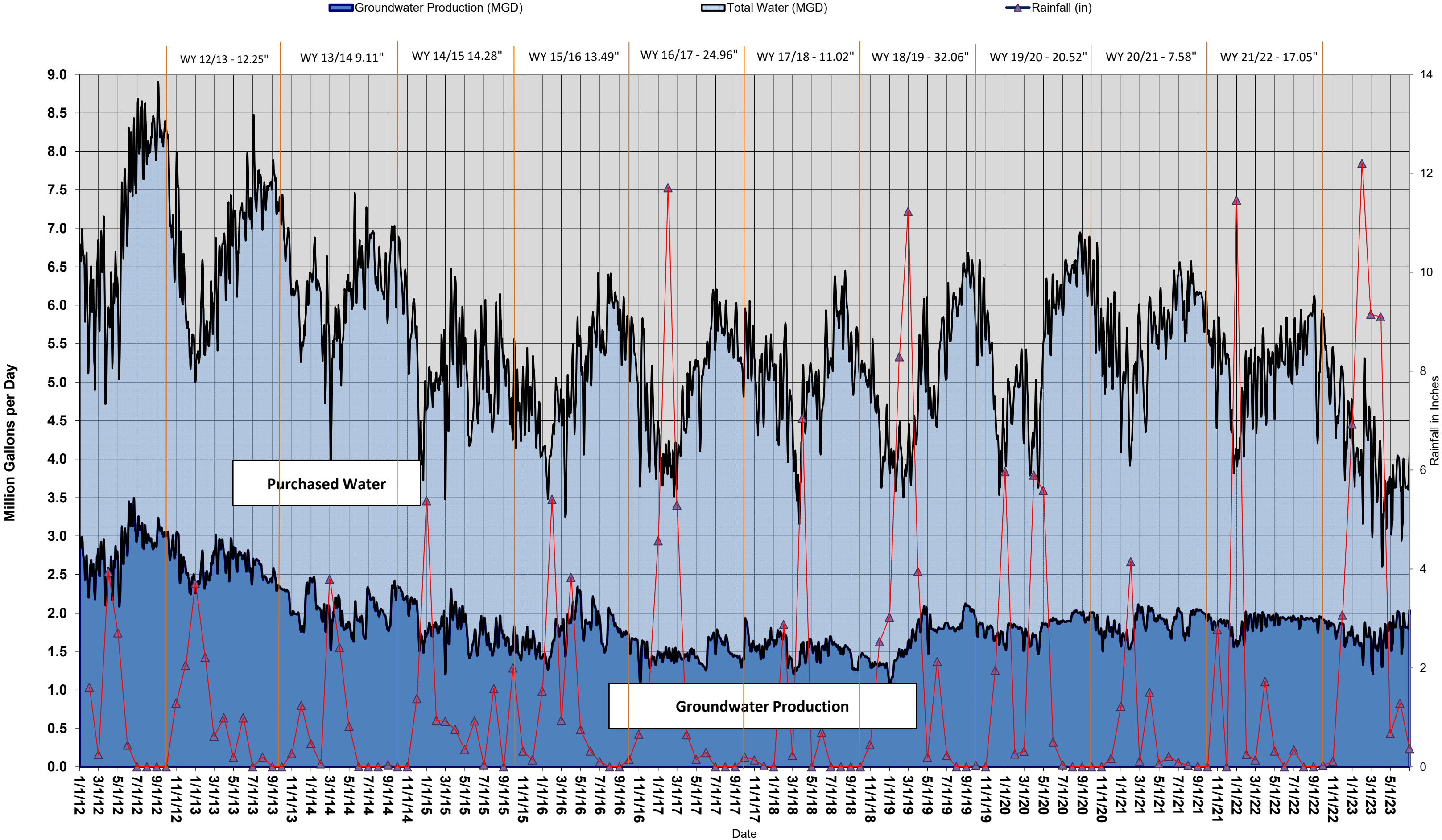
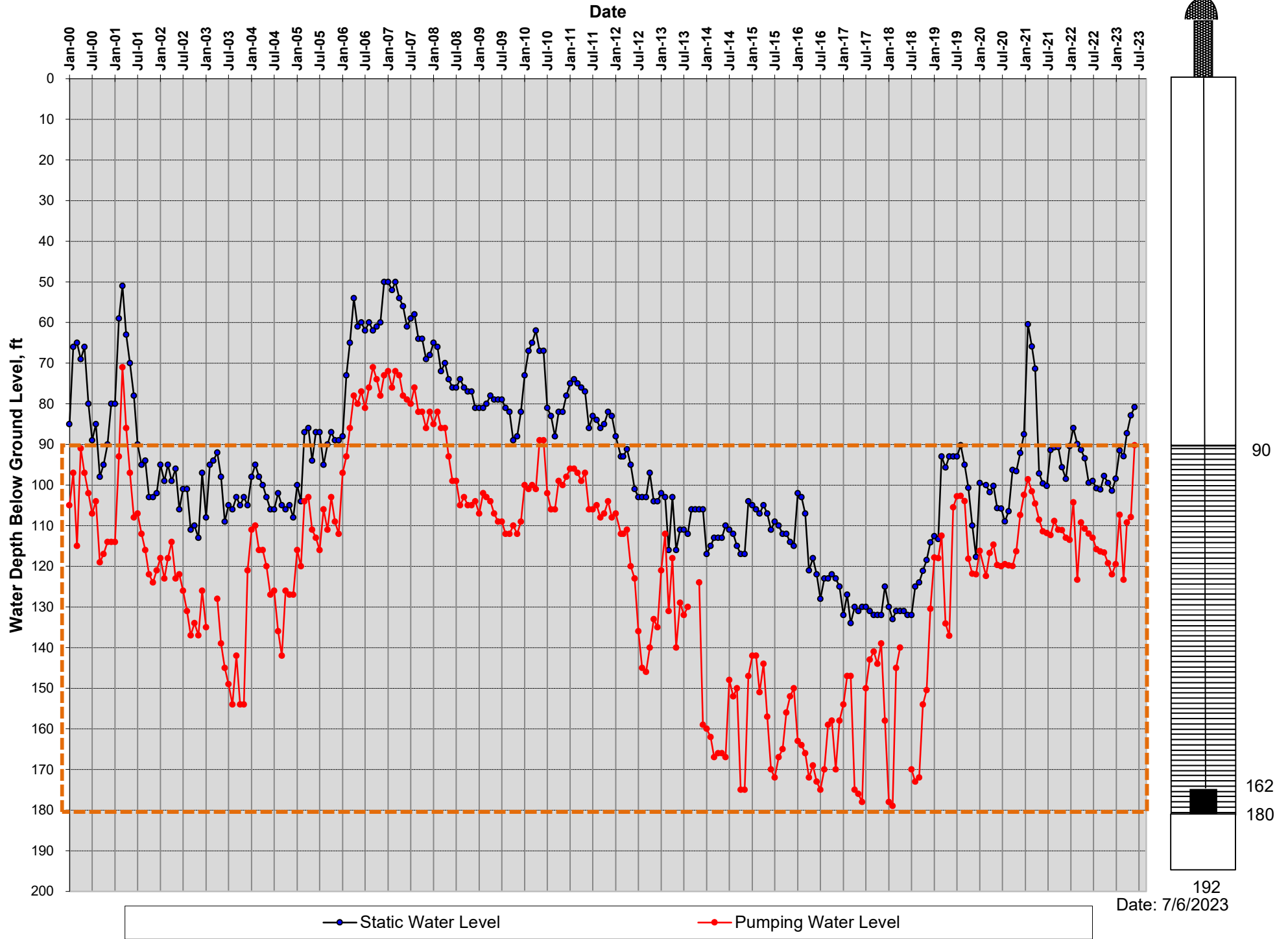


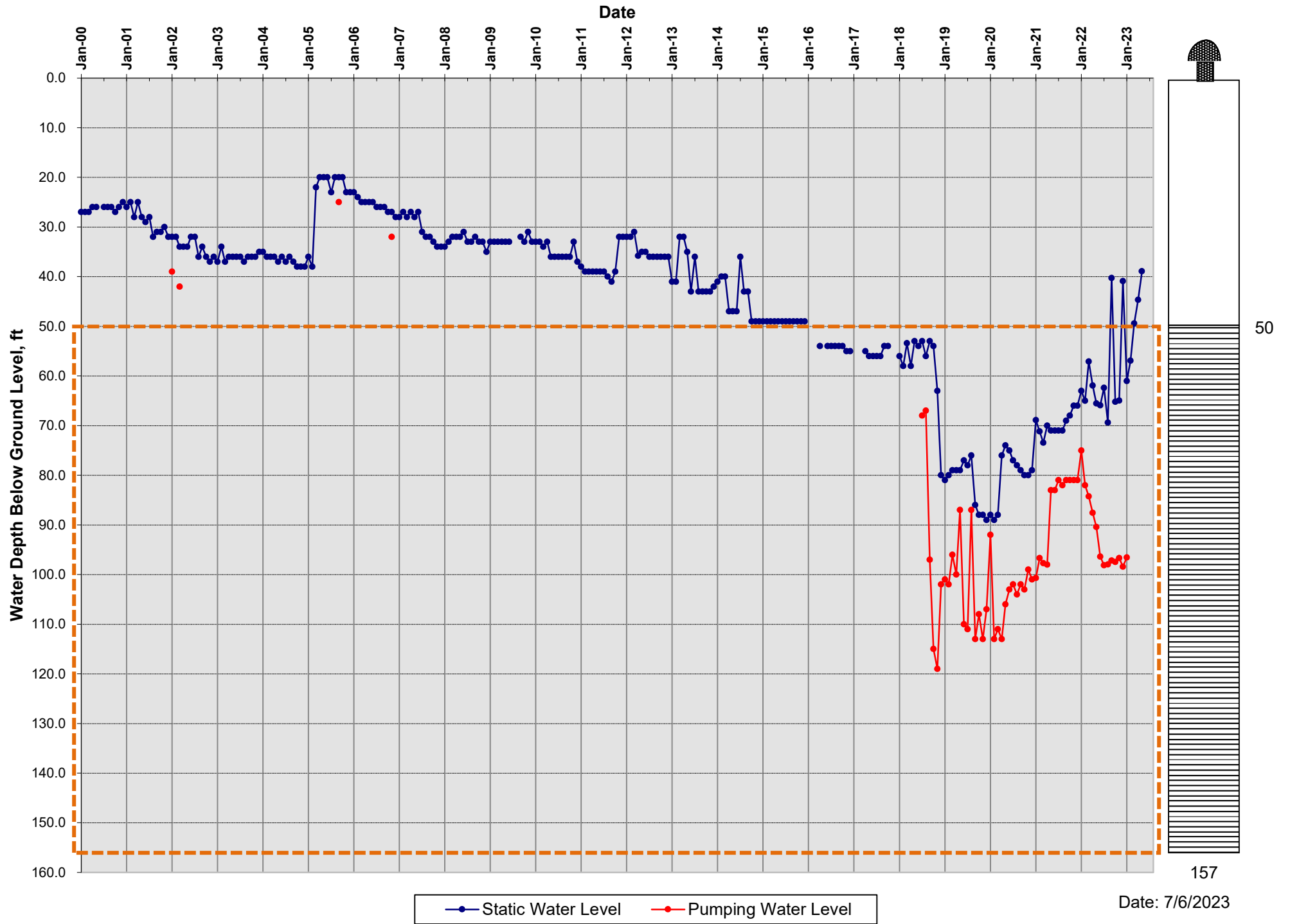
Water Production Chart w/ Rainfall 2012-2023



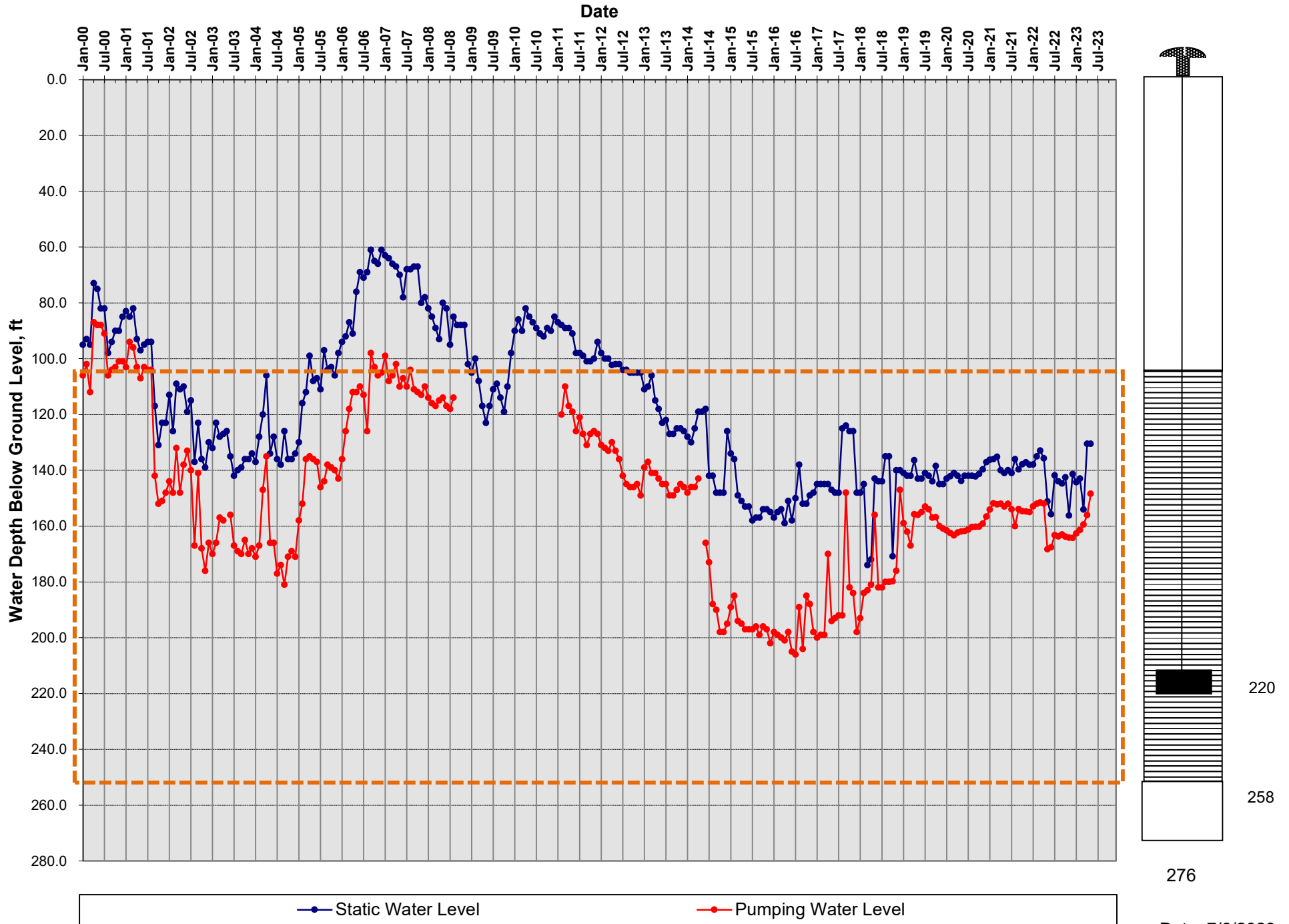
Well 1: January 2000 - May 2023 - Static and Pumping Levels



