REGULAR MEETING OF T HE FLORIN RESOURCE CONSERVATION DISTRICT BOARD OF DIRECTORS

Agenda

Tuesday, October 17, 2023

6:30 PM

Compliance with Government Code Section 54957.5

Public records, including writings related to an agenda item for an open session of a regular meeting of the Florin Resources Conservation District that are distributed less than 72 hours before the meeting, are available by email request. In addition, such writings may be posted, whenever possible, on the Elk Grove Water District website at www.egwd.org. The Board will discuss all items on the agenda and may take action on any item listed as an "Action" item. The Board may discuss items that do not appear on the agenda but will not act on those items unless there is a need to take immediate action and the Board determines by a two-thirds (2/3) vote that the need for action arose after posting of the agenda. If necessary, the Meeting will be adjourned to Closed Session to discuss items on the agenda listed under "Closed Session." At the conclusion of the Closed Session, the meeting will reconvene to "Open Session."

CALL TO ORDER, ROLL CALL AND PLEDGE OF ALLEGIANCE

Public Comment

This is the opportunity for the public to comment on non-agenda items within the subject matter jurisdiction. Comments are limited to three (3) minutes.

Page Numbers

1. Proclamations and Announcements

Associate Director Comment

Public Comment

2. Consent Calendar — 4-5

(Amber Kavert, Acting Board Secretary and Patrick Lee, Treasurer)

a. Minutes of Regular Board Meeting of September 19, 2023 — **6-8**
b. Accounts Payable Check History – September 2023 — **9-12**
c. Board and Employee Expense/Reimbursements – September 2023 — **13**
d. Active Accounts – September 2023 — **14**
e. Bond Covenant Status for FY 2023-24 – September 2023 — **15**
f. CASH - Detail Schedule of Investments– September 2023 — **16**
g. Consultants Expenses – September 2023 — **17**
h. Major Capital Improvement Projects – September 2023 — **18**

Associate Director Comment

Public Comment

Recommended Action/Information: Approve Florin Resource Conservation District Consent Calendar items a – h.

3. Elk Grove Water District Fiscal Year 2023-24 Quarterly Operating Budget Status Report — 19-26

(Patrick Lee, Finance Manager/Treasurer)

Associate Director Comment

Page Numbers

Public Comment

Recommended Action/Information: Information only.

4. Elk Grove Water District Fiscal Year 2023-24 Quarterly Capital Reserve Status Report **27-30**
(Patrick Lee, Finance Manager/Treasurer)

Associate Director Comment

Public Comment

Recommended Action/Information: Information only.

5. Lead Service Line Inventory **31-33**
(Richard Ko, Engineering Technician I)

Associate Director Comment

Public Comment

Recommended Action/Information: Information only.

6. Revisions to Elk Grove Water District Standard Construction Specifications and Standard Detail Drawings **34-139**
(Ben Voelz, Associate Engineer)

Associate Director Comment

Public Comment

Recommended Action/Information: Adopt Resolution No. 10.17.23.01, approving the 2023 revisions to the Elk Grove Water District Construction Specifications and Standard Detail Drawings.

7. Legislative Matters and Potential Direction to Staff **140-186**
(Travis Franklin, Program Manager)

Associate Director Comment

Public Comment

Recommended Action/Information: Information only.

8. General Manager's Report **187-191**
(Bruce Kamilos, General Manager)

Associate Director Comment

Public Comment

Recommended Action/Information: Information only.

9. Elk Grove Water District Operations Report – September 2023 **192-238**
(Bruce Kamilos, General Manager)

Associate Director Comment

Public Comment

Recommended Action/Information: Information only.

10. Directors Comments

Adjourn to Regular Meeting – November 21, 2023

October 17, 2023

TO: Chair and Directors of the Florin Resource Conservation District

FROM: Amber Kavert, Acting Board Secretary and Patrick Lee, Treasurer

SUBJECT: **CONSENT CALENDAR**

RECOMMENDATION

It is recommended that the Florin Resource Conservation District Board of Directors approve Florin Resource Conservation District Consent Calendar items a – h.

SUMMARY

Consent Calendar items a – h are standing items on the Regular Board Meeting agenda.

By this action, the Florin Resource Conservation District (FRCD) Board of Directors will approve FRCD Consent Calendar items a – h.

DISCUSSION

Background

Consent Calendar items are standing items on the Regular Board Meeting agenda.

Present Situation

Consent Calendar items a – h are standing items on the Regular Board Meeting agenda.

ENVIRONMENTAL CONSIDERATIONS

There are no direct environmental considerations associated with this report.

STRATEGIC PLAN CONFORMITY

This item conforms to the FRCD/Elk Grove Water District 2020-2025 Strategic Plan. The monthly Consent Calendar report provides transparency, which aligns with Goal No. 1, Governance and Customer Engagement, of the Strategic Plan 2020-2025.

FINANCIAL SUMMARY

There is no financial impact associated with this report.

Respectfully submitted,

STEFANI PHILLIPS
BOARD SECRETARY

And

PATRICK LEE
TREASURER

Attachments

MINUTES OF THE REGULAR MEETING OF THE FLORIN RESOURCE CONSERVATION DISTRICT BOARD OF DIRECTORS

Tuesday, September 19, 2023

The regular meeting of the Florin Resource Conservation District Board of Directors was called to order at 6:30 p.m. by Chair Tom Nelson at 9829 Waterman Road, Elk Grove, CA.

Call to Order, Roll Call, and Pledge of Allegiance.

Directors Present:	Tom Nelson, Paul Lindsay, Lisa Medina, Sophia Scherman
Directors Absent:	Elliot Mulberg
Staff Present:	Bruce Kamilos, General Manager; Patrick Lee, Finance Manager/ Treasurer; Stefani Phillips, Human Resources Administrator/Board Secretary; Travis Franklin, Program Manager; Donella Murillo, Finance Supervisor; Ben Voelz, Associate Engineer; Amber Kavert, Human Resources Technician; Steve Shaw, Water Treatment Supervisor; Brandon Wagner, Water Treatment Operator III
Staff Absent:	None
Associate Directors Present:	Kim Martin
Associate Directors Absent:	Robert Stresak
General Counsel Present:	Andrew Ramos, Bartkiewicz, Kronick & Shanahan

Public Comment
No comment.

1. Proclamations and Announcements
General Manager Bruce Kamilos recognized Water Treatment Operator III Brandon Wagner and Water Distribution Operator III Justin Mello for their 10 years of service to the Elk Grove Water District.

2. Consent Calendar
a. Minutes of Regular Board Meeting of August 15, 2023
b. Accounts Payable Check History – August 2023
c. Board and Employee Expense/Reimbursements – August 2023
d. Active Accounts – August 2023
e. Bond Covenant Status for FY 2023-24 – August 2023
f. Bond Covenant Status – FY 2022-23
g. CASH - Detail Schedule of Investments– August 2023
h. Consultants Expenses – August 2023
i. Major Capital Improvement Projects – August 2023
j. Major Capital Improvement Projects – FY 2022-23
k. Year to Date Revenues and Expenses Compared to Budget – FY 2022-23

MSC (Lindsay/Scherman) to approve Florin Resource Conservation District Consent Calendar items a-k with amendments. 4/0: Ayes: Lindsay, Nelson, Medina, and Scherman.

3. Year to Date Revenues and Expenses Compared to Budget – August 2023
Finance Manager Patrick Lee provided an update on the Year-to-Date Revenue and Expenses Compared to Budget for the month of August to the Florin Resource Conservation District (District) Board of Directors (Board).

4. Water Professionals Appreciation Week

Mr. Kamilos presented the item to the Board.

In summary, California's seventh annual Water Professionals Appreciation Week will kick off October 7, 2023, highlighting the important role of water industry professionals and local public water agencies in ensuring safe and reliable water, wastewater, and recycled water operations in California. To extend its appreciation to Elk Grove Water District employees and all water professionals, staff recommended that the Board adopt Resolution No. 09.19.23.01, declaring October 7-15, 2023, Water Professionals Appreciation Week.

MSC (Medina/Scherman) to adopt Resolution No. 09.19.23.01, declaring October 7-15, 2023, Water Professionals Appreciation Week. 4/0: Ayes: Lindsay, Nelson, Medina and Scherman.

5. Proposed State Water Board Regulation for Urban Water Use Efficiency Standards

Mr. Kamilos introduced the item to the Board before turning it over to Program Manager Travis Franklin for a PowerPoint presentation.

In summary, the State Water Resources Control Board (State Water Board) released proposed regulation for urban water use efficiency standards on August 18, 2023. The proposed regulation would set water use objectives for each urban retail water supplier equal to the sum of residential indoor water use, residential outdoor water use, water loss, and commercial, industrial, and institutional landscapes with dedicated irrigation meters (CII-DIM). The Legislature has already established standards for residential indoor water use and the State Water Board has already established water loss standards. The proposed regulation sets standards for residential outdoor water use and CII-DIM water use that will likely not be achievable even using drought tolerant landscapes and the most current water efficient irrigation systems. The State Water Board is holding a public workshop on October 4, 2023, to discuss the proposed water efficiency regulation. This is an opportunity for water suppliers to be heard on changes they would like included in the regulation. Mr. Franklin and Mr. Kamilos will be attending the workshop.

Mr. Franklin explained the biggest thing that will help the District meet the proposed standards is Advanced Metering Infrastructure (AMI). He mentioned that based on research, the District can save 9% of water use just by having a fully functional AMI system.

Associate Director Kim Martin stated that AMI is brilliant and is going to be a huge asset, and asked the District to do what it does best, which is solve problems.

Vice-Chair Paul Lindsay asked that staff provide feedback to the Board on the public workshop after it is attended.

MSC (Lindsay/Medina) to authorize the General Manager to sign on behalf of the Florin Resource Conservation District to comment letters prepared by the Regional Water Authority and/or Association of California Water Agencies in support of changes to the proposed State Water Resources Control Board regulation for urban water use efficiency standards. 4/0: Ayes: Lindsay, Nelson, Medina and Scherman.

6. Legislative Matters and Potential Direction to Staff

Mr. Franklin presented the current legislative matters to the Board. He highlighted Assembly Bill (AB) 249 – Water: school sites: lead testing: conservation, AB 755 – Water: public entity: cost-of-service analysis, AB 1572 – Potable water: nonfunctional turf, and Assembly Constitutional Amendment (ACA) 13 – Voting thresholds.

Relative to AB 249, Chair Tom Nelson asked if the funding for lead testing, that was discussed in the bill, is still available. Mr. Franklin commented, there will be more information available in the next few days, and he will keep the Board updated.

7. General Manager's Report

Mr. Kamilos presented the item to the Board. He provided information on the Bay Area Transparency group that has been going around public agencies trying to provoke reactions to post on their YouTube channel. He explained that it has been discussed with legal counsel and staff on how to handle a visit by the group.

Mr. Kamilos also informed the Board of a Reginal Water Authority website they can visit to learn more about the Sacramento Regional Water Bank – https://sacwaterbank.com/.

8. Elk Grove Water District Operations Report – August 2023

Mr. Kamilos presented the EGWD Operations Report – August 2023 to the Board.

9. Directors Comments

Nothing to report.

Adjourn to Regular Board Meeting on September 19, 2023.

Respectfully submitted,

Stefani Phillips, Board Secretary

AK/SP

Check History Report

9/1/2023 to 9/30/2023
Elk Grove Water District

Check Number	Check Date	Vendor Number	Name	Check Amount	Explanation
058061	9/6/2023	ACWAJPI	CB&T/ ACWA-JPIA	62,275.27	Medical Benefits - October 2023
058062	9/6/2023	AMAZON	AMAZON CAPITAL SERVICES	77.57	
058063	9/6/2023	BADAWI	BADAWI & ASSOCIATES	11,778.75	FY 2023 Audit - Billing #2
058064	9/6/2023	BEN RES	BENEFIT RESOURCE, INC	300.00	
058065	9/6/2023	BG SOLU	SOLUTIONS BY BG INC.	9,350.20	Daily Tasks/Help Tickets
058066	9/6/2023	CDW	CDW GOVERNMENT	50.62	TV Mount for Samsung 4k TV - HR
058067	9/6/2023	CDW	CDW GOVERNMENT	433.21	Samsung 50in 4k TV - HR
058068	9/6/2023	CINTAS2	CINTAS	360.40	
058069	9/6/2023	COVER A	COVERALL NORTH AMERICA, INC	1,549.00	Janitorial Services -ADMIN/OPS
058070	9/6/2023	CRF LMN	LMNR HOMES LLC	62.37	Account Closed - Customer Refund
058071	9/6/2023	CS DF	CARD SERVICES	271.82	Materials - Distribution Crew
058072	9/6/2023	DATAPRO	DATAPROSE LLC	6,559.74	Monthly Billing & Postage - August 2023
058073	9/6/2023	DELPHIA	DELPHIA CONSULTING, LLC	220.00	Contracted Services - HR
058074	9/6/2023	DITCH 3	DITCH WITCH WEST	1,030.25	(2) Invoices - Supplies - Distribution
058075	9/6/2023	HOLT	HOLT OF CALIFORNIA	209,462.77	New 2023 Caterpillar Backhoe - OPS
058076	9/6/2023	JAYS	JAY'S TRUCKING SERVICE	435.00	Equipment Trailer/Equipment Moving - Excavator - Water Main Replacement Project - CIP
058077	9/6/2023	KINETIC	NORCAL WATER SYSTEMS	205.00	Water Composition Field Test - Treatment
058078	9/6/2023	LCW	LIEBERT CASSIDY WHITMORE	3,012.00	Legal - August 2023
058079	9/6/2023	METRO2	METRO MAILING SERVICE	3,114.09	Water Drop Newsletter - Summer 2023
058080	9/6/2023	PACE	PACE SUPPLY CORP	66.08	Materials - Treatment
058081	9/6/2023	PAULA M	PAULA MAITA & COMPANY	176.18	
058082	9/6/2023	PEST	PEST CONTROL CENTER INC	85.00	
058083	9/6/2023	RDO	RDO EQUIPMENT CO.	242.01	
058084	9/6/2023	REPUBLI	REPUBLIC SERVICES #922	569.02	Waste, Recycle, Organic - ADMIN
058085	9/6/2023	REPUBLI	REPUBLIC SERVICES #922	1,969.95	Waste, Recycle, Organic - OPS
058086	9/6/2023	ROOCO	ROOCO RENTS	2,223.38	(2) Invoice - Materials - Water Main Replacement Project - CIP
058087	9/6/2023	SIERRA	SIERRA OFFICE SUPPLIES	31.62	
058088	9/6/2023	SIGN CE	THE SIGN CENTER	358.12	
058089	9/6/2023	SMUD	SMUD	7,542.87	
058090	9/6/2023	SMUD	SMUD	3,199.99	
058091	9/6/2023	SMUD	SMUD	9,627.78	
058092	9/6/2023	SMUD	SMUD	14,573.38	
058093	9/6/2023	SMUD	SMUD	2,641.04	
058094	9/6/2023	SMUD	SMUD	35.15	
058095	9/6/2023	SMUD	SMUD	9,751.12	
058096	9/6/2023	SMUD	SMUD	1,561.48	
058097	9/6/2023	SMUD	SMUD	871.15	
058098	9/6/2023	SOUTHWE	SOUTHWEST ANSWERING SERVICE,	1,319.52	
058099	9/6/2023	SWRCB2	SWRCB-DWOCP	90.00	Certification Renewal D3 - John Vance
058100	9/6/2023	TEICH A	TEICHERT AGGREGATES	518.86	Materials - Water Main Replacement Project - CIP
058101	9/6/2023	TRE&TRA	TRENCH & TRAFFIC SUPPLY	122,029.59	(12) Invoices - Equipment Rental & Equipment Purchased - Skid Steel Plates
058102	9/6/2023	VIPRE 2	THREATTRACK SECURITY INC.	1,527.50	* Annual Antivirus Software - ADMIN/OPS
058103	9/6/2023	WALKER	WALKER KREATIVE	1,900.00	Social Media Public Outreach Campaign
058104	9/13/2023	AMAZON	AMAZON CAPITAL SERVICES	182.67	
058105	9/13/2023	BACK TE	BACKFLOW TECHNOLOGIES, INC	5,330.00	Contracted Services - Backflow Testing - Treatment
058106	9/13/2023	BSK4	BSK ASSOCIATES	396.00	Sampling - Treatment
058107	9/13/2023	CHECK P	CHECK PROCESSORS, INC	332.80	
058108	9/13/2023	COEG	CITY OF ELK GROVE	550.75	General District Maintenance - Encroachment & Overhead Allocation - June 2023

058109	9/13/2023	COEG	CITY OF ELK GROVE	3,803.27	Locust St. - Encroachment & Overhead Allocation - June 2023
058110	9/13/2023	CONSOLI	CONSOLIDATED COMMUNICATIONS	1,624.88	Phone/Internet
058111	9/13/2023	COUNTY	COUNTY OF SACRAMENTO	516,872.42	Purchased Water Billing - July & August 2023
058112	9/13/2023	CR KHA	KAREN HATLEN	53.93	Account Closed - Customer Refund
058113	9/13/2023	CRF BCH	BAOHUA CHEN	64.02	Account Closed - Customer Refund
058114	9/13/2023	CRF JWA	JINXI WANG	1.26	Account Closed - Customer Refund
058115	9/13/2023	CRF JWA	JINXI WANG	1.36	Account Closed - Customer Refund
058116	9/13/2023	CRF KAE	KATHLEEN EDDY	119.99	Account Closed - Customer Refund
058117	9/13/2023	CRF MBA	MOHAMMED BABAR	69.17	Account Closed - Customer Refund
058118	9/13/2023	CRF MNU	MOHAMMED NURE	15.20	Account Closed - Customer Refund
058119	9/13/2023	CRF MRF	MICHAEL FRUGE & RHONDA FRUGE	7.13	Account Closed - Customer Refund
058120	9/13/2023	CRF ROM	ROBERT MORIARTY	117.48	Account Closed - Customer Refund
058121	9/13/2023	CRF SRO	SCOTT ROTHENBERG	19.90	Account Closed - Customer Refund
058122	9/13/2023	CRF TAY	TAYLOR MORRISON	441.64	Account Closed - Customer Refund
058123	9/13/2023	DB COLS	DB CONSTRUCTIONAL LANDSCAPE	3,260.00	Landscape & Maintenance - Wellsite's & Offices
058124	9/13/2023	DELPHIA	DELPHIA CONSULTING, LLC	165.00	Contracted Services - HR
058125	9/13/2023	KEVIN Y	KEVIN YOUNG CONCRETE	10,250.00	(4) Invoices - Concrete Removal and Replacement - 4 Locations
058126	9/13/2023	LANSET	LANSET AMERICA	1,433.60	Disaster Recovery - ADMIN/OPS
058127	9/13/2023	LCW	LIEBERT CASSIDY WHITMORE	319.50	Legal - August 2023
058128	9/13/2023	PACE	PACE SUPPLY CORP	1,937.65	(2) Invoices - Materials - Distribution
058129	9/13/2023	PG&E	PACIFIC GAS & ELECTRIC	24.53	
058130	9/13/2023	REPUBLI	REPUBLIC SERVICES #922	321.10	Storm Drain Utility Fee Zone - Bi-Monthly
058131	9/13/2023	SULCA'S	SULCA'S CARPETS INC	4,088.52	Replacement Check
058132	9/13/2023	VERIZON	VERIZON WIRELESS	585.95	
058133	9/20/2023	AQUA	AQUA SIERRA CONTROLS, INC	5,597.62	Replace WTP Well Magmeter Transmitter - Treatment
058134	9/20/2023	AQUA ME	AQUA-METRIC SALES, CO.	28,704.60	(2) Invoices - Meters
058135	9/20/2023	BART KR	BARTKIEWICZ, KRONICK &	2,728.41	Legal - August 2023
058136	9/20/2023	BAY 3	BAY ALARM COMPANY	2,554.10	Monthly Security Monitoring - MOC/ADMIN
058137	9/20/2023	BOBCAT	BOBCAT DNF, INC	227.47	(2) Invoices - Materials - Distribution
058138	9/20/2023	BRENNTA	BRENNTAG PACIFIC, INC	4,166.06	Materials - Treatment
058139	9/20/2023	BSK4	BSK ASSOCIATES	4,454.00	Sampling - Treatment
058140	9/20/2023	CINTAS2	CINTAS	180.11	
058141	9/20/2023	CR EGHA	ELK GROVE HART	3.79	Account Closed - Customer Refund
058142	9/20/2023	CR EGHA	ELK GROVE HART	7.04	Account Closed - Customer Refund
058143	9/20/2023	CR FNT3	FIDELITY NATIONAL TITLE	34.76	Account Closed - Customer Refund
058144	9/20/2023	CR JJO	JIM JONES	36.95	Account Closed - Customer Refund
058145	9/20/2023	CR KNH	KIEN NHAN	62.74	Account Closed - Customer Refund
058146	9/20/2023	CR KWE	KARINA WEST	59.30	Account Closed - Customer Refund
058147	9/20/2023	CR LTI	LENNAR TITLE	101.55	Account Closed - Customer Refund
058148	9/20/2023	CR PAS	PAUL ASAHARA	29.38	Account Closed - Customer Refund
058149	9/20/2023	CRF ABE	AMANDA N. BEDOLLA	64.76	Account Closed - Customer Refund
058150	9/20/2023	CRF BLO	BARBARA LONG	81.97	Account Closed - Customer Refund
058151	9/20/2023	CRF CHA	CHRISTOPHER HARNER	73.00	Account Closed - Customer Refund
058152	9/20/2023	CRF FN3	FIDELITY NATIONAL TITLE	14.28	Account Closed - Customer Refund
058153	9/20/2023	CRF JBI	JOSEFINA BIGORNIA	86.67	Account Closed - Customer Refund
058154	9/20/2023	CRF JFO	JUDITH FORD	98.95	Account Closed - Customer Refund
058155	9/20/2023	CRF KMU	KEVIN MUNDAY	67.35	Account Closed - Customer Refund
058156	9/20/2023	CRF PAG	PAUL GOETZ	71.47	Account Closed - Customer Refund
058157	9/20/2023	CRF PDF	PDF PROPERTY MANAGEMENT	143.36	Account Closed - Customer Refund
058158	9/20/2023	CRF RHF	RHONDA PHILLIPS	109.39	Account Closed - Customer Refund
058159	9/20/2023	CRF STS	STEWART TITLE OF SACRAMENTO	42.25	Account Closed - Customer Refund
058160	9/20/2023	CRF UTP	UTOPIA MANAGEMENT	33.70	Account Closed - Customer Refund
058161	9/20/2023	CRFAHMO	AHMED MOHIELDIEN	197.28	Account Closed - Customer Refund
058162	9/20/2023	CRFCTC2	CHICAGO TITLE CO.	39.64	Account Closed - Customer Refund
058163	9/20/2023	CRFFID1	FIDELITY NATIONAL TITLE	81.52	Account Closed - Customer Refund
058164	9/20/2023	CS AA	CARD SERVICES	676.70	Materials, Tools, Supplies, Late Fees - Utility Crew

058165	9/20/2023	CS AH	CARD SERVICES	1,849.54	Materials, Supplies, Certification Renewal, Tools - Treatment
058166	9/20/2023	CS BV	CARD SERVICES	152.50	CEQA Filing, Old Plotter Disposal - Assc. Engineer
058167	9/20/2023	CS CP	CARD SERVICES	775.74	Materials, Repairs & Maintenance Equipment. Late Fees - Utility Crew
058168	9/20/2023	CS DF	CARD SERVICES	151.40	Materials, Late Fees - Distribution Crew
058169	9/20/2023	CS DM	CARD SERVICES	35.54	Vehicle Maintenance, Software Programs - Finance
058170	9/20/2023	CS SH	CARD SERVICES	990.37	Safety Materials, Supplies, Tools. Late Fees - Distribution Crew
058171	9/20/2023	CS SP	CARD SERVICES	2,209.89	ACWA Conference Registration, Employee Appreciation, Meals, Materials - HR Admin
058172	9/20/2023	CS SS	CARD SERVICES	146.09	Vehicle Maintenance, Materials - Treatment
058173	9/20/2023	CS TF	CARD SERVICES	1,093.88	Airfare, ACWA Conference Registration, Printing.- Program Manager
058174	9/20/2023	EG FORD	ELK GROVE FORD	127.07	
058175	9/20/2023	FLORIN	FLORIN AUTOMOTIVE REPAIR	59.08	
058176	9/20/2023	J&S ASP	J&S ASPHALT	40,028.00	ADMIN Drainage Improvements
058177	9/20/2023	JAYS	JAY'S TRUCKING SERVICE	1,948.24	Materials & Dump Fees - Water Main Replacement Project/Distribution Crew
058178	9/20/2023	KAISER3	THE PERMANENTE MEDICAL	115.00	
058179	9/20/2023	MISCOWA	MISCOwater	674.74	Materials - Treatment
058180	9/20/2023	PACE	PACE SUPPLY CORP	9,100.66	(6) Invoices - Materials - Water Main Replacement Project/Distribution Crew
058181	9/20/2023	PIT 5	PURCHASE POWER	520.99	Postage - ADMIN
058182	9/20/2023	PIT 6	PITNEY BOWES GLOBAL FINANCIAL SERVICES LLC	179.33	
058183	9/20/2023	ROOCO	ROOCO RENTS	2,011.75	(2) Invoices - Materials - Water Main Replacement Project - CIP
058184	9/20/2023	TEICH A	TEICHERT AGGREGATES	1,186.93	(3) Invoices - Materials - Water Main Replacement Project - CIP
058185	9/20/2023	TRE&TRA	TRENCH & TRAFFIC SUPPLY	1,550.68	(4) Invoices - Rental Equipment - Water Main Replacement Project-CIP
058186	9/20/2023	USBANK	U.S. BANK EQUIPMENT FINANCE	816.94	Copier - ADMIN
058187	9/20/2023	USS	UNITED SITE SERVICES	1,219.56	Facilities - Utility Crew
058188	9/20/2023	WILSON	MARCELL WILSON	252.98	Boot Reimbursement
058189	9/20/2023	BG SOLU	SOLUTIONS BY BG INC.	9,350.20	Daily Tasks/Help Tickets
058190	9/20/2023	CS BK	CARD SERVICES	3,324.03	ACWA Conf, Airfare, Materials, Meals, Software Programs, Tools. Comp Tests
058191	9/27/2023	AFLAC	AFLAC	1,444.92	
058192	9/27/2023	AMAZON	AMAZON CAPITAL SERVICES	113.86	
058193	9/27/2023	BAY ALA	BAY ALARM COMPANY	517.44	Quarterly Alarm Monitoring - ADMIN
058194	9/27/2023	BSK4	BSK ASSOCIATES	793.00	Sampling - Treatment
058195	9/27/2023	CHIC12	CHICAGO TITLE COMPANY	48.76	
058196	9/27/2023	CINTAS2	CINTAS	180.64	
058197	9/27/2023	CR EPM	EAGLE PROPERTY MANAGEMENT	1.34	Account Closed - Customer Refund
058198	9/27/2023	CR HOLY	HOLY TRINITY ETHIOPIAN CHURCH	1,069.18	Account Billed in Error - Refund Issued
058199	9/27/2023	CR LORI	LORI LUCAS	8.68	Account Closed - Customer Refund
058200	9/27/2023	CRCLAYT	CLAYTON KUCALA	101.17	Account Closed - Customer Refund
058201	9/27/2023	CRDAKH	DALIA SIDAHMAD & KHALID TALAAT	56.30	Account Closed - Customer Refund
058202	9/27/2023	CREVLO	EVONNE MARISCAL & LORRAINE	8.42	Account Closed - Customer Refund
058203	9/27/2023	CRF LEN	LENNAR HOMES CA, INC	61.19	Account Closed - Customer Refund
058204	9/27/2023	CRF LEN	LENNAR HOMES CA, INC	40.78	Account Closed - Customer Refund
058205	9/27/2023	CRF LTI	LENNAR TITLE	108.71	Account Closed - Customer Refund
058206	9/27/2023	CRF SRU	SUSAN RUSHING	72.14	Account Closed - Customer Refund
058207	9/27/2023	CRFFAT3	FIRST AMERICAN TITLE	34.56	Account Closed - Customer Refund
058208	9/27/2023	CRFFID1	FIDELITY NATIONAL TITLE	26.91	Account Closed - Customer Refund
058209	9/27/2023	CRJAMES	JAMES P MITCHELL	32.97	Account Closed - Customer Refund
058210	9/27/2023	CRJOHNP	JOHN PANENKA	76.19	Account Closed - Customer Refund
058211	9/27/2023	CRNASO	NASSER OTHMAN	14.22	Account Closed - Customer Refund
058212	9/27/2023	CRRON N	RONALD NEWMAN	64.95	Account Closed - Customer Refund
058213	9/27/2023	CRSAB M	SABRINA MCNALLY	2.18	Account Closed - Customer Refund
058214	9/27/2023	CSD	COSUMNES COMMUNITY SERVICES	547.77	Account Opened and Billed in Error - Refund Issued
058215	9/27/2023	DELPHIA	DELPHIA CONSULTING, LLC	385.00	Contracted Services - HR
058216	9/27/2023	JAYS	JAY'S TRUCKING SERVICE	4,813.13	Equipment Rental - Water Main Replacement Project - CIP
058217	9/27/2023	OREILLY	O'REILLY AUTO PARTS	20.41	
058218	9/27/2023	PACE	PACE SUPPLY CORP	1,388.29	Materials - Water Main Replacement Project - CIP
058219	9/27/2023	REPUBLI	REPUBLIC SERVICES #922	573.91	Waste, Recycle, Organic October Billing- ADMIN

058220	9/27/2023	REPUBLI	REPUBLIC SERVICES #922	1,865.80	Waste, Recycle, Organic October Billing- OPS
058221	9/27/2023	SAC 5	SACRAMENTO COUNTY	20.00	Lien Release
058222	9/27/2023	SAC LAF	SACRAMENTO LAFCO	2,068.00	*FY 2023-24 Agency Contributions
058223	9/27/2023	SHELL	WEX BANK	4,947.63	Fuel
058224	9/27/2023	SIERRA	SIERRA OFFICE SUPPLIES	395.48	
058225	9/27/2023	SUMMIT	AIR WORKS INC	255.00	HVAC Preventative Maintenance - MOC
058226	9/27/2023	TEICH A	TEICHERT AGGREGATES	526.77	Materials - Utility Crew
058227	9/27/2023	USS	UNITED SITE SERVICES	3,656.52	(3) Invoices - Facilities - Utility Crew
			Total:	**1,202,892.09**	

BOARD AND EMPLOYEE MONTHLY EXPENSE/REIMBURSEMENTS

As of 09/30/2023

INDIVIDUAL	DESCRIPTION	AMOUNT PAID
Travis Franklin	Airfare - ACWA Conference	$211.92
Travis Franklin	Hotel - ACWA Conference	$815.00
Aaron Hewitt	Certification Renewal - Cross Connection Specialist	$100.00
Bruce Kamilos	ACWA Conference Registration	$815.00
Bruce Kamilos	Airfare - ACWA Conference	$198.92
Amber Kavert	ACWA Conference Registration	$815.00
Amber Kavert	Airfare - ACWA Conference	$198.92
Stefani Phillips	ACWA Conference Registration	$815.00
Stefani Phillips	Airfare - ACWA Conference	$198.92
Tom Nelson	Airfare - ACWA Conference	$198.92
Tom Nelson	ACWA Conference Registration	$815.00
Marcell Wilson	Boot Reimbursement	$252.98
		$5,435.58

Active Account Information
As of 09/30/2023

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Water Accounts:												
Metered												
Residential	12,330	12,336	12,327									
Commercial	363	361	360									
Irrigation	190	190	190									
Fire Service	188	189	189									
Total Accounts	13,071	13,076	13,066	-	-	-	-	-	-	-	-	-

Active Account Information
FY 2022/2023

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Water Accounts:												
Metered												
Residential	12,303	12,292	12,293	12,289	12,300	12,299	12,302	12,298	12,296	12,297	12,303	12,324
Commercial	361	361	360	361	360	360	360	360	360	360	360	362
Irrigation	185	187	186	186	186	187	187	188	188	188	191	191
Fire Service	186	186	187	187	187	187	187	187	187	188	188	190
Total Accounts	13,035	13,026	13,026	13,023	13,033	13,033	13,036	13,033	13,031	13,033	13,042	13,067

Bond Covenant Status
For Fiscal Year 2023-24
As of 09/30/2023

Operating Revenues:			
Charges for Services	$	4,952,170	
Operating Expenses:			
Salaries & Benefits		1,089,310	
Seminars, Conventions and Travel		8,261	
Office & Operational		417,861	
Purchased Water		1,060,530	
Outside Services		206,088	
Equipment Rent, Taxes, and Utilities		127,209	
Total Operating Expenses		2,909,259	
Net Operating Income	$	2,042,911	
Annual Interest & Principal Payments $3,886,994	$	971,749	(1)
Debt Service Coverage Ratio, YTD Only:		**2.10**	
Required		**1.15**	

Notes

(1) Reflects budget divided by number of months year to date.
However, first Principal/Interest Payments made in September.
Projected Annual Budget Coverage Ratio is **1.22**

CASH - Detail Schedule of Investments
As of 09/30/2023

G/L Account	Fund	Account number / name	Investment Name	Investment Type		Restrictions	Market Value
HELD BY BOND TRUSTEE:							
1110-000-20	Water	BNY 892744 FRCD 2014A DEBT SERVICE	Dreyfus Inst Treasury	MM Mutual Fund		Restricted	
1112-000-20	Water	BNY 743850 FRCD 2016A DEBT SERVICE	Dreyfus Inst Treasury	MM Mutual Fund		Restricted	0.00
						Subtotal	**$ -**
1001-000-20	Water	Cash on Hand				Unrestricted	**$ 300.00**
HELD BY F&M BANK:							
1011-000-20	Water	F&M 08-032017-01 OPERATING ACCOUNT				Unrestricted	863,183.11
1084-000-20	Water	F&M 08-03201702-31 MONEY MARKET			0.25%	Unrestricted	1,117,231.57
1031-000-20	Water	F&M 08-032912-01 CREDIT CARD ACCOUNT				Unrestricted	994,111.58
1061-000-20	Water	F&M 08-032890-01 PAYROLL ACCOUNT				Unrestricted	271,134.92
1071-000-20	Water	F&M 08-032920-01 DRAFTS ACCOUNT				Unrestricted	161,484.49
						Subtotal	**$ 3,407,145.67**
INVESTMENTS							
1080-000-20	Water	Office of the Treasurer - Sacramento California	LAIF	Investment Pool	3.43%	Unrestricted	**$ 5,619,985.66**
							.
1081-000-20	Water	CALTrust Medium Term		Investment	1.75%	Unrestricted	**$ 1,358,195.96**
1082-000-20	Water						

PURCHASE DATE	CUSIP	ISSUED BY	CALL DATE	MATURITY DATE	% of Portfolio	Current Yield	COST BASIS	MARKET VALUE
9/30/2016	N/A	US Bank	N/A	N/A	2.20%	5.22%	$ 84,142.24	$ 84,142.24
11/19/2020	3135GA5H0	Federal Home Loan (FHLB)	07/10/20 - qrtly	11/25/2025	24.00%	0.640%	$ 1,000,000.00	905,120.00
7/31/2020	3133ELQ56	Federal Home Loan (FHLB)	11/25/20 - qrtly	7/2/2024	25.50%	0.590%	$ 1,000,000.00	963,030.00
7/29/2021	3133EMT36	Federal Home Loan (FHLB)	04/15/26- qrtly	4/26/2026	23.80%	0.970%	$ 1,000,000.00	897,920.00
7/31/2020	3136G4YP2	Federal Natl MTG ASSN	07/09/2021 - qrtly	7/9/2025	24.40%	0.780%	$ 1,000,000.00	922,280.00
							$ 4,084,142.24	**$ 3,772,492.24**

YTM = Yield to Maturity
qtrly = quarterly
cont. = continuous

Total	**$ 14,158,119.53**
Total Restricted	**$ -**
Total Unrestricted	**$ 14,158,119.53**

Consultant Expenses
As of 09/30/2023

Fiscal Retainer Contracts

	Description	Total Contract	Current Month	Paid to date	2023-2024 FY Budget	Percent of year (25%)
Bartkiewicz, Kronick & Shanahan	Task orders	TBD	$ 2,728	$ 7,359		
Liebert Cassidy Whitmore	Task orders	TBD	$ 3,332	$ 3,368		
Total			$ 6,060	$ 10,727	$ 220,000	4.88%
Solutions by BG, Inc.	Task orders	792,676	$ 18,700	$ 56,100	$ 262,236	21.39%

Major Contracts

Consultant	Description	Total Contract		Paid to date	2023-2024 FY Budget	Percent of Contract Amount
	PSA		$ -			#DIV/0!
	PSA		$ -			#DIV/0!
	PSA		$ -			#DIV/0!

Elk Grove Water District
Major Capital Improvement Project
Budget vs Actuals
As of 09/30/2023

Capital Project	Total Project Budget	Total Project Exp to Date	Percent Spent	Capitalized Labor	Fund Type	Project Type	2023-24 Budget	Sept Project Exp	Total YTD [1]	YTD % Spent	% of Project Complete
Locust/Summit Alley Water Main	699,478	374,286	53.51%	$ 76,670	R&R	Supply/Distribution	$ 505,000	$ 80,151	$ 179,799	35.60%	80%
Well Rehab Program	84,000	-	0.00%	-	R&R	Supply/Distribution	84,000	-	-	0.00%	0%
School St/Locust Watermain	394,000	-	0.00%	-	R&R	Supply/Distribution	394,000	-	-	0.00%	0%
Locust St/EG Blvd Alley Watermain	356,000	-	0.00%	-	R&R	Supply/Distribution	356,000	-	-	0.00%	0%
Bond Rd Watermain Relocation	126,000	-	0.00%	-	R&R	Supply/Distribution	126,000	-	-	0.00%	0%
Storage Tank Coating	25,000	-	0.00%	-	R&R	Treatment	25,000	-	-	0.00%	0%
Chlortech System Replacements	290,021	188,721	65.07%	-	R&R	Treatment	150,000	51	48,700	32.47%	30%
9829 Waterman Rd - Drainage Improvement	95,000	-	0.00%	-	R&R	Building and Site	95,000	40,028	40,028	42.13%	100%
Plotter	10,000	-	0.00%	-	R&R	Building and Site	10,000	-	6,791	67.91%	100%
Admin Storage Building Improvements [2]	20,000	-	0.00%	-	R&R	Building and Site	20,000	51	51	0.26%	0%
ERP System	520,000	-	0.00%	-	R&R	Building and Site	520,000	-	-	0.00%	0%
Derr St Watermain Looping	152,000	-	0.00%	1,539	CIP	Supply/Distribution	152,000	-	1,539	1.01%	0%
Locust St/EG Blvd Alley Watermain Looping	77,000	-	0.00%	-	CIP	Supply/Distribution	77,000	-	-	0.00%	0%
Brinkman Transmission Main	100,000	-	0.00%	-	CIP	Supply/Distribution	100,000	-	-	0.00%	0%
Chlorine Analyzers Shallow Wells	20,000	399	2.00%	-	CIP	Treatment	20,000	66	399	2.00%	75%
Trench Plates	130,000	117,450	90.35%	-	CIP	Building and Site	130,000	117,450	117,450	90.35%	100%
Backhoe Loader	210,000	209,463	99.74%	-	CIP	Building and Site	210,000	209,463	209,463	99.74%	100%
Truck Mounted Compressor	35,000	-	0.00%	-	CIP	Building and Site	35,000	-	-	0.00%	0%
Truck Replacement	66,000	65,943	99.91%	-	CIP	Building and Site	66,000	-	65,943	99.91%	100%
Unforeseen Capital Projects	100,000	-	0.00%	-	-	-	100,000	-	-	0.00% [3]	-
Sub-Total	$ 3,509,499	$ 956,263	27.25%	$ 78,209			$ 3,175,000	$ 447,260	$ 670,164	21.11%	

[1] Includes $78,209 in capitalized labor through 09/30/2023

[2] A change order was issued in the amount of $5,961.59, which is 52% of the original contract amount of $11,412.41. This is being reported to the Board in accordance with the District's Public Works Construction Contracts procurement policy. The new total contract amount is $17,374.

[3] Includes unforseen capital projects, including:

XXXXXXX	-
Total	$ -

October 17, 2023

TO: Chair and Directors of the Florin Resource Conservation District

FROM: Patrick Lee, Finance Manager/Treasurer

SUBJECT: **ELK GROVE WATER DISTRICT FISCAL YEAR 2023-24 QUARTERLY OPERATING BUDGET STATUS REPORT**

RECOMMENDATION

This item is presented for discussion purposes only. No action by the Florin Resource Conservation District Board of Directors is requested at this time.

SUMMARY

Staff is presenting the quarterly budget status report through the first quarter of fiscal year 2023-24. This report is to keep the Florin Resource Conservation District (District) Board of Directors (Board) and the public informed on the financial status of the Elk Grove Water District (EGWD).

DISCUSSION

Background

On June 20, 2023, the Board approved the District's Fiscal Year (FY) 2023-24 Operating Budget. The adopted budget projects total revenues of approximately $16.4 million and total expenditures of approximately $18.5 million, including appropriations into the District's FY 2023-24 Capital Improvement Program (CIP) reserves of approximately $3.2 million. The projected expenses in excess of revenues of approximately $2.1 million will be funded by excess operating reserves from prior years.

Present Situation

A summary of the EGWD's financial status as of September 30, 2023 (Attachment 1) is attached to this report and a detailed analysis of the changes in each revenue and expenditure category is as follows:

Revenues collected through the first quarter of the fiscal year total $4,952,170 which is 30.20% of the $16,396,704 annual budget. The revenues are $153,691 or 3.20% above the same quarter of the prior year due to an overall increase in consumption for the months of July through September 2023 and a 2.0% revenue rate increase that went into effect January 1, 2023.

Total Operational Expenses were $2,909,259 through the first quarter, which is 24.93% of the annual budget of $11,669,804. The actual operating expenses were $326,575 or 12.64% above the same quarter of the prior fiscal year as follows:

Personnel expenditures through the first quarter total $1,089,311, which is 21.94% of the $4,965,209 annual budget. The actual expenses were $185,976 or 20.59% above the same period of the prior fiscal year. The increase is due mainly to a COLA increase of 4.67% effective July 1, 2023, changes to the District's salary schedule based on the compensation study completed in FY 2022, and the timing of payment of the October 2023 medical premium invoice, which was paid in September of 2023.

Seminars, Conventions and Travel expenditures total $8,261, which is 18.08% of the annual budget of $45,695. The actual expenses were $1,405 or 20.50% above the same period of the prior fiscal year due mainly to airfare and hotel costs for the ACWA Fall 2023 conference in Palm Springs.

Office and Operational expenditures total $417,861, which is 28.17% of the annual budget of $1,483,551. The actual expenses were $79,226 or 23.40% above the same period of the prior fiscal year due mainly to an increase in meter purchases for new development and the payment of software subscription costs at the beginning of the fiscal year.

Estimated Purchased Water costs total $1,060,530, which is 30.60% of the annual budget of $3,466,025. The actual expenses were $74,043 or 7.51% above the same period of the prior fiscal year. The increase is due mainly to an overall increase in consumption during the months of July through September 2023.

Outside Services expenditures total $206,088, which is 18.56% of the annual budget of $1,110,124. The actual expenses were $31,504 or 18.04% above the same period of the prior fiscal year. The increase is due mainly to increased legal costs, increased bank charges for automated credit card payments, increased security costs for new surveillance systems in place at the well sites and increased sampling costs for UCMR 5 sampling in Q1 of fiscal year 2023.

Equipment Rent, Taxes and Utilities expenditures total $127,209, which is 21.23% of the annual budget of $599,200. The actual expenses were $45,579 or 26.38% below the same period of the prior fiscal year. The decrease is due to the District no longer leasing the property at 9257 Elk Grove Blvd as its administration building and the District not yet receiving and paying for the September 2023 SMUD invoices.

ENVIRONMENTAL CONSIDERATIONS

There are no direct environmental considerations associated with this report.

STRATEGIC PLAN CONFORMITY

This item conforms to the FRCD/EGWD's 2020-2025 Strategic Plan. Development and adoption of annual budgets that are balanced through cost-saving measures or transfers from operating reserves is specifically identified as an objective in the Fiscal Responsibility section of the Strategic Plan.

FINANCIAL SUMMARY

This report is provided to the Board for information only. There is no financial impact associated with this item at this time. Staff has attached a copy of the September 30, 2023 Quarterly Budget Review (Attachment 2) for the first quarter. The Quarterly Budget Review includes the line-item detail for the expenditure categories for the quarter-to-date for FY 2023-24, as well as the detail for last year's quarter-to-date.

Respectfully submitted,

PATRICK LEE
FINANCE MANAGER/TREASURER

Attachments

Elk Grove Water District
Year to Date Revenues and Expenses Compared to Budget
As of September 30, 2023

	General Ledger Reference	YTD Activity	Annual Budget	3/12=25.00% % Realized
Revenues	4100 - 4900	$ 4,952,170	$ 16,396,705	30.20%
Operating Expenses				
Salaries & Benefits	5100 - 5280	1,167,519	5,400,398	21.62%
less Capitalized Labor		(78,209)	(435,189)	17.97%
Less CalPERS Prepayment for Remainder of Year:		-		
Adjusted Salaries and Benefits:		$ 1,089,310	$ 4,965,209	21.94%
Seminars, Conventions and Travel	5300 - 5350	8,261	45,695	18.08%
Office & Operational	5410 - 5494	417,861	1,483,551	28.17%
Purchased Water est. [1]	5495 - 5495	1,060,530	3,466,025	30.60%
Outside Services	5505 - 5580	206,088	1,110,124	18.56%
Equipment Rent, Taxes, Utilities	5620 - 5760	127,209	599,200	21.23%
Total Operational Expenses		$ 2,909,259	$ 11,669,804	24.93%
Net Operating Income		$ 2,042,911	$ 4,726,901	43.22%
Non-Operating Revenues				
Interest Received	9910 - 9910	21,170	25,000	84.68%
Unrealized Gains/(Losses)	9911 - 9911	104,598	-	100.00%
Other Income/(Expense)	9920 - 9973	2,236	215,000	1.04%
Total Non-Operating Revenues		$ 128,003	$ 240,000	53.33%
Non-Operating Expenses				
Election Costs	9950 - 9950	-	-	0.00%
Capital Expenses [2]:				
Capital Improvements	1705 - 1760	394,794	790,000	49.97%
Capital Replacements	1705 - 1760	275,370	2,285,000	12.05%
Unforeseen Capital Projects	1705 - 1760	-	100,000	0.00%
Total Capital Expenses:		$ 670,164	$ 3,175,000	21.11%
Bond Interest Accrued [3]	7300 - 7300	302,999	1,211,994	25.00%
Total Non Operating Expenses		$ 973,163	$ 4,386,994	22.18%
Bond Retirement [3]:		$ 668,750	$ 2,675,000	25.00%
Total Expenditures		4,423,169	18,491,798	23.92%
Revenues in Excess of All Expenditures, including Capital		$ 529,001	$ (2,095,093)	-25.25%

Notes:

[1] There is a lag in water billings from the Sacramento County Water Agency. Included above is an estimate of costs to date based on water used.

[2] YTD Activity includes $78,209 in capitalized labor charged to capital projects.

[3] Bond retirement payments are made two times a year in September and March

[4] Accounts receivable balance, which represents the difference between the total amount billed and total amount collected, as of September 30, 2023 is $256,574.50

ELK GROVE WATER DISTRICT
QUARTERLY BUDGET REVIEW
THROUGH SEPTEMBER 30, 2023
FISCAL YEAR 2023-24

Account	Description	FY 2023-24 Budget	Y-T-D 9/30/2023	25.00% Percentage	Y-T-D 9/30/2022	Change from prior year
4100	Water Payment Revenues - Residential	$ 13,629,113	4,174,336	30.63%	$ 4,143,478	$ 30,858
4110	Water Payment Revenues - Commercial	2,202,712	572,665	26.00%	501,996	70,669
4120	Water Payment Revenues - Fire Service	235,379	55,417	23.54%	52,320	3,097
4200	Meter Fees/Plan Check/Water Capacity	126,000	94,461	74.97%	19,571	74,890
4201	Backflow Installation	15,000	9,450	63.00%	14,125	(4,675)
4202	Backflow Testing Fee	2,500	8,385	335.40%	7,410	975
4300	Fire Protection	-	312	100.00%	156	156
4520	Door Hanger Fees	115,000	26,575	23.11%	30,250	(3,675)
4530	Meter Testing Fee	-	-	0.00%	47	(47)
4540	New account Fees	20,000	4,020	20.10%	5,220	(1,200)
4550	NSF Fees	2,000	385	19.25%	560	(175)
4560	Fees & Penalties	-	-	0.00%	8,004	(8,004)
4570	Shut-off Fees	50,000	13,900	27.80%	19,800	(5,900)
4575	24 Hour Turn On	-	-	0.00%	-	-
4580	Restoration Fees	-	-	0.00%	-	-
4585	Administration Citations	-	-	0.00%	-	-
4590	Credit Card Fees	-	-	0.00%	-	-
4591	Sac County Release of Lien Fee	-	60	100.00%	(220)	280
4700	Rental Income	-	-	0.00%	-	-

ELK GROVE WATER DISTRICT
QUARTERLY BUDGET REVIEW
THROUGH SEPTEMBER 30, 2023
FISCAL YEAR 2023-24

4900	Customer Refunds	(1,000)	(7,796)	779.60%	(4,238)	(3,558)
	TOTAL GROSS REVENUES	**$ 16,396,704**	**$ 4,952,170**	**30.20%**	**$ 4,798,480**	**$ 153,691**

Account	Description	FY 2023-24 Budget	Y-T-D 9/30/2023	25.00% Percentage	Y-T-D 9/30/2022	Change from prior year
	Salaries & Benefits					
5100	Executive Salary	258,417	54,052	20.92%	46,807	7,246
5110	Exempt Salaries	727,395	157,899	21.71%	144,358	13,541
5120	Non-Exempt Salaries	2,231,561	444,137	19.90%	421,717	22,420
5130	Overtime Compensation	45,000	6,200	13.78%	10,327	(4,127)
5140	On Call Pay	31,025	6,545	21.10%	7,055	(510)
5150	Holiday Pay	170,801	27,903	16.34%	24,438	3,465
5160	Vacation Pay	188,579	73,465	38.96%	39,500	33,966
5170	Personal Time Pay	136,641	57,836	42.33%	26,883	30,953
5200	Medical Benefits	696,569	211,216	30.32%	166,212	45,004
5195	EAP	911	298	32.67%	214	83
5201	EGWD Contribution H.S.A	25,000	-	0.00%	-	-
5210	Dental/Vision/Life Insurance	61,585	20,507	33.30%	15,308	5,199
5220	Retirement Benefits	354,798	75,675	21.33%	61,828	13,846
5225	Retirement Benefits - Post Employment	280,719	20,006	7.13%	19,504	502
5230	Medical Tax, Social Security and SUI	73,318	10,791	14.72%	10,479	312
5240	Worker's Compensation Insurance	68,799	-	0.00%	-	-
5250	Education Assistance	2,500	-	0.00%	-	-
5260	Employee Training	36,200	-	0.00%	1,716	(1,716)
5270	Employee Recognition	2,880	989	34.34%	1,386	(397)
5280	Meetings	7,700	-	0.00%	-	-
	Less Capitalized Expenditures	(435,189)	(78,209)	17.97%	(88,407)	10,198
	Less Remaining CalPERS prepayment	-	-	N/A	(5,992)	5,992
	Category Subtotal	**4,965,209**	**1,089,311**	**21.94%**	**903,335**	**185,976**

Account	Description					
	Seminars, Conventions and Travel					
5300	Airfare	4,600	1,020	22.17%	335	685
5310	Hotels	12,600	1,109	8.80%	530	579
5320	Meals	6,790	807	11.89%	124	684
5330	Auto Rental	1,300	-	0.00%	-	-
5340	Seminars & Conferences	12,575	4,075	32.41%	4,399	(324)
5350	Mileage Reimbursement, Parking, Tolls	1,830	-	0.00%	111	(111)

ELK GROVE WATER DISTRICT
QUARTERLY BUDGET REVIEW
THROUGH SEPTEMBER 30, 2023
FISCAL YEAR 2023-24

5375	Auto Allowance	6,000	1,250	20.83%	1,357	(107)
	Category Subtotal	**45,695**	**8,261**	18.08%	**6,855**	**1,405**

Account	Description	FY 2023-24 Budget	Y-T-D 9/30/2023	25.00% Percentage	Y-T-D 9/30/2022	Change from prior year
	Office & Operational					
5410	Advertising	17,200	148	0.86%	3,075	(2,927)
5415	Association Dues	132,870	94,634	71.22%	94,405	229
5420	Insurance	154,200	61,964	40.18%	58,326	3,638
5425	Licenses, Certifications, Fees	3,650	622	17.03%	925	(304)
5430	Repairs & Maintenance - Automotive	36,500	4,272	11.70%	917	3,355
5432	Repairs & Maintenance - Building	93,520	15,675	16.76%	17,541	(1,866)
5434	Repairs & Maintenance - Computers	21,650	607	2.80%	10,957	(10,349)
5435	Repairs & Maintenance - Equipment	160,500	22,341	13.92%	12,892	9,449
5438	Fuel	56,720	13,205	23.28%	13,927	(723)
5440	Materials	163,150	14,968	9.17%	39,478	(24,510)
5445	Chemicals	65,000	16,984	26.13%	19,670	(2,686)
5450	Meter Repairs	100,000	50,594	50.59%	11,013	39,581
5453	Permits	95,000	5,593	5.89%	5,602	(10)
5455	Postage	82,325	13,489	16.38%	13,847	(359)
5460	Printing	26,850	3,475	12.94%	4,225	(750)
5465	Safety Equipment	18,000	931	5.17%	4,031	(3,100)
5470	Software Programs & Updates	141,196	79,438	56.26%	8,341	71,096
5475	Supplies	29,520	4,889	16.56%	6,343	(1,454)
5480	Telephone	33,500	6,157	18.38%	5,590	566
5485	Tools	19,500	4,254	21.82%	4,900	(645)
5490	Clothing Allowance	7,700	828	10.76%	573	255
5491	EGWD-Other Clothing	13,000	2,794	21.49%	2,055	739
5493	Water Conservation Materials	12,000	-	0.00%	-	-
	Category Subtotal	**1,483,551**	**417,861**	**28.17%**	**338,634**	**79,226**

ELK GROVE WATER DISTRICT
QUARTERLY BUDGET REVIEW
THROUGH SEPTEMBER 30, 2023
FISCAL YEAR 2023-24

Account	Description					
5495	Purchased Water	**3,466,025**	**1,060,530**	**30.60%**	**986,487**	**74,043**

Account	Description	FY 2023-24 Budget	Y-T-D 9/30/2023	20.83% Percentage	Y-T-D 9/30/2022	Change from prior year
	Outside Services					
5505	Administration Services	4,700	982	20.89%	691	291
5510	Bank Charges	210,800	55,653	26.40%	49,204	6,448
5515	Billing Services	25,500	3,170	12.43%	3,436	(266)
5520	Contracted Services	449,866	92,697	20.61%	87,919	4,777
5525	Accounting Services	30,000	11,779	39.26%	11,779	-
5530	Engineering	50,000	-	0.00%	-	-
5535	Legal Services	220,000	10,727	4.88%	3,155	7,572
5540	Financial Consultants	-	116	100.00%	-	116
5545	Community Relations	5,200	-	0.00%	175	(175)
5550	Pre-employment	1,000	-	0.00%	-	-
5552	Misc. Medical	2,000	168	8.40%	115	53
5555	Janitorial	22,200	4,905	22.09%	3,226	1,678
5560	Bond Administration	6,550	3,673	56.08%	1,500	2,173
5570	Security	32,308	10,768	33.33%	7,155	3,614
5575	Sampling	50,000	11,452	22.90%	6,229	5,223
	Category Subtotal	**1,110,124**	**206,088**	**18.56%**	**174,585**	**31,504**

Account	Description	FY 2023-24 Budget	Y-T-D 9/30/2023	25.00% Percentage	Y-T-D 9/30/2022	Change from prior year
	Equipment Rent, Taxes and Utilities					
5610	Occupancy	-	-	0.00%	12,000	(12,000)
5620	Equipment Rental	32,600	8,015	24.59%	6,731	1,284
5710	Property Taxes	4,000	-	0.00%	-	-
5740	Electricity	510,800	101,977	19.96%	140,807	(38,830)
5750	Natural Gas	6,000	46	0.76%	49	(3)
5760	Sewer and Garbage	45,800	17,171	37.49%	13,201	3,970
	Category Subtotal	**599,200**	**127,209**	**21.23%**	**172,788**	**(45,579)**
	Total Operational Expenses	**11,669,804**	**2,909,259**	**24.93%**	**2,582,684**	**326,575**

October 17, 2023

TO: Chair and Directors of the Florin Resource Conservation District

FROM: Patrick Lee, Finance Manager/Treasurer

SUBJECT: **ELK GROVE WATER DISTRICT FISCAL YEAR 2023-24 QUARTERLY CAPITAL RESERVE STATUS REPORT**

RECOMMENDATION

This item is presented for discussion purposes only. No action by the Florin Resource Conservation District Board of Directors is requested at this time.

SUMMARY

On June 16, 2020, the Florin Resource Conservation District (District) Board of Directors (Board) adopted the District's Reserve and Capital Investments Policy (Policy), establishing the funding levels for each of the District's respective reserve funds. Per the Policy, the District's unrestricted net position as of July 1 of each fiscal year is allocated first to the Operating Reserve (120 days of budgeted operating and maintenance expenses), then to the upcoming year's capital budget, followed by elections/special studies, with the balance allocated to future capital improvements and future capital replacements in the ratio of 75:25, respectively. The total unaudited unrestricted net position available to be allocated to reserves on July 1, 2023 was $17,523,943.

Through the first quarter of Fiscal Year 2023-24, the District expended $670,164 for capital projects leaving a remaining total reserve balance on September 30, 2023 of $16,853,780.

DISCUSSION

Background

On June 20, 2023, the Board approved the District's Fiscal Year (FY) 2023-24 Operating Budget and the District's FY 2024-28 Capital Improvement Program (CIP) that included an appropriation of $18.5 million in expenses, including $3.2 million in unrestricted funds to the FY 2023-24 CIP.

Present Situation

The District has appropriated reserve funds for FY 2023-24 as follows:

• Operations Reserves (120 days of O&M budget)	$ 5,035,660
• FY 2023-24 Capital Improvement Fund	$ 840,000
• FY 2023-24 Capital Replacement Fund	$ 2,335,000
• Elections and Special Studies	$ -
• Future Capital Improvements	$ 6,984,963
• Future Capital Replacements	$ 2,328,321
	$ 17,523,943

The District has expended $670,164 for capital expenditures through September 30, 2023 as follows:

• Capital Improvement Fund	
○ Backhoe Loader	$ 209,463
○ Tench Plates	$ 117,450
○ Chlorine Analyzers Shallow Wells	$ 399
○ Derr Street Watermain Looping	$ 1,539
○ Truck Replacements	$ 65,943
TOTAL	$ 394,794
• Capital Replacement Fund	
○ Locust/Summit Alley Watermain	$ 179,799
○ Chlortech System Replacement	$ 48,700
○ 9829 Waterman Drainage Improvements	$ 40,028
○ Plotter	$ 6,791
○ Admin Storage Building Improvements	$ 51
TOTAL	$ 275,369

The District's remaining reserve fund balances as of September 30, 2023 are as follows:

• Operations Reserves (120 days)	$ 5,035,660
• FY 2023-24 Capital Improvement Fund	$ 445,206
• FY 2023-24 Capital Replacement Fund	$ 2,059,631
• Elections and Special Studies	$ -
• Future Capital Improvements	$ 6,984,963
• Future Capital Replacements	$ 2,328,321
	$ 16,853,780

ENVIRONMENTAL CONSIDERATIONS

There are no environmental considerations associated with this report.

STRATEGIC PLAN CONFORMITY

This item conforms to the FRCD/EGWD's 2020-2025 Strategic Plan. Developing and adopting annual budgets that are balanced through cost saving measures or transfers from operating reserves is specifically identified as an objective in the Fiscal Responsibility section of the Strategic Plan.

FINANCIAL SUMMARY

There is no financial impact with this report. Staff has provided a copy of the September 30, 2023, Quarterly Capital Reserves Review (attached) for the first quarter.

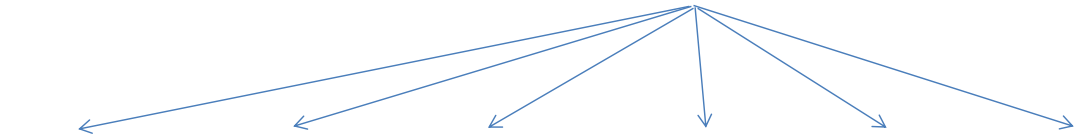
Respectfully submitted,

PATRICK LEE
FINANCE MANAGER/TREASURER

Attachment

ELK GROVE WATER RESERVES
Fiscal Year 2023-24
As of September 30, 2023

Total Available $ 17,523,943 at 7/1/2023 (unaudited)



Operating Reserves	Capital Improvements	Capital Replacements	Elections/ Special Studies	Future Capital Improvements	Future Capital Replacements
Needed	Funded	Funded	Funded	Funded	Funded
$ 5,035,660	$ 840,000	$ 2,335,000	$ -	$ 6,984,963	$ 2,328,321
Available	Expended	Expended	Expended	Expended	Expended
-	$ 394,794	$ 275,369	$ -	$ -	$ -
Remaining	Remaining	Remaining	Remaining	Remaining	Remaining
$ 5,035,660	$ 445,206	$ 2,059,631	$ -	$ 6,984,963	$ 2,328,321

Capital Improvement Funds

Supply/Dist. Improvements	Treatment Plant Improvements	Bldng/Site/Veh. Improvements	Unforeseen Capital Projects
Funded	Funded	Funded	Funded
$ 329,000	$ 20,000	$ 441,000	$ 50,000
Expended	Expended	Expended	Expended
$ 1,539	$ 399	$ 392,856	$ -
Remaining	Remaining	Remaining	Remaining
$ 327,461	$ 19,601	$ 48,144	$ 50,000

Capital Replacement Funds

Supply/Dist. Improvements	Treatment Plant Improvements	Bldng/Site/Veh. Improvements	Unforeseen Capital Projects
Funded	Funded	Funded	Funded
$ 1,465,000	$ 175,000	$ 645,000	$ 50,000
Expended	Expended	Expended	Expended
$ 179,799	$ 48,700	$ 46,870	$ -
Remaining	Remaining	Remaining	Remaining
$ 1,285,201	$ 126,300	$ 598,130	$ 50,000

October 17, 2023

TO: Chair and Directors of the Florin Resource Conservation District

FROM: Richard Ko, Engineering Technician I

SUBJECT: **LEAD SERVICE LINE INVENTORY**

RECOMMENDATION

This item is presented for discussion purposes only. No action by the Florin Resource Conservation District Board of Directors is requested at this time.

SUMMARY

The Lead Service Line Inventory is one of the major requirements under the Lead and Copper Rule Revision (LCRR). The United States Environmental Protection Agency (EPA) established the LCRR in January 2021 in order to better protect the public from lead and copper exposure in drinking water. The regulation mandates public water systems conduct an inventory of all service lines in their water systems. The purpose of the inventory is to identify and document any lead service lines within water systems. The LCRR requires public water systems to complete and submit lead service line inventories to their respective state water agencies by October 16, 2024.

DISCUSSION

Background

The LCRR requires all public water systems to complete lead service line inventories by October 16, 2024. Under the LCRR, a service line is considered to be a portion of pipe which connects from a water main to the building inlet, regardless of service line ownership status. This differs from Elk Grove Water District's (EGWD) Provisions of Water Service Ordinance, which specifies ownership of the service line to be split between EGWD and the customer. In this case, EGWD owns the portion of the service line from the water main to the meter and the customer owns the portion from the meter to the building inlet. The Lead Service Line Inventory must include all service lines, regardless of ownership status. Therefore, the entire service line must be inventoried, both the EGWD and customer-owned portions of the service line.

Present Situation

EGWD is in the process of conducting the inventory of all service lines within the water system. This project identifies and documents all necessary information required for the inventory. EGWD will be using Esri's Lead Service Line Inventory solution to complete the inventory. This solution provides a template for mapping, mobile apps, and dashboards to quickly identify and record service line information. EGWD currently has 13,190 service lines within the water system. Out of the 13,190 service lines, 8,619 have been classified as non-lead by using the following verification methods:

- Historical records,
- Installation of service lines after California state lead ban (after January 1, 1986),
- Installation year of water mains,
- Service line diameter 4 inches or greater,
- Service line repair or replacement records,
- Field inspections.

This leaves the number of service lines constructed of unknown materials to be 4,571. To verify the unknown materials, the State Water Resources Control Board's Division of Drinking Water (DDW) allows predictive/statistical models as a method of identification on a case-by-case basis. The statistical model provides a method for completing the lead service line inventory without the need to visually inspect all unknown service lines.

EGWD has applied and has been approved by DDW to use the stratified random sampling method to determine the unknown materials of service lines. The stratified random sampling method requires a 95% confidence level with 5% margin of error and 50% sample proportion of the total number of service lines with unknown materials. Based on this method, the random sample size of service lines to inspect is 373.

The sample service lines will be randomly selected and visually inspected at the meter. Field staff will document the material of both the customer and EGWD-owned portions of the service line immediately adjacent to the meter. All inspection results, materials, and photos will be recorded and tracked by ArcGIS Field Maps on mobile devices. EGWD will have field staff inspect and verify all 373 service lines within a 10-month period or less. This is an average of approximately 40 inspections per month. Planned completion of the visual inspections is by July 2024. The deadline to complete and turn in the Lead Service Line Inventory to DDW is October 16, 2024.

ENVIRONMENTAL CONSIDERATIONS

There are no direct environmental considerations associated with this report.

STRATEGIC PLAN CONFORMITY

This item conforms to Strategic Goal 4, Protection of Public and Environmental Health, of the Strategic Plan which states to comply with all State and Federal Drinking Water Standards.

FINANCIAL SUMMARY

There is no direct financial impact associated with this report.

Respectfully submitted,

RICHARD KO
ENGINEERING TECHNICIAN I

October 17, 2023

TO: Chair and Directors of the Florin Resource Conservation District

FROM: Ben Voelz, Associate Engineer

SUBJECT: **REVISIONS TO ELK GROVE WATER DISTRICT STANDARD CONSTRUCTION SPECIFICATIONS AND STANDARD DETAIL DRAWINGS**

RECOMMENDATION

It is recommended that the Florin Resource Conservation District Board of Directors adopt Resolution No. 10.17.23.01, approving the 2023 revisions to the Elk Grove Water District Standard Construction Specifications and Standard Detail Drawings.

SUMMARY

The Elk Grove Water District (District) Standard Construction Specifications and Standard Detail Drawings (Standards) dictate the standard construction methods and materials by which all public drinking water infrastructure is installed or constructed within the District's service areas. Besides minor revisions, the District Standards have not been thoroughly updated to accommodate current construction methods and materials since their adoption by the Florin Resource Conservation District Board of Directors (Board) in 2005. The District Standards have now been updated to reflect current construction methods and materials that are approved by staff in compliance with all applicable State and Federal drinking water regulations. Per the District's Provisions of Water Service Ordinance No. 09.18.19.01, any changes to the District Standards shall be approved by the Board.

Staff recommends that the Board approve Resolution No. 10.17.23.01, adopting the 2023 revisions to the Elk Grove Water District Standard Construction Specifications and Standard Detail Drawings.

DISCUSSION

Background

The District Standards are used to specify standardized construction methods and materials approved by the District to construct or install public drinking water infrastructure within the District's jurisdiction. Staff, outside contractors, and outside developers are required to abide by the methods and materials described in the District Standards while constructing or installing public drinking water infrastructure on behalf of the District or otherwise. All

construction methods and materials are strictly enforced by the District as they are described in the District Standards.

In 2005, the Board formally adopted the current version of the District Standards that has been in use up to this point in time. Minor revisions to the District Standards were undertaken in 2020. However, the District Standards have not been thoroughly updated since their adoption in 2005. Per the District's Provisions of Water Service Ordinance No. 09.18.19.01, any changes to the District Standards shall be approved by the Board.

Present Situation

Staff has updated the District Standards to reflect current construction methods and materials approved by the District in compliance with all applicable State and Federal drinking water regulations.

Staff recommends that the Board approve Resolution No. 10.17.23.01, adopting the 2023 revisions to the Elk Grove Water District Standard Construction Specifications and Standard Detail Drawings.

ENVIRONMENTAL CONSIDERATIONS

Adopting the revised District Standards does not, in and of itself, have a physical effect on the environment. Any environmental considerations related to the enforcement of the District Standards will be addressed on a case-by-case basis consistent with the California Environmental Quality Act (CEQA).

STRATEGIC PLAN CONFORMITY

The recommendation made in this staff report conforms to Strategic Goal 3, Planning and Operational Efficiency. Strategic Goal 3 directs the District to update the Standard Construction Specifications and Standard Detail Drawings. Adopting the proposed resolution specifically conforms to this goal.

FINANCIAL SUMMARY

There is no financial impact associated with adopting the proposed resolution.

Respectfully submitted,

BEN VOELZ
ASSOCIATE ENGINEER

Attachment

RESOLUTION NO. 10.17.23.01

A RESOLUTION OF THE FLORIN RESOURCE CONSERVATION DISTRICT BOARD OF DIRECTORS APPROVING THE 2023 REVISIONS TO THE ELK GROVE WATER DISTRICT STANDARD CONSTRUCTION SPECIFCATIONS AND STANDARD DETAIL DRAWINGS

WHEREAS, the Florin Resource Conservation District (District) is a Resource Conservation District organized pursuant to Division 9 of the California Public Resources Code, Sections 9001, et seq. (Resource Conservation Law); and

WHEREAS, the District is formed for the purposes delineated in the Public Resources Code Section 9001 and all things necessary to carry out the provisions of the Resource Conservation Law and adopted District Bylaws; and

WHEREAS, the 2005 version of the Elk Grove Water District Standard Construction Specifications and Standard Detail Drawings (Standards) were reviewed by supervisory and administrative staff; and

WHEREAS, comments from staff have been incorporated into the final 2023 version of the Standards; and

WHEREAS, the adoption of the revised Standards does not, in and of itself, have a physical effect on the environment. Any environmental considerations related to the enforcement of the Standards will be addressed on a case-by-case basis consistent with the California Environmental Quality Act (CEQA); and

WHEREAS, the adoption of the revised Standards conforms to Goal No. 3, Planning and Operational Efficiency, of the Florin Resource Conservation District/Elk Grove Water District's 2020-2025 Strategic Plan; and

WHEREAS, there is no financial impact associated with adopting the revised Standards.

NOW, THEREFORE, THE FLORIN RESOURCE CONSERVATION DISTRICT BOARD OF DIRECTORS DOES HEREBY RESOLVE:

SECTION 1. The Board of Directors hereby adopts the foregoing recitals as true and correct and incorporates them herein by reference.

SECTION 2. The 2023 revisions to the Elk Grove Wate District Standard Construction Specification and Standard Detail Drawings shall be approved as incorporated herein and attached hereto as Exhibit "A".

SECTION 3. The Board Secretary shall certify the adoption of this Resolution.

SECTION 4. This Resolution shall take effect immediately upon its adoption.

PASSED, APPROVED AND ADOPTED by the Florin Resource Conservation District Board of Directors on this 17th day of October 2023 by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Tom Nelson
Chair

ATTEST:

_____
Stefani Phillips
Board Secretary

APPROVED AS TO FORM:

_____
Andrew Ramos
General Counsel

EXHIBIT "A"

"ELK GROVE WATER DISTRICT STANDARD CONSTRUCTION SPECIFICATIONS AND STANDARD DETAIL DRAWINGS"

[Attached behind this cover page]

Elk Grove Water District

A DEPARTMENT OF THE
Florin Resource Conservation District

STANDARD CONSTRUCTION SPECIFICATIONS
STANDARD DETAIL DRAWINGS
CONSTRUCTION NOTES

September 2023

Elk Grove Water District

9829 Waterman Rd., Elk Grove, California 95624
Telephone (916) 685-3556

STANDARD CONSTRUCTION SPECIFICATIONS
STANDARD DETAIL DRAWINGS

Approved by the Board of Directors - January 2005 Effective: January 2005

Last Revisions: Standard Construction Specifications – September 2023
Standard Detail Drawings – September 2023
Construction Notes – September 2023

Approved By:

General Manager: B. M. Kamilos

Bruce M. Kamilos, P.E.

