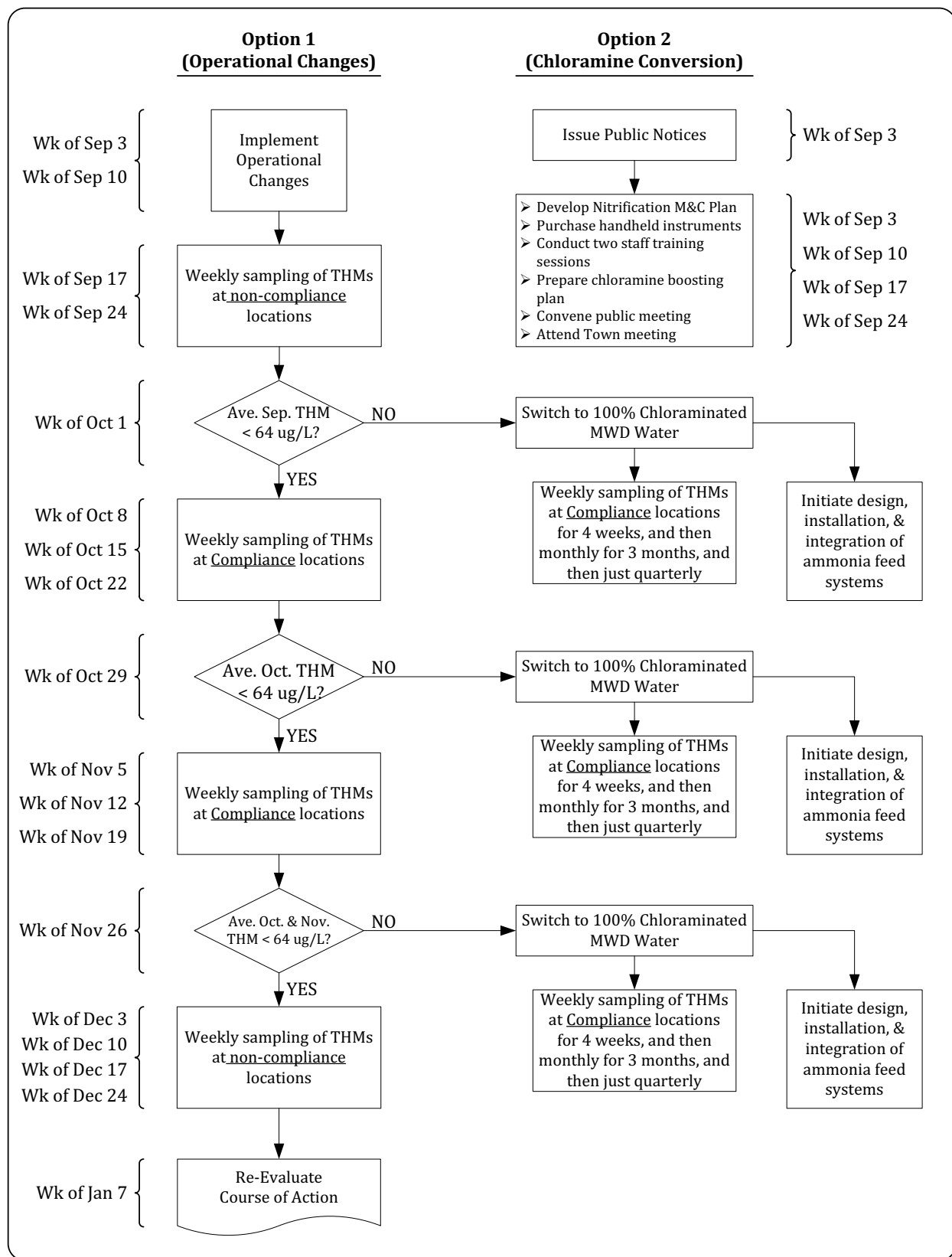


Figure 3 – Mitigation Option Decision Tree & Associated Schedule

SCOPE OF WORK

This section presents the specific tasks to be conducted by WQTS and includes discussion of the activities to be conducted under each task. This information is primarily provided as a basis for the cost information provided in the next section. The following tasks will be conducted:

- Task 1 – Develop Nitrification Monitoring & Control Plan
- Task 2 – Conduct Staff Training on Chloramine Chemistry & Nitrification
- Task 3 – Develop Chloramine Boosting Plan and Calculator
- Task 4 – Participate in two Public Meetings & Three Board Meetings
- Task 5 – Permitting Support
- Task 6 – Assist with Startup of Chloramine Conversion Activities
- Task 7 – Develop 30% Design of Ammonia Feed Systems

The following are discussions of the activities under each task.