Well 2: January 2000 - May 2023 - Static and Pumping Levels

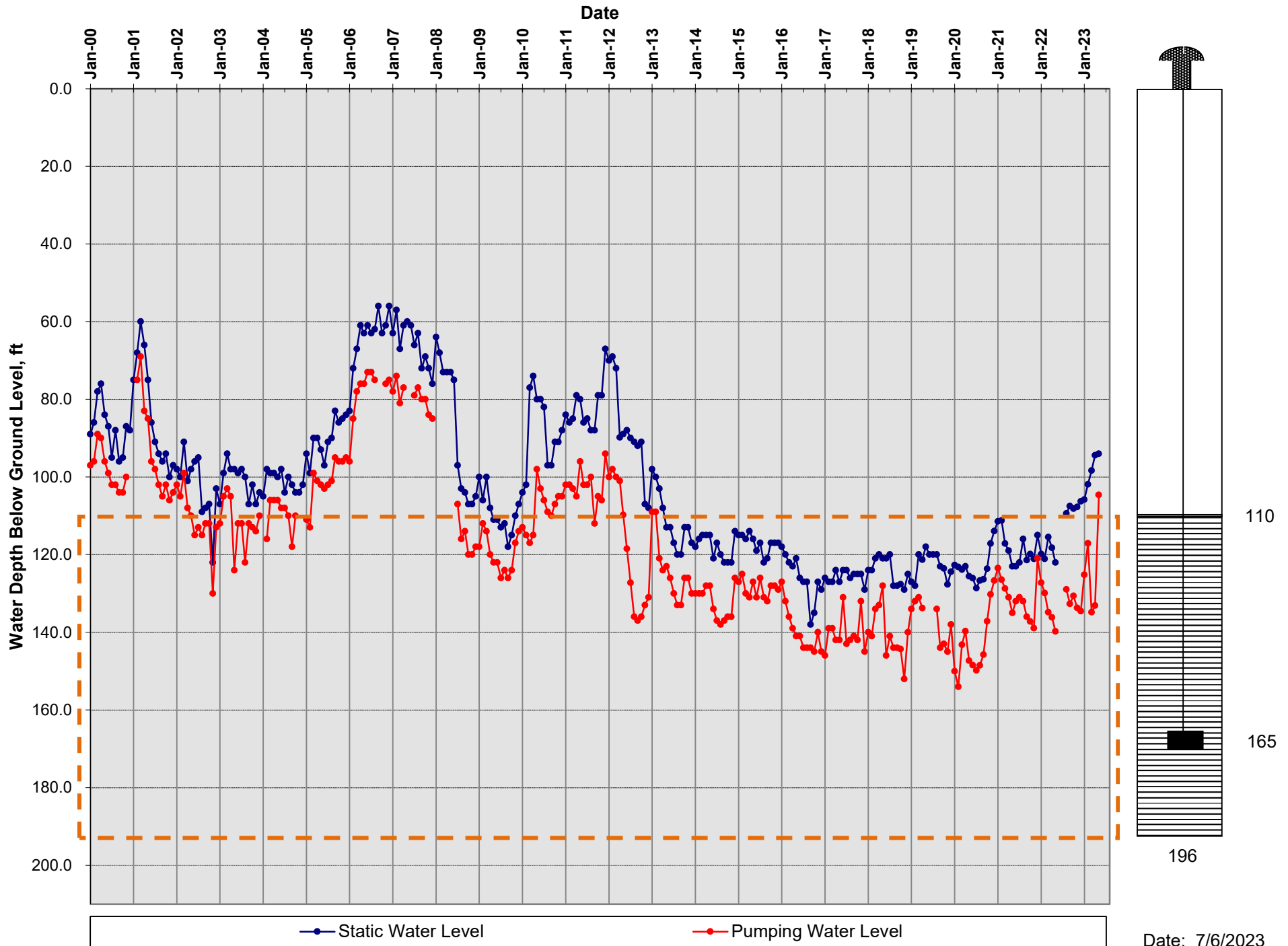


Well 5: January 2000 - May 2023 - Static and Pumping Levels

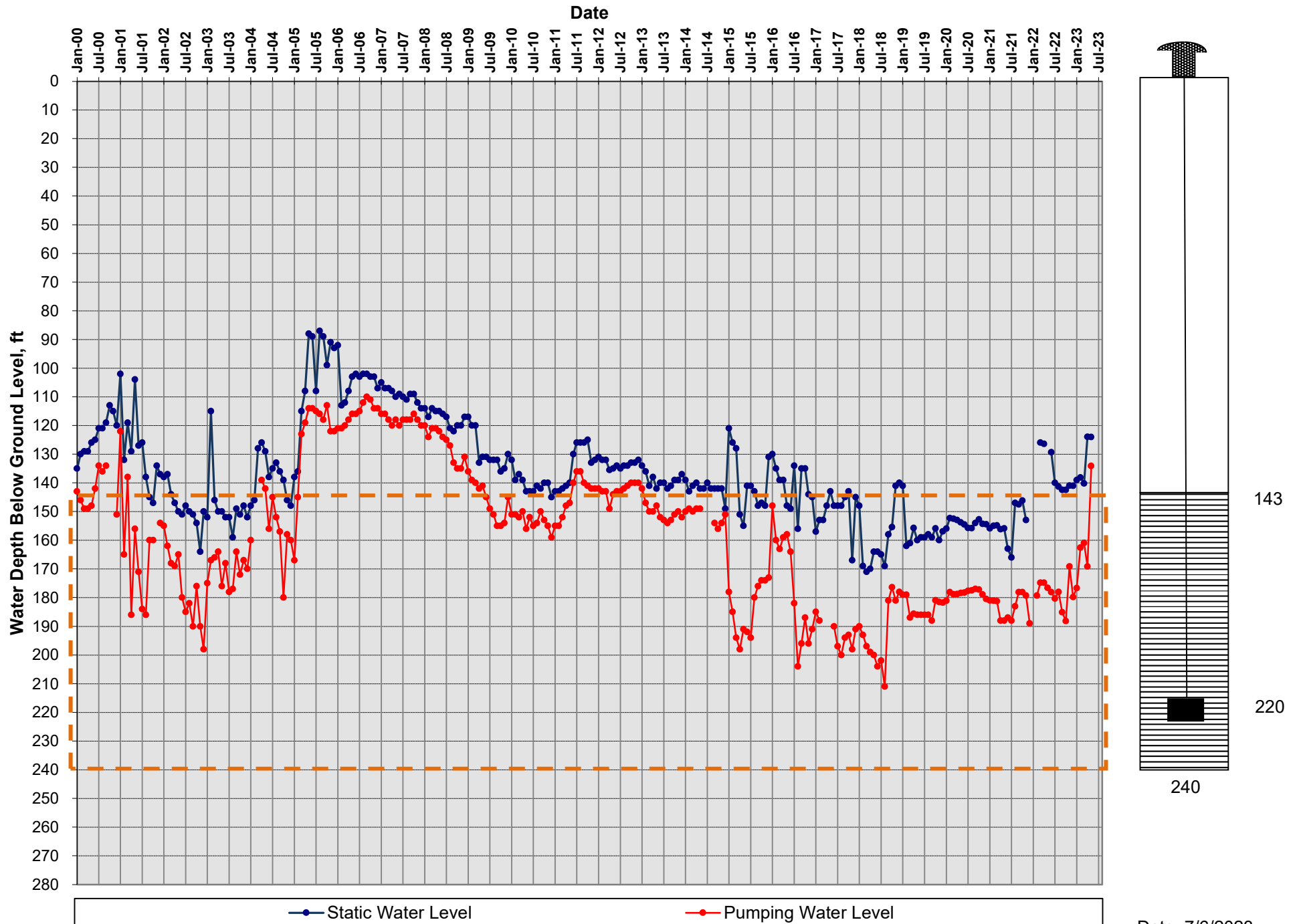


Date: 7/6/2023

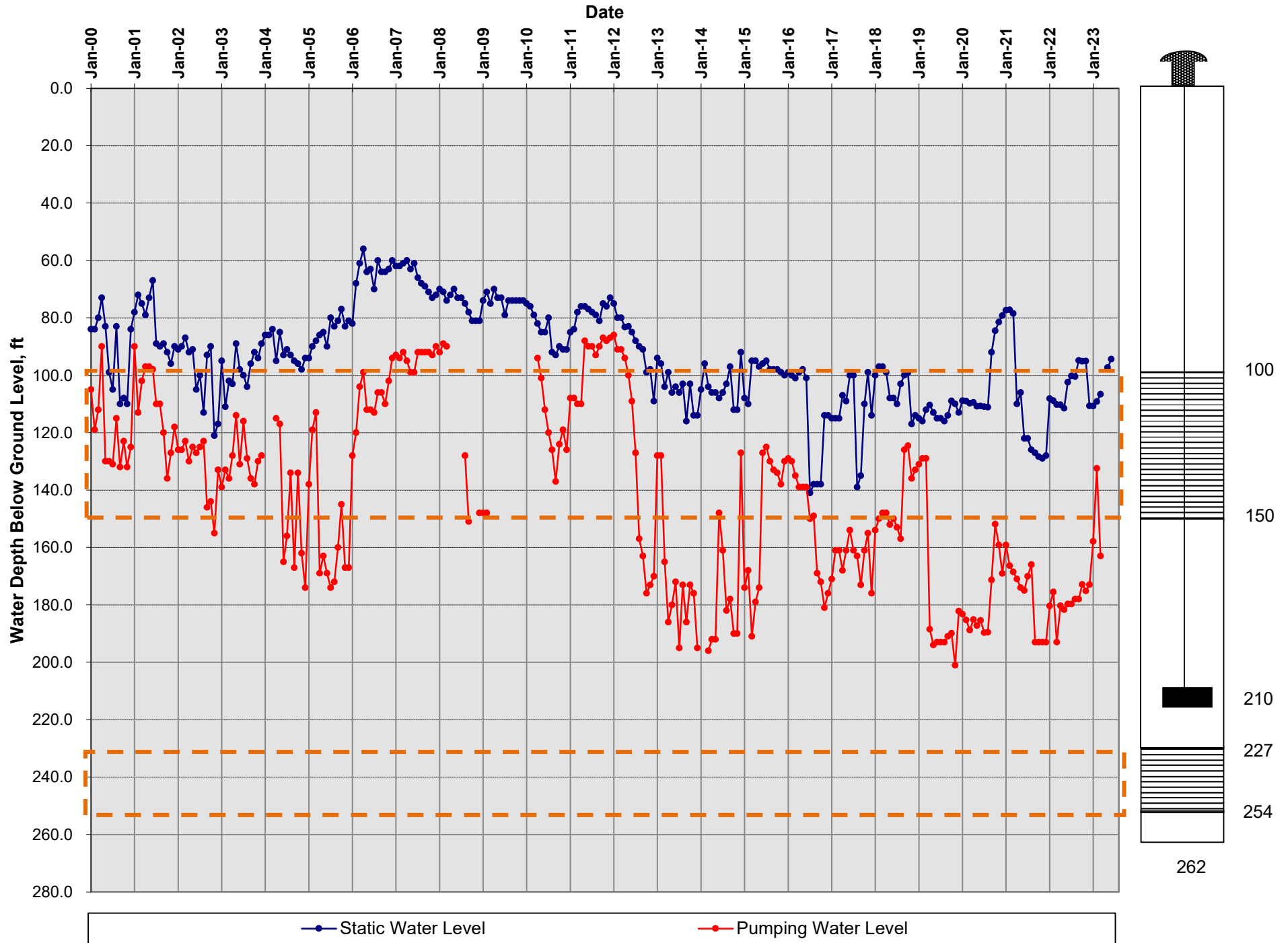
Well 7: January 2000 - May 2023 - Static and Pumping Levels



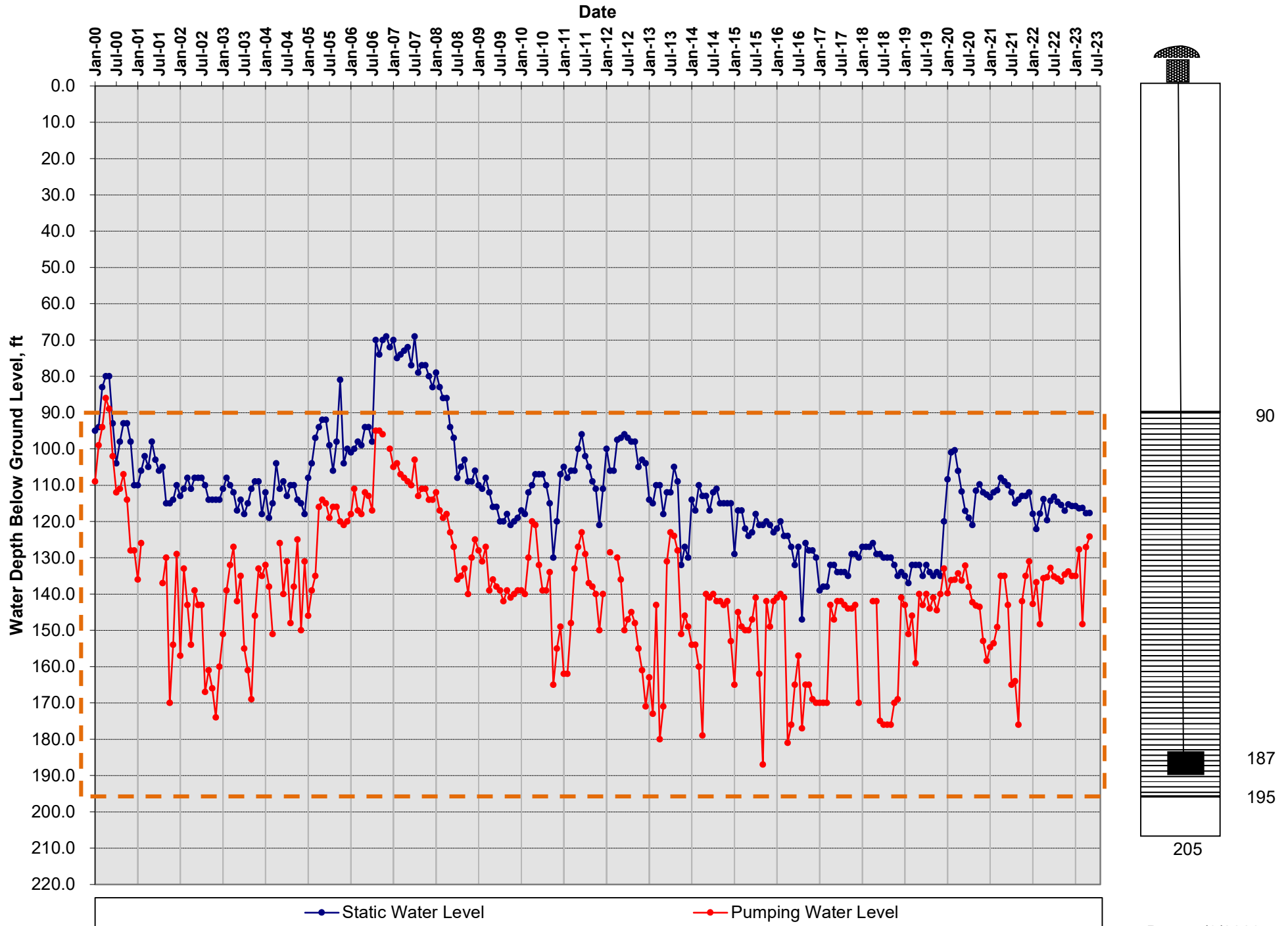
Well 8: January 2000 - May 2023 - Static and Pumping Levels



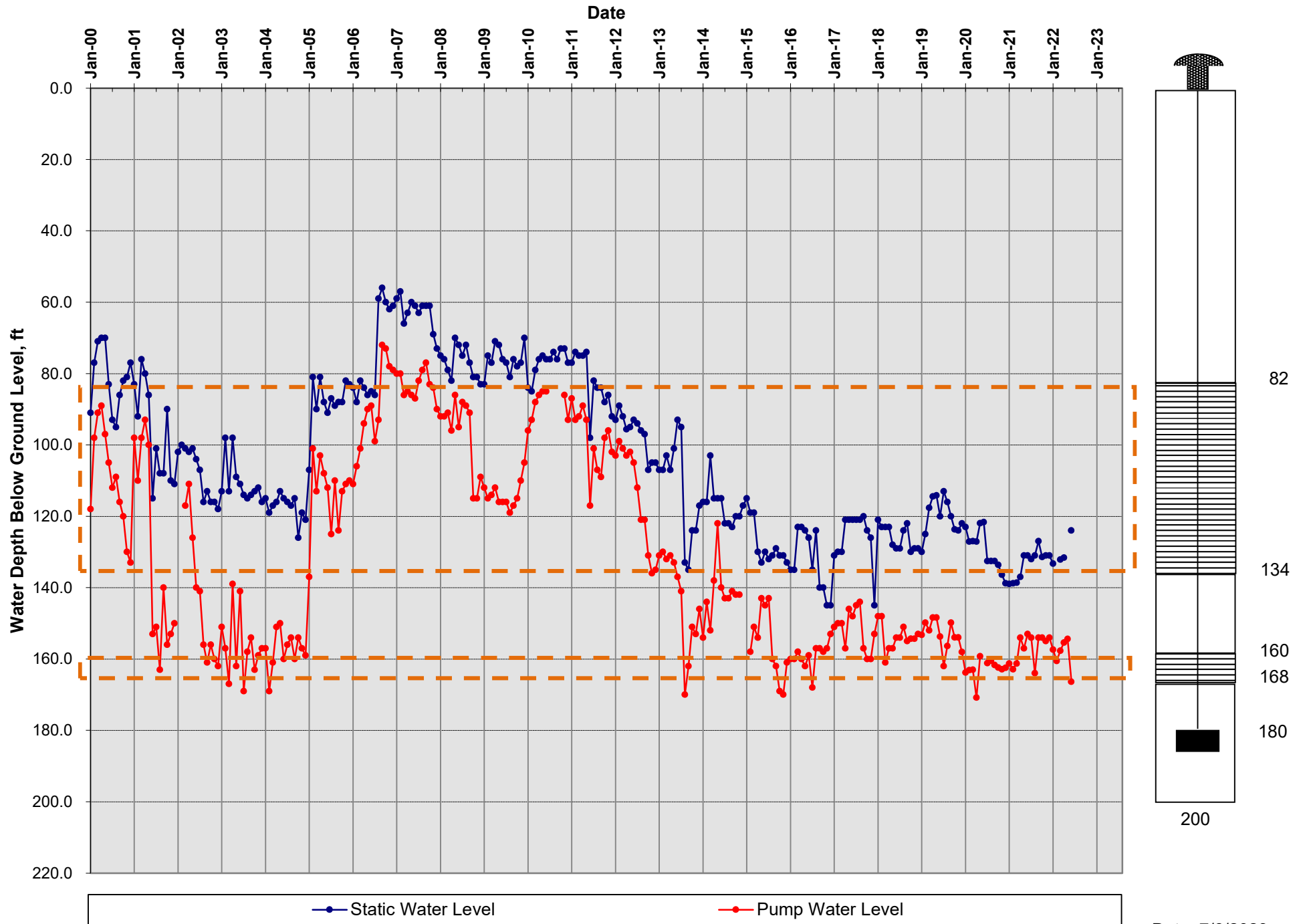
Well 9: January 2000 - May 2023 - Static and Pumping Levels