STANDARD CONSTRUCTION SPECIFICATIONS
STANDARD DETAIL DRAWINGS
CONSTRUCTION NOTES

Price: $25.00 (tax included)

Copies of these specifications may be purchased at the Elk Grove Water District office at 9829 Waterman Road, Elk Grove, California, 95624. Contact Elk Grove Water District at 916-685-3556 for all mail order requests and associated fees for postage.

Specifications and standard detail drawings may be viewed and downloaded at:

www.egwd.org

PREFACE

All portions of these Standard Construction Specifications, which place any duty or responsibility upon personnel or agencies of Elk Grove Water District or other public entity, are intended for use in those contracts entered into by public entities and administered by Elk Grove Water District. Any use of these Standard Construction Specifications by any other person, persons, or entity shall not create or imply the assumption of any liability or responsibility by Elk Grove Water District or any public entity authorized to use these Standard Construction Specifications.

Unless otherwise excluded, Section 4, inclusive of these Standard Construction Specifications, shall apply to all construction projects administered and/or inspected by Elk Grove Water District, and to construction of private development within public rights of way or easements and for dedication or incorporation into Elk Grove Water District facilities.

ELK GROVE WATER DISTRICT

Elk Grove Water Works (EGWW) was formed in 1893 to serve water to homeowners in the unincorporated area of Sacramento County, 15 miles south of the City of Sacramento, known as the town of Elk Grove. EGWW became a privately owned company in 1906 and had remained solely owned by the Jones family until December of 1999. In December of 1999 the Florin Resource Conservation District acquired the EGWW and changed the name to Elk Grove Water Service (EGWS) and then eventually to Elk Grove Water District (EGWD). EGWD is governed by Division 9 of the Public Resource Code with a Board of Directors consisting of five members.

The primary water supply source for EGWS is groundwater. Four deep wells and three shallow wells are in operation as of September 2023. They range in output from 600-1,800 gallons per minute. Distribution system pressures ranges from a minimum of 40 pounds to a maximum of 60 pounds through normal and peak demand periods. EGWS has additional supply sources from Sacramento County Water Agency (SCWA).

EGWD currently serves approximately 13,000 residential, commercial and industrial customers, representing a population base of over 47,000. In addition, EGWD provides water for fire protection as required by Consumnes CSD Fire Department. EGWD has one office located at 9829 Waterman Rd., Elk Grove, CA 95624. The phone number is (916) 685-3556. EGWD General Manager is Bruce M. Kamilos.

Elk Grove Water District

A DEPARTMENT OF THE
Florin Resource Conservation District

STANDARD CONSTRUCTION SPECIFICATIONS

September 2023

FINAL

TABLE OF CONTENTS

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SECTION 1. PURPOSE AND DEFINITIONS

1-1 PURPOSE

The purpose of the Plan Submittal and Construction Standards is to provide standards to be applied to water system additions and improvements to be accepted by EGWD. These standards shall apply to the design, preparation, and execution/implementation of plans for construction of water supply facilities and related improvements within the EGWD service area.

1-2 DESIGN PRACTICE

Any items or improvements not included in this Plan Submittal and Construction Standards shall be designed in accordance with Sacramento County Standard Construction Specifications, Consumnes CSD Fire Department, accepted water industry engineering practice and standards, and as reviewed/approved by Elk Grove Water District.

1-3 DEFINITIONS

Whenever the following terms or titles are used, the intent and meaning shall be as follows:

(a) EGWD

Shall mean the Elk Grove Water District.

(b) Consulting Engineer

Shall mean any person or persons, firm, partnership or corporation legally authorized to practice civil, mechanical, or electrical engineering in the State of California.

(c) Developer

Shall mean any person or persons, firm, partnership, corporation, or combination thereof, financially responsible for the work involved.

(d) Contractor

Shall mean any person or persons, firm, partnership, corporation, or combination thereof, responsible for accomplishing the work involved.

(e) Engineer

Shall mean the EGWD Engineer employed or retained by EGWD to provide engineering advice and services.

(f) Development

Shall mean the act or process of any construction on properties as well as subdivision improvement.

(g) Improvements

Shall mean any water system additions and improvements to the EGWD System.

(h) Standard Construction Specifications

Shall mean the latest Standard Construction Specifications adopted by EGWD governing the construction of Water System Improvements.

(i) Standard Drawings

Shall mean those drawings included herein, approved by the EGWD, which illustrate and govern the design and construction of Water System Improvements.

(j) As-Built Drawings

As-built drawings shall show the exact location of all underground work. All underground components of the water system and/or sprinkler system shall be located by field measured dimensions, either from fixed structures using at least two points as a measure of distance in the North-South direction and two points as a measure of distance in the East-West direction. These points will act as survey datum control necessary to locate the new facilities.

(k) Contract Documents

Shall mean those documents specific to the project and construction requirements thereof, in addition to those required by EGWD Standard Construction Specifications.

(l) Proposal

Shall mean a project bid package.

(m) AWWA Standard

Shall mean the current version of the cited American Water Works Association standard.

(n) ANSI

Shall mean the current version of the cited American National Standards Institute standard.

(o) USC

Shall mean the University of Southern California Foundation for Cross Connection Control and Hydraulic Research.

(p) ASTM

Shall mean American Standard Testing Methods.

(q) Improvement Plan Processing Fee Deposit

Shall mean the deposit fee paid to EGWD by the developer at the time of plan submittal based upon the number of lots, building units or EDU's.

(s) Sacramento County Standards

Shall mean County of Sacramento, Public Works Agency Standard Construction Specifications, September 2008 or most recent update.

(t) Consumnes Community Services District/Consumnes CSD Fire Department (CSDFD)

Shall mean the fire agency responsible for the fire protection services within the EGWD service area.

(u) SCWA

Shall mean Sacramento County Water Agency.

(v) State Specifications

Shall mean the State of California, Department of Transportation, Standard Specifications, 2022 Edition or most recent update.

SECTION 2. GENERAL REQUIREMENTS

2-1 PLANS BY AN APPROPRIATE ENGINEER

All plans and specifications for improvements submitted to the EGWD shall be prepared by a California Registered Consulting Engineer of the appropriate discipline of engineering applicable to the work submitted.

2-2 IMPROVEMENT PLAN SUBMITTAL

Improvement plans and deposit shall be submitted and required prior to plan approval. The submittal shall consist of the following:

(a) One (1) set of complete digital plans and specifications in PDF format and any required computations, test data, and other material requested by the EGWD Engineer. Improvement plan submittal can be delivered electronically through email to the EGWD Engineer or physically to the EGWD Office on a thumb drive.

(b) Improvement plan processing fee per Appendix E. One copy of alterations or revisions to the submitted plans, with the corrections marked or indicated thereon, will be returned electronically to the Consulting Engineer for corrections. One (1) corrected set of plans shall be resubmitted electronically to EGWD.

2-3 PLAN SHEET REQUIREMENT

Improvement plans should be delivered to EGWD as necessary for plan checking and review. Improvement plans and drawings shall conform to the following EGWD Drafting Standard and medium requirements:

(a) Paper and Scaling Requirements

All improvement plans shall be prepared on a preferred 22" x 34" or alternatively 24” x 36” layout. Scales: horizontal 1" =20', 40' or 50', vertical 1" = 2', 4' or 5', respectively, but only the scale, horizontal and vertical, for which the sheet was intended shall be used.

(b) Drafting Standards

All line work must be sufficiently clear, sharp and heavy to be legible on a half-size 11" x 17" format. Letters and numbers must be 1/8-inch minimum height, well formed and sharp. Numerals showing profile elevations shall not be bisected by station grid lines. Dimension lines shall be terminated by sharp solid arrowheads. Computer-aided drafting format is required, with a thumb drive containing the AutoCAD data files for the development, suitable for incorporation into the EGWD data base.

(c) Title Block

Each sheet within the set of drawings shall have an approved title block showing the sheet title, page number, date, scale the Consulting Engineers name, signature stamp and license number, the street address or Assessors Parcel Number (APN) and the name of the subdivision project or assessment district.

(d) General Information Requirements

1. The following information shall be listed on the cover or title sheet of plans, or on the first sheet if there is no title sheet:

a. Location Map
b. Index of sheets
c. Legend of symbols

2. In addition, the following information shall be shown on the water plan and/or the title sheet:

a. The entire subdivision or parcel and proposed project
b. EGWD boundary (if on, or adjacent to the project site) and nearby existing facilities
c. Street names and widths
d. Adjacent subdivisions, including lot lines and lot numbers
e. Signature blocks in the lower right hand corner of the sheet for approval by the appropriate representative of the EGWD.

3. Each set of plans shall include one sheet depicting entire water plan.

(e) Plan Details

In addition to other requirements of these Construction Standards, the following details shall be shown on water plans submitted for approval.

1. Right-of-way lines, the boundaries of lots, easements, section lines and corners, land grant lines and temporary construction easements, both existing and proposed, shall be shown on the plans. All right-of-way and easement lines shall be properly dimensioned and identified.

2. Topography and Existing Utilities - All pertinent topographic features shall be shown, such as street lines, medians, driveways, curbs, sidewalks, location and size of storm and sanitary sewer lines, water lines, gas lines, telephone conduits, other underground utilities, existing structures, houses, trees, (six inches in diameter and larger) and other foliage, traffic signals, street lights and pull-boxes, underground electrical conduits, drainage ditches, utility poles, fire hydrant, retaining walls, masonry structures, and all other features of the area which may affect the design requirements. When a potential utility conflict exists, As Built evaluations of the

utilities shall be verified by the Consulting Engineer. The best available information shall be used and shown to the best ability of the Consulting Engineer after coordination with the Utility providers, even if the best available information may have inherent inaccuracies.

3. Profiles - Plans shall include profiles of all proposed water mains whenever the pipeline diameter will be 8 inches or greater. The profile shall show all crossing and closely paralleling sewer, storm drains and utilities. The existing ground and/or finished grade line over the pipeline shall be shown.

4. Stationing and Orientation shall be as follows unless modifications to the following have been accepted prior by EGWD:

i) Stationing on plan and profile shall read from left to right.
ii) Sacramento County Standards for stationing shall be used.
iii) Stationing shall increase from south to north or from west to east.
iv) Plans shall be arranged so that North arrow points toward the top or upper right.

5. Bench Marks - The bench marks and datum shall be clearly delineated on the plans as to location, description and elevations. The datum shall be 1929 North American Datum (U.S.G.S. or U.S.D. & G.S.). Consulting Engineers shall contact Sacramento County or City of Elk Grove for location and elevation of the nearest official benchmark.

6. Special Notes and Details - Special notes shall be included to clarify the design. EGWD Standard Detail Drawings and Construction Notes may be reproduced and included within the plans.

2-4 APPROVED PLANS

One (1) digital set of complete plans and specifications for all proposed improvements including any necessary dedications shall be submitted in PDF format to EGWD for approval. Plans must be approved and signed by an authorized representative of EGWD prior to beginning improvement construction.

All materials shown on plans and/or used in construction shall be from the approved materials list as listed in part B of the Water Service Standards described herein. Refer to Section 2-18 for the materials approval process.

Approved plans must be resubmitted, if not constructed after twelve (12) months of date of signature approval by EGWD.

Additionally, plans will not be approved until each of the following items has been submitted as required:

(a) One (1) digital set, in PDF format, of the approved development plans including the water system improvement plans. The entire water system in plan view shall be detailed on one

sheet and submitted in AutoCAD R12 (or later) on a thumb drive. The water system layout shall include all water-related facilities, streets, parcels, lot numbers etc.

(b) At EGWD's request, all proposed water systems shall be computer modeled using an industry accepted Hastaed Methods modeling software program, subject to field verification of tie-ins, if required by the utility. A thumb drive of the water system data file using AutoCAD R12, or later, should be provided before EGWD final approval. All water facilities, associated streets, parcels, etc. shall be included.

(c) One plan sheet showing water system on an Elk Grove area location map.

(d) A plat map of the subdivision with respect to the water system showing the scale and individual measurements of each lot shall.

2-5 FINAL ACCEPTANCE

The following items shall be submitted prior to final acceptance of the project:

(a) Actual construction costs of the water system paid by the developer/applicant with itemized costs for transmission mains, distribution mains, services, hydrants, and valves as well as linear feet of different sized pipe.

(b) As-built drawings with specific measurements locating individual services, valves, gate valves etc. Refer to Section 2-15, of these Specifications, for additional as-built information.

2-6 IMPROVEMENT PLAN PROCESSING FEE & METER INSTALLATION CHARGES

Improvement plan processing fee and meter installation charges are based on size of construction project. Refer to the Schedule of Charges, Rates, Fees, and Deposits Ordinance, for the latest plan processing fee. Refer to the Water Connection Fees Ordinance for the latest meter charges. Both ordinances may be found on EGWD's website at www.egwd.org.

2-7 CONTRACTORS LICENSE AND INSURANCE

All contractors performing work on projects which are to be accepted by EGWD must be duly licensed under the laws of the State of California to perform such work. All contractors must be approved by EGWD. Contractors shall furnish proof of current license and insurance that meets or exceeds EGWD minimum insurance requirements prior to beginning work.

2-8 REFERENCE TO SPECIFICATIONS AND STANDARDS

Standards referred to within this document (such as AWWA, ANSI, etc.) shall be the latest officially adopted version.

2-9 WORK IN CITY OF ELK GROVE AND COUNTY OF SACRAMENTO RIGHTS OF-WAY, EASEMENTS AND WATERWAYS

Proposed work in city right-of-ways, easements, and water ways shall conform to the requirements of the City of Elk Grove and appropriate permits shall be obtained by the contractor, at the contractor's own expense, and copies provided to the EGWD prior to start of construction.

2-10 COMPLIANCE WITH STATUTES

The Contractor shall conduct all work in compliance with all existing State and Federal code laws and County and Municipal ordinances and regulations limiting or controlling the work (permitting, environmental, safety, etc.).

2-11 TRAFFIC CONTROL

The Contractor shall provide EGWD with a traffic control plan prior to start of construction. The plan will identify measures in accordance with the current Caltrans Manual of Traffic Controls or as required by County, State or other permitting agencies for all work within an area accessible to public traffic.

2-12 SAFETY PLAN

The Contractor shall provide EGWD with a safety plan prior to start of construction. The safety plan shall be in accordance with County, State, or other permitting agency requirements for shoring, bracing, sloping and all provisions necessary to protect workers from the hazard of caving ground for all excavations five feet or more in depth.

2-13 PRE-CONSTRUCTION MEETING

Contractor will arrange a pre-construction meeting one (1) week prior to construction, and shall be responsible for location of all existing utilities. Meetings will be held at the project site with an EGWD engineering and construction service representative. Inspection schedules require a minimum of two (2) working days (48 hours). EGWD requires three (3) working days advance notice of any shut down or interruptions of normal service for installation and hook-ups. The Contractor shall have a copy of the EGWD Construction Specifications and Standard Drawing Details on-site at all times. Pre-construction meetings will not be scheduled until after all EGWD fees have been paid in full, and a complete set of construction documents have been provided to EGWD.

2-14 CONSTRUCTION COSTS

The contractor shall provide EGWD with a detailed construction cost estimate for those facilities to be contributed to EGWD.

2-15 AS-BUILT DRAWINGS

The Contractor shall maintain a neat and accurately marked set of record drawings. Drawings shall be subject to the inspection of an EGWD representative at all times and shall be kept current weekly with all work instructions, change orders, and construction adjustments shown thereon and initialed by the inspector.

Upon final inspection, the Contractor shall submit to EGWD one (1) set of completed as-built drawings in PDF format. As-built drawings shall show the exact location of all underground work. All underground components of the water system shall be located by field measured dimensions, from acceptable fixed structures, including but not limited to, fire hydrants, drop inlets, manholes, streetlights or others as approved by EGWD using at least one point as a measure of distance in the North-South direction and one point as a measure of distance in the East-West direction. These points will act as survey datum control necessary to locate the new facilities.

As-built plans shall clearly define the location of pertinent water supply appurtenances including but not limited to valves, blow-offs, air release valves, fire hydrants, etc.

The work will not be formally accepted until as-built drawings have been accepted by EGWD.

2-16 CONFLICT, ERRORS AND OMISSIONS

Approval of plans by EGWD will not be granted that are in conflict with any California State Law, Sacramento County Code, these standards, conditions of approval, or good engineering practice, even though such errors, omissions or conflicts may have been overlooked in the EGWD review of plans.

2-17 OTHER AGENCY NOTIFICATIONS

The Consulting Engineer is responsible for obtaining the approval and necessary permits from government or municipal agencies when their facilities and/or jurisdictions are involved.

2-18 MATERIALS APPROVAL

At least one week prior to the pre-construction meeting, the Contractor shall furnish to EGWD for approval, data on materials to be used in constructing the new water facilities to be turned over to EGWD upon Final Acceptance, including manufacturer's literature, actual location of manufacturer, model number and proof of compliance with all applicable standards as requested in the proposal. Refer to the Approved Materials List in Appendix A, of these Specifications.

2-19 INSPECTION REQUIREMENTS

Any improvement for which it is intended that the EGWD will assume ownership and/or maintenance responsibility shall be inspected during construction by the EGWD inspector. Each phase of construction shall be inspected and approved prior to proceeding to subsequent phases.

The Contractor shall notify EGWD two (2) days prior to the commencement of construction and

shall furnish EGWD at least forty-eight (48) hours notice when inspections are required.

EGWD Inspectors shall have access to the work at all times during its construction and shall be furnished access and assistance for ascertaining that the materials and the workmanship are in accordance with the requirements and intent of the contract drawings and specifications. Any work constructed without inspection as provided above, except with the specific written consent or approval of EGWD, or constructed contrary to the instructions or order of EGWD or its authorized representative, must, if requested by EGWD, be uncovered for examination and properly restored at the Contractors expense.

The inspection of the work does not release the Contractor of any of its obligation to fulfill the contract as prescribed. Work and materials not meeting such requirements shall be made good and unsuitable work or material may be rejected, notwithstanding that such works or materials have been previously inspected by EGWD or that payment therefore has been included in progress estimate.

2-20 STANDARD CONSTRUCTION SPECIFICATIONS AND DETAIL DRAWINGS

The Contractor shall have accessible at all times their own copy the EGWD Standard Construction Specifications and Detail Drawings at the project site. EGWD's inspector's copy of the Standard Construction Specification and Detail Drawings will not be a valid copy of the Specifications at the project site.

A printed copy of the Standard Construction Specifications and Detail Drawings are available at the EGWD office and may be purchased for $25. The EGWD office is located at 9829 Waterman Rd.., Elk Grove, CA 95624. A copy of the Standard Construction Specifications and Detail Drawings may also be mailed upon request at the rate of $25 plus an additional fee for shipping and handling. Contact EGWD at (916) 685-3556 for additional information. The Standard Construction Specifications and Detail Drawings may also be downloaded for free from EGWD's website at www.egwd.org

SECTION 3. DOMESTIC WATER SUPPLY SYSTEM DESIGN

3-1 INTRODUCTION

Engineering design of domestic water facilities within the EGWD service area shall conform to the design standards described in the following paragraphs.

3-2 INTENT OF CRITERIA

The intent of these criteria is to provide a potable water system that will be dependable and most efficiently convey the required amount of water meeting State Department of Health Services requirements throughout the distribution system with the least cost, both in construction and in maintenance. In establishing the required amount of water, the estimated maximum day demand and the estimated peak hour demand shall be used as approved by the EGWD.

3-3 CURRENT STANDARDS

Pertinent and current requirements of the following agencies or standards shall be complied with. In case of conflict, the design criteria of the EGWD, as established herein, shall govern.

(a) Environmental Protection Agency Drinking Water Regulations.

(b) Laws and Standards of the (State of California, Department of Health Services), relating to Domestic Water Supply, and particularly therein the Standards of Minimum Requirements for Safe Practice in the Production and Delivery of Water for domestic Use, as approved by the California Section of American Water Works Association.

(c) Standard Specifications of the County of Sacramento, Department of Public Works.

(d) Sacramento County Code, Section 6.28, regulation the installation, operation, construction, reconstruction, and repair of well and pumps.

(e) Title 17, Chapter V, Section 7583-7622, California Administrative Code, regarding cross-connections.

(g) Consumnes CSD Fire Department requirements and Insurance Services Office Grading schedule for Municipal Fire Protection and Guide for Determination of Required Fire Flow.

(h) California Well Standards, Department of Water Resources.

(i) AWWA, current standards.

(j) State of California, Department of Transportation, Construction Standards.

3-4 WATER SUPPLY QUALITY

The quality of the water shall conform to the Environmental Protection Agency Drinking Water Regulations, California Code of Regulations Title 22 Drinking Water Regulations, and these specifications where applicable.

3-5 WATER SUPPLY PRESSURE

Normal operating pressures of not less than 20 psi or more than 120 psi shall be maintained at service connections to the distribution system.

3-6 RATE OF USE

For typical demands to be used in proposed single family units, see the table below.

Average Day Demand	0.5 gallons per minute (gpm)
Maximum Day Demand	1.0 gpm (2.0 x Average Day Demand)
Peak Hour Demand	2.0 gpm (4 x Average Day Demand)

For developments other than single family units, the developer shall submit estimated unit demands for each different type of proposed land use.

For extension of existing systems consisting of more than 500 services, the design shall be based on records of the average rate of consumption per service on the day of maximum use. Special consideration shall be given to areas zoned for multiple housing, schools, commercial, and industrial development. New storage facilities and/or well production/ treatment facilities may be considered in meeting the proposed development demand requirements.

3-7 OPERATING CONDITIONS

(a) Operating Pressures

A normal operating pressure of 20 pounds per square inch gauge (psig) shall be maintained within the EGWD system at all times.

TABLE 3-7
PRESSURE STANDARDS

Condition	Pressure Standard (psig)
Normal conditions Operating pressure Service connection pressure	 ≥20 ≤120
Hourly maximum demand conditions Operating pressure	 ≥30
Hourly minimum demand conditions Operating pressure	 ≤120 and ≥20

3-8 REQUIRED FIRE FLOWS

Required fire flows are to be established which meet the requirements of the Cosumnes Community Services District (CSD) Fire Department and the California Fire Code (CFC). Any deviations from the CFC shall be provided in these standards.

The minimum required fire flow for single family residential water systems shall be 2,000 gallons per minute. Lesser fire flow requirements in conformance with CFC may be allowed with prior approval of Consumnes CSD Fire Department, but will restrict development projects to the associated maximum allowable "Fire Area" square footage in the CFC. An increase in "Fire Area" square footage will not be allowed as a result of reduced fire flow requirements for automatic fire sprinkler systems without prior approval by Consumnes CSD Fire Department. The minimum required fire flow for multi-family residential water systems shall be per CFC requirements. The minimum required fire flow for commercial/industrial water systems shall be 3,000 gpm.

In addition to providing capacity to meet water use created by residential, commercial, industrial, and public demands, EGWD must be able to supply fire demand flows required by Cosumnes CSD Fire Department. In most cases, sizing of the transmission and distribution facilities are controlled by fire flow requirements. These minimum fire flows represent the additional flows required above the maximum day demands to meet fire protection needs. Minimum operating pressure at the fire flow location during a fire flow is 20 psig, with the minimum operating pressure in the remainder of the EGWD system of at least 30 psig.

3-9 WELL AND PUMPING PLANT DESIGN

All phases of well, pumping plant and treatment facility design shall be closely coordinated with, and shall be under the direction of the EGWD engineer.

All water well design and construction shall conform to the latest bulletin of the State of California, Department of Water Resources and Water Well Standards and California Code of Regulations Title 22 Drinking Water Regulations.

3-10 DISTRIBUTION SYSTEM DESIGN

Sizing of mains shall be such that the stated normal pressures and the minimum requirements for main spacing and sizing are maintained and shall conform to Section 3-11, Distribution System Layout Requirements of these Standards.

3-11 DISTRIBUTION SYSTEM LAYOUT REQUIREMENTS

The water system layout requirements are as follows:

(a) Location of Water Main:

All water mains shall be installed within public utility easements or rights-of -way.

1. Water main location shall be 3 feet from lip of gutter on the north or west side of the street. Locations other than those mentioned above must be approved by EGWD.

2. Minimum cover for pipe in unimproved areas shall be thirty (36) inches and a maximum cover of fifty-four (54) inches from the flow line of curb and gutter within roadways or from finish grade out of roadway areas, unless specifically set forth in the Contract Documents or shown on the Plans. Minimum cover under roadways shall be thirty-six (36) inches for AWWA C900 polyvinyl chloride (PVC) pipe and thirty (30) inches for ductile iron pipe.

3. Minimum cover in open fields shall be sixty (60) inches for AWWA C900 PVC pipe and forty-eight (48) inches for ductile iron pipe.

4. If it is necessary to install a water main within a private road, the permanent easement shall be a minimum of fifteen (15) feet in width with a five (5) foot working easement on both sides. The water main shall be centered in the easement.

5. If it is necessary to install a water main within a landscape corridor, no trees shall be planted within five (5) feet of the water main. The water main shall be centered within a fifteen (15) foot water main easement.

6. Ten (10) feet shall be the minimum horizontal distance, outer diameter to outer diameter, between parallel water distribution and gravity or force sanitary sewer mains. In all instances the water main shall maintain a minimum of one (1) foot separation above the sewer main when installed in parallel. Separation may be less if it is in accordance with California Code of Regulations Title 22 Drinking Water Regulations and California State Department of Environmental Health requirements and approved by EGWD. Refer to Section 4-20 of these Standard Construction Specifications for additional information.

7. When crossing a storm drain, storm drain lateral, sanitary sewer main, or sanitary sewer service lateral, it shall be specified that the water distribution main be

installed a with a minimum of one (1) foot separation between the sewer line. If one (1) foot of separation cannot be maintained, mitigation measures subject to approval by the California Department of Water Resources – Division of Drinking Water and EGWD is required. No joints are allowed in the water main within ten (10) feet of each side of any sewer crossing, See EGWD Standard Drawing Detail W-12

8. In every instance where a water main is to be installed in a public right-of-way or easement, the City of Elk Grove shall be consulted to grant approval for Traffic Control during construction. Elk Grove Water District shall grant approval for the preferred location of the water main.

9. The developer shall accept the responsibility to move, remove or abandon water mains or service lines in conflict with improvements and re-establish service to existing customers with minimal disruption to service.

(b) Main Layout and Sizing

The distribution system shall be in grid form so that pressures throughout the system tend to become equalized under varying rates and locations of maximum demand. The minimum pressures and flows as specified shall govern design of the system.

The minimum size for water distribution mains necessary to adequately deliver domestic and public fire protection water to all new developments and construction of whatever kind or size shall be determined with reference to the Zoning Districts established by the City of Elk Grove, including any variance granted thereto, and specifically in compliance with the following provisions:

Zoning Districts	Minimum Water Main Size (inches)
Industrial (LI, LI/FX, HI)	12
Commercial (SC, LC, GC, AC, C-0)	12
Mixed Use (VCMU, RMU, BP, MP)	12
Mobile Home Park (MHP, RM-1, RM-2)	12
Residential, High Density (RD-20, RD-30, RD-40, and greater)	12
Public (O, PR, PS, Schools, Parks, etc.)	12
Quai-Public (Hospitals, Churches, Meeting Halls, etc.)	12
All Other Zoning *	8

Larger sized mains may be required to adequately handle design flows, as determined solely by the District.

(c) Valves, Hydrants and Blow-Offs

The distribution system shall be furnished with a sufficient number of valves so that no single shut-down will result in shutting down a transmission main, or necessitate the removal from service of a length of pipe greater than five-hundred (500) feet in school, commercial, industrial, or multiple-family dwelling areas or greater than eight-hundred (800) feet in other areas. In no case shall more than two fire hydrants be removed from service.

The valves shall be so located that any section of main can be shut down without going to more than three locations to close valves. Valves shall preferably be located at street intersections. Four (4) valves shall be placed where mains cross and three (3) valves shall be placed where mains tee.

Fire hydrants and blow-off assemblies shall be located as follows:

1. Transmission and distribution main valve actuators shall be located so that the valve boxes will be located adjacent to the gutter pan where possible. Locations other than those mentioned above must be approved by EGWD prior to construction.

2. Fire hydrants shall be connected to distribution mains only. Fire hydrants shall not be connected to transmission mains.

3. Fire hydrants shall be located to minimize the hazard of damage by traffic. They shall have a maximum normal spacing of five-hundred (500) feet measured along the street frontage in residential developments and three-hundred (300) feet in commercial developments. Within residential areas, all other hydrants shall be located on property lines between lots at a minimum distance of three (3) feet from back of walk to allow maintenance personnel access to a hydrant that has been damaged without being sprayed with water. Hydrants located at intersections shall be installed at the curb return or within five (5) feet if a drop inlet is present.

4. A fire hydrant or four (4) inch blow-off assembly shall be installed on all permanent dead end runs including cul-de-sacs. Two (2) inch blow-off assemblies shall be used on all temporary dead end runs. Wherever possible, the blow-off assemblies shall be installed in the street right-of-way, a minimum distance of three (3) feet from the lip of gutter. In no case shall the location be such that there is a possibility of back-siphonage into the distribution system.

5. The minimum size main serving a fire hydrant shall be eight (8) inch diameter pipe. The pipeline connecting the hydrant to the main shall be a minimum of (6) inch diameter with a gate valve installed at the main per Standard Drawing W-2A and W-2B.

(d) Service Lines

Service lines from the water main to the property line or edge of easement shall be installed

at the time the main is constructed. Service from mains installed in private roads shall extend one foot beyond the edge of the pavement. Service line criteria shall be as follows:

1. All water service shall be installed per Section 4-14 of these specifications.

2. The service line to an existing building shall be located so as to make the most direct connections to the existing structure.

3. Where dual water services are to be installed, a common trench is acceptable. Refer to Section 4-14 for dual water service installation requirements.

4. Normal size of a service line shall be one (1) inch diameter polyethylene pressure pipe meeting standards of AWWA C901 and in conformance with Section 4-14 of these specifications. Schools, commercial, industrial, or multiple-family units with higher demand shall be provided with larger service lines, materials subject to approval of EGWD.

5. All taps shall be made by a qualified contractor at the developer's expense and approved by EGWD. An EGWD inspector shall be present prior to beginning the tap or tie-in being made. All tapping sleeves must be approved by EGWD prior to commencing work.

6. The Contractor shall have all materials, fittings, tools, equipment and onsite appurtenances necessary to complete the connection and to repair and return to service the water line in the event of damage prior to commencing work on the tap.

Where water services are placed a meter box must be installed as shown on applicable EGWD Standard Detail Drawings. Water meters will be purchased by the developer at time of plan approval and installed by EGWD. Once a construction permit has been released to the developer and/or contractor, notification to EGWD must be made to schedule installation of the water meters.

Refer to Standard Detail Drawing W-23, Backflow Manifold Schematic for additional information on location of backflow manifolds on irrigation and domestic services.

(e) Fire Service Lines

A double detector-check valve and bypass meter is required on each fire service line into a building or looped private fire line. For looped fire service lines, a double detector-check valve and bypass meter is required at both connection points to the public water system. See Standard Detail Drawing W-10 and W-10A for specifications and typical installation details.

(f) Water Meters

Water meters shall be installed in all residential, commercial, industrial, multi-family, and

irrigation water services. Residential meters and meter boxes will be installed by EGWD after building permits are issued, not when water service lines are installed. Size of water meter shall not be less than the size of the service line unless approved by EGWD. See Standard Detail Drawing W-8A, W-8B and W-8C for specifications and typical installation details.

(g) Back-Flow Device

Back- flow devices are required in accordance with Title 17, Sections 7583-7605 of the California Code of Regulations. See EGWD Standard Detail Drawings for specifications and typical installation details.

(h) Air Release/Vacuum Valve

Air release/vacuum valve assemblies are required at high points in distribution system as determined by EGWD. See Standard Detail Drawing W-18 and Section 4-13 of these specifications for typical installation details.

(i) Water Pipe

Pipe used in the construction of water distribution systems shall be either ductile iron, or PVC pipe. Ductile iron may be used only when specifically approved by EGWD. The pipe and the method of placement shall conform to Section 4 of these Standards.

Joints for PVC pipe shall be J-M Ring-Tite gasket type joint seal. Fittings shall be mechanical joint. Solvent weld joints will not be allowed. Joints for Ductile Iron pipe shall be Push-On Tyton Joint Type for pipe sizes 3"-24" and for sizes 30"-36" Fastite Joint Type.

Pipes located between residential homes shall be AWWA C151 Class 350 Ductile Iron Pipe installed with six (6) inches of sand bedding and eight (8) mils of polyvinyl encasement. Backfill with sand to six (8) inches above the top of the pipe and a six (12) inch wide detectable warning tape shall be placed eighteen (18) inches above the pipe. The pipe shall be centered within a fifteen (15) foot wide easement.

(j) Locating Wire

All water pipe runs shall have a No. 10 gauge solid, insulated with one-sixteenth (1/16) inch insulation, soft-drawn copper wire laid along the pipe to facilitate location of the pipe at a later date. The wire shall be stubbed up inside each valve box and be placed as shown on Standard Detail Drawing W-6. All wire connections shall be stripped to bare wire connected with brass connectors shall be wrapped twice with 10mil PVC tape. Wire extending into the valve boxes shall have a one-sixteenth (1/16) inch polyvinyl chloride insulation. The contractor shall conduct a continuity test on all locating wire splices. Installation shall be in accordance with Standard Detail Drawing W-6.

SECTION 4. STANDARD CONSTRUCTION SPECIFICATIONS

4-1 GENERAL

Pipe used in the construction of water distribution systems shall be Ductile Iron Pipe (DIP) as specified in Section 4-5 or polyvinyl chloride (PVC) pipe as specified in Section 4-6, unless a particular typed is specified on the plans and in these Standards. All pipes shall be the regular product of a firm which has successfully manufactured comparable pipe for at least three years, and approved by EGWD.

All pipe, valves, fittings, connections, and appurtenances thereto shall conform to the provisions of these specifications or as specifically set forth in these Standards. EGWD will maintain a listing of approved hydrants and water source material and fittings which establish a standard of material quality for the EGWD system. Material used shall be limited to those on this listing. Alternate material items may be added to this list upon review and/or testing by EGWD.

(a) **Testing of Material:** All testing requirements of the ASTM and AWWA specifications shall be conducted by the pipe manufacturer or representative within the State of California and the resulting tests shall be certified by an established reputable firm operating in the testing materials field. Certification must accompany the delivery of the materials to the job site.

(b) **Installation:** All pipe, valves, fittings, and appurtenances shall be installed in accordance with the manufacturer's recommendations and according to accepted EGWD practice. Each section of pipe and each fitting shall be thoroughly cleaned out before it is installed. All pipe, fittings, valves, etc., shall be carefully lowered into the trench by suitable tools or equipment as to prevent any damage, particularly to the pipe lining and coating. When required by the Engineer, approved slings shall be used to lower the pipe. Under no circumstances shall pipe or accessories be dropped into the trench. Each section of pipe, before lowering into the trench, shall be examined for defects. Any defective or damaged pipe shall be reflected and removed from the job site.

The pipe shall be laid true and uniform to line and grade, with no visible change in alignment at any joint unless curved alignment is called for on the Plans, in which case the maximum deflection at any joint shall not exceed two and one-half (2-1/2) degrees for ductile iron pipe or one-half (1/2) the manufacturer's recommended deflection, whichever is less, unless prior approval by EGWD. Deflection and bending of polyvinyl chloride pipe shall not exceed the limits described in Standard Detail Drawing W-21.

The pipe shall have a minimum cover of thirty (36) inches and a maximum cover of fifty-four (54) inches from the flow line of curb and gutter within roadways or from finish grade out of roadway areas, unless otherwise shown on Plans.

Thrust blocks of Class B concrete shall be cast-in-place at all horizontal or vertical bends of 11-1/4 degree angle or more, at all tees or crosses which will be valved or plugged in such a manner that it can act as an elbow or tee. The thrust block shall extend from the

fitting to undisturbed soil, shall be kept clear of the joints, and shall be of such bearing area as to assure adequate resistance to the force to be encountered. Size of blocking shall be in accordance with Standard Detail Drawing W-3. Restrained joints shall be used on all fire hydrant installation as shown in standard detail drawing W-2A and W-2B.

Whenever existing utilities may cause conflict with placement of thrust blocks or where maintenance of facilities may become limited, restrained joints may be used in lieu of the above required thrust blocks. Refer to Standard Detail Drawing W-19 for all restrained joints.

Whenever pipe laying is discontinued for more than one hour, the open ends of all mains and fittings shall be closed with water-tight plugs or bulkheads. The plug or bulkhead shall not be removed unless, or until, the trench is dry and the Contractor is ready to proceed with the work. Pipe shall not be laid when the condition of the trench or the weather is unsuitable or when there is the possibility or foreign material entering the pipe. All pipe joining shall be in accordance with accepted best practices and as detailed in the manufacturers installation manual, except pipe deflection shall be in accordance with requirements stated above. All joint surfaces shall be clean before joints are made. Materials used in joining the pipe shall only be that furnished with the pipe or recommended by the manufacturer.

Where necessary to properly locate valves and fittings, the pipe shall be neatly and squarely cut to length, using methods recommended by the manufacturer.

When field cuts are made in PVC pipe, the cut ends shall be cut square and all burrs removed from the pipe interior. The beveling of the pipe ends shall be as specified by the manufacturer. Guide marks for joining the pipe, after cutting, must be made on the pipe in accordance with the manufacturer's specifications.

On all water systems, <u>except for systems being installed as part of new subdivision improvements</u>, the following shall be required:

1) There shall be no more than a maximum of three hundred (300) feet of trench allowed to remain open in unimproved areas, excluding manhole excavations, for each operation unless otherwise authorized by EGWD. The remainder of the trench shall be backfilled and compacted, and when in streets, opened to traffic as soon as possible.

2) Testing, flushing, placement of first lift of paving and cleanup shall follow pipe laying and service line construction as a continual operation, or as designated by the Engineer, with the provision that these phases of work shall be completed no later than fifteen (15) working days after starting construction in any portion of the project.

3) No more than 3,000 linear feet of water main shall be installed before starting installations of the water services, with this approximate sequence maintained throughout the construction project.

4-2 TRENCH EXCAVATION

Trench excavation shall include the removal of all materials or obstructions and the control of water as necessary to construct the work as shown or specified in the Contract. Unless otherwise shown or specified in the Contract, excavation shall be by open cut or as directed by EGWD.

Surface water shall not be allowed to enter any pipe trench and shall not be permitted to enter the existing downstream water pipe system.

(a) **Water Pipe:** Water pipe minimum and maximum trench widths shall be as shown on Standard Detail Drawing W-14 unless otherwise shown or specified in the Contract Drawings. If trench widths at the top of the pipe are exceeded by any amount, the Contractor shall provide stronger pipe or improved bedding and backfill conditions, as approved by EGWD to meet the changed load requirements and at the Contractors expense.

(b) **Pavement Cutting:** When in existing paved areas, the pavement shall be saw cut in neat lines. The width of the saw cut shall not be any greater than is required to properly install the pipe and not damage the edges of the pavement. Pavement shall be restored as per City of Elk Grove and/or the County of Sacramento Standard Construction Specifications.

(c) **Shoring and Bracing:** Shoring and bracing shall follow those requirements as specified in the City of Elk Grove and/or County of Sacramento Standard Construction Specifications.

(d) **Maximum Length of Open Trench:** At the end of each working day, there shall be no more than three-hundred (300) feet of open trench remaining open in unimproved areas. The remainder of the trench shall be backfilled and compacted, and when in streets, opened to traffic as soon as possible.

(e) **Special Foundation Treatment:** Whenever the bottom of the trench is soft or rocky, or, in the opinion of the EGWD Inspector, otherwise unsuitable as a foundation for pipe bedding, the unsuitable material shall be removed to a minimum depth of six (6) inches and replaced with crushed rock, gravel, or sand as directed by EGWD. When the trench bottom is cobbled or of any other material which might, in the opinion of EGWD, allow loss of sand backfill, the backfill material shall be crushed rock or gravel graduated so that one hundred percent (100%) will pass the three quarter (3/4) inch sieve and not more than fifteen percent (15%) will pass the number 8 sieve. Crushed rock or gravel and sand shall conform to Section 4-4 (b) of these Standards.

4-3 PIPE BEDDING AND BACKFILLING OF TRENCHES

(a) **Pipe Bedding:** Pipe bedding shall be in accordance with these Standards, specifically Section 4-5 for Ductile Iron Pipe (DIP) and Section 4-6 for PVC pipe. Pipe bedding shall be placed on a firm layer of bedding material and shall be bedded uniformly throughout its length.

(b) **Initial Backfill:** Initial backfill shall be in accordance with these Standards, specifically

Section 4-5 for Ductile Iron Pipe (DIP) and Section 4-6 for PVC pipe and conform to the requirements of Standard Detail Drawing W-14. Unless otherwise shown on the Plans, initial backfill for water distribution systems, including water mains, fire hydrant branch leads, and water services, shall be sand conforming to the requirements of Section 4-4 (a) of these Specifications.

Backfill material shall be carefully placed so as not to damage or disturb the pipe. Backfill shall be placed in layers not exceeding six (6) inches in depth before compaction. Compaction shall be done by mechanical, pneumatic or vibratory compaction equipment and not by ponding or jetting methods. The compacted material must achieve a relative compaction of at least ninety percent (90%) as determined by ASTM Designation: D 698.

(c) **Trench Backfill:** Trench backfill shall consist of material placed between the initial backfill and subgrade in paved areas or to the top of the trench in unpaved areas, unless otherwise shown or specified on the plans.

i) **Trenches greater than four (4) feet:** Backfill material may be native material excavated at the work site and placed per Standard Detail Drawing W-14. Material must be free of organic or other unsuitable materials. Rocks, stones and solid earth chunks exceeding three (3) inches in greatest dimension shall be removed from the trench backfill material.

Trench backfill shall be placed in layers not exceeding six (6) inches in depth before compaction. Until the total backfill above the top of the pipe exceeds three (3) feet, machine-placed backfill material shall not be allowed to "freefall" more than two (2) feet.

ii) **Trenches less than four (4) feet:** Backfill material shall be imported granular material, uniformly graded Class 2 aggregate base conforming to Section 26, "Aggregate Bases", of the State Specifications or 2-sack sand slurry. Imported granular material shall be placed in lifts not to exceed six (6) inches after compaction. Compaction requirements for imported granular material shall be the same as those for native material.

Unless otherwise shown or specified in the Contract Documents, compaction of all backfill material shall be by mechanical, pneumatic or vibratory compaction equipment. Ponding and jetting methods will not be permitted, except by written permission of EGWD.

Trench backfill shall be compacted to a relative compaction of not less than ninety percent (90%), as determined by ASTM Designation: D 1557. The top six (6) inches below the subgrade shall be compacted to a relative compaction of ninety-five percent (95%), except that trenches in easements outside the street right-of-way may be compacted to ninety percent (90%) relative compaction throughout the depth. Compaction testing outside of right-of-way, when required, will be performed and paid for by the Contractor. Costs for retesting of areas that fail to meet the required compaction will be paid for by the Contractor. Costs for all

compaction testing within right-of-way will be by EGWD and coordinated with prior approved testing laboratory as specified by EGWD.

4-4 CONSTRUCTION MATERIALS

(a) Graded Sand: Graded sand shall be free from vegetable matter, lumps, balls of clay, or adherent films of clay. The percentage of composition by weight of graded sand shall conform to the following gradations:

Graded Sand Gradations	
Sieve Size	**Percentage Passing by Weight**
9.5 mm (3/8")	100
4.75 mm (#4)	95 - 100
2.36 mm (#8)	90 - 100
1.18 mm (#16)	80 - 100
600 µm (#30)	65 - 100
300 µm (#50)	40 - 70
150 µm (#100)	0 - 30
75 µm (#200)	0 - 12

(b) Crushed Rock: A uniformly graded material that is the product of crushing rock or gravel, free of organic matter, oil, alkali, or other deleterious substances, and is hard, sound and durable.

Unless otherwise specified in the Contract Documents, crushed rock shall conform to the requirements for coarse (1/2" x No. 4) crushed screenings as specified in Section 37-1.02, "Materials", of the State Specifications. Crushed rock shall have a minimum Cleanliness Value of 80 as determined by California Test Method 227.

4-5 DUCTILE IRON PIPE (DIP)

(a) Specifications: Ductile iron pipe shall conform to ANSI A21.51 (AWWA C151) for a minimum working pressure of 150 psi unless otherwise specified. Ductile iron castings shall conform to and be tested in accordance with ASTM A536. Casting grade for pipe shall be 60-42-10. Laying length shall be the manufactures standard length, normally eighteen (18) feet. Shorter lengths may be used when required for closures and proper location of special sections.

The interior surface of all ductile iron pipe shall be cement-mortar lined and seal coated in conformance with AWWA C104 and the exterior surface shall have a bituminous coating of either coal tar or asphalt base, approximately one (1) mil thick.

Fittings shall have mechanical joints or flanged ends. Four (4) inch through twelve (12)

inch fittings shall be ductile iron, fittings larger than twelve (12) inches shall be cast iron or ductile iron. All fittings shall conform to ANSI 21.10 (AWWA C110), ANSI 21.11 (AWWA C111) or AWWA C153 designed for a working pressure of 250 or 350 psi. Coating and lining requirements shall be the same as specified for pipe.

(b) **Installation:** Installation of ductile iron pipe and appurtenances shall conform to the manufactures recommendations. The ductile iron main, fittings, and cast iron fittings shall be encased in eight (8) mil polyethylene encasement in accordance with AWWA C105.

1) **Pipe Bedding:** Backfill shall conform to the requirements of Section 4-4 (a), "Graded Sand", of these Specifications. If existing soil is too porous to hold sand, a geotextile fabric placed on the trench bottom and covered with six (6) inches of sand may be used. The use of geotextile fabric must be approved by EGWD.

2) **Initial Backfill:** Ductile iron distribution mains shall have graded sand backfilled to eight (8) inches above the top of the distribution main. Graded sand shall be per the requirements of Section 4-4 (a), "Graded Sand", of these Specifications. No native material will be allowed.

3) **Trench Backfill:** See Section 4-3 (c), "Trench Backfill", of these Specifications.

(c) **Joints:** Joints shall be push-on or mechanical type and shall conform to ANSI 21.11 (AWWA C111) with rubber gaskets unless otherwise specified. Gasket lubricant shall be a minimum required, plus 10 percent (10%).

(d) **Payment:** The unit price bid per linear foot of water main of the respective sizes and types shall include the furnishing of all materials and appurtenances for construction of the water pipeline including but not limited to all labor, material, and equipment necessary to excavate the trench, remove all obstruction, remove and replace all utilities where necessary, bed, place and joint the pipe, place thrust blocks, backfill the trench, restore the street surface, disinfect, flush and test the pipelines, make connections to existing facilities, furnish pre-construction photographs as specified in the Contract Documents, and do all other work necessary to produce a complete and finished job in accordance with the drawings and specifications. The unit price bid shall be the average price for all mains and appurtenances of a given size.

4-6 POLYVINAL CHLORIDE (PVC) PIPE

(a) **Specification:** Polyvinyl Chloride (PVC) Pipe shall conform to AWWA Standard C900, Class 235 (DR18) or AWWA Standard C905, Class 235-165 (DR 18-25, respectively). Outside pipe diameter shall be manufactured with Cast Iron Pipe (CIP) - Equivalent ODs and furnished in standard twenty (20) foot lengths.

Fittings shall be flanged or mechanical joint type, ductile iron fittings and shall conform to ANSI 21.10 (AWWA C110) or ANSI 21.11 (AWWA C111 or AWWA C153) designed for a working pressure of 250 or 350 psi. Fittings shall be encased in 8-mil polyethylene in accordance with ANSI A21.5 (AWWA C105).

(b) **Installation:** Installation of PVC piping shall be in accordance with the manufacturer's recommendations. All runs of pipe shall have a No. 10 gauge solid, insulated, soft drawn copper wire laid along the top of the initial backfill to facilitate locating the pipe. Installation of the locating wire shall conform to Standard Drawing No. W-6. Joints shall be either integral bell and spigot joints or elastomeric gasket couplings. Solvent cement jointing shall be prohibited.

1) **Pipe Bedding:** PVC water distribution mains shall have four (6) inches of sand bedding that conforms to the requirements of Section 4-4 (a), "Graded Sand", of these Specifications. If existing soil is too porous to hold sand, six (6) inches of crushed aggregate or a geotextile fabric placed on the trench bottom and covered with four (4) inches of sand may be used. EGWD must approve the crushed aggregate and the geotextile fabric.

2) **Initial Backfill:** Initial backfill for PVC water distribution main and/or ductile iron or cast iron fittings used with PVC pipe shall be sand to eight (8) inches above the top of pipe or fitting, per the requirements of Section 4-4 (a), "Graded Sand", of these Specifications. No native material will be allowed.

3) **Trench Backfill:** Per the requirements of Section 4-3 (c), "Trench Backfill", of these Specifications.

(c) **Payment:** The unit price bid per linear foot of water main of the respective sizes and types shall include the furnishing of all materials, and appurtenances for construction of water pipeline, including, but not limited to all labor, materials and equipment necessary to excavate the trench, remove all obstruction, remove and replace all utilities where necessary, bed, place and joint the pipe, place thrust blocks, backfill the trench, restore the street surface, disinfect, flush and test the pipelines, make connections to existing facilities, furnish pre-construction photographs as specified in the Contract Documents, and do all other work necessary to produce a complete and finished job in accordance with the drawings and specifications. The unit price bid shall be the average price for all mains and appurtenances of a given size.

4-7 WATER PIPE FITTINGS

Fittings shall be mechanical joint of flanged ends. Four (4) inch through twelve (12) inch fittings shall be ductile iron; fittings larger than twelve (12) inch shall be cast iron or ductile iron. All fittings shall conform to ANSI 21.4 (AWWA C104), ANSI 21.10 (AWWA C110), ANSI 21.11 (AWWA C111), or AWWA C153 designed for a working pressure of 250 or 350 psi. Coating and lining requirements shall be the same as specified for the pipe. Fittings shall be encased in eight (8) mil polyethylene in accordance with ANSI A21.5 (AWWA C105).

4-8 REDUCED PRESSURE BACKFLOW PREVENTER

Reduced Pressure Backflow Preventer (RPBP) devices shall be installed on all nonresidential connections. Under this item of the Proposal, the Contractor shall bid unit cost per each for furnishing and installing the reduced pressure backflow preventer as indicated on the plans and in the proposal.

Refer to www.egwd.org/wp-content/uploads/Approved-Tester-List.pdf for a list of the latest backflow prevention assembly testers per EGWD Cross-Connection Control Specialist and/or www.egwd.org/cross-connection-control/ for the latest approved backflow prevention devices per the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research's (USC) most recent list of approved devices.

(a) **Specification:** The reduced pressure backflow preventer shall be USC approved. The reduced pressure backflow preventer shall be a complete assembly, consisting of two separate spring loaded check valves and a differential relief valve. These devices shall automatically reduce the pressure in the "zone" between the check valves.

Both check valves and the differential relief valve shall be constructed so that they may be serviced without removing the device form the line. The devices shall be rated to 175 psi working pressure. The unit shall include properly located resilient seated test cocks and tightly closing resilient seated shutoff valves at each end of the assembly.

Contractors may also acquire the most recent list of approved reduced pressure backflow prevention assemblies in accordance with EGWD Ordinance 10.17.18.01 from https://www.egwd.org/cross-connection-control/.

(b) **Installation:**

1. RPBP to be installed above ground, in a horizontal and level position, on the water customer's side, as close to the service connections as is practicable and no greater than five (5) feet per Standard Detail Drawings unless otherwise approved by the EGWD Cross-Connection Control Specialist.

2. RPBP to be installed a minimum of twelve (12) inches above finished grade and not more than thirty-six (36) inches above finished grade as measured from the bottom of the assembly, and shall be readily accessible for maintenance and testing as shown in Standard Detail Drawings.

3. There shall be no outlet, tee, tap, take-off or connection of any sort, to or from the supply pipe line, between the service connection and the backflow prevention assembly.

4. RPBP shall be installed such that no part of the assembly will be submerged during normal operating and weather conditions.

5. The RBPB shall be installed so that flooding would not cause the relief valve to become submerged.

6. All buried pipe shall be per the requirements for specific pipe material installation per the requirements of Section 4 of these Specifications.

(c) **Testing:** The backflow prevention assembly shall be tested by a certified backflow prevention assembly tester at the time of installation and annually thereafter, or more often as the EGWD Cross-Connection Control Specialist may require.

4-9 FIRE HYDRANT ASSEMBLIES

(a) **Specification:** Fire hydrants shall be wet barrel Clow 960 meeting the requirements of AWWA Standards C503, and shall be furnished with a break off check valve.

The foot piece shall have an inlet size for connecting to pipe of not less than six (6) inches in diameter and shall be suitable for push-on, mechanical-joint, or flanged end pipe. The bury length shall be three (3) feet from the flanged breakable section to the centerline of the connecting pipe, unless otherwise shown on the drawings, or required by the topography and approved by the Engineer.

Delivery classification shall be two (2) hose and one (1) pumper nozzle, having National Standard Fire Hose Coupling Screw Threads in conformity with NFPA 194 and ANSI B26. Hose nozzles shall be for two and one half (2½) inch hoses and pumper nozzles shall be for four and one half (4½) inch hoses. The operating nuts and nozzle caps shall be National Standard pentagon dimensions, open left (counter-clockwise). Fire Hydrants shall be Clow 960.

Hydrants are to be furnished without a drain opening in the base; if manufactured with such opening, it shall be plugged.
All fire hydrants shall be furnished with two layers of factory-applied white coatings. Coatings shall be polyurethane epoxy, alkyd or epoxy base coat with acrylic top coat. Coating thickness shall be in accordance with coating manufacturer requirements. Epoxy top coats will not be allowed.

Field touch-ups of damage to coating shall be done with coating sample provided by the manufacturer, and shall be the same type and color as the factory applied coating.

(b) **Installation:** In no case shall a fire hydrant be installed within three (3) feet of a building or any other structure that would limit access. Fire hydrants shall stand plumb with the pumper outlet facing the street. The lowest valve stem shall be twenty (20) inches minimum and twenty-four (24) inches maximum above the sidewalk or finished ground surface, whichever is higher. The four and one-half (4½) inch pumper connection shall be a maximum of one (1) foot and a minimum of six (6) inches behind finished walk or planter box, with four and one-half (4½) inch discharge facing driveway or street. A two (2) foot square concrete pad is to be set around base of hydrant, the thickness being the same as the sidewalk. Fire hydrants installation shall be in accordance with Standard Detail Drawing

W-2A or W-2B.

All fire hydrant installations shall have a six (6) inch gate valve and steel lid valve box installed on the lateral from the main with concrete around the base.

(c) **Payment:** The unit price bid for fire hydrants shall include excavation, furnishing and placing the tee in the main, the six (6) inch lateral to the hydrant, the gate valve, the fittings, and the hydrant, all as detailed on the drawings, blocking, backfill, restoration of street surfaces, and all other labor, equipment and material necessary for installing the fire hydrant in accordance with the drawings and specifications. The unit price bid shall be the average price for all fire hydrants indicated or required.

(d) **Protection:** Fire hydrants shall be protected as shown in Standard Detail Drawing W-22. All hydrants in commercial areas shall be protected using bollards as shown in Standard Drawing W-22.

4-10 FIRE PROTECTION SERVICE ASSEMBLY

(a) **Specification:** The Fire Protection Service Assembly shall include a resilient-seated gate valve, double detector check valve, and O S & Y valves.

Water valve shall be as specified in Section 4-12 and Section 4-13. Valves shall be furnished with flanged ends.

Double detector check valve shall be listed by Underwriters Laboratories, Incorporated and approved by USC and Associated Factory Mutual

Fire protection service assembly piping shall be flanged ductile iron Class 150 conforming to Section 4-1.

(b) **Installation:** Valve, double detector check valve, O S & Y valves shall be installed and set in a horizontal position as shown on Standard Detail Drawing W-10 and W-10A, and detector check assembly shall be installed above ground.

(c) **Payment:** The unit price bid for Fire Protection Service Assembly shall include excavation, furnishing and setting valve, detector check valve, by-pass meter, connection to the water main, piping and all necessary fittings, backfilling, restorations of surface, and furnishing all other labor, equipment and material necessary for installation of the Fire Protection Service Assembly in accordance with the manufacturer's recommendation and in a good workmanlike manner. The unit price bid shall be the average price for all assemblies of a given service size.

4-11 BLOW-OFF ASSEMBLY

(a) **Specification:** Permanent blow-off assemblies shall be as shown on Standard Detail Drawing W-15 or W-16. Temporary blow-offs shall be as shown on Standard Detail

Drawing W-17. The location shall be such that there shall be no possibility of back-siphonage into the distribution system. Valve boxes shall conform to Sections 4-12(b) and 4-13(b) of these standards.

(b) Installation: Blow-off assemblies shall be installed as shown on the Standard Drawing No. W-15, W-16 or W-17. Valve boxes and meter boxes shall be installed as specified in Sections 4-12(b), 4-13(b), 4-15(c), 4-16(c) and 4-17(c) of these Specifications.

(c) Payment: The unit price bid for blow-off assemblies shall include excavation, furnishing and placing the blow-off piping, valve, and valve box, meter box, all as detailed on the drawings, blocking, backfilling, restoration of surfaces, and all other labor, equipment, and material necessary for installing the blow-off assembly in accordance with the drawings and specifications.

4-12 WATER VALVES & VALVE BOXES

(a) Specifications: Types of valves to be installed shall be specified in the Contract. Unless otherwise shown on the Plans, valves provided shall open to the left (counter-clockwise), and be furnished with flange or mechanical joint. Valves shall bear the registered certification mark of the AWWA.

All installed valves shall operate smoothly with no more than twenty-five (25) ft-lbs. torque. Valves operating at torques greater than twenty-five (25) ft-lbs. require the approval of EGWD.

Valves three (3) through ten (10) inch in diameter shall be gate valves. Ten (10) inch valves may be gate or butterfly valves. Valves twelve (12) inch or larger shall be butterfly valves.

1. Gate valves shall be NPS (nominal pipe size) with iron body, bronze stem nuts, glands and bushings, resilient-seated bonded or mechanically attached to the gate, non-rising stem (NRS), working water pressure of 200 psi, conforming to the requirements of AWWA Standards C509. The valve shall have a 2-inch square operating nut. Unless otherwise specified on the plans, valves shall be furnished with ends flanged or mechanical joint, using an elastomeric-gasket seal, and shall conform in dimensions and style to the pipe and/or fitting requirements. All gate valves shall be coated and lined with a two-part polyamide epoxy in accordance with AWWA Standard C550-90. Metal surfaces to be coated or lined shall be sandblasted in accordance with SSPC-SP10. Finished or bearing surfaces shall not be painted. Exposed machined surfaces shall be covered with slush grease or other readily removable protective coating before shipment.

When specifically referred to in the Contract Documents or on Plans, double disc gate valves will be allowed. All double disc gate valves shall be iron body, bronze mounted, parallel seat, non-rising stem (NRS), open to the left (counter-clockwise), 175 psi pressure rating and conforming to the requirements of AWWA Standards C500. The valves shall have a two (2) inch square operating nut. Unless otherwise

specified on the plans, valves shall be furnished with ends flanged, mechanical joint, or bell, using an elastomeric-gasket seal and shall conform in dimensions and style to the pipe and/or fitting requirements. Valves for PVC pipe shall be connected by tyton fitting or mechanical joint fittings.

2. Butterfly valves shall be iron body, rubber seated, tight-closure butterfly valve conforming to the requirements of AWWA Standards C504, Class 150B. Butterfly valves shall be rated at 150 psi working pressure and provide drip tight shut-off at 150 psi of pressure. Operating stem with manual operators shall open to the left (counter-clockwise) and provided with two (2) inch square operating nut unless otherwise specified or shown on the plans. Butterfly valves shall have flanged ends that meet the requirements of AWWA C207 Class D flanges. All valves shall be provided with manual actuators.

All butterfly valves shall be coated and lined with a two-part polyamide epoxy in accordance with AWWA Standard C550-90. Metal surfaces to be coated or lined shall be sandblasted in accordance with SSPC-SP10. Finished or bearing surfaces shall not be painted. Exposed machined surfaces shall be covered with slush grease or other readily removable protective coating before shipment.

(b) **Valve Boxes:** Valve boxes shall be of precast concrete, and shall have a cast iron face and a cast iron traffic lid. Covers shall be marked "WATER" and shall have a loose fit in the box. Valve box riser shall be of Class 63 PVC or PVC C900 and shall fit inside of valve box without slipping. (See Standard Detail Drawing W-7) Plastic valve boxes shall have ferrous metal imbedded in the lid.

(c) **Installation:** Gate and butterfly valves shall be set plumb, supported on the trench bedding, and properly fitted to the adjacent sections of main. A valve box shall be installed over each gate valve. The type of box and lid is dependent upon location, as specified herein. Valve boxes shall be set flush with the finish grade, pavement, or concrete. Where valves are placed in unimproved easement areas the valve boxes shall be set six inches above grade. Valves behind back of walk or in landscaped areas shall be marked with a "WV" stamped on the curb.

(d) **Payment:** The unit price bid for valves shall include excavation, furnishing and setting valves and valve boxes as detailed on the drawings, backfilling, restoration of street surfaces, and furnishing all other labor, equipment and material necessary for placing the valve in accordance with the drawings and specifications. The unit price bid shall be the average price for all valves of a given size.

4-13 AIR RELEASE/VACUUM VALVES

(a) **Specification:** All valves shall be air release/vacuum type valves. The body and cover of the valve shall be cast iron unless otherwise approved by EGWD. All interior parts shall be stainless steel. Air release/vacuum valves shall be fully automatic and requiring no regular maintenance.

(b) **Installation:** Air release/vacuum valves shall be set plum, and properly fitted to the high points on the water main. Air release/vacuum valves will be required at other locations on long stretches or pipe as shown on the Plans. A vault with adequate venting and drainage shall be provided as required. The air release/vacuum valve and all appurtenances shall be of material listed and shall be installed as shown in Standard Detail Drawing W-18.

Air release/vacuum valves shall be capable of automatically releasing accumulated air from a water system while that system is in operation and under pressure. Also, the valve shall automatically allow air to re-enter the pipeline when the internal pressure of the pipeline becomes negative due to draining of the pipeline, a power outage, pipeline break, etc.

(c) **Payment:** The unit price bid for air release/vacuum valves shall include excavation, furnishing and placing the piping, valve, and valve box, all as detailed on the drawings, blocking, backfilling, restoration of surfaces, and all other labor, equipment, and material necessary for installing the air release/vacuum valve in accordance with the drawings and specifications.

4-14 WATER SERVICE LINES

(a) **Specification:** All residential water service lines shall be one (1) inch diameter polyethylene pressure pipe meeting standards of AWWA C901, unless otherwise specified. Water service pipe material up to and including two (2) inches in diameter shall be polyethylene pressure pipe meeting standards of AWWA C901. Polyethylene pipe shall be high density, ultra-high molecular weight and meet all applicable requirements, including testing, of Type III, Grade P33 or P34, Class C, designated as PE 3408 in ASTM D2239 and D1248. The polyethylene pipe shall have a minimum pressure rating of 200 psi, shall be homogeneous throughout and free of cracks, holes, foreign inclusions or other defects, shall be uniform in color, opacity, density and other physical properties. Polyethylene pipe shall be supplied with markings, at intervals of not more than five (5) feet, indicating nominal pipe size, designation, pressure class, and manufacturer's name or trademark. Polyethylene shall be manufactured to Copper Tubing Size (CTS). Installation shall be in accordance with the manufacturer's recommendation. When the size of the tap exceeds the manufacture's recommended limit for the size of the main, a special fitting shall be furnished.

All services shall be equipped with a bronze ball valve corporation stop at the main. On services up to and including two (2) inch diameter, a bronze ball valve angle stop, and meter shall be installed at the property line or easement line; on larger services a gate valve shall be furnished instead of a ball valve. Size of the corporation stop, curb stop or gate valve shall be the same as the service line. A meter box at the property line or easement line is required for all services.

Service saddle requirements are shown on Standard Detail Drawing W-1. (McDonald C-900, or equivalent). Risers shall be eight (8) inch AWWA C900 for gate valves. Service saddles, corporation stops, coupling nuts, and all appurtenances shall be bronze. Only neoprene or rubber gaskets shall be used between the saddle and the pipe. Threads for underground services line fittings shall conform to AWWA Standards C800, National Pipe

Thread (N.P.T.).

All bronze fittings shall be lead-free.

(b) **Installation:** Where curb and gutter exists, or is to be constructed concurrently with the improvements, the location of each service shall be permanently indicated by inscribing the letter "W" in the curb directly above the line when the service is perpendicular to the street centerline. Otherwise, the "W" mark for a skewed or angling service shall be placed at a right angel to the end of the service. When water services are installed in a street with existing curb, the curb mark shall be placed at the time the service is installed to assure proper location. In new subdivisions, when the services are installed before the curb is constructed, it shall be the Contractor's responsibility to establish the exact location of each service and to furnish this information to the curb and gutter subcontractor, if any, to allow for accurate placement of "W" in the curb after it is poured.

All water service shall be installed two and one half (2-1/2) feet from the side of lot line. In addition, the service line shall be no closer than seven (7) feet to electrical vaults. All water services shall have a seven (7) foot separation from street lights, fire hydrants and drop inlets where there will be conflict with proposed water service, with dimensioning as such shown on plans.

Services shall have a locating wire as specified in Section 3-11, Item J.

Tapping sleeve types must be approved by an EGWD representative prior to commencing work. The water main shall be tapped at the service locations shown on the plans and construction completed by the Contractor in accordance with Standard Detail Drawing W-1. A minimum distance of eighteen (18) inches between taps must be maintained. The service line may be either laid in an open cut or placed through a hole produced by jacking or unidirectional drilling/boring. Water services to adjacent lots may be laid in a common trench, provided that a minimum center to center spacing of eighteen (18) inches is maintained, with no service behind the right-of-way greater than two and one-half (2-1/2) feet from the common property line in accordance with Standard Detail Drawing W-8A. Under no circumstances will service lines be placed in a common trench with transmission mains, fire hydrant service lines or any other utilities.

Under no circumstances shall pipe wall pieces of "plugs" be allowed to enter the distribution main when tapping. The Contractor shall be responsible to remove any "plugs" which may enter the pipe, and at the contractor's own expense. Where water service lines are installed by the open cut method, the service line trench shall be backfilled the same as the water main trench except, however, service line trenches crossing an existing street shall be backfilled with sand, to an elevation of eight (8) inches minimum over the top of the service pipe.

Applicable codes prohibiting the laying of water pipe in the same trench as the service sewer shall be rigidly enforced.

The Contractor shall also furnish the exact location of each service to the inspector per

Section 2-15 of these Specifications. The Contractor is responsible to resurvey and reestablish the end of each service before the curb and gutter is placed in lieu of the above requirements to ensure that the "W" is at an acceptable location.

(c) **Payment:** The unit price for water services shall include all labor and materials necessary to excavate the trench, connect to the main, furnish and install the service saddle, corporation valve, piping fittings, and curb stop or gate valve, bed place and joint the pipe and fittings, backfill the trench, restore street surface, mark the curb, furnish and install a valve box, and all other works necessary to product a complete installation in accordance with the drawings and specifications. The unit price bid shall be the average price for all water services of a given size.

4-15 WATER METERS – 1 INCH SIZE

(a) **Specification:** Water meters shall be purchased by fees paid to EGWD. Meters shall be Xylem (Sensus) IPERL, no substitutes.

(b) **Meter Box:** Meter boxes shall be of reinforce concrete utility box (Christy or equal) designed for the appropriate size of meter and curb stop. Meter box lid outside of the traffic area, in new subdivisions or unimproved areas shall have a reinforced concrete lid with a cast iron self-closing reading lid with a one and three quarter (1-3/4) inch pre-cast hole. Meter box for traffic service shall have a steel checker plate traffic cover. Covers shall have a loose fit in the box and shall be marked "WATER".

(c) **Installation:** Water meters shall be installed and set horizontal in accordance with the manufacturer's recommendation and as shown on Drawing W-8A. A meter box shall be installed over each meter that the meter may be easily read through the reading lid of the cover. The meter box shall be installed so as to prevent undue stress form normal or traffic load on the meter, curb stop, fittings and piping.

A meter box, with appropriate lid, shall be set flush with the final finish grade, pavement or concrete.

(d) **Payment:** The unit price bid for 1-inch size water meter for customer service shall include excavation, furnishing an setting meter, meter box, furnishing appropriate connections to piping and making all connections, backfilling, restoration of surface, and furnishing all other labor, equipment and material necessary for installation of the meter in accordance with the manufacture's recommendations and standard industry practice. The unit price bid shall be the average price for all meters of a given size.

4-16 WATER METERS – 1-1/2 INCH SIZE OR LARGER

(a) **Specification:** Water meters shall be purchased by fees paid to EGWD. Meters shall be Xylem (Sensus) OMNI compound meter, no substitutes

(b) **Meter Box:** Meter box shall be of pre-cast reinforced concrete utility vault (Christy, Brooks, or equivalent), and shall have a reinforced concrete lid with a hinged cast iron self-

closing reading lid and a one and three quarter (1-¾) inch pre-cast hole. Meter box for traffic service shall have a steel checkered plate traffic cover with hinged self closing reading lid and a one and three quarter (1- ¾) inch pre-cast hole. Covers shall have a loose fit in the box and shall be sized as shown on Standard Drawing No. W-7.

(c) **Installation:** Compound meter, valves, flange coupling adapters, piping and utility vault shall be installed by the contractor and set in a horizontally as shown on Drawings W-8B and W-8C.

The utility vault shall be installed with the reading lid over the meter register. The utility vault shall be installed and supported as to prevent undue stress or loading on the meter, valves, or piping.

The top of the utility vault shall be set four inches above the highest finish grade immediately surrounding the vault and supported to maintain that setting.

All buried steel or casing iron pipe shall be given a corrosion protection wrapping. Pipe shall be spirally wrapped with polyvinyl chloride or polyethylene pressure sensitive tape, applied over a suitable primer. The wrap shall have a nominal thickness of twenty (20) mils. All buried ferrous fittings and valves shall be fully wrapped with flexible 6 mil plastic sheets.

All ferrous material exteriors not buried shall be properly cleaned, primed and finished with two coats of epoxy in green metallic aluminum of six (6) mil minimum total dry film thickness. The paint system and applications shall be in accordance with the paint manufacturer's recommendation. No coating shall be applied to any copper-alloy surface.

(d) **Payment:** The unit price bid for 1-1/2 inch size water meter or larger shall include excavation, furnishing and setting the compound meter valves, connection to the main, piping and all necessary fittings, backfilling, restoration of surface, and furnishing all labor, equipment and material necessary for installation of the water meter in accordance with these specifications, the manufacturers recommendation and all in a good workmanlike manner. The unit price bid shall be the average price for all meters of a given size.

4-17 PLACING LOCATING WIRE ON WATER MAIN

All runs of all water pipe, including services, shall have a No. 10 gauge solid, insulated, soft-drawn copper wire laid along the pipe to facilitate locating the pipe at a later date. The wire shall be stubbed up inside each valve box and be placed as shown on Drawing No. W-6. Wire extending into the valve boxes shall have a one-sixteenth (1/6) inch polyvinyl chloride insulation.

4-18 CONNECTIONS TO EXISTING WATER MAINS

Under no circumstances shall anyone other than a representative of EGWD, or authorized agency, open or close any valve in the EGWD service area. Contractor shall not operate valves without prior EGWD approval where final acceptance of the project has been granted. When a water source or lateral is to be connected to an existing line, a qualified contractor approved by the EGWD, will

be used at the developer's expense. An EGWD inspector shall be present prior to beginning the tap or tie in being made. All tapping sleeves must be approved by the EGWD prior to commencing work. Applications should be made to the EGWD and the required fees paid at least five working days in advance of the time the tap is to be made. All excavation and backfill, and the installation of the remainder of the water lateral or service shall be done by the Contractor.