Task 1 – Develop Nitrification Monitoring & Control Plan. Nitrification in stored water containing chloramine is inevitable, and many water agencies in Southern California experience it. It is the primary downside to chloramine in distribution systems. Water agencies mitigate nitrification by increased monitoring and taking specific actions when detected. In this task, WQTS will develop a Nitrification Monitoring & Control Plan (NMCP) for the District to implement. The NMCP will include specific water quality monitoring activities and their schedule, as well as specific actions to be taken based on triggers of nitrite (an indicator of possible nitrification), ammonia and total chlorine residual levels in the samples collected.

Task 2 – Conduct Staff Training on Chloramine Chemistry & Nitrification. WQTS will prepare and give two training classes to District operations and water quality staffs focused on chloramine chemistry and nitrification monitoring and control. These classes will also be an opportunity to discuss the specifics of the NMCP developed under Task 1 and how to use the analytical instruments to be purchased for nitrite and ammonia field monitoring.

Task 3 – Develop Chloramine Boosting Plan and Calculator. Maintaining an elevated chloramine residual is critical to minimizing the occurrence of nitrification in reservoirs. WQTS will work with District staff to identify means of chloramine boosting at each individual storage tank in the system, and then develop a boosting calculator that helps District staff feed the proper amount of chlorine to the inlet to the reservoir, if accessible, to boost the chloramine to a target level.

Task 4 – Participate in two Public Meetings & three Board Meetings. As requested by District staff, WQTS will participate in two public meetings to answer any questions that may arise about the implementation of chloramine conversion in the system. For budgeting purposes, WQTS will also assume that WQTS staff will attend three Board of Directors meetings during the course of this effort to update the Board on the progress and answer any questions.

Task 5 – DDW Permitting Support. DDW staff indicated to District staff that a permit amendment is only required if and when the District adds ammonia to its groundwater supplies. If the District implements ammonia addition, WQTS will support the District's permitting effort by participating in one DDW meeting and reviewing the permit amendment application documents.

Task 6 – Assist with Startup of Chloramine Conversion Activities. If the District implements chloramine conversion after October 1, WQTS will provide technical support during the first month of operation on an on-call basis to support District staff in the water quality monitoring activities, the interpretation of the results, and the troubleshooting and mitigation of any water quality challenges that may arise during that period. For budgeting purposes, WQTS assumed 32 hours of Dr. Issam Najm's time, and 64 hours of an engineer's time to support monitoring activities.

Task 7 – Design and Construction Support. WQTS will contract with Carollo Engineers to provide design support and construction oversight support services. Because of the critical nature of the project and the short timeline, design services will be provided simultaneously with equipment procurement and construction. The District will make the improvements themselves or will hire a Contractor to make them. The District will also manage the project. Below is our scope of work based on our understanding of the above referenced project from our recent site visit and meeting with the District. The proposed effort does not include services for preparing an operations and maintenance manual, final record drawings, or providing system operational training. The following are the tasks to be completed by Carollo Engineers under this task.

Task 7.1 – Design Support Services

Carollo will assist with design services for this project. In order to move the project directly into construction phase, Carollo will only develop a few drawings which include the following for each of the two project sites:

- Process flow diagram
- Basic plan sheet
- Piping and instrumentation drawings (P&IDs)

The purpose of the process flow diagrams and basic plan sheets will be to give the builder a basis for construction. Pipe routing details will be coordinated and worked through during construction. The P&IDs will be to help the integrator understand the scope of the project, including the number of signals passed to/from the new process equipment. It is our understanding the District has subconsultant integrators and programmers that understand their system such that P&IDs will be sufficient to complete integration and programming. It is assumed design services may require up to two coordination meetings that will be conducted remotely via video/teleconference (WebEx). As part of the design services, no specifications will be developed. Rather, equipment used will be based on District preferences or Carollo standards which will be coordinated with the builder.

Design assumptions for this project are based on discussions with the District from our 9/5/2018 site visit. These assumptions include the following:

- Chemical metering of the Liquid Ammonium Sulfate (LAS) will use a pump skid patterned after the pump skid for the sodium hypochlorite system at the Glenwood Plant.
- The LAS system at the Glenwood Plant will be housed underneath the existing parking canopy located along the north site boundary. The system will utilize chemical totes.
- The LAS system at the Mills Plant will be located on a concrete slab that will be placed adjacent to and on the south side of the existing sodium hypochlorite system. The system will utilize a small polyethylene tank and an existing fiberglass structure will be installed over the system.
- The District will provide all necessary power and instrumentation wire to new junction boxes near the LAS systems.