Well 10: January 2000 - May 2023 - Static and Pumping Levels

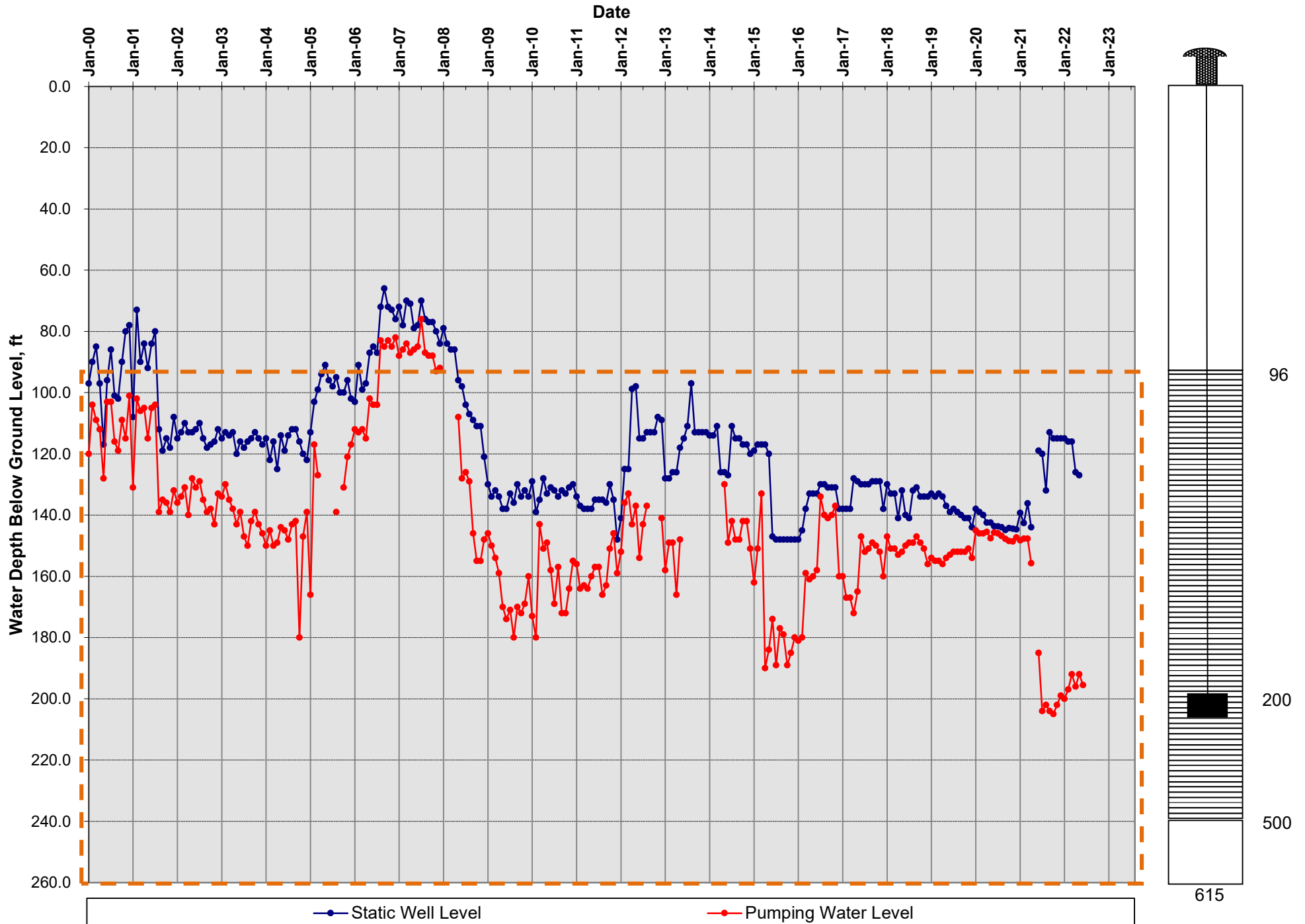


Well 11: January 2000 - May 2023 - Static and Pumping Levels



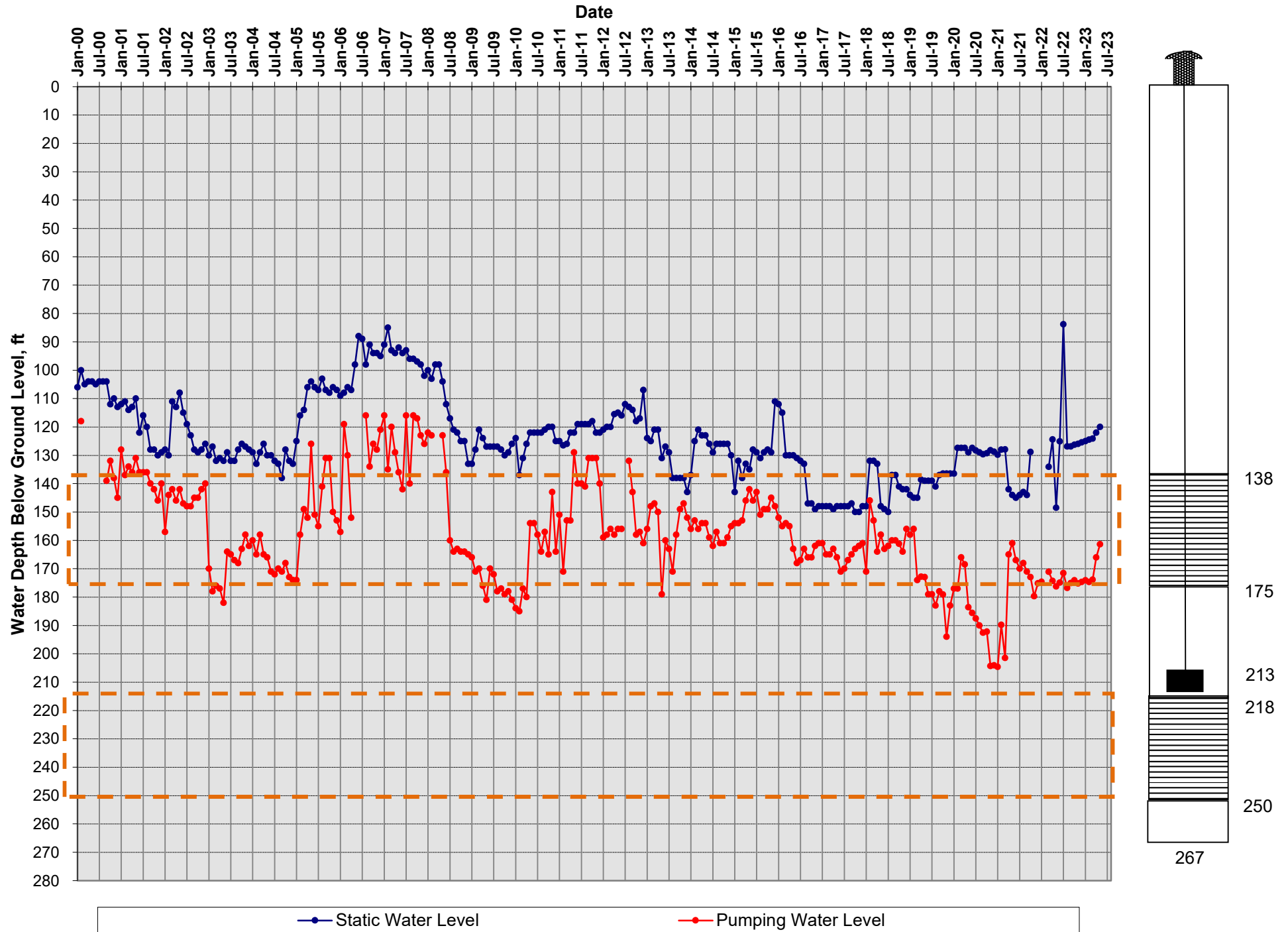
Date: 7/6/2023

Well 12: January 2000 - May 2023 - Static and Pumping Levels



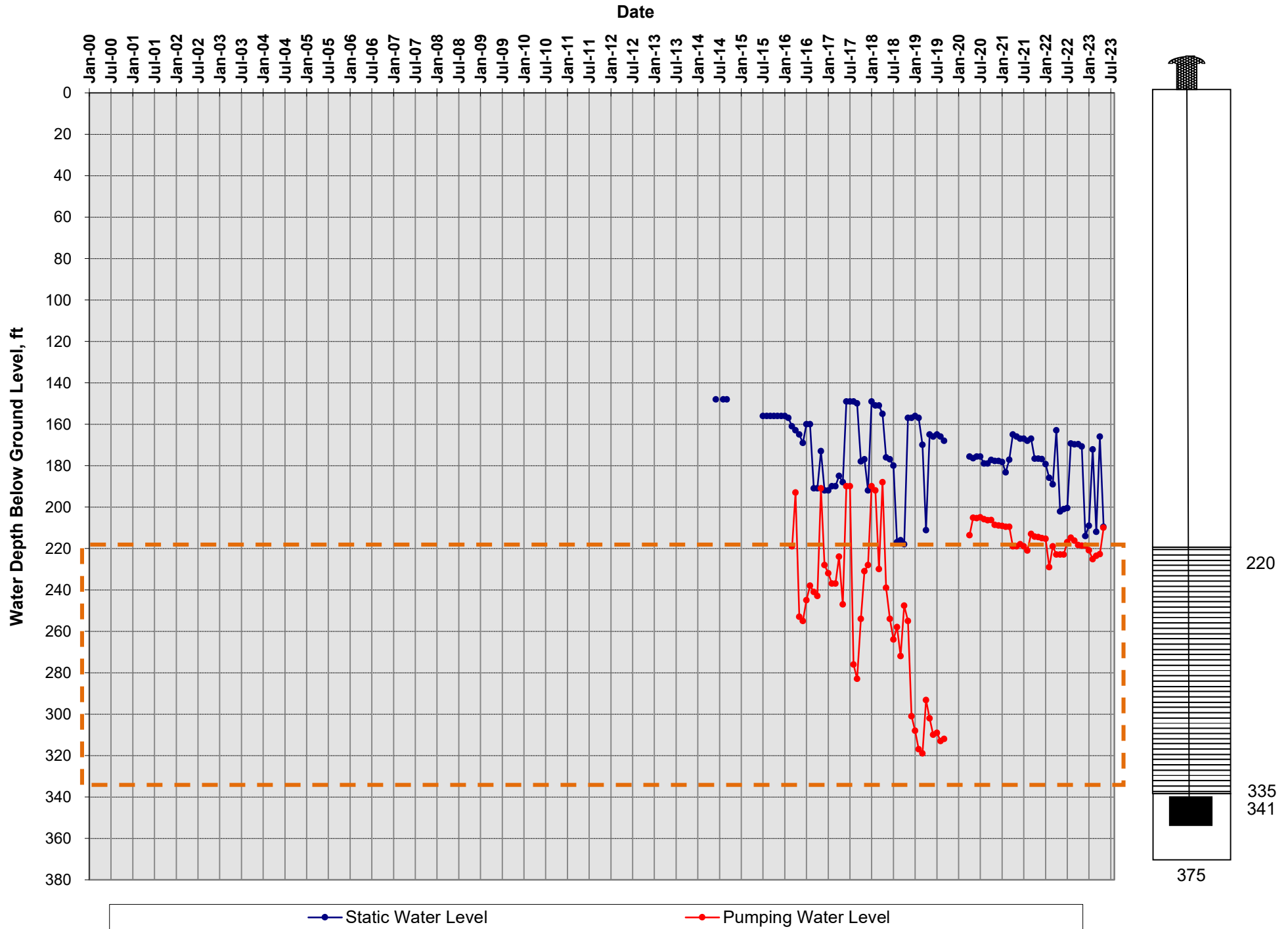
Date: 7/6/2023

Well 14: January 2000 - May 2023 - Static and Pumping Levels



Date: 7/6/2023

Well 16: January 2000 - May 2023 - Static and Pumping Levels



Date: 7/6/2023

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 2
July 10, 2023

To: Engineering and Operations Committee
From: Christy Colby – Regulatory and Public Affairs Manager
Subject: PFOS Sampling Results

INFORMATION ITEM:

Discussion of PFOS Regulations and Sampling Results

BACKGROUND:

What are PFAS:

Per- and polyfluoroalkyl substances (PFAS) are a group of more than 12,000 human-made substances that are not naturally occurring and are resistant to heat, water, and oil. These chemicals have been used and produced extensively in the United States for both commercial and industrial purposes, as well as for emergency fire response. Due to their unique chemistry, PFAS have been widely used as surface coatings and protectant formulations in consumer goods such as carpet and home textiles; clothing; food packaging; and non-stick cookware. PFAS substances have also been used as a surfactant in chrome plating, firefighting foam, and other industrial applications. In typical conditions, PFAS are resistant to degradation and do not break down in the environment. These substances can accumulate within the human body and are toxic at relatively low concentrations.

State Division of Drinking Water and EPA Regulatory History:

In October of 2022, the State Division of Drinking Water (DDW) issued General Order DW-2022-001-DDW for Public water systems monitor for PFAS chemicals. The notification and response levels are noted below. The District was not required to take part in this round of PFAS monitoring.

Abbreviation	Chemical name	Notification Level ng/L (ppt)	Response Level ng/L (ppt)
PFOA	Perfluorooctanoic acid	5.1	10
PFOS	Perfluorooctane sulfonic acid	6.5	40
PFBS	Perfluorobutane sulfonic acid	500	5000
PFHxS	Perfluorohexane sulfonic acid	3	20

Note: Notification levels are health-based advisory levels established by the Division of Drinking Water (DDW) for chemicals in drinking water that lack maximum contaminant levels (MCLs). When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply. The level at which DDW recommends removal of a drinking water source from service is called the "response level."

Development of drinking water regulations for PFAS has been ongoing for years. US EPA included PFOA and PFOS in the third and fourth Contaminant Candidate Lists (CCLs) in 2009 and 2016. The CCL is a list of contaminants that US EPA is considering for new regulations. Water utilities are required to collect information on the levels at which the CCL contaminants occur and report the results to US EPA through a program called the Unregulated Contaminant Monitoring Rule (UCMR). Monitoring data for six PFAS were collected during the third UCMR (UCMR3) between 2013 and 2015. The District's sampling did not detect any PFAS in the drinking water during UCMR3; however, laboratory detection limits at the time were higher. The fifth UCMR (UCMR5) requires sample collection and analysis for 29 PFAS to occur

between 2023 and 2025. These samples which the District began collection in late February of 23 did have positive PFAS detections. (See attached table)

In March 2023, the US EPA proposed new Maximum Contaminant Levels (MCLs) for two PFAS: PFOA and PFOS at 4 ng/L. Four additional PFAS (PFNA, HFPO-DA, PFHxS, and PFBS) will be regulated via a Hazard Index which is intended to account for the combined effects of simultaneous exposure to these PFAS. US EPA expects this new regulation to be finalized by the end of 2023 or early 2024.

Sampling Results:

The District began its UCMR 5 testing in late February. Upon receiving results for the laboratory, the District informed DDW that there were sample results greater than the DDW notifications levels for PFOA, PFOS, and PFHxs. Samples collected at imported water only locations were all Not Detected for any PFOS substances. DDW requested the District perform confirmation samples and additional samples on the District's groundwater wells. On April 19, 2023, the District collected confirmation samples at UCMR 5 sampling locations and samples from CVWD groundwater wells. These are the results that are summarized in the attached table. In summary, nearly half of the District's wells had PFOA or PFOS above the States Notification Levels and 1 location, Well 8, greater than the State's Response Level. Please note that Well 9 was undergoing rehabilitation and unable to be sampled.

Staff developed a mass balance at Glenwood to estimate the contribution of Well 8 on the combined flow exiting the Glenwood Nitrate Facility. The table below summarizes those results based on the average flows for the month of June 2023 and the sampling results collected in April.

Glenwood Well 8 Flow x Concentration	Glenwood Well 10 Flow x Concentration	Glenwood Well 12 Flow x Concentration	Glenwood Well 14 Flow x Concentration	Glenwood Well 16 Flow x Concentration	Well subtotal, PFOA ($\sum CxQ$)	Estimated PFOA in effluent, ppt
3836.48	39.07	315.53	255.79	129.03	4575.89	6.94

Glenwood Well 8 Flow x Concentration	Glenwood Well 10 Flow x Concentration	Glenwood Well 12 Flow x Concentration	Glenwood Well 14 Flow x Concentration	Glenwood Well 16 Flow x Concentration	Well subtotal, PFOS ($\sum CxQ$)	Estimated PFOS in effluent, ppt
3502.87	0.00	113.59	0.00	131.09	3747.55	5.70

Based on these averages staff estimates that flow out of Glenwood is projected to be above the response level for PFOA but under the response level for PFOS.