Shutdowns shall be made only at times when there will be the least interference with consumer service. Contractor shall contact EGWD for approval of shut down times at least seventy-two (72) hours in advance of proposed shut down. Connections shall be made only after complete and satisfactory preparations for such work has been made, in order that the shutdown may be as short as possible. The Contractor shall have on site all piping, fittings, equipment and appurtenances as may be required to complete the connection. Notification to Fire Districts and to all consumers whose water source will be interrupted shall be made by the Contractor, forty-eight (48) hours prior to the scheduled shutdown.

4-19 REGULATIONS RELATING TO SANITARY HAZARDS

All construction shall conform to applicable regulations relative to safeguarding the public health, particularly the regulations relating to cross connections and basic separation standards as established by the California Administrative Code, Title 22, Chapter 16, Article 5, Water Mains and Appurtenances, Section 64630, Water Main Installation.

Ten (10) feet shall be the minimum horizontal distance between parallel water and gravity sanitary sewer mains. Pressure water mains shall maintain at least twelve (12) inches of separation between sanitary sewer lines where these lines must cross. Separation distances specified shall be measured from the nearest edges of the pipelines. Water mains and sewer lines must not be installed in the same trench.

Ten (10) feet shall be the minimum horizontal distance, from outer diameter to outer diameter, between parallel water and sanitary sewer mains. When a water main crosses a sanitary sewer main or service lateral, the water main shall be as close as practical to the perpendicular and the sewer main should be at least one (1) foot below the water line when possible. When a new water main crosses over an existing sewer force main, the water main shall be constructed of pipe materials with a minimum rated working pressure of 235 psi or equivalent pressure rating.

Four (4) feet shall be the minimum horizontal distance, from outer diameter to outer diameter, between parallel water and storm drain mains. When a water main crosses a storm drain main or storm drain lateral, the water main shall be as close as practical to the perpendicular and the storm drain main should be at least one (1) foot below the water line when possible. When a new water main crosses over an existing storm drain main, the water main shall be constructed of pipe materials with a minimum rated working pressure of 235 psi or equivalent pressure rating.

Prior approval from California Department of Water Resources – Division of Drinking Water and EGWD is required, when the Basic Separation Standards for the construction of sewer lines or storm drain lines and water lines cannot be attained.

In situations where it is not possible for a water main to cross above a sanitary sewer or storm drain

main or lateral, refer to Drawings W-12 and W-13 of these standard construction specifications for utility crossings details.

All water pipelines shall clear underground facilities by one (1) foot minimum unless otherwise approved by EGWD. Water mains placed under cross culverts must have one (1) foot clearance unless otherwise approved on the construction plans with specified backfill material.

No field changes shall be made that conflict with these requirements without the prior written approval of EGWD.

4-20 DISENFECTION AND FLUSHING

After all other work has been completed, and prior to placing in service, all water lines shall be completely flushed and disinfected by using the Continuous-Feed Method as specified in AWWA C651-14 standard method. The Contractor shall furnish all material, equipment, and labor for such disinfection testing. The continuous-feed method shall yield an average minimum dose of twenty five (25) milligrams per liter. Volume of chlorine required to obtain the minimum concentration per 100-feet of pipe is shown in the following table:

Chlorine required to produce an initial 25 mg/L concentration in 100 ft of pipe by diameter (Refer to Table 4 AWWA C651 – 14 for 1% chlorine solution mixture)

Pipe Diameter	100% Chlorine		12.5% Chlorine Solution	
	lb	***(g)***	***gal***	***(L)***
4	0.013	(5.9)	0.014	(0.052)
6	0.030	(13.6)	0.032	(0.12)
8	0.054	(24.5)	0.06	(0.21)
10	0.085	(38.6)	0.08	(0.32)
12	0.120	(54.4)	0.12	(0.47)
16	0.217	(98.4)	0.22	(0.83)

When the installation of the water system is completed, the water mains shall be filled with chlorinated water at a velocity of less than one foot per second (1 fps). During filling, air shall be released from all high points in the line. The contractor shall provide a corporation stop at high points to provide air vents and insure that all air is released.

In addition, as the chlorinated water flows past tees and crosses, related valves and hydrants shall be operated so as to disinfect them also.

The chlorinated water shall be allowed to stand in the pipeline at least twenty-four (24hrs) hours. At the end of this period, the chlorinated water shall be flushed from the line yielding an initial residual concentration of not less than ten (10) milligrams per liter. Once the proper residual concentration is confirmed, the pipeline shall be flushed until the chlorine remaining in the line is no higher than that generally found in the existing distribution system, or less than one mg/l total residual chlorine. The Contractor shall obtain prior approval from Sacramento Regional County Sanitation District if flushing chlorinated water from pipelines into sanitary sewer manholes or

from the City of Elk Grove if flushing into the storm drain system. Proper approvals will be confirmed by EGWD prior to disinfection testing.

Before the new water system is placed in service as part of the existing distribution system, a representative of EGWD will take the required number of samples. Temporary tie-ins used for sampling and testing shall be per EGWD Standard Detail Drawing W-5. Bacteriological examination of samples shall meet the following criteria:

1) Total Coliform less than 1 per 100 milliliters

2) Total Plate Count less than 500 bacteria per milliliter

3) If the initial disinfection fails to produce satisfactory samples, Disinfection shall be repeated as directed by EGWD.

The water shall also meet State and Federal drinking water standards; Title 22, California Administrative Code, and the 1986 Amendments to the Safe Drinking Water Act of 1974, as issued by the United States Environmental Protection Agency (EPA).

New water mains shall not be connected to existing distribution systems until the EGWD has determined that the new water has been disinfected.

Under no circumstances will the Contractor take samples of the water system for bacteriological examination.

4-21 PRESSURING TESTING WATER MAIN INSTALLATIONS

After completion of the installation, the Contractor shall pressure test all piping hereinafter specified. The Contractor shall furnish all material, equipment, and labor for such testing. The system may be tested as a unit or in sections as directed by the Engineer, but each unit tested shall successfully meet the requirements herein specified. Temporary tie-ins used for testing shall be per EGWD Standard Detail Drawing W-5.

The water services shall be considered as part of the main for test purposes.

In no case shall there be placement of permanent pavement prior to successful completion of the test. Joints and fittings must be backfilled to the horizontal diameter of the pipe and the pipe between joints backfilled to a depth necessary to hold the line securely during the test, but in no case less than eighteen (18) inches. Thrust blocks shall have been in place for at least thirty-six (36) hours if high-early-strength cement was used, or at least seven (7) days if standard cement was utilized.

Each section of the pipe to be tested shall be slowly filled with water, and all air shall be expelled from the pipe. The release of the air can be accomplished by opening hydrants and service line cocks at the high points of the system and the blow-offs at all dead ends. The valve controlling the admission of water into the section of pipe to be tested should be opened wide before shutting hydrants or blow-offs. After the system has been filled with water and all air expelled, the valve

controlling the section to be tested shall be closed and the line remains in the condition for at least twenty-four (24) hours.

The pipe shall then be refilled, if necessary, and subjected to a pressure of at least 150 PSI, or the service pressure plus 50 pounds, whichever is greater, for two hours. The contractor shall provide necessary pump and a clean calibrated container for measurement of make-up water required to replace leakage during this two (2) hour period.

The allowable leakage in the test section shall not exceed two gallons per hour per mile per inch diameter of pipe tested.

All leaks that are found shall be immediately corrected and the system again subjected to the same test for a period of two hours.

The Contractor shall take all necessary precautions to prevent any joints from deforming while the pipe lines and their appurtenances are being tested and shall, at his own expense, repair any damage to the pipes and their appurtenances, or to any other structures, resulting form or caused by these tests.

4-22 WATER USED DURING CONSTRUCTION

Water used in testing and flushing or any other construction operation that is taken from an EGWD system shall be supplied through an EGWD provided construction water meter and shall be paid for at the EGWD current construction water rate. The contractor will be billed for water usage monthly according to the monthly construction meter reads obtained by EGWD.

Before drawing water from the EGWD system, the Contractor shall make an application for such service with EGWD for a permit and authorized location(s). Location(s) will be determined at the time of issuance of all construction water permits and construction water meters. Requests for alternate authorized location(s) can be made after the issuance of a permit by visiting EGWD during normal business hours. At no time will unauthorized construction water use be permitted. Construction water permits can be obtained at EGWD during normal business hours. Unauthorized use of any fire hydrant or service connection will result in a Water Misuse Fine per EGWD's Water Theft Ordinance. The permit shall be in the possession of the personnel taking the water at the time and location that water is being taken.

APPENDIX A

ELK GROVE WATER SERVICES
APPROVED MATERIALS LIST
APPENDIX A

ELK GROVE WATER SERVICES
APPROVED MATERIALS LIST

The following is a list of materials that have been reviewed for use in EGWD facilities and found to be acceptable. This list is subject to change at the directions of the EGWD.

Project specifications may supersede the acceptability of these materials. This list is not complete but represents commonly used types. Written request for approval of material not covered on this list should be submitted to EGWD for review.

WATER PIPE (4-INCH THROUGH 12-INCH DIAMETER)

PVC AWWA C-900 Class 150 (Tyton or mechanical joint fitting)

Diamond
Vinyl Tech
Westlake/NAPCO

Cast Iron/Ductile Iron (Factory Cement Mortar Lined According to AWWA C-104 or Fusion Epoxy Coated)

Dayton
Olympic
Tyler
U.S. Pipe
Sigma

Gate Valves (AWWA Approved, Cast Iron, Resilent Wedge, 12-inch diameter and larger shall be butterfly type)

American Darling
Kennedy
Mueller
Clow

Fire Hydrant

Clow 960, Factory Painted White

Service Saddles (Bronze with brass screw)

McDonald
Ford
Jones
Mueller

Service Fittings (Bronze, Brass)

Mueller
Jones
Ford
McDonald

Corporation Stops (Bronze, I.P. tread, Brass screw)

Mueller
Jones
Ford
McDonald

Service Tubing (CTS)

ADS

Curb Stops (Ball valve, Brass Screw)

Mueller
Jones

Ford
McDonald

Angle Meter Stop (Brass screw)

Mueller
Jones
Ford
McDonald

Flexible Couplings

APAC
Smith Blair
Romac
JCM

Valve Boxes (Concrete, Traffic)

Christy G-5

Service Boxes (Concrete, Traffic)

Carson
Christy

Valve Box Riser Material

8-inch AWWA C900

Meter Boxes (Concrete, Traffic)

Carson
Christy

Backflow Prevention Devices (Reduced Pressure)

Refer to Section 4-8 of these specifications

Meters

Xylem (Sensus), installed and supplied by EGWD

APPENDIX B

EGWD DEVELOPMENT FORM

Elk Grove Water District
9829 Waterman Rd.
Elk Grove, CA 95624
Phone: 916.685.3556
Fax: 916.685.5376

DEVELOPMENT FEE FORM
(Revised: 9/21/2023)

***Date*:** _____

Project Name: _____

Project Location: _____

Developer: _____ ***Contact Name:*** _____

Email address: _____ ***Phone Number:*** _____

Engineer: _____ ***Contact Name:*** _____

Email address: _____ ***Contact Name:*** _____

Responsible Billing Party: _____

Address: _____

Email Address: _____ ***Phone Number:*** _____

1. Plan check and inspection fees, and meter and capacity charges are based on the typed of project and location.

TABLE I provides fee information required for plan check fee based upon the number of lots, building units or equivalent dwelling units (EDU's). These fees are for non-residential and residential types of development.

TABLE II provides fee information for meters based upon meter size. These fees are for either domestic or irrigation.

TABLE III provides fee information for the development of water capacity supplies to adequately satisfy the demands of growth for Service Area 1 only. This fee does not apply to developments in Service Area 2 or within the Sacramento County Water Agency service areas. (Exhibit A shows the locations of this service area.)

Complete plans and specifications for all proposed improvements including any necessary dedications shall be submitted to Elk Grove Water District for approval. Plans must be approved and signed by an authorized representative of Elk Grove Water District prior to beginning improvement construction.

Ordinance No. 12.19.18.01, approved December 19, 2018 entitled *An Ordinance of the Florin Resource Conservation District Board of Directors Amending Ordinance No. 07.18.18.01, Exhibit A, Florin Resource Conservation District/Elk Grove Water District's Water Ordinance Schedule of Charges, Rates, Fees and Deposits*, prescribes that "Any person required by this Ordinance to have plans checked shall deposit with Elk Grove Water District the following fee or fees for the service:"

TABLE I. PLAN CHECK FEE

No. of Lots, Building Units or EDU's	**Fee**
Irrigation Only	$500
One (1)	$500
Two (2) to Nine (9)	$2,000
Ten (10) or more	$5,000

This deposit shall serve as credit towards fees for plan check, inspection, engineering and administrative costs of the project and actual fees will be calculated on a time and materials basis. Expenses incurred beyond the deposit will be billed monthly and the project will not be accepted by Elk Grove Water District until all outstanding balances have been paid. Credits not used after acceptance of a project shall be refunded to the project.

PLAN CHECK FEE: **$_____**

Ordinance No. 07.18.23.02, approved July 18, 2023, entitled *An Ordinance of the Florin Resource Conservation District Board of Directors Approving the 2024 Capacity Fee Study Report and Revising the Elk Grove Water District Water Connection Fees as Prescribed in the Study*, prescribes that water connection fees are the fees recommended in the "Elk Grove Water District Capacity Fee Study Report," dated May 2, 2023.

Meter charges applicable to such service installation are as follows:

TABLE II. METER CHARGES

Meter Sizes			Meter Prices
1"		(1.0 EDU)	$ 926
1-1/2"	(Domestic)	(2.0 EDU)	T&M*
1-1/2"	(Irrigation)	(2.0 EDU)	T&M*
2"	(Domestic)	(3.2 EDU)	T&M*
2"	(Irrigation)	(3.2 EDU)	T&M*
3"	(Domestic)	(7.0 EDU)	T&M*
3"	(Irrigation)	(7.0 EDU)	T&M*
4"	(Domestic)	(12.0 EDU)	T&M*
4"	(Irrigation)	(12.0 EDU)	T&M*
6"	(Domestic)	(27.0 EDU)	T&M*
6"	(Irrigation)	(27.0 EDU)	T&M*

*Cost of time and materials to install meter. Contact Elk Grove Water District for current pricing. The meter charge includes price of meter and installation costs. The meter box, lid, and associated fittings shall be furnished and installed at the Developers expense. Fees are for domestic residential and non-residential types of construction and irrigation.

METER CHARGE(S) FOR DOMESTIC SERVICE:

No. of Connections: _____ X **$** _____ **/ Meter for** _____ **- inch = $**_____

_____ **X $** _____ **/ Meter for** _____ **- inch = $**_____

METER CHARGE(S) FOR IRRIGATION:

No. of Connections: _____ **X $** _____ **/ Meter for** _____ **- inch = $** _____

_____ **X $** _____ **/ Meter for** _____ **- inch = $**_____

TOTAL METER CHARGE(S) REQUIRED: **$**_____

Ordinance No. 07.18.23.02, approved July 18, 2023, entitled *An Ordinance of the Florin Resource Conservation District Board of Directors Approving the 2024 Capacity Fee Study Report and Revising the Elk Grove Water District Water Connection Fees as Prescribed in the Study*, prescribes that water connection fees are the fees recommended in the "Elk Grove Water District Capacity Fee Study Report," dated May 2, 2023. Water capacity charges applicable to such service installation are as follows: Beginning July 1, 2023 and continuing annually thereafter on that same month and day, the minimum total connection fee will be automatically increased according to the most recent index values published in the Engineering News-Record Magazines' Construction Cost Index.

TABLE III. WATER CAPACITY CHARGES

Meter Sizes		Water Capacity Charge
1"	(1.0 EDU)	$4,292.00/meter
1-1/2"	(2.0 EDU)	$8,584.00/meter
2"	(3.2 EDU)	$13,734.00/meter
3"	(7.0 EDU)	$30,044.00/meter
4"	(12.0 EDU)	$51,504.00/meter
6"	(27.0 EDU)	$115,884.00/meter

Water capacity charges apply only to projects located within Service Area 1. See attached map (Exhibit A) for determining location of project. For meter sizes larger than 6 inch, contact Elk Grove Water District to determine amount.

WATER CAPACITY CHARGE(S) (SERVICE AREA 1 ONLY):

No. of Connections: _____ **X $** _____ **/ Meter for** _____ **- inch = $**_____

_____ **X $** _____ **/ Meter for** _____ **- inch = $**_____

_____ **X $** _____ **/ Meter for** _____ **- inch = $**_____

TOTAL WATER CAPACITY CHARGE(S): $_____

Fire Protection Services:

Applicable to all water service furnished for privately owned fire protection service.

No. of Connections: _____ **X Connection Size** _____**- inch**

_____ **X Connection Size** _____**- inch**

PLAN CHECK FEE: **$** _____
(From Page 2)

TOTAL METER CHARGE(S): **$** _____
(From Page 3)

TOTAL WATER CAPACITY CHARGE(S): **$** _____
(From Page 4)

TOTAL OF PLAN CHECK FEE
AND METER AND CAPACITY CHARGES **$** _____

2. Additional labor costs for inspection by EGWD after normal business hours or observed holidays will be subject to EGWD overtime rates and paid by the developer or applicant or deducted from the Improvement Plan Processing Fee Deposit.

3. One (1) full-size paper copy and an electronic copy in PDF format of the approved development plans depicting water distribution system shall be submitted prior to and required for plan approval. The water system layout will include all water related facilities, streets, parcels, lot numbers etc.

4. All easements shall be submitted and reviewed for acceptance prior to and required for final acceptance of the project.

5. As-built drawings with specific measurements locating individual services, valves, gate valves etc. shall be required and necessary for final acceptance of project.

6. Other _____

_____

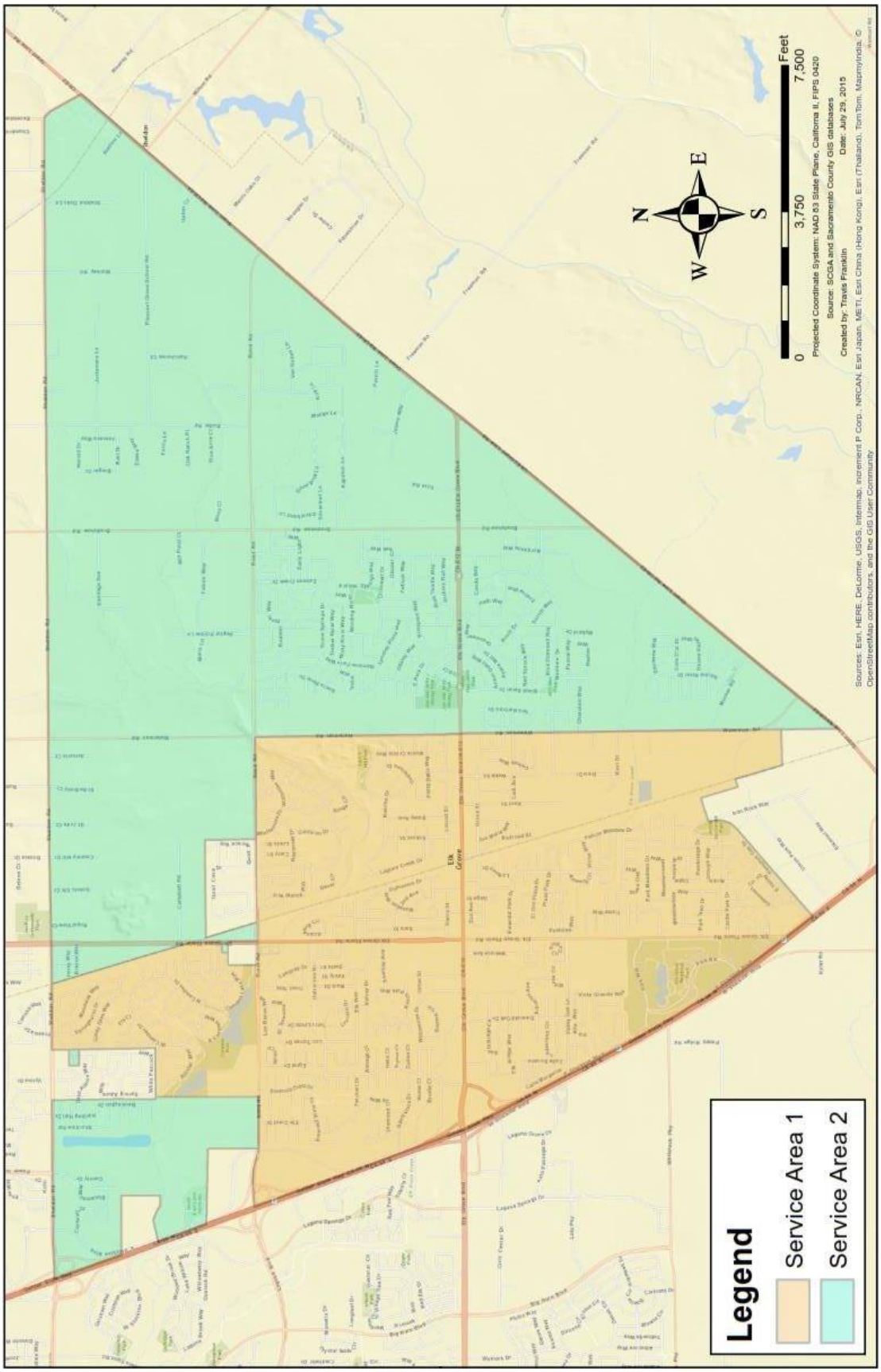
Acknowledgment:

_____ _____

Developer's Signature **Date**

_____ _____

Developer's Printed Name **Title**


Legend
Service Area 1
Service Area 2
N
E
S
W
0
3,750
7,500
Feet
Projected Coordinate System: NAD 83 State Plane, California III, FIPS 0420
Source: SCGA and Sacramento County GIS databases
Created by: Travis Franklin
Date: July 29, 2015
Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Elk Grove Water District

A DEPARTMENT OF THE
Florin Resource Conservation District

STANDARD DETAIL DRAWINGS

September 2023

FINAL

DWG NO.	DESCRIPTION
G–1	DRAWING INDEX
G–2	LIST OF ABBREVIATIONS
W–1	1" – 2" WATER SERVICE INSTALLATION
W–2A	FIRE HYDRANT ASSEMBLY – GATE VALVE IN STREET
W–2B	FIRE HYDRANT ASSEMBLY – BEHIND SIDEWALK
W–3	THRUST BLOCK BEARING AREA
W–4	THRUST BLOCK REDUCER
W–5	TEMPORARY WATER MAIN TIE–IN CONNECTION
W–6	LOCATING WIRE FOR WATER MAINS & SERVICES
W–7	VALVE BOX & RISER INSTALLATION
W–8A	1" RESIDENTIAL & IRRIGATION METERED WATER SERVICE
W–8B	1 ½" & 2" COMMERCIAL OR IRRIGATION METERED SERVICE
W–8C	3"–6" COMMERCIAL METERED WATER SERVICE
W–9	METER BOX PROTECTION & TEMPORARY WATER
W–10	4" & LARGER FIRE PROTECTION DETAIL FOR CONNECTION TO A SINGLE BUILDING FIRE RISER
W–10A	4" & LARGER FIRE PROTECTION DETAIL FOR PRIVATE FIRE LOOP
W–11	1"–2" BACKFLOW PREVENTER
W–12	UTILITY CROSSING
W–13	UTILITY CROSSING UNDER EXISTING WATER MAIN
W–14	TYPICAL TRENCH SECTION
W–15	4" BLOW OFF ASSEMBLY, END OF MAIN
W–16	4" BLOW OFF ASSEMBLY, IN–LINE
W–17	2" TEMPORARY BLOW OFF ASSEMBLY
W–18	1" COMBINATION AIR/VACUUM VALVE
W–19	PIPE RESTRAINED LENGTH CHART
W–20	WATER MAIN CUT IN DETAIL (PVC & DIP)
W–21	MAXIMUM DEFLECTION FOR PVC PIPE
W–22	FIRE HYDRANT CLEARANCE AND PROTECTION REQUIREMENTS
W–23	BACKFLOW MANIFOLD ASSEMBLY
W–24	WATER MAIN CUT IN DETAIL (AC PIPE)
W–25	BACKFLOW PREVENTER PROTECTION & CLEARANCE
W–26A	DOUBLE CHECK ASSEMBLY BACKFLOW PREVENTER 1" TO 2"
W–26B	DOUBLE CHECK ASSEMBLY BACKFLOW PREVENTER 1" TO 2" IN VALVE BOX
W–27	3" & LARGER REDUCED PRESSURE BACKFLOW PREVENTER
W–28	3" & LARGER DOUBLE CHECK DETECTOR BACKFLOW PREVENTER

Elk Grove Water District

Florin Resource Conservation District

Elk Grove Water District

DRAWING INDEX

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
EGWD SIGNATURE		B. M. Kamilos	CHECKED BY: A. ARAGON
			EGWD : B. KAMILOS

G-1

AB	AGGREGATE BASE
AC	ASPHALTIC CONCRETE
AVB	ATMOSPHERIC VACUUM BREAKER
AWWA	AMERICAN WATER WORKS ASSOCIATION
B.O.	BLOW–OFF
BFP	BACKFLOW PREVENTER
C&G	CURB AND GUTTER
CLR	CLEAR
COMP	COMPRESSION
CU. FT.	CUBIC FEET
DF	DOUGLAS FIR
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
EGWS	ELK GROVE WATER SERVICE
EXT	EXTENSION
F.I.P.T.	FEMALE IRON PIPE THREAD
FLG	FLANGE
GA.	GAUGE
GALV	GALVANIZED
I.D.	INSIDE DIAMETER
LG	LONG
MAX	MAXIMUM
MIN	MINIMUM
MJ	MECHANICAL JOINT
NPT	NORMAL PIPE THREAD
NTS	NOT TO SCALE
O.D.	OUTSIDE DIAMETER
OS&Y	OUTSIDE STEM AND YOKE
P.T.D.F.	PRESSURE TREATED DOUGLAS FIR
PE	PLAIN END
PL	PLATE
POJ	PUSH ON JOINT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE PIPE
REQ'D.	REQUIRED
RL	RESTRAINED LENGTH
RWD	REDWOOD
S/W	SIDEWALK
SQ.	SQUARE
STD	STANDARD
TBC	TOP BACK OF CURB
TYP	TYPICAL
U.L./F.M.	UNDERWRITERS LABORATORIES, INC. / FACTORY MUTUAL RESEARCH CORP.

Elk Grove Water District

LIST OF ABBREVIATIONS

REV.	DATE	REVISION

EGWD SIGNATURE B. M. Kamilos

DATE: JUNE 2023

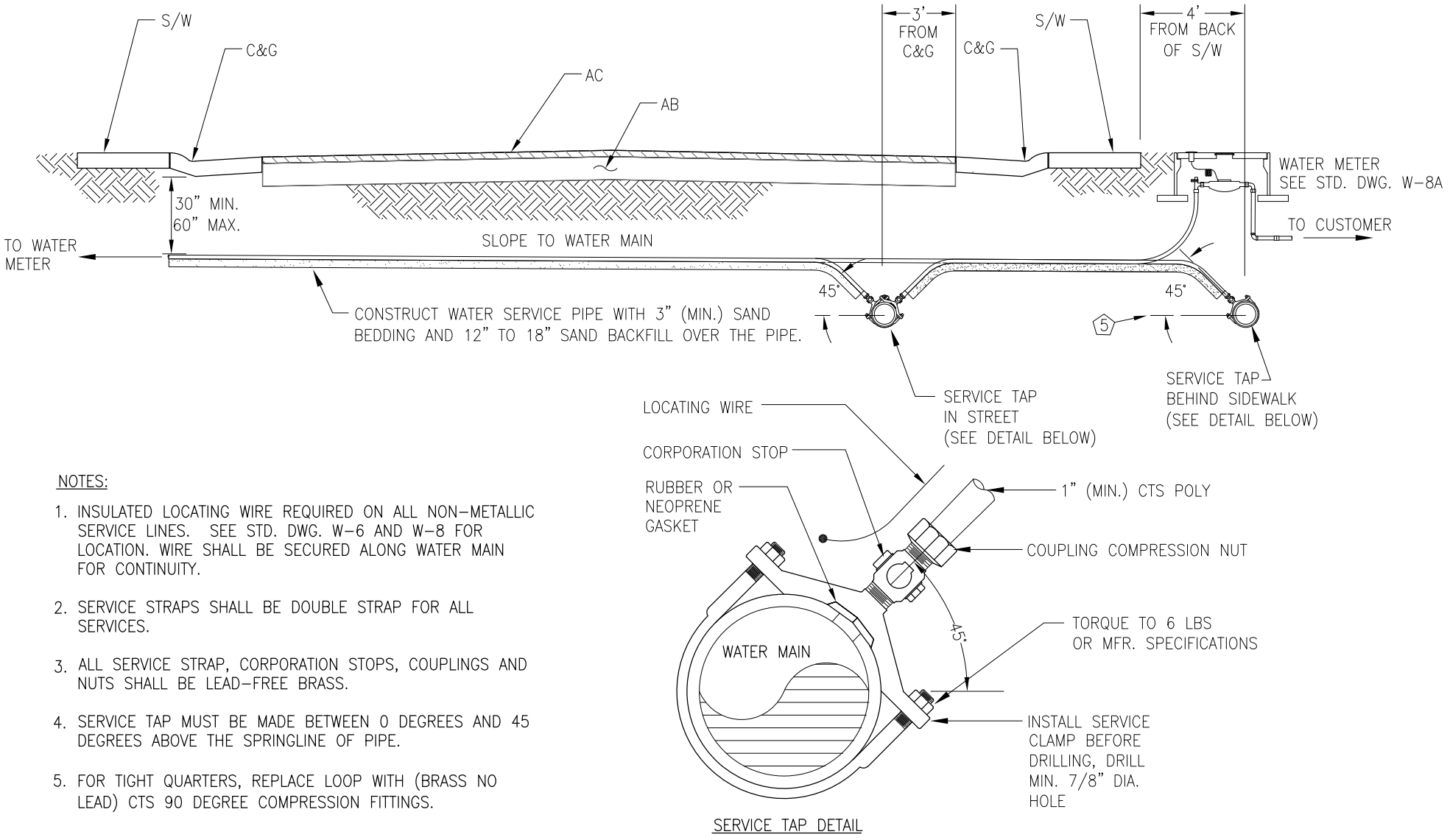
PROJECT:

DRAWN BY: B. VOELZ

CHECKED BY: A. ARAGON

EGWD : B. KAMILOS

G-2



SERVICE TAP DETAIL

NOTES:

1. INSULATED LOCATING WIRE REQUIRED ON ALL NON-METALLIC SERVICE LINES. SEE STD. DWG. W-6 AND W-8 FOR LOCATION. WIRE SHALL BE SECURED ALONG WATER MAIN FOR CONTINUITY.
2. SERVICE STRAPS SHALL BE DOUBLE STRAP FOR ALL SERVICES.
3. ALL SERVICE STRAP, CORPORATION STOPS, COUPLINGS AND NUTS SHALL BE LEAD-FREE BRASS.
4. SERVICE TAP MUST BE MADE BETWEEN 0 DEGREES AND 45 DEGREES ABOVE THE SPRINGLINE OF PIPE.
5. FOR TIGHT QUARTERS, REPLACE LOOP WITH (BRASS NO LEAD) CTS 90 DEGREE COMPRESSION FITTINGS.

Elk Grove Water District

1"- 2" WATER SERVICE INSTALLATION

REV.	DATE	REVISION

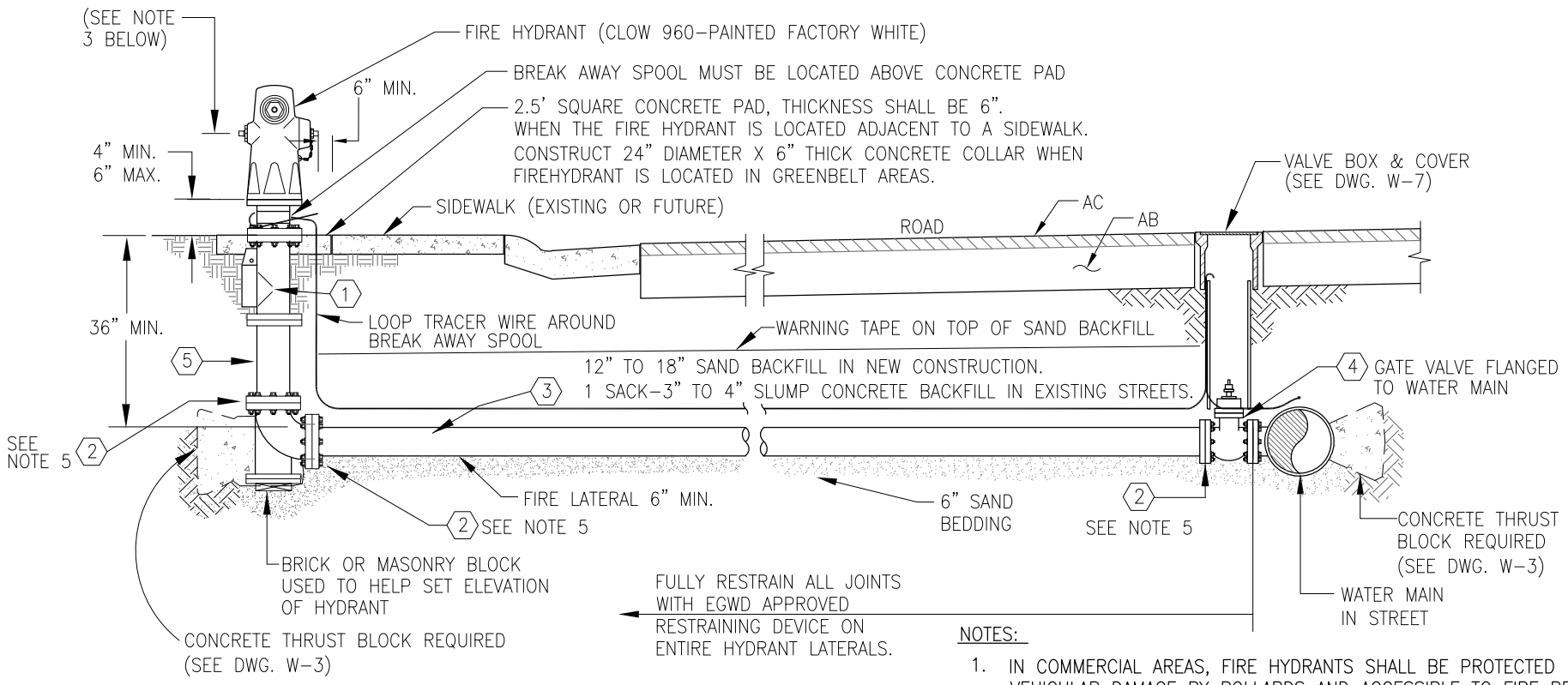
EGWD SIGNATURE B. M. Kamilos

DATE: JUNE 2023
PROJECT:
DRAWN BY: B. VOELZ
CHECKED BY: A. ARAGON
EGWD : B. KAMILOS

W-1

Florin Resource Conservation District

100



MATERIAL LIST:

1. BREAKOFF CHECK VALVE ASSEMBLY
2. MECHANICAL JOINT RETAINER GLANDS
3. DUCTILE IRON PIPE SPOOL, 6" MIN. DIA.
4. 6" FLG X MJ GATE VALVE
5. 6" PIPE SPOOL TO FIT (OPTION WET BARREL HYDRANT)

NOTES:

1. IN COMMERCIAL AREAS, FIRE HYDRANTS SHALL BE PROTECTED FROM VEHICULAR DAMAGE BY BOLLARDS AND ACCESSIBLE TO FIRE PROTECTION EQUIPMENT, SEE DWG. W–22.
2. GATE VALVE SHALL BE FLANGED TO THE WATER MAIN.
3. LOWEST CAP NUT ON HYDRANT SHALL BE 18" MIN. AND 22" MAX. ABOVE TOP OF CONCRETE PAD.
4. THESE JOINTS SHALL BE FLANGE, OR RESTRAINED MECHANICAL JOINTS WITH EGWD APPROVED RESTRAINING DEVICE.
5. ALL METALLIC PIPES AND FITTINGS SHALL BE ENCASED WITH 8 MIL PLASTIC AND 10 MIL PVC PIPE TAPE SO THAT NO SOIL IS IN CONTACT WITH THE PIPES AND FITTINGS.

Elk Grove Water District

FIRE HYDRANT ASSEMBLY - GATE VALVE IN STREET

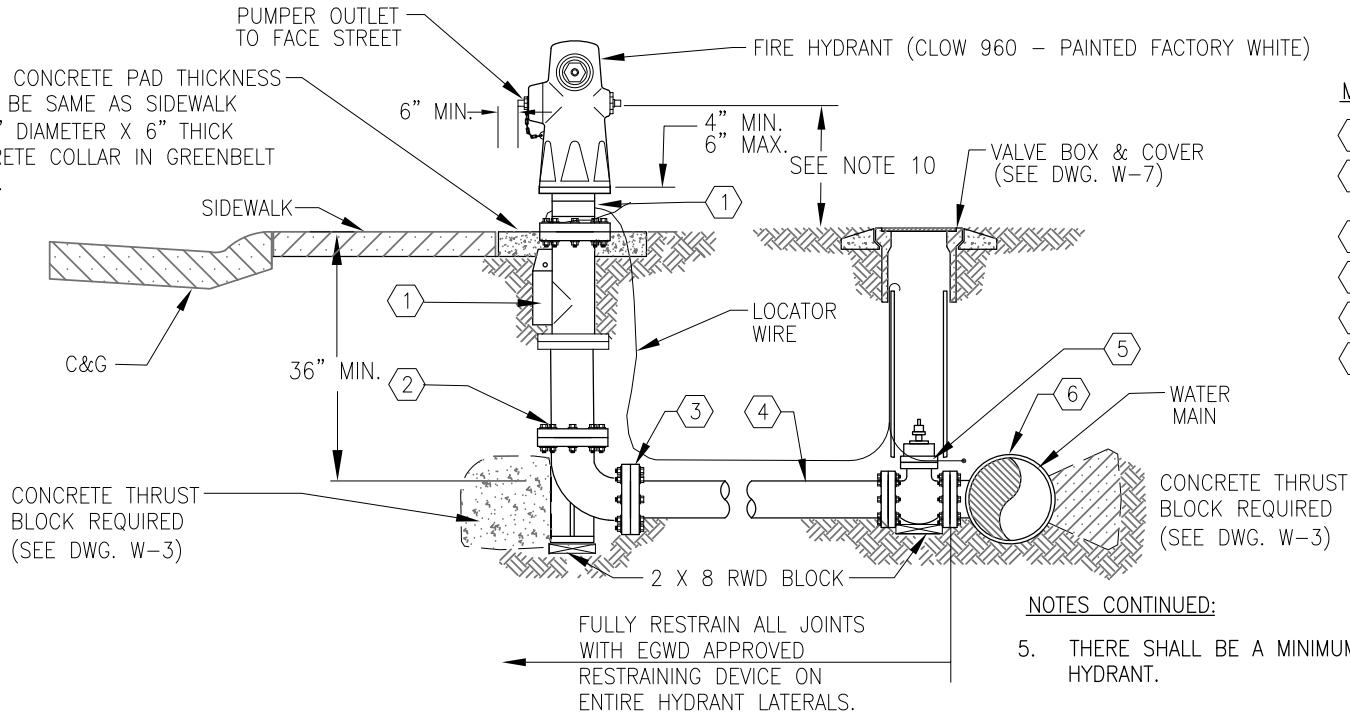
REV.	DATE	REVISION

EGWD SIGNATURE: B. M. Kamilos

DATE: JUNE 2023
PROJECT:
DRAWN BY: B. VOELZ
CHECKED BY: A. ARAGON
EGWD : B. KAMILOS

W-2A

Florin Resource Conservation District



MATERIAL LIST:

1. BREAKOFF CHECK VALVE ASSEMBLY
2. WET BARREL HYDRANT BURY (WITH OPTIONAL PIPE SPOOL)
3. MECHANICAL JOINT RETAINER GLANDS
4. DUCTILE IRON PIPE SPOOL
5. 6" FLG X MJ GATE VALVE
6. FLG X MJ TEE, SEE DWG. W-20

NOTES:

1. IN COMMERCIAL AREAS, FIRE HYDRANTS SHALL BE PROTECTED FROM VEHICULAR DAMAGE AND ACCESSIBLE TO FIRE PROTECTION EQUIPMENT, SEE DWG. W-22.
2. GATE VALVE SHALL BE FLANGE CONNECTED TO THE WATER MAIN.
3. WHEN PIPE IS SHORTER THAN 18", NO JOINTS ALLOWED. USE MECHANICAL JOINT RETAINER GLANDS. TWO 3/4" GALV. TIE RODS MAY BE USED IN LIEU OF OTHER EGWS APPROVED RESTRAINING DEVICES FOR INSTALLATIONS LESS THAN 18" LONG. TIE RODS SHALL BE COATED WITH TWO COATS BITUMASTIC.
4. WHEN PIPE IS LONGER THAN 18", RETAINER GLANDS NOT REQUIRED.

NOTES CONTINUED:

5. THERE SHALL BE A MINIMUM OF 18" HORIZONTAL CLEARANCE AROUND HYDRANT.
6. WHEN PLACED ADJACENT TO CURB, HYDRANT PORT SHALL BE 24" FROM FACE OF CURB.
7. FIRE HYDRANTS SHALL BE PLACED TO PROVIDE A MINIMUM OF 5' CLEARANCE FROM DRIVEWAYS, POLES, AND OTHER OBSTRUCTIONS.
8. HYDRANT PUMPER PORT SHALL FACE DIRECTION OF ACCESS.
9. LOWEST CAP NUT ON HYDRANT SHALL BE 18" MIN. TO 22" MAX. ABOVE TOP OF CONCRETE PAD.
10. ALL METALLIC PIPES AND FITTINGS SHALL BE ENCASED WITH 8 MIL PLASTIC SO THAT NO SOIL IS IN CONTACT WITH THE PIPES AND FITTINGS AND 10 MIL PVC PIPE TAPE.

Elk Grove Water District

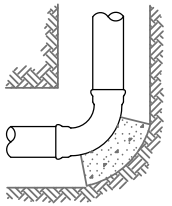
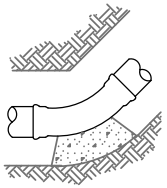
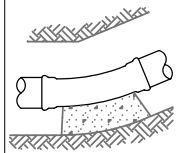
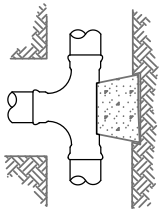
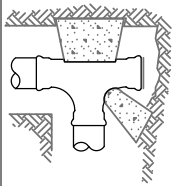
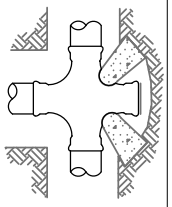
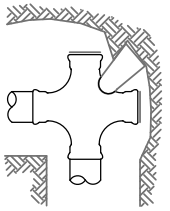
FIRE HYDRANT ASSEMBLY - WATER MAIN BEHIND SIDEWALK

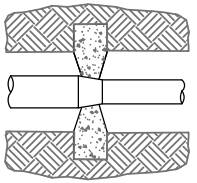
REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
EGWD SIGNATURE	B. M. Kamilos	DRAWN BY: B. VOELZ
		CHECKED BY: A. ARAGON
		EGWD : B. KAMILOS

W-2B

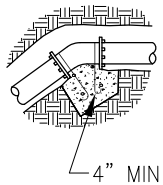
Florin Resource Conservation District

REQUIRED BEARING AREA – SQUARE FEET

TYPE OF FITTING		90° BEND	45° BEND	11 ¼ BEND 22 ½ BEND	TEE OR DEAD END	TEE W/ PLUG	CROSS W/ PLUG	CROSS W/ PLUGS
TYPICAL INSULATION								
SIZE OF PIPE	4"	2	1	1	2	2	2	2
	6"	4	2	1	3	4	4	4
	8"	7	4	2	5	7	7	7
	10"	12	6	3	8	12	12	12
	12"	16	10	5	12	16	16	16



SEE DWG. W–4
REDUCER



4" MIN HOOK

VERTICAL BEND

NOTES:

1. THRUST BLOCKS TO BE CONSTRUCTED OF CLASS "B" (3000 PSI STRENGTH) 5 SACK CONCRETE.
2. AREAS GIVEN ARE FOR CLASS 150 PIPE AT TEST PRESSURE OF 150 P.S.I. IN SOIL WITH 2000 P.S.F. BEARING CAPACITY. INSTALLATIONS USING DIFFERENT PIPE, TEST PRESSURES, AND OR SOIL TYPES SHOULD ADJUST AREAS ACCORDINGLY, SUBJECT TO APPROVAL OF EGWD.
3. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED SOIL. IF THRUST BLOCKS CANNOT BE INSTALLED PER THIS SPECIFICATION, RESTRAINED FITTINGS AND BELL RESTRAINTS WILL BE REQUIRED. SEE STD. DTL. W–12 AND W–19 FOR RESTRAINING REQUIREMENTS.
4. JOINTS AND FACE OF PLUGS TO BE KEPT CLEAR OF CONCRETE.
5. THRUST BLOCKS WILL BE REQUIRED FOR REDUCERS UNLESS REDUCERS RESTRAINED. THRUST BLOCKS FOR REDUCERS SHALL BE DESIGNED BY AN ENGINEER AND SHOWN ON THE IMPROVEMENT PLANS. (SEE DWG. W–4)
6. PIPE JOINTS TO BE KEPT CLEAR OF CONCRETE.
7. ALL FITTINGS TO BE WRAPPED WITH 8 MIL PLASTIC AND 10 MIL PVC FILM TAPE.

RODS FOR VERTICAL BENDS		
FITTING SIZE	ROD SIZE	EMBEDMENT
12" AND LESS	#6	30"
14"–16"	#8	36"

Elk Grove Water District

Florin Resource Conservation District

Elk Grove Water District

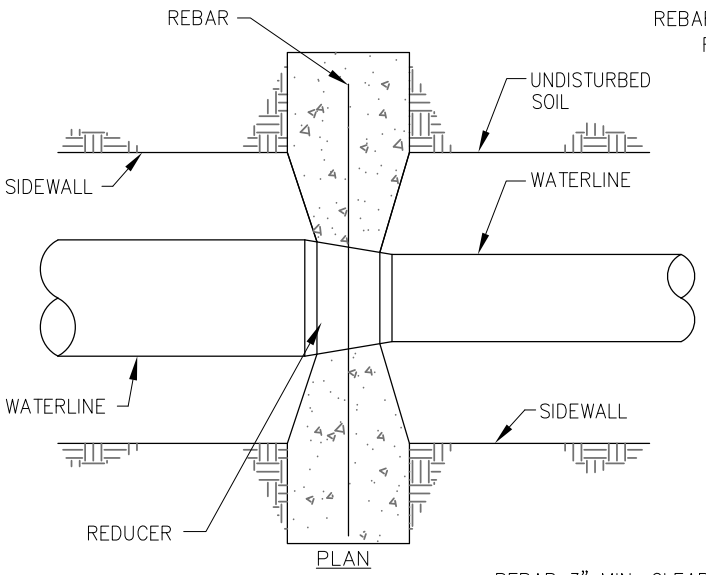
THRUST BLOCK BEARING AREA

REV.	DATE	REVISION

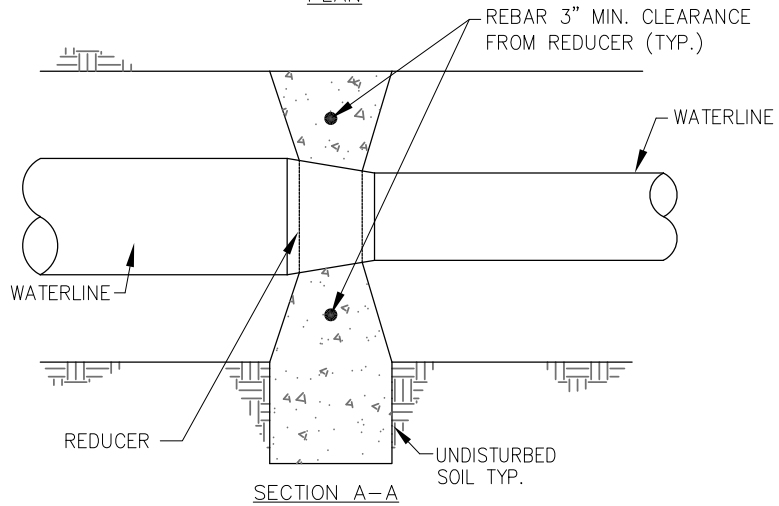
EGWD SIGNATURE B. M. Kamilos

DATE: JUNE 2023
PROJECT:
DRAWN BY: B. VOELZ
CHECKED BY: A. ARAGON
EGWD : B. KAMILOS

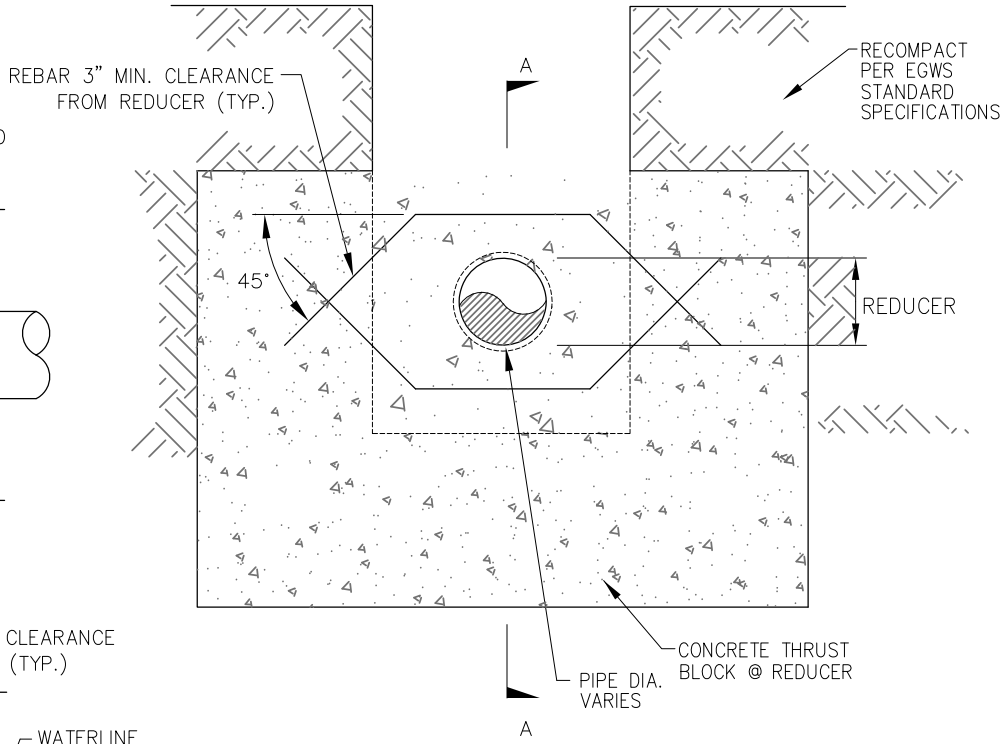
W-3



PLAN



SECTION A–A



ELEVATION

NOTES:

1. ALL NOTES FOR STD. DWG. W–3 EGWD FOR THRUST BLOCKS SHALL APPLY.
2. IF RESTRAINED, THRUST BLOCK NOT REQUIRED. SEE DWG. W–19.

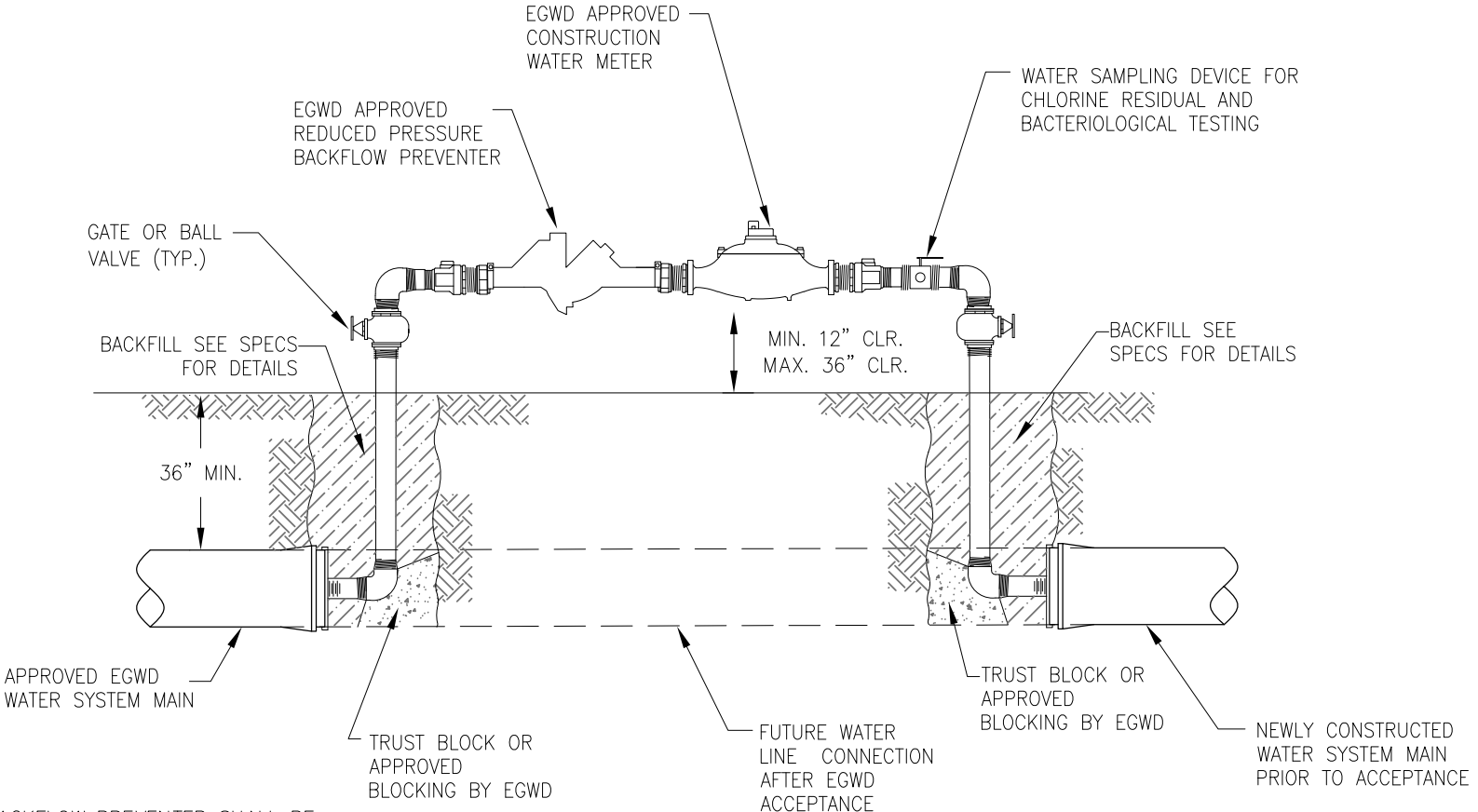
Elk Grove Water District

THRUST BLOCK REDUCER

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
EGWD SIGNATURE		B. M. Kamilos	CHECKED BY: A. ARAGON
			EGWD : B. KAMILOS

W-4

Florin Resource Conservation District



NOTES:

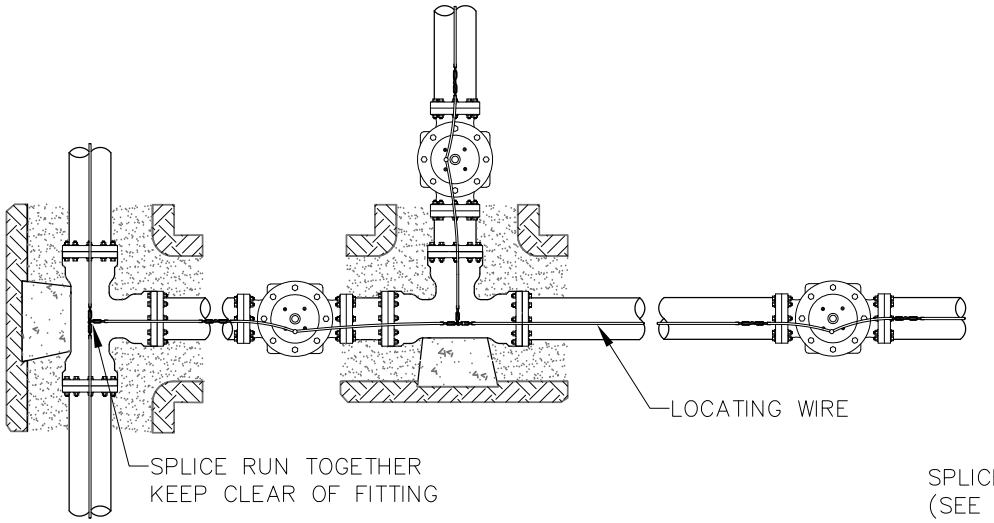
1. REDUCED PRESSURE BACKFLOW PREVENTER SHALL BE LISTED IN THE MOST RECENT MANUAL OF CROSS-CONNECTION CONTROL BY USC IN ACCORDANCE WITH ELK GROVE WATER DIESTRICT'S CROSS-CONNECTION CONTROL PROGRAM.

Elk Grove Water District

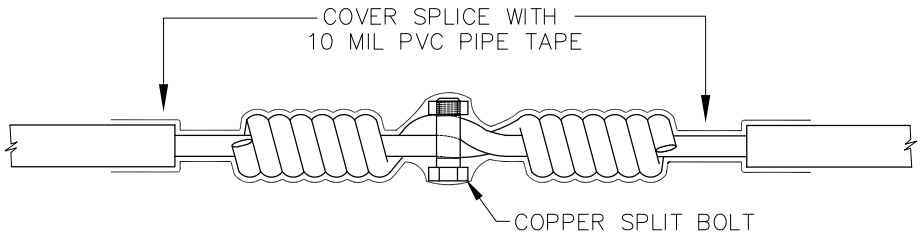
TEMPORARY WATER MAIN TIE-IN CONNECTION

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
EGWD SIGNATURE		B. M. Kamilos	CHECKED BY: A. ARAGON
			EGWD : B. KAMILOS

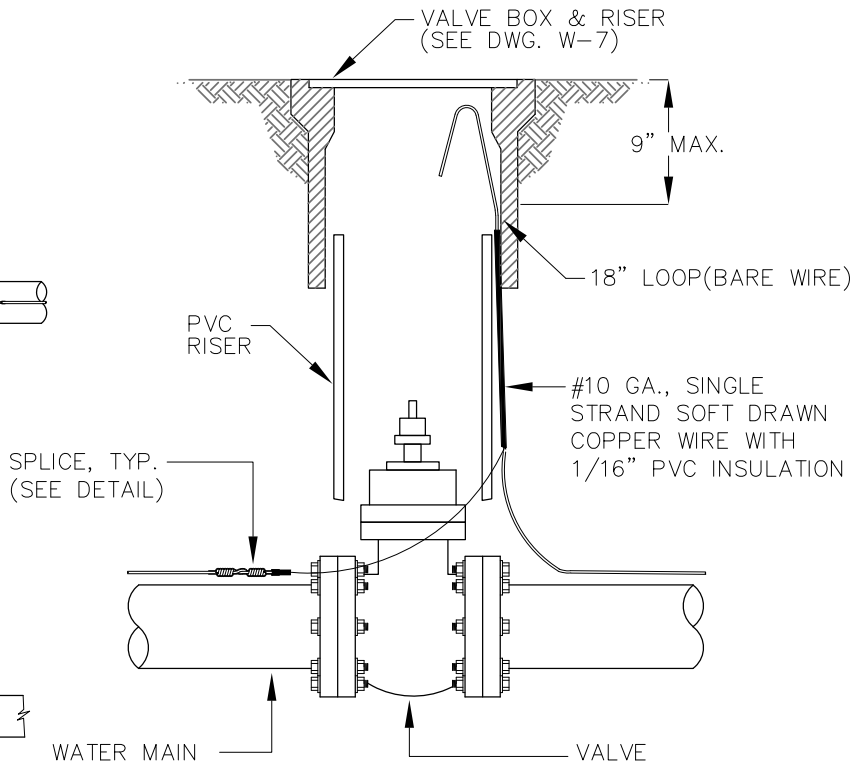
W-5



TYPICAL LAYOUT



SPLICE DETAIL



VALVE DETAIL

NOTES:

1. WIRE SHALL BE CONTINUOUS BETWEEN VALVE BOXES ONLY USE SPLICES IF ABSOLUTELY REQUIRED
2. LOCATING WIRE SHALL BE LAID ON TOP OF THE WATER MAIN, AND SHALL BE TAPED TO PIPE AT 3' INTERVALS AND AT ALL CROSSES, TEES, AND ELBOWS.

NOTES CONTINUED:

3. CONTRACTOR SHALL CONDUCT A CONTINUITY TEST ON THE ENTIRE SYSTEM..
4. WIRE SHALL BE SPLICED WITH COPPER CONNECTORS AND WRAPPED WITH 10 MIL PVC PAPER TAPE

Elk Grove Water District

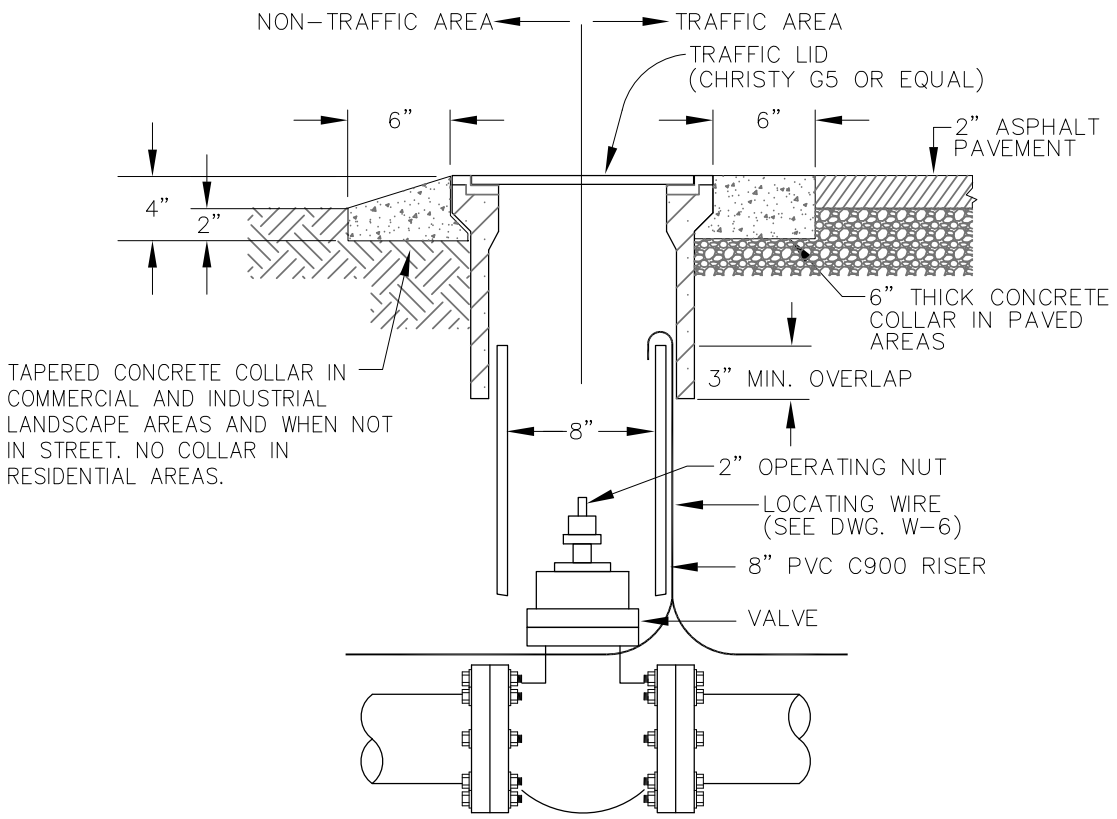
LOCATING WIRE FOR WATER MAINS & SERVICES

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
EGWD SIGNATURE		B. M. Kamilos	CHECKED BY: A. ARAGON
			EGWD : B. KAMILOS

W-6

Florin Resource Conservation District

106



TRAFFIC VALVE BOX

NOTES:

1. SET VALVE BOX TO FINISHED GRADE FOR NEW CONSTRCUCTION. IN AREAS WHERE THE FINISHED GRADE HAS NOT BEEN DEFINED, PLACE 4"X4" LOCATING POST PAINTED BLUE WITHIN 1 FOOT OF VALVE BOX. POST SHALL BE 6 FEET IN LENGTH, BURIED 3 FEET.
2. VALVE BOX AND RISER TO BE SET PLUMB AND CENTERED OVER WATER VALVE NUT. DO NOT REST RISER ON VALVE.

Elk Grove Water District

VALVE BOX & RISER INSTALLATION

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
EGWD SIGNATURE		B. M. Kamilos	CHECKED BY: A. ARAGON
			EGWD : B. KAMILOS

W-7

MATERIAL LIST:

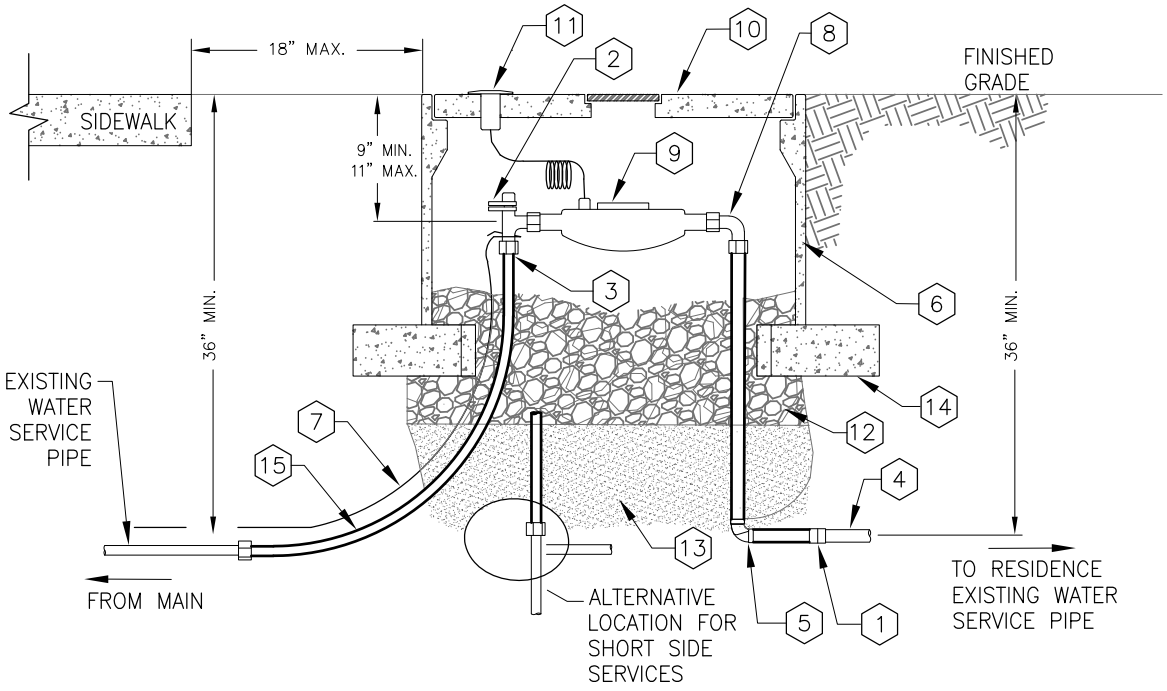
1. PVC COUPLER or BUSHING ADAPTER
2. ANGLE STOP: FORD 1" METER ANGLE (BA13-444W-NL)
3. INSERTS: FORD 1" CTS INSERT-S2
4. PLASTIC PIPE: 1" PVC OR EXISTING
5. PVC 90 DEGREE COUPLER
6. METER BOX: CHRISTY 13201636 "WATER" LID WITH PROBE PORT
7. TRACER WIRE: SOLID COPPER WIRE 14 GAUGE
8. ANGLE METER COUPLING: FORD 1" METER x 1" FIP CATALOG # L31-44
9. WATER METER: SENSUSMETER 1" iPERL
10. CONCRETE, STEEL, OR FRP LID (PER SURFACE CONDITION REQUIREMENTS) WITH HINGED METER READING LID CENTERED OVER WATER METER
11. TOUCH-READ TRANSMITTER IN METER BOX LID
12. COMPACTED 1/2" CRUSHED ROCK (9" MIN DEPTH)
13. FILL SAND TO BE USED TO PROTECT PIPE
14. CONCRETE BRICKS AT ALL FOUR CORNERS TO LEVEL AND SUPPORT METER BOX
15. 1" POLY PIPE CTS

NOTE:

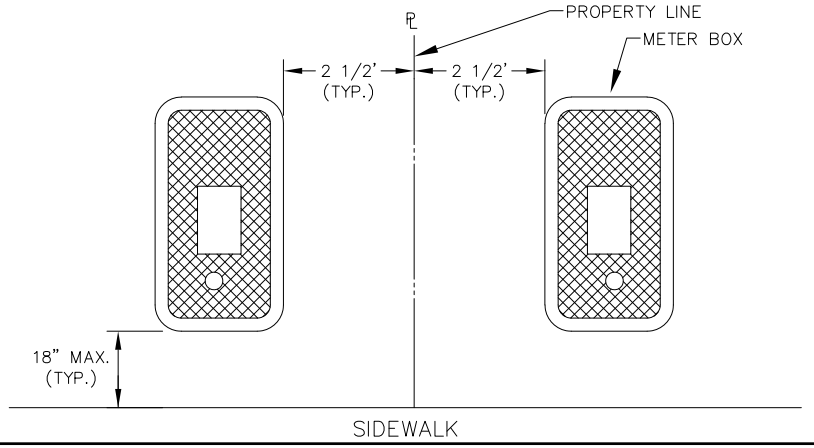
1. ALL METALLIC PIPES AND FITTINGS SHALL BE ENCASED WITH 8 MIL PLASTIC AND 10MIL. PVC PIPE TAPE SO THAT NO SOIL IS IN CONTACT WITH THE PIPES AND FITTINGS.
2. FOR RP IRRIGATION SERVICE DEVICE PLEASE SEE DRAWING (W-11).
3. PLASTIC LID FOR GREEN BELT AREAS. CONCRETE LIDS FOR ALL OTHER AREAS.