Task 7.2 – Construction Support

Carollo will provide support during construction as needed. This support will include shop drawing review for critical components (metering pumps, tanks, and associated equipment). It is assumed that the District will manage construction and perform daily inspection. Carollo will provide milestone project inspection and start-up assistance (up to two site visits for a total of three days). These inspection services are intended to ensure overall construction meets the intent of design.

Task 7.3 – Permitting Support

It is our understanding that the only permitting needed for the project will be coordination with the local fire authority and the Division of Drinking Water (DDW). It is assumed the District will coordinate with the fire authority and the District and/or WQTS will coordinate with DDW for project approvals. It is anticipated the fire authority will only require emergency eyewash/showers and secondary containment vessels at each site and no fire sprinklers or emergency alarms/beacons will be needed. Carollo will provide support, as needed, which will include making minor adjustments to the design drawings, one site visit and up to two coordination meetings that will be conducted remotely via video/teleconference (WebEx).

Task 7.4 – Additional Electrical Support

Basic services provided above assumes the District will provide power and controls to field located junction boxes. This task includes a site visit by an electrical engineer and additional services for providing design support and construction services to route power and controls from existing panels to the above referenced junction boxes. This task assumes existing lighting panels have adequate space to accommodate power and existing control panels have adequate spare input/output for this project. The District will be responsible for field coordinating conduit runs.

BUDGET

The cost of these services is summarized in Table 1 below. The total cost is projected at \$144,040 based on our understanding of the level of services required to complete these tasks. We realize that the District wishes to minimize the cost whenever possible. To that end, WQTS will provide its services on a Time-and-Material basis, and to the extent services are completed below budget, the final cost will be lower.

Table 1 – Breakdown of Anticipated Cost

	Task	WQTS Labor	Outside Cost	Task Total
1	Develop Nitrification Monitoring & Control Plan	\$15,700	\$0	\$15,700
2	Conduct Staff Training	\$8,000	\$1,100	\$9,100
3	Develop Chloramine Boosting Plan & Calculator	\$5,300	\$0	\$5,300
4	Participate in 2 Public Meetings & 3 Board Meetings	\$5,000	\$0	\$5,000
5	Permitting Support	\$3,500	\$0	\$3,500
6	Assist with Startup of Chloramine Conversion	\$16,700	\$0	\$16,700
7	Design & Construction Support Services	\$6,000	\$82,740	\$88,740
	Total	\$60,200	\$83,840	\$144,040

Table 3 - Project Schedule for Ammonia Treatment System & DDW Approval
(Revised 9/17/18)

Task No.	Task	Start Date	End Date	Person Responsible	Calendar Days
1	Review Carollo Proposal	Friday, September 14, 2018	Friday, September 14, 2018	DG	0
2	Scope of Work - Construction Admin	Friday, September 14, 2018	Monday, September 17, 2018	DG/JR	3
3	Equipment - Review - Lead Time	Monday, September 17, 2018	Tuesday, September 18, 2018	DG	1
4	Carollo - Start 30% Design	Monday, September 17, 2018	Monday, October 8, 2018	WQTS /Carollo	21
5	Staff Report - Engineering Committee	Tuesday, September 18, 2018	Thursday, September 20, 2018	DG	2
6	Engineering Committee	Thursday, September 20, 2018	Thursday, September 20, 2018	Eng. Com.	0
7	Staff Report	Thursday, September 20, 2018	Friday, September 21, 2018	DG	1
8	Award of Contract 1. WQTS - Extend with Carollo Costs 2. JRC for Const. Admin and Coordination	Friday, September 21, 2018	Tuesday, September 25, 2018	DG	4
9	Notice of Award/Agreements	Tuesday, September 25, 2018	Wednesday, September 26, 2018	DG	1
10	Carollo - Preliminary 30% Design Submittal for quantities for cost estimate	Wednesday, September 26, 2018	Thursday, October 4, 2018	WQTS /Carollo	8
11	Staff Report - Construction Costs	Thursday, October 4, 2018	Friday, October 5, 2018	DG	1
12	Construction Costs - Total Cost Approved	Friday, October 5, 2018	Tuesday, October 9, 2018	DG	4
13	Ordering Material & Equipment	Tuesday, October 9, 2018	Monday, October 15, 2018	DG/JR	6
14	Carollo - Finalize 30% Design	Thursday, October 4, 2018	Thursday, October 11, 2018	WQTS /Carollo	7
15	Electrical - RFQ - Bidding	Thursday, October 11, 2018	Monday, October 15, 2018	JR	4
16	Electrical - RFQ - Back with Quote, approve, agreement	Monday, October 15, 2018	Thursday, October 25, 2018	Contractor /DG	10
17	RTU - Intergration - RFQ send out	Thursday, October 11, 2018	Monday, October 15, 2018	JR/RD/MH	4
18	RTU - Intergration - RFQ - Back with Quote, approve, agreement	Monday, October 15, 2018	Thursday, October 25, 2018	TESCO	10
19	HMI - Intergration - RFQ	Thursday, October 11, 2018	Monday, October 15, 2018	JR/RD/MH	4
20	HMI - Intergration - RFQ - Back with Quote, approve, agreement	Monday, October 15, 2018	Thursday, October 25, 2018	APEX	10
21	Submittal & Review - DDW	Thursday, October 11, 2018	Thursday, October 25, 2018	DG/CS	14
22	Equipment - Shop drawing review; fabrication & delivered to Site	Monday, October 15, 2018	Monday, December 3, 2018	JR	49
23	Construction - CVWD Crews; Electrical Contractor	Monday, December 3, 2018	Monday, December 31, 2018	JR/DG	28
24	Approval from DDW	Thursday, October 25, 2018	Saturday, November 24, 2018	DG/CS	30