What do the Results Mean:

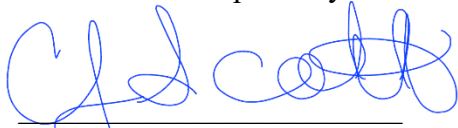
For State, DDW, compliance with the PFOS regulations lets start with the Notification Levels. The District was required to notify the Board or Council members of all other agencies where the District serves water within a 30-day time frame. The District mailed letters to the appropriate persons, and the CVWD Board received a copy of that letter (See Attached). The District was also required to inform its own governing body within a 30-day time frame. This was done through an email from Mr. Lee. The District is required to inform all its water customers within a 12-month period. This may be done in one of two ways, through an individual mailer, or through the District's annual Consumer Confidence Report (CCR). There is required language, much like the letter that was sent out to other agencies. Should the District elect to utilize the CCR method, the CCR report would need to be completed and sent to customers the first week of June prior to the standard July 1 deadline.

As for the Well 8 value that is above the DDW Response level, DDW requested the District collect PFOS samples at reservoir sites, entry points, mixing stations and all groundwater wells to perform a mass balance calculation. These samples have been collected, but results are not expected until the third week in June. The District expects to be able to complete a blending plan to reduce the PFOA value at Well 8 below the State's Response Level of 10 ppt so that well 8 may remain in service. Utilizing the blending option will require a daily mass balance sheet to be submitted to DDW along with the monthly water quality report.

Federal regulation limits are much lower than the current State limits. More than half of the District's wells would be over the 4 ppt MCL for PFOA and nearly half for PFOS. The other regulated substances referred to as the Gen X chemicals use a Hazard Index (HI) to calculate the MCL. The HI is a commonly used risk management approach for mixtures of chemicals (USEPA, 1986a; 2000a). In this approach, a ratio called a hazard quotient (HQ) is calculated for each of the four PFAS (PFHxS, HFPO-DA and its ammonium salt (also known as GenX chemicals), PFNA, and PFBS) by dividing an exposure metric. Using the index, it appears that the only vulnerable sources are Well 1 and Well 8. (Please note we do not have results from Well 9).

As this regulation has not been finalized, there is currently no timeframe for compliance. Once the regulation is promulgated, there will be a sampling period and a timeline for compliance. Additionally, when the District can complete a mass balance, we will have a better idea of where we stand on the proposed Federal levels. Should treatment beyond a blending scenario be necessary down the road, current treatment processes that can be effective for PFAS removal include granular activated carbon, ion exchange resins, and high-pressure membrane systems.

Submitted & Prepared by:



Christy J. Colby
Regulatory and Public Affairs Manager

Attachments:

1. PFAS Sampling Results
2. PFOA and PFOS Glenwood Flow Diagram
3. Sample notification letter

EPA 533 in ng/L

Sample Description	HFPO-DA	PFBA	PFBS	PFDA	PFHpA	PFHxA	PFHxS	PFNA	PFOA	PFOS	PFPeA	PFPeS
Combined Wells 1, 5, 7, 9	ND	3.9	6.5	ND	2.5	7.3	5.0	ND	4.1	1.1	7.5	1.3
Combined Glenwood	ND	5.0	4.5	ND	3.9	9.2	4.0	0.8	7.1	6.3	9.6	0.91
Glenwood Plant	ND	5.1	4.7	ND	4.1	9.5	3.7	0.84	7.2	6.6	9.9	0.86
Encinal Reservoir	ND	3.8	3.6	ND	2.5	6.2	2.9	ND	4.3	4.0	6.4	0.68
Oak Creek Reservoir	ND	3.0	3.1	ND	1.5	3.9	2.5	ND	2.4	1.4	3.9	ND
Well 1	ND	7.3	14	ND	4.8	15	5.8	ND	8.8	2.0	13	1.4
Well 2	ND	6.1	8.4	ND	4.0	9.7	4.8	ND	5.9	2.5	12	1.1
Well 5	ND	2.7	3.1	ND	1.4	4.4	3.0	ND	2.2	0.93	5.4	1.0
Well 7	ND	3.1	5.6	ND	2.1	6.2	6.7	ND	2.8	0.95	5.5	1.5
Well 8	ND	11	8.9	1.7	11	22	5.4	3.2	23	21	22	1.1
Well 10	ND	1.8	2.4	ND	0.78	2.8	1.5	ND	0.85	ND	3.3	ND
Well 11	ND	5.0	8.3	ND	4.4	9.7	6.1	ND	6.6	4.9	9.6	1.1
Well 12	ND	3.1	3.9	ND	2.0	6.1	3.7	ND	2.0	0.72	6.5	0.89
Well 14	ND	2.3	2.9	ND	1.2	4.4	4.7	ND	1.5	ND	4.2	0.67
Well 16	ND	2.3	2.9	ND	1.2	3.5	2.5	ND	1.3	0.69	4.6	0.93
Pickens	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND



Proposed Federal MCL 4 MCL

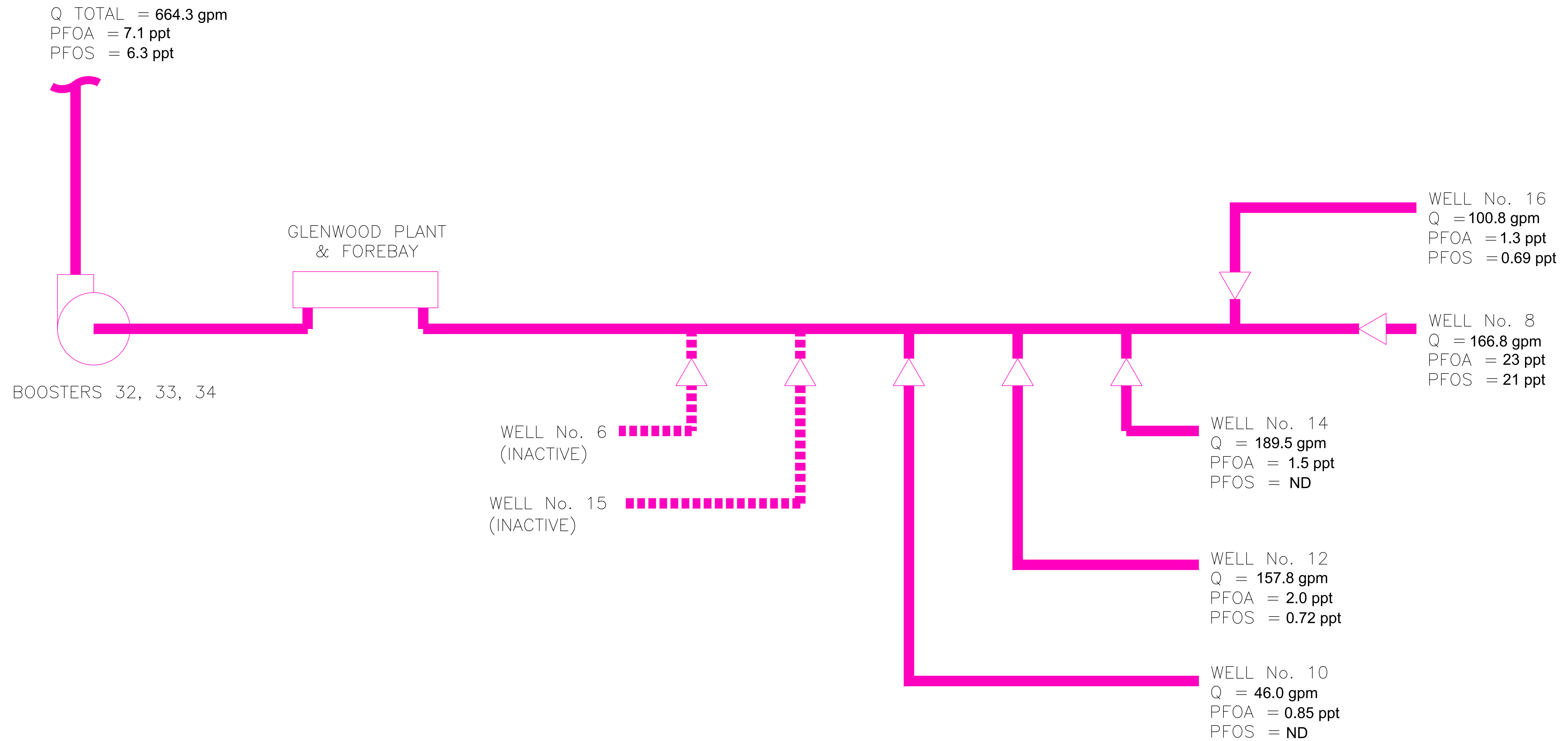


Proposed Hazard Index regulation



Regulated by the State Division of Drinking Water

Note: PFOS subatances that were Not Detected (ND) for all samples are not reported in this table



Example Letter to: Required by Health and Safe Code §116455

The water system's governing body and the governing body of any local agency whose jurisdiction includes areas supplied with drinking water by the retail water system. If the retail water system is a water company regulated by the California Public Utilities Commission, then the retail water system shall also notify the commission.

Subject: Notification of PFOA/PFOS

Dear **Local Agency**

The purpose of this letter is to inform you on the presence of perfluorooctanesulfonic acid (PFOS) <<**and/or**>> perfluorooctanoic acid (PFOA) in the groundwater that is served to our customers. Following mandatory monitoring required by the State Water Resources Control Board, Division of Drinking Water (DDW), it was determined that the notification level for PFOA <<**and/or**>> PFOS has been exceeded. The notification level <<**for PFOS is 6.5 parts per trillion and for PFOA is 5.1 parts per trillion**>>. The response levels for PFOA and PFOS are 10 and 14 parts per trillion, respectively.

Pursuant to Health and Safety Code Section 116455, the (**water system**) is required to inform its governing body and the governing body of any local agency whose jurisdiction includes the areas supplied with drinking water by the (**water system**) of concentrations exceeding the notification levels. Notification levels are health-based advisory levels established by the DDW for chemicals in drinking water that lack maximum contaminant levels. When chemicals are found at concentrations greater than their notification levels, certain notification requirements and recommendations apply.

A summary of the levels associated with water delivered to our customers in located <<**in the attachment or posted in the table below**>> (**Provide a summary of results along with the identification of the sources and the operational status of the source**).

PFOS and PFOA have been extensively produced and studied in the United States. These manmade substances have been synthesized for water and lipid resistance. They have been used extensively in consumer products such as carpets, clothing, fabrics for furniture, paper packaging for food, and other materials (e.g., cookware) designed to be waterproof, stain-resistant or non-stick. In addition, they have been used in fire-retarding foam and various industrial processes. The origin of the contaminant in our water supply at this time is unknown but the water system is working with the State Board and other agencies to determine how and why. (**If known, provide details**)

If a chemical is present in drinking water that is provided to consumers at concentrations considerably greater than the notification level, the response level, DDW recommends that the drinking water system take the source out of service. However, at this time the water system is continuing to monitor the levels in our source(s) and has not exceeded the response level at this time. Additional information will be provided to our customers in the <<**water system**>> Consumer Confidence Report that comes out next year.

Based on the current evaluation of recent human and animal toxicity data, exposure to PFOA and PFOS in tap water over certain levels may result in adverse health effects including hepatotoxicity, immunotoxicity, thyroid toxicity, reproductive toxicity, and cancer (pancreatic and liver).

If you have any questions, please call **XXXXXXXX**

SAMPLE

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 3

July 10, 2023

To: Engineering and Operations Committee
From: Brook Yared, M.S., P.E. – Director of Engineering and Operations
Subject: Discussion to Award a Construction Contract to J. Colon Coatings to Rehabilitate Goss Canyon No. 2 Steel Reservoir.

INFORMATION ITEM:

Steel Reservoir Rehabilitation at Goss Canyon No. 2 Reservoir – Discussion regarding waiving the Public Contracting requirement for Goss Canyon Reservoir No. 2 based on estimates requested from the Contractor currently completing work at Goss Canyon Reservoir No. 1.

BACKGROUND:

Crescenta Valley Water District (CVWD) owns two (2) tanks at its Goss Canyon Reservoir site located at the top of Goss Canyon Avenue. The steel tanks were built in 1954 and have a combined capacity of 0.92 million gallons (0.42MG and 0.50MG.). In 1996, an assessment of the District's seventeen (17) reservoirs was performed by Harper & Associates Engineering, Inc. (Harper), and it was determined that the Goss Canyon Reservoir tanks needed to be re-coated to extend the life of the steel tanks. Since that time, the interior and exterior of the Goss Canyon Reservoir tanks have been inspected every five (5) years. All reports indicated light corrosion on the ceiling and rafters until recently. In 2015 both Goss Canyon Reservoir No. 1 and No. 2 showed signs of advanced corrosion and were added to the list of reservoirs that need to be rehabilitated.

- In 2022, Harper and Associates began the design of the Goss Canyon No.1 steel reservoir rehabilitation. The design was completed in Fall 2022. Shortly after, the District publicly advertised bids and started the competitive bidding process. A construction contract was awarded to J. Colon Coatings at the end of the year. (Figure 1)
- In 2023, the Goss Canyon No.1 steel tank was taken out of service and improvements began. The work was completed on July 6, 2023.
- In 2023, J. Colon Coatings proposed to skip demobilizing after improvements were complete on Goss Canyon No. 1 and rehabilitate Goss Canyon Tank No.2, saving the District the cost to mobilize, approximately \$11,000.



Figure 1

DISCUSSION:

In 2023, Staff worked with J. Colon Coatings, Inc. to rehabilitate the steel reservoir at Edmund No. 2 Reservoir site and again in 2023 to rehabilitate Goss No. 1 Reservoir. J. Colon Coatings, Inc. has also worked with other agencies throughout California, such as Kern County Water Agency, East Valley Water District, and the City of Santa Cruz over the last five (5) years. Staff is confident that J. Colon Coatings, Inc. is capable of performing the work.

Due to persistent cold weather, the project was delayed because low temperatures and moisture in the atmosphere do not allow for the specialty coatings used in reservoir resurfacing to cure correctly. As a result, the timing makes it appropriate to begin construction on Goss Canyon No. 2, which has been budgeted for FY 23/24. If Staff could continue construction with J. Colon Coatings, it would save the community the inconvenience of having equipment demobilized. Staff thought it might also save costs overall and avoid unnecessary delays in starting the second tank at Goss Canyon.

Staff approached J. Colon Coatings and requested a quote based on the scope of work performed on Goss Canyon No. 1 (see attached). The proposal cost seems reasonable considering that Goss Canyon No. 1 is smaller than Goss Canyon No. 2, and the bid amount includes common additional bid items for this type of work. The cost increase is approximately \$98,800, which is 16% higher than the cost of Goss Canyon No. 1. Since Goss Canyon No. 2 is approximately 19% bigger and includes additional alternative bid items such as roof rafters, which may or may not be used, the price increase presents a money-saving opportunity for the community. In addition to the savings,

this would allow the District and the community to minimize significant public inconveniences commonly associated with large construction projects, such as traffic impacts and noise associated with mobilization and demobilization.

Under CVWD's rules and regulations, Article 18.01 Bid Procurement and Purchasing Policy, the District is not legally required to use or follow a formal competitive bidding process to obtain contracts for construction work, including acquiring materials or equipment for use by the District. Article 18.01 allows the Board flexibility when continuing work with the same Contractor is in the District's best interest.

Quality Control Inspection Services:

Staff requested a proposal from Harper & Associates Engineers, Inc (Harper) to provide quality control inspection services for structural modifications, existing coating, removal and re-coating of the interior and exterior reservoir surfaces, and installation of a new cathodic protection system for a total of \$60,800.