* COMPRESSION BY F.I.P.T. (FEMALE IRON PIPE THREADS)

ELEVATION VIEW



PLAN



Elk Grove Water District

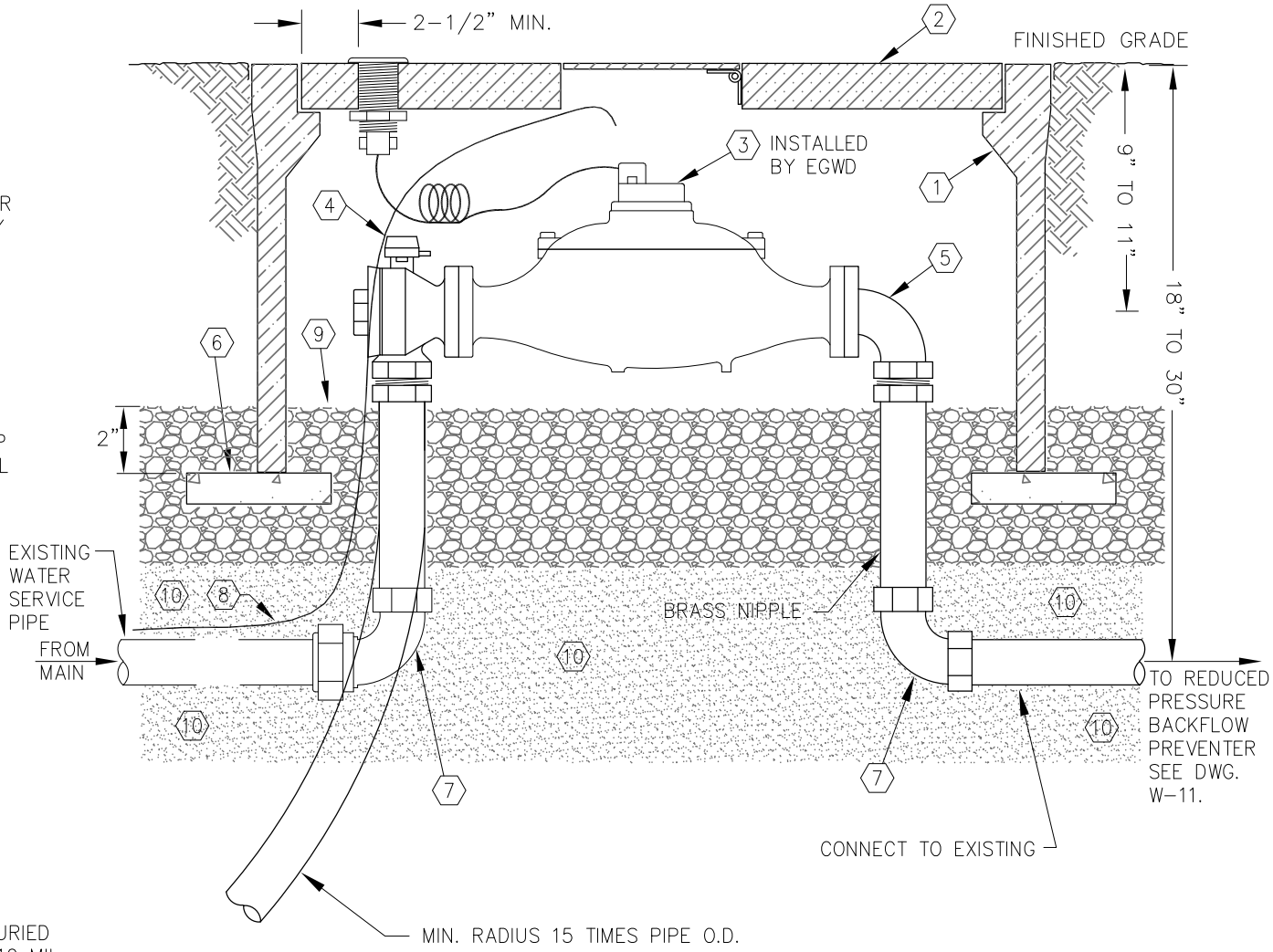
1" RESIDENTIAL & IRRIGATION METERED WATER SERVICE

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
EGWD SIGNATURE		B. M. Kamilos	CHECKED BY: A. ARAGON
			EGWD : B. KAMILOS

W-8A

MATERIAL LIST:

1. REINFORCED CONCRETE UTILITY BOX (CHRISTY B36 FOR 1-1/2" & 2")
2. REINFORCED CONCRETE COVER WITH A HINGED CAST IRON LID AND A 1-3/4" PRE-CAST HOLE LOCATED OPPOSITE WATER LABEL(CHRISTY B36G COVER.
3. 1 ½" OR 2" OMNI C2 COMPOUND WATER METER (100 CU. FT. REGISTER) TO BE INSTALLED BY EGWS UPON CONTRACTOR OBTAINING BUILDING PERMIT.
4. FLANGED WINGED ANGLE METER STOP WITH TEFLON COATED BALL.
5. OVAL FLANGED 90° BRASS FITTING.
6. 3/4" TO 1"X4"X16" CONCRETE BLOCK TO HELP SUPPORT VALVE BOX, USE ONE BLOCK ON ALL FOUR SIDES OF METER BOX. COVER ANY OPENINGS OR HOLES IN THE SIDE OF THE UTILITY BOX WITH CONCRETE BLOCK.
7. BRASS COMPRESSION BY THREADED 90° FITTING.
8. LOCATING WIRE 18" LOOPED.
9. COMPACTED 1/2" CRUSHED ROCK (9" MIN. DEPTH)
10. FILL SAND TO BE USED TO PROTECT PIPE



NOTE:

1. ALL METALLIC PIPES AND FITTING THAT ARE BURIED SHALL BE ENCASED WITH 8 MIL PLASTIC AND 10 MIL PVC PIPE TAPE SO THAT NO SOIL IS IN CONTACT WITH THE PIPES AND FITTINGS.

Elk Grove Water District

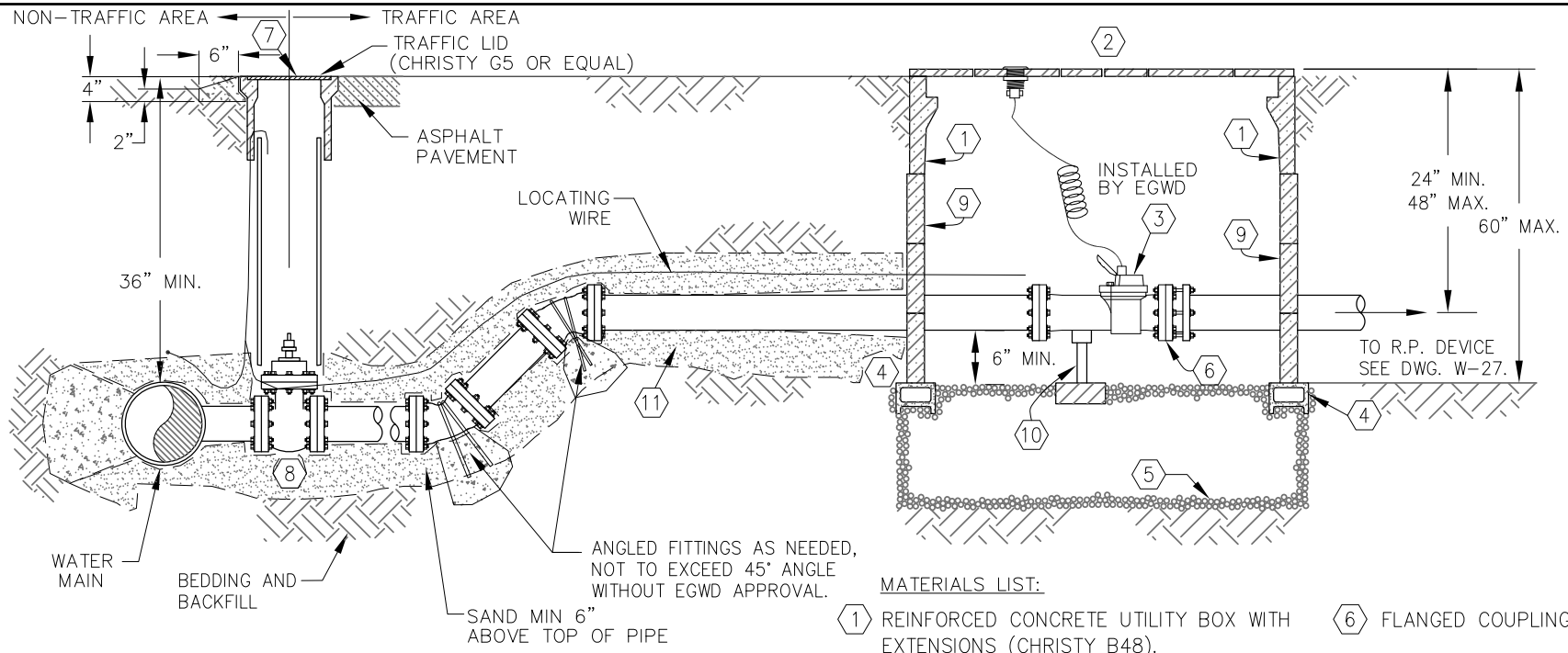
1 1/2" & 2" COMMERCIAL OR IRRIGATION METERED WATER SERVICE

REV.	DATE	REVISION

EGWD SIGNATURE: B. M. Kamilos

DATE: JUNE 2023
PROJECT:
DRAWN BY: B. VOELZ
CHECKED BY: A. ARAGON
EGWD : B. KAMILOS

W-8B



NOTES:

1. WHEN NEEDED CONCRETE BLOCKS SHALL BE USED TO BLOCK ANY OPENING OR CUT OUT PORTIONS OF THE METER BOX NOT UTILIZED (MINIMUM OF 1" THICK BLOCK ARE REQUIRED).
2. ALL 4" TO 6" DIA. PIPE BETWEEN THE WATER MAIN AND THE METER SHALL BE DUCTILE IRON WITH POLYETHYLENE ENCASEMENT AND 6-INCHES OF SAND BACKFILL AND 6-INCHES OF SAND BEDDING. JOINTS BETWEEN MAIN AND METER SHALL BE RESTRAINED.
3. 3" PIPE SHALL BE DUCTILE IRON PIPE WITH 8 MIL PLASTIC AND HAVE SAND BEDDING AND BACKFILL. VALVES ON 3-INCH DIAMETER PIPE SHALL HAVE BRONZE CORPORATION AND CURB VALVES WITH TEFLON COATED BALLS.
4. VALVES ATTACHED TO THE MAIN MUST HAVE FLANGED ENDS.
5. INSTALL LOCATING WIRE PER DWG. W-6.

MATERIALS LIST:

(1) REINFORCED CONCRETE UTILITY BOX WITH EXTENSIONS (CHRISTY B48).

(2) 2 PIECE STEEL CHECKER PLATE W/ TWO 10" ROUND SELF-CLOSING READING LIDS AND 1-3/4" HOLE FOR TOUCH READ MODULE IN ONE READING LID (CHRISTY B48-62G COVER).

(3) 3"-6" SENSUS OMNI C2 WATER METER (100 CU. FT. REGISTER) TO BE INSTALLED BY EGWS UPON CONTRACTOR OBTAINING BUILDING PERMIT.

(4) CONCRETE BLOCKS SHALL BE PLACED ALONG THE ENTIRE PERIMETER TO SUPPORT BOX.

(5) 3/4" CHRUSHED ROCK SUB-BASE, 12" TO 18" DEEP, COMPACT TO 90% COMPACTION.

(6) FLANGED COUPLING ADAPTER.

(7) VALVE BOX AND LID (SEE W-7).

(8) GATE VALVE, WITH BOTH ENDS FLANGED.

(9) METER BOX EXTENSION (TYPICAL).

(10) ADJUSTABLE PIPE SUPPORT W/BLOCKING.

(11) FILL SAND USED TO PROTECT PIPE

Elk Grove Water District

Florin Resource Conservation District

Elk Grove Water District

3"- 6" COMMERCIAL METERED WATER SERVICE

REV.	DATE	REVISION

EGWD SIGNATURE B. M. Kamilos

DATE: JUNE 2023

PROJECT:

DRAWN BY: B. VOELZ

CHECKED BY: A. ARAGON

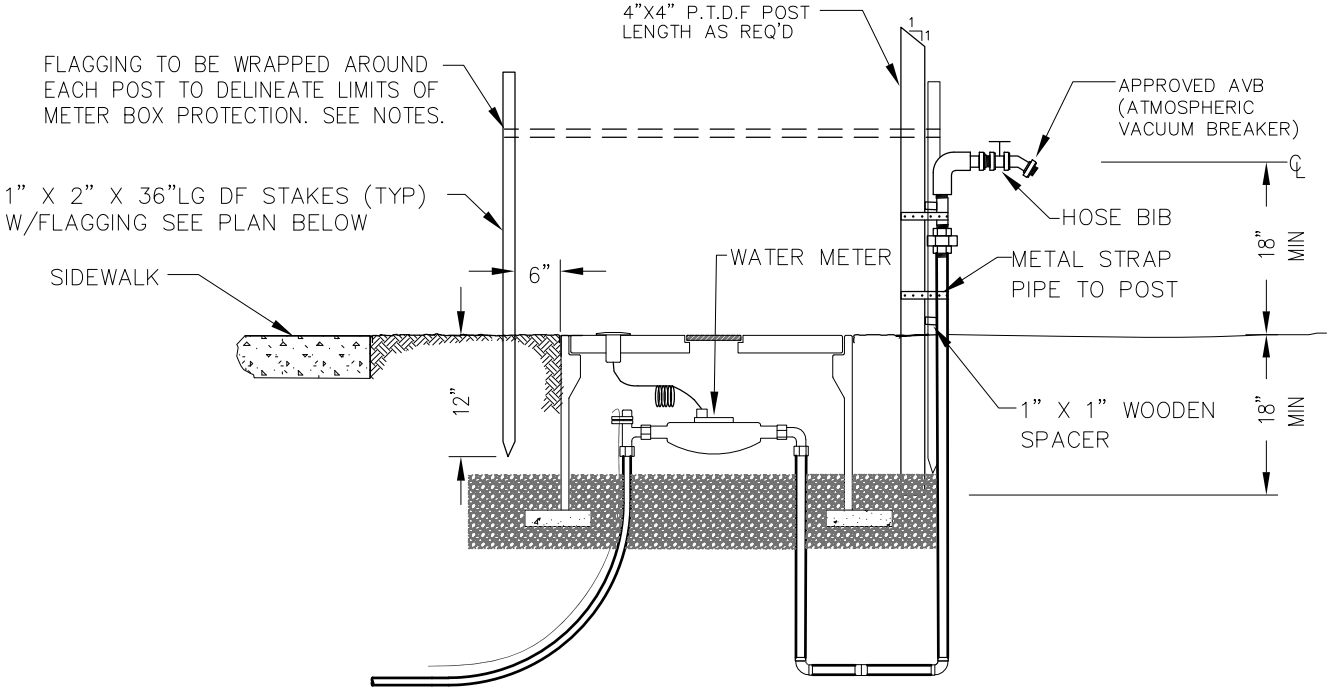
EGWD : B. KAMILOS

W-8C

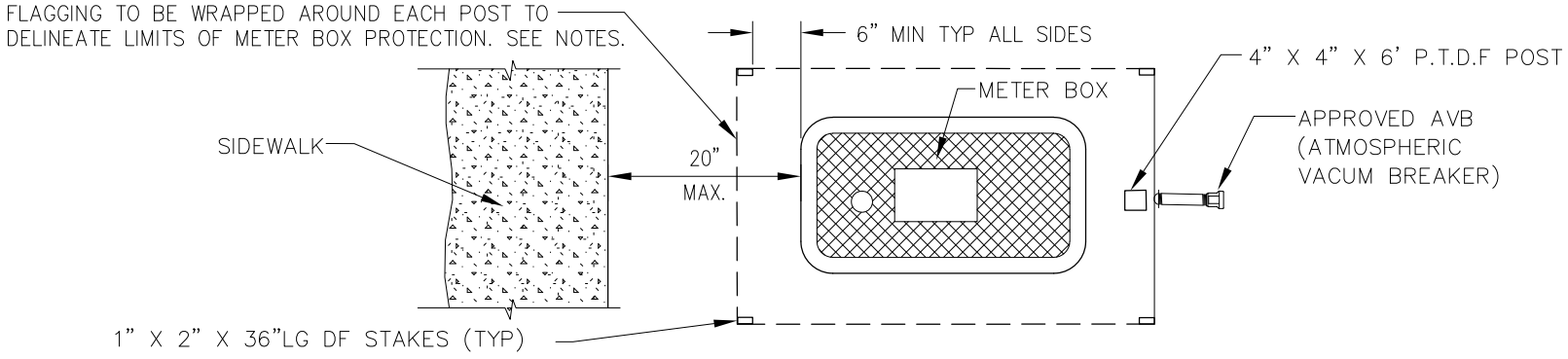
110

NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND COSTS OF ANY DAMAGE TO METER BOXES DURING CONSTRUCTION.
2. METER BOXES SHALL BE KEPT FREE OF DEBRIS AT ALL TIMES.



ELEVATION



PLAN

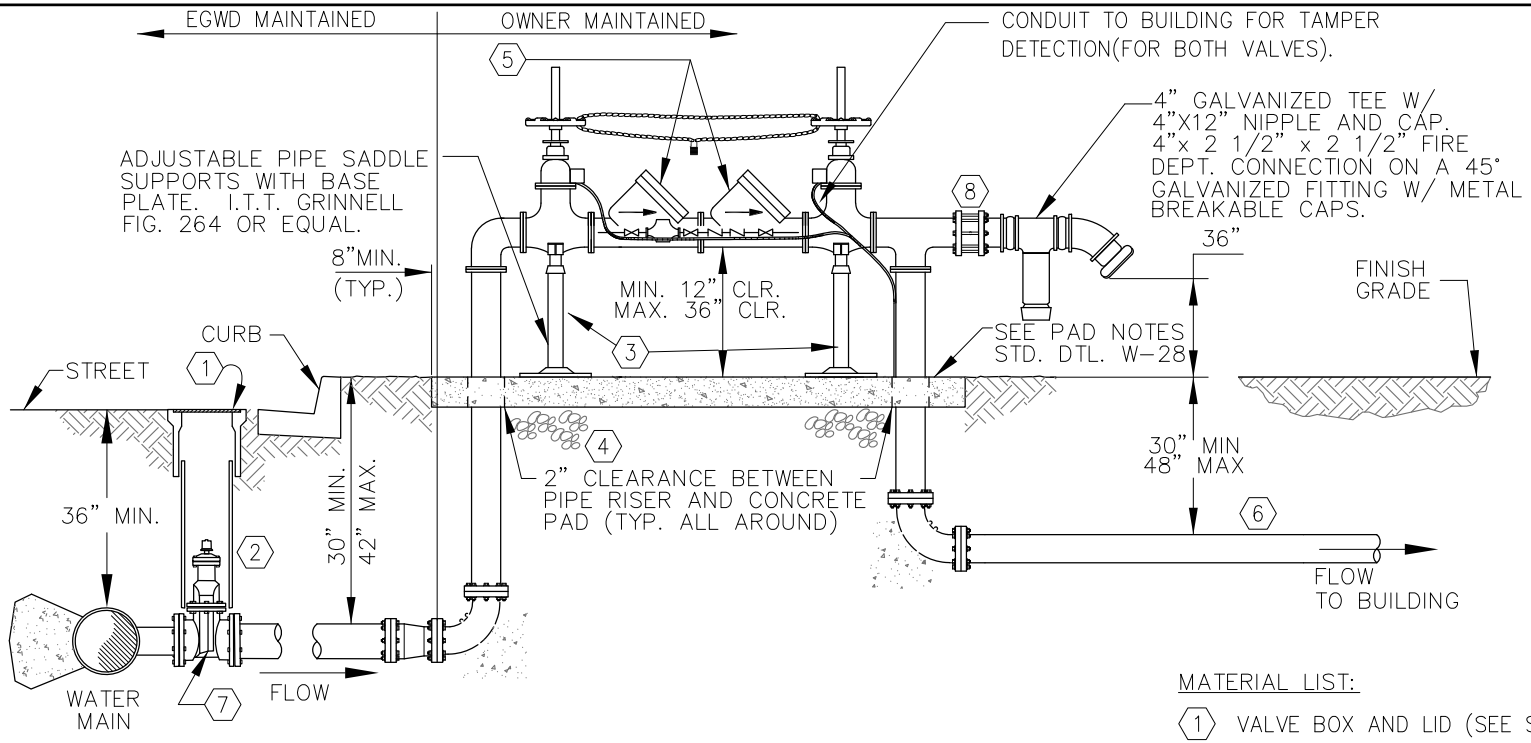
Elk Grove Water District

Florin Resource Conservation District

METER BOX PROTECTION & TEMPORARY WATER

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
EGWD SIGNATURE		B. M. Kamilos	CHECKED BY: A. ARAGON
			EGWD : B. KAMILOS

W-9



NOTES:

1. INSTALL LOCATING WIRE PER STD. DWG. W-6.
2. ALL JOINTS BETWEEN MAIN AND DOUBLE DETECTOR CHECK SHALL BE FLANGED.
3. CHECK VALVE SHALL BE U.S.C APPROVED.
4. ALL METALLIC PIPE AND FITTINGS SHALL BE ENCASED WITH 8 MIL POLYETHYLENE PER AWWA C105, SO THAT NO SOIL IS IN CONTACT WITH THE PIPE, FITTINGS, AND WIRE.
5. ALL FITTINGS SHALL BE RESTRAINED BY EGWD APPROVED MATERIALS.
6. DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER SHALL BE LISTED ON THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS-CONECTION CONTROL AND HYDRAULIC RESEARCH'S MOST RECENT LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES. OS&Y VALVES REQUIRED.

MATERIAL LIST:

1. VALVE BOX AND LID (SEE STD. DWG. W-7).
2. PVC C-900 BOX EXTENSIONS (SEE STD. DWG. W-7).
3. PIPE SUPPORT, MIN. 2" GALVANIZED SCHEDULE 40.
4. 3/4" CRUSHED ROCK SUB-BASE, 12" TO 18" DEEP.
5. DOUBLE DETECTOR CHECK VALVE-TYPE AND BY PASS METER APPROVED BY EGWD (SEE STD. DTL W-28).
6. DUCTILE IRON SPOOL.
7. AWWA C509 GATE VALVE, FLANGED ENDS.
8. WAFER CHECK VALVE.

Elk Grove Water District

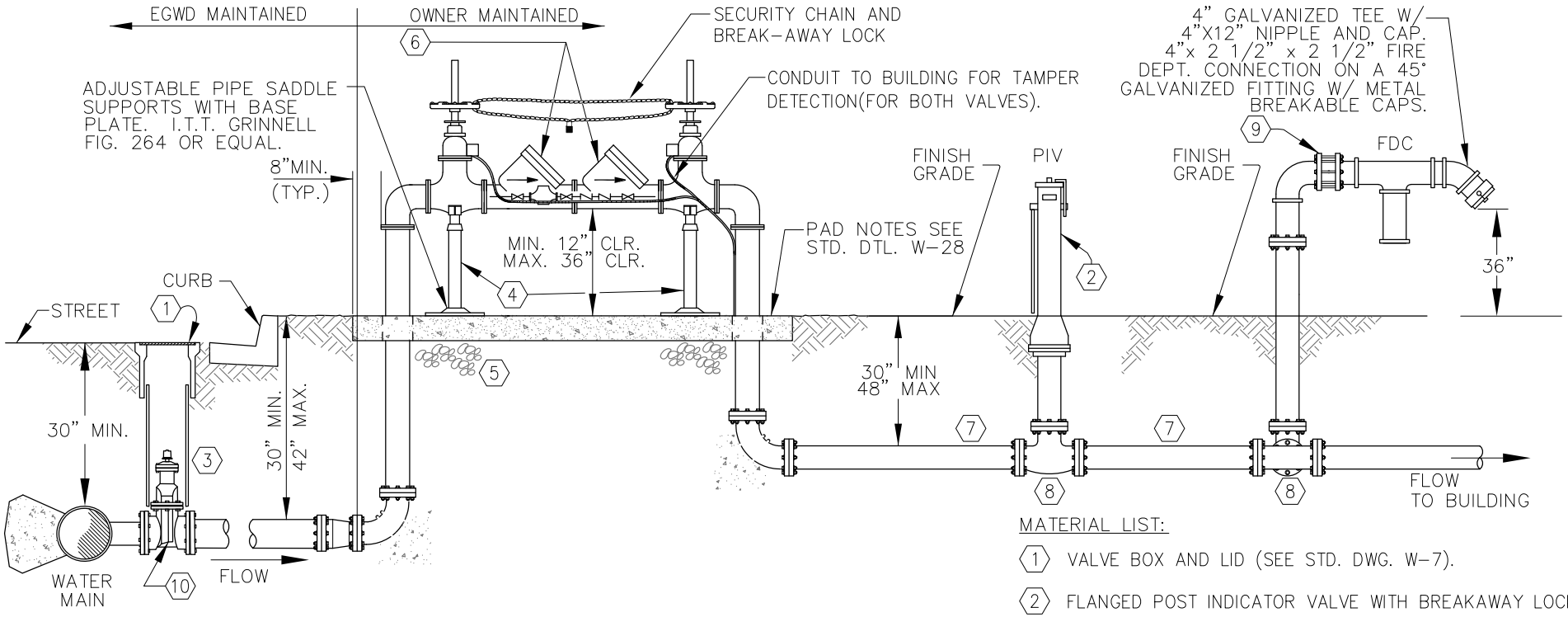
Florin Resource Conservation District

Elk Grove Water District

4" & LARGER FIRE PROTECTION DETAIL FOR CONNECTION TO A SINGLE BUILDING FIRE RISER

REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
EGWD SIGNATURE	B. M. Kamilos	DRAWN BY: B. VOELZ
		CHECKED BY: A. ARAGON
		EGWD : B. KAMILOS

W-10



NOTES:

1. INSTALL LOCATING WIRE PER STD. DWG. W-6.
2. ALL JOINTS BETWEEN MAIN AND DOUBLE DETECTOR CHECK SHALL BE FLANGED.
3. CHECK VALVE SHALL BE U.S.C. APPROVED.
4. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE ENCASED WITH 10 MIL POLYETHYLENE PER AWWA C105, SO THAT NO SOIL IS IN CONTACT WITH THE PIPE, FITTINGS, AND WIRE.
5. ALL FITTINGS SHALL BE RESTRAINED BY EGWD APPROVED MATERIALS.
6. DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER SHALL BE LISTED ON THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS-CONECTION CONTROL AND HYDRAULIC RESEARCH'S MOST RECENT LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES. OS&Y VALVES REQUIRED.

MATERIAL LIST:

1. VALVE BOX AND LID (SEE STD. DWG. W-7).
2. FLANGED POST INDICATOR VALVE WITH BREAKAWAY LOCK.
3. PVC C-900 BOX EXTENSIONS (SEE STD. DWG. W-7).
4. PIPE SUPPORT, MIN. 2" GALVANIZED SCHEDULE 40.
5. 3/4" CRUSHED ROCK SUB-BASE, 12" TO 18" DEEP.
6. DOUBLE DETECTOR CHECK VALVE-TYPE AND BY PASS METER APPROVED BY EGWD (SEE STD. DTL W-28).
7. DUCTILE IRON SPOOL.
8. DUCTILE IRON FLANGED TEE.
9. WAFER CHECK VALVE.
10. AWWA C509 GATE VALVE, FLANGED ENDS

Elk Grove Water District

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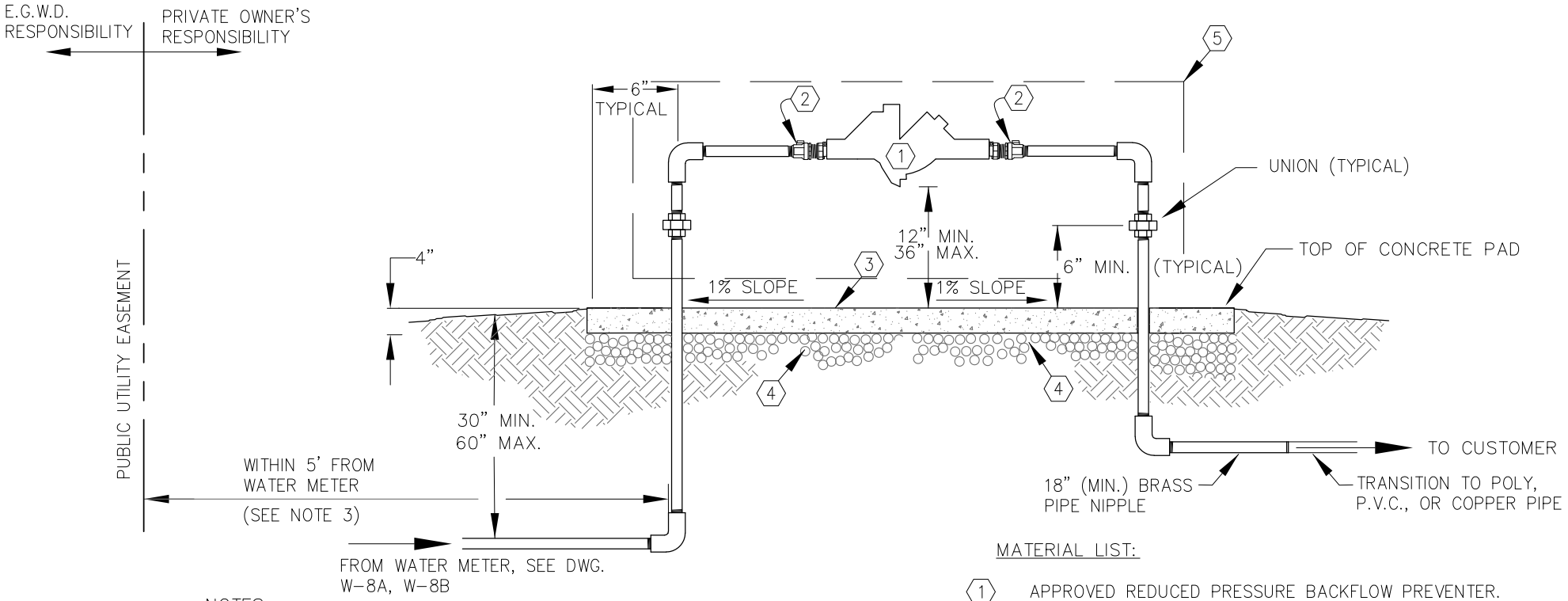
Elk Grove Water District

4" & LARGER FIRE PROTECTION DETAIL FOR PRIVATE FIRE LOOP

REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
EGWD SIGNATURE	B. M. Kamilos	DRAWN BY: B. VOELZ
		CHECKED BY: A. ARAGON
		EGWD : B. KAMILOS

W-10A



NOTES:

1. BACKFLOW PREVENTER APPROVED BY EGWD CROSS CONNECTION CONTROL SPECIALIST SHALL BE LISTED ON THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH'S MOST RECENT LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
2. ALL PIPES AND FITTINGS SHALL BE LEAD-FREE BRASS OR TYPE K HARD DRAWN COPPER. ALL BURIED PIPES SHALL BE WRAPPED WITH 8 MIL POLYETHYLENE TAPE, DOUBLE-WRAPPED.
3. UPON APPROVAL BY THE ELK GROVE WATER DISTRICT CROSS-CONNECTION CONTROL SPECIALIST, THE BACKFLOW PREVENTER MAY BE INSTALLED FARTHER AWAY THAN 5' FROM THE WATER METER IF EXISTING CONDITIONS NECESSITATE.

MATERIAL LIST:

1. APPROVED REDUCED PRESSURE BACKFLOW PREVENTER.
2. BRASS BODY, RESILIENT SEATED BALL VALVE MINIMUM WORKING PRESSURE OF 175 PSI.
3. 4" SLAB – 18" WIDE WITH VARYING LENGTH.
4. 1/2" OR 3/4" CRUSHED ROCK, 4" MINIMUM THICKNESS, MECHANICALLY COMPACTED TO 95% COMPACTION.
5. CHRISTY'S BACKFLOW SECURITY FREEZE BLANKET, OR COMPARABLE PRODUCT. FREEZE BLANKET SIZE TO FIT VALVE SIZE.
6. PROTECTION CAGE (OPTIONAL).
7. BOLLARDS (OPTIONAL). REFER TO STD. DWG.W-25 FOR BOLLARD DETAILS.

Elk Grove Water District

1"- 2" BACKFLOW PREVENTER

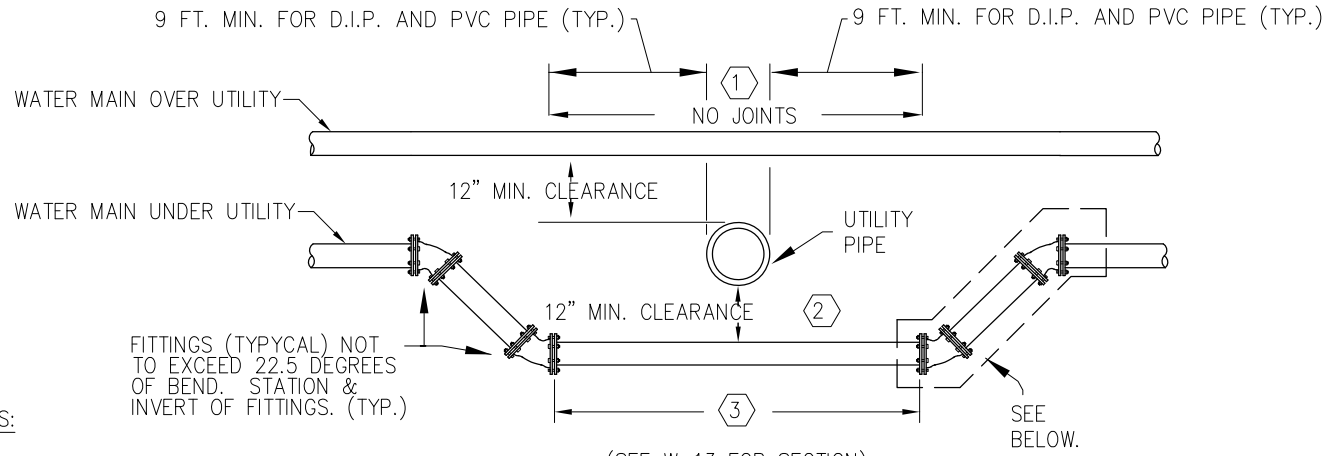
REV.	DATE	REVISION

EGWD SIGNATURE B. M. Kamilos

DATE: JUNE 2023
PROJECT:
DRAWN BY: B. VOELZ
CHECKED BY: S. SHAW
EGWD : B. KAMILOS

W-11

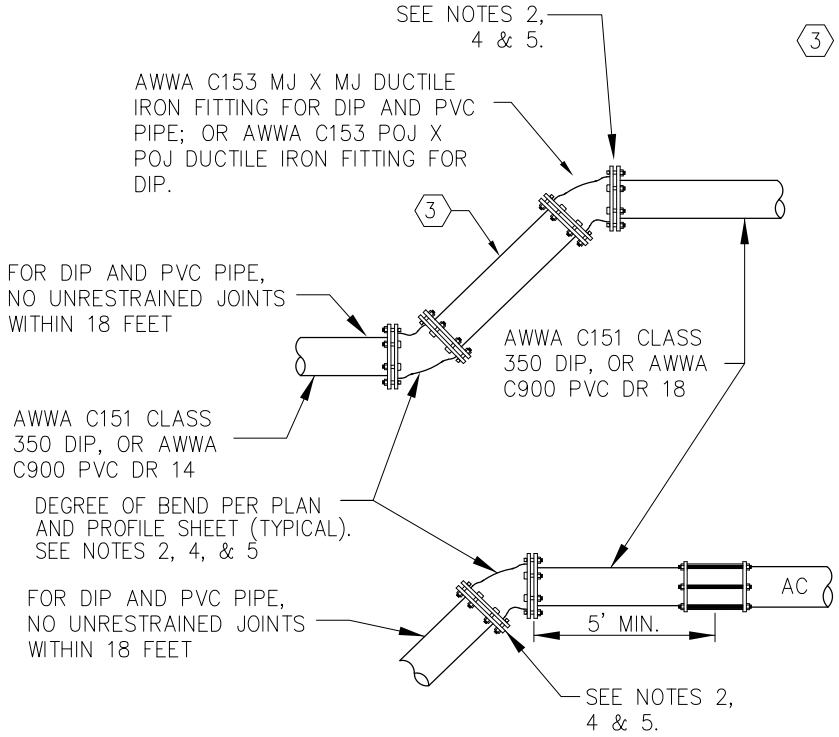
Florin Resource Conservation District



(SEE W-13 FOR SECTION)

NOTES:

1. IF DIP IS USED, FITTINGS MAY HAVE BELL ENDS WITH U.S. PIPE FIELD LOK GASKETS FOR RESTRAINING DEVICES OR APPROVED EQUAL BY EGWD. BELL RESTAINTS FOR PVC PIPE ARE NOT ALLOWED.
2. IF BEND IS TO EXCEED 22.5 DEGREES, THE BEND AND THE RESTRAINED LENGTH MUST BE APPROVED BY EGWD.
3. WRAP ALL DIP AND FITTINGS WITH 8 MIL. POLYETHYLENE ENCASEMENT AND 10 MIL TAPE IN ACCORDANCE WITH AWWA C105.
4. RESTRAINING DEVICE FOR DIP: USE U.S. PIPE FIELD LOK GASKETS OR APPROVED EQUAL; FOR MJ JOINTS USE STAR PIPE PRODUCTS STARGRIP 3000, EBAA MEGALUG 2000PV SERIES, OR APPROVED EQUAL BY EGWD.
5. RESTRAINING DEVICE FOR PVC PIPE: USE MJ FITTINGS WITH STAR PIPE PRODUCTS SERIES 4000 OR 4100, EBAA MEGALUG 2000PV SERIES, OR APPROVED EQUAL BY EGWD.
6. SEE PLAN & PROFILE FOR RESTRAINED LENGTH AND DEGREE OF BEND.
7. THIS DETAIL IS FOR WATER PIPES 12" IN DIAMETER & SMALLER. FOR ANY LARGER DIAMETER PIPES CONTACT EGWD FOR APPROVAL.



1. IF UTILITY BEING CROSSED IS NOT A STORM DRAIN, SEWER, OR OTHER WATER LINE, THEN THE "NO JOINT" REQUIREMENT DOES NOT APPLY. WHERE A 9 FOOT MIN. JOINT SEPARATION CANNOT BE ACHIEVED WITH A SINGLE 18 FOOT SECTION OF PIPE, AN 18 FOOT SECTION OF PIPE SHALL BE CENTERED ON THE CROSSING. SEE NOTES 4 AND 5 FOR APPROVED RESTRAINING DEVICES.

2. IF THE UTILITY BEING CROSSED IS A SEWER, STORM DRAIN OR OTHER WATER LINE, THE TYPE OF PIPE MUST BE DUCTILE IRON OR AWWA C900 DR 14 PVC PIPE.

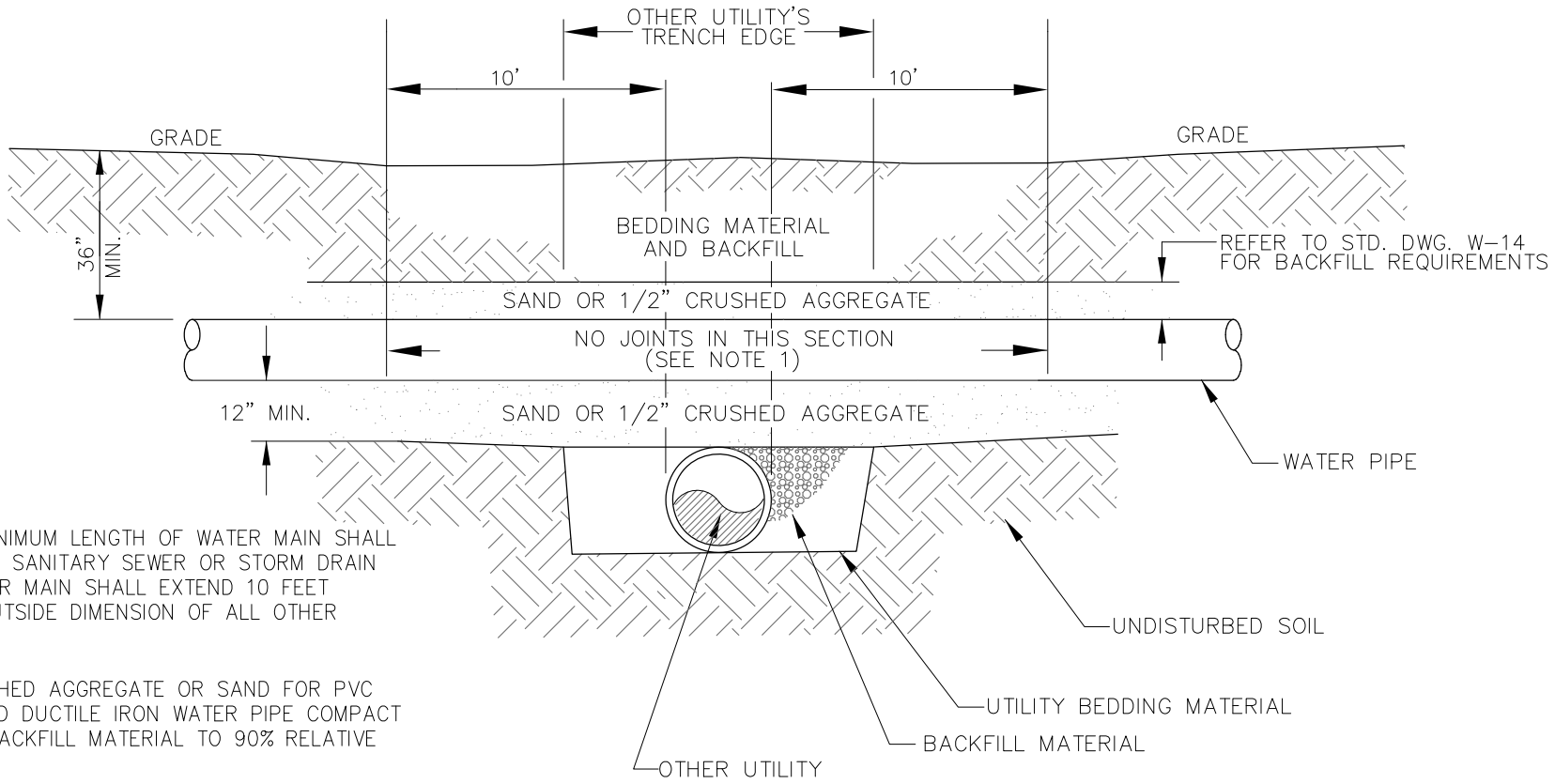
3. NO JOINTS ALLOWED IF CROSSINGS LESS THAN 18 FEET. ALL JOINTS BETWEEN FITTINGS MUST BE RESTRAINED WITH EITHER OF THE METHODS DESCRIBED FOR DIP OR PVC. BELL RESTRAINTS FOR PVC PIPE ARE OK IF CROSSING IS GREATER THAN 18 FEET. SEE NOTES 4 AND 5.

Elk Grove Water District

UTILITY CROSSING

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
		EGWD SIGNATURE	CHECKED BY: A. ARAGON
		B. M. Kamilos	EGWD : B. KAMILOS

W-12



NOTES:

1. AN 20 FOOT MINIMUM LENGTH OF WATER MAIN SHALL EXTEND OVER A SANITARY SEWER OR STORM DRAIN PIPE. THE WATER MAIN SHALL EXTEND 10 FEET BEYOND THE OUTSIDE DIMENSION OF ALL OTHER UTILITIES.

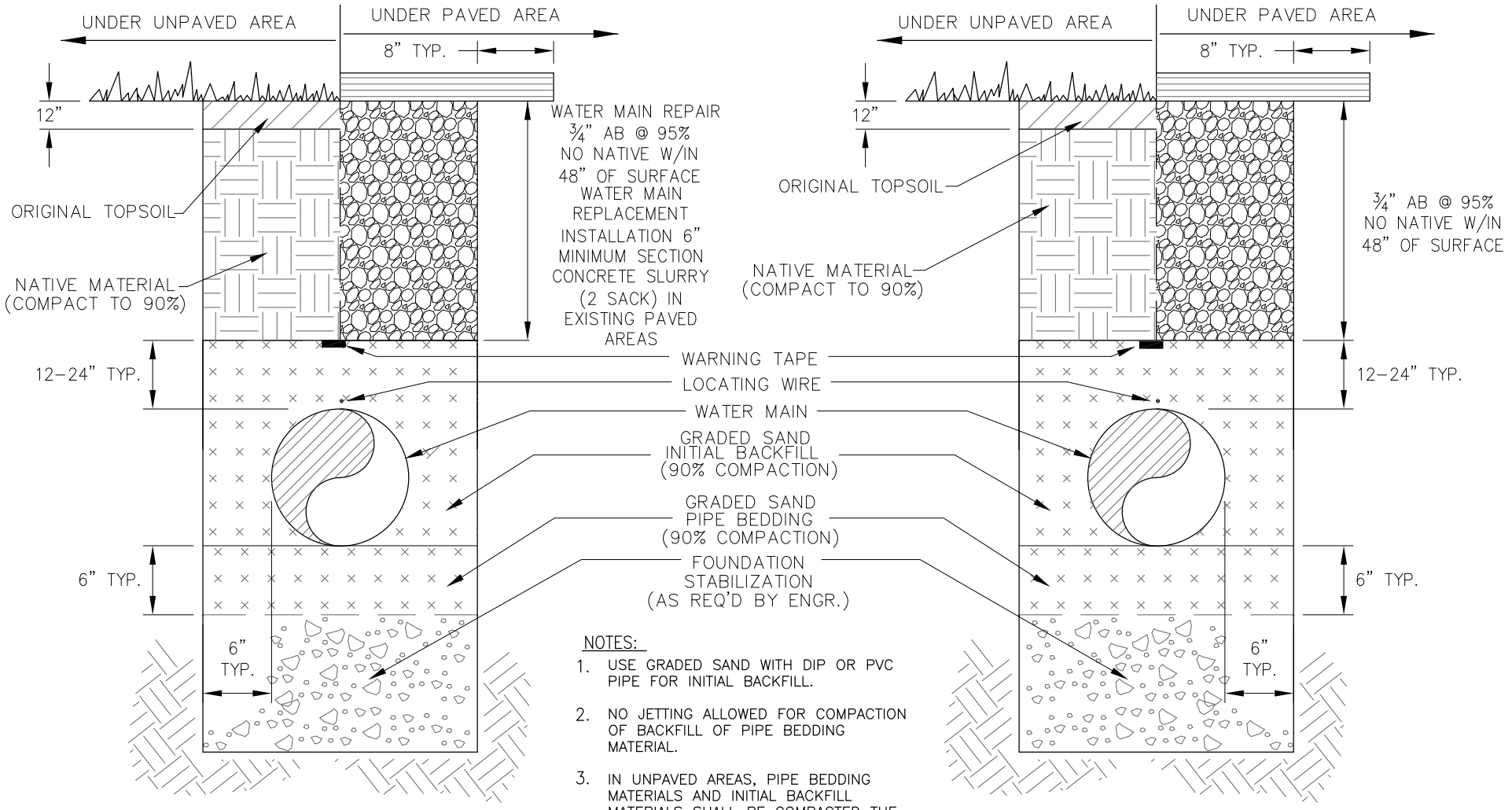
2. USE 1/2" CRUSHED AGGREGATE OR SAND FOR PVC WATER PIPE AND DUCTILE IRON WATER PIPE COMPACT BEDDING AND BACKFILL MATERIAL TO 90% RELATIVE COMPACTION.

Elk Grove Water District

UTILITY CROSSING UNDER EXISTING WATER MAIN

REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
EGWD SIGNATURE	B. M. Kamilos	DRAWN BY: B. VOELZ
		CHECKED BY: A. ARAGON
		EGWD : B. KAMILOS

W-13



NOTES:

1. USE GRADED SAND WITH DIP OR PVC PIPE FOR INITIAL BACKFILL.
2. NO JETTING ALLOWED FOR COMPACTION OF BACKFILL OF PIPE BEDDING MATERIAL.
3. IN UNPAVED AREAS, PIPE BEDDING MATERIALS AND INITIAL BACKFILL MATERIALS SHALL BE COMPACTED THE SAME AS IN PAVED AREAS.
4. CONTRACTOR RESPONSIBLE FOR COMPACTION TESTING ON NEW WATER MAIN INSTALLATION WHEN AB IS REQUIRED.

REPLACEMENT/REPAIR
TYPICAL TRENCH

NEW CONSTRUCTION
TYPICAL TRENCH

Elk Grove Water District

TYPICAL TRENCH SECTION
Replacements/Repair/New Construction

REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
EGWD SIGNATURE	B. M. Kamilos	DRAWN BY: B. VOELZ
		CHECKED BY: A. ARAGON
		EGWD : B. KAMILOS

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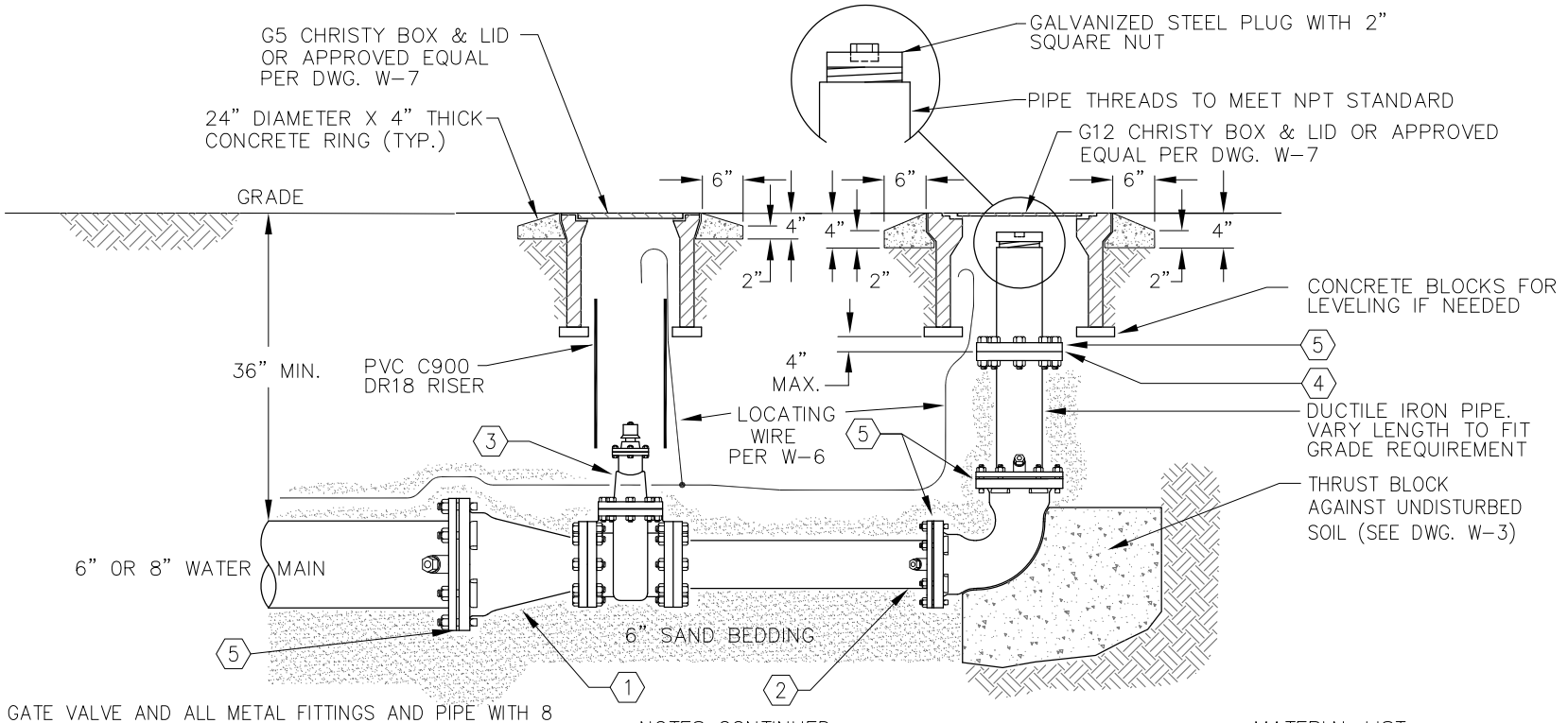
Florin Resource Conservation District



NOTES:

1. WRAP 4" GATE VALVE AND ALL METAL FITTINGS AND PIPE WITH 8 MIL POLYETHYLENE ENCASEMENT AND 10 MIL PVC TAPE PER AWWA C105.
2. ALL FITTINGS SHALL HAVE A MINIMUM PRESSURE CLASS OF 200 PSI AND MEET AWWA C110 OR AWWA C153 STANDARDS.
3. PROVIDE 6 INCHES OF SAND BEDDING AND BACKFILL WITH SAND TO 6 INCHES ABOVE THE TOP OF PIPE AND FITTINGS, COMPACT TO 90% RELATIVE COMPACTION.
4. WRAP ALL DUCTILE IRON PIPE WITH 8 MIL OF POLYETHYLENE ENCASEMENT AND 10 MIL POLYETHYLENE TAPE; DOUBLE WRAP PIPE THREADS.
5. THESE JOINTS SHALL BE RESTRAINED. TYPES OF RESTRAINED JOINTS MAY BE: (1) FLANGE, (2) MJ WITH EGWD APPROVED RESTAINING DEVICES (EBAA OR STAR PIPE PRODUCTS), OR (3) FOR D.I.P., PUSH ON JOINTS WITH U.S. PIPE FIELD-LOK GASKET OR EGWD APPROVED EQUAL.

NOTES CONTINUED:

6. FOR RESTRAINED LENGTH SEE DWG. W-19.
7. USE GRADED SAND FOR INITIAL BACKFILL.
8. JETTING WILL NOT BE ALLOWED FOR COMPACTION OF BACKFILL OR PIPE BEDDING MATERIAL.
9. IN UNPAVED AREAS, PIPE BEDDING MATERIAL, AND INITIAL BACKFILL MATERIALS SHALL BE COMPACTED THE SAME AS IN PAVED AREAS.

MATERIAL LIST:

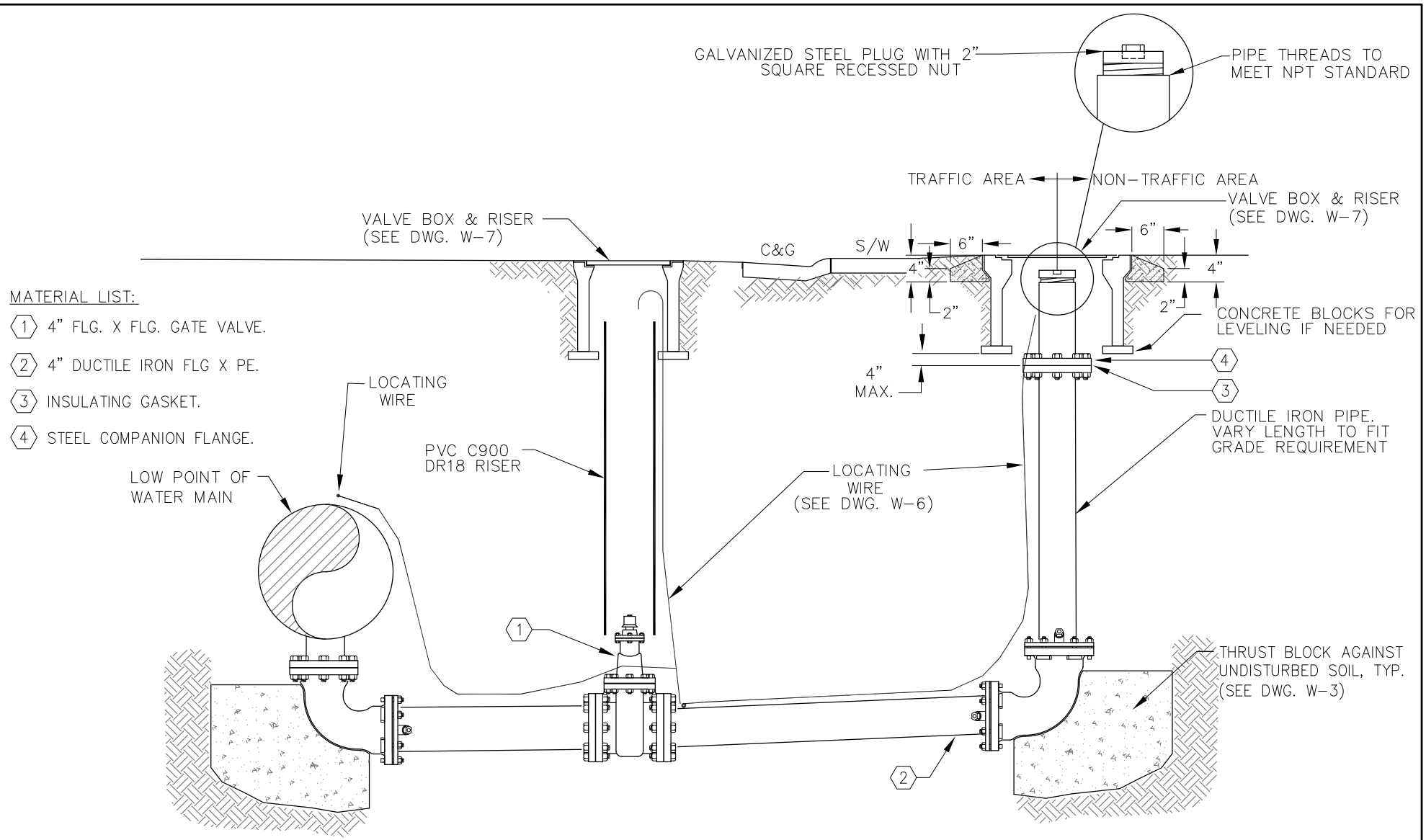
1. 6" OR 8" MJ X 4" FL REDUCER.
2. 4" DIP SPOOL, FL X PE OR FL X FL, LENGTH AS NECESSARY TO LOCATE B.O. PER PLANS.
3. 4" FLG. X FLG. GATE VALVE.
4. INSULATING GASKET.
5. STEEL COMPANION FLANGE.

Elk Grove Water District

4" BLOW-OFF ASSEMBLY, END OF MAIN

REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
EGWD SIGNATURE	B. M. Kamilos	DRAWN BY: B. VOELZ
		CHECKED BY: A. ARAGON
		EGWD : B. KAMILOS

W-15



Elk Grove Water District

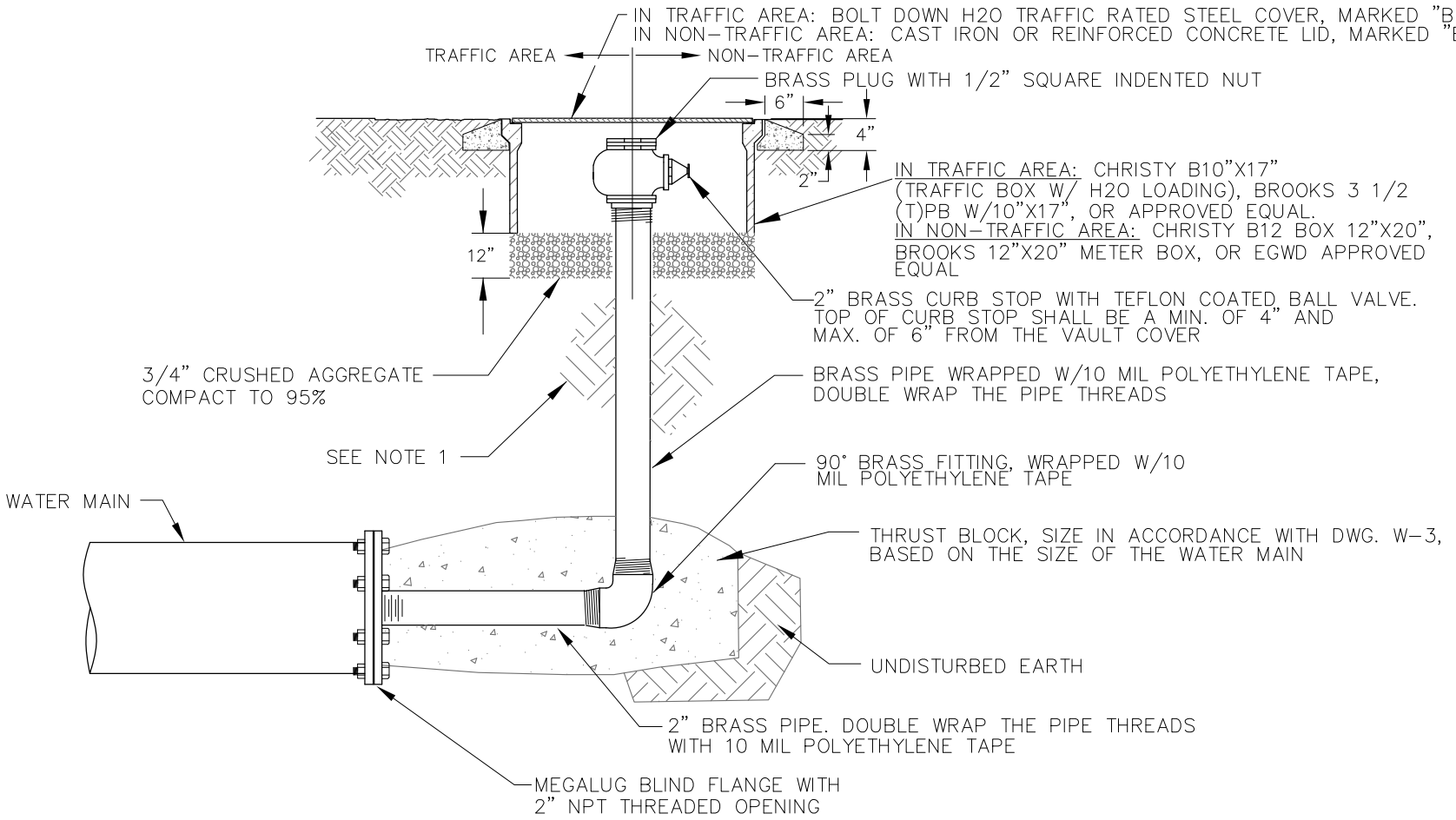
Florin Resource Conservation District

Elk Grove Water District

4" BLOW-OFF ASSEMBLY, IN-LINE

REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
EGWD SIGNATURE	B. M. Kamilos	DRAWN BY: B. VOELZ
		CHECKED BY: A. ARAGON
		EGWD : B. KAMILOS

W-16



NOTES:

1. BACKFILL WITH NATIVE MATERIAL AND COMPACT TO 80% COMPACTION. IN TRAFFIC AREAS THE BACKFILL AND COMPACTION REQUIREMENTS FOR THE ROAD SHALL GOVERN.

Elk Grove Water District

2" BLOW-OFF ASSEMBLY

REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
EGWD SIGNATURE	B. M. Kamilos	DRAWN BY: B. VOELZ
		CHECKED BY: A. ARAGON
		EGWD : B. KAMILOS

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Florin Resource Conservation District

120

3/16" STEEL, 6"X6" RECTANGULAR TUBE 18" HIGH WITH AN 8–1/2" CAP, SPOT WELDED AT THE TOP. CLEAN INTERIOR AND EXTERIOR OF STEEL WITH A WATER BASED CLEANER, DEVPREP 88 OR EQUAL. FACTORY APPLY 1 COAT, AT 2.0 MILS, OF TNEMEC SERIES 135 EPOXY PRIMER, THEN 1 COAT, AT 2.0 MILS OF TNEMEC SERIES 28 ACRYLIC TO THE CAP, TUBE, & TOP OF THE LID OF THE UTILITY BOX. COLOR TO BE HUNTER GREEN OR APPROVED EQUAL BY EGWD.

2–3/8" BOLTS, GRADE 3 WITH WASHER.

1/4" THICK STEEL LID. TACK WELD 1/4" THICK BY 1" WIDE STEEL PLATE AROUND PERIMETER OF LID SO TOP OF LID IS FLUSH W/TOP OF BOX. CUT 5"X5" SQUARE HOLE IN TOP OF LID. SQUARE HOLE TO BE CENTERED RELATIVE TO WIDTH OF LID. LID & TUBE ASSEMBLY SHALL BE PWAE118M BY PLACER WATERWORKS OR APPROVED EQUAL BY EGWD. LID SHALL BE BOLTED TO BOX.

WELD 2 LOCKING NUTS TO LID TO ACCEPT BOLTS.

1" SCHEDULE 40 GALVANIZED STEEL PIPE W/STEEL THREADED COUPLING AND 1" TO 3/4" PVC ADAPTER. OPERATOR MUST BE ABLE TO UNSCREW PVC RISER FROM COUPLING.

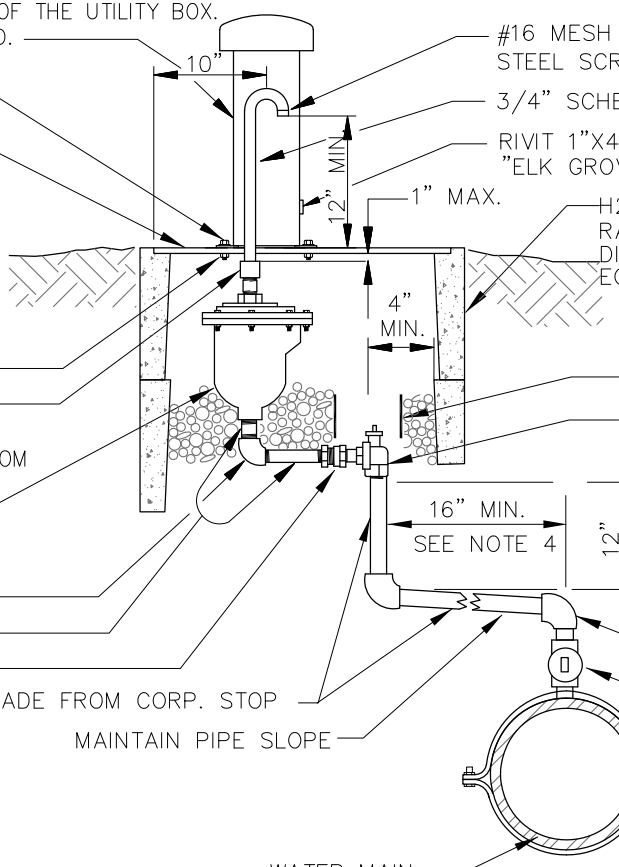
1" CRISPIN UL–10 COMBINATION AIR RELEASE/VACUUM VALVE OR EGWD APPROVED EQUAL

1"– 90° BRASS FITTING (TYP)

1"– BRASS NIPPLE (TYP)

1 1/4" X 1" BRASS THREADED UNION

1" SCHEDULE 40 PVC PIPE; MAINTAIN UPWARD GRADE FROM CORP. STOP TO AIR/VACUUM COMBINATION VALVE



#16 MESH BRONZE OR STAINLESS STEEL SCREEN

3/4" SCHEDULE 40 PVC

RIVIT 1"X4" SILVER COLORED NAME PLATE THAT READS "ELK GROVE WATER DISTRICT" TO TUBING.

H20 TRAFFIC RATED BOX TO ACCEPT BOLT DOWN H20 RATED METAL LID. BOX SHALL HAVE A 13" X 24" INSIDE DIMENSION AS MADE BY CHRISTY, BROOKS OR APPROVED EQUAL.

6" DIAMETER PVC SLEEVE

1" BASS ANGLED CURB STOP BALL VALVE TYPE: JONES OR APPROVED EQUAL BY EGWD.

BACKFILL W/ SAND TO 12 INCHES ABOVE PIPE AND PLACE WARNING TAPE 12 INCHES ABOVE PIPE

1"– 90° BRASS FITTING (TYPICAL)

1" LEAD FREE BRASS CORP. STOP

LEAD FREE BRASS SERVICE SADDLE AND BOLTS, WRAP W/ 8 MIL POLYETHYLENE ENCASEMENT

NOTES:

1. MAINTAIN A GRADE UPWARD FROM CORP. STOP TO AIR VALVE.
2. FLARE OR SOLDER JOINT FITTINGS AND COMPRESSION FITTINGS ARE ACCEPTABLE.
3. PROVIDE 3'X3'X3' OF 1/2" CRUSHED AGGREGATE FOR DRAINAGE AND SUPPORT UNDER VALVE.
4. SEE PLAN AND PROFILE SHEETS FOR LOCATION OF VALVE BOX AND AIR VENT.
5. DETAIL NOT FOR USE IN ROADWAYS.
6. ALL COMPACTION SHALL BE PER EGWD STANDARDS CONSTRUCTION SPECIFICATIONS.

Elk Grove Water District

1" COMBINATION AIR/VACUUM VALVE

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
EGWD SIGNATURE		B. M. Kamilos	CHECKED BY: A. ARAGON
			EGWD : B. KAMILOS

W-18

Florin Resource Conservation District

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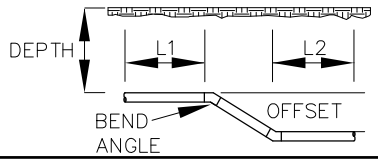
NOTES:

1. ALL JOINTS WITHIN THE RESTRAIN LENGTH MUST BE RESTRAINED. SEE STD. DTL. W–12 FOR APPROVED RESTRAINING DEVICES.
2. FOR DUCTILE IRON PIPE, INSIDE THE BELL RESTRAINING DEVICES MUST BE USED FOR THE ENTIRE RESTRAINED LENGTH SHOWN. FOR PVC, BELL RESTRAINING DEVICES MUST BE USED FOR THE ENTIRE RESTRAINED LENGTH SHOWN. SEE STD. DTL. W–12 FOR APPROVED RESTRAINING DEVICES.
3. RESTRAIN LENGTH FOR THE TEE DESCRIBED, ASSUMES A THRUST BLOCK IS INSTALLED AT LOCATIONS SHOWN. IF THRUST BLOCK IS NOT INSTALLED RESTRAIN LENGTH MUST CALCULATED BY THE ENGINEER OF RECORD AND BE APPROVED BY EGWD.
4. THIS CONFIGURATION IS ONLY TO BE USED IF A THRUST BLOCK CANNOT BE POURED BEHIND THE TEE AND AGAINST UNDISTURBED SOIL.
5. JOINTS ON PIPES PERPENDICULAR (CROSSING PIPES) TO RESTRAIN LENGTH RUN, MUST BE RESTRAINED FOR A MIN. OF 4 FEET.
6. THE RESTRAIN LENGTHS ARE BASED ON A WATER PRESSURE OF 150 PSI AND A TYPE 4 AWWA LAYING CONDITION. IF HIGHER PRESSURE OR HIGHER SURGE PRESSURES ARE ANTICIPATED, THEN THIS TABLE DOES NOT APPLY AND RESTRAIN LENGTH MUST BE CALCULATED BY THE ENGINEER OF RECORD AND APPROVED BY EGWD.
7. RESTRAINED LENGTHS SHOWN SHALL BE APPLIED TO BOTH SIDES OF THE IN LINE VALVE.