**Table 4 - Project Schedule for 100% MWD water and
Ammonia Treatment System & DDW Approval
(Revised 9/17/18)**

Task No.	Task	Start Date	End Date	Person Responsible	Calendar Days
1	Review Carollo Proposal	Friday, September 14, 2018	Friday, September 14, 2018	DG	0
2	Scope of Work - Construction Admin	Friday, September 14, 2018	Monday, September 17, 2018	DG/JR	3
3	Equipment - Review - Lead Time	Monday, September 17, 2018	Tuesday, September 18, 2018	DG	1
4	Carollo - Start 30% Design	Monday, September 17, 2018	Monday, October 8, 2018	WQTS /Carollo	21
5	Staff Report - Engineering Committee	Tuesday, September 18, 2018	Thursday, September 20, 2018	DG	2
6	Engineering Committee	Thursday, September 20, 2018	Thursday, September 20, 2018	Eng. Com.	0
7	Staff Report	Thursday, September 20, 2018	Friday, September 21, 2018	DG	1
8	Award of Contract 1. WQTS - Extend with Carollo Costs 2. JRC for Const. Admin and Coordination	Friday, September 21, 2018	Tuesday, September 25, 2018	DG	4
9	Notice of Award/Agreements	Tuesday, September 25, 2018	Wednesday, September 26, 2018	DG	1
10	Operations Meeting - Planning for 100% MWD Water	Wednesday, September 26, 2018	Thursday, September 27, 2018	DG/Operators	1
11	Carollo - Preliminary 30% Design Submittal for quantities for cost estimate	Wednesday, September 26, 2018	Thursday, October 4, 2018	WQTS /Carollo	8
12	Meet with FMWD on increased flow	Thursday, September 27, 2018	Friday, September 28, 2018	FMWD/ CVWD	1
13	Tune off Wells & increase flow from FWMD	Friday, September 28, 2018	Monday, October 1, 2018	CVWD	3
14	Nitrification - Sample Distribution System	Monday, October 1, 2018	Friday, October 5, 2018	CVWD	4
15	TTHM Sample at Reservoir Sites	Tuesday, October 2, 2018	Wednesday, October 3, 2018	CVWD	1
16	Staff Report - Construction Costs	Thursday, October 4, 2018	Friday, October 5, 2018	DG	1
17	Construction Costs - Total Cost Approved	Friday, October 5, 2018	Tuesday, October 9, 2018	DG	4
18	Ordering Material & Equipment	Tuesday, October 9, 2018	Monday, October 15, 2018	DG/JR	6
19	TTHM Sample at Reservoir Sites	Wednesday, October 10, 2018	Thursday, October 11, 2018	CVWD	1
19	Carollo - Finalize 30% Design	Thursday, October 4, 2018	Thursday, October 11, 2018	WQTS /Carollo	7
20	Electrical - RFQ - Bidding	Thursday, October 11, 2018	Monday, October 15, 2018	JR	4
21	Electrical - RFQ - Back with Quote, approve, agreement	Monday, October 15, 2018	Thursday, October 25, 2018	Contractor /DG	10