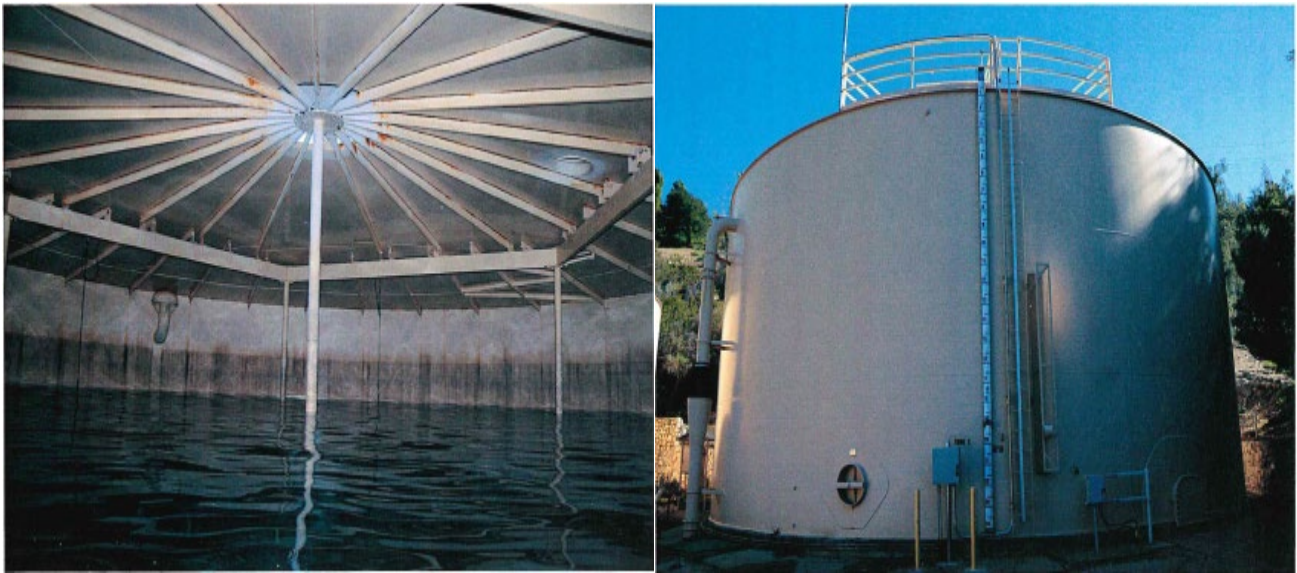
FUNDING AVAILABILITY:

There are sufficient funds available in the FY 22/23 CIP Budget and in the following account for the project:

Account Description	Amount
FY 23/24 Water CIP– Water Storage	\$865,000
Contractor Bid Proposal with Alternative Bid Items	<\$708,800>
Specialty Quality Control Inspection and Design Services	<\$76,200>
CVWD Labor	<\$6,000>
Total Cost Estimate	<\$791,000>
Amount Remaining in Water CIP – Water Storage	\$74,000

RECOMMENDATION:

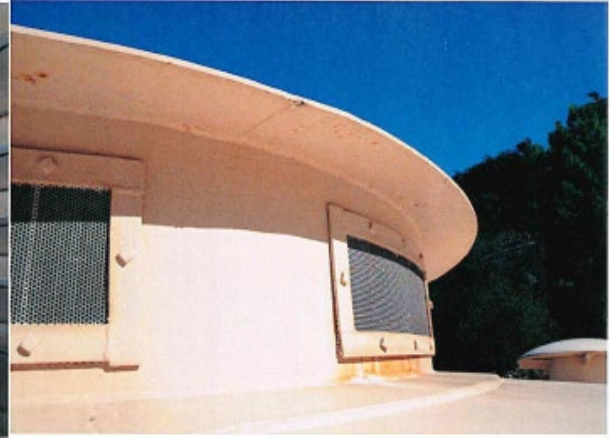
It is Staff's recommendation to present the quotes received from J. Colon Coatings and Harper and Associates to the Board of Directors at the July 25, 2023, meeting to Award the Contracts for design and construction, as well as find the Project Exempt from CEQA. This will allow CVWD to take advantage of the construction delays caused by inclement weather in the Winter and Spring of 2023 and reduce the costs associated with bidding and mobilization at Goss Canyon Reservoir No. 2.



Left, View of Goss Canyon No. 2 Reservoir above the waterline. Right exterior view. November 2015



View of underside center vent cover



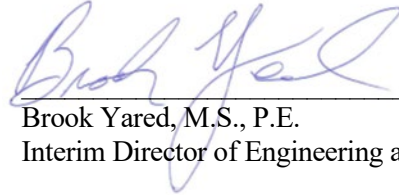
View of the exterior center vent and cover

Prepared by:

A handwritten signature in blue ink, appearing to read "CK", written over a horizontal line.

Christina Kopelman
Assistant Engineer

Submitted by:

A handwritten signature in blue ink, appearing to read "Brook Yared", written over a horizontal line.

Brook Yared, M.S., P.E.
Interim Director of Engineering and Operations

Attachments:

1. Goss Canyon #1 – Bid Proposal
2. Goss Canyon #2 – Bid Proposal
3. Construction Support and QA/QC Quote

G:\Engineering Committee\2023 EC Memo\07102023\07-11-23 ECM - Goss Canyon No 2 Rehab - AC.docx

CRESCENTA VALLEY WATER DISTRICT

Title: Rehabilitation of Goss Canyon No. 1 Reservoir

E-Job No: E-1053

Engineer's Estimate: \$610,000

Project Manager: Christina Kopelman

BID LOCATION: 2700 Foothill Blvd. La Crescenta, CA 91214

TIME: 2:00 PM

DATE: 12/6/2022

BY: CK CHECKED By: BY

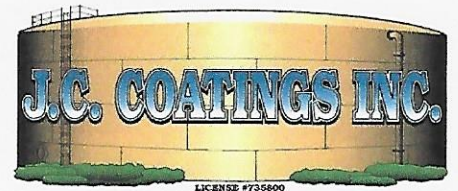
ITEM	DESCRIPTION	QUANTITY		Engineers Estimate		J. Colon Coatings Inc.		Crosno Construction		Spiess Construction Co.		AIS, Inc.	
				UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT
1	Interior Coating: Furnish all labor, materials, and equipment to remove coal tar enamel from bottom surfaces and lower 1-foot of the shell, prepare all surfaces, and coat interior with 100% solids epoxy coatings, in accordance with the specifications.	1	LS	\$185,800.00	\$185,800.00	\$187,300.00	\$187,300.00	\$381,300.00	\$381,300.00	\$316,200.00	\$316,200.00	\$426,900.00	\$426,900.00
2	Disinfection: Furnish all labor, materials, and equipment to prepare surfaces and disinfect interior.	1	LS	\$3,000.00	\$3,000.00	\$2,500.00	\$2,500.00	\$6,640.00	\$6,640.00	\$3,600.00	\$3,600.00	\$5,500.00	\$5,500.00
3	Exterior Painting: Furnish all labor, materials, and equipment to prepare all exterior surfaces and paint all exterior surfaces with an epoxy/urethane paint system, in accordance with the specifications.	1	LS	\$102,800.00	\$102,800.00	\$128,600.00	\$128,600.00	\$64,760.00	\$64,760.00	\$140,450.00	\$140,450.00	\$250,000.00	\$250,000.00
4	Interior Caulking: Furnish all labor, materials, and equipment to caulk all designated voids on the interior surfaces, in accordance with the specifications.	1	LS	\$4,500.00	\$4,500.00	\$2,500.00	\$2,500.00	\$3,640.00	\$3,640.00	\$3,600.00	\$3,600.00	\$5,500.00	\$5,500.00
5	Center Vent Screen: Furnish all labor, materials, and equipment to remove and dispose of existing vent screen and install new aluminum screen, including removing and reinstalling the vent cover, in accordance with the specifications.	1	LS	\$4,000.00	\$4,000.00	\$1,450.00	\$1,450.00	\$8,740.00	\$8,740.00	\$1,750.00	\$1,750.00	\$3,500.00	\$3,500.00
6	Existing Auxiliary Vent: Furnish all labor, materials, and equipment to remove and dispose of the existing upper section of the vent neck above the flange and the vent cover, furnish and install a new neck section and cover, and install new aluminum screen, in accordance with the plans and specifications.	1	LS	\$9,800.00	\$9,800.00	\$2,200.00	\$2,200.00	\$5,930.00	\$5,930.00	\$6,675.00	\$6,675.00	\$4,900.00	\$4,900.00
7	Auxiliary Vents: Furnish all labor, materials, and equipment to furnish and install two (2) new auxiliary vents, in accordance with the plans and specifications.	2	LS	\$12,000.00	\$24,000.00	\$4,600.00	\$9,200.00	\$6,835.00	\$13,670.00	\$5,625.00	\$11,250.00	\$6,000.00	\$12,000.00
8	Auxiliary Vent Fans: Furnish all labor, materials, and equipment to furnish and install vent fans, solar panels, conduit, junction box, and wiring on existing and new vents including modifying the existing vent, in accordance with the plans.	3	LS	\$12,000.00	\$36,000.00	\$2,400.00	\$7,200.00	\$2,259.00	\$6,777.00	\$4,300.00	\$12,900.00	\$6,000.00	\$18,000.00
9	Roof Hatch: Furnish all labor, materials, and equipment to remove the existing roof hatch and furnish and install a new 36" x 36" roof hatch, in accordance with the specifications and plans.	1	LS	\$5,400.00	\$5,400.00	\$4,600.00	\$4,600.00	\$3,500.00	\$3,500.00	\$8,600.0	\$8,600.00	\$6,500.00	\$6,500.00
10	Interior Ladder: Furnish all labor, materials, and equipment to relocate the interior ladder to the center of the new hatch and replace the interior ladder brackets, in accordance with the plans and specifications.	1	LS	\$4,200.00	\$4,200.00	\$3,500.00	\$3,500.00	\$5,070.00	\$5,070.00	\$8,150.00	\$8,150.00	\$6,500.00	\$6,500.00
11	Interior Saf-T-Climb: Furnish all labor, materials, and equipment to remove and dispose of the existing Saf-T-Climb and furnish and install a new Saf-T-Climb, including a dismount section and dismount section brackets on the existing guardrails, in accordance with the plans.	1	LS	\$8,000.00	\$8,000.00	\$3,200.00	\$3,200.00	\$4,570.00	\$4,570.00	\$6,400.00	\$6,400.00	\$5,900.00	\$5,900.00

ITEM	DESCRIPTION	QUANTITY		Engineers Estimate		J. Colon Coatings Inc.		Crosno Construction		Spiess Construction Co.		AIS, Inc.	
				UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT
12	Stairway: Furnish all labor, materials, and equipment to remove the existing exterior ladder and furnish and install a new stairway with concrete pad, in accordance with the plans and specifications.	1	LS	\$60,000.00	\$60,000.00	\$87,400.00	\$87,400.00	\$65,870.00	\$65,870.00	\$53,250.00	\$53,250.00	\$76,000.00	\$76,000.00
13	Fall Restraint System: Furnish all labor, materials, and equipment to furnish and install fall restraint stainless steel cables, attachments, and necessary mounting hardware on the roof, in accordance with the plans.	1	LS	\$4,200.00	\$4,200.00	\$2,900.00	\$2,900.00	\$2,730.00	\$2,730.00	\$7,425.00	\$7,425.00	\$4,000.00	\$4,000.00
14	Liquid Level Indicator: Furnish all labor, materials, and equipment to remove and dispose of the existing liquid level indicator assembly, plate over the openings, and furnish and install new half travel liquid level indicator assembly including gauge board at grade level, in accordance with the plans.	1	LS	\$6,000.00	\$6,000.00	\$7,700.00	\$7,700.00	\$6,970.00	\$6,970.00	\$10,425.00	\$10,425.00	\$6,500.00	\$6,500.00
15	Overflow: Furnish all labor, materials, and equipment to remove the existing passive check valve and reinstall the passive check valve after completion of the exterior painting, in accordance with the specifications.	1	LS	\$2,000.00	\$2,000.00	\$600.00	\$600.00	\$900.00	\$900.00	\$750.00	\$750.00	\$13,900.00	\$13,900.00
16	Sample Ports: Furnish all labor, materials, and equipment to furnish and install a 1 ¼" sample port, in accordance with the plans.	3	EA	\$2,200.00	\$6,600.00	\$1,000.00	\$3,000.00	\$460.00	\$1,380.00	\$1,450.00	\$4,350.00	\$4,500.00	\$13,500.00
17	8" Roof Port: Furnish all labor, materials, and equipment to remove the existing 8" diameter pipe port and plate over the opening, in accordance with the specifications.	1	LS	\$3,000.00	\$3,000.00	\$1,000.00	\$1,000.00	\$900.00	\$900.00	\$2,300.00	\$2,300.00	\$1,500.00	\$1,500.00
18	1 ½" Roof Port: Furnish all labor, materials, and equipment to furnish and install a 1 ½" port with threaded cap, in accordance with the plans.	1	LS	\$2,200.00	\$2,200.00	\$650.00	\$650.00	\$840.00	\$840.00	\$1,125.00	\$1,125.00	\$3,600.00	\$3,600.00
19	4" Shell Ports: Furnish all labor, materials, and equipment to remove two (2) existing 4" diameter pipe ports and plate over the openings, in accordance with the specifications.	1	LS	\$3,900.00	\$3,900.00	\$1,000.00	\$1,000.00	\$900.00	\$900.00	\$2,100.00	\$2,100.00	\$2,000.00	\$2,000.00
20	12" Shell Nozzle: Furnish all labor, materials, and equipment to remove the existing 12" diameter shell nozzle and plate over the opening, in accordance with the specifications.	1	LS	\$4,800.00	\$4,800.00	\$1,000.00	\$1,000.00	\$900.00	\$900.00	\$4,550.00	\$4,550.00	\$1,500.00	\$1,500.00
21	Lateral Braces: Furnish all labor, materials, and equipment to remove the existing tie-rods and furnish and install new lateral braces, in accordance with the plans and specifications.	1	LS	\$26,000.00	\$26,000.00	\$17,500.00	\$17,500.00	\$18,800.00	\$18,800.00	\$25,800.00	\$25,800.00	\$25,000.00	\$25,000.00
22	Grade Band: Furnish and install all labor and equipment to remove grade band.	1	LS	\$18,800.00	\$18,800.00	\$8,900.00	\$8,900.00	\$19,530.00	\$19,530.00	\$13,400.00	\$13,400.00	\$9,000.00	\$9,000.00
23	Cathodic Protection: Furnish all labor, materials, and equipment to remove the existing 12" diameter shell nozzle and plate over the opening, in accordance with the specifications.	1	LS	\$20,000.00	\$20,000.00	\$12,500.00	\$12,500.00	\$12,890.00	\$12,890.00	\$13,000.00	\$13,000.00	\$30,900.00	\$30,900.00
24	New 36" Manway: Furnish all labor, materials, and equipment to remove the existing manhole and install a new 36” diameter manhole, in accordance with the plans and specifications.	1	LS	\$14,800.00	\$14,800.00	\$16,300.00	\$16,300.00	\$6,500.00	\$6,500.00	\$8,800.00	\$8,800.00	\$12,500.00	\$12,500.00
25	Conduit Supports: 16-inch long Unistrut supports on the shell for future conduits, in accordance with the plans and specifications.	1	LS	\$6,000.00	\$6,000.00	\$3,900.00	\$3,900.00	\$750.00	\$750.00	\$5,175.00	\$5,175.00	\$5,000.00	\$5,000.00
Goss Canyon No. 2 Reservoir - Total - Bid Items 1 - 25					\$565,800.00		\$516,600.00		\$644,457.00		\$672,025.00		\$950,100.00

ITEM	DESCRIPTION	QUANTITY		Engineers Estimate		J. Colon Coatings Inc.		Crosno Construction		Spiess Construction Co.		AIS, Inc.	
				UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT
Alternaive Bid Items				Engineers Estimate		J. Colon Coatings Inc.		Crosno Construction		Spiess Construction Co.		Crosno Construction	
26	Dehumidification: Furnish all labor, materials, and equipment to use dehumidification system for interior work, including curing of coatings, in accordance with the specifications.	5	wks	\$3,000.00	\$15,000.00	\$1,600.00	\$8,000.00	\$2,500.00	\$12,500.00	\$1,800.00	\$9,000.00	\$5,000.00	\$25,000.00
27	Pit/Perforation Treatment: Furnish all labor, materials, and equipment to fill pits or weld plates over pitted or corroded areas, as determined necessary by the Engineer	16	Crew Hour	\$450.00	\$7,200.00	\$425.00	\$6,800.00	\$375.00	\$6,000.00	\$250.00	\$4,000.00	\$350.00	\$5,600.00
28	Grinding: Furnish all labor, materials, and equipment to grind smooth sharp edges of the rafter flanges and structural members, as determined necessary by the Engineer	16	Crew Hour	\$350.00	\$5,600.00	\$400.00	\$6,400.00	\$375.00	\$6,000.00	\$425.00	\$6,800.00	\$300.00	\$4,800.00
29	Inspection Spot Blasting: Furnish all labor, materials, and equipment to abrasively blast clean severely corroded surfaces, as determined necessary by the Engineer.	8	Crew hrs.	\$800.00	\$6,400.00	\$500.00	\$4,000.00	\$725.00	\$5,800.00	\$675.00	\$5,400.00	\$800.00	\$6,400.00
30	Nuts and Bolts: Furnish all labor, materials, and equipment to replace existing nuts and bolts at the structural connections, as determined necessary by the Engineer. Each is based on a set of two bolts per connection.	100	EA	\$100.00	\$10,000.00	\$78.00	\$7,800.00	\$105.00	\$10,500.00	\$50.50	\$5,050.00	\$90.00	\$9,000.00
Total - Alternative Bid Items 26- 30					\$44,200.00		\$33,000.0		\$40,800.00		\$30,250.00		\$50,800.00
Total - Bid Items 1 - 30				EE	\$610,000	LOW	\$549,600		\$685,257	2ND	\$702,275	3RD	\$1,000,900

June 22, 2023

Crescenta Valley Water District
2700 Foothill Blvd.
La Crescenta, CA 91214



6047 CAROL AVENUE ~ ALTA LOMA, CALIFORNIA 91701

PH(909)989-6507 FX(909)989-1591

Attn: Christina Kopelman

Re: Proposal Goss Canyon #2 Reservoir Rehabilitation (60' dia X 24'H)

Christina,
Thank you for the opportunity to be of service. The following attached bid schedule is our proposal for this project.