RESTRAIN LENGTH IN FEET (RL = RESTRAINED LENGTH)

PIPE CONFIGURATION			DEPTH OF 36"						DEPTH OF 60"					
			8"		10"		12"		8"		10"		12"	
			DIP	PVC	DIP	PVC	DIP	PVC	DIP	PVC	DIP	PVC	DIP	PVC
In Line Valve		(SEE NOTE 7)	31	45	38	58	46	70	25	25	30	30	35	40
HORIZONTAL BENDS		11.25°	3	4	4	4	4	5	2	2	2	3	3	3
		22.5°	6	7	7	8	8	10	4	4	5	5	5	6
		45°	13	14	15	17	17	20	8	9	10	11	11	13
		90°	30	35	36	40	42	48	19	21	23	26	27	30
Dead Ends			77	110	93	132	108	155	48	70	58	83	70	98
Vertical Bends/Offsets	1.5 - 3.4 Ft Offset	11.25°	L1	14	20	17	25	20	30	8	12	10	15	12	18
			L2	4	6	6	7	7	8	2	3	3	4	4	5
		22.5°	L1	30	42	35	51	42	60	18	26	22	32	26	38
			L2	11	13	13	15	15	17	6	7	8	9	9	11
		45°	L1	62	89	75	180	88	127	38	55	47	68	55	80
			L2	24	28	28	32	32	38	14	16	17	20	21	24
	>=3.5 Ft Offset	11.25°	L1	12	18	15	23	18	27	6	10	8	13	10	16
			L2	3	4	4	5	5	6	2	2	2	2	2	3
		22.5°	L1	27	40	33	50	40	58	16	24	20	30	24	36
			L2	9	10	11	13	13	15	4	5	6	7	7	9
		45°	L1	60	87	73	106	86	125	36	53	45	66	53	78
			L2	21	25	26	30	31	36	12	14	15	18	19	22
VALVE AT TEE (INLINE) (SEE NOTE 3)		8"	61	88	57	82	53	76	33	47	29	41	25	35
		10"	80	115	77	110	74	105	46	67	43	61	40	57
		12"	98	140	95	136	93	132	58	83	56	80	53	76
Valve at Tee (Crossing)		(SEE NOTE 4)	31	45	38	58	46	70	25	25	30	30	35	40
VALVE AT CROSS (SEE NOTE 5)		8"	31	45	44	65	75	115	25	25	38	38	45	50
		10"	26	39	38	58	68	94	20	20	30	30	39	44
		12"	17	32	31	56	46	70	16	16	24	24	35	40
REDUCER		6"	75	107	151	216	237	340	47	67	95	135	149	212
		8"	-	-	70	99	144	206	-	-	44	63	90	129
		10"	70	99	-	-	70	100	44	63	-	-	44	63
		12"	144	206	70	100	-	-	90	129	44	63	-	-

VERTICAL OFFSET CONFIGURATION

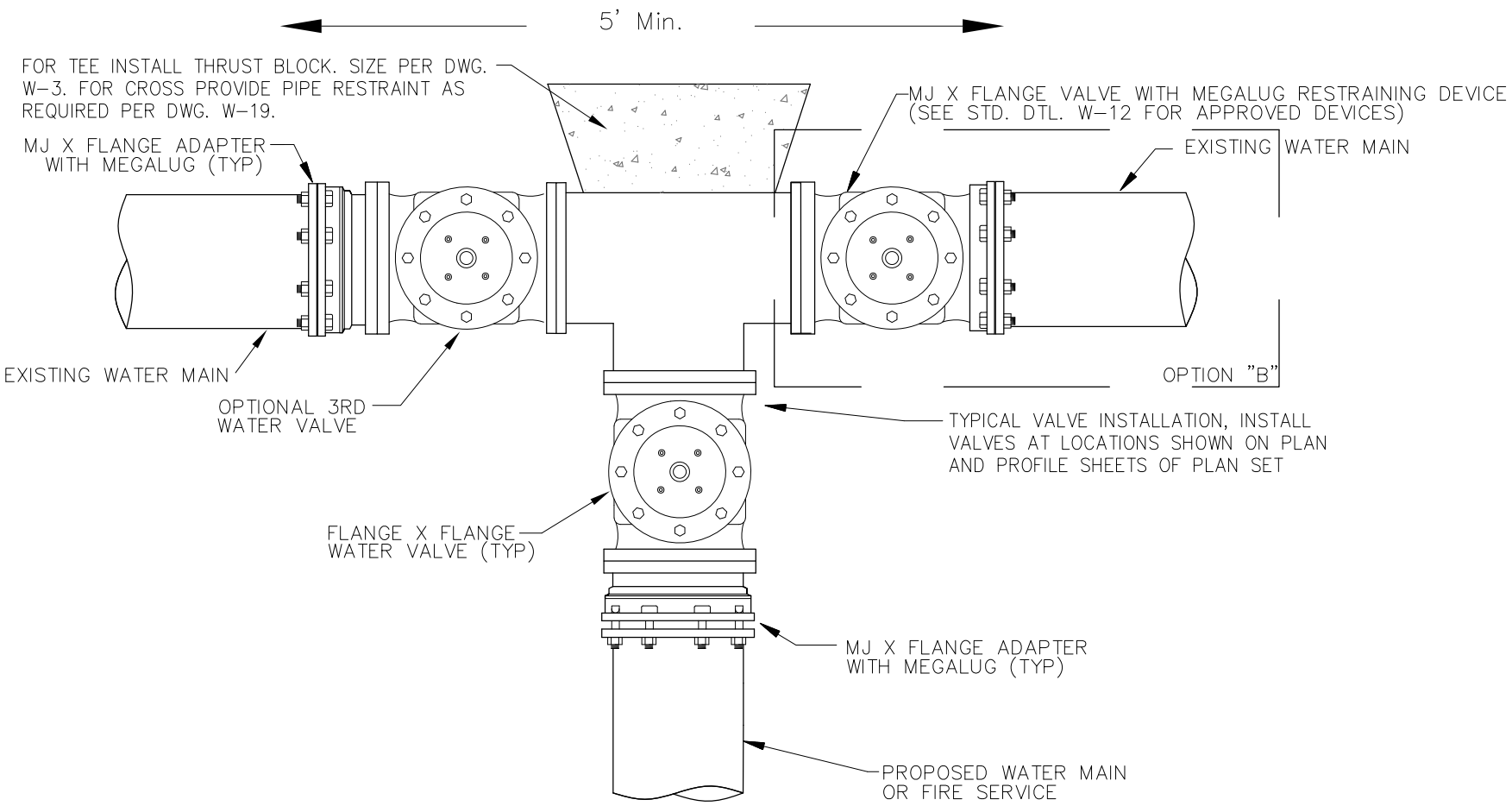


Elk Grove Water District

PIPE RESTRAINED LENGTH CHART

		DATE: JUNE 2023
		PROJECT:
REV. DATE	REVISION	DRAWN BY: B. VOELZ
EGWD SIGNATURE	B. M. Kamilos	CHECKED BY: A. ARAGON
		EGWD : B. KAMILOS

W-19



NOTES:

1. TEE AND MJ X FLANGE ADAPTER SHALL BE WRAPPED WITH 8 MIL POLYETHYLENE ENCASEMENT WITH SEAMS SEALED WITH 10 MIL PVC TAPE.

2. DIG SUMP UNDER CUT IN LOCATION AND PUMP ALL WATER FROM EXISTING MAIN AWAY FROM CUT IN LOCATION. DO NOT ALLOW ANY WATER TO ENTER EXISTING PIPE. CHLORINATE IN ACCORDANCE WITH EGWD STANDARDS. SPRAY EXISTING PIPE, ALL FITTINGS AND VALVES WITH A SOLUTION OF SUPER CHLORINATED WATER JUST PRIOR TO INSTALLATION.

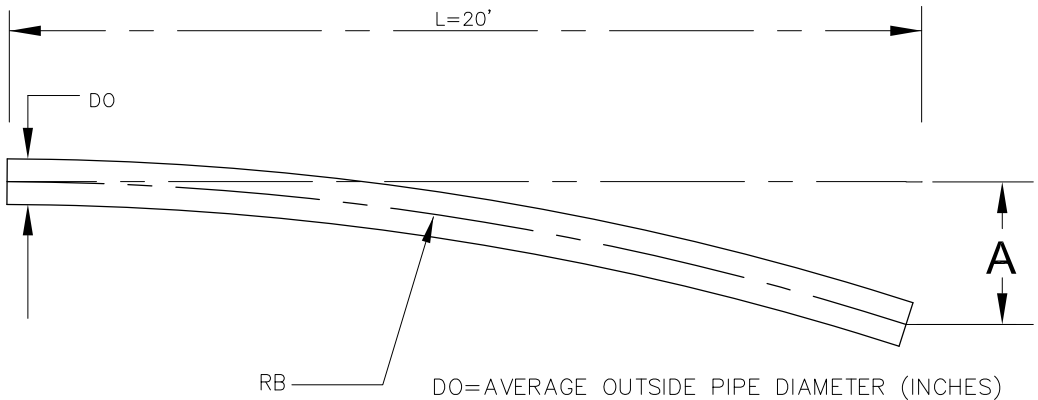
Elk Grove Water District

WATER MAIN CUT-IN DETAIL (PVC & DIP)

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
		EGWD SIGNATURE	CHECKED BY: A. ARAGON
		B. M. Kamilos	EGWD : B. KAMILOS

W-20

Florin Resource Conservation District



DO=AVERAGE OUTSIDE PIPE DIAMETER (INCHES)
A=OFFSET AT THE END OF THE PIPE (INCHES)
RB=MINIMUM BENDING RADIUS (FEET)

MAX. DEFLECTION FOR PVC PIPE, AWWA C900 CLASS 235* DR 18

NOMINAL PIPE DIAMETER	AVERAGE OUTSIDE PIPE DIAMETER,DO	MINIMUM WALL THICKNESS	MINIMUM BENDING RADIUS, RB	OFFSET AT FREE END "A"
(INCHES)	(INCHES)	(INCHES)	(FEET)	(INCHES)
4	4.800	0.267	121	20
6	6.900	0.383	185	13
8	9.050	0.503	240	10
10	11.100	0.617	400	6
12	13.200	0.733	800	4

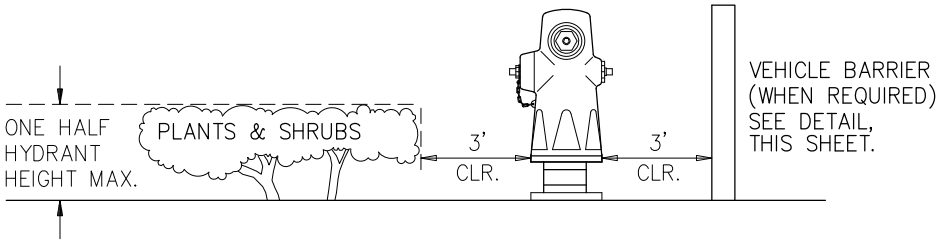
JOINT DEFLECTION OF AWWA C900 PVC PIPE IS PROHIBITED.
*FM RATING FOR AWWA C900 CLASS 235 DR 18 PIPE IS 185 PSI

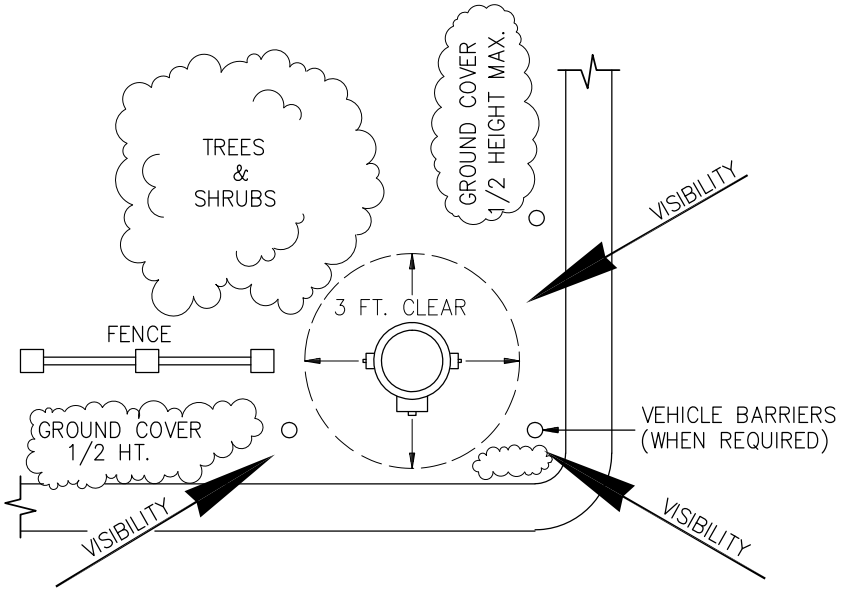
Elk Grove Water District

MAXIMUM DEFLECTION FOR PVC PIPE

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
EGWD SIGNATURE		B. M. Kamilos	CHECKED BY: A. ARAGON
			EGWD : B. KAMILOS

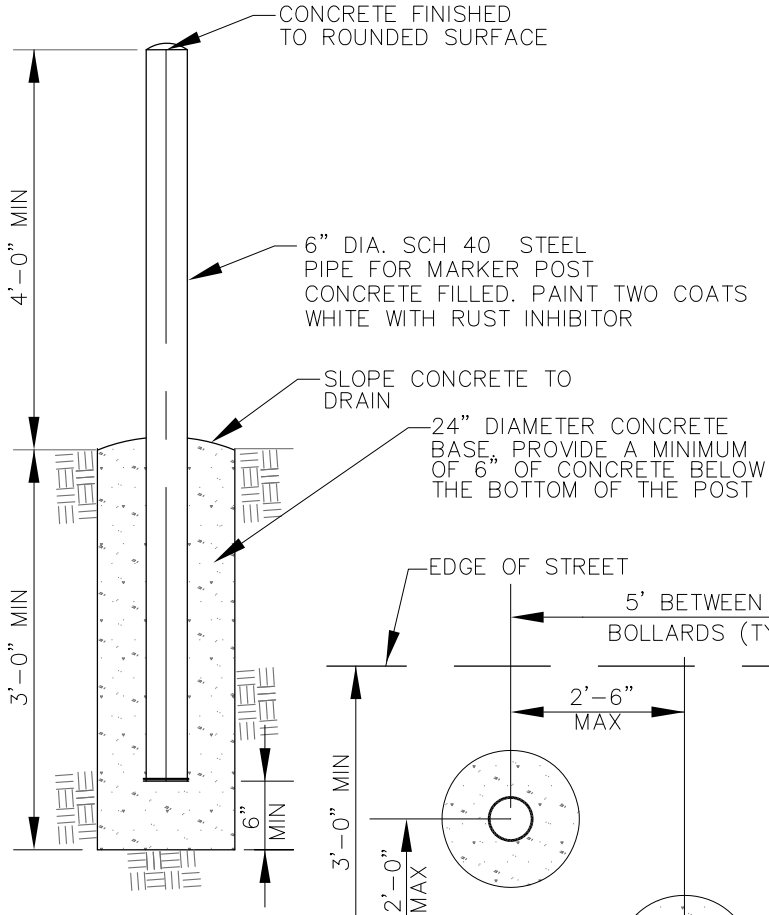
W-21



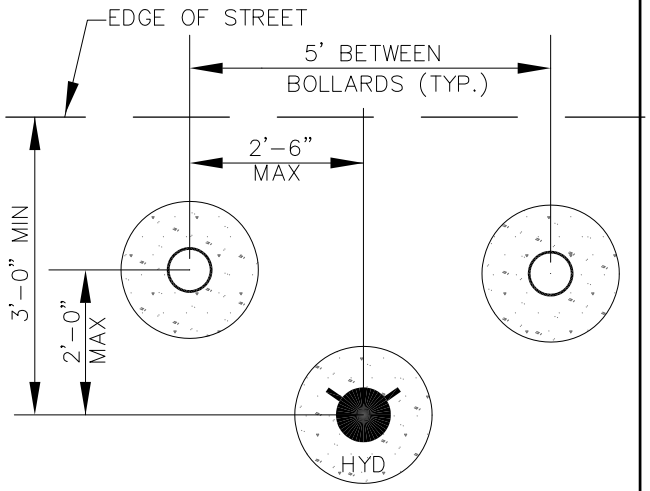


NOTES:

1. MINIMUM EMBEDMENT INTO CONCRETE BASE SHALL BE 2'–6". THERE SHALL BE A MINIMUM OF 3'–0" ABOVE THE FINISHED CONCRETE SURFACE.
2. IF HYDRANT IS IN LANDSCAPED, CURBED PLANTER, W/5' FROM HYDRANT TO FACE CURB IN EACH DIRECTION, BOLLARDS WILL NOT BE REQUIRED.



ELEVATION



PLAN

VEHICLE BARRIER
NO SCALE

Elk Grove Water District

FIRE HYDRANT CLEARANCE & PROTECTION REQUIREMENTS

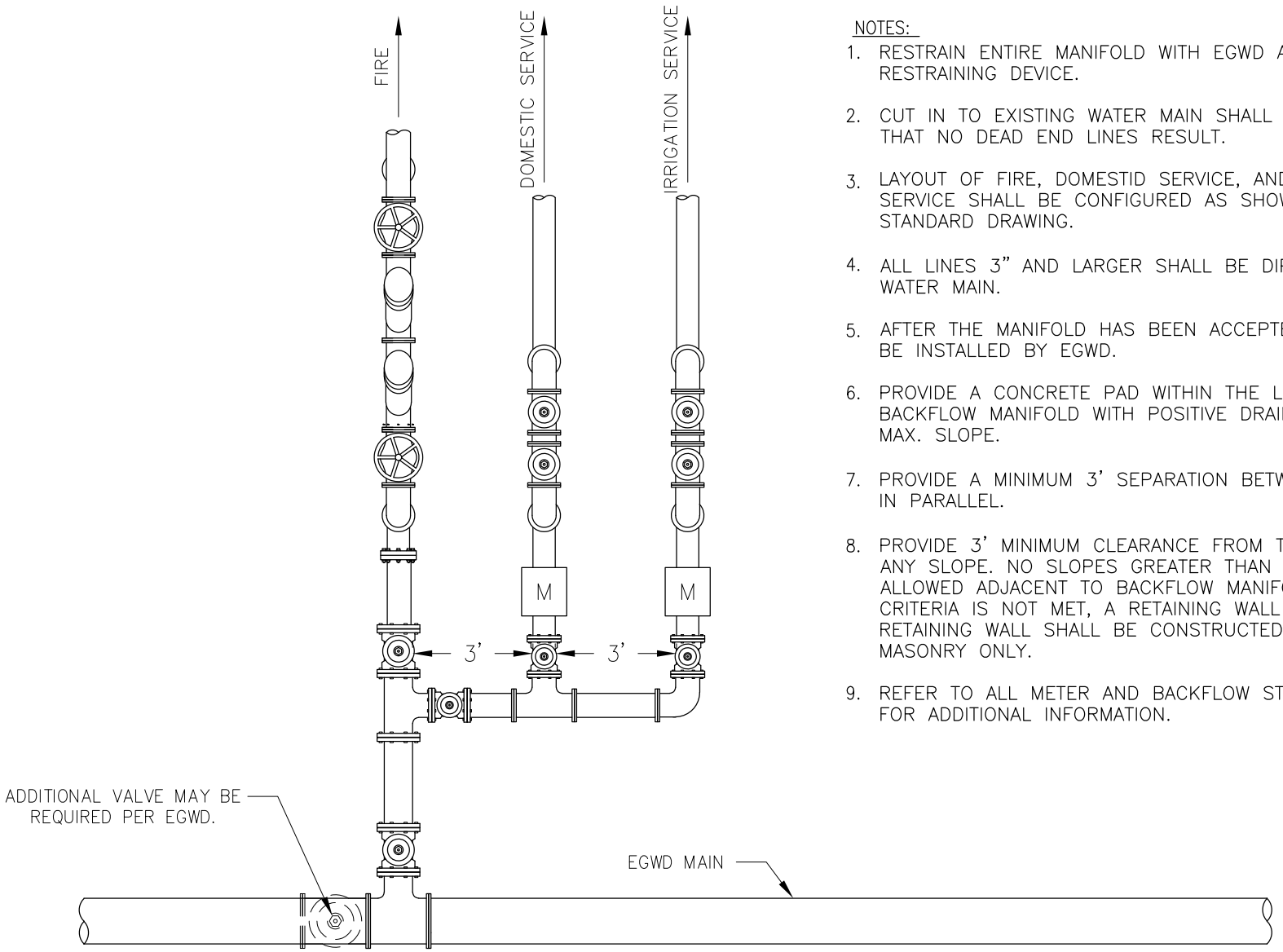
REV.	DATE	REVISION

EGWD SIGNATURE: B. M. Kamilos

DATE: JUNE 2023
PROJECT:
DRAWN BY: B. VOELZ
CHECKED BY: A. ARAGON
EGWD : B. KAMILOS

W-22

Florin Resource Conservation District



NOTES:

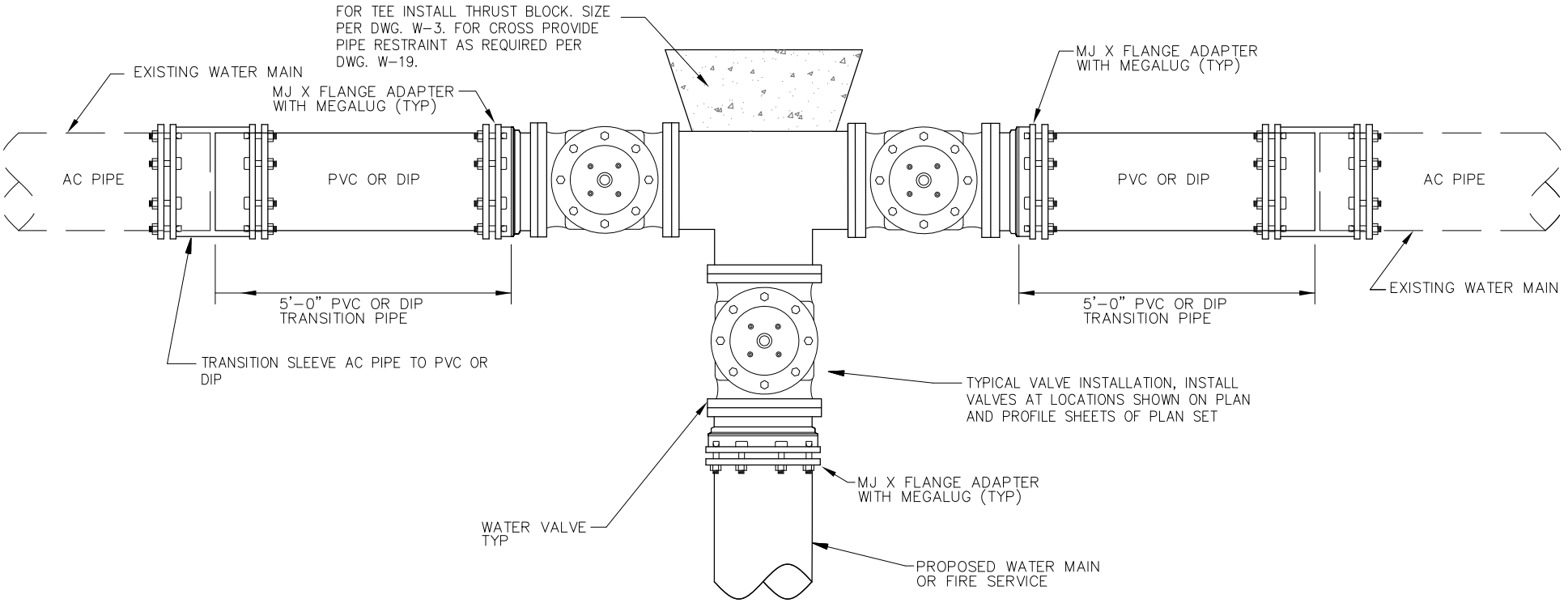
1. RESTRAIN ENTIRE MANIFOLD WITH EGWD APPROVED RESTRAINING DEVICE.
2. CUT IN TO EXISTING WATER MAIN SHALL BE MADE SUCH THAT NO DEAD END LINES RESULT.
3. LAYOUT OF FIRE, DOMESTID SERVICE, AND IRRIGATION SERVICE SHALL BE CONFIGURED AS SHOWN ON THIS STANDARD DRAWING.
4. ALL LINES 3" AND LARGER SHALL BE DIP FROM EXISTING WATER MAIN.
5. AFTER THE MANIFOLD HAS BEEN ACCEPTED, METERS SHALL BE INSTALLED BY EGWD.
6. PROVIDE A CONCRETE PAD WITHIN THE LIMITS OF THE BACKFLOW MANIFOLD WITH POSITIVE DRAINAGE AND A 2% MAX. SLOPE.
7. PROVIDE A MINIMUM 3' SEPARATION BETWEEN BACKFLOWS IN PARALLEL.
8. PROVIDE 3' MINIMUM CLEARANCE FROM TOE OR TOP OF ANY SLOPE. NO SLOPES GREATER THAN 2:1 SHALL BE ALLOWED ADJACENT TO BACKFLOW MANIFOLD. IF THE ABOVE CRITERIA IS NOT MET, A RETAINING WALL IS REQUIRED. THE RETAINING WALL SHALL BE CONSTRUCTED OF CONCRETE OR MASONRY ONLY.
9. REFER TO ALL METER AND BACKFLOW STANDARD DRAWINGS FOR ADDITIONAL INFORMATION.

Elk Grove Water District

BACKFLOW MANIFOLD ASSEMBLY

REV.	DATE	REVISION	
			DATE: JUNE 2023
			PROJECT:
			DRAWN BY: B. VOELZ
		EGWD SIGNATURE B. M. Kamilos	CHECKED BY: A. ARAGON
			EGWD : B. KAMILOS

W-23



NOTES:

1. TEE AND MJ X FLANGE ADAPTER SHALL BE WRAPPED WITH 8 MIL POLYETHYLENE ENCASEMENT

2. DIG SUMP UNDER CUT IN LOCATION AND PUMP ALL WATER FROM EXISTING MAIN AWAY FROM CUT IN LOCATION. DO NOT ALLOW ANY WATER TO ENTER EXISTING PIPE. CHLORINATE IN ACCORDANCE WITH EGWS STANDARDS. SPRAY EXISTING PIPE, ALL FITTINGS AND VALVES WITH A SOLUTION OF SUPER CHLORINATED WATER JUST PRIOR TO INSTALLATION.

Elk Grove Water District

WATER MAIN CUT-IN DETAIL (AC PIPE)

REV.	DATE	REVISION

EGWD SIGNATURE B. M. Kamilos

DATE: JUNE 2023

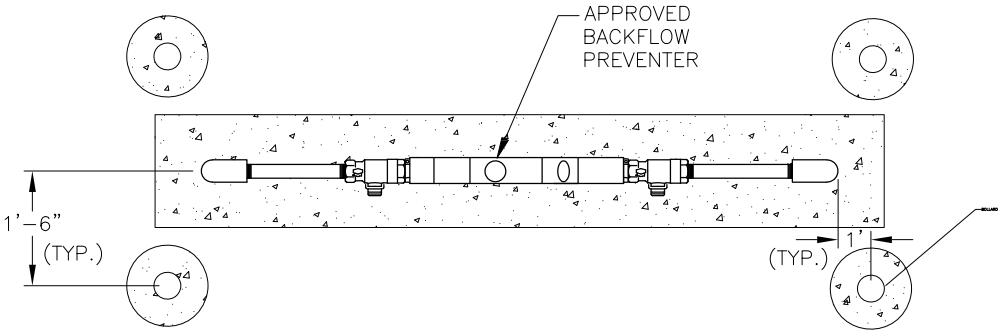
PROJECT:

DRAWN BY: B. VOELZ

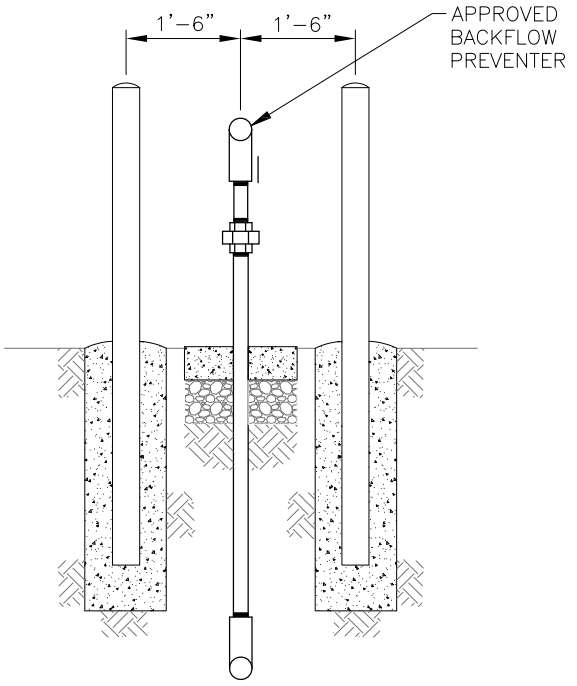
CHECKED BY: A. ARAGON

EGWD : B. KAMILOS

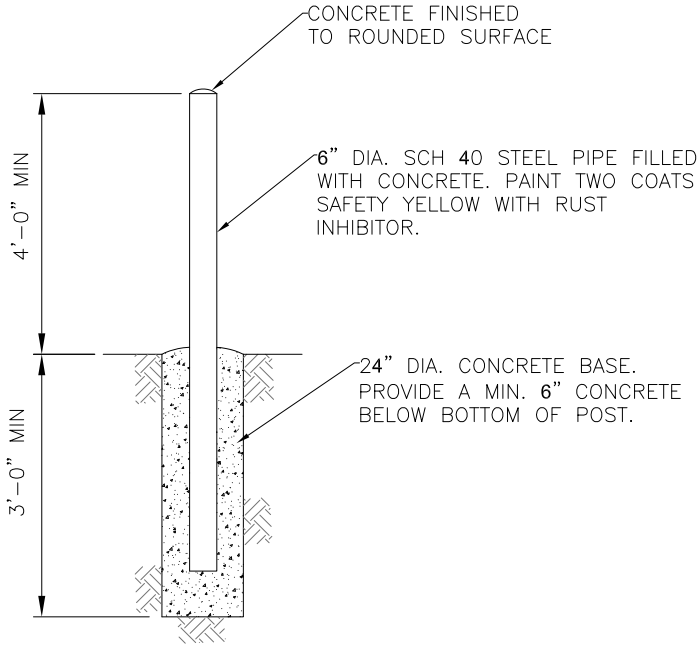
W-24



PLAN VIEW



ELEVATION VIEW



BOLLARD DETAIL

Elk Grove Water District

BACKFLOW PREVENTER PROTECTION & CLEARANCE

REV.	DATE	REVISION

EGWD SIGNATURE B. M. Kamilos

DATE: JUNE 2023

PROJECT:

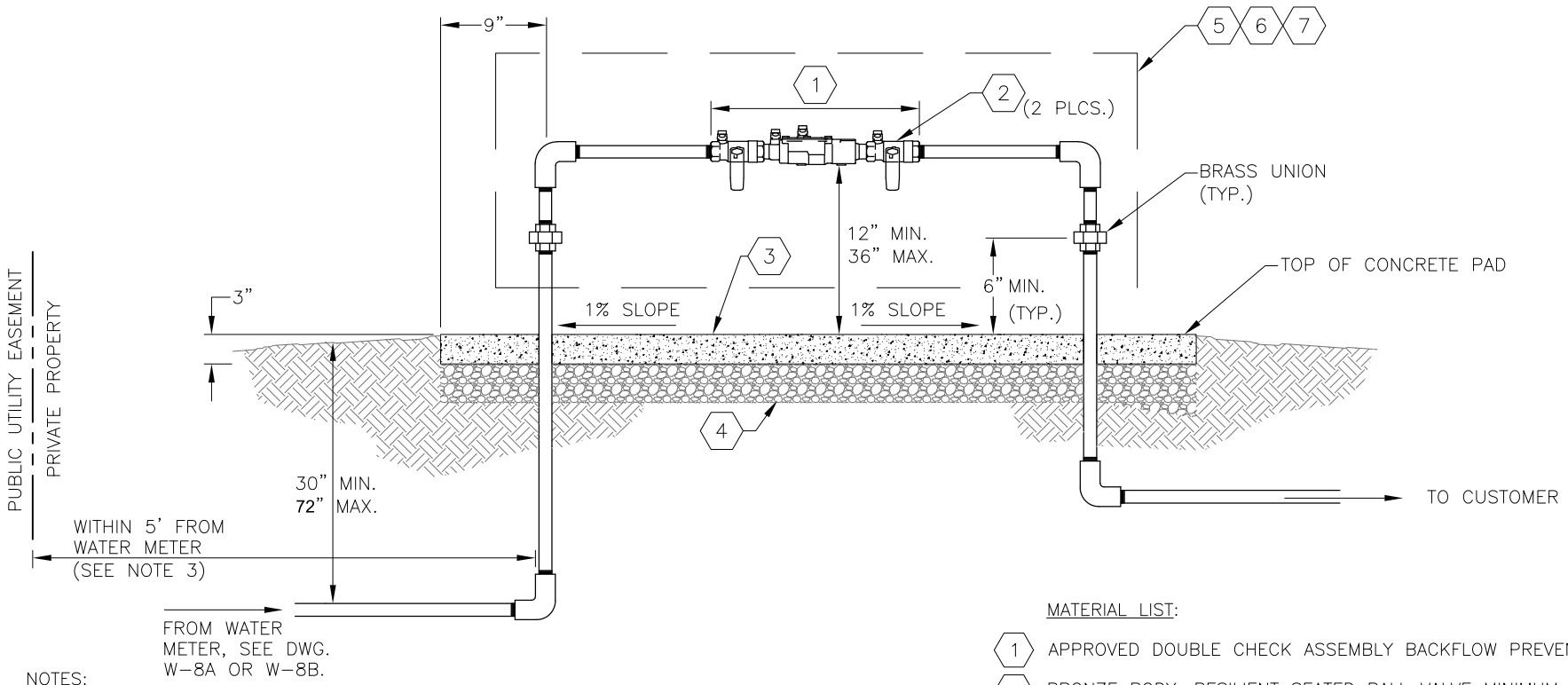
DRAWN BY: B. VOELZ

CHECKED BY: S.SHAW

EGWD : B. KAMILOS

W-25

Florin Resource Conservation District



NOTES:

1. DOUBLE CHECK ASSEMBLY BACKFLOW PREVENTER SHALL BE LISTED ON THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH'S MOST RECENT LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
2. ALL PIPES AND FITTINGS SHALL BE LEAD-FREE BRASS OR TYPE K HARD DRAWN COPPER. ALL BURIED PIPES SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE ENCASEMENT OR 10 MIL. POLYETYHLENE TAPE.
3. UPON APPROVAL BY THE ELK GROVE WATER DISTRICT CROSS-CONNECTION CONTROL SPECIALIST, THE BACKFLOW PREVENTER MAY BE INSTALLED FARTHER AWAY THAN 5' FROM THE WATER METER IF EXISTING CONDITIONS NECESSITATE.

MATERIAL LIST:

1. APPROVED DOUBLE CHECK ASSEMBLY BACKFLOW PREVENTER.
2. BRONZE BODY, RESILIENT SEATED BALL VALVE MINIMUM WORKING PRESSURE OF 175 PSI
3. 3" SLAB – 18" WIDE WITH VARYING LENGTH.
4. 1/2" OR 3/4" CRUSHED ROCK, 4" MINIMUM THICKNESS, MECHANICALLY COMPACTED TO 95% COMPACTION.
5. CHRISTY'S BACKFLOW SECURITY FREEZE BLANKET, OR COMPARABLE PRODUCT. FREEZE BLANKET SIZE TO FIT VALVE SIZE.
6. PROTECTION CAGE (OPTIONAL).
7. BOLLARDS (OPTIONAL). REFER TO STD. DWG. W-26 FOR BOLLARD DETAILS.

Elk Grove Water District

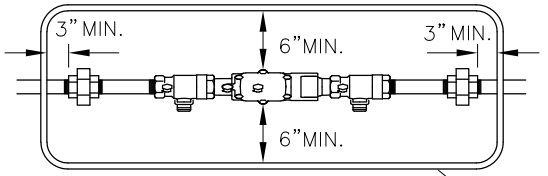
Florin Resource Conservation District

Elk Grove Water District

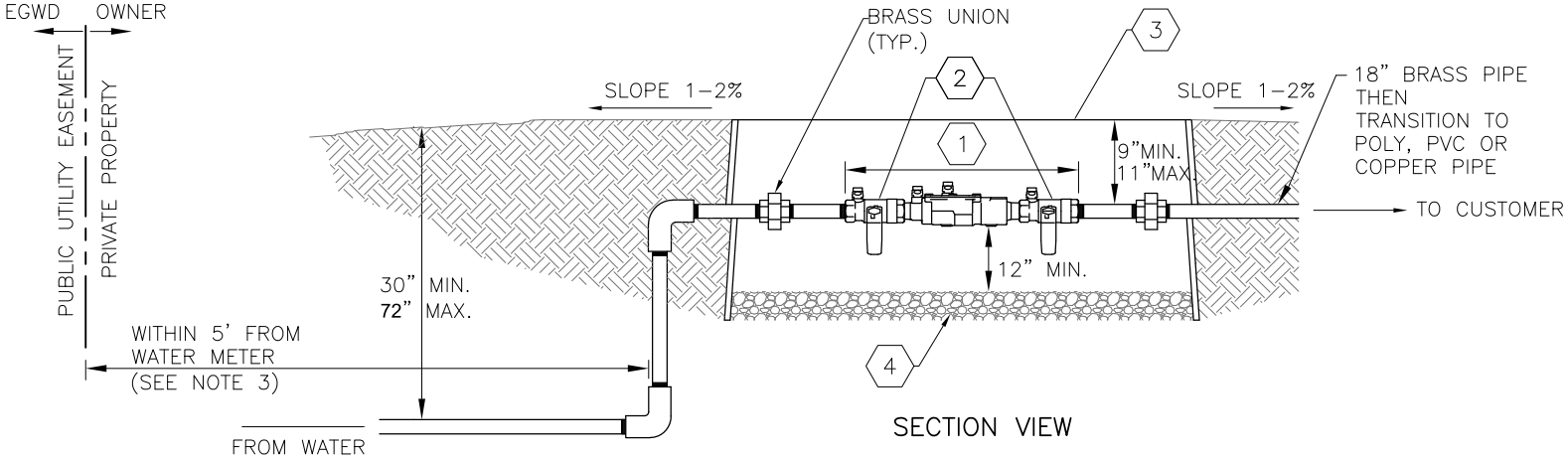
DOUBLE CHECK ASSEMBLEY BACKFLOW PREVENTER 1" TO 2"

REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
EGWD SIGNATURE	B. M. Kamilos	DRAWN BY: B. VOELZ
		CHECKED BY: S. SHAW
		EGWD : B. KAMILOS

W-26A



PLAN VIEW



SECTION VIEW

NOTES:

1. DOUBLE CHECK ASSEMBLY BACKFLOW PREVENTER SHALL ONLY BE INSTALLED IN A VALVE BOX WITH PRIOR APPROVAL FROM EGWD CREOSS–CONNECTION CONTROL SPECIALIST. DOUBLE CHECK ASSEMBLY BACKFLOW PREVENTER SHALL BE LISTED ON THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS–CONNECTION CONTROL AND HYDRAULIC RESEARCH'S MOST RECENT LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
2. ALL PIPES AND FITTINGS SHALL BE LEAD–FREE BRASS OR TYPE K HARD DRAWN COPPER. ALL BURIED PIPES SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE ENCASEMENT AND 10 MIL. POLYETYHLENE TAPE DOUBLE WRAP.
3. UPON APPROVAL BY THE ELK GROVE WATER DISTRICT CROSS–CONNECTION CONTROL SPECIALIST, THE BACKFLOW PREVENTER MAY BE INSTALLED FARTHER AWAY THAN 5' FROM THE WATER METER IF EXISTING CONDITIONS NECESSITATE.

MATERIAL LIST:

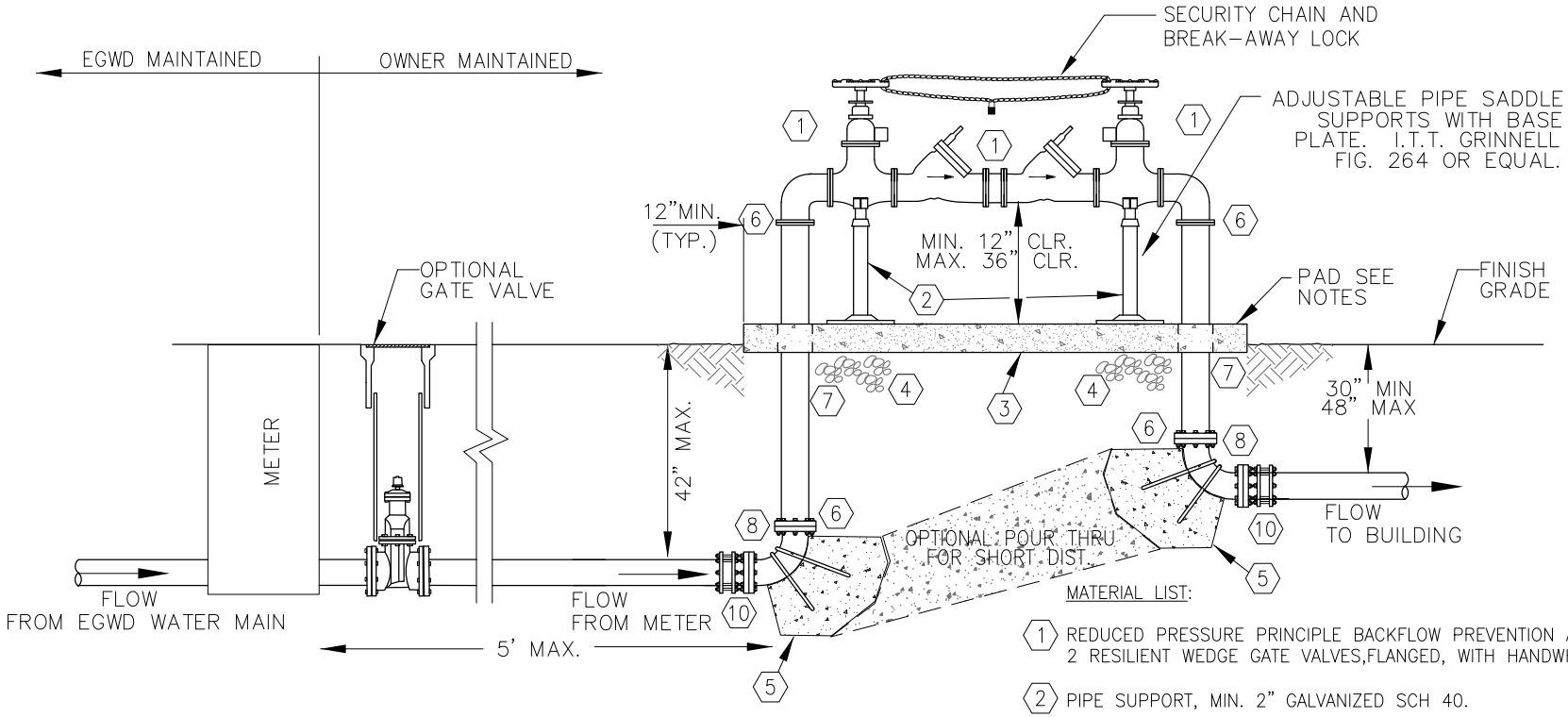
1. APPROVED DOUBLE CHECK ASSEMBLY BACKFLOW PREVENTER.
2. BRONZE BODY, RESILIENT SEATED BALL VALVE MINIMUM WORKING PRESSURE OF 175 PSI
3. TWO METER BOXES STACKED ON TOP OF EACH OTHER OR OVERSIZED BOX. MUST HAVE REMOVABLE COVER. BOXES LOCATED IN TRAFFIC AREAS SHALL HAVE TRAFFIC RATED LIDS.
4. 1/2" OR 3/4" CRUSHED ROCK, 4" MINIMUM THICKNESS, MECHANICALLY COMPACTED TO 95% COMPACTION.

Elk Grove Water District

DOUBLE CHECK ASSEMBLEY BACKFLOW PREVENTER 1" TO 2" IN VALVE BOX

REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
EGWD SIGNATURE	B. M. Kamilos	DRAWN BY: B. VOELZ
		CHECKED BY: S. SHAW
		EGWD : B. KAMILOS

W-26B



NOTES:

1. REDUCED PRESSURE BACKFLOW PREVENTER SHALL BE LISTED ON THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH'S MOST RECENT LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
2. PIPES SHALL BE DUCTILE IRON. ABOVE GROUND JOINTS SHALL BE FLANGED. BURIED JOINTS SHALL BE FLANGED OR RESTRAINED MF. FLANGES SHALL BE CLASS D.
3. INSTALL LOCATING WIRE PER EGWD STD. DTL. DWG. W-6.
4. ALL BURIED METAL SHALL BE WRAPPED WITH 10 MIL. POLYETHYLENE ENCASEMENT SO THAT NO SOIL IS IN CONTACT WITH METAL.

MATERIAL LIST:

(1) REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY, WITH 2 RESILIENT WEDGE GATE VALVES,FLANGED, WITH HANDWHEEL OPERATORS.

(2) PIPE SUPPORT, MIN. 2" GALVANIZED SCH 40.

(3) 4" CONCRETE SLAB – 24" WIDE WITH VARYING LENGTH.

(4) 6" CLASS 2 AGGREGATE BASE COMPACTED TO 95% COMPACTION.

(5) THRUST BLOCK (PER DWG. W-3) WITH #5 REBARS. WRAP THE PORTION OF THE REBAR NOT EMBEDDED IN CONCRETE WITH 20 MIL POLYETHYLENE TAPE.

(6) FLANGE CONNECTION ONLY.

(7) FLANGE X FLANGE SPOOL, DUCTILE IRON. WRAP WITH 2 LAYERS 20 MIL TAPE AT SLAB PENETRATION.

(8) FLANGE X FLANGE 90° ELBOW, DUCTILE IRON.

(9) LOCATING WIRE PER DWG. W-6. LOOP WIRE AROUND PIPE AT TOP OF SLAB.

(10) FLANGE X MJ ADAPTER, RESTRAINED.

Elk Grove Water District

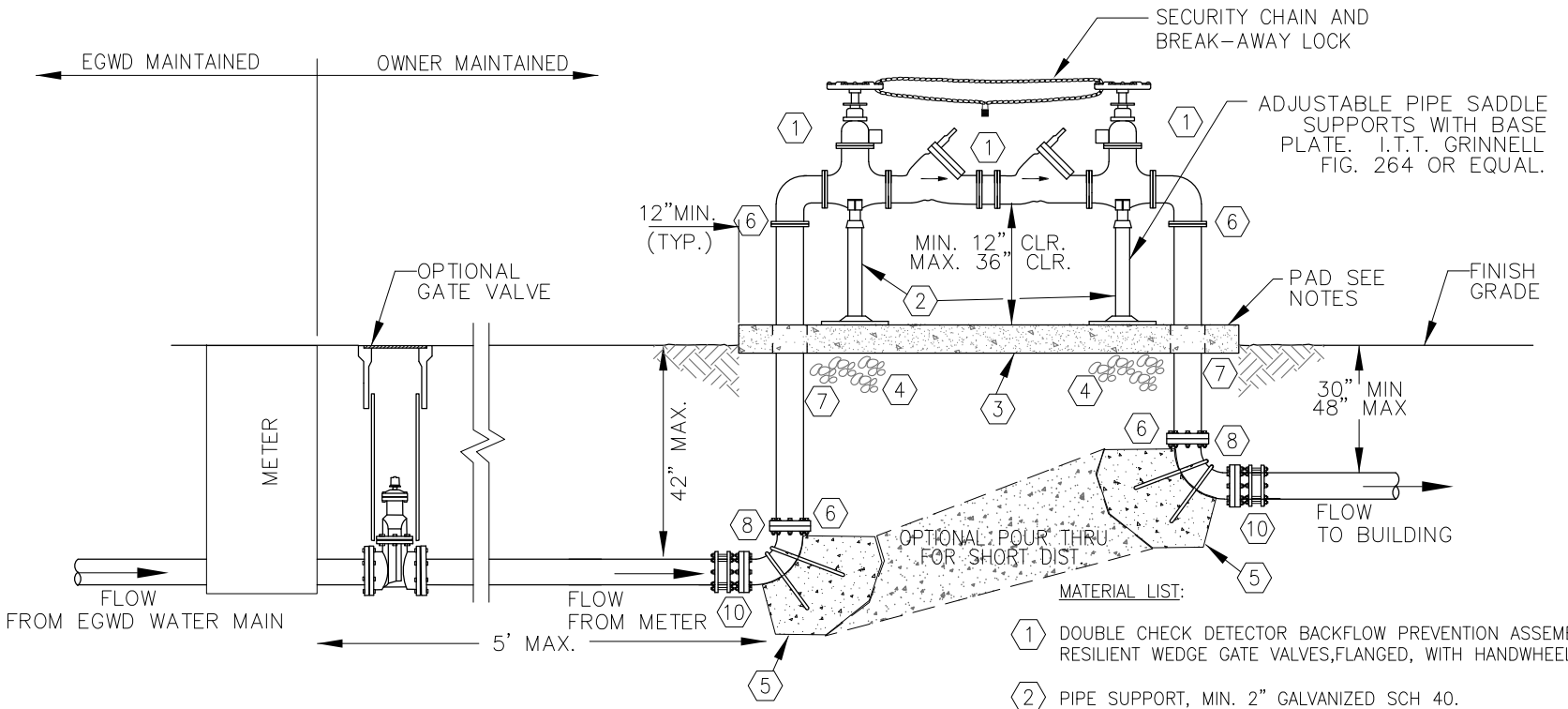
Florin Resource Conservation District

Elk Grove Water District

3" & LARGER REDUCED PRESSURE BACKFLOW PREVENTER

REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
		DRAWN BY: B. VOELZ
EGWD SIGNATURE	B. M. Kamilos	CHECKED BY: S. SHAW
		EGWD : B. KAMILOS

W-27



NOTES:

1. DOUBLE CHECK DETECTOR BACKFLOW PREVENTER ASSEMBLY SHALL BE LISTED ON THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH'S MOST RECENT LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
2. PIPES SHALL BE DUCTILE IRON. ABOVE GROUND JOINTS SHALL BE FLANGED. BURIED JOINTS SHALL BE FLANGED OR RESTRAINED MF. FLANGES SHALL BE CLASS D.
3. INSTALL LOCATING WIRE PER EGWD STD. DTL. DWG. W-6.
4. ALL BURIED METAL SHALL BE WRAPPED WITH 10 MIL. POLYETHYLENE ENCASEMENT SO THAT NO SOIL IS IN CONTACT WITH METAL.

MATERIAL LIST:

(1) DOUBLE CHECK DETECTOR BACKFLOW PREVENTION ASSEMBLY, WITH 2 RESILIENT WEDGE GATE VALVES,FLANGED, WITH HANDWHEEL OPERATORS.

(2) PIPE SUPPORT, MIN. 2" GALVANIZED SCH 40.

(3) 4" CONCRETE SLAB – 24" WIDE WITH VARYING LENGTH.

(4) 6" CLASS 2 AGGREGATE BASE COMPACTED TO 95% COMPACTION.

(5) THRUST BLOCK (PER DWG. W-3) WITH #5 REBARS. WRAP THE PORTION OF THE REBAR NOT EMBEDDED IN CONCRETE WITH 20 MIL POLYETHYLENE TAPE.

(6) FLANGE CONNECTION ONLY.

(7) FLANGE X FLANGE SPOOL, DUCTILE IRON. WRAP WITH 2 LAYERS 20 MIL TAPE AT SLAB PENETRATION.

(8) FLANGE X FLANGE 90° ELBOW, DUCTILE IRON.

(9) LOCATING WIRE PER DWG. W-6. LOOP WIRE AROUND PIPE AT TOP OF SLAB.

(10) FLANGE X MJ ADAPTER, RESTRAINED.

Elk Grove Water District

3" & LARGER DOUBLE CHECK DECTOR BACKFLOW PREVENTER

REV. DATE	REVISION	DATE: JUNE 2023
		PROJECT:
EGWD SIGNATURE	B. M. Kamilos	DRAWN BY: B. VOELZ
		CHECKED BY: S. SHAW
		EGWD : B. KAMILOS

W-28

Elk Grove Water District

A DEPARTMENT OF THE
Florin Resource Conservation District

CONSTRUCTION NOTES

September 2023

FINAL

Elk Grove Water District
9829 Waterman Rd.
Elk Grove, CA 95624
Phone: (916) 685-3556
Fax: (916) 685-5376

Elk Grove Water District
CONSTRUCTION NOTES &
WATER SERVICE STANDARDS
(September 21, 2023)

I. CONSTRUCTION NOTES

A. General Notes:

1. All materials, construction methods and installation of water systems shall comply with Elk Grove Water District (EGWD) Standard Construction Specifications. Construction methods and materials not covered by EGWD Standard Construction Specifications shall conform to the City of Elk Grove Standard Construction Specifications and/or Sacramento County Standard Construction Specifications. Construction standards for installation of materials not covered by EGWD, City of Elk Grove or Sacramento County Standard Construction Specifications shall be per the manufacturer's recommendations.

2. All materials shown on plans and/or used in construction shall be from the approved materials list as described in Appendix "A" of EGWD Standard Construction Specifications. Materials deviating from the approved materials list shall be approved in writing by EGWD prior to installation.

3. Contractor will arrange a pre-construction meeting one (1) week prior to construction, and shall be responsible for location of all existing utilities. Meetings will be held at the project site with an EGWD engineering and construction service representative. Inspection schedules require a minimum of one (1) working day (24 hours) notice. The Contractor shall have a copy of the EGWD Construction Specifications and Standard Drawing Details on-site at all times. Pre-construction meetings will not be scheduled until after all EGWD fees have been paid in full, and a complete set of construction documents have been provided to EGWD.

4. EGWD requires three (3) working days (72 hours) advance notice of any shut down or interruptions of normal service for installation and hook-ups. Shut down or interruptions of normal service for installation and hook-ups to EGWD's water system shall be required to occur on Mondays starting no earlier than 9:00 a.m. and shall have service restored by 3:00 p.m. and on Sundays for commercial areas starting no earlier than 10:00 p.m. and shall have service restored by the following morning (Monday) by 5:00 a.m.

5. The contractor shall provide signed and dated as-built drawings per EGWD standards. All valves shall be raised to finish grade, accessible and turned on prior to Final Acceptance. All valves located back of walk or in any landscaped areas shall require a "WV" be cut into the concrete curb for locating purposes.

II. WATER SERVICE STANDARDS

A. Water System Notes:

6. All water mains shall be laid in separate trenches as far as possible from near-by sewer lines; a minimum horizontal separation of ten (10) feet, outer diameter to outer diameter, is required.

7. All water mains shall be laid in separate trenches as far as possible from near-by storm drain lines; a minimum horizontal separation of four (4) feet, outer diameter to outer diameter, is required.

8. All water pipelines shall clear underground facilities by one-foot (1') minimum unless specifically called out and approved on the construction plans with specified backfill material. A minimum of one-foot (1') vertical separation must be maintained when crossing sanitary sewer or storm drain lines, unless specifically approved in writing by the California State Water Resources Control Board – Division of Drinking Water.

9. Water lines shall be placed in public right-of-way and at a minimum of thirty-six (36) inches below finished grade.

10. Water main location shall be 3 feet from lip of gutter on the north or west side of the street when installation is within a 50 foot right-of-way or greater. When installation is within a less than 50 foot right-of-way, water main location shall be located 3 feet from lip of gutter on the north or west side of the street, where possible. Locations for detached sidewalks or other than those mentioned above must be approved by EGWD.

11. Water services shall be two and a half (2-1/2) feet from side of the lot line. All water services shall have a seven (7) foot separation from street lights, storm drainage inlets and fire hydrants with dimensioning as such shown on plans.

12. Where dual water services are to be installed, a common trench is acceptable. Services must be at least a minimum of eighteen inches (18") apart. At no time shall there be a service in the same trench as any water main.

13. Where water services are placed, a meter box must be installed. Water meters will be purchased by the developer at time of plan approval and installed by EGWD. Once a construction permit has been released to the developer and/or contractor, notification to EGWD must be made to schedule installation of the water meters.

14. At no time will unauthorized construction water use be permitted. Construction water permits can be obtained at EGWD Monday through Friday from 7:00 a.m. to 4:00 p.m. Unauthorized use of any fire hydrant or service connection will result in a Water Theft Fine per Ordinance No. 05.15.19.01.

15. All one to two (1–2) inch water service lines shall be polyethylene pipe. The pipe size shall be CTS.

16. All water pipelines shall have a No. 10 gauge insulated copper tracer wire installed per EGWD Standard Detail Drawing W-6. Wire shall be spliced together with brass connectors and wrapped per EGWD Standard Detail Drawing W-6.

17. All water pipelines shall be marked and installed with detectable water tape placed on top of the pipe initial backfill located approximately 12 inches above the top of water pipeline.

18. No pipeline/fitting shall be blocked or backfilled without EGWD inspection and approval.

19. Trench shall be backfilled with sand to a minimum of twelve (12) inches above the pipe per EGWD Standard Detail Drawing W-14.

20. All non-residential services shall have approved back-flow prevention devices installed and tested prior to service.

21. Permanent blow-off assemblies shall be installed as shown on EGWD Standard Detail Drawing W-15 and W-16.

22. Temporary blow-offs shall be as shown on EGWD Standard Detail Drawing W-17.

23. Refer to EGWD Standard Construction Specifications for pressure testing, disinfection, and flushing requirements. (Note: Prior to pressure testing a Construction Water Permit must be obtained by EGWD.)

24. Under no circumstances shall pressure testing be performed by installing a test plate.

25. Contractor shall maintain access to mainline gate valves at all times. Gate valves shall not be covered by dirt, construction material or debris.

26. Under no circumstances shall anyone other than a representative of EGWD, or authorized agency, open or close any valve in EGWD service area. Contractor shall not operate valves without prior EGWD approval where occupancy of the project has been granted.

27. Connections to the existing water system where the existing pipe material is asbestos cement pipe (ACP or transite), replacement of the existing pipe must extend a

minimum of five feet (5') from any valve or fitting on both ends of the connection as shown on EGWD Standard Detail Drawing W-24.

B. Material List:

28. All pipe four (4) inches or larger shall be C-900 PVC or Ductile Iron or prior approved equal.

29. All fittings shall be Tyton System or mechanical joint and wrapped, or prior approved equal.

30. Gate valves shall be resilient wedge type. All water mains twelve (12) inches or larger require butterfly valves.

31. All service valves (corporation or curb) shall be compression type. All curb stops shall be ball valves.

32. Saddles should be McDonald C-900, or prior approved equal. Gate valve boxes shall be Christy G-5, or prior approved equal.

33. Riser material shall be eight (8) inch C900 PVC for all gate valves.

34. Meters shall be either iPerl TR/PL or OMNI C2 TR/PL (Sensus) reading in 100 cubic feet, or prior approved equal. (Note: All meters shall be paid for by the developer/contractor but shall be installed by EGWD.)

C. Hydrant Specification/Installation Notes:

35. All water mains and hydrants required for new buildings shall be fully operational and capable of delivering the required fire flow protection supply prior to issuance of building permit.

36. All double detector check valves will be installed and tested prior to service on all fire sprinkler systems.

37. Hydrants shall be located a minimum of three (3) feet from any building or structure.

38. Hydrants shall be installed (per detail W-2A or W-2B) with the lowest valve stem twenty (20) inches (minimum) and twenty-four (24) inches (maximum) above the finished grade. The 4-½ inch pumper connection shall be a minimum of six (6) inches and a maximum of one (1) foot behind finished walk or planter box, with 4-½ inch discharge facing driveway or street.

39. A two (2) foot square concrete pad is to be set around base of hydrant, the thickness being the same as the sidewalk.

40. Hydrants shall be Clow 960 factory white.

41. Hydrants located in commercial areas shall be protected in accordance with Standard Construction Detail W-22.

Elk Grove Water District

A DEPARTMENT OF THE
Florin Resource Conservation District

October 17, 2023

TO: Chair and Directors of the Florin Resource Conservation District

FROM: Travis Franklin, Program Manager

SUBJECT: **LEGISLATIVE MATTERS AND POTENTIAL DIRECTION TO STAFF**

RECOMMENDATION

This item is presented as information although the Florin Resource Conservation District Board of Directors may provide an action to authorize staff to respond to a legislative item.

SUMMARY

This report summarizes the bills that have been introduced in the 2023 legislative session that the Florin resource Conservation District/Elk Grove Water District (District) has been tracking.

DISCUSSION

Background

The Florin Resource Conservation District (FRCD) Board of Directors (Board) is periodically updated on legislative and regulatory issues.

Present Situation

The 2023 legislative session ended on September 14th and the Governor was required to sign bills by October 14th for them to become law.

The following bills the District has been tracking were signed by the Governor prior to the deadline.

AB 557 (Hart D) Open meetings: local agencies: teleconferences.

This bill would extend the teleconferencing provisions when a declared state of emergency is in effect, or in other situations related to public health indefinitely. The bill would also extend the period for a legislative body to make the above-described findings related to a continuing state of emergency and social distancing to not later than 45 days after the first teleconferenced meeting, and every 45 days thereafter, in order to continue to meet under the abbreviated teleconferencing procedures. The California Special Districts Association (CSDA) is the sponsor of this bill.

AB 755 (Papan D) Water: public entity: cost-of-service analysis

This bill requires a public entity, when conducting a cost-of-service analysis, to (1) identify and make publicly available on the entity's website the incremental costs incurred by major water users in the single-family residential class and (2) identify the incremental costs that would be avoided if major water users met a specified efficiency goal. The bill has been amended significantly to require an analysis as part of a cost-of-service analysis and does not require any action other than making the information publicly available. The Association of California Water Agencies (ACWA) and Regional Water Authority (RWA) have taken a neutral position.

SB 48 (Becker D) Water and Energy Savings Act.

Current law requires each utility to maintain records of the energy usage data of all buildings to which they provide service for at least the most recent 12 complete calendar months, and to deliver or otherwise provide that aggregated energy usage data for each covered building, as defined, to the owner, as specified. This bill would expand those requirements, beginning January 1, 2025, to include each utility that provides water service and its water usage data. RWA has taken a support if amended position.

SB 389 (Allen D) State Water Resources Control Board: determination of water right.

This bill would authorize the State Water Resources Control Board (State Water Board) to investigate the diversion and use of water from a stream system to determine whether the diversion and use are based upon appropriation, riparian right, or other basis of right. This bill would make a water right holder prove by the preponderance of evidence the basis of their right in a state board proceeding to determine a diversion and basis of right. ACWA and RWA have taken a neutral position.

SB 659 (Ashby D) Groundwater recharge: minimum requirement.

This bill would establish a statewide goal for the ability to do 10 million acre-feet of groundwater recharge a wet year by 2035. This bill would task the Department of Water Resources (DWR) in consultation with the State Water Board to develop a plan to achieve the goal. This is an RWA co-sponsored bill.

The following bills the District has been tracking are still pending the Governor's action as of October 10th.

AB 779 (Wilson D) Groundwater: adjudication.

This bill would require the court to invite a representative from the department or the State Water Board to provide technical assistance or expert testimony on the amount of water in the basin subject to adjudication, equitable and sustainable pumping allocations for the basin, and sustainable groundwater management best practices and recommendations. The bill would require the court to take into account the needs of small farmers and disadvantaged communities, as those terms are defined, when entering a judgment. RWA has taken a neutral position.

AB 1572 (Friedman D) Potable water: nonfunctional turf.

This bill would prohibit the use of potable water, as defined, for the irrigation of nonfunctional turf located on commercial, industrial, municipal, institutional, and multifamily residential properties, as specified. ACWA has taken a support if amened position. RWA has taken a neutral position.

The following bills the District has been tracking were vetoed by the Governor prior to the deadline.

AB 249 (Holden D) Water: school sites: lead testing: conservation.

This bill would require a community water system that serves a school site to test for lead in the potable water system outlets of the school site before January 1, 2027, except for potable water system outlets in buildings that were either constructed after January 1, 2010, or modernized after January 1, 2010, and all faucets and other end point devices used for providing potable water were replaced as part of the modernization. The bill would require the community water system to report its findings to the applicable school or local educational agency and to the State Water Board. The bill would require the local educational agency or school, if the lead level exceeds a specified level at a school site, to notify the parents and guardians of the pupils who attend the school site or preschool, take immediate steps to make inoperable and shut down from use all fountains and faucets where the excess lead levels may exist, and work with the school sites under its jurisdiction to ensure that a potable source of drinking water is provided for pupils, as specified. The bill would require a community water system to prepare a sampling plan for each school site where lead sampling is required under these provisions. The bill would require the State Water Board to make the results of school site lead sampling

publicly available by posting the results on its internet website. CSDA has taken an oppose position. ACWA and RWA have taken an oppose unless amended position.

AB 676 (Bennett D) Water: general state policy.

Current law establishes various state water policies, including the policy that the use of water for domestic purposes is the highest use of water and that the next highest use is for irrigation. This bill would instead declare that the use of water for health and safety purposes is the highest use of water. RWA has taken a neutral position.

Staff will continue to monitor these bills along with any other bills which may affect District operations.

Provided for the Board are the RWA (Attachment 1) and ACWA (Attachment 2) Comment Letters regarding the State Water Board's proposed Making Water Conservation a California Way of Life Regulation. These are the comment letters the Board authorized the general manager to sign on behalf the District to at the last meeting.

ENVIRONMENTAL CONSIDERATIONS

There are no direct environmental considerations associated with this report.

STRATEGIC PLAN CONFORMITY

Tracking active legislation complies with the District's Water Industry Leadership goals of the 2020-2025 Strategic Plan.

FINANCIAL SUMMARY

There is no direct financial impact associated with this report.

Respectfully submitted,

TRAVIS FRANKLIN
PROGRAM MANAGER

Attachments

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Lincoln, City of
Nevada Irrigation District
Orange Vale Water Company
Placer County Water Agency
Rancho Murieta Community Services District
Roseville, City of
Sacramento, City of
Sacramento County Water Agency
Sacramento Suburban Water District
San Juan Water District
West Sacramento, City of
Yuba City, City of

Associates

County of Placer
El Dorado County Water Agency
Sacramento Area Flood Control Agency
Sacramento Municipal Utility District
Sacramento Regional County Sanitation District
Yuba Water Agency

October 17, 2023

Submitted via email: commentletters@waterboards.ca.gov

Subject: Comment Letter – Proposed Making Water Conservation a California Way of Life Regulation

Dear Members of the Board and Staff,

The Regional Water Authority (RWA) appreciates the opportunity to comment on the Proposed Making Conservation a California Way of Life Regulation. RWA is a joint powers authority representing 22 public and private water suppliers serving over 2.2 million residents in Sacramento, Placer, El Dorado, Nevada, Yolo, and Sutter Counties. RWA's mission is to serve, represent and align the interests of regional water providers and stakeholders for the purpose of improving water supply reliability, availability, quality and affordability. RWA's award winning Regional Water Efficiency Program has been supporting locally cost-effective water efficiency efforts for over two decades. **Our region has reduced total demand 18% since 2013 with a growing population. We believe that water efficiency is a necessary component of sustainable water management and climate change adaptation.**

RWA has been an active participant in the regulation development process and has provided many of the same comments contained in this letter to both the Department of Water Sources (DWR) and the State Water Board over the last several years. We support the regulation's budget-based approach to water efficiency and believe that all Californians must make water conservation a Californian way of life to address climate change. That said, **we believe the regulation, as currently proposed, will set our residents, water suppliers and the state up for failure.**

The purpose of the 2018 Senate Bill 606 and Assembly Bill 1668 (collectively known as the Conservation Legislation) was to establish long term efficient water use for the residential and commercial industrial and institutional dedicated irrigation meter (CII DIM) sectors, not a "how low can you go" approach. Efficient outdoor use should be set at a level that can be maintained over time, is achievable by the average resident and supports healthy new and existing landscapes. Only healthy landscapes will produce the multitude of benefits envisioned by stakeholders and the state to adapt to climate change. The proposed regulation endangers the existence of healthy landscapes, especially urban trees, which are paramount to address climate change impacts.

Our overarching concern is that the proposed regulation will adversely impact affordability and quality of life for all customers. Ultimately, we must arrive at a place where costs are balanced with affordability while supporting healthy landscapes through irrigation efficiencies that can be achieved in a real-world setting.

Our hope is that water supplier and State Water Board staff can work together to redline the regulation text with mutually beneficial improvements to increase the odds

of successful implementation of this regulation. Successful implementation means reasonable reductions in water use to achieve increased efficiency while appropriately balancing the impacts to disadvantaged communities (DAC) and black, indigenous and people of color (BIPOC) communities, limiting adverse costs and maintaining urban tree canopies.

With successful implementation in mind, RWA supports all the recommendations, concerns and redlined regulation text included in the ACWA Comment Letter and has the additional following recommendations and comments:

1. <u>The proposed regulation either contradicts the requirements of the Conservation Legislation or exceeds the scope authority provided to the State Water Board in the Conservation Legislation.</u>
    - Water Code Section 10609.20 states (a) "The board, in coordination with the department, shall adopt long-term standards for the efficient use of water pursuant to this chapter on or before June 30, 2022. (b) the standards include (1) outdoor residential water use (2) outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use. (3) A volume of water loss. To date, only (3) the volume of water loss standard has been adopted (October 19, 2022). The State Water Board isn't expected to adopt the remaining outdoor standards (1) and (2) until mid-2024, amounting to a nearly 2-year delay past statue deadline. This delay forces suppliers to submit an incomplete report, based on draft standards, to the DWR to be in compliance with Water Code Section 10609.20 that states "Each urban retail water provider shall calculate its urban water use objective no later than January 1, 2024, and by January 1 every year thereafter." The outdoor standards are a required input to calculate a supplier's objective.
      Solution: While the time delay cannot be undone, the delay should be acknowledged when establishing regulation milestones and considered when administering supplier enforcement.

    - Water Code Section 10609.24(a) states "An urban retail water supplier shall submit a report to the department no later than January 1, 2024, and by January 1 every year thereafter." The department is shorthand for DWR. The report includes the calculation of a supplier's calculated objective, actual water use, CII performance measures, validated water loss audit and a description of progress made towards meeting the objective and the reports shall be posted on its website. In Section 975(a) of the regulation, the State Water Board appears to require dual reporting for suppliers as suppliers are required to report to DWR via statute and State Water Board via the regulation text. The passage of Assembly Bill 1755 (2016) directs the DWR, State Water Board and Department of Fish and Wildlife to "coordinate and integrate existing water and ecological data from local, state, and federal agencies" and to "develop protocols for data sharing." Dual reporting of the same information to two different state agencies is redundant and is a data quality liability.

Solution: Supplier should follow the statute and limit unnecessary redundances by submitting reports only to DWR. DWR and the State Water Board should develop a protocol for data sharing.

- Water Code Section 10609.20 (b) states the objective calculation "shall be based on the urban retail water supplier's water use conditions for the previous calendar or fiscal year." However, the proposed regulation text limits flexibility in Section 975 stating the "report (referenced in Water Code Section 10609.24, which includes the objective calculation in subsection (1)) shall reflect the conditions of the previous state fiscal year." The regulation unnecessarily limits the flexibility granted in statute. This limitation is further complicated by Water Code Section 10608.34 (b)(3) which states "each urban retail water supplier shall submit a completed and validated water loss audit report for the previous calendar year or previous fiscal year as part of the report submitted to the department." Data from these water loss audits is a required component of a supplier's objective calculation. Suppliers have been submitting validated water loss audits in either fiscal or calendar year timesteps since 2017, with about 75% of the suppliers submitting in calendar year.[1] According to the American Water Works Associations' M36 Water Loss Manual, "One month or even 6 months is too short a time to give an overall picture of water flow through a system. A 12-month study period is recommended as it is long enough to include seasonal variations and reduces the effects of lag time in customer meter reading." In order to comply with the regulation's fiscal year only limitation and to accurately report water loss, suppliers currently reporting water loss audits in calendar year would either need to revalidate previous calendar year audits at considerable cost ($20,000 per audit with consultant/staff time) or prorate two existing annual audits (6 months each) to fit into a fiscal year schedule, which compromises the 12-month study period water loss best management practice described above. Additionally for some suppliers, switching water loss audits to fiscal year only could compromise water loss audit input data quality like financial metrics that may only be calculated on an annual basis. The regulation should mirror DWR's water loss audit reporting definitions for calendar and fiscal year which states reporting is " Annually by January 1 (1 year after calendar year audit period ends and 6 months after the fiscal year audit period ends)."[2]
  Solution: Maintain fiscal and calendar year flexibility for supplier objective reporting as provided in statue. Add definitions for calendar and fiscal year in the regulation in alignment with DWR's water loss audit reporting definitions.

- Water Code Section 10609.6 (2)(B) states "The standard shall apply to irrigable lands." The current regulation only includes irrigable-irrigated (II) land in the outdoor standards, which is a subcategory of irrigable land and therefore the regulation does not apply to all irrigable land,

[1] DWR WUA Data Public Portal website https://wuedata.water.ca.gov/ .
[2] https://water.ca.gov/programs/water-use-and-efficiency/urban-water-use-efficiency

which would include the addition of irrigable not (currently) irrigated (INI) as defined in DWR's Recommendations for Outdoor Residential Water Use Efficiency Standard, WUES-DWR-2021-02, A Report to the State Water Resources Control Board Prepared Pursuant to California Water Code Section 10609.6(a)(1), September 2022.[3]
Solution: The State Water Board should develop methodology options in the regulation text for a supplier to include all irrigable landscape areas in their objective calculation, as needed.

- Water Code Section 10609.9 states "principles of the model water efficient landscape ordinance means those provisions of the model water efficient landscape ordinance applicable to the establishment or determination of the amount of water necessary to efficiently irrigate both new and existing landscapes." The proposed regulation's residential 0.55 and nonresidential 0.45 landscape efficiency factor (LEF) (also referred to as evapotranspiration adjustment factor or ETAF/ETF) values for 2035 compliance for all parcels are Model Water Efficient Landscape Ordinance (MWELO) design standards adopted only for new landscapes established after 2015. These values do not provide sufficient water for efficiently irrigating existing landscapes as allowed through statute. The regulation treats both new and existing (pre-2015) landscapes the same, even though existing landscapes were established under different development/irrigation efficiency requirements as follows: 0.8 assumed for pre-1992, 0.8 for 1993-2019, and 0.7 for 2010-2015. MWELO only applies to 20 percent of the California's housing stock and developer installed landscapes. Therefore, this regulation will not provide "water necessary to efficiently irrigate" 80% of the state's existing landscapes as originally intended in legislation. This concern is further confirmed by the relatively flat statewide ETF range for existing landscapes in the graph below presented by State Water Board staff at the October 1, 2023 Board Workshop. The single factor of an average ETF of 0.73 does not represent an "average" existing landscape because of the wide distribution of data. Using an average does not mean it is representative or appropriate to use for statewide analysis. Taking the average statewide ETF and then backing into what is "efficient" from this value is not a technically sound approach for accommodating all existing landscapes. Lastly the average and median metrics would be higher than displayed in the slide below if additional landscape measurement errors were accounted for, which are further explained in Section #2 of this comment letter.