**Table 4 - Project Schedule for 100% MWD water and
Ammonia Treatment System & DDW Approval
(Revised 9/17/18)**

Task No.	Task	Start Date	End Date	Person Responsible	Calendar Days
22	RTU - Integration - RFQ send out	Thursday, October 11, 2018	Monday, October 15, 2018	JR/RD/MH	4
23	RTU - Integration - RFQ - Back with Quote, approve, agreement	Monday, October 15, 2018	Thursday, October 25, 2018	TESCO	10
24	HMI - Integration - RFQ	Thursday, October 11, 2018	Monday, October 15, 2018	JR/RD/MH	4
25	HMI - Integration - RFQ - Back with Quote, approve, agreement	Monday, October 15, 2018	Thursday, October 25, 2018	APEX	10
26	Submittal & Review - DDW	Thursday, October 11, 2018	Thursday, October 25, 2018	DG/CS	14
27	Equipment - Shop drawing review; fabrication & delivered to Site	Monday, October 15, 2018	Monday, December 3, 2018	JR	49
28	Construction - CVWD Crews; Electrical Contractor	Monday, December 3, 2018	Monday, December 31, 2018	JR/DG	28
29	Approval from DDW	Thursday, October 25, 2018	Saturday, November 24, 2018	DG/CS	30



Los Angeles County Registrar-Recorder/County Clerk

DEAN C. LOGAN
Registrar-Recorder/County Clerk

RECEIVED

SEP 20 2018

CRESCENTA VALLEY
WATER DISTRICT

September 14, 2018

Mr. Thomas A. Love, General Manager
Crescenta Valley Water District
2700 Foothill Boulevard
La Crescenta, California 91214

Dear Mr. Love:

This is to inform you that for the election scheduled, to be held in your District on November 6, 2018, only three persons have been nominated for the three offices of Director for the full term ending December 2, 2022.

Attached is a copy of the certificate pursuant to Section 10515 stating that no election will be held, but that the Board of Supervisors will appoint the persons nominated to such office.

Please call Laticia McCorkle, Assistant Division Manager of the Election Information and Preparation Division at (562) 462-2691 or Maria Lopez at (562) 462-3056 if you have any questions.

Sincerely,

DEAN C. LOGAN
Registrar-Recorder/County Clerk

LATICIA MCCORKLE, Assistant Division Manager
Election Information and Preparation Division

Enclosure

I, DEAN C. LOGAN, Registrar-Recorder/County Clerk of the County of Los Angeles, do hereby certify that, at the close of nominations, only three persons were nominated for the three offices of Director for the

CRESCENTA VALLEY WATER DISTRICT

for the full term ending December 2, 2022, namely:

JAMES BODNAR

KERRY D. ERICKSON

KENNETH R. PUTNAM

Pursuant to Section 10515 of the Elections Code, there being only three candidates nominated for the three offices to be filled, and no petition having been filed, the election scheduled for the 6th day of November, 2018 shall not be held. The Board of Supervisors, therefore, shall at a regular or special meeting held prior to November 26, 2018 appoint to the office of Director, the persons nominated. Such persons shall take office and serve exactly as if elected at a general district election.

Dated this 14th day of September, 2018.




DEAN C. LOGAN
Registrar-Recorder/County Clerk
County of Los Angeles

CRESCENTA VALLEY WATER DISTRICT

General Manager Report

GM Report

September 25, 2018

To: Honorable President and Members of the Board of Directors

From: Nem Ochoa, General Manager

Subject: **General Manager Report**

General Managers Report Topics:

- GM Activities

The following are some highlights in this month's report:

- ACWA JPIA Risk Management Safety Report
- Sewer Interceptor Line Cleaning Update
- Board of Director Stipend Report

STAFFING

4 employees have work anniversaries in September. David Inman – 2 years, Peter Hilke – 6 years, Brook Yared – 11 years, Bryan Jones – 23 years

As of September 21st the District has gone 1,564 Days without a lost time accident.