Should you have any questions, please do not hesitate to call.

Sincerely,

Jose Colon
J. Colon Coatings, Inc.

CRESCENTA VALLEY WATER DISTRICT

Page 1 of 2

Title: Rehabilitation of Goss Canyon No. 2 Reservoir,
 E-Job No: E-1053
 Engineer's Estimate: \$550,000
 Project Manager: Christina Kopelman

BID LOCATION: 2700 Foothill Blvd. La Crescenta, CA 91214
 TIME: 2:00 PM
 DATE: 6/21/2023
 BY: CK CHECKED By: BY

ITEM	DESCRIPTION	QUANTITY		Engineers Estimate		J. Colon Coatings Inc.							
				UNIT	AMOUNT	UNIT	AMOUNT						
1	Interior Coating: Furnish all labor, materials, and equipment to remove coal tar enamel from bottom surfaces and lower 1-foot of the shell, prepare all surfaces, and coat interior with 100% solids epoxy coatings, in accordance with the specifications.	1	LS				251,800						
2	Disinfection: Furnish all labor, materials, and equipment to prepare surfaces and disinfect interior.	1	LS				3,000						
3	Exterior Painting: Furnish all labor, materials, and equipment to prepare all exterior surfaces and paint all exterior surfaces with an epoxy/urethane paint system, in accordance with the specifications.	1	LS				163,500						
4	Interior Caulking: Furnish all labor, materials, and equipment to caulk all designated voids on the interior surfaces, in accordance with the specifications.	1	LS				3,000						
5	Center Vent Screen: Furnish all labor, materials, and equipment to remove and dispose of existing vent screen and install new aluminum screen, including removing and reinstalling the vent cover, in accordance with the specifications.	1	LS				1,500						
6	Existing Auxiliary Vent: Furnish all labor, materials, and equipment to remove and dispose of the existing upper section of the vent neck above the flange and the vent cover, furnish and install a new neck section and cover, and install new aluminum screen, in accordance with the plans and specifications.	1	LS				2,500						
7	Auxiliary Vents: Furnish all labor, materials, and equipment to furnish and install two (2) new auxiliary vents, in accordance with the plans and specifications.	2	LS			4,750	9,500						
8	Auxiliary Vent Fans: Furnish all labor, materials, and equipment to furnish and install vent fans, solar panels, conduit, junction box, and wiring on existing and new vents including modifying the existing vent, in accordance with the plans.	3	LS			2,500	7,500						
9	Roof Hatch: Furnish all labor, materials, and equipment to remove the existing roof hatch and furnish and install a new 36" x 36" roof hatch, in accordance with the specifications and plans.	1	LS				5,000						
10	Interior Ladder: Furnish all labor, materials, and equipment to relocate the interior ladder to the center of the new hatch and replace the interior ladder brackets, in accordance with the plans and specifications.	1	LS				4,000						
11	Interior Saf-T-Climb: Furnish all labor, materials, and equipment to remove and dispose of the existing Saf-T-Climb and furnish and install a new Saf-T-Climb, including a dismount section and dismount section brackets on the existing guardrails, in accordance with the plans.	1	LS				3,500						

ITEM	DESCRIPTION	QUANTITY		Engineers Estimate		J. Colon Coatings Inc.							
				UNIT	AMOUNT	UNIT	AMOUNT						
12	Stairway: Furnish all labor, materials, and equipment to remove the existing exterior ladder and furnish and install a new stairway with concrete pad, in accordance with the plans and specifications.	1	LS				88,000						
13	Fall Restraint System: Furnish all labor, materials, and equipment to furnish and install fall restraint stainless steel cables, attachments, and necessary mounting hardware on the roof, in accordance with the plans.	1	LS				3,000						
14	Liquid Level Indicator: Furnish all labor, materials, and equipment to remove and dispose of the existing liquid level indicator assembly, plate over the openings, and furnish and install new half travel liquid level indicator assembly including gauge board at grade level, in accordance with the plans.	1	LS				8,000						
15	Overflow: Furnish all labor, materials, and equipment to remove the existing passive check valve and reinstall the passive check valve after completion of the exterior painting, in accordance with the specifications.	1	LS				1,000						
16	Sample Ports: Furnish all labor, materials, and equipment to furnish and install a 1 1/4" sample port, in accordance with the plans.	3	EA			1,000	3,000						
17	8" Roof Port: Furnish all labor, materials, and equipment to remove the existing 8" diameter pipe port and plate over the opening, in accordance with the specifications.	1	LS				1,000						
18	1 1/2" Roof Port: Furnish all labor, materials, and equipment to furnish and install a 1 1/2" port with threaded cap, in accordance with the plans.	1	LS				800						
19	4" Shell Ports: Furnish all labor, materials, and equipment to remove two (2) existing 4" diameter pipe ports and plate over the openings, in accordance with the specifications.	1	LS				1,000						
20	12" Shell Nozzle: Furnish all labor, materials, and equipment to remove the existing 12" diameter shell nozzle and plate over the opening, in accordance with the specifications.	1	LS				1,200						
21	Lateral Braces: Furnish all labor, materials, and equipment to remove the existing tie-rods and furnish and install new lateral braces, in accordance with the plans and specifications.	1	LS				18,000						
22	Grade Band: Furnish and install all labor and equipment to remove grade band.	1	LS				9,000						
23	Cathodic Protection: Furnish all labor, materials, and equipment to remove the existing 12" diameter shell nozzle and plate over the opening, in accordance with the specifications.	1	LS				13,200						
24	New 36" Manway: Furnish all labor, materials, and equipment to remove the existing manhole and install a new 36" diameter manhole, in accordance with the plans and specifications.	1	LS				16,800						
25	Conduit Supports: 16-inch long Unistrut supports on the shell for future conduits, in accordance with the plans and specifications.	1	LS				4,000						
Goss Canyon No. 2 Reservoir - Total - Bid Items 1 - 25							622,800						

ITEM	DESCRIPTION	QUANTITY		Engineers Estimate		J. Colon Coatings Inc.							
				UNIT	AMOUNT	UNIT	AMOUNT						
Alternative Bid Items				Engineers Estimate		J. Colon Coatings Inc.							
26	Dehumidification: Furnish all labor, materials, and equipment to use dehumidification system for interior work, including curing of coatings, in accordance with the specifications.	5	wks			2,000	10,000						
27	Pit/Perforation Treatment: Furnish all labor, materials, and equipment to fill pits or weld plates over pitted or corroded areas, as determined necessary by the Engineer	16	Crew Hour			450	7,200						
28	Grinding: Furnish all labor, materials, and equipment to grind smooth sharp edges of the rafter flanges and structural members, as determined necessary by the Engineer	16	Crew Hour			400	6,400						
29	Inspection Spot Blasting: Furnish all labor, materials, and equipment to abrasively blast clean severely corroded surfaces, as determined necessary by the Engineer	8	Crew hrs.			500	4,000						
30	Nuts and Bolts: Furnish all labor, materials, and equipment to replace existing nuts and bolts at the structural connections, as determined necessary by the Engineer. Each is based on a set of two bolts per connection.	100	EA			80	8,000						
31	Rafter Replacement: Furnish all labor, materials and equipment to remove the existing rafters and furnish and install new rafters in like kind, as determined necessary by the Engineer.	21	LS			2,400	50,400						
Total - Alternative Bid Items 26- 31							86,000						
Total - Bid Items 1 - 31				EE			708,800						



HARPER & ASSOCIATES ENGINEERING, INC.

CONSULTING ENGINEERS

1240 E. Ontario Ave., Ste. 102-312 Corona, CA 92881-8671
Phone (951) 372-9196 Fax (951) 372-9198
www.harpereng.com

PROPOSAL TO

CRESCENTA VALLEY WATER DISTRICT

FOR

ENGINEERING CONSULTING SERVICES TO UPDATED TECHNICAL
SPECIFICATIONS AND PLANS, CONSTRUCTION MANAGEMENT, AND INSPECTION
SERVICES FOR A WELDED STEEL WATER RESERVOIR

I. PROJECT DESCRIPTION

The 0.50 MG (24' x 60') water storage reservoir is located on a District-owned site in La Crescenta, California and is designated as the Goss Canyon Reservoir #2.

A. SCOPE OF WORK – EVALUATION

1. Telephone conference with District to verify approach to project.
2. Review existing inspection reports.
3. Accomplish field evaluation of the complete exterior surfaces and interior roof and shell surfaces above the water level, to evaluate the present condition from the following standpoints:
 - a. Corrosion-related structural soundness of the tank.
 - b. Condition of coatings; how they are protecting the steel from corrosion, their aesthetic qualities, the percent failures, and their ability to be recoated.
 - c. Environmental and operating conditions which affect the use of the tank, maintenance of the tank, the aggressiveness of the atmosphere and water, and extent of abrasion damage.
 - d. Condition of appurtenances: float, overflow, inlet, ladders, etc.
 - e. Observe and note structural safety and health code violations per DOHS, OSHA, and AWWA requirements.
4. Field evaluation of the interior roof surfaces to visually inspect roof and structural members for corrosion related structural damage would entail inspection via

inflatable raft from the water level. It would be necessary to have the water level 3 to 4 feet below roof line.

- a. The hatch must be a minimum of 24" in diameter to permit entrance of the raft and personnel into the tank.
5. Surfaces would be photographed and entered into a photographic survey.
6. Conclusions, recommendations, and cost estimates for rehabilitation of the tank will be prepared and included in a design report. A pdf of the report will be submitted.
7. The following sanitary measures will be fully complied with in accordance with AWWA C652-92, Section 5.
 - a. No body parts shall come in contact with potable water.
 - b. All equipment shall be thoroughly disinfected by a 100% wash-down or immersion in a 200 PPM solution of chlorine and water.
10. Safety Procedures
 - c. Harper & Associates Engineering, Inc. fully complies with all the following safety procedures in accordance with Cal-OSHA Title 8, General Industry Safety Orders, Group 26, Article 152, 153, 6050-6056

B. SCOPE OF WORK – UPDATE SPECIFICATIONS, PLANS, AND COST ESTIMATE

1. Telephone conference with District to finalize the scope of work for the Reservoir, based on utilizing reports and estimated costs.
2. Update technical specifications covering interior coating and exterior painting for the reservoir.
3. Update technical specifications and CAD drawings for the reservoir for the safety and health upgrades and structural modifications, including but not limited to the following:
 - a. Welding Repair
 - b. Nuts and Bolts
 - c. Tie-rods and lateral bracing
 - d. Auxiliary Vents with solar powered fans
 - e. Rafter Repairs
 - f. Self-closing gate
 - g. Vent Screens
 - h. 3'x 3' roof hatch
 - i. Staircase
 - j. Personal Fall Restraint
 - k. Sample Ports
4. Update technical specifications and CAD drawings for a new galvanic cathodic protection system.

5. Submit two copies of plans and specifications for 90%, and 100% review, and accomplish all revisions determined needed.
6. Upon approval of the plans and specifications, an electronic file in AutoCad of the plans and an electronic file in Word of the specifications shall be supplied to the District.
7. Furnish District with an engineer's estimate for project in accordance with the bid schedule generated.

C. SCOPE OF WORK – CONSTRUCTION MANAGEMENT

1. Assist District in conducting Pre-Construction Conference to enable all relevant parties to comprehend scope of project, implementation of specification and District requirements.
 - a. Prepare minutes of Pre-Construction Conference covering all aspects of contractor's questions and clarifications of project and present to all parties.
2. Assist District in review and approval of Contractor submittals and project procedures. Rejected submittals would be supplemented with an explanation of the reason for rejection and requirements for re-submittal.
3. Provide telephone liaison with the Contractor and District regarding requests for information and change orders including drawings, sketches and/or written descriptions and responses of the work for the project, as required.
4. Review all contractor invoices, inspection reports, inspector estimates of percent completion and make recommendations to the District for payment of contractor as appropriate.
5. Provide general inspection services as needed for structural modifications to the reservoir.
6. Assist District in final acceptance of project upon completion of all work by Contractor, including final job walk and punch list.

D. SCOPE OF WORK – QUALITY CONTROL INSPECTION SERVICES

1. **DAILY INSPECTION ACTIVITY REPORTS:** Reports shall identify daily start and stop times, size of contractor's crew, equipment used, visitors to jobsite, climatic conditions throughout the day, quantity of materials used, work accomplished, periods of Contractor down time and cause, inspection procedures used and results, verification and recording of surface preparation, coating material "batch numbers" mixing, thinning, application, and thickness. All entries shall be dated and timed. Pictures shall be taken at key points in the project documenting the progress of the work.
2. **SURFACE PREPARATION INSPECTION -** Physical inspection of blast cleaned surfaces to verify compliance with specification, removal of dust, etc.

- a. Weather conditions will be verified by use of a sling psychrometer to determine suitability of climatic conditions prior to and during all blast cleaning operations.
 - b. Surface will be observed throughout cleaning operations to determine compliance with specifications.
- 3. PRIME COAT INSPECTION - After approval of surface preparation, ongoing inspection monitors weather condition, Contractor's application equipment and its operation, mixing of primer and physical inspection of prime coat application, including spray techniques, cleanliness of surface, thickness, etc.
- 4. FINISH COAT(S) INSPECTION - After approval of prime coat application, ongoing inspection monitors weather condition, Contractor's application equipment and its operation, mixing of primer and physical inspection of prime coat application, including spray techniques, cleanliness of surface thickness, etc.
 - a. Procedures outlined above are repeated during application of additional coats, including careful examination of areas where cleaning penetrated coating film to verify edges of film have not lifted, curled, etc. Where defects exists, additional cleaning will be performed to bring area into compliance with specification and area will be recoated as required.
- 5. FINAL INSPECTION - Requires input at conclusion of finish coatings to ensure application and dry film thickness are in complete conformance to specification.
 - a. DRY FILM THICKNESS TESTING: Dry film thickness measurements will be taken on 3' centers until it is determined deficient readings warrant more tests to truly indicate the thickness of the area. Testing will be performed as deemed necessary to accurately determine the thickness, regardless of what the Contractor may say. After completion of the testing and after the Contractor has recoated all the deficient areas, tests on the recoated areas will be repeated until the minimum dry film thickness is obtained.
 - b. HOLIDAY DETECTION: After completion of dry film thickness testing, all surfaces will be holiday detected, utilizing the specified detector. Holiday detection and marking of defective areas will be performed as noted above under "Dry Film Thickness Testing". All marked areas are then to be repaired and holiday detection performed again. Re-detection and marking will continue until the surface is holiday-free unless otherwise instructed by the District.

II. SCHEDULE

- A. Work noted above would commence at a mutually agreed time upon execution of a written agreement and receipt of a Notice to Proceed.

III. DISTRICT RESPONSIBILITIES

- A. The District shall provide the following items, personnel and/or services to be utilized in connection with this work.

1. The District shall make available to the Consultant reasonable and timely staff input for purposes of conference discussion, reviewing submissions from the Consultant, providing information and/or suggestions relating to the work in a manner such that the Consultant may meet the project completion schedule.
2. The District shall provide designated water operations person for access to reservoir site upon request by the Consultant at time and in the manner mutually agreed upon as required to accommodate work of Consultant.
3. The District will provide payment on monthly progress estimates to the Consultant based upon work accomplished during the previous month or portion thereof.

IV. WORK PRODUCT

- A. The District designee shall at all times have access to the work product of the Consultant while it is under preparation or in progress. Upon completion of the project, all drawings, documents, and notes shall become property of the District, including all sketches and correspondence.

V. DESIGNATED REPRESENTATIVES

- A. Project shall be under direct control of Ms. Krista Harper, P.E., to whom all questions may be directed. It is understood the District's representative will be Ms. Christina Kopelman, who will provide the interface between the District's Staff and Consultant.

VI. COST ESTIMATE

- A. Based on the previously noted Scope of Work - Evaluation, the cost would be \$3,800.
- B. Based on the previously noted Scope of Work to update the project – UPDATE SPECIFICATIONS, PLANS, AND COST ESTIMATE, the estimated cost for performing services would be \$7,200.
- C. Based on the previously noted Scope of Work – CONSTRUCTION MANAGEMENT, estimated cost for performing services would be \$8,200.
- D. Based on previously noted Scope of Work – QUALITY CONTROL INSPECTION, estimated costs for performing services are \$60,800, based on project duration of (80) working days for interior coating and exterior painting:
 1. The estimate is based on an Inspector working 8 hours per day, 5 days per week, Monday through Friday. Inspection hours are based on the hourly rate of \$92.00 per hour. A 4-hour minimum will be charged for the inspector being on site.
 2. If the Contractor accomplishes the work in less time the above cost will be reduced. Should the Contractor fail to achieve the schedule, project's completion would be extended accordingly, resulting in additional inspection time and costs.