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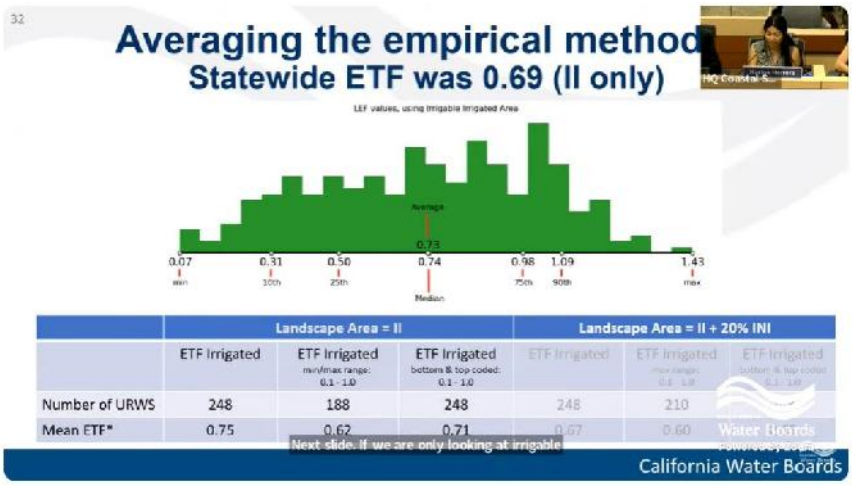
[3] DWR's Recommendations for Outdoor Residential Water Use Efficiency Standard, WUES-DWR-2021-02, A Report to the State Water Resources Control Board Prepared Pursuant to California Water Code Section 10609.6(a)(1), September 2022 https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/2018-Water-Conservation-Legislation/Performance-Measures/ORWUS_STD_WUES-DWR-2021-02_COMPLETE.pdf



Solution: Adopt minimum of .63 ETAF/LEF outdoor standard to account for various MWELO budgets for existing landscapes as recommended by DWR.

- Regulation section 974 (e) (1) states that "Each urban retail water supplier shall ban the irrigation of non-functional turf with potable water on all commercial, industrial, and institutional (CII) landscapes in its service area by July 1, 2025." The proposed regulation text 2025 effective date precedes the effective dates for the same nonfunctional turf restrictions outlined in Assembly Bill 1572 (Friedman, 2023).
  Solution: Remove the non-functional turf related section from the regulation.
- Proposed Regulation Section 966(i)(2)(e)(iv) states that suppliers that wish to pursue a 5-year compliance extension must provide "dedicated funding for the creation and maintenance of climate-ready landscapes, with a minimum of 40 percent of program funds dedicated to low-income households and disadvantaged communities within the supplier's service area." This requirement has potential conflicts with Proposition 218 funding guidelines, which was tested in the 2022/2023 legislature with Assembly Bill 1072 (Wicks) that contained similar language that was voted down and assigned to be a two-year bill.
  Solution: Remove this requirement for suppliers that elect the 5-year extension of 2028 CII DIM and 2030 residential outdoor standards option.

2. <u>The 2035 outdoor standards of 0.55 and 0.45 are unacceptable from a technical and practical standpoint.</u> All of the below details provide backup documentation to support this statement and offer solutions on how to fix it.
   - We call for the complete removal of 0.55 and 0.45 ETAF/LEF (residential and CII DIM respectively) as these are Model Water Efficient Landscape Ordinance (MWELO) design standard and are not broadly and reasonably achievable in the real-world for the average person or business, especially for established existing (pre MWELO) landscapes. It is concerning that State Water Board's outdoor standard recommendation deviates so far from DWR's final recommendations. DWR's recommendations were a result of a multiyear stakeholder

process involving topical stakeholder advisory committees and concluded with 1,000's of pages of recommendations and extensive back up documentation. The State Water Board's recommendations were a result of taking DWR's recommendations, performing additional lightly documented analysis that concluded with a handful of slides as back up documentation. Where is the documentation from the State Water Board to justify such drastic changes from the DWR recommendations? Why were years of work from stakeholders like water suppliers through the DWR process tossed aside? Perhaps the most perplexing part is that State Water Board staff were intimately involved in the DWR process with regular joint staff meetings, joint stakeholder presentations, joint review of recommendation documents, etc. Yet the fact still remains that both state agencies' analysis yielded wildly different results for what is considered "efficient use" using the same available baseline data appears to demonstrate to stakeholders the data quality issues, methodology shortcomings and misinterpretations of supplier data that have been expressed to the state for several years. What else could explain and would have perpetuated such different interpretations of the available data? These data issues include over or underestimating residential landscape area, improper connection of budgets to supplier demand data to pre-assess compliance, supplier data errors, the complete omission of analysis for CII DIM irrigation budgets, MWELO standards versus on the ground performance and a scientifically unsound horticultural irrigation efficiency factor to name a few. All of these issues have already been well documented in RWA, ACWA and numerous other comment letters during the initial DWR process and were again confirmed by Santa Margarita Water District in their presentation at the October 4th State Water Board workshop. When there are glaring and documented data errors and a consistent mismatch/contradiction with on the ground research and expertise, there is a professional responsibility to proceed with caution in terms of setting standards and not to double down on those errors by requiring a standard that is so "efficient" it can only be achieved on paper or in a new professionally installed and managed residential site. The latter of which is not a fiscal option for the vast majority of California residents and businesses.

Solution: Reinstate DWR's recommendation of 0.63 ETAF/LEF for existing residential and CII DIM landscapes as a minimum value for 2035 compliance and beyond and extend 0.8 ETAF/LEF until 2034.

- Landscapes are alive and change throughout time. It is unreasonable and inaccurate to designate irrigated landscape area measurements based on only one month of imagery as the baseline for long term landscape budgets. DWR's recommendation of 20% INI buffer was established using data analysis of the evapotranspiration factor, irrigated and INI landscape metrics and proposed as a compromise to account for undercounted irrigated areas due to aerial imagery

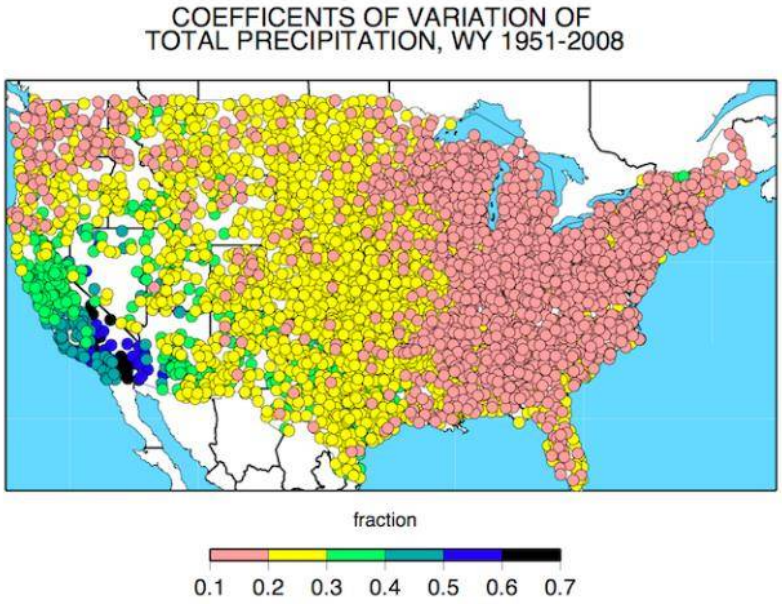
limitations, while still meeting other aspects of statue like water savings goals.[4] Because the intended purpose was data accuracy, it does not make sense for the 20% INI buffer to only apply through 2027 as the State Water Board states in Regulation Section 968(b)(2)(B). Furthermore, in the absence at this time of the state providing regularly updated imagery, including this established 20% INI buffer can help account for varying irrigated landscape area year to year changes we know are happening, but the vast majority of suppliers lack the resources to update imagery annually for themselves. However, even with updated imagery, there will always be a need for some level of INI buffer to account for inherent and unavoidable errors of using irrigated landscape data based on single timeframe imagery. To this end, the exact INI buffer volume will need to be reassessed and updated when the imagery is updated at a statewide level. Lastly, the guiding legislation states "the standards shall apply to irrigable lands" as previously stated so this recommendation is in aligned and allowed through current statute.

Solution: Reinstate DWR's recommendation of a 20% INI buffer for all regulated years.

- Rainfall does not fall uniformly in a service area or throughout the state as shown in the map below. Rainfall "is highly variable across the state with the southeast deserts receiving less than 5 inches in one year to the north coast which can get over 100 inches a year" with "yearly variability on the order of half the annual average."[5] What become "effective" rainfall varies depending on an individual property's soil type, slope, and precipitation duration. These above conditions create inequity in landscape budgets for suppliers and their customers in certain areas of the state where effective precipitation will be subtracted out of supplier's outdoor budgets without providing suppliers control over customers' behavior to incorporate effective rainfall into their watering practices. It is infeasible, unreasonable and impractical to expect residents and businesses to precisely account for effective rainfall. Not even weather-based irrigation controllers can account for effective rainfall. If it can't be reasonably implemented by the average person, it should not be in the outdoor budget calculation.

[4] DWR's Recommendations for Outdoor Residential Water Use Efficiency Standard, WUES-DWR-2021-02, A Report to the State Water Resources Control Board Prepared Pursuant to California Water Code Section 10609.6(a)(1), September 2022 https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/2018-Water-Conservation-Legislation/Performance-Measures/ORWUS_STD_WUES-DWR-2021-02_COMPLETE.pdf (page 57)

[5] California Precipitation. August 2019. Joint publication and map by CA State Climatologist, California Department of Water Resources, California Nevada Applications Program, Center for Western Weather and Water Extremes and Southwest Climate Science Center. https://cwc.ca.gov/-/media/CWC-Website/Files/Documents/2019/08_August/Dettinger_CA_Precipitation.pdf



Furthermore, effective precipitation will be calculated for this regulation using the Cal-SIMETAW model which is primarily used to model landscape metrics for flat uniform agricultural fields not disturbed diverse urban lawns. It's likely this model will overestimate effective rainfall for urban environments when compared to similarly modeled agricultural soils for various reasons including: 1) Urban soils aren't reflective of soil maps used in modeling. Topsoils are often removed for urban development and replaced with non-native fill soils. 2) Urban soils undergo purposeful grading/drainage to route rainwater away for homes not to optimize infiltration and 3) Urban soils have been altered due to compaction/grading to support built structures which results in lower water holding capacity soils. Additionally, the inclusion of effective rainfall in both the MWELO (Title 23, Division 2.7, Section 494): "A local agency may consider Effective Precipitation (25% of annual precipitation) in tracking water use.") and the governing Conservation Legislation (WC Section 10609.16 "shall address, as necessary, incorporating precipitation data and climate data into estimates of an urban retail water supplier's outdoor irrigation budget for its urban water use objective") are optional, not required. Also precipitation is already accounted for in the outdoor budgets as it is indirectly incorporated in the local evapotranspiration factors used in the proposed regulation objective methodology. Lastly the regulation's use of mass-produced landscape area measurements, generalized plant material ratios (trees versus turf grass versus shrubs) and unrealistic irrigation efficiency factors produce compounded errors in the budget methodology even without the unnecessary addition of effective rainfall, which will only exacerbate existing error. Why add more uncertainty to an uncertain calculation when it's not necessary and will cause supplier implementation inequity?

Solution: Remove effective precipitation from the landscape budget

standard or at the very least limit its inequitable impact on landscape budgets by modifying the definition to "means 50% of modeled effective precipitation or 10% of total precipitation, whichever is smaller, in inches per year."

- The assumption of 0.8 irrigation efficiency in the residential and CII outdoor standard first established in the initial DWR process is not realistic and does not reflect existing data and research. For example, a literature review (Attachment A) by Land IQ, concluded that "There are relevant literature resources from the state of California and other irrigated regions that conflict with the (DWR's) current assumption for (irrigation efficiency) IE. The value assumed for IE of 0.8 is not supported by scientific studies and is higher than reviewed literature values. Evaluated studies indicate that average existing IE in Californian landscapes ranges from 0.49 to 0.55, with values approaching 0.65 in best case scenarios." Additionally, a recent University of California Davis study (Attachment B) commissioned by DWR, Updates on Evapotranspiration Adjustment Factor Study - Agreement #4600008156, revealed a similar average distribution uniformity (proxy for irrigation efficiency) of 0.68, which was derived from the evaluation of irrigation on numerous turf landscape sites throughout California by certified irrigation specialists. It should be noted that the residential outdoor standard is targeted for implementation by residential customers not irrigation professionals. It is extremely unlikely and unreasonable to think that an average homeowner will be able to reach and maintain irrigation efficiency levels above what certified irrigation professionals are able to achieve even with extensive education and outreach efforts.
  Solution: Change irrigation efficiency from 0.8 to 0.625 to align with technical reality, where applicable.

- The regulation includes a temporary provision for only new "climate ready" trees but completely ignores existing trees, which are just as valuable, if not more valuable. The lack of protection for existing trees is extremely concerning regarding the long-term health of our landscapes and trees throughout not only our region but statewide[6]. Maintaining healthy landscapes is one effective strategy for mitigating climate change impacts such as urban heat island effect. We are concerned that the outdoor standard will lead to unhealthy landscapes and diminished tree health that will exacerbate, not mitigate, climate change. Specific to the Sacramento region, a California Natural Resources Agency report cites Sacramento lost 8% of its tree canopy and another 11% were in poor condition after the 2012-2016 drought, during which outdoor watering was significantly reduced.[7] During this drought the Sacramento region saved on average 24.6% compared to the 2013 drought baseline year. The regulation will require our

[6] The RWA is a member of the Sacramento Tree Foundation.
[7] California Natural Resources Agency. "Report to the Legislature on the 2012-2016 Drought." March 2021. Page 41. https://drought.unl.edu/archive/assessments/CNRA-Drought-Report-final-March-2021.pdf

suppliers to conserve on average 24% to be in compliance in 2035, using 2021 data as a baseline. We are projecting, at minimum, to experience similar tree health impacts with this regulation as during the 2012-2016 drought period as the savings requirements are similar. However, the likelihood is that the impacts will be even worse as the drought lasted only 4 years, the regulation is every year for the foreseeable future.
Solution: Add a variance to protect existing tree health.

- Regulation Section 968(i) states "in order to receive approval for either a variance, a temporary provision, of the inclusion of special landscape areas for a given reporting year…" implying that special landscape areas will need to be approved each year. This is an unnecessary and heavy lift for supplier staff as special landscape areas like parks and landscapes irrigated with recycled water are unlikely to change year to year. Approval of these areas for 5 years seems reasonable with the responsibility on the water supplier to resubmit data as changes are made aware to supplier staff.
Solution: Allow all approved special landscape to be valid for 5 years.

- The Regulation Text 969(a)(5), states that "public swimming pools" are to be designated as a special landscape area, which receives a 1.0 LEF value. However residential pools are considered irrigated residential landscape area, with water use reducing over time from 0.8, 0.63 to 0.55 in 2035 just like residential lawns. Evapotranspiration impacts public and private pools the same and they should be budgeted at the same LEF value. Unlike landscapes, pools can't get more efficient over time. A pool is a pool. Also arbitrarily reducing water for pools can lead to safety, vector control and water quality concerns.
Solution: Residential pools should be designated as a Special Landscape Area with a 1.0 LEF budget starting in 2024 without reduction over time to match treatment of public pools.

- As suppliers embark on the first year of reporting in 2024, the imagery used for landscape measurements for their budgets is already 6 years old. However, these measured landscape areas will be compared to more current 2022/2023 corresponding water use for compliance. Any landscape irrigation changes or new development since 2018 are not included in the baseline landscape measurement data and therefore create a "mismatch" between water demand data which is required to be for the previous calendar or fiscal year and the actual incomplete measured landscape area that uses that demand. This effectively creates inequity among suppliers as obtaining the necessary imagery and staffing to calculate and submit changed landscape area every year to State Water Board will be cost prohibitive for the vast majority of suppliers, especially those in DAC areas. For perspective, RWA participated in an imagery purchase partnership with the Sacramento Area Association of Governments (SACOG) to obtain 4 band oblique imagery in 2018 at a total cost of $750,000 for the region. The issue of

outdated imagery is exacerbated by the State Water Board's choice to only include irrigated (not the more inclusive irrigable) landscape area, which is likely to have more significant changes year to year and based on imagery timing. While many options exist for the state to provide this imagery to suppliers, the state already has access to one option for annual statewide imagery through the USDA National Agriculture Imagery Program (NAIP). While the high-resolution version of this data does come at a cost, it can be purchased on an annual basis, is available now and can be provided to suppliers and/or processed by the state for suppliers with a lag time of 1 year. It is unacceptable to have a 6-year mismatch between data and landscape measurement, especially when assessing compliance with a regulation with fiscal enforcement authority. This outdated imagery issue was brought up by suppliers at one of the first public regulation related meetings in West Sacramento nearly 5 years ago and many meetings after that.

Solution: State-funded imagery should be updated for all suppliers for all sectors (residential, CII and CII DIMs) every two years.

3. <u>CII Performance Measures requirements should be streamlined, prioritize measures based on water saving potential and allow for regional/collective compliance options.</u> All of the below details provide backup documentation to support this statement and offer solutions on how to fix it.
    - **Solution: Revise Regulation Sections 974(c-d) to only require water suppliers to design and implement a conservation program that includes at least two of the best management practices (BMP) for each paragraph (1) through (5) for each classification <u>category</u> that is included in the top 20% of CII customers by volume (excluding process water).** This shift allows limited suppler staff and program resources to be targeted to the top use categories within a supplier's overall CII water use sector, where water savings potential is the highest.
    - **Solution: Explicitly allow for existing and newly established local/regional/coordinated single and multisector CII performance measure best management practices and programs to be used for compliance requirements.** Some local suppliers and regional entities like RWA have successful existing long standing CII programs that collectively address multiply requirements in paragraphs (1) - (5) in Regulation Section 974(c). Additionally, some existing CII programs like those managed by the California Water Efficiency Partnership (CalWEP) have statewide reach and participation. Supporting economics of scale CII programs also providing a central hub to more quickly and efficiently distribute grant funding.
    - **Solution: Delete Regulation Section 972(b)1-4.** Additional CII account categorization beyond the ENERGY STAR Portfolio Manager's broad categories is marginal and low priority in terms of achieving water savings. Regarding #4, there is no efficient way for a supplier to know if a CII customer with a car wash uses the majority of its water use on the car wash operations.
    - **Solution: Clarify or remove Regulation Section 973(a)(2)(B) "Irrigation systems maintenance."** As currently written, this text implies that

suppliers are required to maintain the physical irrigation systems of a large landscape customer that do not have a DIM, which would be a huge legal liability for suppliers and is not a widely accepted BMP. Providing educational materials about irrigation system maintenance is a related BMP that is legally within the wheelhouse of water suppliers.

4. Restore equity to CII mixed use meter (MUM) landscape area threshold. Regulation Section 965 (hh) defines large landscapes as those that use 500,000 or more gallons of water per year. Regulation Section 973(a-b) outlines the requirements for large landscape contained within a mixed-use meter (MUM) CII site, which includes installing a dedicated irrigation meter to cover the large landscape area or employing in-lieu technologies to achieve a similar result. The cost of either of these options can be quite intensive for suppliers and customers alike. Setting the threshold at the volumetric 500,000 gallon per year limit versus the non-volumetric DWR recommended threshold of 1 acre (43,560 square feet) will produce inequitable results at the supplier level. Suppliers must determine if a property qualifies for inclusion in this requirement by estimating a water budget using local weather data for the property and determining if it exceeds the 500,000 gallons. However, depending on where the property is located (inland versus coastal) and the associated weather data, the same property may meet the threshold or may be under the threshold because 500,000 gallons waters more landscape area in coastal climates. For example, using the State Water Board provided MUM budget equation in Regulation Section 973(b) a 30,000 square foot property in Sacramento using 2021 NetETo from the State Water Board spreadsheet of 55.22 calculates to a budget of 780,589 gallons and therefore be included in this requirement but that same property in San Francisco with a NetETo of 32.70 and calculated budget of 462,247 gallons would not be included in this requirement. The end result is that a supplier in a hotter drier climate would end up incurring costs for objectively more smaller sized properties than a supplier located in a cooler climate. Furthermore, choosing a volumetric threshold that relies on local weather data means some years a property might be using 500,000 gallons and other years it might use less, which makes it difficult for suppliers to consistently apply this regulation to customers.
   Solution: Revert back to DWR's recommended 1 acre landscape area threshold for converting mixed use meters.[8]

5. An overall data error factor is needed to account for various known data errors and uncertainties when assessing supplier compliance. Various data errors and uncertainties described in this comment letter are built into the State Water Board's initial regulation assessment including overlapping residential and CII DIM landscape measurement data, undercounting residential irrigated area, which prompted DWR's recommendation to include 20% INI landscape area (which the State Water Board subsequently removed after 2027), water supplier data errors, ongoing fluctuations in weather that impact outdoor objective budgets (which can range on average 10% between years), lag time to convert current imagery to increased landscape area, human behavior

[8] https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/2018-Water-Conservation-Legislation/Performance-Measures/PM_CII_WUES-DWR-2021-15_COMPLETE.pdf

regarding water efficient practices, variance associated water use that is ineligible because it is below the 5% overall budget volume threshold, and general acceptance that water efficiency is not an exact science and thus should not be held to an absolute standard that denies these realities. Data doesn't need to be perfect to move forward. But you do need to take the compounding errors in the data into consideration when setting the standards. The general concept of a data error factor is to provide suppliers with additional budget gallons beyond the standard calculations to account for the inherent and unavoidable errors and uncertainties associated with the budget components. Adjustments for data uncertainty as a concept has already been accepted by the State Water Board as a precedented solution during the related water loss regulatory process in 2022. This recommended data error factor should be in addition to the water loss related buffer as they address related by separate data quality issues.

Solution: Include ACWA's proposal for a data error factor in the regulation text for use in calculating annual supplier compliance.

6. Compliance flexibility is an illusion. The most attractive quality of the regulation is that a supplier need not meet every individual part of the objective budget (except water loss which can be enforced on directly and separately via SB 555) but only needs to meet their collective objective budget which includes residential indoor, residential outdoor, CII DIM landscapes and system water loss at each respective compliance timestep. However, by 2035, residential and CII DIM outdoor use will have been reduced to a level in which all parcels must be irrigated at new (post 2015) landscape irrigation levels regardless of establishment age, indoor use will have been reduced to levels beyond cost effectiveness that will "require the vast majority of residences in the state to be equipped with a 1.28 gallon per flush toilet or better, and a high-efficiency washer (Attachment E)," and water loss compliance will be challenging even for suppliers with no required reduction that must maintain a 2017-2020 current loss baseline standard but with 15-18 year older pipes. There is no room for compliance flexibility when each sector's objective is driven down to maximum efficiency levels. There is no room for the "average" customer, where some customers use a little more but some use less, so it averages out to meet the standards. There is only room for perfect but unrealistic efficiency for all sectors. Flexibility is only provided when there is room for movement of gallons between each budget category. While all of these reduced levels of use may have been achieved by a subset of suppliers at one time or another for various periods of time, it cannot be conclusively shown these results were not influenced by unique service area conditions, inherent compliance assessment data error described throughout this comment letter (example: inflated landscape budget area described in Section 2 of this letter), supplier data error or another unexplained reason. Furthermore, the regulation requires most aggressive 2035 reductions to be maintained every year all year after 2035.

   Solution: Revise non-statute related standards to regain flexibility outlined in statute (described above). Consider a 3-year rolling average for compliance after 2035 similar to the water loss regulation.

7. All variance options are too complex and onerous to be useful.
   The purpose of the variances is to account for unique circumstances that impact

supplier demand included in the regulation that are not accounted for the overall existing standards. As proposed, it's unlikely that many suppliers will have the resources to gather the extensive data needed to even assess if a variance would meet the 5% supplier budget threshold to apply for approval. For example, counting the number and type of livestock is too detailed of a role of a water supplier and serves as an opportunity cost from higher priority water efficiency tasks. Furthermore, the number of livestock needed to equal the number of gallons required to be eligible for the 5% is staggering. For example, according to the State Water Board spreadsheet, Carmichael Water District (CWD)'s average annual potable use equivalent to objective (regulated demands) equals 2.36 billion gallons, with 5% equaling 118 million gallons. CWD would need to count 40,410 llamas with an allocation of 8 gallons of water per day or 29,389 horses with an allocation of 11 gallons a day to reach the 5% threshold. In this case, the variance would include residential agricultural or large lot residential parcels because only residential (not agricultural or non-landscape CII water use) is volumetrically included in the objective. If a supplier does the work to apply for a variance and submits proper back up documentation, it should be considered for approval regardless of the volume threshold as it is a valid use that has not previously been accounted for. Furthermore, approved variances should be valid for 5 years as conditions are unlikely to change beyond a rounding error year to year. If significant changes do occur and a supplier is made aware of them, it should be the supplier's responsibility to reassess and resubmit for approval. Variance requirements should be scaled up for ease of assessment. For example, instead of gallons per individual horse, the regulation or supplier could provide a locally appropriate average number of livestock per acre of agricultural residence parcels and an average livestock per day water allocation or similar scaled up metric.

Solution: All variance options should be simplified, scaled up and made valid for 5 years. The 5% threshold should be removed.

8. <u>State responsiveness to variance, new landscape area measurement (LAM) data, alternative data and temporary provisions requests and state distribution of required objective input data should be provided within a reasonable timeframe.</u> We anticipate that suppliers will be submitting requests for additional objective budget volumes through the variety of the options provided. It's helpful to provide suppliers with an approval timeline, which includes state response time for planning purposes so there is no ambiguity (is it approved or not, we haven't heard back from the state yet, etc.) if additional budget has been approved or denied as reporting deadlines approach. Additionally objective inputs like effective precipitation and reference evapotranspiration data are currently required to be provided to suppliers by DWR on an annual basis (Regulation Section 965 (u) and (vv). However, the annual distribution of this data leaves suppliers in the dark on their budget progress for most of the year. By the time suppliers receive data from DWR once a year, it will have been too late to increase efficiency efforts if water use is not on track for compliance.

   Solution: Include staff response time guidelines for objective related data updates similar to Section 984(g) in the water loss regulation that outlines a 90-day response window from when supporting document and request is received from supplier. DWR and suppliers work together to develop a

process to allow suppliers to access effective precipitation and reference evapotranspiration data (even if in provisional form) more frequently than annually, ideally on a quarterly basis.

9. Streamline and align mismatched timelines. Most of the timelines in the regulation are not aligned with ease of implementation and reporting in mind. It's understood that some timelines like the indoor water use standard changes (current, 2025 and 2030) are set in statue at calendar year but non-statute standard changes like residential outdoor and CII DIM are set a fiscal year deadline. The result is that a supplier will have to prorate one of these groups of standards regardless of choosing calendar or fiscal year reporting. Furthermore, Regulation Section 975(d)(2) states that by January 1, 2024, all suppliers need to identity mixed meter landscapes and estimated water use and square footage and in Regulation Section 973(c) suppliers have to install DIM or in lieu technology in 20% of mixed meter accounts by 2026, 60% by 2028 and 100% by 2030. However, DWR is not able to deliver data needed to identify these mixed meter account landscapes for all suppliers until summer 2026. Suppliers can't report on parcels and perform efficiency measures on properties that haven't been identified yet. For this example, a reasonable solution would be starting the identification deadline in 2027 (20%), followed by 2-year gaps for each percentage increases there after until full compliance (100%) in 2033. Similar solutions should be developed for other timeline discrepancies like installing DIM and in lieu technologies to start after CII account identification is complete.
   Solution: Revise regulation timelines with ease of reporting and reasonable implementation time in mind.

10. All non-statue-related timelines should be extended. Given the regulation process is running 2 years behind schedule, the complexity of the regulation, supplier staffing and budget limitations, the sheer ramping up required to meet compliance for some suppliers and the importance the success of this regulation for the state, it is reasonable to extend all non-statue-related timelines, especially those tied to the 2035 residential and CII DIM outdoor standards, which will be a fiscal and customer participation challenge to comply with in any year. If the goal is long-term water efficiency that can be maintained every year in the future, it will take the residents and business of the state developing an extensive paradigm shift, which is not a quick and easy task. More time is not a magic bullet to achieve the desired level of savings, but it is helpful to get budgets, outreach, education and programs in place to support a long-term shift. Too abrupt of a change, pushes people away. Slower gradual change encourages participation. We cannot out regulate human nature.
    Solution: Extended non-statute-related deadlines by a minimum of 5 years and a maximum of 10 years.

11. Dual state agency approval protocols in the proposed regulation text (DWR and State Water Board) are problematic. Regulation Section 968(b)(3) states "(3) A supplier may, for each reporting year, use an alternative data source for reference evapotranspiration, effective precipitation, or its residential landscape area described in subdivision (b)(2), if it demonstrates to the **Department and Board** that the data is equivalent, or superior, in quality and

accuracy to the data provided by the Department." However, the regulation text is contradictory to Water Code Section 10609.20 (e)(2) that states "an urban retail water supplier may use alternative data in calculating the urban water use objective if the supplier demonstrates to the **department** that the alternative data are equivalent, or superior, in quality and accuracy to the data provided by the department. The department may provide technical assistance to an urban retail water supplier in evaluating whether the alternative data are appropriate for use in calculating the supplier's urban water use objective." Statute clearly states DWR is to have approval over alternative data submissions by suppliers. The regulation unnecessarily complicates the approval process by requiring dual approval from both DWR and the State Water Board. What if DWR provides approval for a supplier's alternative data but the State Water Board does not. Where does that leave the supplier? Which agency's decision takes precedence? DWR is the logical choice for reviewing and approving updated/alternative landscape measurement data and special landscape areas as DWR staff has the most relevant technical expertise in these areas, has been pointed out as the technical assistance provider for suppliers in Statute and oversaw the development of the original landscape measurement data.

Suggested Solution: Supplier reporting for annual compliance and alternative/landscape related data should follow the statute and be submitted to DWR. Dual reporting of the same information and supplier data approval requests to two different state agencies is redundant and is a data quality liability.

12. Limit unnecessary and confusing definitions.

We urge the State Water Board staff to review the regulation and remove unnecessary and confusing definitions. For example, as an industry we already have multiple terms for desirable landscape types like River-Friendly, low water, native, Calscape, ocean friendly, etc. The regulation creates a new term – climate-ready landscapes and trees. The definition provided sounds like an all-encompassing landscape that can do it all but what does it look like on the ground. Is there a plant list? How would one verify that a particular landscape fulfills all the definition functions like "reduce waste, sequester carbon, conserve energy, etc.?" The same questions are true for climate-ready trees. Does Sacramento Tree Foundation's SMUD free tree list qualify? Who decides? The creation of a new term is ok from a public outreach/education standpoint, however, there is concern when those same new terms are embedded into regulation requirements (Regulation Section 966(i)(2)(e) and 968(g)(2)(B)) without sufficient definition because it's unclear if a supplier is meeting that requirement.

Solution: If it can't be sufficiently defined, it should be removed from regulation requirements.

13. The State Water Board's Objective Exploration Tool underestimated the percentage reductions required by suppliers to meet their objectives.

While we appreciate the State Water Board's Water Use Objective Exploration Tool to help suppliers assess compliance, up until recently (a few weeks ago) a supplier's reduction requirement show by the tool included all demand sectors not just the demand sectors that are included in the regulation (residential, water loss and CII DIM). The larger volume of water from including all demand sectors

diluted and misrepresented the actual reduction need to comply, which is often higher. For example, the tool showed City of Folsom baseline compliance at 14% compared to 2021 data, when only the regulated demands are calculated, the reduction jumped to 18.6%. The influence varies by supplier, some with higher and some with lower corrections. While the tool has been fixed online, for the State Water Board's assessment of number of suppliers meeting the objective and categorized required savings buckets like on slide 62 in staff's March presentation, was the tool's original skewed data used to create these graphics? If yes, we request that staff update the assessment chart so stakeholders can have a more accurate understanding of the regulation impacts. Additionally, is this the same data that has been presented to Board members to aid in their own assessment of the regulation? The concern is the data as shown on the tool up until a few weeks ago may present a rosier picture of compliance than will be experienced by suppliers and may inappropriately influence policy decisions at the Board level based on this information.
Solution: Update supplier compliance chart and distribute publicly.

14. Suppliers have limited or no control over several factors that directly contribute to the success or failure of the regulation including:

    - Landuse policy and ordinances governing outdoor water use and plant type and quantity,
    - Limiting water use beyond prohibiting water waste,
    - Customer compliance with irrigation schedules, and
    - Residential and CII customer participation in water efficiency programs, outreach messaging, etc.

    Solution: Supplier limitations should be recognized during compliance assessment and enforcement and considered when setting outdoor standards.

15. As proposed, the regulation seriously challenges supplier's ability to maintain affordability for all customers.
    In addition to maintaining healthy landscapes and efficient use, it is important that the regulations balance impacts on affordability. As currently proposed, **RWA has significant concerns that the cost of compliance with the proposed regulation would be significantly more expensive than other local strategies to adapt to climate change impacts and will limit our ability to address both reliability and affordability simultaneously.** The Standardized Regulatory Impact Assessment (SRIA) assesses a $2,128/AF cost for water efficiency regulation implementation, while the marginal cost of local water supply production is approximately $400/AF for regional groundwater banking opportunities. Furthermore, while water efficiency has been a cost-effective option in the past for most suppliers in state, future efficiency programs will be more expensive as the lower hanging fruit options (toilet rebates, etc.) are reaching exhaustion and are being replaced with more resource intense (staff and money) options like DAC indoor direct installation and turf replacement programs. For example, the cost of a toilet rebate can range from $50-$150, however, if that same toilet is replaced through a direct installation program, the cost can range from $400-$700 per toilet to achieve the same water savings.

The SRIA estimates the projected cost of implementing this regulation will be $13.5 billion between 2025-2040. However, that cost will not be distributed evenly throughout the state as State Water Board staff estimate only suppliers serving about half of the state's population are expected to require water savings reductions and those are the customers that will be responsible for the total $13.5 million compliance related cost increases. As stated in our March 2023 comment letter, **we request the release of supplier specific implementation cost estimates to ensure there will not be an undue burden placed on suppliers that provide service to DAC/BIPOC communities and/or those located in inland parts of the state, where the majority of use is outdoors and where the most aggressive standards are placed.** The current cost assessment only provides statewide/average estimates.

Furthermore, a recent study (Attachment C) from M. Cubed shows that the initial SRIA regulation benefit estimate of $15.6 billion and cost estimate of $13.5 billion inaccurately included transfer payments between supplier and households in terms of reduced supplier revenue and reduction of customer water bills, which cancel each other out. Therefore, the updated SRIA initial benefit and cost estimates should be $11.1 billion and $8.9 billion respectively. However, even with updated estimates, several issues still persist with the SRIA including:

- It significantly overstates supplier avoided production costs, which account for 95% of the total benefits and appears to double count these costs.
- It bases its estimates of avoided production costs primarily on wholesale water rates even though these rates embed a sizable portion of fixed costs which in the long run are not avoidable.
- It mistakes the underlying causes of escalating wholesale water rates and consequently overstates the rate at which truly avoidable costs will escalate in the future.
- It uses constant unit costs for conservation measures despite assuming a rapid and massive ramp-up of these programs in the first five years of the regulation.
- It underestimates customer costs by ignoring the time-value-of-money costs of shifting future expenditures closer to the present.
- It underestimates the costs of requiring the installation of dedicated irrigation meters on all large CII landscapes by only counting the initial installation and inspection costs and ignoring the annual maintenance, billing, and meter replacement costs.
- It grossly underestimates the costs of program creation and reporting as well as the costs to implement the proposed CII BMPs.
- It ignores the effects of future price increases on urban water use
- It relies on mutually contradictory assumptions to set the baseline condition, estimate water savings and calculate benefits of the proposed regulation.

Taking into consideration these additional deficiencies, **the true benefit and cost estimates should be closer to $8.2 billion and $15.6 billion, respectively, thus producing a 0.53 benefit cost ratio for the state compared to the initial 1.24 ratio as proposed in the SRIA.**

Furthermore, the SRIA completely omits analysis for 1 of the 4 budget areas, CII DIM landscapes which would entail additional costs not currently accounted for. Also, the SRIA does not include costs for implementing the water loss budget area that was previously calculated as part of a separate regulatory process, which if included would increase the cost estimate by another $512 million. Basically, the SRIA only accounts for 2 of the 4 objective budget areas and is therefore an incomplete assessment. Similar problematic deficiencies and results were concluded in an assessment of the State Water Board's economic model that produces a supplier's water loss standard (Attachment D), which points to a potential State Water Board pattern of overestimating benefits and underestimating costs.

To be clear, RWA supports increased water efficiency efforts in the state and in our region. We also support a budget-based approach to efficiency and believe that all Californians must make water conservation a California way of life to address climate change impacts. However, we must consider the bigger picture and the role of efficiency in it. The question isn't should we do more water efficiency, we should – the real question is how much more – or how much is too much given that water efficiency is only one part of a balanced water supply management approach.

Solution: Solution: Adopt solutions included in this comment letter to produce a more reasonable regulation that keeps affordably in check.

16. <u>The regulation will require unprecedented levels of supplier staff and budget resources that may even not be possible to fulfill:</u>

The sheer increase in scale of current programs, customer participation and customer education efforts needed by some suppliers to meet their proposed collective objective will outstrip current water efficiency staff time and budgets. For example, smaller urban retail water suppliers' efficiency programs typically have an annual budget of between $15,000 and $60,000 and 0.5 to 1.0 full time equivalent (FTE) staff to manage and implement all water efficiency activities. Several RWA suppliers are estimating they will need between $1.5 and $2.2 million a year to be in compliance with the regulation, representing a 25X to 36X jump in budget request starting next year. Additionally, these suppliers will need to hire new staff or consultants to meet the proposed regulation requirements, which will primarily be funded by customer rate increases unless significant state funding (in the billions) is provided. However, rate increases may not be possible for some suppliers that already struggle with insufficient funding like in DAC communities. RWA is concerned there is insufficient staff and funding capacity for both suppliers and the state to adequately implement and track the comprehensive Senate Bill 606/Assembly Bill 1668 Framework. Furthermore, some of the non-water savings requirements like Tree City USA certification are not open to non-municipal entities like special districts and standalone water agencies, which further questions the lack of staff research and utility of including these types of requirements in the regulation.

Solution: Eliminate non water savings related requirements including but not limited to disclosable buildings, EnergyStar Portfolio data gathering and Tree

City USA certification to allow limited staff and resources to be focused on those activities that directly contribute toward meeting a supplier's objective.

17. <u>This regulation will require unprecedented levels of state, regional, and local funding and technical assistance:</u>
    Implementation of this regulation will require costs in the billions for suppliers and customers with varying degrees of benefits throughout the state. The state needs to match the level of supplier and customer cost commitments with comparably funded grants, public outreach and education and technical assistance efforts. The state should partner with and provide funding to statewide, regional and local technical assistance and program partners like the California Water Efficiency Partnership (CalWEP). If these efforts are not provided by the state, this regulation will adversely affect affordability for all impacted customers including DAC/BIPIC households.
    Solution: The state should develop new funding opportunities and increase currently available funding for program grants, public outreach/school education and technical assistance including but not limited to substantial (20-40X) and long term budget increase of the state's Save Our Water campaign.

In closing, the region's suppliers are committed to cost effective water efficiency as part of a supplier's essential function to provide clean, safe, affordable water to customers. A careful balance of all supplier priorities is necessary to continue to reliably provide water at a reasonable cost. This balance includes recognizing and minimizing diminishing returns, which exist for all water efficiency related programs once a cost-effective level of service has been achieved.

The Regulation, as currently drafted, will not result in healthy waterwise landscapes for all but rather struggling landscapes and trees. It will put severe financial hardship on suppliers, even if they are projected to "meet" their objective because the regulation loaded down with numerous non-water saving requirements and repetitive reporting. We must remember that water agencies are primarily public agencies serving the public good and that additional costs ultimately fall disproportionately on DAC and BIPOC communities.

Ultimately, the success of this regulation depends on the actions of residents and businesses all over California - not suppliers, not the State Water Board or their staff. The changes we all need to see will have to come from average Californians and what we are asking of them must be reasonable for them to achieve. If it isn't, we will all fail.

With such an important and lifestyle changing regulation, we cannot afford to only rely on imperfect data analysis and research. The regulation is missing the incorporation of ground truthing and human behavior observation. Suppliers have the on the ground experience that the State Water Board is understandably lacking. Please listen to us when we have concerns. We are here to help the state be successful. This regulation needs a reality check regarding what is possible in real life, and we are here and willing to provide that perspective.

With some strategic and impactful revisions to the draft regulation, we will be closer

to the efficiency sweet spot, where costs and savings are balanced. Water suppliers and specifically our region's dedicated and amazing water efficiency staff should be your best advocates/partners for implementing this regulation, yet, the supplier community's concerns, feedback and expertise have not been adequately considered in this regulation text. We want tangible results, not just speaking opportunities. **Therefore, we are requesting the Board direct staff to work with suppliers and ACWA to redline the regulation text with mutually beneficial improvements that will increase the odds of successful implementation of this regulation.**

With this mindset, we look forward to continuing to work with the State Water Board on implementation of the Regulation and other related initiatives to address both climate resiliency and the human right to water.

Sincerely,

James Peifer
Executive Director

Attachment A – Land IQ Study
Attachment B – UC Davis DU chart
Attachment C – David Mitchell Study – Current SRIA Assessment
Attachment D – David Mitchell Study – Water Loss Economic Model Analysis
Attachment E - CalWEP Indoor Letter

Attachment A – Land IQ Outdoor Report

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July 29, 2021

Ms. Amy Talbot
Water Efficiency Program Manager
Regional Water Authority

RE: Turf Distribution Uniformity (D.U.) Results

Dear Amy:

As per our discussion, here is a table representing our Distribution Uniformity tests for turf landscapes conducted in different climate regions throughout California. This data was part of our Evapotranspiration Adjustment Factor Study (Agreement #4600008156) for DWR.

1. Study from 2009 – 2016.
2. Mature turf sites in various CA climate regions.
3. D.U. cup test performed by certified irrigation specialists.
4. Target D.U. % = 75% for start of turf performance study.

Location	Initial D.U. %	Final D.U. %	% Increase	Initial P.R.	Final P.R.
1	34	63	29	1.12	0.36
2	67	69	2	0.59	0.60
3	43	68	25	0.33	0.36
4	60	67	7	1.55	0.62
5	40	62	22	1.10	1.00
6	44	64	20	1.60	0.40
7	56	67	11	2.02	0.70
8	54	70	16	0.62	0.56
9	73	70	-3	0.71	0.53
10	56	77	21	0.82	0.87
11	76	79	3	0.37	0.40
12	58	70	12	0.90	1.04
13	69	60	-9	0.71	0.59
14	40	71	31	1.17	0.90
AVERAGE=	**55**	**68**			

If you should have any questions regarding our study, please feel free to contact me. Thanks for your interest.

Sincerely,

David W. Fujino

David W. Fujino,
Ph.D.
Executive Director
CA Center for Urban Horticulture

Complete study can be found here:
https://ccuh.ucdavis.edu/sites/g/files/dgvnsk1376/files/inline-files/ETAF_Report_%282014%20-%202016%29_0.pdf

Bill references:

https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB1668

https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB606

https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1414

https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320240AB1572

DRAFT October X, 2023 Submitted via: commentletters@waterboards.ca.gov

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1001 I Street, 24th Floor
Sacramento, CA 95814

Re: Comment Letter — Proposed Making Conservation a California Way of Life Regulation

Dear Mr. Nachbaur,

The Association of California Water Agencies and the undersigned organizations appreciate the opportunity to provide comments to the State Water Resources Control Board (State Water Board) on the Draft Making Conservation a California Way of Life Regulation (Regulation). This comment letter ("Comment Letter") is intended to provide constructive and comprehensive recommendations to the State Water Board to meaningfully advance water use efficiency, address urban retail water suppliers' constraints and concerns, and build on local and regional successes. We respectfully request the State Water Board's thoughtful consideration of our comments and recommendations, as supported by agency specific oral and written comments. We ask for the opportunity to work collaboratively with the State Water Board over the duration of the rulemaking to revise the draft Regulation to incorporate input from interested parties to support successful local and regional implementation.

This comment letter includes an Appendix with detailed suggested redline changes to the draft Regulation. We recognize the suggested redlines are one of many ways in which the draft Regulation could be modified to address suppliers' concerns. ACWA and the undersigned parties are committed to working with the State Water Board on revisions that support both the State's goals and water suppliers' successful implementation of a final Regulation. This Comment Letter is organized as outlined below:

SECTION 1: STATE AND LOCAL PARTERNSHIP

Water suppliers are on the front lines of managing the impacts of climate change to ensure a reliable water supply for California's diverse beneficial uses. The actions that suppliers take will vary across California depending on local and regional supplies and conditions. As water suppliers implement diverse projects to advance existing supplies and new supplies, they have also long recognized water use efficiency as an important tool for climate resilience.

Over the past several decades, water suppliers have been pioneering local and regional programs to advance efficiency and improve drought planning and response. These programs have been complemented by statewide efforts to standardize drought planning and response and set statewide water conservation targets. The Water Conservation Act of 2009 directed the State to achieve a 20% reduction in per capita water use by the 2020. The Department of Water Resources (DWR) Report to the Legislature on the Status of the 2020 Urban Water Management Plans (UWMPs) found that "California surpassed the 20% reduction and reduced per capita urban water use by 32%. Of the 386 Urban Retail Water Suppliers that submitted retail UWMPs, 374 of these (97%) achieved their targeted 2020 water use reduction."[1] While significant achievements have been made to use water wisely, the water community recognizes a continued effort toward greater efficiency is needed to prepare for more frequent and prolonged droughts and a hotter and drier climate.

As the State finalizes this new regulatory program to advance long-term water use efficiency, we ask that it recognize water suppliers as a key partner to the State's success. Compliance with the regulation will fall solely on water suppliers and their ratepayers. The ability of water suppliers to implement the Regulation successfully and cost-effectively will determine California's success in advancing long-term water use efficiency. **We ask that the State Water Board work with ACWA and the water supplier community to address the policy and technical concerns outlined in this Comment Letter.**

Additionally, we ask for the State's leadership to secure resources to support cost-effective compliance with a final Regulation. Given the timelines of the CII Performance Measures and broader water use objective, we encourage the State to provide technical resources, data, and funding as soon as possible. We believe that increasing flexibility and reducing reporting burdens in the draft Regulation can help reduce costs. However, the State should allocate dedicated resources to support water suppliers and Californian's compliance. Additionally, the State should promote regional and statewide partnerships to help leverage limited resources and advance local capacity.

SECTION 2: OVERARCHING POLICY CONCERNS & RECOMMENDATIONS

I. SET REASONABLE TIMELINES

We have significant concerns that the timelines proposed in the draft Regulation are not reasonable and do not support cost-effective compliance. The timelines proposed for both the outdoor water use standards and the CII Performance Measures are problematic. In order to successfully implement programs that require long-term customer behavior change and significant investments, water suppliers require adequate time to: analyze existing water use efficiency programs; plan for cost-effective

[1] Status of 2020 Urban Water Management Plans (ca.gov). A Report to the Legislature pursuant to Section 10644 of the California Water Code. January 2023.

compliance with the standards, objectives and performance measures; budget for and staff programs; partner with customers and build partnerships, including targeted programs for disadvantaged communities (DACs); and allow for technology advancements. The currently proposed timeline does not allow water suppliers to cost-effectively achieve the multi-benefits desired. Furthermore, we are concerned that these timelines could instead result in unintended impacts, such as impacts to urban tree health, disproportionate impacts to DACs and water affordability.

We anticipate the State Water Board will consider adoption of the draft Regulation August 2024 and the final Regulation would go into effect October 2024.[2] Starting 2025, within three months of the Regulation's expected effective date, 46% of suppliers would need to achieve a water reduction. By 2030, 74% of suppliers would need to achieve reductions (with a third by greater than 20%); and by 2035, 82% of suppliers would need to achieve reductions (with over 40% of suppliers by greater than 20%).[3] Suppliers' water use objectives, and the associated required reductions, could change if suppliers obtain variances. However, we do not believe the timeline also limits suppliers' ability to collect and submit the required data to obtain the variances.

Table 2: Urban Retail Water Suppliers by Percent Reduction

Reductions needed to meet proposed objective	2025	2030	2035
	% of urban retail water suppliers		
No Reduction	58%	26%	18%
Less Than 5% Reduction	10%	9%	9%
5-10% Reduction	9%	10%	11%
10-20% Reduction	13%	23%	21%
20-30% Reduction	7%	16%	20%
Greater Than 30% Reduction	3%	16%	21%

Additionally, all suppliers would be required to begin compliance with comprehensive CII Performance Measures (PMs) beginning January 1, 2025: suppliers would be required to identify all disclosable buildings by January 1, 2025 and notify building owners; ban the irrigation of non-functional turf on all CII Landscapes by July 1, 2025; classify all CII customers (20% by 2026); identify CII large landscapes with mixed-use meters (MUMs) and either install dedicated irrigation meters or employ in-lieu water technologies (20% by 2026); and design and implement best management practices (BMPs) by January 1, 2025 (20% of the top 20% of CII classification by 2026)(see Table 1). The currently proposed completion of all CII PMs within a five-year period, beginning 2025, would require significant resources and create implementation challenges. For example, it is unclear how suppliers would accurately implement BMPs for the top 20% of each classification while classifying CII customers. The compressed timeline is unnecessary and further increases costs to suppliers.

[2] Enacted legislation directed the State Water Board to adopt the Regulation by June 30, 2022. We recognize that there are factors beyond the State Water Board's control as to the current status of the draft Regulation. However, currently proposed compliance timelines do not reflect the delayed status of the Regulation.

[3] Provisional Data State Water Resources Control Board. (Version 2.0, 2023-09-13). We note that this does not include compliance with the CIIDIM Outdoor Standard, so reductions will likely be greater.

Table 1: Proposed Regulation's Compliance Schedule

	2024	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34	'35
Reg Effective	Fall											
Indoor Standard.		47					42					
Res. Outdoor Standard		0.8					0.63					0.55
CIIDIM Outdoor Standard					0.8		0.63					0.45
Water Loss												
Variances												
Non-Functional Turf		July										
Disclosable Buildings			20%		60%		100%					
CII Classification (22 proposed)			20%		60%		100%					
CII BMPs			20%		60%		100%					
CII MUMs: In-Lieu or DIM			20%		60%		100%					
Reporting	Jan. 1											

We understand that the enacting legislation does not allow the State Water Board to issue a civil liability penalty until 2027. Additionally, we appreciate that the State Water Board has a positive track record of utilizing its enforcement discretion. However, we believe the intent of the State Water Board should be compliance, not enforcement discretion. Significant consideration of reasonable timelines is necessary.

RECOMMENDATION # 1. Modify the proposed timelines for the outdoor standards to provide an additional 5 years for all suppliers to achieve compliance.[4]

RECOMMENDATION # 2. Provide 10 years for suppliers to complete CII PMs with CII Classification completed between 2025 – 2030 and CII Mixed-Use Meter and CII BMP PMs completed 2030 – 2035. Unstacking the CII BMPs from the CII Classification will allow suppliers to spread limited resources over a 10-year period, while still meeting the goals of the Regulation.

II. RECOGNIZE DATA ERRORS & LIMITS

We appreciate that the intent of this Regulation is to shift away from a one-size fits all approach to one that incorporates local characteristics. A challenge with the approach is that the accuracy of the statewide efficiency standards and water suppliers' water use objectives requires more, verified data, including both statewide and local data. Inaccurate data can create water use efficiency objectives that do not provide the local flexibility the Regulation intends. Currently, observed data gaps and inaccuracies include landscape area measurements (LAM) and population, and the application of Model Water Efficient Landscape Ordinance (MWLO) principles, including effective precipitation and irrigation efficiency. As discussed further in Section 3.II. of this Comment Letter, we continue to have concerns with the three methodologies DWR utilized and data DWR excluded to develop its recommendation of the residential outdoor standards.

[4] The State Water Board has the authority to make this change as the only statewide water use efficiency standard with a legislatively mandated timeline for implementation are the residential indoor water use standards, as required in SB 1157 (Freidman, 2022).

The draft Regulation's methodology should recognize that there are and will continue to be inherent data quality limitations and variability that impact suppliers' compliance with their water objectives. The State Water Board has accounted for data quality and variability issues in other regulations, such as the Water Loss Regulation which provided that "a supplier shall maintain, for each compliance assessment, real loss that is no greater than 5 gallons per connection per day above the supplier's real water loss standard."[5]

We also recommend that the State evaluate if the observed inequities among inland and coastal communities' water use objectives is attributable to DWR's methodologies for developing the outdoor standards, such as the trimmed data and application of MWELO, compounded with local data limitations.

RECOMMENDATION # 3. Include a "Data Error Adjustment" (DEA) in the formula for calculating suppliers' water use objectives. The DEA would be a percentage, either five or ten percent, applied to a supplier's budget for efficient indoor residential water use, efficient outdoor residential water use and efficient water use on a CII landscapes with a dedicated irrigation meter (DIM) or equivalent technology, as follows:

$$WUO = (Rindoor + Routdoor + CIIDIM)DEA + L + V + Pr + BPR$$

The DEA would recognize suppliers' historic progress and achieved savings (SB X7-7 based) and acknowledge that data used to develop and evaluate standards has intrinsic errors. The magnitude of the DEA would reduce over time as suppliers achieve progress towards their water use objective. We are proposing a five percent DEA for suppliers achieving less than 20 percent reduction from SB X7-7, and a 10 percent DEA for suppliers achieving 20 percent or greater of reduction from SB X7-7.

Additionally, we note concern that a supplier may not comply with its water use objective because it is unable to obtain the information required for variances due to resource or other limitations. The draft Regulation identifies the calculations and data requirements to submit to the State Water Board to seek a variance. Collecting this data, however, could require significant resources for suppliers. Prior to taking any enforcement action, the State should offer technical assistance to a supplier, which could include through a regional or statewide partner, to determine if the unique water uses in the supplires' service, for which variances are available, would bring the supplier into compliance. We again reiterate that the goal of this Regulation should be successful compliance, rather than enforcement actions or enforcement discretion.

RECOMMENDATIONS # 4. Clarify that if a supplier does not meet its water use objective because it is unable to obtain the information required for the variances, prior to the issuance of any enforcement action, technical assistance must be offered to the supplier.

III. PROVIDE FOR ALTERNATIVE COMPLIANCE

Our understanding is that State Water Board staff included section 966(i) to serve as an alternative compliance pathway in response to concerns water suppliers continue to raise regarding unreasonable or unattainable water use objectives. We appreciate the intent of this provision and believe that an

[5] Water Loss Control Regulations. As of Oct. 14, 2022.

alternative compliance pathway will be essential for some suppliers. Meaningful advancement of water use efficiency is an important goal of the State's Water Supply Strategy and the draft Regulation. However, some suppliers are confronting significantly larger water reduction requirements. Many of these suppliers are in the central valley and inland communities and may also serve disadvantaged communities or low-income households. Additionally, many of these communities have demonstrated a commitment to advancing water use efficiency, as mentioned in Section 1 of this Comment Letter, including achieving their targeted 2020 water use reduction and supporting the State's goals for voluntary water conservation during the recent drought.

In addition to the five-year extension that we recommend be provided to all suppliers to comply with the requirements of the draft Regulation, we recommend an alternative compliance pathway be provided to suppliers that would incur unreasonable cost and affordability impacts to meet their proposed water use objective. As currently proposed, the alternative compliance pathway is problematic for the following reasons:

- It does not address 2025 and 2030 compliance for suppliers. As shown in Table 1 of this comment letter, some suppliers will have significant reductions in 2025 and 2030. The current proposal does not resolve compliance concerns for these suppliers.

- The provision of five additional years does not resolve compliance concerns for some suppliers with an unreasonable or unattainable objective.

- The eligibility requirements for the currently proposed alternative compliance pathway would impose significant cost burden on suppliers for actions that may not help achieve compliance. For example, the SITES rating system costs $9,600 per site to implement.

- Special districts, which include a significant number of urban retail water suppliers, would be ineligible for the alternative compliance pathway because they do not qualify for the Standards for Tree City USA Recognition. 90% of ACWA's 470 members are special districts.

- The requirement for suppliers to dedicate 40% of funding to DACs conflicts with Proposition 218, which would cause feasibility issues for water suppliers to utilize the pathway.

We have also heard variances characterized as an alternative compliance pathway that provide additional flexibility. The enacting legislation established variances to account for actual water used in a service area in order to provide suppliers with a more accurate water use objective. Accurately accounting for water use in a service area is very different from alternative compliance.

RECOMMENDATION # 5. We request the State Water Board work collaboratively with ACWA, water suppliers and other interested parties to develop an "Alternative Compliance Pathway" that allows suppliers that have an unreasonable or unattainable objective to be eligible for an alternative objective and/or extension of time to comply. This pathway should balance the goals of achieving meaningful water savings and multi-benefits, while considering cost, affordability and suppliers' good faith effort to offer proactive water use efficiency programs to address indoor and outdoor water use.

IV. ALIGN CII PERFORMANCE MEASURES WITH LOCAL SUCCESS

The draft Regulations' CII PMs should be aligned with existing local and regional CII conservation programs and lessons learned. Most water suppliers have extensive experience implementing water use efficiency programs for CII customers. Additionally, CII customer water use will vary significantly among suppliers, and consequently, so will the associated water savings from the overall CII sector and among CII customer types. Currently, the CII PM impose one size fits all approaches to CII water use efficiency, as described below. We request that the CII PM provide more flexibility to water suppliers to (1) build on existing local and regional programs, (2) remove prescriptive timelines, and (3) allow suppliers to focus on customers with the greatest savings potential.

A. Existing CII Programs: The draft Regulation does not recognize suppliers' existing water use efficiency programs that have resulted in already efficient mixed-use meters (MUMs). Many suppliers have existing mixed-use meter programs, practices and rebates, which may offer different in-lieu technologies and water management practices to those listed in 973(a)(1) and (2). Rather than impose MUM requirements that will duplicate existing supplier efforts and expended resources without achieving significant additional savings, suppliers should be able to provide a list of current programs, practices and rebates as an alternative.

RECOMMENDATIONS # 6. Allow suppliers' existing CII conservation programs to serve as an alternative to meeting CII MUM PF requirements currently proposed. Allow suppliers to provide a list and crosswalk of current programs, practices, and rebates to the listed in-lieu technologies and water management programs.

B. Prescriptive Implementation Schedules: Regulation establishes a deadline to complete each CII PM, which is appropriate. However, the draft Regulation also prescribes a timeline to complete each PM by 20% and 60%. For example, section 972(c) would require that "each supplier shall classify at least twenty percent of its CII customers by 2026, at least sixty percent by 2028, and one hundred percent by 2030." Section 973(c) would require "for commercial, industrial, and institutional large landscapes that have mixed-use meters, suppliers shall make annual progress in either installing dedicated irrigation meters or employing in-lieu water technologies for these large landscapes, with at least twenty percent compliance by 2026, at least sixty percent compliance by 2028, and one hundred percent compliance by 2030." This level of prescription removes suppliers' flexibility to achieve the broader goals cost-effectively based on their unique CII customers and local conditions, as well as within the context of completing all the various requirements of the draft Regulation.

RECOMMENDATION # 7. Provide flexibility to suppliers to complete implementation of one hundred percent of CII PMs by removing prescriptive timeline. This includes CII classifications, CII MUMs and CII BMPs.

C. Focused Water Savings: Finally, the draft Regulation directs suppliers to implement BMPs for the top 20% of each CII classification. We understand the intent is for suppliers to target large CII water users to maximize water savings potential. However, this approach may have the unintended impact of steering suppliers' efforts to CII customers with negligible water use. For example, the Energy Star Portfolio Manager classification "warehouse/ storage" may account for a very small percent of a suppliers' CII water use in a service area. However, a supplier would still be required to target customers at or above the 80th percent for water use in that classification

category. Suppliers need flexibility to develop programs and engage with their CII customers that have water savings potential, which will be driven by characteristics unique to each service area. This prescriptive requirement could impose an unnecessary burden on suppliers for minimal water savings. We also recommend an exemption for suppliers from the CII BMP PMs whose CII potable water use is less than 10%. This will allow those suppliers to focus efforts and resources on residential actions to maximize water savings.

RECOMMENDATION # 8. Direct suppliers to implement programs for CII customers at or above the 80th percentile among all CII customers, rather than by individual CII classification. Additionally, exempt suppliers with less than 10% CII potable water usage, based on a five-year average, from BMP requirements.

V. ADHERE TO LEGISLATIVE REQUIREMENTS

Authorizing legislation AB 1668 and SB 606 (2018) (collectively referred to as "Conservation Legislation") underwent a year and half of negotiations among diverse interested parties. We have significant concerns that provisions of the draft Regulation either contradict the requirements of the Conversation Legislation or exceed the authority delegated to the State Water Board. Specific concerns and recommendations include:

A. Existing Landscapes: The Conservation Legislation specifically states that the landscape efficiency factor (LEF) values should reflect a factor that allows for "the amount of water necessary to efficiently irrigate both new and existing landscapes." (Water Code Section 10609.9) The proposed regulation sets efficiency factors for residential use at 0.55 and for non-residential use at 0.45, which are the standards in the Model Water Efficient Landscape Ordinance (MWELO) design standards. As detailed in Section 3(ii) of this comment letter, we have provided data to both DWR and the State Water Board that indicates the proposed LEFs would not support existing landscapes. Because the draft Regulation would set the LEF too low to ensure enough available water for use on existing landscapes, it is inconsistent with the Conservation Legislation.

RECOMMENDATION # 9: Establish an LEF that will support existing and new landscapes.

B. Irrigable Land: The Conservation Legislation requires outdoor efficiency standards to apply to "irrigable lands." (Wat. Code, § 10609.6 (2)(B).) The draft Regulation does not apply to "irrigable lands" as the statute requires. Instead, the draft Regulation only includes irrigable land that is currently being irrigated in its proposed outdoor standards. Section 968(b)(2)(B) inappropriately limits 20% of the irrigable, but not currently irrigated, landscape area as eligible for inclusion in the objective until 2027, and even then, it is only allowed to be included if the supplier will surpass its objective target without it. Because the draft Regulation does not apply to all irrigable lands, it is inconsistent with the Conservation Legislation.

RECOMMENDATION # 10: Revert to DWR's recommendation with the inclusion of 20 percent INI. Suppliers would recalculate INI when DWR provides new LAM data.

C. Non-Functional Turf: Section 974(e)(1) of the draft Regulation would ban the irrigation of non-functional turf with potable water by July 1, 2025. This language does not align with AB 1572 (Freidman, 2023), which is currently pending the Governor's signature and would not ban the irrigation of non-functional turf for most CII Customers until January 1, 2028. This bill was a collaborative effort that was ultimately supported by a broad array of stakeholders, including ACWA. If AB 1572 is signed by the Governor, the language in this regulation would not only be unnecessary, but would create confusion among water suppliers and CII customers. The draft Regulation is inconsistent with the State Water Board's authorities within the law.

RECOMMENDATION # 11: Remove non-functional turf provisions from the draft Regulation.

D. Reporting Year: The Conservation Legislation allows for water suppliers' calculations to be based on "conditions for the previous calendar or fiscal year." (Wat. Code § 10609.20, subd. (b).) Section 975 of the draft Regulation would require urban water supply reports to be based on conditions of the previous state fiscal year. A regulation may not limit flexibility that a statute specifically allows. We additionally note that this is inconsistent with the State Water Board's adopted Water Loss Regulation, which allows reporting on either a fiscal or calendar year, and water loss auditing, which DWR requires on a calendar year. Because the proposed Regulation would require water suppliers to report based on the state fiscal year, it is inconsistent with the Conservation Legislation.

RECOMMENDATION # 12: Allow suppliers to report either calendar year or fiscal year.

E. Dedicated Funding for DAC: The draft Regulation section 966(i)(2)(e)(iv) would require that suppliers who want to pursue a five-year compliance extension must provide "dedicated funding for the creation and maintenance of climate-ready landscapes, with a minimum of 40 percent of program funds dedicated to low-income households and disadvantaged communities within the supplier's service area." This requirement would conflict with the requirements of Proposition 218 funding guidelines. Additionally, the Legislature in the 2022/2023 legislative session discussed this issue when considering Assembly Bill 1072 (Wicks 2023). Because of the issues associated with Proposition 218, the bill was ultimately held on suspense while still in the Assembly.

RECOMMENDATION # 13: Remove funding threshold requirements for low-income and DAC funding from the draft Regulation.

SECTION 3: TECHNICAL CONCERNS AND RECOMMENDATIONS

I. OUTDOOR STANDARDS

In ACWA's March 30, 2023, comment letter to the State Water Board on the draft Regulatory Framework, we provided input on DWR's three methodologies utilized to develop its recommendation of ETF of an 0.63 by 2030. Additionally, we raised concerns with technical assumptions and policy decisions that underestimated current outdoor residential water use and overestimated feasibility from what is evident

through real-world performance.[6] We support a methodology that is based on real-world performance, horticultural and irrigation science, supports healthy landscapes, and minimizes unintended impacts. We note that detailed recommendations with redlines are provided in the Section 4 Appendix of this Comment Letter. High level recommendations are in bold below, consistent with detailed redlines in the Section 4 Appendix.

As mentioned in Section 2.II. of this Comment Letter, we recommend the State Water Board assess if the observed inequities among inland and coastal communities water use objectives could be attributable to DWR's methodologies for developing the outdoor standards, compounded with local data limitations. Additionally, as noted in Section 2.V. of this Comment Letter, we note the deviation of the draft Regulation from the requirements of the Conservation Legislation. These inconsistencies must be corrected to align the draft Regulation with the requirements of the law.

A. Methodology Error 1: Horticultural Approach (Assumed 0.8 Irrigation Efficiency (IE)) – DWR's horticultural and irrigation science approach assumed 0.8 IE. **The draft Regulation should reflect an outdoor residential water use efficiency standard be based on an IE that ranges from 0.55 to 0.65**, based on accumulated data from water purveyors on actual irrigation system and performance through the various landscape programs implemented over ten or more years, recently completed field studies by UC Davis (Evapotranspiration Adjustment Factor Study (Agreement #4600008156)), and data by the Irrigation Association.

B. Methodology Error 2: Statewide ETF Approach (Trimmed Data > 1.0) – DWR "trimmed" all existing landscape data outside of the range of 0.1 to 1.0 ETF because "it is not consistent with MWELO principles." 80 percent of homes in California pre-date Model Water Efficient Landscape Ordinance (MWELO). MWELO design standards did not start being incorporated into landscape designs until after 2015. Trimming data based on MWELO design standards excluded existing landscapes prevalent throughout California and is inconsistent with the application of MWELO. **The draft Regulation outdoor standards should consider all real-world California landscape data to provide a more accurate baseline**.

C. Methodology Error 3: Theoretical Average Approach (Consistency with MWELO) – DWR analyzed a statewide ETAF by using the age distributions of housing stock and corresponding ETAF from MWLEO Guidelines: 0.8 assumed for pre-1992, 1993 – 2009 assumed 0.8 ETAF, 2010 – 2015 assumed 0.7 ETAF, 2015 to 2020 assumed 0.55 ETAF, and 2021- 2030 assumed 0.55 ETAF. As described above, MWELO only applies to 20 percent of California's housing stock and developer-installed landscapes. This methodology assumes all homes are compliant with MWELO, which is fundamentally flawed. **This methodology should not inform the outdoor standards.**

D. Effective Precipitation – Effective Precipitation is not required by MWELO (Title 23, Division 2.7, Section 494): "A local agency may consider Effective Precipitation (25% of annual precipitation) in tracking water use." The inclusion of Effective Precipitation in the outdoor standard is inconsistent with real-world irrigation practices. Landscapes are generally not designed to

[6] ACWA and Coalition Comment Letter on the Draft Regulatory Framework . March 30, 2023.

consider effective precipitation since it can be highly variable. Precipitation often falls during winter months when irrigation is not utilized (May through September) and can percolate below the root zone of the plant negating its beneficial effect to that plant's watering needs). Additionally, precipitation is often not distributed evenly throughout a supplier's service area - some areas may receive precipitation and other areas none, making it difficult to apply one effective precipitation rate at the water supplier level. **Effective Precipitation should be removed from the draft Regulation and outdoor standard.**

E. Landscape Area Measurements – A key concern based on waters suppliers' verification of LAM data is that residential LAMs are being overestimated and underestimated, which could have a significant impact on suppliers' outdoor water use standard and overall objective. Improved data quality should be an important goal of the draft Regulation, as inaccurate data will further exacerbate feasibility challenges and sound decision making. **The draft Regulation should include a Data Error Adjustment to recognize data limitations and variability (see Recommendation # 3).**

F. Irrigable vs. Irrigated – As discussed in Section 2.V of this Comment Letter, the Conservation Legislation requires outdoor efficiency standards to "apply to irrigable lands." (Water Code, § 10609.6 (2)(B).) In accordance with Water Code section 10609.6, DWR conducted a statistical analysis of outdoor water use, LAM and INI data. The data concluded that the INI area is being irrigated at one fifth or 20 percent of the irrigable area. This 20% should not be viewed as additional, but as area that is actually being irrigated. As a result, DWR correctly recommended that the calculation of annual outdoor water use must include 20 percent INI. DWR's findings were also based on the recognition that its analysis was only a snapshot in time and undercounting of irrigated area would continue unless multiple images are conducted over the analysis year. The removal of DWR's recommendation to include 20% for INI is statistically inaccurate and further exacerbates feasibility challenges with the outdoor standard. **The draft Regulation should reflect DWR's recommendation with the inclusion of 20 percent INI. Suppliers would recalculate INI when DWR provides new LAM data.**

G. Temporary Provisions: Recycled Water –Sites irrigated with recycled water generally do not change and are on DIMs, which suppliers already are required to measure by 2028. The requirement to annually apply for variances and temporary provisions places a significant burden on both State Water Board staff and suppliers. **Recycled water should not be a temporary provision.**

H. Temporary Provisions: Pools –The residential factor for residential pools should be same as public pools, which is 1.0. Water evaporates at about 1.0. Not allocating enough water to residential pools effectively further reduces the residential outdoor budget. Most pools are not subject to MWELO, as they are generally in backyards and existing prior to MWLEO. In addition to evaporation, water loss from pools includes splash out and water carried out on swimwear and people. Pool covers are generally not effective. During summer months when pools are used daily, customers won't use covers. Metropolitan Water District's pool cover rebate

program inspections found that many times the covers were in garages and had never been installed. **Residential pools should not be a temporary provision**.