GENERAL MANAGER ACTIVITIES

Meetings:

Chloramines Public Workshop	- September 15 th
Management staff meetings	- September 17 th , September 24 th
CV Town Council meeting	- September 20 th
Engineering Committee meeting	- September 20 th

Submitted by:

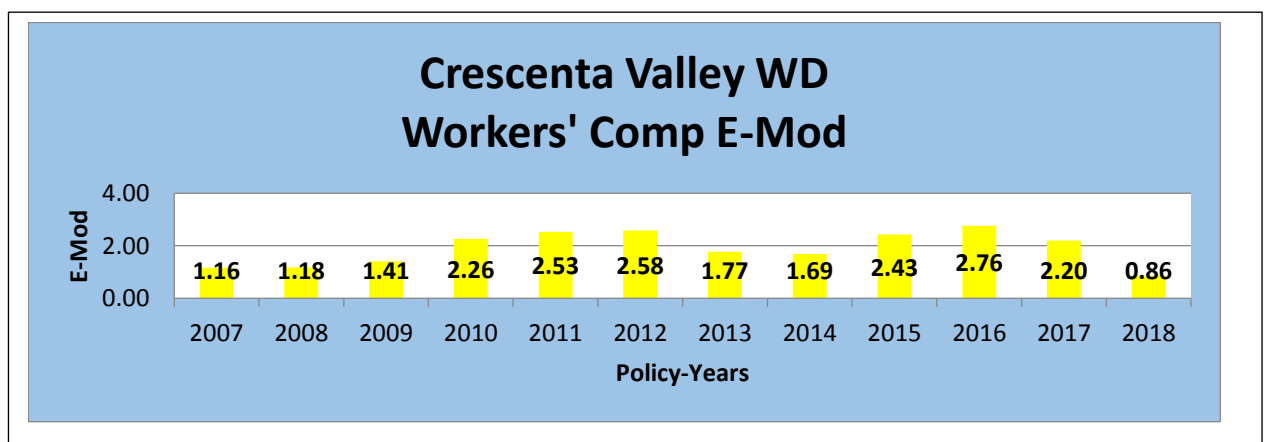
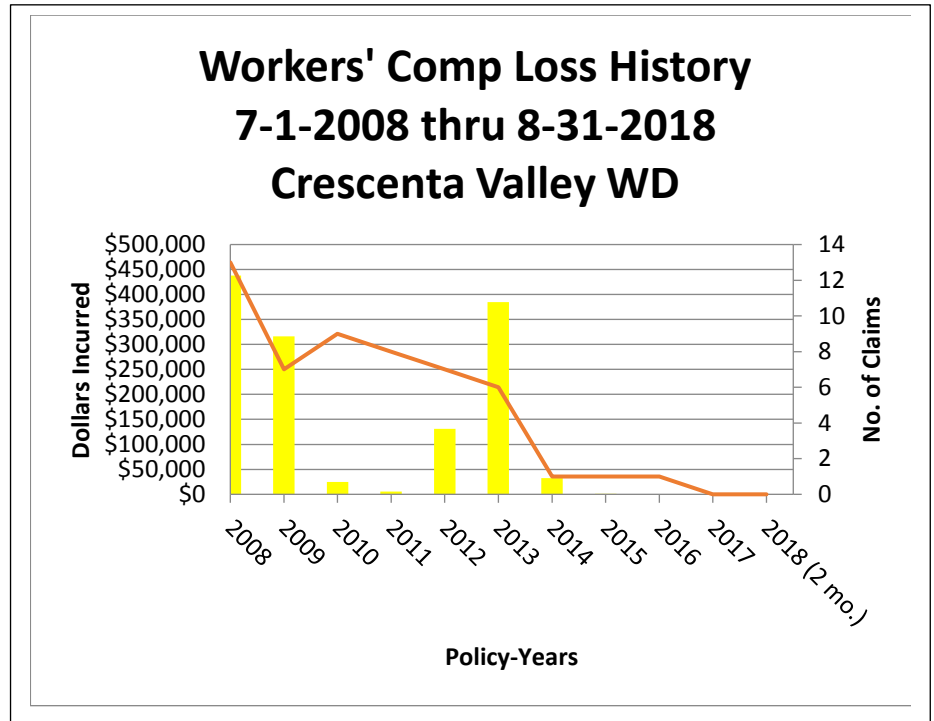


Nem Ochoa
General Manager



Crescenta Valley WD Workers' Compensation Loss Review

Policy Yr.	# of Claims	\$'s Incurred
2008	13	\$437,938
2009	7	\$316,452
2010	9	\$24,858
2011	8	\$5,332
2012	7	\$131,029
2013	6	\$384,643
2014	1	\$32,350
2015	1	\$958
2016	1	\$33
2017	0	\$0
2018 (2 mo.)	0	\$0