VII. INSURANCE COVERAGES

- A. Consultant will provide and maintain in full force and effect, while operating under an agreement with District, a comprehensive liability insurance policy which shall include bodily injury, and property damage coverage of \$4,000,000 combined single limit, automobile liability insurance with limits of \$2,000,000, worker's compensation insurance

with limits of coverage as prescribed by law, and an Errors and Omissions professional liability policy with a minimum limit of coverage of \$2,000,000. The above noted insurance coverages are currently in force with Consultant.

VIII. INDEMNITY

- A. District shall hold Harper & Associates Engineering, Inc., harmless from any and all liability to perform beyond the exact confines of the services offered in this proposal.

IX. ACCEPTANCE OF PROPOSAL

- A. The cost estimate, terms and conditions of this proposal are valid for sixty days from receipt of proposal. Acceptance shall be deemed valid upon receipt by Harper & Associates Engineering, Inc. of the original proposal executed by the District's authorized representative within noted time frame. Acceptance will be in whatever form is routinely used by District.

X. CONFIDENTIALITY OF PROPOSAL

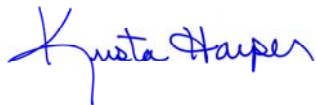
- A. The content of this proposal and any conversations with Consultant regarding this proposal are considered to be confidential and is not for publication, discussion or knowledge of any person or persons who are not employees of District.

XI. TERMINATION OF AGREEMENT

- A. District may terminate this agreement at any time prior to the completion of the services to be furnished by Harper & Associates Engineering, Inc., by giving a written notice of termination to Harper & Associates Engineering, Inc., in which event District shall only pay Harper & Associates Engineering, Inc., as provided herein for work done prior to receipt of such notice of termination, plus the necessary and reasonable cost of termination (not to exceed \$500.00).
- B. In the event District terminates this agreement, Harper & Associates Engineering, Inc., shall furnish District a copy of all work effort and product in progress to the date of termination.

Respectfully submitted,

HARPER & ASSOCIATES ENGINEERING, INC.



Krista Harper
Vice President

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 4
July 10, 2023

To: Engineering and Operations Committee
From: Brook Yared, M.S., P.E. – Interim Director of Engineering & Operations
Subject: Project Update – Conversion to Chloramines, Project E-995/E-1052

INFORMATION ITEM:

Disinfection Conversion to Chloramines, Project E-995/E-1052 - Project update of CVWD's disinfection conversion to chloramines

BACKGROUND:

In August 2018, with groundwater production not fully recovered from the past drought, CVWD's water supply blend shifted to 40% groundwater and 60% imported water. This, coupled with the additional chlorine needed to achieve breakpoint chlorination in the system, caused an increase in TTHMs levels at the four (4) regulatory compliance points within the distribution system. Staff implemented a water quality sampling plan to measure levels of TTHMs weekly to ensure CVWD complies with DDW's Disinfection By-product Rule. As shown on the attached charts, since August 2018, CVWD's TTHM quarterly running annual average level has trended below the maximum contaminate level (MCL) of 80 micrograms/liter. Levels have been well below the MCL since these measures were implemented. Since starting this work in 2018, CVWD has installed new equipment to help reduce TTHM production while on free chlorine and reduce "water age". These improvements have the added benefit of contributing to more advanced control and monitoring strategies for chloramine disinfection.

On August 23, 2022, the Board authorized the award of contract for the Completion of the Conversion to Chloramines, E-1052. At that time, Brown and Caldwell had won the award with Helene Baribeau, Ph.D. Dr. Baribeau parted ways with Brown and Caldwell in December 2022. Dr. Baribeau indicated that she will not be able to keep the District on as a client in her new capacity.

After receiving direction from the Engineering Committee at our March 1, 2023, meeting, Staff has contracted with Water Quality and Treatment Solutions (WQTS), one of the lead consultants in the Chloramine permit development undertaken in 2018, to review all permitting requirements, assist in ordering any additional probes and/or analyzers, and developing a strategy to transition CVWD's water system to chloramine disinfection.

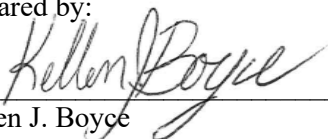
DISCUSSION:

A kickoff meeting was held with WQTS on June 14, 2023, and the changes made to the system since developing the chloramine conversion strategy were shared with WQTS. At this time, an overall control strategy was developed, and WQTS requested drawings and data to help identify any additional equipment and plans that need to be added to make CVWDs conversion to Chloramines a success.

On June 29, 2023, a follow-up meeting was held with Apex Manufacturing Solutions (Apex), CVWD's control systems consultant, and WQTS. Apex provided CVWD Staff and WQTS with details of the control strategies already implemented and in place. After reviewing and discussing each control screen, recommendations were made for improving the system for chloramine conversion.

Apex's work to incorporate these updates was budgeted for FY23/244. However, the additional monitoring probes necessary to accomplish the new strategy were not incorporated. Currently, Staff plans to convert the disinfection method in October 2023. The District must order the additional materials as soon as possible to accomplish conversion in October 2023.

Prepared by:



Kellen J. Boyce
Systems and Operations Manager

Submitted by:



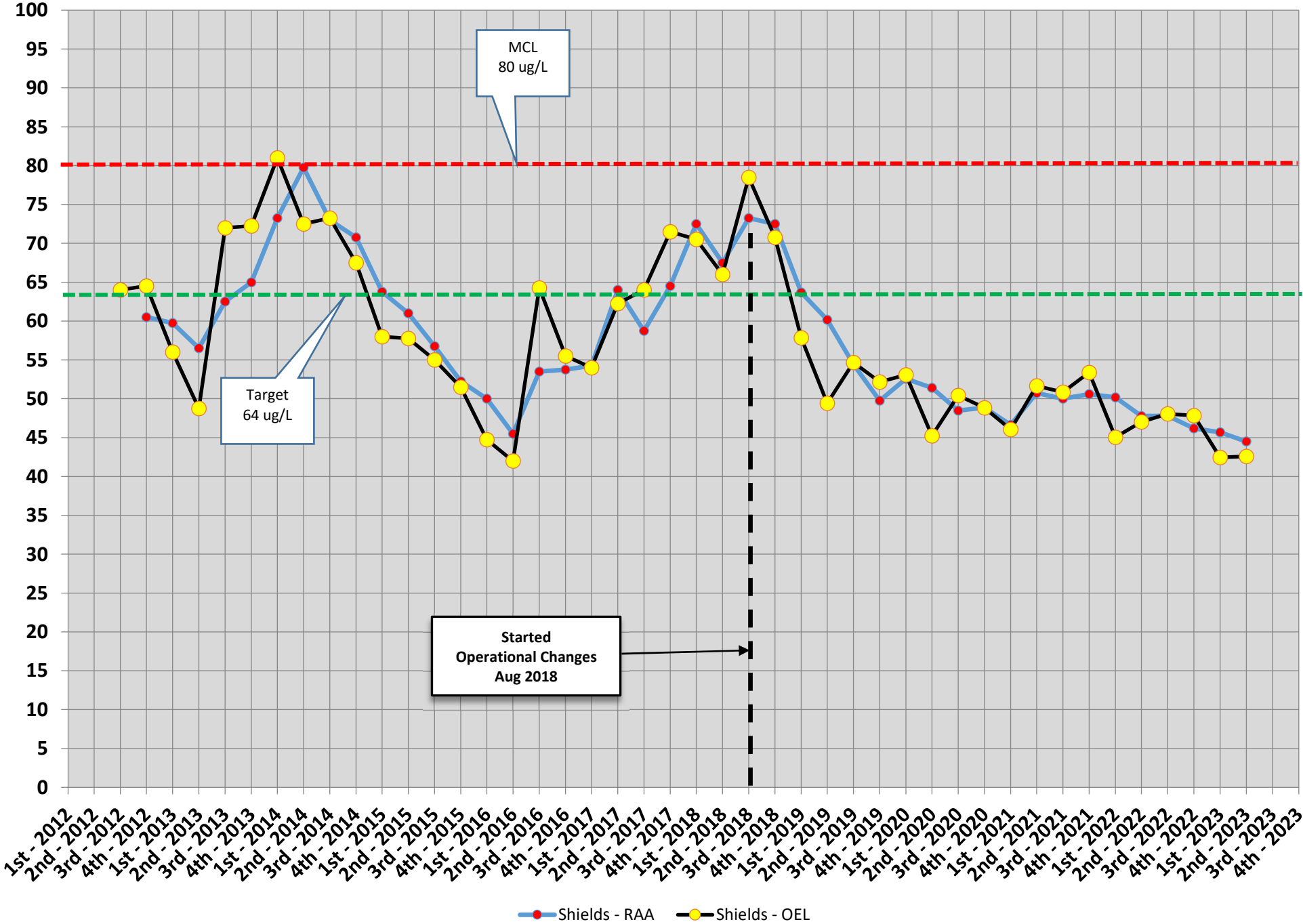
Brook Yared, M.S., P.E.
Interim Director of Engineering & Operations

Attachments:

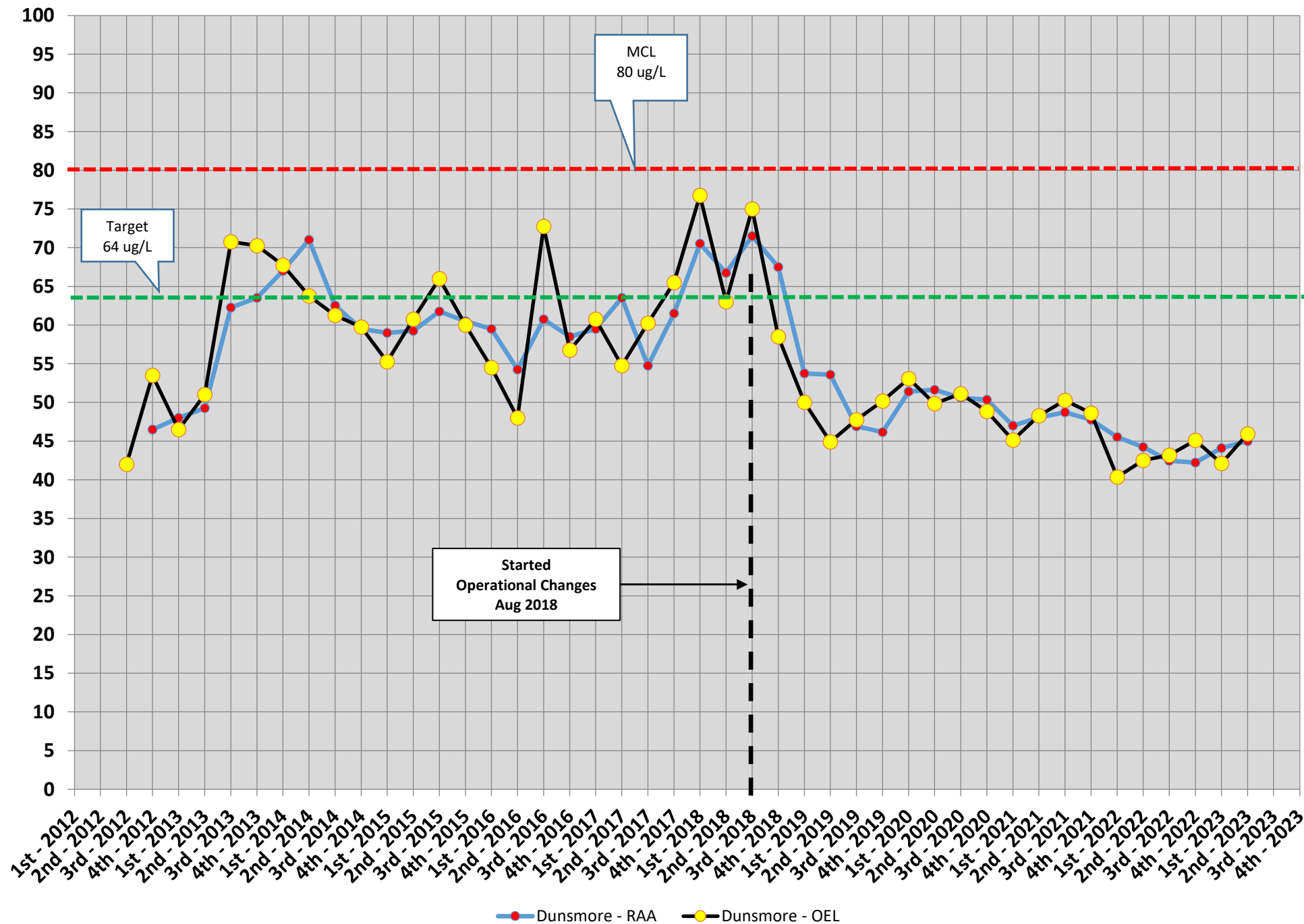
1. TTHM Reservoir site charts & TTHM Compliance charts

g:\engineering committee\2020 ec memo\05-08-20 ecm - e-995 disinfection process upgrades - update 18.docx

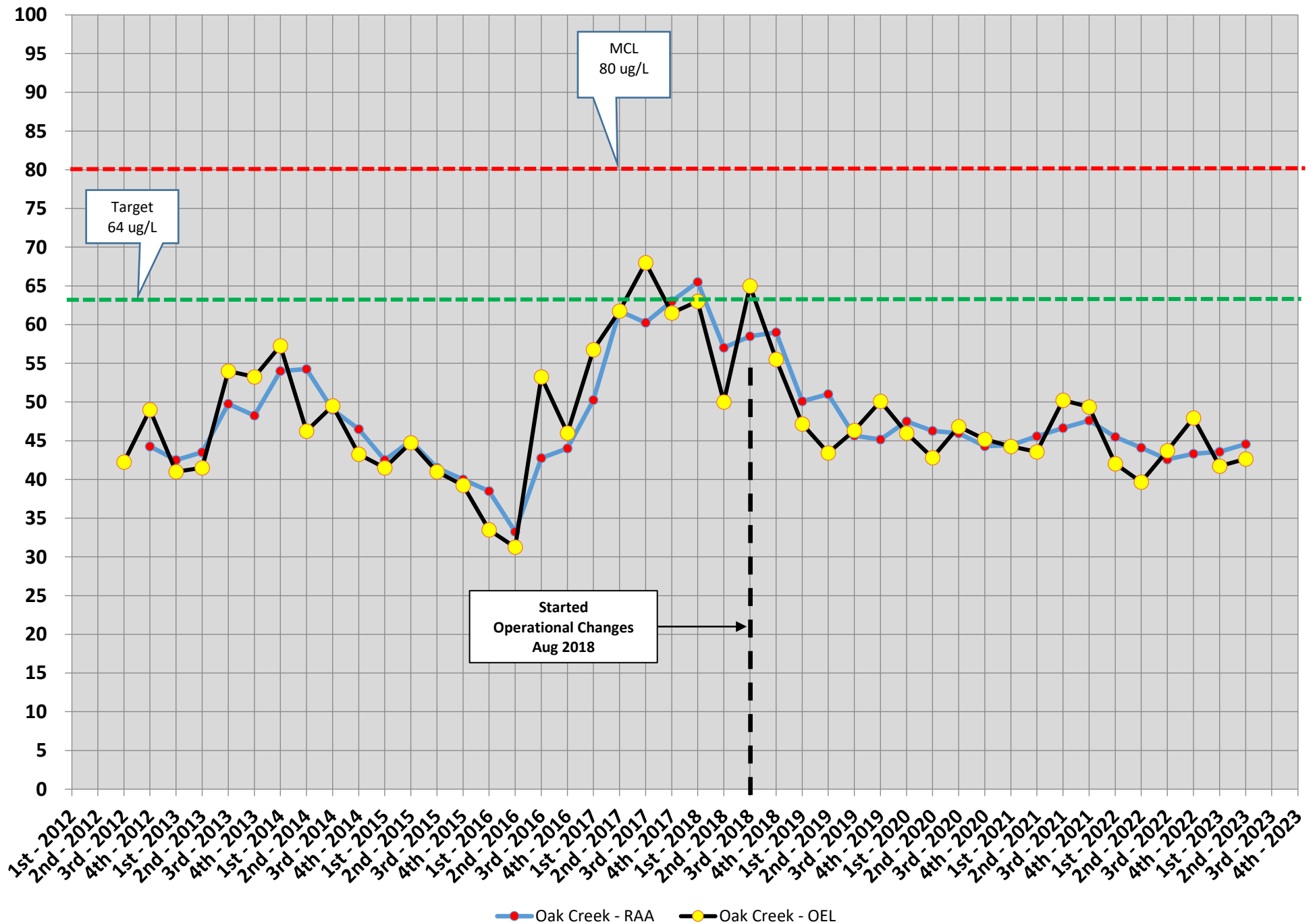
Shields - Quarterly TTHM - Running Annual Average 2012 - 2023