I. MWELO: Newly Constructed Landscapes and Special Landscapes Areas (SLA) – The standards for newly constructed landscapes, including residential and CII landscapes with DIM, point to factors identified in MWELO. Additionally, the standard for CII landscapes with DIMs that are special landscape areas point to the factor identified in MWELO. MWELO can be modified, which could impact suppliers' compliance with the Regulation and associated costs. Suppliers need certainty as they strive to implement this Regulation in the most cost-effective manner. **The draft Regulation should set these standards as LEFs, rather than refer to MWLEO.** Additionally, the draft Regulation would require that suppliers demonstrate the existence of newly constructed landscapes through annual MWELO reporting. Many new residential landscapes are not subject to MWELO or MWELO reporting. MWELO reporting would be incomplete and would not accurately reflect newly constructed residential landscape area. **We request that the draft Regulation include DWR's recommended approaches to account for newly constructed residential and CII DIM landscape areas, which include on-the ground measurement, remote sensing methods, and using service area level averages.**

II. CII PERFORMANCE MEASURES

A. CII Classification

i. Energy Star: Suppliers worked closely with DWR to inform its CII Classification PM recommendations. DWR proposed 19 categories, in which they found "these categories are sufficient to address major CII water uses and provide adequate differentiation among different CII sectors to facilitate data collection and future references. However, the system will not be overly detailed to create undue burdens on urban retail suppliers for implementation." The draft Regulation is proposing 22 classifications, 18 Energy Star Portfolio Manager board categories and 4 additional proposed categories. Classifying CII customers will require significant supplier staff time and resources, including making changes to internal billing systems. The CII Classification PMs should be simplified to reduce the burden on suppliers, where possible. **The four additional proposed classifications (that deviate from the Energy Star Portfolio Manager broad categories) should be removed from the draft Regulation.**

ii. Alternative Schedule Timeline for Completion: As discussed in Section 2.IV. of this Comment Letter, we recommend more flexibility be provided to suppliers to complete classifications by 2030. **The draft Regulation should remove schedules for classifying 20% of customers by 2026 and 60% by 2028.**

iii. Classification of Existing Customers: It is unclear how existing versus new customers are considered within the five-year timeframe to complete all CII classifications. CII classification will be a significant lift for suppliers. Suppliers should focus on completing classifications for a static list of CII customers based on the time of the State Water Board's adoption of the final Regulation. The additional burden of addressing influxes and changes of CII customers within the first five years of

completing classifications could impair suppliers' ability to comply. **The draft Regulation should clarify that the initial classification of CII customers is based on existing customers at the time of the State Water Board's adoption of the Regulation. Suppliers must include any new CII customers after completing the initial classification of all CII customers.**

iv. State Guidance: As a statewide performance measure, the State should develop guidance to all suppliers that will support consistent interpretation of SIC and NAICS codes as it applies to each Energy Star Portfolio Manager category. A standardized interpretation will lend itself to better data and overall implementation. **DWR should provide a guide to associate NAICS codes to the respective classification category prior to suppliers' implementing CII classifications.**

B. Large Landscapes with Mixed-Use Meter

i. Timeline: DWR CII-LAM data will not be delivered until 2026. Suppliers need adequate time to review the data before coming into compliance. To implement this specific PM, suppliers would need to identify actual large landscape water use (e.g., remove the process water to see ACTUAL landscape water usage for CII). The compliance schedule for MUM conversion should account for every customer being a unique and specific project, requiring budget and taking time to implement, if a physical conversion is taking place. **As already discussed in Section 2.I. of this comment letter, we request the timeline to complete MUM PM be from 2030 – 2035. Additionally, the draft Regulation should remove prescriptive schedules for completing this PM of 20% of large landscapes by 2026 and 60% by 2028.**

ii. Recognize Existing Programs: As already discussed in Section 2.IV. of this Comment Letter, many suppliers have existing MUMs programs, which may offer different in-lieu technologies and water management practices to those listed in 973(a)(1) and (2). **The draft Regulation should allow suppliers' existing CII conservation programs to serve as an alternative to meeting CII MUM PM requirements currently proposed.**

iii. "Offer" vs. "Employ:" The draft Regulation requires suppliers to "employ" actions and technologies for large landscapes. The term "employ" implies that suppliers will take up an action on a customer's behalf. Suppliers may offer programs, rebates, incentives and in-lieu technologies, but suppliers cannot require the customer to act or implement in-lieu water use technologies. **The draft Regulation should replace "employ," to "offer" to recognize suppliers' appropriate authorities.**

iv. Efficient Water Use Technologies & Water Management Practices: We recommend technical changes to the specified water technologies that reflect on-the-ground best practices and actions that are within suppliers' authorities. For example, water suppliers generally do not provide maintenance services for customer irrigation systems or irrigation schedules. That is the responsibility of the customer and could be a liability for suppliers. Additionally, DWR recommended suppliers implement one in-lieu technology. However, the draft Regulation would require suppliers to implement two in-lieu technologies. Requiring two is duplicative and does not

necessarily generate more savings. **The draft Regulation section 973 should be updated to reflect the Appendix suggested redlines in this Comment letter.**

v. Quantification of Volume of Water Use on CII MUMs: The draft Regulation would direct suppliers to estimate the volume of water use on CII large landscapes with MUMs. As a PM, suppliers should not be required to quantify MUM water usage, particularly because any quantification is inclusive of process water and the draft Regulation does not provide the appropriate time for suppliers to investigate customer water usage for a compliance determination. **This provision should be removed from the draft Regulation.**

C. Best Management Practices

i. Disclosable Buildings: The draft Regulation would require suppliers to identify all disclosable buildings in their service area by January 1, 2025 and deliver specified information to each building owner. These requirements would place significant burden on suppliers' limited resources, without providing clear benefits or guaranteeing water savings. Out concerns include: (1) suppliers do not have or maintain square footage information to identify disclosable buildings; (2) square footage is well correlated with energy use, but not necessarily with water use, so this may not be an effective use of limited resources; (3) many suppliers currently provide monthly (or bi-monthly) water usage to customers in their bill with water use reports, or through an AMI portal. Sending duplicative data to customers, particularly those that will not utilize it, is not good use of suppliers' limited resources, (4) suppliers cannot determine what meter serves which buildings on an owner's parcel. Suppliers can associate meters with an account but they may not know the he customer's use. Suppliers can't identify how much water use goes to each building if there are multiple buildings on the meter; and 5) proposed the timelines are not reasonable. **Proposed section 974(a) and (b) should be removed from the draft Regulation.**

ii. Thresholds and De Minimis CII Water Use: As already discussed in Section 2.IV. of this comment letter, suppliers need flexibility to develop programs and engage with their CII customers that have water savings potential, which will be driven by characteristics unique to each service area. **The draft Regulation should direct suppliers to implement programs for CII customers at or above the 80th percentile among all CII customers, rather than by individual CII classification. Additionally, suppliers with less than 10% CII potable water usage, based on a five-year average, should be exempt from BMP requirements**.

iii. Non-Functional Turf: As already discussed in Section 2.V. of this Comment Letter, Section 974(e)(1) of the draft Regulation would ban the irrigation of non-functional turf with potable water by July 1, 2025, which is inconsistent with State Water Board's pending authority. **This provision should be removed from the draft Regulation.**

iv. Timelines: As discussed in Section 2.I. of this Comment Letter, we have concerns with the requirement to complete BMPs while suppliers are completing CII

Classification. Additionally, consistent with Section 2.IV. of this Comment Letter, suppliers should be able to best determine how to meet the broader BMP PMs requirements based on the unique local characteristics and existing programs. **The draft Regulation timeline should be modified to allow for suppliers to achieve 100 percent compliance with BMP PMs by 2035 and remove percentage completion requirements.**

v. BMPs: We recommend technical changes to the specified water technologies that reflect on-the-ground best practices and actions that are within the authorities of water suppliers. For example, water suppliers generally do not provide maintenance services for customer irrigation systems or irrigation schedules. Additionally, we recommend AMI be specifically included. **The draft Regulation section 974 should be updated to reflect the suggested redlines in the attached Appendix of this Comment Letter.**

D. Methodologies & Variances

i. Compliance & Alternative Compliance: As discussed extensively in Section 2.(I), (II) and (III) of this Comment Letter, we are requesting changes to compliance provisions of the draft Regulation. We believe these change preserve the intent of the draft Regulation to advance meaningful water use efficiency. **The draft Regulation should incorporate our recommendations that modify the timelines of the outdoor standards and CII PMs, include the DEA, and establish an Alternative Compliance Pathway.**

ii. Variance Threshold: The draft Regulation currently proposes that an individual variance must represent 5% or more of the sum of a water suppliers budget. This threshold fails to recognize the cumulative impact unique water uses could have on suppliers' ability to comply with their water use objectives. Additionally, we continue to raise concerns that the five percent threshold could significantly restrict the ability of water suppliers that have unique water uses. The Conservation Legislation requires the State Water Board to establish appropriate variances for unique uses that can have a material effect on water use of an urban retail water supplier. Variances are not a "bonus" or "alternative compliance" mechanism. Variances are intended to provide suppliers' with an accurate water use objective. **The draft Regulation should establish a cumulative threshold for variances of 5%.**

iii. Variance Frequency: We are concerned the currently proposed variance pathway would be too onerous and expensive to an extent that would deter small to mid-sized agencies from seeking variances. The draft Regulation currently requires suppliers to submit requests for variances annually. Requiring annual submittal and approval of the variances would place a significant administrative burden on both suppliers and State Wate Board staff, and does not help advance actual water use efficiency**. The draft Regulation should allow for a suppliers' approved variance(s) be valid for five years.**

iv. Reporting: The State Water Board should ensure that water suppliers' limited resources are not being shifted to complying with burdensome reporting

requirements, rather than working with customers to achieve water savings. The State Water Board should consider the goals of AB 1755, the Open and Transparent Water Data Act and AB 1668 requirements under Water Code Section 10609(c)(4), which directs the state to identify opportunities for streamlined reporting, eliminate redundant data submissions, and incentivize open access to data collected by urban and agricultural water suppliers, and the overall usefulness of data requested. We have concerns with the duplicative reporting to both DWR and the State Water Board. We think that state agencies should share datasets, rather than require duplicative reporting. Additionally, as noted in Section 2.V. of this Comment Letter, we have concerns with the removed flexibility for water suppliers to report on a fiscal year or calendar year. **We encourage the State to partner with the California Data Collaborative and California Water Data Consortium to identify strategies for streamlining data reporting and minimizing data quality concerns that would go into effect once the final Regulation is adopted.**

SECTION 4: APPENDIX: REDLINE RECOMMENDATIONS

The included Appendix of the Comment Letter provides detailed suggested redline changes to the draft Regulation. We recognize the suggested redlines are one of many ways in which the draft Regulation could be modified to address suppliers' concerns. ACWA is committed to working with State Water Board staff on revisions that support both the State goals and water suppliers' successful implementation of the Regulation.

SECTION 5: CLOSING REMARKS

We appreciate the opportunity to provide these written comments to the State Water Board on the draft Regulation. We ask for the opportunity to work collaboratively with the State Water Board over the duration of the rulemaking to revise the draft Regulation to incorporate input from interested parties to support successful local and regional implementation. Please do not hesitate to contact me at ChelseaH@acwa.com or (916) 206-4078 if you have any questions regarding our input.

DRAFT

October 17, 2023

TO: Chair and Directors of the Florin Resource Conservation District

FROM: Bruce Kamilos, General Manager

SUBJECT: **GENERAL MANAGER'S REPORT**

RECOMMENDATION

This item is presented to the Florin Resource Conservation District Board of Directors for information, discussion, and in some instances, to provide direction to staff.

SUMMARY

The General Manager's Report is a standing item on the regular board meeting agenda. The report is intended to inform the Florin Resource Conservation District/Elk Grove Water District (District) Board of Directors (Board) of notable, miscellaneous items the General Manager would like to share with the Board. The report also provides an opportunity for the Board to discuss the items, and in some instances provide direction to staff.

DISCUSSION

Background

Each month, the General Manager provides a report to the Board of any notable, miscellaneous items.

Present Situation

- Sacramento LAFCo Election – Staff received an email (Attachment 1) from the Sacramento Local Agency Formation Commission (LAFCo) stating an insufficient number of ballots were received for the special district seat to establish a quorum. Per LAFCo law, the Executive Director may extend the election by 60 days. The election is now open through November 30, 2023.

- PFAS Class Action Settlements – Over the past weeks, staff received two (2) Notices of Proposed Class Action Settlements related to PFAS. On September 28, 2023, I wrote an email (Attachment 2) to Board Chair Tom Nelson providing details on the Notices and what the District should do about them. I will provide a report to the full Board on this matter.

- State Water Board Public Hearing on Conservation as a California Way of Life – On October 4, 2023, staff attended the State Water Board's public hearing/workshop on the proposed Conservation as a California Way of Life regulation. The proposed regulation would have a significant effect on all urban water suppliers and their customers. Staff will provide a summary of the public hearing.

- Groundwater Recharge Projects Update – Pursuing groundwater recharge projects is a key objective for the District. Staff will provide an update.

- Giant Pumpkin Festival – The Elk Grove Water District participated in the 29th annual Elk Grove Giant Pumpkin Festival on October 8-9. Staff will provide a recap.

ENVIRONMENTAL CONSIDERATIONS

There are no direct environmental considerations associated with this report.

STRATEGIC PLAN CONFORMITY

This item conforms to the FRCD/EGWD 2020-2025 Strategic Plan. Due to the varied subject matters presented in the General Manager's Report, the report over time will likely touch on every strategic goal contained in the plan.

FINANCIAL SUMMARY

There is no financial impact associated with this report.

Respectfully submitted,

B. M. Kamilos

BRUCE KAMILOS
GENERAL MANAGER

Attachments

Stefani Phillips

From: Henriquez. Jose <henriquezj@saccounty.gov>
Sent: Friday, October 6, 2023 9:10 AM
To: dgillick@sloansakai.com
Cc: Lindsey Liebig; CPAC-Forwarder-h2ogay; charhorseranch@aol.com; Fox. Desirae
Subject: Update on the Special District Representative to LAFCo Election

Good morning,

Thank you for participating in the election for the special district representative on LAFCo. This is just an update. We have received an insufficient number of ballots to establish a quorum (we are shy by about 8 ballots). Per LAFCo Law, I can extend the election by 60 days. I intend to notify and encourage the districts that have not yet voted to submit their ballots before November 30th, 2023.

Please let me know if you have any questions.

José

José C. Henríquez
Executive Officer
henriquezj@saclafco.org

Sacramento Local Agency Formation Commission
1112 I Street, Suite 100
Sacramento, CA 95814
(916) 874-2937 / FAX (916) 854-9099

From: Bruce Kamilos
To: Tom Nelson (tanelson@citlink.net)
Cc: Andrew Ramos (AJR@bkslawfirm.com)
Subject: PFAS Class Action Settlements
Date: Thursday, September 28, 2023 11:12:00 AM
Attachments: DuPont-Notice-Long-Form-with-Coversheet.pdf
AFF-3M-Long-Form-Notice-Final.pdf

Hi Tom,

Over the past weeks, I have received two Notices of Proposed Class Action Settlements related to PFAS. (This information can be found at https://www.pfaswatersettlement.com/.) One is associated with DuPont and other named companies. The other is associated with 3M Company. The Notices were sent to:

1. All Public Water Systems in the USA that draw or otherwise collect from any Water Source that, on or before June 30, 2023, was tested or otherwise analyzed for PFAS and found to contain any PFAS at any level; and
2. All Public Water Systems in the USA that, as of June 30, 2023, are (i) subject to the monitoring rules set forth in UCMR 5 or (ii) required under applicable state or federal law to test or otherwise analyze any of their Water Sources or the water they provide for PFAS before the UCMR Deadline.

The Notices state that the purpose is (i) to advise that a proposed settlement has been reached with those companies related to PFAS; (ii) to summarize the rights in connection with the Settlement; and III) to inform that Court hearing to grant final approval of the Settlement will be held on December 14, 2023 at 10:00 am EST (Dupont) and February 2, 2024 at 10:00 am EST (3M Company). The Notices state that receiving a Notice means that the Elk Grove Water District has been identified as a potential Settlement Class Member.

The Settlement Class Members fall into one of two categories:

a. Phase 1 is for Public Water Systems that have found PFAS in their water systems.
b. Phase 2 is for Public Water Systems that were required to sample for PFAS under UCMR 5 or other state or federal law. It allows reimbursement for costs associated with PFAS sampling. However, only costs associated with sampling the Water Sources (wells) to develop a Baseline will be reimbursed (refer to section V.1 of Notices). This is above and beyond what UCMR 5 testing requires which is to test for PFAS only at the entry points to the distribution system.
    a. The 3M Notice has the additional requirement of the testing laboratory submitting detailed PFAS test results to the Claims Administrator on a Claims Form within 45 calendar days after receiving the test results. This means the PFAS sampling we already did on all the Water Sources is out of date and would have to be redone in the 3M case.
    b. PFAS Lab Testing Cost: $450/Water Source x 7 Wells = $3,150
    c. Manhours: 8 hours x $75/manhour = $600
    d. Total: $3,150 + $600 = $3,750

An amount of $3,750 is approximately what, I believe, we could submit as a claim to both DuPont

and 3M. However, we do not have to retest the Water Sources as we have already done the testing. This would save the District a cost of $3,750. If this were our approach, then we would submit a claim form only in the DuPont case which does not require submitting testing results within 45 calendar days after receiving the test results.

Opting out from the Settlements is an option by following the procedures identified in Sections VIII of the Notices. Opting out would have to be done by 12/4/2023 (DuPont) and 12/11/2023 (3M). We should not opt out as we want to be absolutely certain EGWD is non-detect for PFAS. We will not be certain of that until EGWD completes its second round of UCMR 5 testing for PFAS in February/March 2024. EGWD just completed its first round of UCMR 5 testing in August 2023 and we were non-detect in all wells, although we had to retest Well 1D as the first sample came back with a trace amount of PFAS. The retest of Well 1D was non-detect for PFAS. I will continue to monitor developments and keep the Board posted. I will discuss this item in my General Manager's Report at the October board meeting to bring all Directors up to date.

Let me know if you have any questions or want to discuss. I have copied Legal Counsel Andrew Ramos on this email as he should be aware of this matter.

Bruce Kamilos, P.E.
General Manager
Florin Resource Conservation District/
Elk Grove Water District
9829 Waterman Rd.
Elk Grove, CA 95624
(916) 685-3556
bkamilos@egwd.org

October 17, 2023

TO: Chair and Directors of the Florin Resource Conservation District

FROM: Bruce Kamilos, General Manager

SUBJECT: **ELK GROVE WATER DISTRICT OPERATIONS REPORT – SEPTEMBER 2023**

RECOMMENDATION

This item is presented for information only. No action by the Florin Resource Conservation District Board of Directors is proposed at this time.

SUMMARY

The Elk Grove Water District (EGWD) Operations Report is a standing item on the regular board meeting agenda.

All regulatory requirements were met for the month of September. Other notable events are described below.

DISCUSSION

Background

Every month, staff presents an update of the activities related to the operations of the EGWD. Included for the Florin Resource Conservation District Board of Director's review is the EGWD's September 2023 Operations Report.

Present Situation

The EGWD September 2023 Operations Report highlights are as follows:

- **Operations Activities Summary –** 331 door hangers were placed for past due balances, which resulted in 41 shut offs. We received three (3) water pressure complaints and zero water quality complaints.

- **Production –** The Combined Total Service Area 1 production graph on page 14 shows that production during the month of September decreased by 5.62 percent compared to what was produced in 2020. The year 2020 is the baseline year the State Water Resources Control Board adopted for water usage. The Total Demand/Production for both service areas on page 14 shows that customer use during the month of September compared to 2020 was down by 6.84 percent.

- **Static and Pumping Level Graphs –** The third quarter soundings are shown and indicate that the static water levels are higher compared to the third quarter of 2022.

- **Treatment (Compliance Reporting) –** All samples taken during the month comply with all regulatory permit requirements. No exceedances of any maximum contaminant levels were found, and all water supplied to EGWD's customers met or exceeded safe drinking water standards.

- **Corrective Maintenance Program –** The tables included in this section of the report also include certain activities completed to date. Below is a list of out-of-ordinary maintenance work completed in September:

    - Staff facilitated the installation of a new flow transmitter for Well 14D Railroad.
    - Due to a malfunction, staff investigated and replaced the communications radio at Well 9 Polhemus.
    - Due to a malfunction, staff investigated the facility power monitor at the Railroad Water Treatment Plant. It needs replacement.

- **Safety Meetings/Training –** Two (2) safety training sessions were conducted for the month which is compliant with OSHA standards.

- **Service and Main Leaks Map –** There were five (5) service line leaks and zero main line leaks during September.

- **System Pressures –** Pressures in Service Area 1 generally remained stable during the month of September. Pressures in Service Area 2, which are controlled by Sacramento County Water Agency (SCWA), are trending lower due to SCWA supplying more surface water in Service Area 2 and less groundwater.

ENVIRONMENTAL CONSIDERATIONS

There are no direct environmental considerations associated with this report.

STRATEGIC PLAN CONFORMITY

This item conforms to the FRCD/EGWD 2020-2025 Strategic Plan. The EGWD Operations Report provides an ongoing review of EGWD's operations, and therefore conforms with Strategic Goal No. 1, Governance and Customer Engagement.

FINANCIAL SUMMARY

There is no financial impact associated with this report.

Respectfully submitted,

BRUCE KAMILOS
GENERAL MANAGER

BMK/ac

Attachment

EGWD

OPERATIONS REPORT

September 2023

Elk Grove Water District

A DEPARTMENT OF THE Florin Resource Conservation District

Elk Grove Water District
Operations Report
Table of Contents

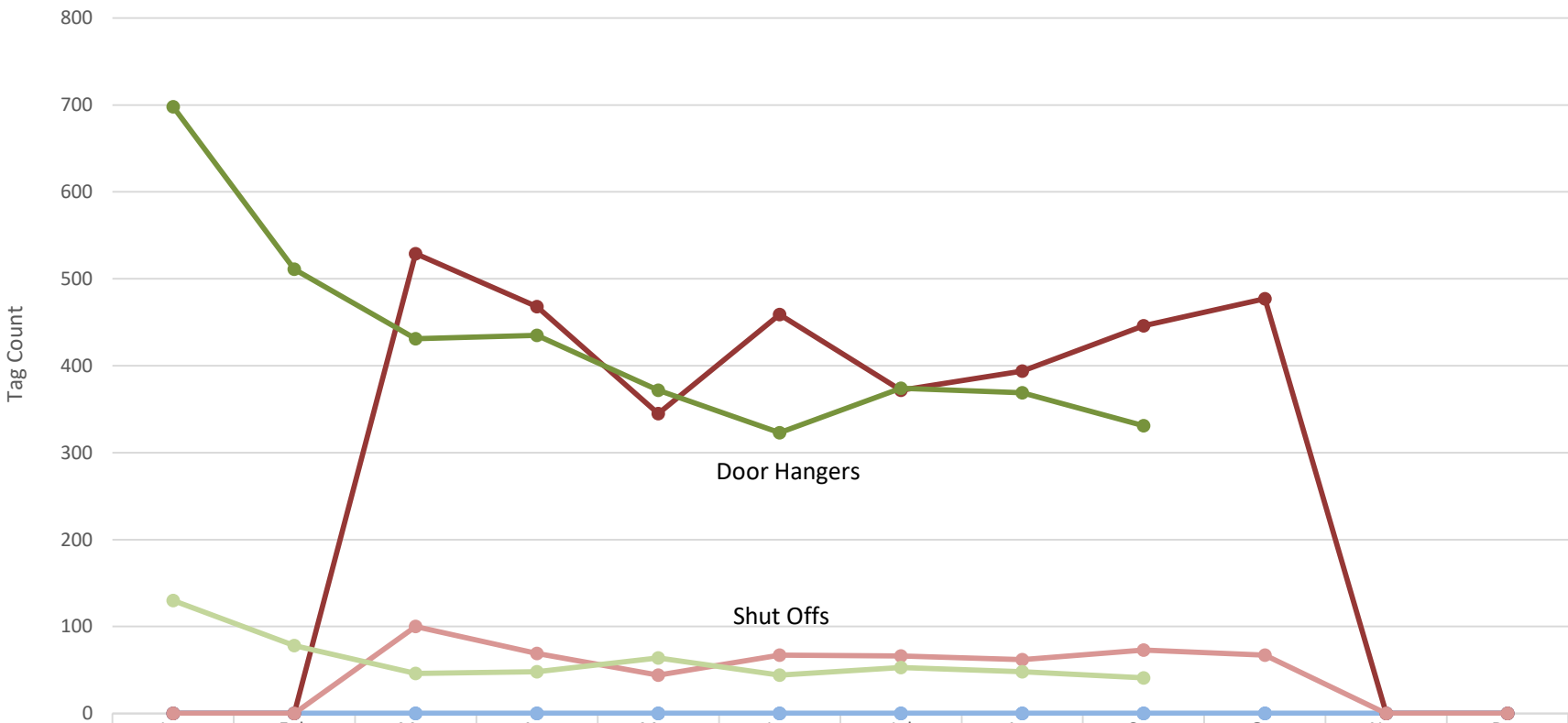
Operations Activities Summary

Service Requests:	September -23		YTD (Since Jan. 1, 2023)	
Department	Service Request	Hours	Service Request	Hours
Distribution				
Door Hangers	331	12	3,844	129
Shut offs	41	8	522	76
Turn ons	39	12	792	74
Investigations	25	6.25	480	120
USA Locates	377	94.25	2,972	743
Customer Complaints				
-Pressure	3	1.5	26	13
-Water Quality	0	0	3	1.5

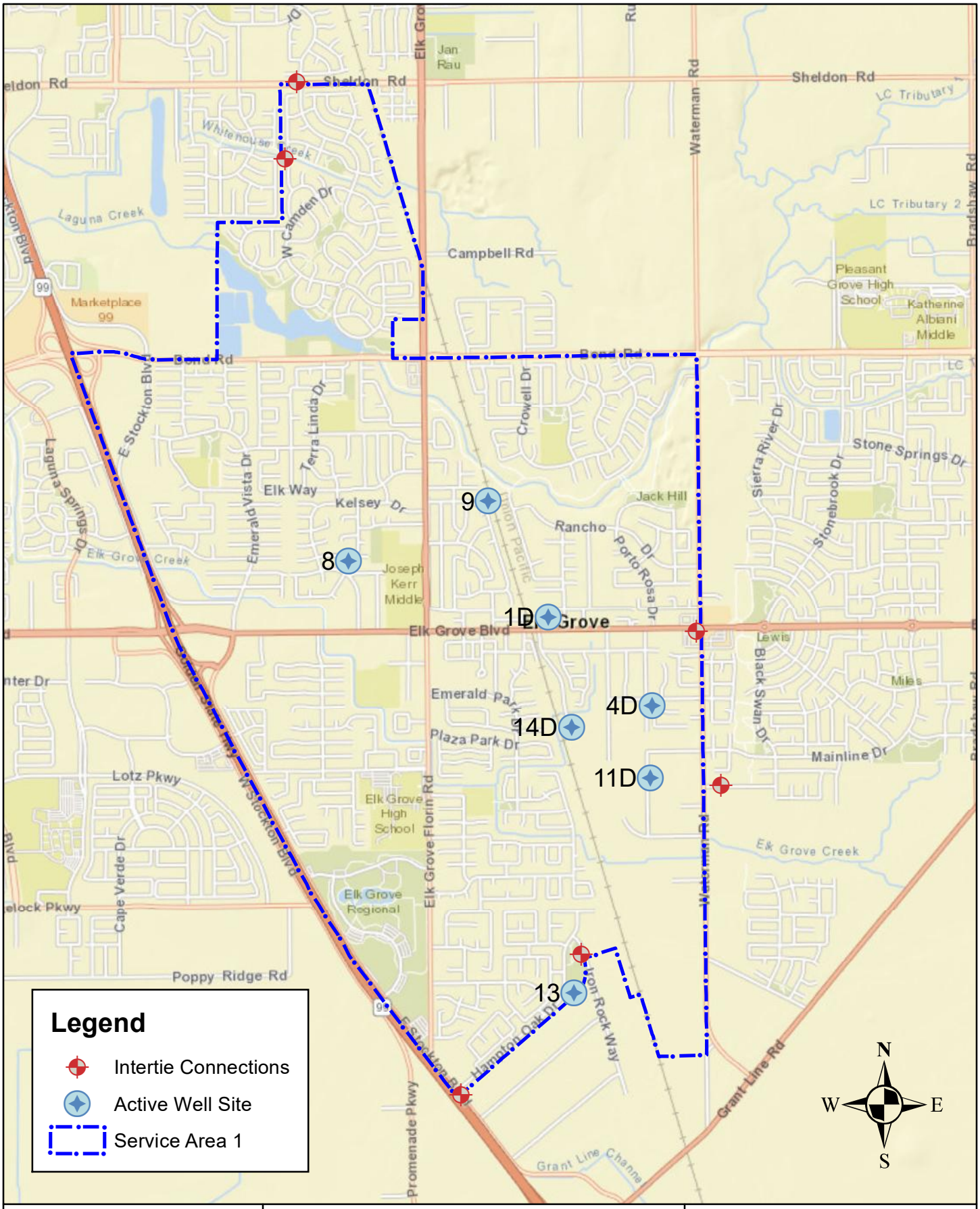
Work Orders:	September -23		YTD (Since Jan. 1, 2023)	
Department	Work Orders	Hours	Work Orders	Hours
Distribution:				
Meters Installed	0	0	29	15
Meter Change Out	37	22.98	201	122.8
Preventative Maint.				
-Hydrant Maintenance (45)	45	12	431	98
-Valve Exercising (127)	127	24	1,143	254
Corrective Maint.				
-Leaks	5	51.5	25	341.75
-Other	0	0	74	94.75
Valve Locates	0	0	0	0

Elk Grove Water District

Door Hangers and Shut Off Tags



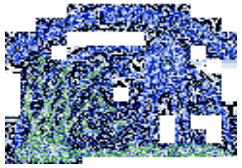
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021 Door Hangers	0	0	0	0	0	0	0	0	0	0	0	0
2021 Shut Offs	0	0	0	0	0	0	0	0	0	0	0	0
2022 Door Hangers	0	0	529	468	345	459	372	394	446	477	0	0
2022 Shut Offs	0	0	100	69	44	67	66	62	73	67	0	0
2023 Door Hangers	698	511	431	435	372	323	374	369	331			
2023 Shut Offs	130	78	46	48	64	44	53	48	41			



Active Well Sites & Intertie Connections

0 1,250 2,500 5,000 Feet

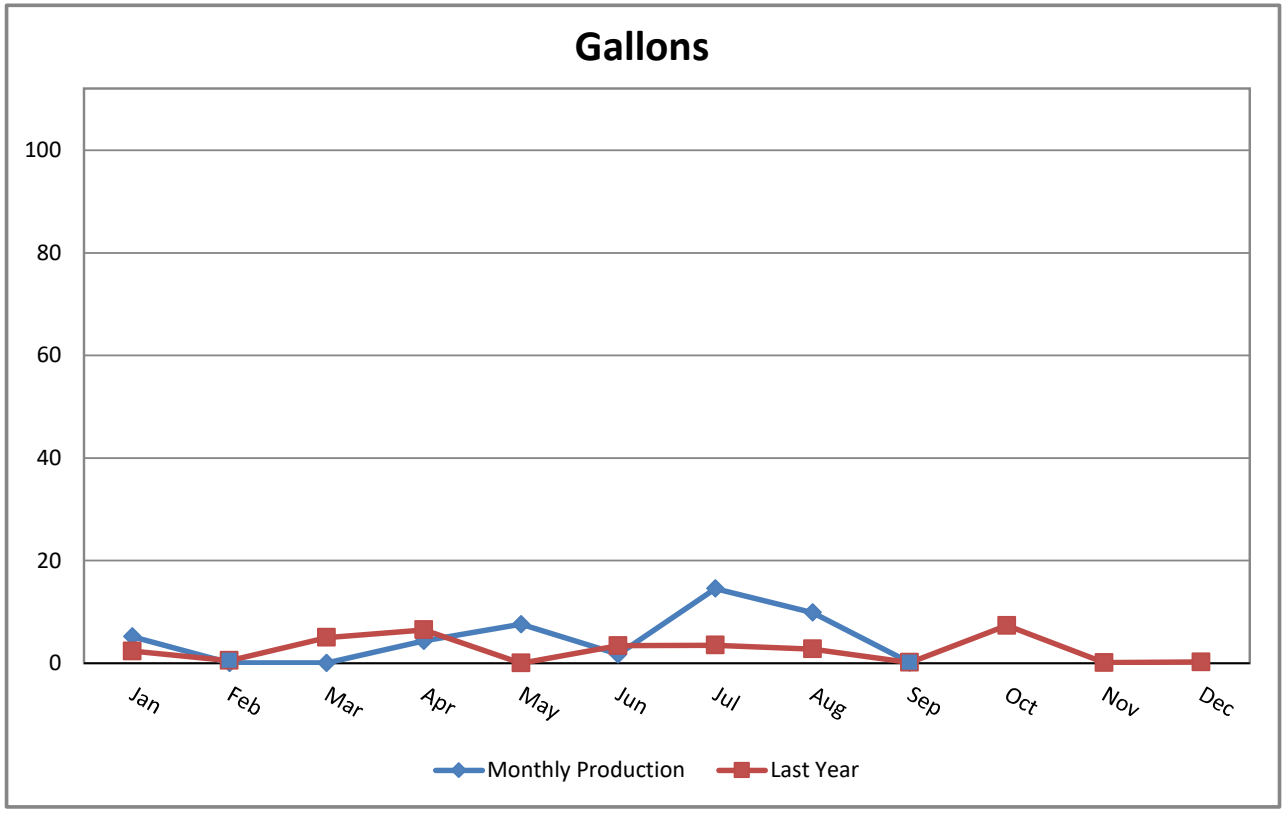
Elk Grove Water District



Elk Grove Water District

Monthly Production

Well 1D School -- September 2023



Selected Month Production
108,636 Gallons

Average GPM:	1,810
Pump depth:	275 ft
Well depth:	1025 ft

Motor:

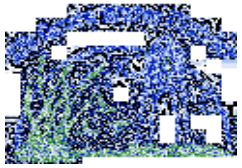
Volts:	469
Volts (Rated):	460
RPM:	1789
RPM (Rated):	2115
Amps A:	182
Amps A (Rated):	222
Amps B:	179
Amps B (Rated):	222
Amps C:	175
Amps C (Rated):	222
Motor Temp:	128.4 F
Hour Meter:	1.00

Chlorine:

Dosing:	1.57 mg/L
Demand:	0.50 mg/L
Residual:	1.07 mg/L

Vibration Reading:

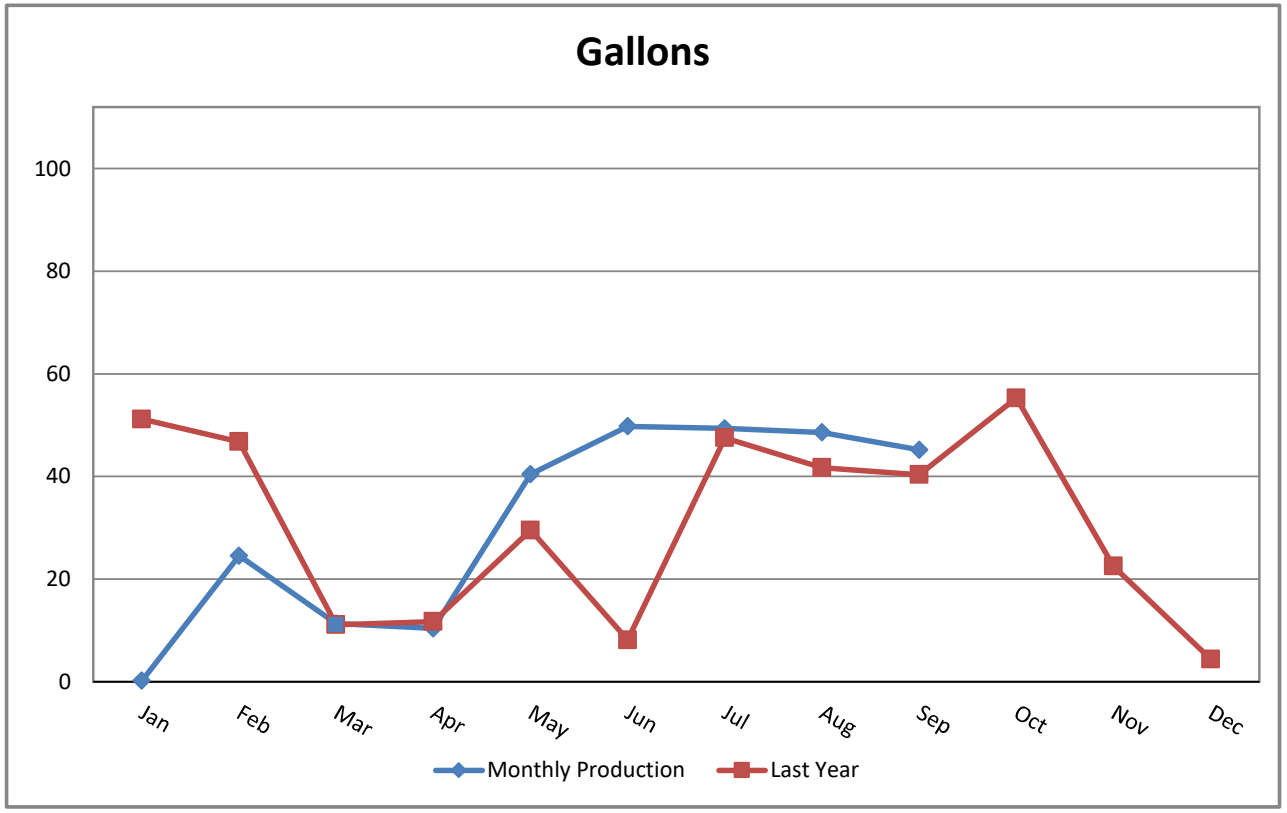
Base Line:	0.05 in/sec
Current:	-- in/sec



Elk Grove Water District

Monthly Production

Well 4D Webb -- September 2023



Selected Month Production
45,186,061 Gallons

Average GPM:	1693
Pump depth:	340 ft
Well depth:	1075 ft

Motor:

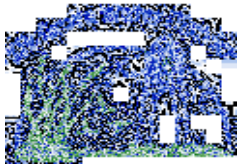
Volts:	477
Volts (Rated):	460
RPM:	1686
RPM (Rated):	1775
Amps A:	202
Amps A (Rated):	225
Amps B:	200
Amps B (Rated):	225
Amps C:	200
Amps C (Rated):	225
Motor Temp:	157.3 F
Hour Meter:	444.60

Chlorine:

Dosing:	1.69 mg/L
Demand:	0.64 mg/L
Residual:	1.05 mg/L

Vibration Reading:

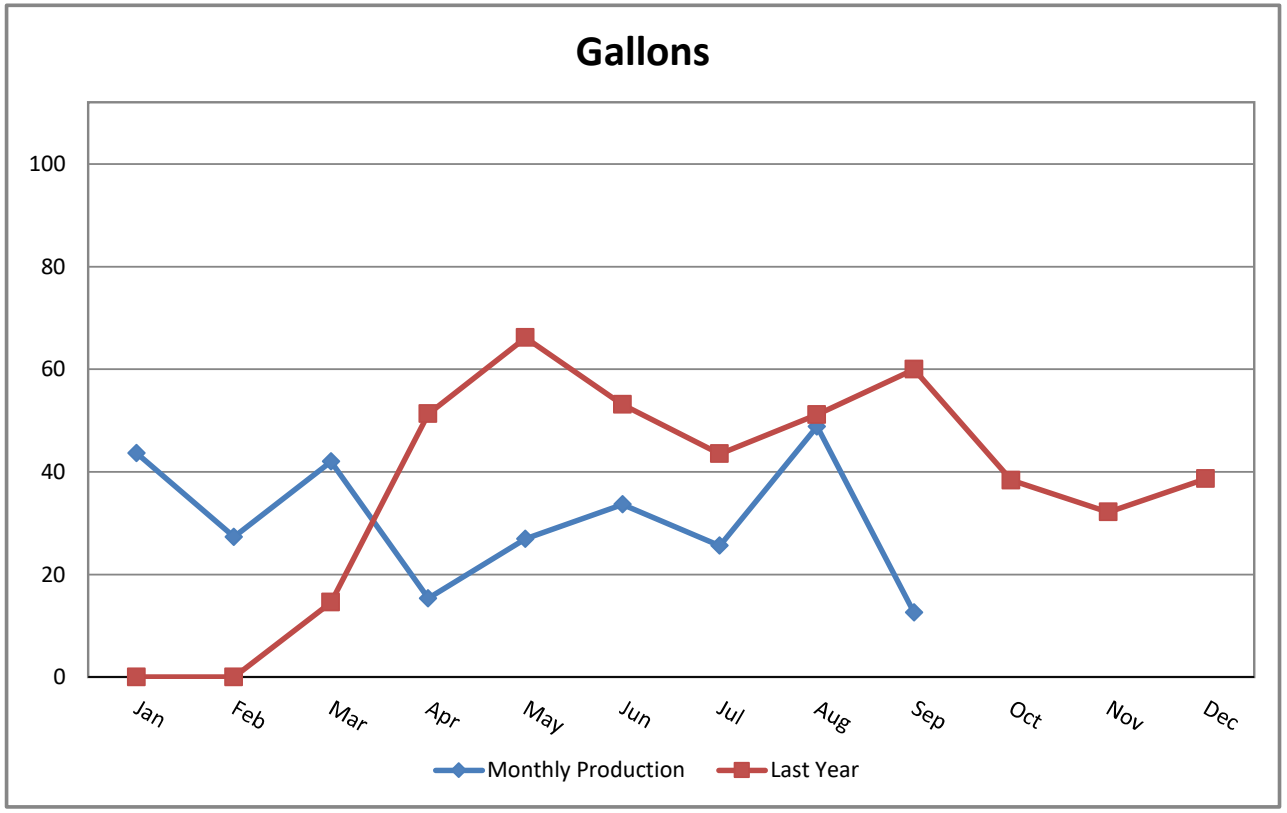
Base Line:	0.05 in/sec
Current:	-- in/sec



Elk Grove Water District

Monthly Production

Well 11D Dino -- September 2023



Selected Month Production
12,563,021 Gallons

Average GPM:	1699
Pump depth:	340 ft
Well depth:	1038 ft

Motor:

Volts:	477
Volts (Rated):	460
RPM:	1719
RPM (Rated):	1775
Amps A:	205
Amps A (Rated):	225
Amps B:	208
Amps B (Rated):	225
Amps C:	195
Amps C (Rated):	225
Motor Temp:	109 F
Hour Meter:	123.20

Chlorine:

Dosing:	1.68 mg/L
Demand:	0.68 mg/L
Residual:	1.00 mg/L

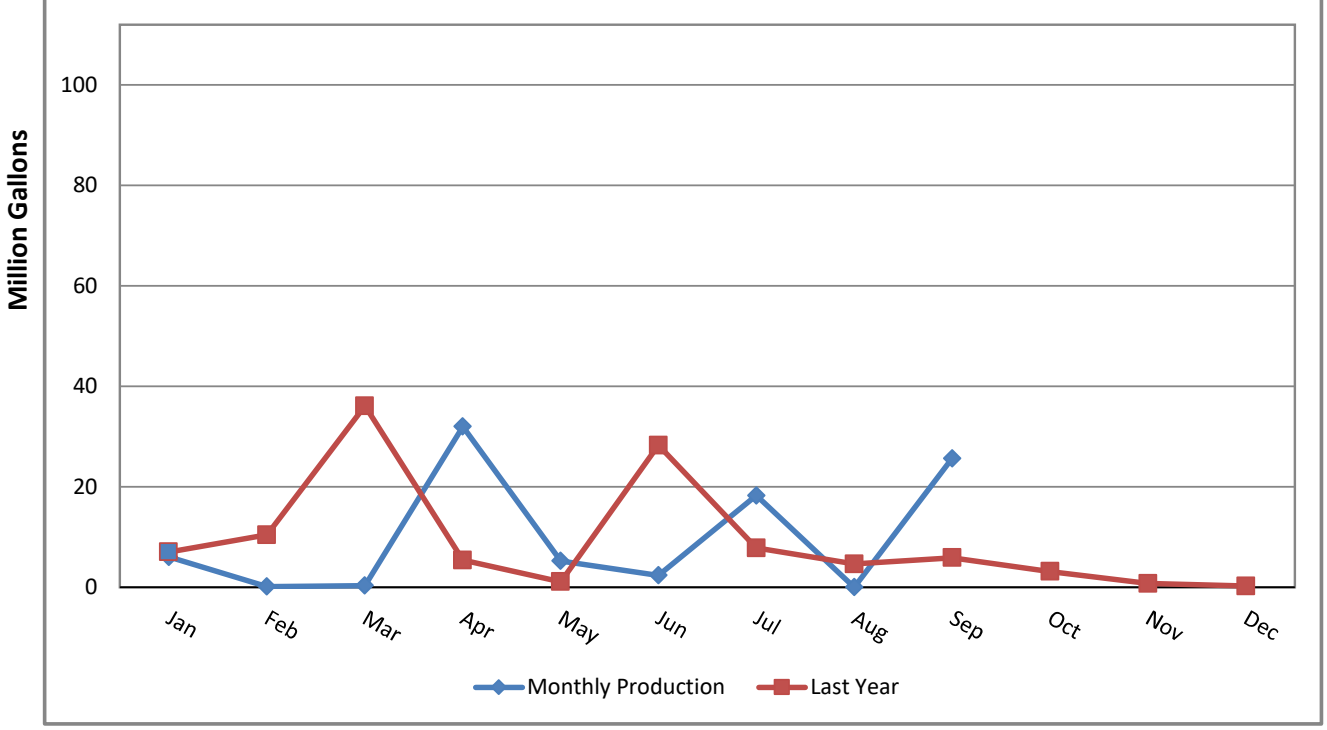
Vibration Reading:

Base Line:	0.05 in/sec
Current:	-- in/sec

Elk Grove Water District

Monthly Production

Well 14D Railroad -- September 2023



Selected Month Production
25,637,256 Gallons

Average GPM:	1438
Pump depth:	340 ft
Well depth:	1051 ft

Motor:

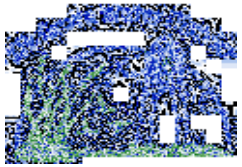
Volts:	479
Volts (Rated):	460
RPM:	1784
RPM (Rated):	1785
Amps A:	161
Amps A (Rated):	171
Amps B:	165
Amps B (Rated):	171
Amps C:	163
Amps C (Rated):	171
Motor Temp.:	136.0 F
Hour Meter:	297.10

Chlorine:

Dosing:	1.68 mg/L
Demand:	0.64 mg/L
Residual:	1.04 mg/L

Vibration Reading:

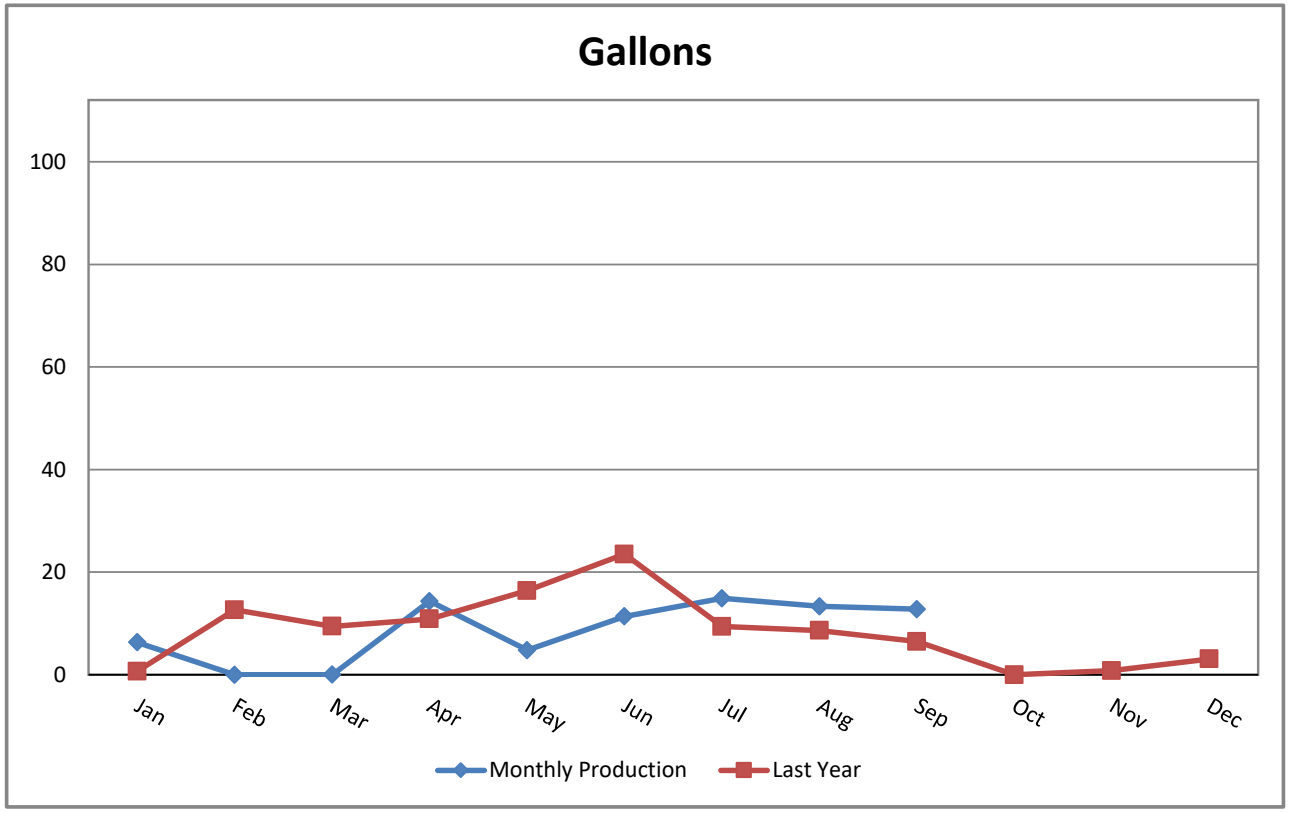
Base Line:	0.02 in/sec
Current:	-- in/sec



Elk Grove Water District

Monthly Production

Well 8 Williamson -- September 2023
(Submersible)



Selected Month Production
12,764,612 Gallons

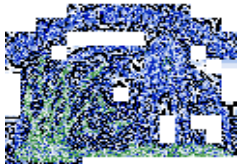
Average GPM:	552
Pump depth:	150 ft
Well depth:	564 ft

Motor:

Volts:	462
Volts (Rated):	460
Amps A:	69
Amps A (Rated):	65
Amps B:	66
Amps B (Rated):	65
Amps C:	67
Amps C (Rated):	65
Hour Meter:	384.80

Chlorine:

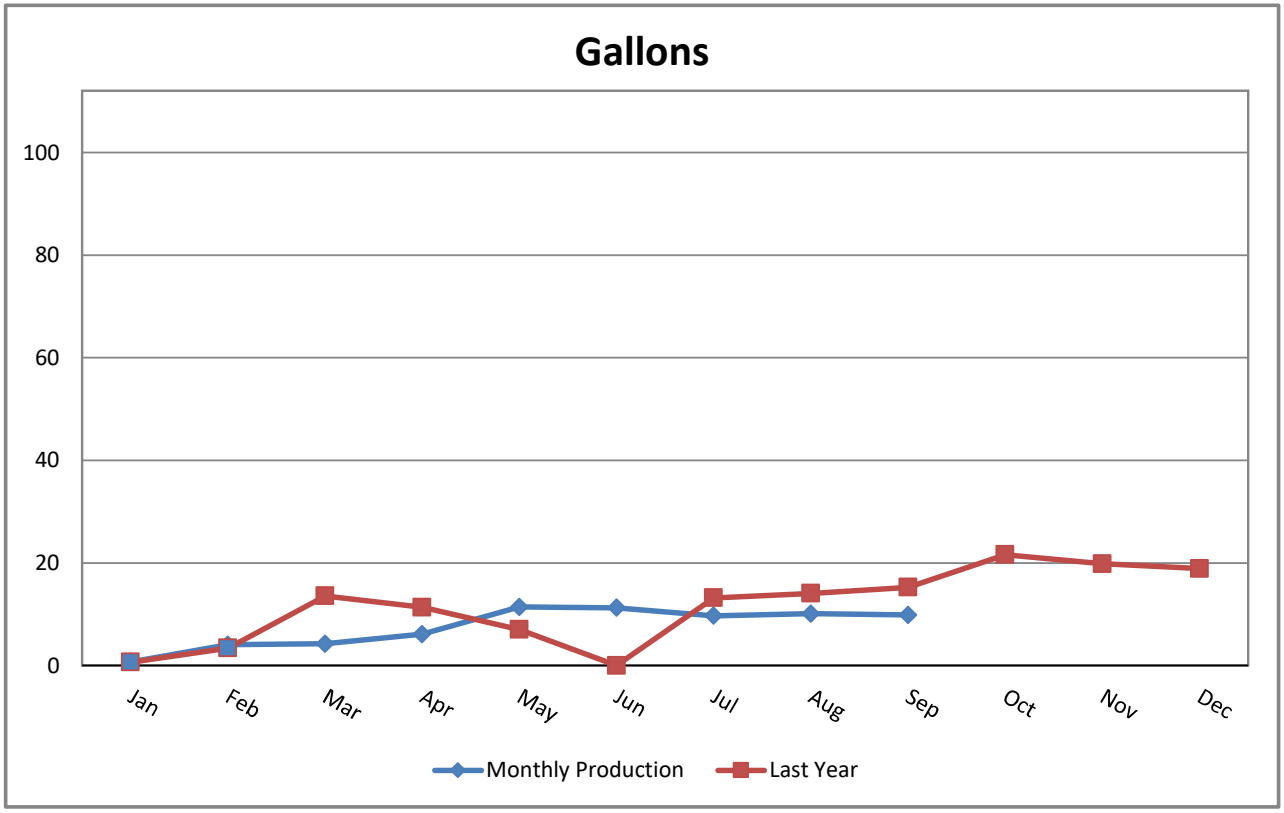
Dosing:	1.27 mg/L
Demand:	0.45 mg/L
Residual:	0.82 mg/L



Elk Grove Water District

Monthly Production

Well 9 Polhemus -- September 2023
(Submersible)



Selected Month Production
9,844,492 Gallons

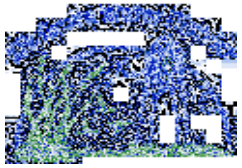
Average GPM:	489
Pump depth:	150 ft
Well depth:	556 ft

Motor:

Volts:	480
Volts (Rated):	460
Amps A:	57
Amps A (Rated):	65
Amps B:	57
Amps B (Rated):	65
Amps C:	62
Amps C (Rated):	65
Hour Meter:	335.20

Chlorine:

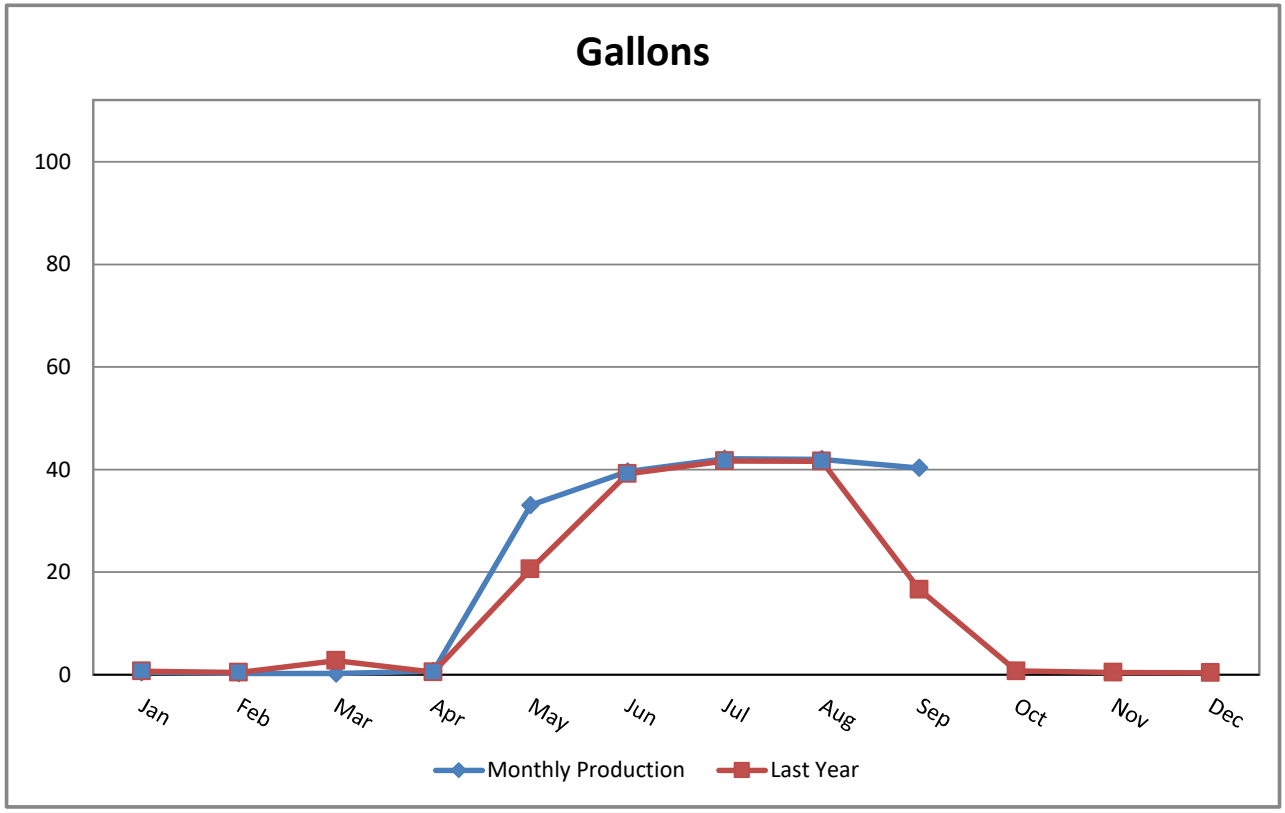
Dosing:	1.35 mg/L
Demand:	0.55 mg/L
Residual:	0.80 mg/L



Elk Grove Water District

Monthly Production

Well 13 Hampton -- September 2023



Selected Month Production
40,304,375 Gallons

Average GPM:	933
Pump depth:	200 ft
Well depth:	500 ft

Motor:

Volts:	474
Volts (Rated):	460
RPM:	1786
RPM (Rated):	1785
Amps A:	103
Amps A (Rated):	141
Amps B:	104
Amps B (Rated):	141
Amps C:	106
Amps C (Rated):	141
Motor Temp.:	157.5 F
Hour Meter:	719.4

Chlorine:

Dosing:	1.45 mg/L
Demand:	0.56 mg/L
Residual:	0.89 mg/L

Vibration Reading:

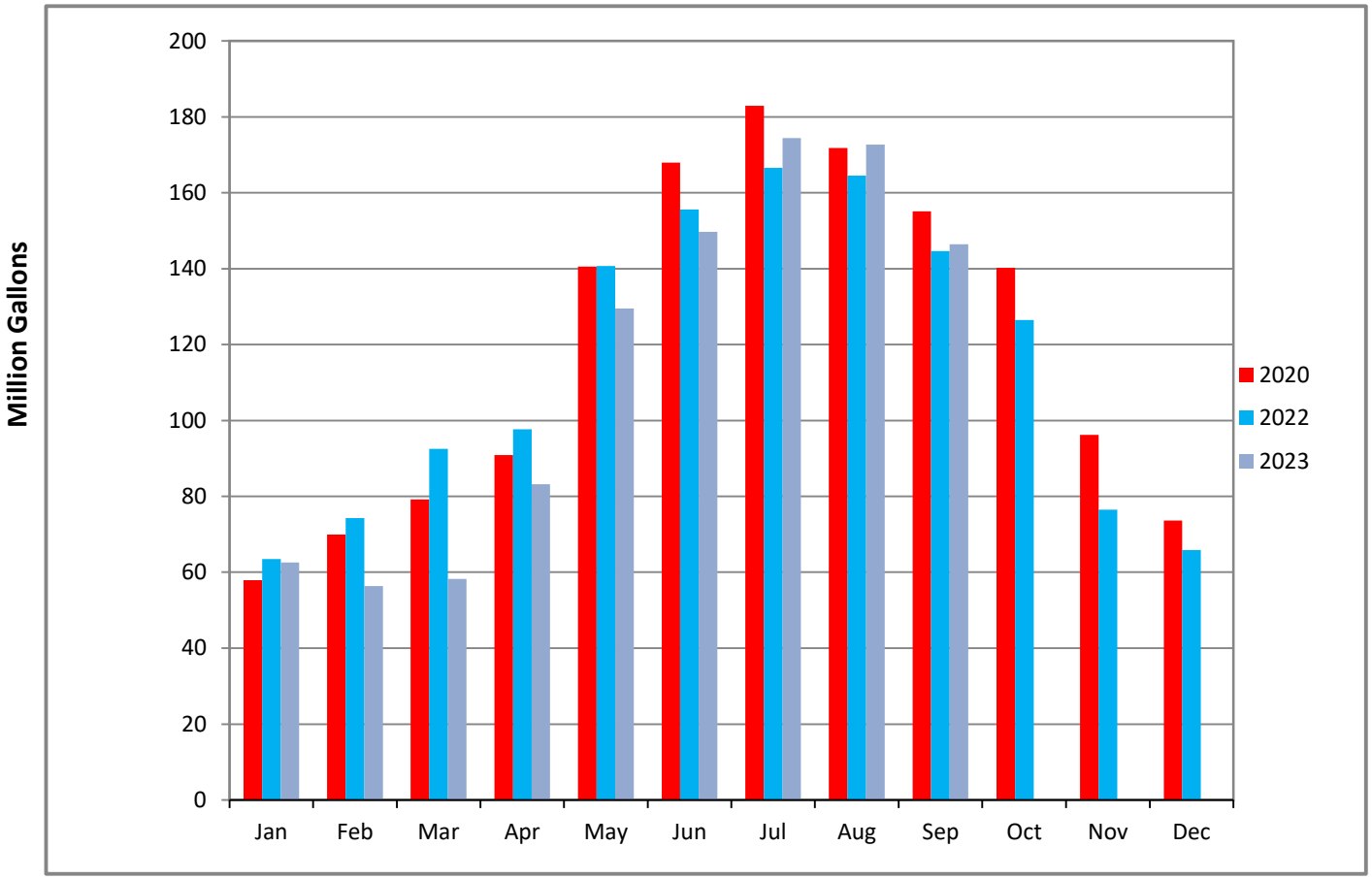
Base Line:	0.02 in/sec
Current:	-- in/sec

Elk Grove Water District

Combined Total Production

Service Area 1

Sep-2023



Current Month Production:
146,408,453 Gallons

Highest Day Demand of the Month:	Date of Occurance
5,515,042	5-Sep-23

Highest Day Demand of the Calender Year:	Date of Occurance
6,083,244	22-Jul-23

"Water Year" Rainfall: (Oct-22 to Sep-23)

Current Month:	0.08 in
Year To Date:	22.00 in

"Water Year" Rainfall: (Oct-21 to Sep-22)

SEP 2022	0.28 in
Year To Date:	16.82 in
Entire Year Total:	16.82 in

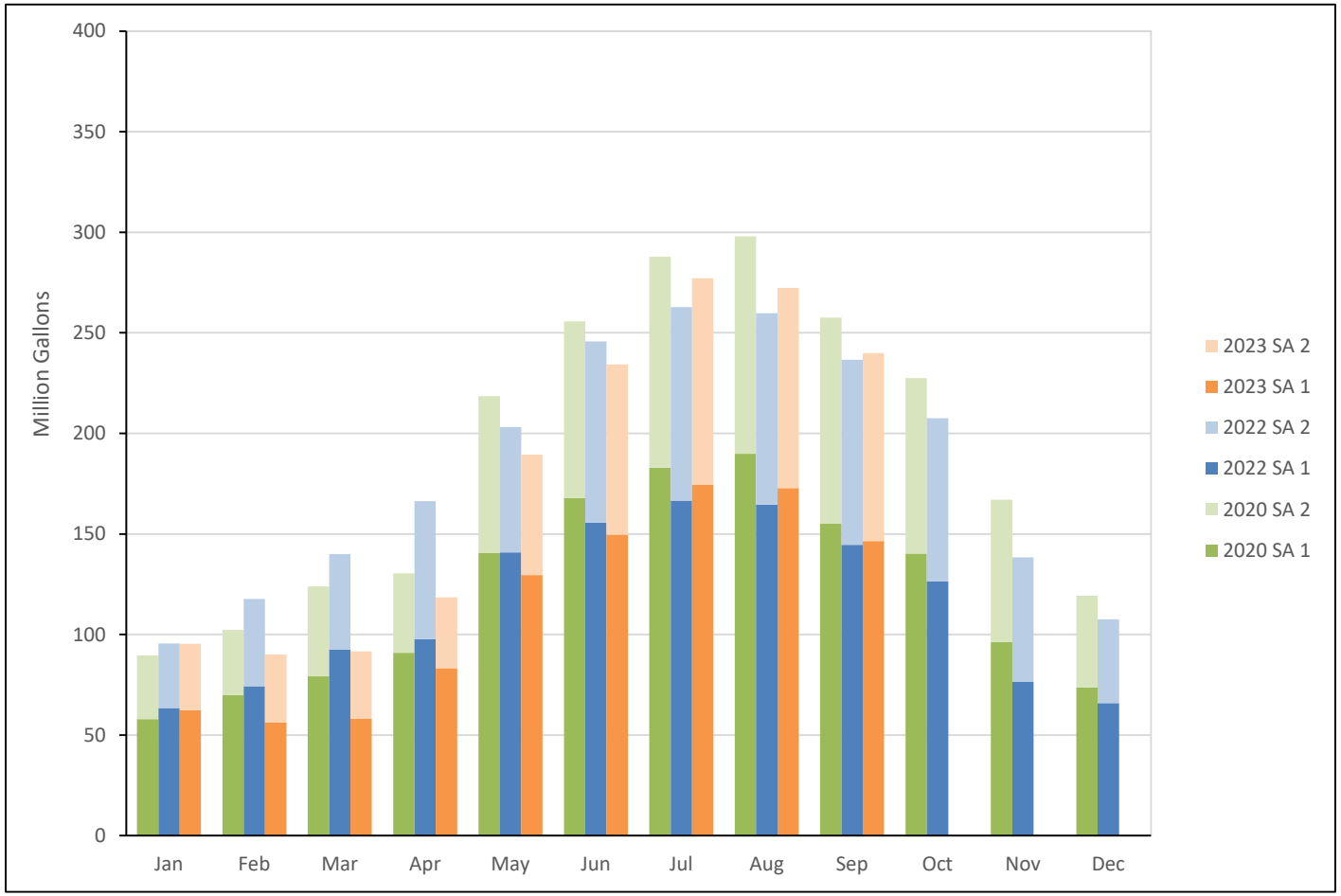
Temperature:

This Month High	93 F
This Month Low	52 F
This Month Average	70.85 F
SEP-22 High	114 F
SEP-22 Low	53 F
SEP-22 Average	76.4 F

Elk Grove Water District

Total Demand/Production

Sep-2023



Current Month Demand/Production:
239,952,585 Gallons
***Change From September 2020:** -6.84%
GPCD: 169.9 Gallons per Day
R-GPCD: 126.7 Gallons per Day

Service Area 1
Active Connections: 7,938
Current Month Demand/Production:
146,408,453 Gallons
***Change From September 2020:** -5.62%
GPCD: 170.0 Gallons per Day
R-GPCD: 131.0 Gallons per Day

Service Area 2
Active Connections: 4,948
Current Month Demand/Production:
93,544,132 Gallons
***Change From September 2020:** -8.68%
GPCD: 169.6 Gallons per Day
R-GPCD: 120.0 Gallons per Day

*Percent reduction has been changed to percent change. Negative change is reduction and positive change is increase.

Elk Grove Water District Water Usage

---------- Monthly Production (gallons) ----------

2020	January	February	March	April	May	June	July	August	September	October	November	December	Total
GW (SA1)	57,904,843	69,920,851	79,195,437	90,851,253	140,575,760	167,942,394	182,964,721	189,801,764*	155,126,225	140,229,242	96,201,714	73,624,502	1,444,338,706
Purchased (SA2)	31,743,624	32,416,076	44,764,808	39,523,572	77,964,788	87,759,848	104,799,288	108,177,256	102,434,860	87,187,628	70,876,740	45,577,136	833,225,624
Total	89,648,467	102,336,927	123,960,245	130,374,825	218,540,548	255,702,242	287,764,009	297,979,020	257,561,085	227,416,870	167,078,454	119,201,638	2,277,564,330

2021	January	February	March	April	May	June	July	August	September	October	November	December	Total
GW (SA1)	64,881,378	57,088,452	78,904,998	122,759,415	161,903,489	171,428,103	180,693,083	173,985,025	153,922,309	114,717,480	65,607,814	61,008,401	1,406,899,947
Purchased (SA2)	34,553,112	34,867,272	38,268,428	53,156,620	84,725,960	96,521,920	110,862,576	113,081,144	94,977,300	84,569,628	48,501,816	34,885,972	828,971,748
Total	99,434,490	91,955,724	117,173,426	175,916,035	246,629,449	267,950,023	291,555,659	287,066,169	248,899,609	199,287,108	114,109,630	95,894,373	2,235,871,695

2022	January	February	March	April	May	June	July	August	September	October	November	December	Total
GW (SA1)	63,469,715	74,242,203	92,483,924	97,643,001	140,747,995	155,597,114	166,596,675	164,513,039	144,632,180	126,478,648	76,517,155	65,813,605	1,368,735,254
Purchased (SA2)	32,115,380	43,369,788	47,452,372	68,588,608	62,494,652	90,110,812	96,146,424	95,299,688	92,002,504	81,006,904	61,785,548	41,748,872	812,121,552
Total	95,585,095	117,611,991	139,936,296	166,231,609	203,242,647	245,707,926	262,743,099	259,812,727	236,634,684	207,485,552	138,302,703	107,562,477	2,180,856,806

2023	January	February	March	April	May	June	July	August	September	October	November	December	Total
GW (SA1)	62,562,387	56,343,279	58,232,742	83,205,416	129,475,692	149,684,059	174,452,699	172,730,059	146,408,453	-	-	-	1,033,094,786
Purchased (SA2)	32,851,412	33,735,548	33,439,340	35,189,660	59,937,240	84,604,784	102,673,472	99,610,412	93,544,132	-	-	-	575,586,000
Total	95,413,799	90,078,827	91,672,082	118,395,076	189,412,932	234,288,843	277,126,171	272,340,471	239,952,585	0	0	0	1,608,680,786

---------- Monthly Percent Change - Comparing 2020 to 2023 ----------

% Change	January	February	March	April	May	June	July	August	September	October	November	December	Total
GW (SA1)	8.04%	-19.42%	-26.47%	-8.42%	-7.90%	-10.87%	-4.65%	-8.99%	-5.62%	-	-	-	-
Purchased (SA2)	3.49%	4.07%	-25.30%	-10.97%	-23.12%	-3.60%	-2.03%	-7.92%	-8.68%	-	-	-	-
Total	6.43%	-11.98%	-26.05%	-9.19%	-13.33%	-8.37%	-3.70%	-8.60%	-6.84%	-	-	-	-
% Cumulative Change	6.43%	-3.38%	-12.27%	-11.37%	-12.02%	-11.00%	-9.26%	-9.13%	-8.80%	-	-	-	-

*Notes

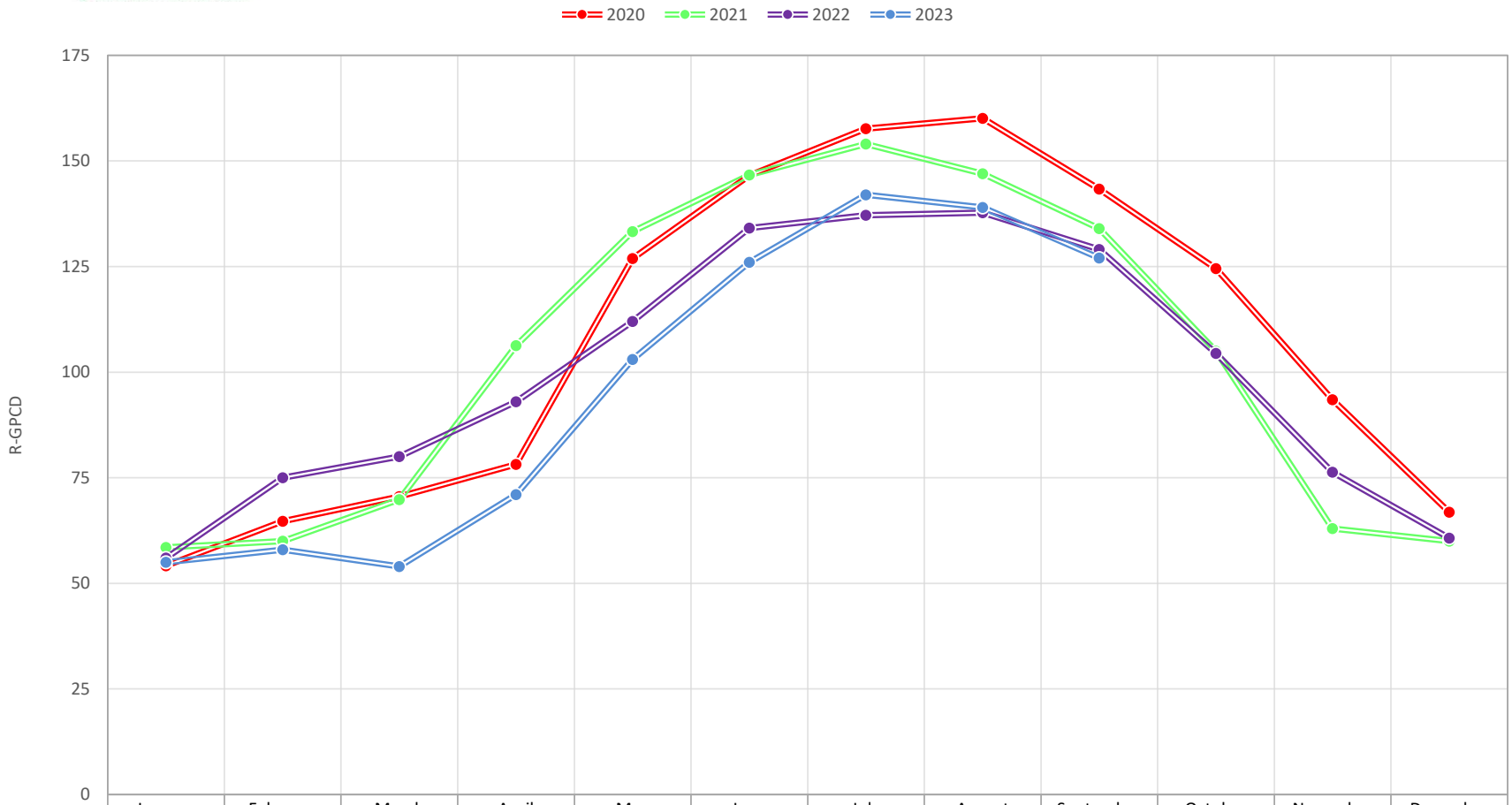
2020 August production number for SA1 includes water delivered through open interties with SA2.