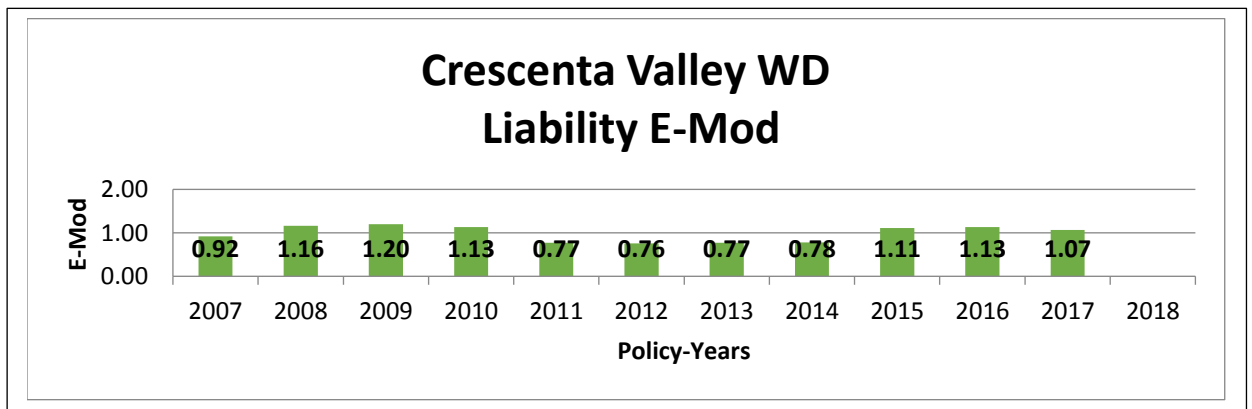
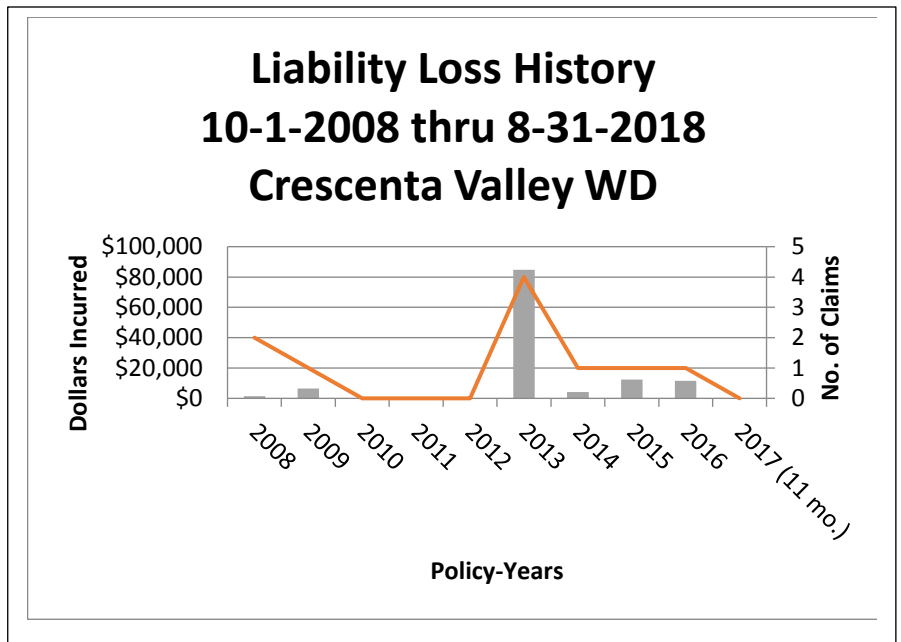
2013 Policy-Period:

Trip and fall over bolder - \$166,347 (43%)
Vehicle accident - \$119,987 (31%)

Lifting valve key-contusion to foot - \$70,926 (18%)
Reaching over truck seat, strained knee - \$42,871 (11%)

Crescenta Valley WD
Liability Loss Review

Policy Yr.	# of Claims	\$'s Incurred
2008	2	\$1,377
2009	1	\$6,399
2010	0	\$0
2011	0	\$0
2012	0	\$0
2013	4	\$84,653
2014	1	\$4,196
2015	1	\$12,324
2016	1	\$11,598
2017 (11 mo.)	0	\$0