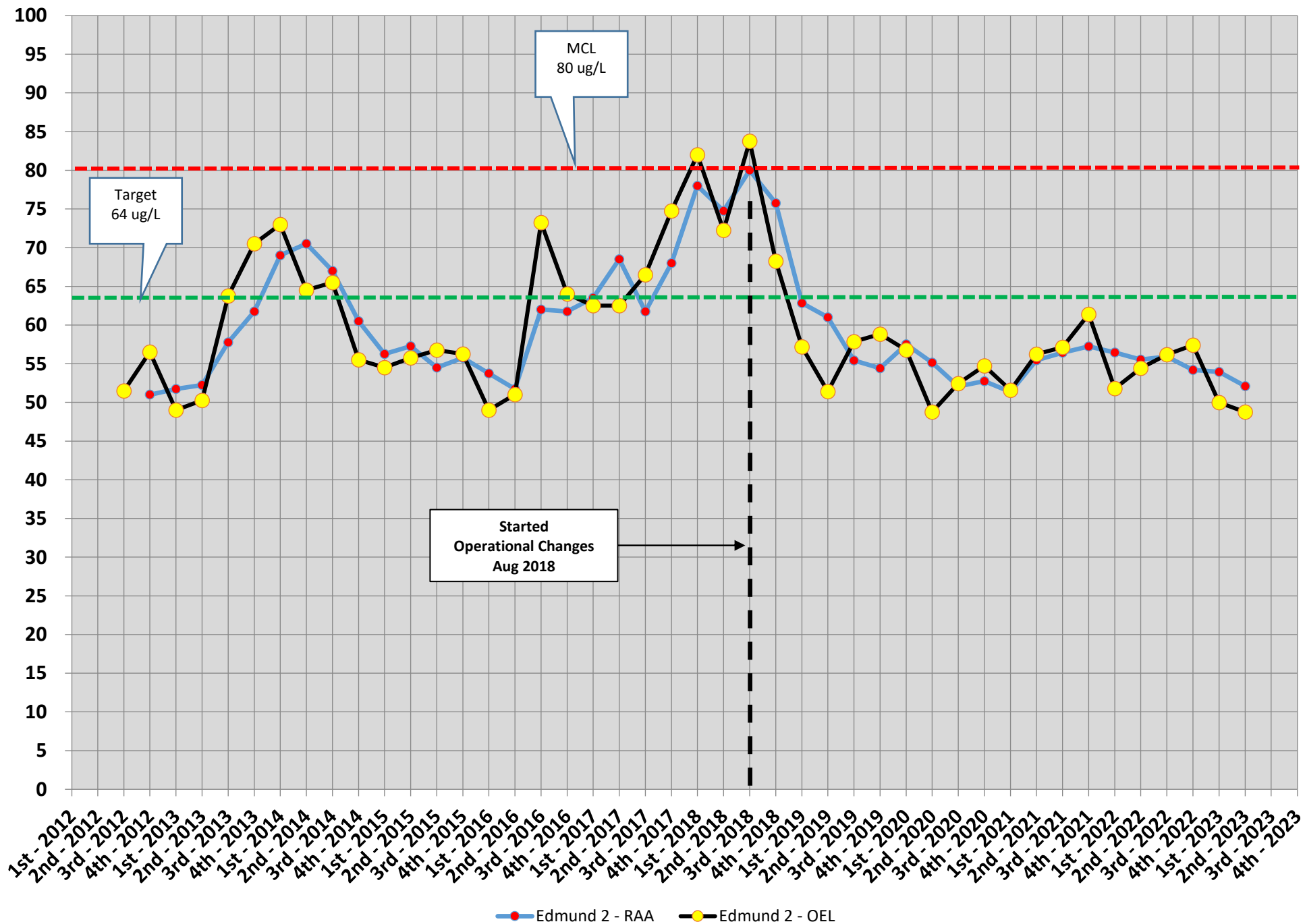
Dunsmore - Quarterly TTHM - Running Annual Average 2012 - 2023



Oak Creek - Quarterly TTHM - Running Annual Average 2012 - 2023



Edmund II - Quarterly TTHM - Running Annual Average 2012 - 2023



Crescenta Valley Water District

FY 23/24 Capital Improvement Project Priority List

Capital Improvement Project Program	Budget FY 23/24	Category	Priority	Cumulative Estimated Costs	Project Description
Pipeline Replacement - 2600 & 2700 Block of Orange & 5000 Block of El Adobe	\$ 979,700	Water Distribution	1	\$ 979,700	Pipeline Replacement - 2600 & 2700 Block of Orange & 5000 Block of El Adobe, project delayed from FY 22/23
Steel Reservoir Rehabilitation - Goss Canyon #2	\$ 863,500	Water Storage	1	\$ 1,843,200	Reservoir Rehabilitation - Structural repairs and re-coating at Goss Canyon #2 Reservoir during low demand (Winter) season
Well 14 Rehabilitation	\$ 110,000	Water Supply	1	\$ 1,953,200	Well Rehabilitation - Remove & Inspect Well Pump & Casing, Chemical Treatment Well Casing, Pump Test, New Pump & Motor
Conversion to Chloramines	\$ 80,000	Water Treatment	1	\$ 2,033,200	Water Treatment: Disinfection - Conversion of Disinfection Method from Free Chlorine to Chloramines
PFAs Regulatory Compliance Measures	\$ 60,000	Water Treatment	1	\$ 2,093,200	Water Treatment: Pending Federal and State Regulations - Pending Regulatory compliance measures for the remediation of PFAs
AMI - Replace 1.5" Smart Meters with SmartPoints (Grant)	\$ 335,000	Technology	1	\$ 2,428,200	Advanced Metering Infrastructure (AMI) - Install 1.5" water meters with SmartPoints
SCADA Replacement - E-939	\$ 100,000	Technology	1	\$ 2,528,200	Technology - Transition from Tesco control system to non-proprietary Allen-Bradley based control system.
Mills Booster B Pump Replacement	\$ 35,000	Water Distribution	2	\$ 2,563,200	Booster Pump Replacement - Replace 15-yr and older booster pump with new pump.
AMI - Zones 6, 7, & 8 - Year 1	\$ 110,000	Technology	2	\$ 2,638,200	Advanced Metering Infrastructure (AMI) - First year of meter lid replacement and radio installation.
PRS - Zone 2 to Zone 1 at Mayfield & Ramsdell	\$ 60,000	Water Distribution	2	\$ 2,698,200	New Pressure Reducing Station at Mayfield & Ramsdell - <u>Continuation from FY 22/23</u> - Construction of PRS from Zone 2 to zone 1
Rosemont Reservoir - Emergency Water Station	\$ 90,000	Emergency Response	2	\$ 2,788,200	Emergency Response - Community water filling station
AMI - Replace 2" Smart Meters with SmartPoints	\$ 100,000	Technology	2	\$ 2,888,200	Advanced Metering Infrastructure (AMI) - Replace all 2" water meters with SmartPoints
Dunsmore Tunnel Reinstatement Feasibility Study	\$ 25,000	Water Supply	2	\$ 2,913,200	Water Supply - Investigating supply options as part of the development of the Integrated Resource Management Plan
Pipeline Replacement - 2400 - 2500 Blocks of Montrose	\$ 1,337,500	Water Distribution	2	\$ 4,250,700	Pipeline Replacement - 2400 - 2500 Blocks of Montrose
Pipeline Replacement - 2600 - 2700 Blocks of Montrose	\$ 1,224,400	Water Distribution	2	\$ 5,475,100	Pipeline Replacement - 2600 - 2700 Blocks of Montrose
Mills Booster A - VFD and Motor Replacement	\$ 60,000	Water Distribution	2	\$ 5,535,100	Water Distribution - Installation of a new motor and VFD to provide for pumping redundancy at Mills Operations Facility.
Replace/Refurbish Mills Aeration Tower	\$ 150,000	Water Treatment	2	\$ 5,685,100	Water Treatment - Rehabilitation or replacement of the existing aeration tower at the Mills Operations Facility.

AMI - Zone 6, 7, & 8 - Install Meter Lids & SmartPoints	\$ 375,200	Technology	3	\$ 6,060,300	Advanced Metering Infrastructure (AMI) - Complete meter lid replacement and radio installation.
SCADA Radio Communications Network	\$ 50,000	Technology	3	\$ 6,110,300	Technology: Telemetry - Radio and Antenna Equipment Replacement
Pipeline Replacement - 2200 Honolulu - South Alley	\$ 545,600	Water Distribution	3	\$ 6,655,900	Pipeline Replacement - 2400 - 2200 Honolulu - South Alley
Pipeline Replacement - 2200 Block of Montrose Ln	\$ 491,500	Water Distribution	3	\$ 7,147,400	Pipeline Replacement - 2200 Block of Montrose Ln
Pipeline Replacement - 2300 Block of Jayma Lane	\$ 907,600	Water Distribution	4	\$ 8,055,000	Pipeline Replacement - 2300 Block of Jayma Lane

FY 2023/24 CIP Budget	Budget FY 23/24	Forecast FY 24/25	Forecast FY 25/26
FY 22/23 Pipeline Replacement (2700 LF)	\$ 979,700		
2400 - 2500 Blocks of Montrose (1830 LF)	\$ 1,337,500		
2600 - 2700 Blocks of Montrose (1920 LF)	\$ 1,224,400		
2200 Honolulu - South Alley (760 LF)	\$ 545,600		
FY 23/24 Pipeline Replacement (4510 LF)	\$ 4,087,200		
2800 - 2900 Blocks of Mary (1805 LF)		\$ 1,101,700	
3000 - 3100 Blocks of Stevens (1695 LF)		\$ 1,112,400	
3200 Block of Markridge & 5300 Block of Pennsylvania (1955 LF)		\$ 1,189,500	
2200 Block of Montrose Ln (725 LF)		\$ 491,500	
FY 24/25 Pipeline Replacement (6180 LF)		\$ 3,895,100	
2300 Block of Jayma Lane (1275 LF)			\$ 907,600
2300 - 2500 Blocks of Teasley (2325 LF)			\$ 1,490,100
2400-2600 Blocks of Upper Terrace (1550 LF)			\$ 993,400
FY 25/26 Pipeline Replacement (5150 LF)			\$ 3,391,100

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

Information Item No. 7

July 10, 2023

To: Engineering and Operations Committee
From: Brook Yared, M.S., P.E. – Interim Director of Engineering & Operations
Subject: Status Update - FY 22/23 Capital Improvement Project Budget

DISCUSSION:

The following is a status and budget update of the FY 22/23 Capital Improvement Program.

1. 2600 & 2700 Block of Orange & 5000 Block of El Adobe (E-1046)

- a. Construction Began June in 2022
- b. CM&I transitioning to in-house July 7, 2023
- c. Staff developing 15-year pipeline cost history

FY 2022/23 CIP Program Cost Update: 6/30/23	E-Job	Recorded FY 21/22	Budget FY 22/23	<i>FY 22/23 Cost to date from 7/1/22 to 6/30/23</i>	Projected FY 23/34
<i>2600 & 2700 Block of Orange & 5000 Block of El Adobe - 2700 LF</i>	E-1046	\$ 1,748	\$ 1,350,050	\$ 361,599	\$ 979,700

2. Transfer of Services to Glendale Water and Power (E-1051)

- a. Transfer of Services on Frederick and Thelma to Glendale Water and Power to avoid capital replacement.
- b. Work is planned to begin with Glendale in October 2023.

3. Steel Reservoir Rehabilitation

- a. Edmund No. 2 (E-1036)
 - i. Warranty Inspection Complete
 - ii. Cathodic Protection Activated
 - iii. Scheduling Warranty Repairs
- b. Goss Canyon No. 1 (E-1053)
 - i. Pending Final PPE and Retention
 - ii. Rehabilitation Complete July 7, 2023
 - iii. Performing required sampling before returning to service

FY 2022/23 CIP Program Cost Update: 6/30/23	E-Job	Recorded FY 21/22	Budget FY 22/23	<i>FY 22/23 Cost to date from 7/1/22 to 6/30/23</i>
<i>Edmund #2 - Reservoir Rehabilitation</i>	E-1036	\$ 644,495	\$ 53,772	\$ 31,992
<i>Goss Canyon #1 - Reservoir Rehabilitation</i>	E-1053	\$ -	\$ 800,000	\$ 502,885

4. Replacement of SCADA Equipment, Programming & Integration (E-939)

- a. Project Schedule – April 2022 to January 2024
- b. APEX – Programming & Integration
 - i. Sites Completed – Wells 5, 7, 8, 9, 11, 14 & 16
 - ii. Ramsdell Mixing Station & Glendale/CVWD Interconnection
 - iii. Encinal Reservoir
 - iv. Glenwood Plant with Wells 6, 10, 12 & 15
 - v. Mills Plant with Well 1

- c. Sites Pending Integration (2023)
 - i. Paschall Booster Station
 - ii. Rosemont Reservoir
 - iii. Assisting with Chloramine Conversion Control Strategy Implementation
 - iv. Implementing controls for Well 2 permit revision
- d. Radio Communication Upgrade – Moved to FY 23/24

FY 2022/23 CIP Program Cost Update: 6/30/23	E-Job	Recorded FY 21/22	Budget FY 22/23	FY 22/23 Cost to date from 7/1/22 to 6/30/23
<i>Communication Radio Network</i>	E-1025	\$ 17,610	\$ 50,000	\$ -
<i>SCADA Replacement - Installation</i>	E-939		\$ 395,000	\$ 257,389

5. AMI – Installation of ¾” & 1” meters (E-1035)

- a. Purchasing Materials for Zones 9, 10 & 11
- b. Currently 255 customers are waiting to be configured for the Customer Engagement Platform
- c. 184 are active on the Customer Engagement Platform
- d. Approximately 7067 radios and lids to install/replace
- e. 190, ¾-inch meters to replace
- f. 31, 1-inch meters to replace

6. AMI – Installation of 3” & 4” meters (E-1031) – USBR Grant

- a. Install and connect 32 – 3” & 4” meters – Construction complete by August 2023
- b. 1-1/2-inch meter installation construction deferred to FY 24/23

FY 2022/23 CIP Program Cost Update: 6/30/23	E-Job	Recorded FY 21/22	Budget FY 22/23	FY 22/23 Cost to date from 7/1/22 to 6/30/23
<i>AMI - Communication</i>	E-1020	\$ 111,847	\$ -	\$ 44,765
<i>GRANT - 3” & 4” Smart Meters</i>	E-1031	\$ 56,165	\$ 144,000	\$ 17,961
<i>AMI - Meter Lids - Zones 9, 10 & 11</i>	E-1035	\$ -	\$ 220,000	\$ 14,884
<i>AMI - Customer Service Interface</i>	E-1035	\$ 57,402	\$ 26,000	\$ 119,682
<i>AMI - Meter Lids - Zones 9, 10 & 11</i>	E-1035	\$ -	\$ 220,000	
<i>GRANT - 1-1/2” Smart Meters - USBR Grant</i>	E-1041	\$ 1,664	\$ 335,000	\$ -

7. Conversion of Disinfection System to Chloramines (E-1052)

- a. Proposal Received from Water Quality and Treatment Solutions – \$83,980

FY 2022/23 CIP Program Cost Update: 6/30/23	E-Job	Recorded FY 21/22	Budget FY 22/23	FY 22/23 Cost to date from 7/1/22 to 6/30/23
<i>Conversion to Chloramination</i>	E-995/ E-1052	\$ -	\$ 100,000	\$ 13,498

8. FEMA Local Hazard Mitigation Plan (M-1004)

- a. Project 1 – New emergency electrical generators at 5 sites - Deferred pending Grant availability.
- b. Project 2 – Seismic Evaluation of CVWD’s facilities application – Deferred pending Grant availability.

9. New Pressure Reducing Station & Rehabilitation of the Ramsdell Mixing Station (E-977)

- a. Hydraulic Modeling Review Complete
- b. Installation of two fire hydrants to provide additional bypass options to Zone 1 – FY 23/24

FY 2022/23 CIP Program Cost Update: 3/1/23	E-Job	Recorded FY 21/22	Budget FY 22/23	<i>FY 22/23 Cost to date from 7/1/22 to 6/30/23</i>
<i>Upgrade - Ramsdell Mixing Station</i>	E-977	\$ 48,594	\$ 49,310	\$ 7,645

10. Well 2

- a. Developing permit amendment for a bypass option to avoid repairs to the Biological Nitrate Removal Facility

11. Well 9 Rehabilitation

- a. Complete, back in operation

12. Well 14 Failure

- a. Work performed under 22/23 Emergency Services
- b. Rehabilitation of Well 14 was budgeted for FY 23/24

13. Booster 26 at Cresta Heights Replacement

- a. Replacement scheduled for July 14, 2023

14. Wastewater Master Plan

- a. GIS and Wastewater model demonstration – July 18, 2023, at 1:30 pm
- b. CIP Development beginning August 2023

SUMMARY:

Staff continue to provide updated information to the Engineering and Operations Committee as the FY 22/23 CIP program progresses over the next two months.

Prepared & submitted by:



Brook Yared, M.S., P.E.
Interim Director of Engineering & Operations

Attachments: None

g:\engineering committee\2023 ec memo\05032023\05-03-23 ecm memo - fy 23-cip update.docx