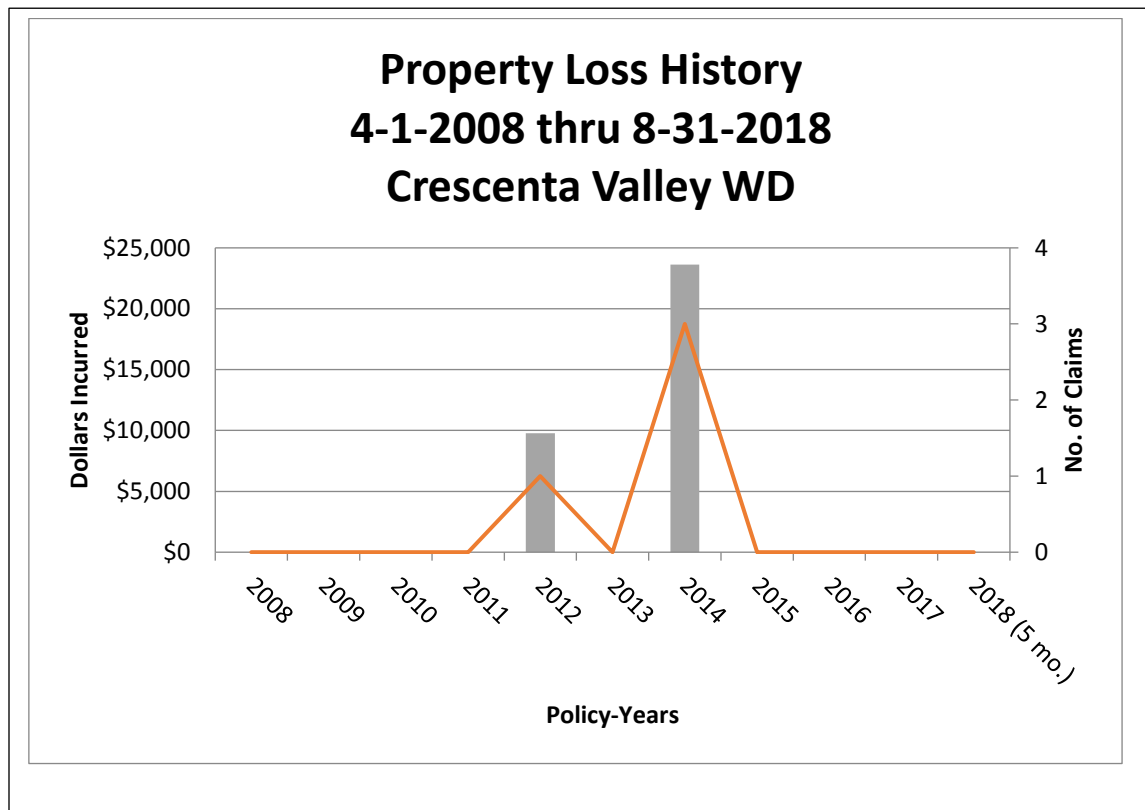


2013 Policy Period:

Vehicle Accident – 2 claims totaling \$81,096 (96%)

Crescenta Valley Water District Property Loss Experience

Policy Yr.	# of Claims	\$'s Incurred
2008	0	\$0
2009	0	\$0
2010	0	\$0
2011	0	\$0
2012	1	\$9,765
2013	0	\$0
2014	3	\$23,613
2015	0	\$0
2016	0	\$0
2017	0	\$0
2018 (5 mo.)	0	\$0



2014 Policy-Year:

Vehicle Accidents

CRESCENTA VALLEY WATER DISTRICT
DIRECTOR STIPEND REPORT
SEPTEMBER 2018

Name	Meeting Date	Meeting/ Event	Items Discussed	Meeting Compensation	Expense Reimbursement
Director Bodnar	09/11/18	Board Meeting		\$ 90.00	
	09/25/18	Board Meeting		\$ 90.00	
Director Claessens	09/11/18	Board Meeting		\$ 90.00	
	08/14/18	CA Workplace Harassment	Required training for public officials		\$ 15.95
	09/25/18	Board Meeting		\$ 90.00	
Director Erickson	09/11/18	Board Meeting		\$ 90.00	
	09/20/18	Engineering Committee	Status of E-982; TTHM Study & operations	\$ 90.00	
	09/25/18	Board Meeting		\$ 90.00	
Director Putnam	09/11/18	Board Meeting		\$ 90.00	
	09/20/18	Engineering Committee	Status of E-982; TTHM Study & operations	\$ 90.00	
	09/25/18	Board Meeting		\$ 90.00	
Director Tejeda	09/11/18	Board Meeting		\$ 90.00	
	09/25/18	Board Meeting		\$ 90.00	