SA1 = Service Area 1, SA2 = Service Area 2. SA1 is all groundwater (GW) production. SA2 is all purchased water from SCWA.

Charlois and Springhurst Intertie	18,000,000	Gallons	
Charlois Intertie (Aug 2020)	8,706,529	Gallons	(Determined from Bruce Kamilos calculations)
Springhurst Intertie (Aug 2020)	14,511,000	Gallons	(Number provided from meter read by SCWA)

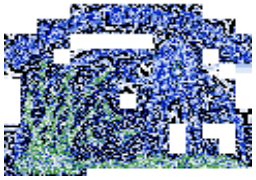
Service Area 2		Consumption	
2023	# Accts	CCF	Gallons
Jan	4,921	43,919	32,851,412
Feb	4,922	45,101	33,735,548
Mar	4,923	44,705	33,439,340
Apr	4,923	47,045	35,189,660
May	4,923	80,130	59,937,240
Jun	4,948	113,108	84,604,784
Jul	4,948	137,264	102,673,472
Aug	4,948	133,169	99,610,412
Sep	4,948	125,059	93,544,132
Oct			
Nov			
Dec			

EGWD COMBINED R-GPCD



	January	February	March	April	May	June	July	August	September	October	November	December
2020	54	65	71	78	127	147	158	160	143	125	93	67
2021	59	60	70	106	133	147	154	147	134	105	63	60
2022	56	75	80	93	112	134	137	138	129	104	76	61
2023	55	58	54	71	103	126	142	139	127			

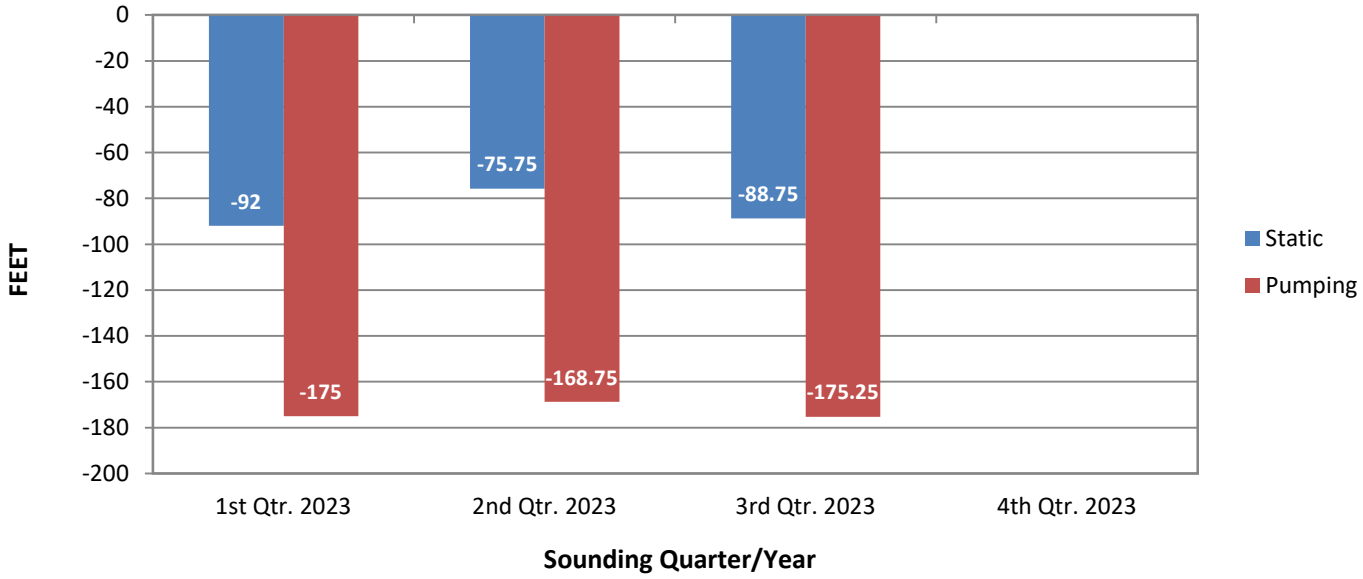
R-GPCD = Residential Gallons per Capita per Day

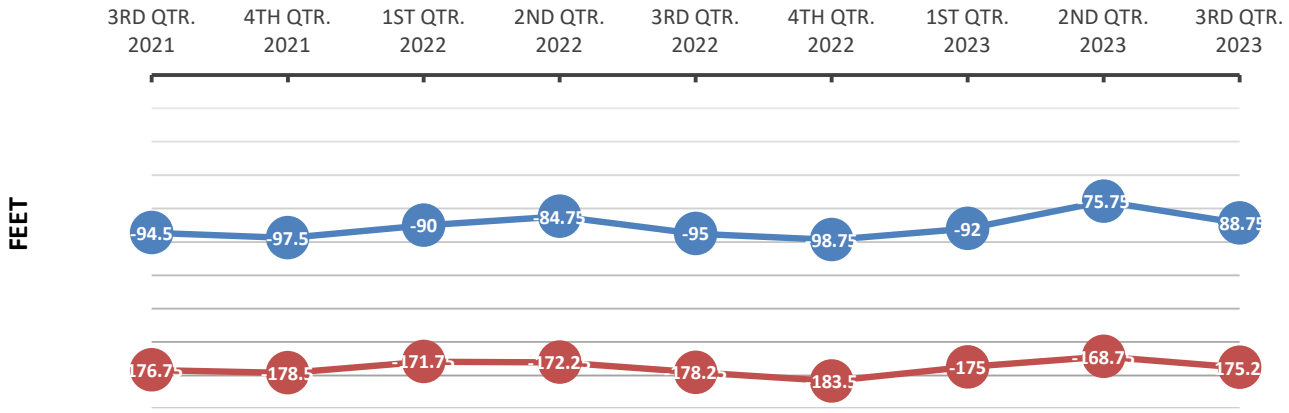


Elk Grove Water District

Static and Pumping Levels

Well 1D School St



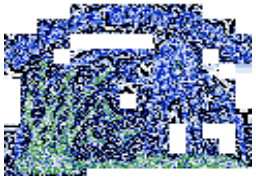


Latest Well Sounding

Static:	88.75 Ft
Pumping:	175.25 Ft
Drawdown:	86.5 Ft
GPM:	1,760
Specific Capacity:	20.341

Latest Sand Tester Results:

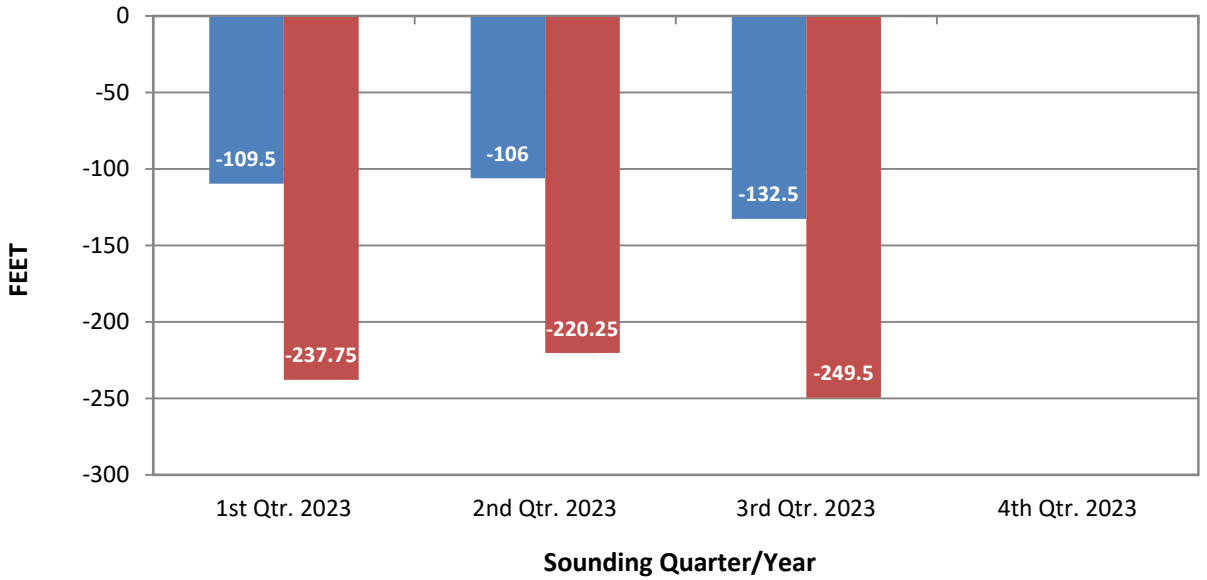
15 Min:	< 5 ppm



Elk Grove Water District

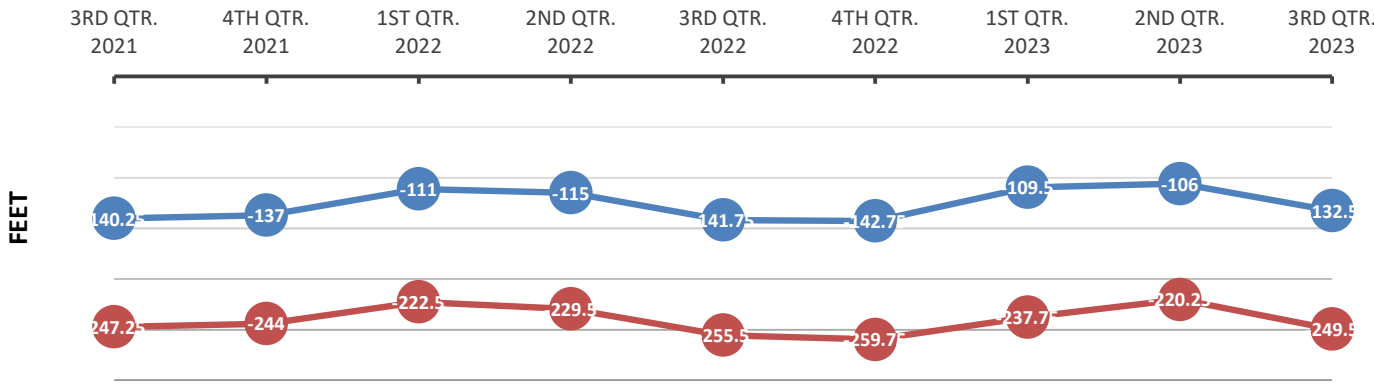
Static and Pumping Levels

Well 4D Webb St



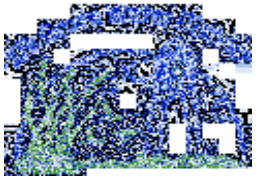
Latest Well Sounding

Static:	132.5 Ft
Pumping:	249.5 Ft
Drawdown:	117 Ft
GPM:	1,696
Specific Capacity:	14.499



Latest Sand Tester Results:

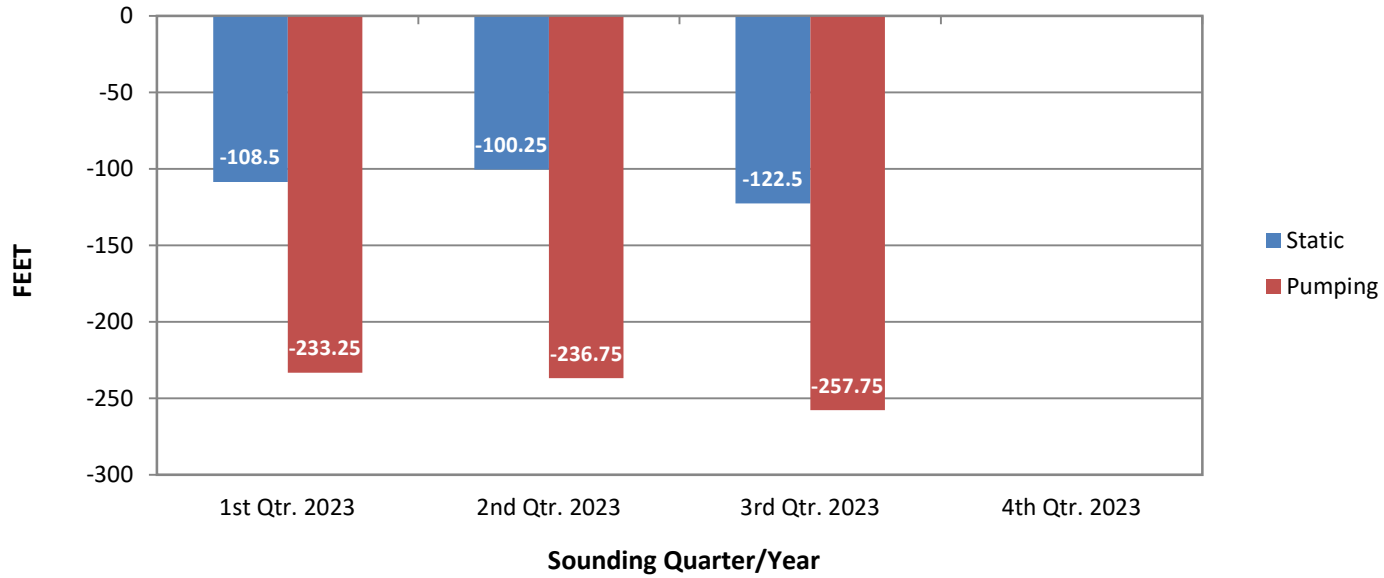
15 Min: < 5 ppm



Elk Grove Water District

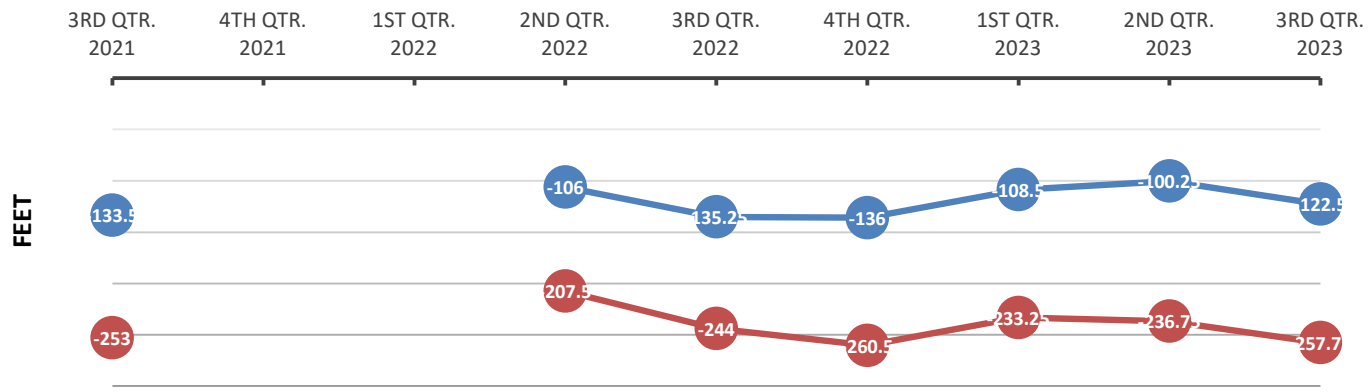
Static and Pumping Levels

Well 11D Dino



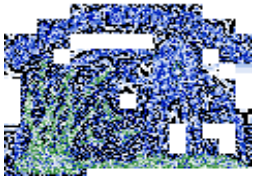
Latest Well Sounding

Static:	122.5 Ft
Pumping:	257.75 Ft
Drawdown:	135.25 Ft
GPM:	1,714
Specific Capacity:	12.670



Latest Sand Tester Results:

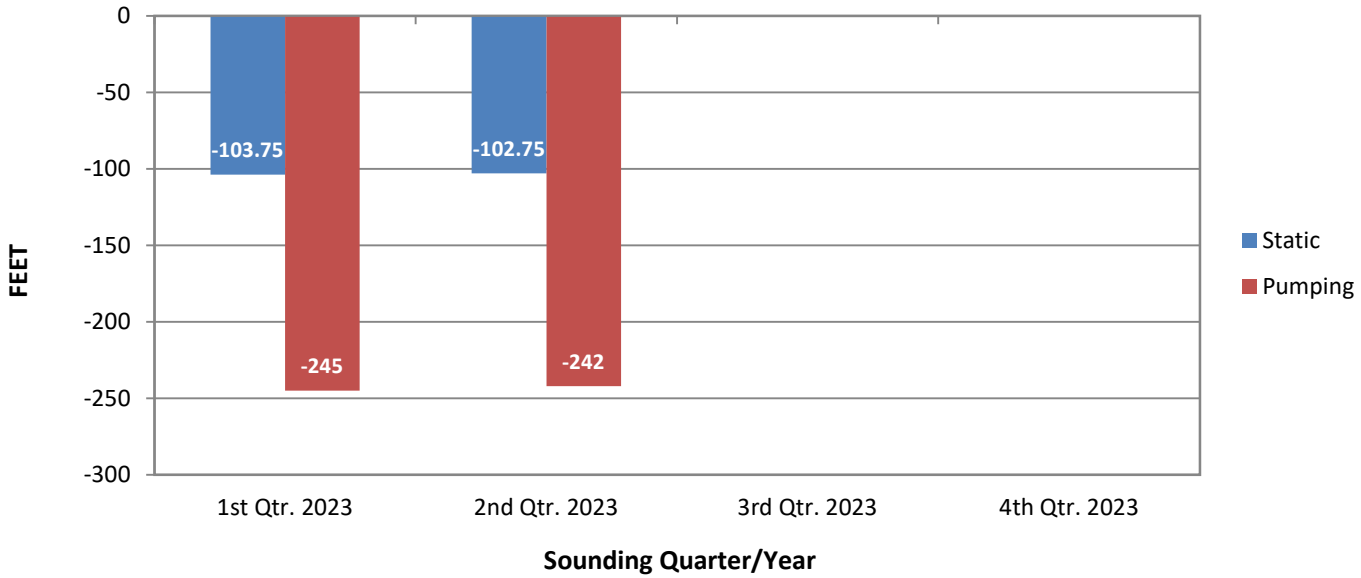
15 Min:	< 5 ppm



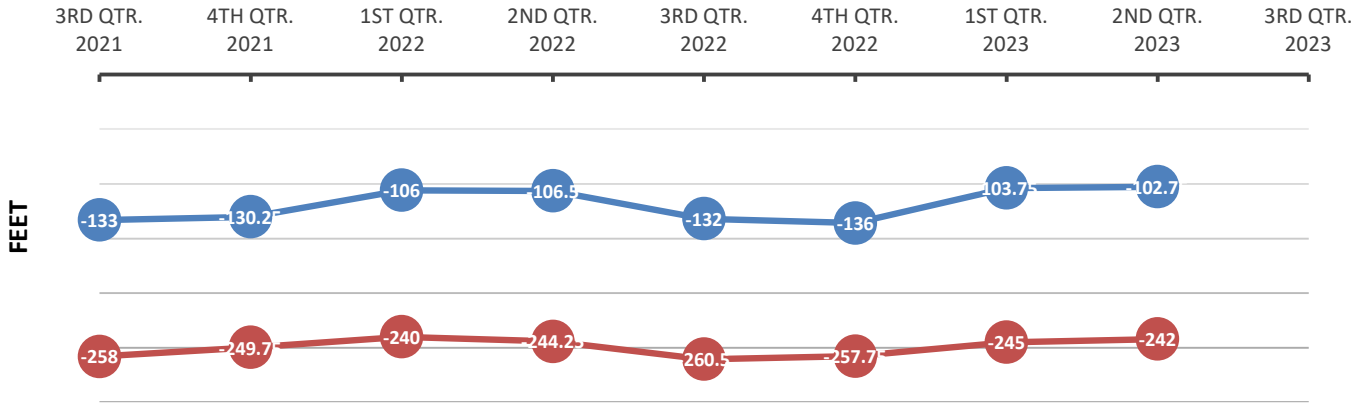
Elk Grove Water District

Static and Pumping Levels

Well 14D Railroad



Sounding Quarter/Year

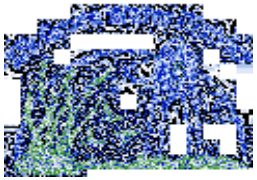


Latest Well Sounding

Static:	102.75 Ft
Pumping:	242 Ft
Drawdown:	139.25 Ft
GPM:	1,570
Specific Capacity:	11.277

Latest Sand Tester Results:

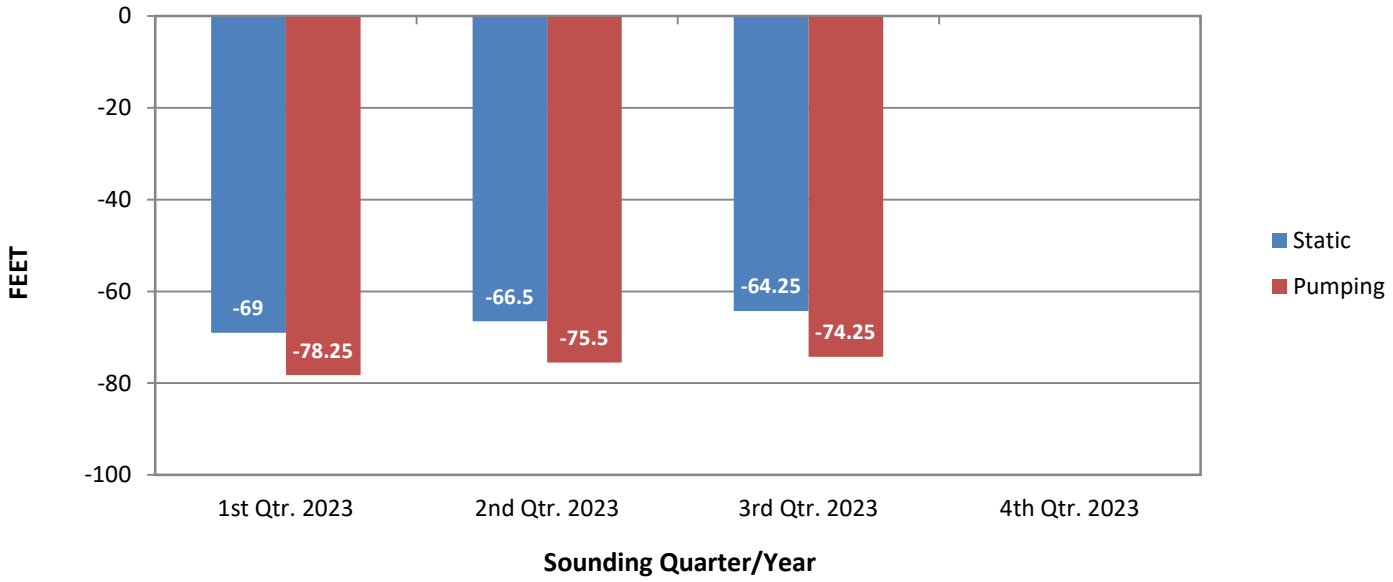
15 Min:	< 5 ppm



Elk Grove Water District

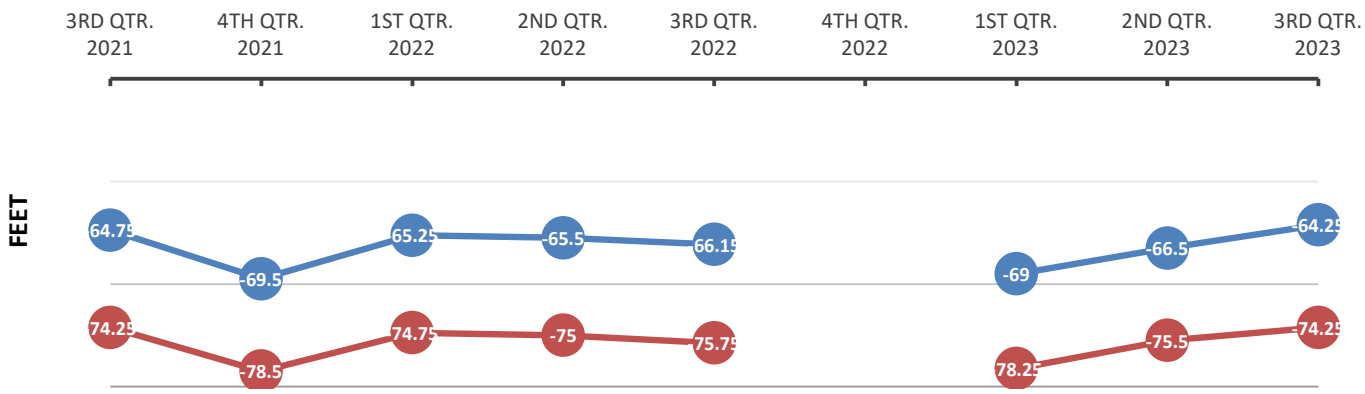
Static and Pumping Levels

Well 8 Williamson



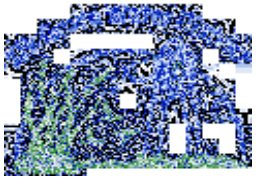
Latest Well Sounding

Static:	64.25 Ft
Pumping:	74.25 Ft
Drawdown:	10 Ft
GPM:	560
Specific Capacity:	55.972



Latest Sand Tester Results:

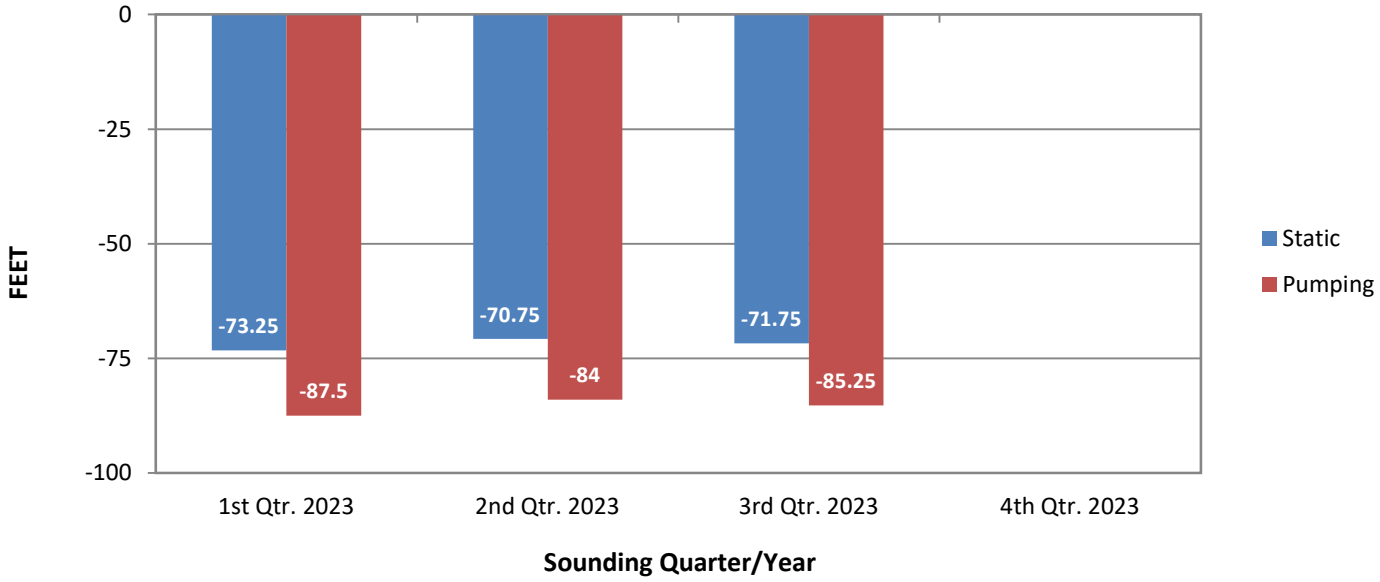
15 Min: < 5 ppm



Elk Grove Water District

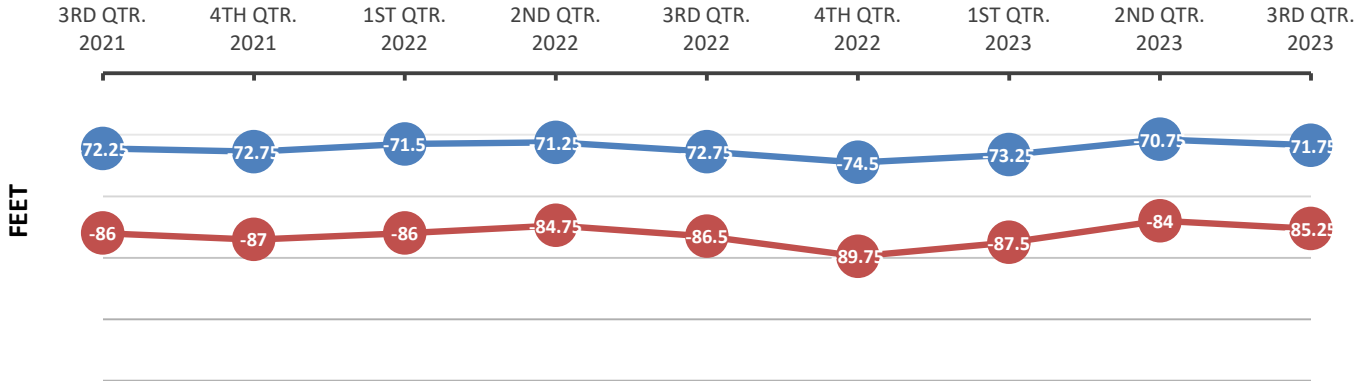
Static and Pumping Levels

Well 9 Polhemus



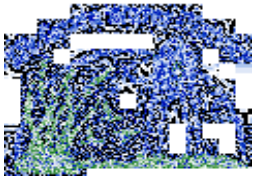
Latest Well Sounding

Static:	71.75 Ft
Pumping:	85.25 Ft
Drawdown:	13.5 Ft
GPM:	500
Specific Capacity:	37.003



Latest Sand Tester Results:

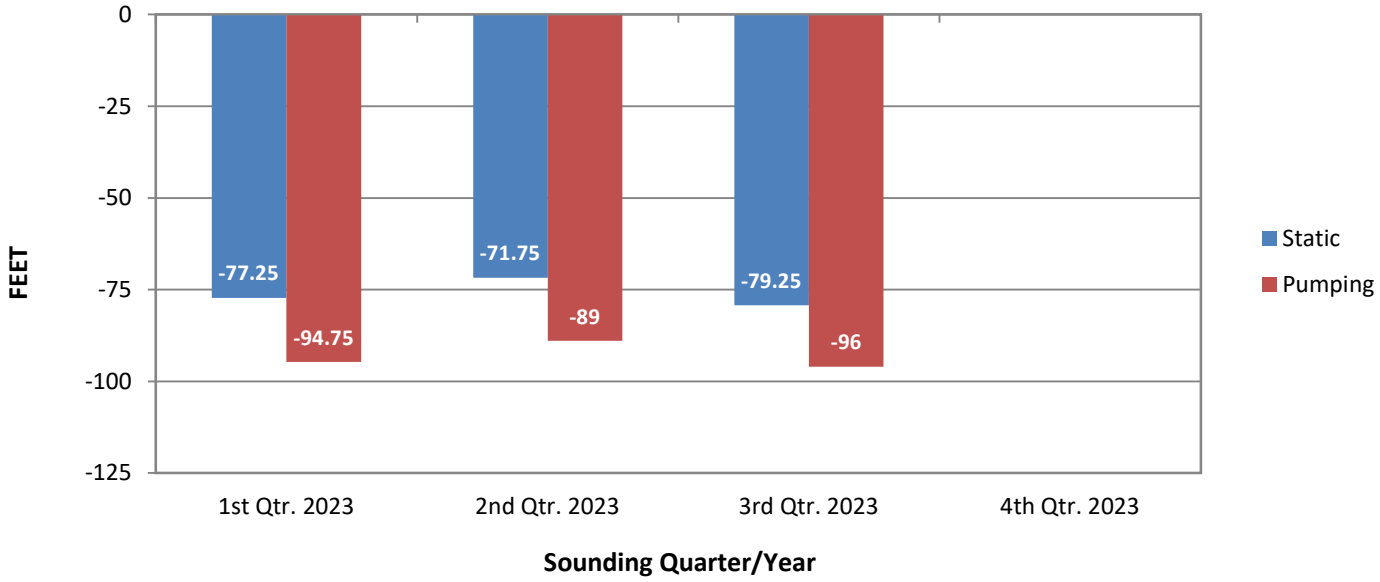
15 Min:	< 5 ppm



Elk Grove Water District

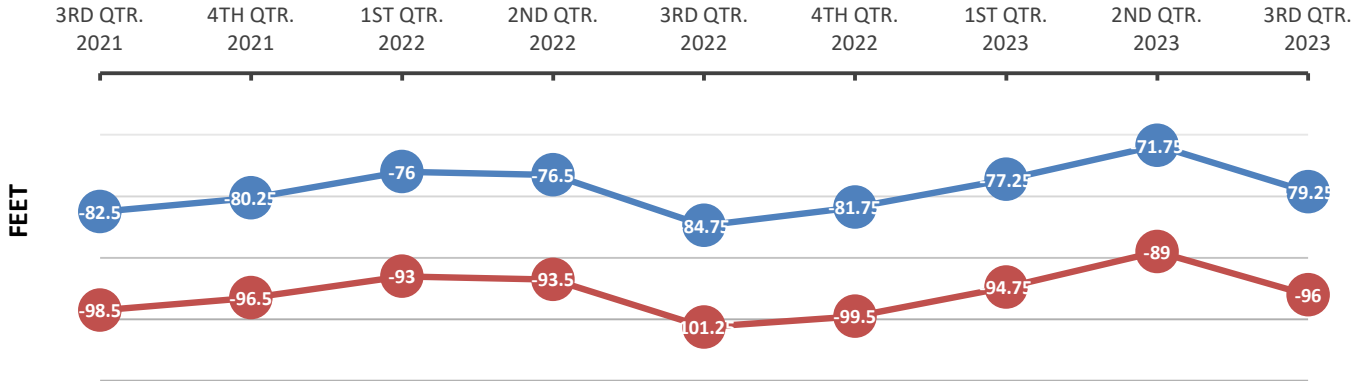
Static and Pumping Levels

Well 13 Hampton



Latest Well Sounding

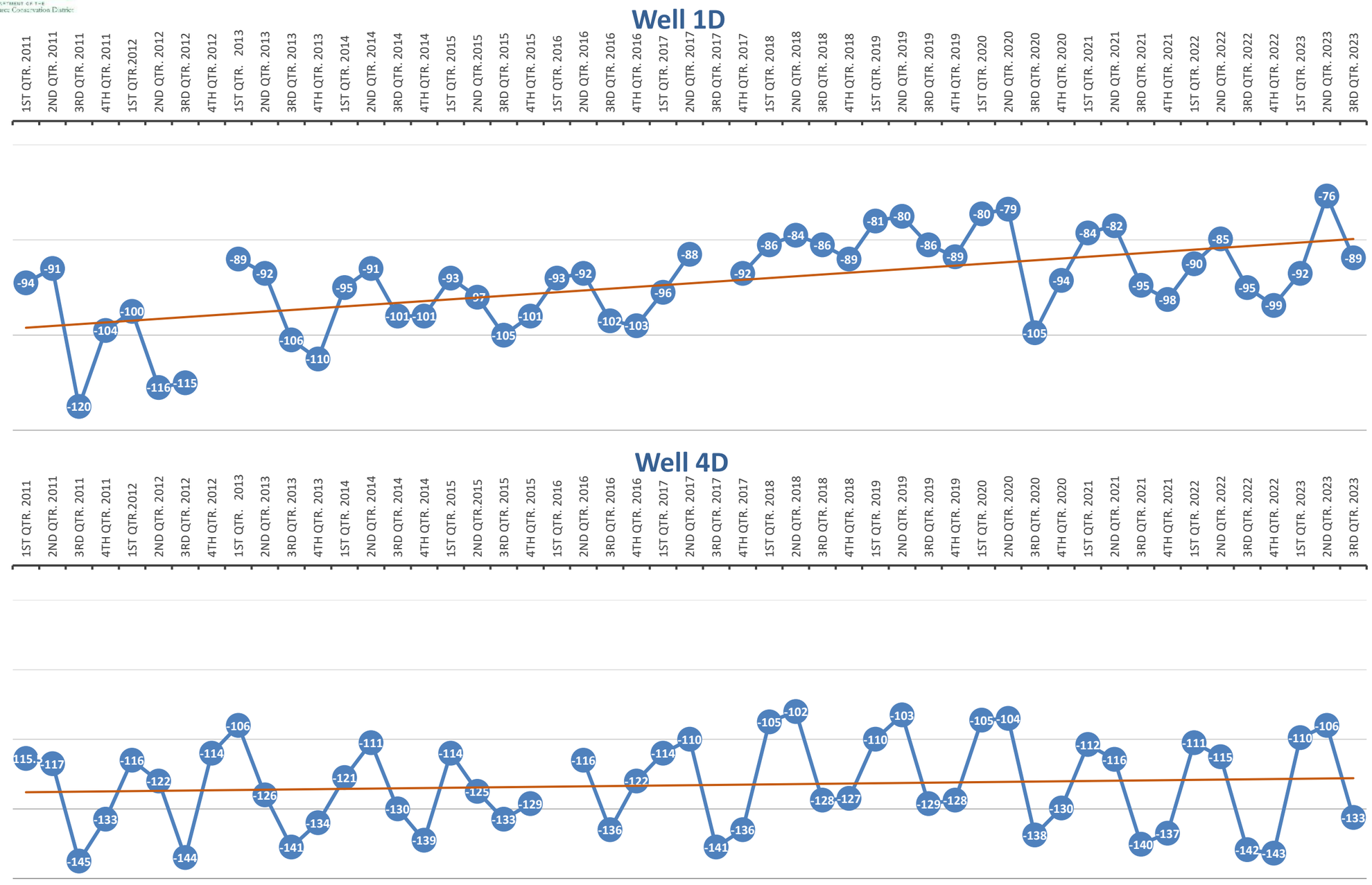
Static:	79.25 Ft
Pumping:	96 Ft
Drawdown:	16.75 Ft
GPM:	961
Specific Capacity:	57.390



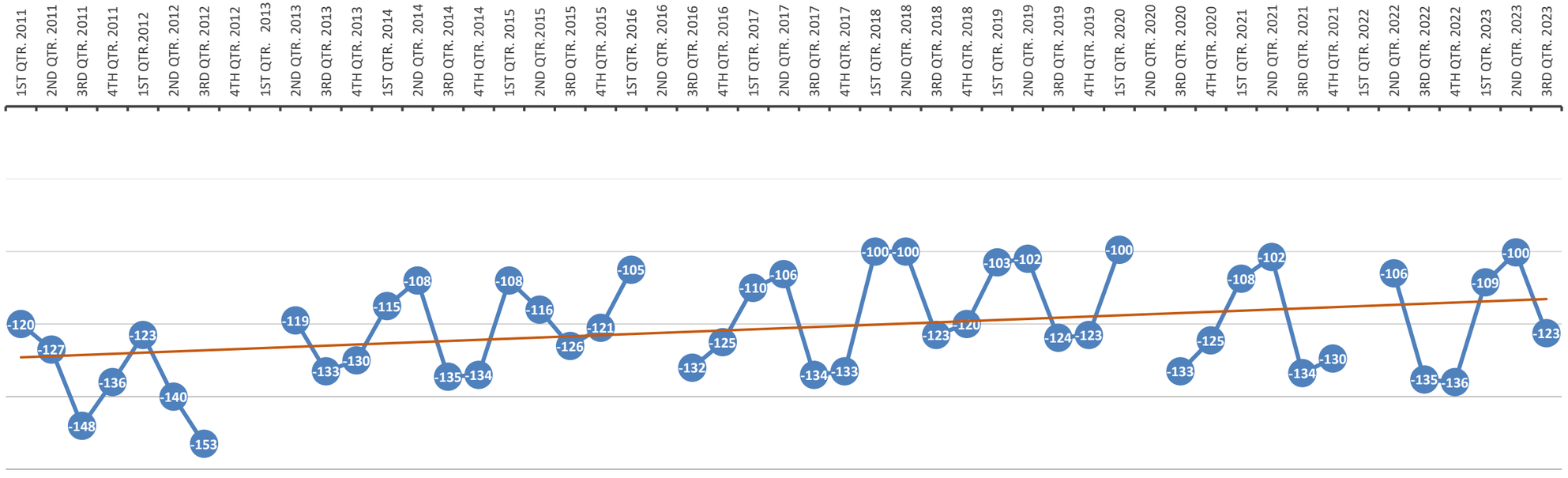
Latest Sand Tester Results:

15 Min: < 5 ppm

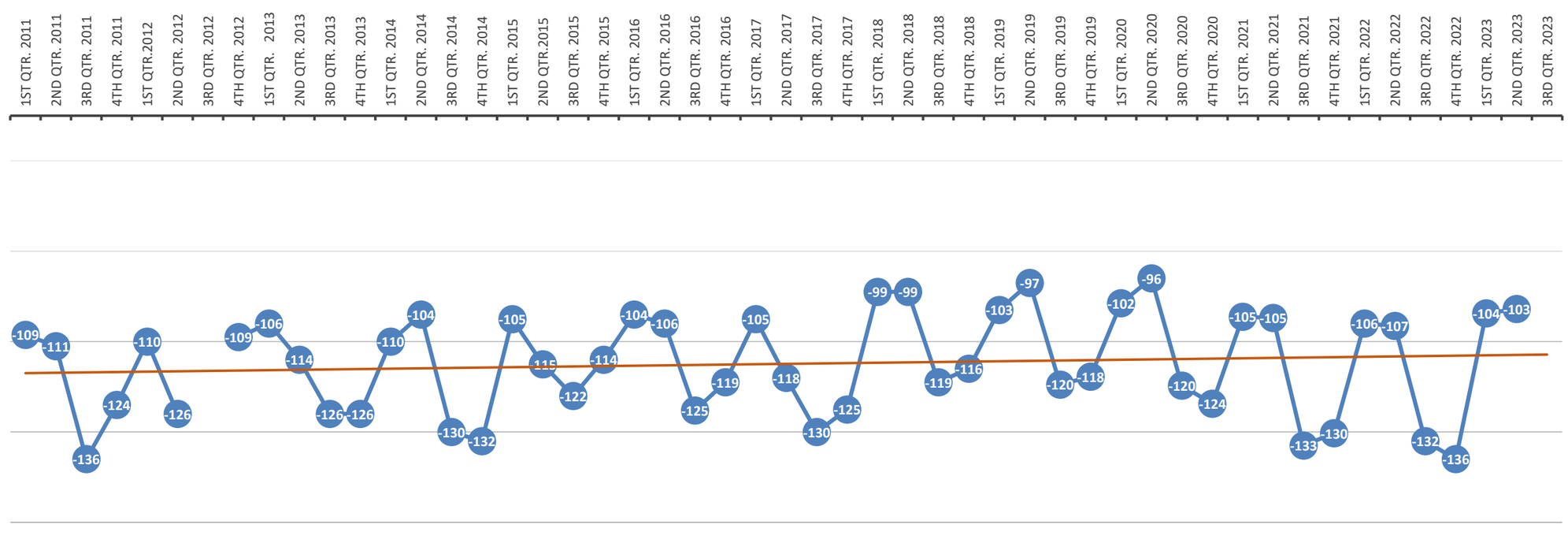
Historic Static Well Levels



Well 11D



Well 14D



Well 8

1ST QTR. 2011
2ND QTR. 2011
3RD QTR. 2011
4TH QTR. 2011
1ST QTR.2012
2ND QTR. 2012
3RD QTR. 2012
4TH QTR. 2012
1ST QTR. 2013
2ND QTR. 2013
3RD QTR. 2013
4TH QTR. 2013
1ST QTR. 2014
2ND QTR. 2014
3RD QTR. 2014
4TH QTR. 2014
1ST QTR. 2015
2ND QTR.2015
3RD QTR. 2015
4TH QTR. 2015
1ST QTR. 2016
2ND QTR. 2016
3RD QTR. 2016
4TH QTR. 2016
1ST QTR. 2017
2ND QTR. 2017
3RD QTR. 2017
4TH QTR. 2017
1ST QTR. 2018
2ND QTR. 2018
3RD QTR. 2018
4TH QTR. 2018
1ST QTR. 2019
2ND QTR. 2019
3RD QTR. 2019
4TH QTR. 2019
1ST QTR. 2020
2ND QTR. 2020
3RD QTR. 2020
4TH QTR. 2020
1ST QTR. 2021
2ND QTR. 2021
3RD QTR. 2021
4TH QTR. 2021
1ST QTR. 2022
2ND QTR. 2022
3RD QTR. 2022
4TH QTR. 2022
1ST QTR. 2023
2ND QTR. 2023
3RD QTR. 2023
-76 -75 -75 -75 -72 -79 -79 -75 -78 -80 -79 -73 -78 -73 -74 -73 -73 -75 -73 -72 -81 -77 -73 -71 -73 -68 -66 -66 -65 -63 -65 -68 -69 -64 -65 -65 -70 -65 -66 -66 -69 -67 -64

Well 9

1ST QTR. 2011
2ND QTR. 2011
3RD QTR. 2011
4TH QTR. 2011
1ST QTR.2012
2ND QTR. 2012
3RD QTR. 2012
4TH QTR. 2012
1ST QTR. 2013
2ND QTR. 2013
3RD QTR. 2013
4TH QTR. 2013
1ST QTR. 2014
2ND QTR. 2014
3RD QTR. 2014
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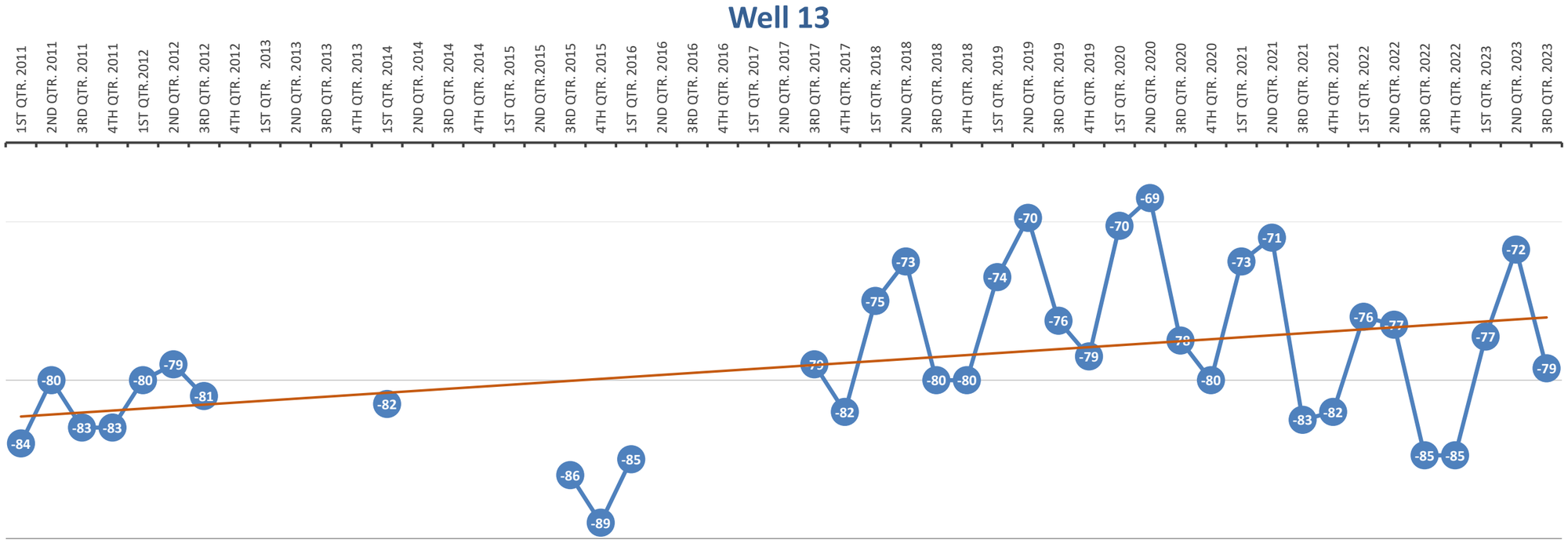
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-79

Monthly Sample Report - September 2023
Water System: Elk Grove Water System

Sampling Point: 01 - 8693 W. Camden			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week

Sampling Point: School Well 01D - Raw Water			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
			Quarterly

Sampling Point: 02 - 9425 Emerald Vista			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week

Sampling Point: 03 - 8809 Valley Oak			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week

Sampling Point: Webb Well 04D - Raw Water			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
			Quartely

Sampling Point: 04 - 10122 Glacier Point			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week

Sampling Point: 05 - 9230 Amsden Ct.			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week

Sampling Point: 06 - 9227 Rancho Dr.			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week

Sampling Point: 07 - Al Gates Park Mainline Dr.			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week
9/5/2023	Distribution System	Fluoride	Week

Sampling Point: - Williamson Well 8 Raw Water			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
			Quartely

Sampling Point: 08 - 9436 Hollow Springs Wy.			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week

Sampling Point: 09 - 8417 Blackman Wy.			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week

Sampling Point: 10 - 9373 Oreo Ranch Cir.			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week

Sampling Point: 11 - 9907 Kapalua Ln.			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week

Sampling Point: 12-9205 Meadow Grove Dr.			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Distribution System	Bacteriological	Week
9/12/2023	Distribution System	Bacteriological	Week
9/19/2023	Distribution System	Bacteriological	Week
9/26/2023	Distribution System	Bacteriological	Week

Sampling Point: Dino Well 11D - Raw Water			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
			Quarterly

Sampling Point: Hampton Well 13 - Raw Water			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Source Water	Fe, Mn, As, Total	Weekly
9/11/2023	Source Water	Fe, Mn, As, Total	Weekly
9/18/2023	Source Water	Fe, Mn, As, Total	Weekly
9/25/2023	Source Water	Fe, Mn, As, Total	Weekly

Sampling Point: Hampton WTP Effluent			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Source Water	Fe, Mn, As, Total	Weekly
9/11/2023	Source Water	Fe, Mn, As, Total	Weekly
9/18/2023	Source Water	Fe, Mn, As, Total	Weekly
9/25/2023	Source Water	Fe, Mn, As, Total	Weekly

Sampling Point: Hampton WTP Backwash Tank			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**

Sampling Point: Railroad Well 14D - Raw Water			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
			Quarterly

Sampling Point: Railroad WTP Effluent			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**
9/5/2023	Treated Plant Effluent	Fe, Mn,As, Al	Monthly

Sampling Point: Railroad WTP Backwash Tank			
Sample Date	**Sample Class**	**Sample Name**	**Collection Occurrence**

Sampling Point: Special Distribution/Construction Samples			
Sample Date	**Sample Class**	**Sample Name**	**Collection Description**
9/5/2023	Distribution System	Bacteriological	8913 Melodic Ct. Hydrant Tie-In
9/6/2023	Distribution System	Bacteriological	9131 Locust St. CIP Tie-In
9/19/2023	Distribution System	Bacteriological	8848 E. Stockton Blvd. Mainline Installation
9/26/2023	Distribution System	Bacteriological	8310 Sheldon Rd. New Hydrant -Blow-Off Installation

Colors	Monthly Total	Yearly Total
Black = Scheduled	58	647
Green = Unscheduled	4	37
Red = Incomplete Sample	0	

Elk Grove Water District
A DEPARTMENT OF THE
Florin Resource Conservation District

October 5, 2023

Sacramento Regional County
Sanitation District
Environmental Specialist
10060 Goethe Rd.
Sacramento, CA. 95827

WASTEWATER DISCHARGE COMPLIANCE REPORT FORM

Enclosed is the Wastewater Discharge Compliance Report Form from Elk Grove Water District September 2023.

If you have any further questions, you may contact me at 916-585-9386

STEVE SHAW
WATER TREATMENT SUPERVISOR

SACRAMENTO REGIONAL COUNTY SANITATION DISTRICT (REGIONAL SAN)

COMPLIANCE REPORT FORM

Attn: Alex Burkert	E-mail: burkerta@sacsewer.com	Wastewater Source Control Section
Phone: (916) 875-6454		Fax: (916) 854-9286
From:		
Company: Elk Grove Water District		Permit # WTP-010

Discharge Month:	September	Year:	2023

The following reports and information are attached (check all that apply):

☒ Water use/flow meter report (If there is no discharge during the reporting period, this must be reported)

Location	Total Gallons
OF 1 Hampton WTP Backwash Tank	1,199,026
OF 3 Railroad WTP Backwash Tank	0
OF 5 Analyzer Water	34,560
OF 6 Tank Sludge (preapproval req)	
OF 7 Misc. (preapproval req)	

☐ Monitoring results/analytical report(s)

pH (if measured); Grab Monitoring Data Review

☐

Location	Date and Time	pH
OF1		
OF3		
OF6		
OF7		

pH compliance statement – CHECK ONE BELOW

☐ Based on a review of this facility's pH data, pH has exceeded the discharge limits.

☐ I certify that this facility has reviewed pH data and is in compliance.

Discharge Rate - CHECK ONE BELOW

☐ Based on a review of this facility's flow data, the discharge rate limit was exceeded.

or

☒ I certify that this facility is in compliance with the discharge rate limit.

☐ Attached is a description of anticipated changes that may significantly alter the nature, quality, or volume of the wastewater discharged.

☐ Flow monitoring equipment certification

☐ Other (explain):

SACRAMENTO REGIONAL COUNTY SANITATION DISTRICT (REGIONAL SAN)

Domestic Calculation

Domestic Usage/ Employee Monthly Totals	Number of Full-time Equivalent* Employees	Business Days per Month	Allowance (gallons per day)	Gallons
Production	2	17	15	510
Office	3	17	10	510
Drivers/Field	13	17	3	663
			Total	1,683

*FTE Equivalent: all employees' monthly hours added together and converted to a full-time employee count

Certification Statement

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

SIGNATURE of Authorized Representative: _____

PRINTED NAME, TITLE: Steve Shaw (Name) Water Treatment Supervisor (Title)

DATE: October 5, 2023

Elk Grove Water District
A DEPARTMENT OF THE
Florin Resource Conservation District

October 3, 2023

State Water Resources Control Board
Division of Drinking Water
1001 I Street
13th Floor
Sacramento, CA. 95814

MONTHLY SUMMARY OF DISTRIBUTION SYSTEM COLIFORM MONITORING

Enclosed is the Monthly Summary of Distribution System Coliform Monitoring report from Elk Grove Water District for September 2023.

If you have any further questions, you may contact me at 916-585-9386.

STEVE SHAW
WATER TREATMENT SUPERVISOR

MONTHLY SUMMARY OF REVISED TOTAL COLIFORM RULE DISTRIBUTION SYSTEM MONITORING

(including triggered source monitoring for systems subject to the Groundwater Rule)

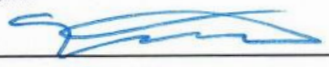
System Name	System Number
Elk Grove Water District	3410008
Sampling Period	
Month: **September**	Year: 2023

	Number Required	Number Collected	Number Total Coliform Positives	Number E.coli Positives
1. Routine Samples (see note 1)	48	48	0	0
2. Repeat Samples following samples that are Total Coliform Positive and *E.coli* **Negative** (see notes 10 and 11)		0	0	0
3. Repeat Samples following Routine Samples that are **Total Coliform Positive** and ***E. coli* Positive** (see notes 10 and 11)		0	0	0
4. Treatment Technique (TT)/MCL Violation Computation for Total Coliform/*E. coli* Positive Samples a. Totals (sum of columns)	48	48	0	0
b. If 40 or more samples collected in month, determine percent of samples that are total coliform positive [(total number positive/total number collected) x 100] =	0 %			
c. Did the system trigger… a **Level 2** Assessment TT? (see notes 2, 3, 4, 5 and 6 for trigger info)			☐ Yes ☑ No	
If a Level 2 Assessment is triggered, see note 8 below. a **Level 1** Assessment TT? (see note 7 for trigger info)			☐ Yes ☑ No	
If a Level 1 Assessment is triggered, see note 9 below.				
5. Triggered Source Samples per Groundwater Rule (see notes 12 and 13)		0	0	0

6. Invalidated Samples

(Note what samples, if any, were invalidated; who authorized the invalidation; and when replacement samples were collected. Attach additional sheets, if necessary.)

7. Summary Completed By: Steve Shaw

Signature	Title	Date
	Water Treatment Supervisor	10.3.2023

NOTES AND INSTRUCTIONS:

1. Routine samples include:
   a. Samples required pursuant to 22 CCR Section 64423 and any additional samples required by an approved routine sample siting plan established pursuant to 22 CCR Section 64422.
   b. Extra samples are required for systems collecting less than five routine samples per month that had one or more total coliform positives in previous month.
   c. Extra samples for systems with high source water turbidities that are using surface water or groundwater under direct influence of surface water and do not practice filtration in compliance with regulations;
2. Note: For a repeat sample following a total coliform positive sample, any *E.coli* positive repeat (boxed entry) **constitutes an MCL violation and requires immediate notification to the Division** (22, CCR, Section 64426.1).
3. Note: For repeat sample following a *E.coli* positive sample, any total coliform positive repeat (boxed entry) **constitutes an MCL violation and requires immediate notification to the Division** (22, CCR, Section 64426.1).
4. Note: Failure to take all required repeat samples following an *E. coli* positive routine sample (22, CCR, Section 64426.1) **constitutes an MCL violation and requires immediate notification to the Division** (22, CCR, Section 64426.1).
5. Note: Failure to test for *E. coli* when any repoeat sample tests postive for total coliform (22, CCR, Section 64426.1) **constitutes an MCL violation and requires immediate notification to the Division** (22, CCR, Section 64426.1).
6. Note: Second Level 1 treatment technique trigger in a rolling 12-month period.
7. Total coliform Treatment Technique (TT) Violation **(Notify Department within 24 hours of TT violation):**
   a. For systems collecting less than 40 samples, if two or more samples are total coliform positive, then the TT is violated and a Level 1 Assessment is required.
   b. For systems collecting 40 or more samples, if more than 5.0 percent of samples collected are total coliform positive, then the TT is violated and a Level 1 Assessment is required.
8. Contact the Division as soon as practical to arrange for the division to conduct a Level 2 Assessment of the water system. The water system shall complete a Level 2 Assessment and sumbit it to the Division within 30 days of learning of the trigger exceedance.
9. Conduct a Level 1 Assessment in accordance with as soon as practical that covers the minimum elements (22, CCR, Section 64426.8 (a), (2). Submit the report to the Division within 30 days of learing of the trigger exceedance.
10. Positive results and their associated repeat samples are to be tracked on the Coliform Monitoring Worksheet.
11. Repeat samples must be collected within 24 hours of being notified of the positive results. For systems collecting more than one routine sample per month, three repeat samples must be collected for each total coliform positive sample. For systems collecting one or fewer routine samples per month, four repeat samples must be collected for each total coliform positive sample. At least three samples shall be taken the month following a total coliform positive.
12. For systems subject to the Groundwater Rule: Positive results and the assceiated triggered source samples are to be tracked on the Coliform Monitoring Worksheet.
13. For triggered sample(s) required as a result of a total coliform routine positive sample, an *E.coli* positive triggered sample (boxed entry) **requires immediate notification to the Division, Tier 1 public notification, and corrective action.**

Elk Grove Water District
A DEPARTMENT OF THE
Florin Resource Conservation District

October 4, 2023

State Water Resources Control Board
Division of Drinking Water
1001 I Street
13th Floor
Sacramento, CA. 95814

MONTHLY SUMMARY OF THE HAMPTON GROUNDWATER TREATMENT PLANT

Enclosed is the Monthly Summary of the Hampton GWTP report from Elk Grove Water District for September 2023.

If you have any further questions, you may contact me at 916-585-9386.

STEVE SHAW
WATER TREATMENT SUPERVISOR

Elk Grove Water District

Hampton GWTP Monthly Report

PWS Number 3410008-013 Month: September

GWTP Name Hampton Water Treatment Plant

Date	Hour Meter	Run Hours	Production Meter	Well Production	Backwash Meter	Backwash Waste
last day	27401.7		600780680		34405929	41862763
1	27425.3	23.6	602110258	1329578	34438903	41898746
2	27449.2	23.9	603458094	1347836	34468168	41935542
3	27473	23.8	604794170	1336076	34497503	41972493
4	27497.4	24.4	606158133	1363963	34530522	42010910
5	27521.4	24	607513413	1355280	34563381	42048441
6	27546	24.6	608894719	1381306	34596298	42087527
7	27569.4	23.4	610203215	1308496	34625588	42124381
8	27594.1	24.7	611588484	1385269	34658555	42163704
9	27618	23.9	612927592	1339108	34691530	42202916
10	27641.7	23.7	614252890	1325298	34724526	42242157
11	27665.4	23.7	615584996	1332106	34757533	42281399
12	27689.6	24.2	616937124	1352128	34790493	42320979
13	27713.6	24	618284392	1347268	34823459	42363242
14	27737.4	23.8	619616157	1331765	34856400	42404713
15	27761	23.6	620934232	1318075	34889473	42445157
16	27785.1	24.1	622285078	1350846	34922477	42486476
17	27809.1	24	623626773	1341695	34955418	42527187
18	27833.2	24.1	624983930	1357157	34988417	42568224
19	27857.6	24.4	626350634	1366704	35021411	42609942
20	27881.7	24.1	627699551	1348917	35054301	42650713
21	27905	23.3	629004463	1304912	35080330	42689094
22	27929.6	24.6	630373125	1368662	35116485	42731160
23	27953.4	23.8	631704025	1330900	35145788	42770978
24	27976.8	23.4	633017810	1313785	35175096	42811103
25	28001.5	24.7	634403213	1385403	35208130	42852904
26	28025.5	24	635744104	1340891	35241164	42894623
27	28049.7	24.2	637095605	1351501	35274146	42936455
28	28073.3	23.6	638413854	1318249	35307162	42978410
29	28097.4	24.1	639757291	1343437	35340231	43020214
30	28121.1	23.7	641085055	1327764	35373350	43061789
31						
Total		719.4		40,304,375	967,421	1,199,026

Weekly In-House Monitoring (mg/L) R (Raw) T (Treated)As (ug/L)

Date	Fe, R	Fe, T	Mn, R	Mn, T	As, R	As, T
9/5/2023	0.003	0.048	0.039	0.01	13	4
9/11/2023	0.021	0.02	0.046	0.018	13	4
9/18/2023	0	0.039	0.041	0.007	13	4
9/25/2023	0.002	0.028	0.045	0.001	13	2

Total Gallons Sodium Hypochlorite:	417.8 Gal
Pounds per day	16.85 Lbs/Day
Dosage (Milligrams Per Liter @ 12.5% Cl)	1.8 mg/L
Total Gallons Ferric Chloride:	251.8 Gal
Dosage (Milligrams Per Liter @ 38% FeCl)	.65mg/L
Total Gallons Sodium Hydroxide:	308 Gal
Dosage (Gallons Per Hour @ 30% NaOH)	0.48 Gal/Hr
Total Gallons Sulfuric Acid :	267.9 Gal
Dose (Gallons Per Hour @ 93% H2SO4)	0.33 Gal/Hr

Weekly Average		
	Inf. pH	Eff. pH
Week 1: 7.0 to 6.9		
Cl2		0.98
Week 2: 7.1 to 6.9		
Cl2		0.94
Week 3: 7.1 to 7.0		
Cl2		0.9
Week 4: 7.1 to 7.0		
Cl2		0.87
Week 5: ____ to ____		
Cl2		

Total Backwashed	967,421Gal
Total Water Pumped	40,304,375 Gal

Total Run Hours	719.4Hours
Total Backwash Waste	1,199,026 Gal

Reporting Limits/Units
Iron = 0.100 mg/L
Manganese = 0.010 mg/L
Arsenic = 1.0 µg/L

Maximum Contaminant Levels (MCLs)
Iron (Fe) = 0.300 mg/L (Secondary)
Manganese (Mn) = 0.050 mg/L (Secondary)
Arsenic (As) = 10 µg/L (Primary)

Prepared By: Steve Shaw Date: 10/4/2023

Elk Grove Water District
A DEPARTMENT OF THE
Florin Resource Conservation District

October 3, 2023

State Water Resources Control Board
Division of Drinking Water
1001 I Street
13th Floor
Sacramento, Ca. 95814

MONTHLY FLUORIDATION MONITORING REPORT

Enclosed is the Monthly Summary of the Fluoridation Monitoring from Elk Grove Water District for September 2023.

If you have any further questions, you may contact me at 916-585-9386.

STEVE SHAW
WATER TREATMENT SUPERVISOR

ELK GROVE WATER DISTRICT AREA 2

DISTRIBUTION SYSTEM

MONTHLY FLUORIDATION MONITORING REPORT

October-23

Week	Location of Sample		Monitoring Results (mg/L) Date	Time	Results
1	Hollow Springs		9.5.2023	9:04 AM	0.65
1	Kapalua		9.5.2023	9:25 AM	0.57
1	Al Gates Park		9.5.2023	9:43 AM	0.7
1	Oreo Ranch		9.5.2023	10:18 AM	0.58
1	Blackman		9.5.2023	11:56 PM	0.63
2	Hollow Springs		9.12.2023	9:10 AM	0.57
2	Kapalua		9.12.2023	9:37 AM	0.68
2	Al Gates Park		9.12.2023	10:08 AM	0.53
2	Oreo Ranch		9.12.2023	11:00 AM	0.60
2	Blackman		9.12.2023	12:06 PM	0.56
3	Hollow Springs		9.19.2023	9:33 AM	0.49
3	Kapalua		9.19.2023	10:01 AM	0.72
3	Al Gates Park		9.19.2023	10:25 AM	0.75
3	Oreo Ranch		9.19.2023	10:39 AM	0.63
3	Blackman		9.19.2023	12:54 PM	0.69
4	Hollow Springs		9.26.2023	9:25 AM	0.7
4	Kapalua		9.26.2023	9:37 AM	0.68
4	Al Gates Park		9.26.2023	10:09 AM	0.58
4	Oreo Ranch		9.26.2023	10:32 AM	0.77
4	Blackman		9.26.2023	12:45 PM	0.72
5	Hollow Springs				
5	Kapalua				
5	Al Gates Park				
5	Oreo Ranch				
5	Blackman				

Monthly fluoride split sample results:

Date: 9.5.2023

Water System Results: 0.7 mg/L

Approved Lab: 0.62 mg/L

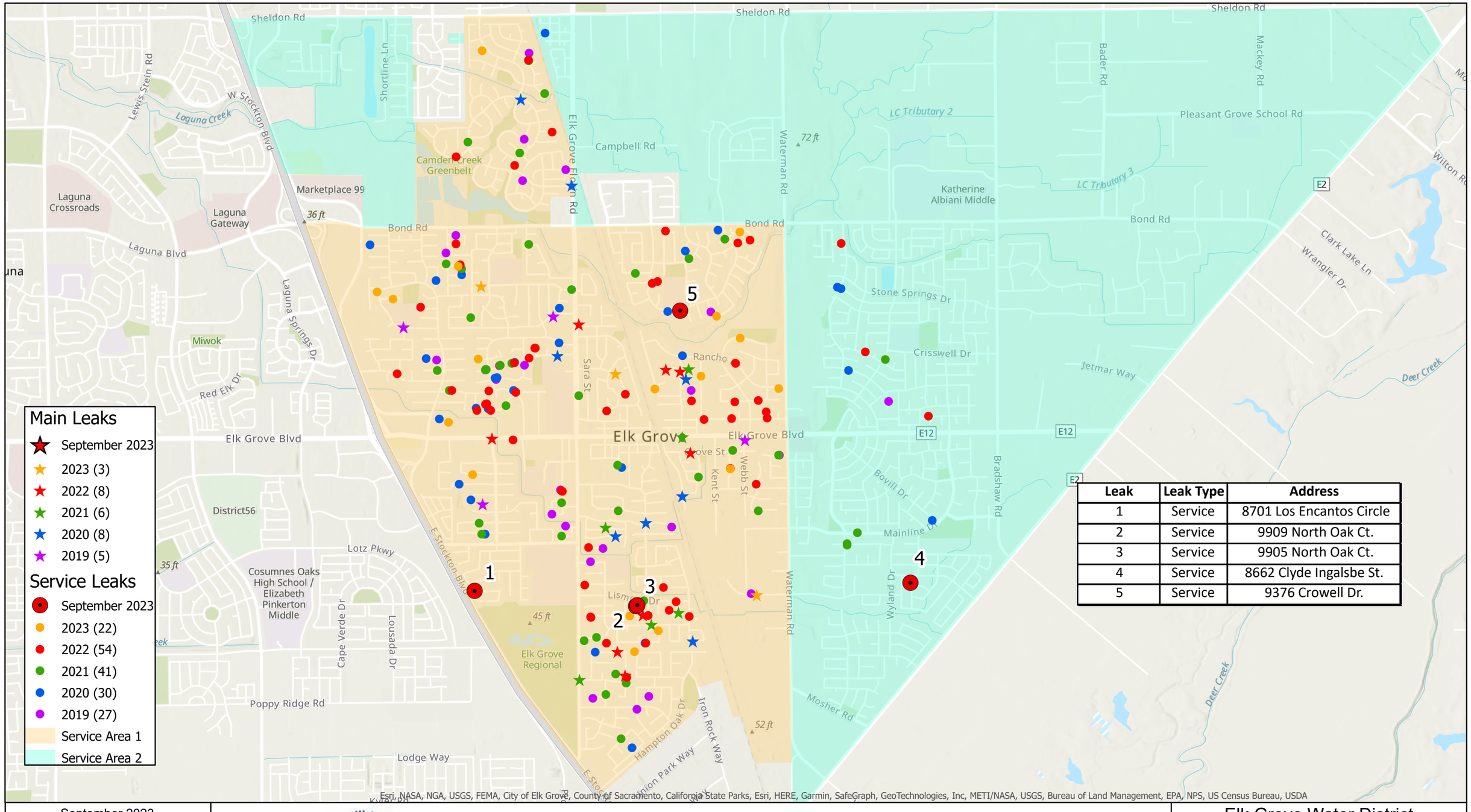
Contact Name: Steve Shaw

Telephone : (916) 585-9386

System PWS Number: 3410008

Elk Grove Water District
Safety Meetings/Training
September 2023

Date	Topic	Attendees	Hosted By
9/11/2023	Fatigue on the Job	Stefan Chanh, Travis Franklin, David Frederick, Jaylyn Gordon-Ford, Aaron Hewitt, James Hinegardner, Sean Hinton, Brandon Kent, Patrick Lee, Justin Mello, Sal Mendoza, Michael Montiel, Chris Phillips, Stefani Phillips, Steve Shaw, John Vance, Brandon Wagner, Tonia Williams, Marcell Wilson	Steve Shaw & Sean Hinton
9/25/2023	Why Work Safely?	Alan Aragon, Stefan Chanh, David Frederick, Aaron Hewitt, Sean Hinton, Brandon Kent, Justin Mello, Sal Mendoza, Michael Montiel, Chris Phillips, Steve Shaw, John Vance, Brandon Wagner, Marcell Wilson	Steve Shaw & Sean Hinton



Leak	Leak Type	Address
1	Service	8701 Los Encantos Circle
2	Service	9909 North Oak Ct.
3	Service	9905 North Oak Ct.
4	Service	8662 Clyde Ingalsbe St.
5	Service	9376 Crowell Dr.

Esri, NASA, NGA, USGS, FEMA, City of Elk Grove, County of Sacramento, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

September 2023	
Main Line Leaks: 0	YTD: 3
Service Line Leaks: 5	YTD: 22
Total Leaks: 5	YTD: 25

Elk Grove Water District

Main and Service Line Leaks Map

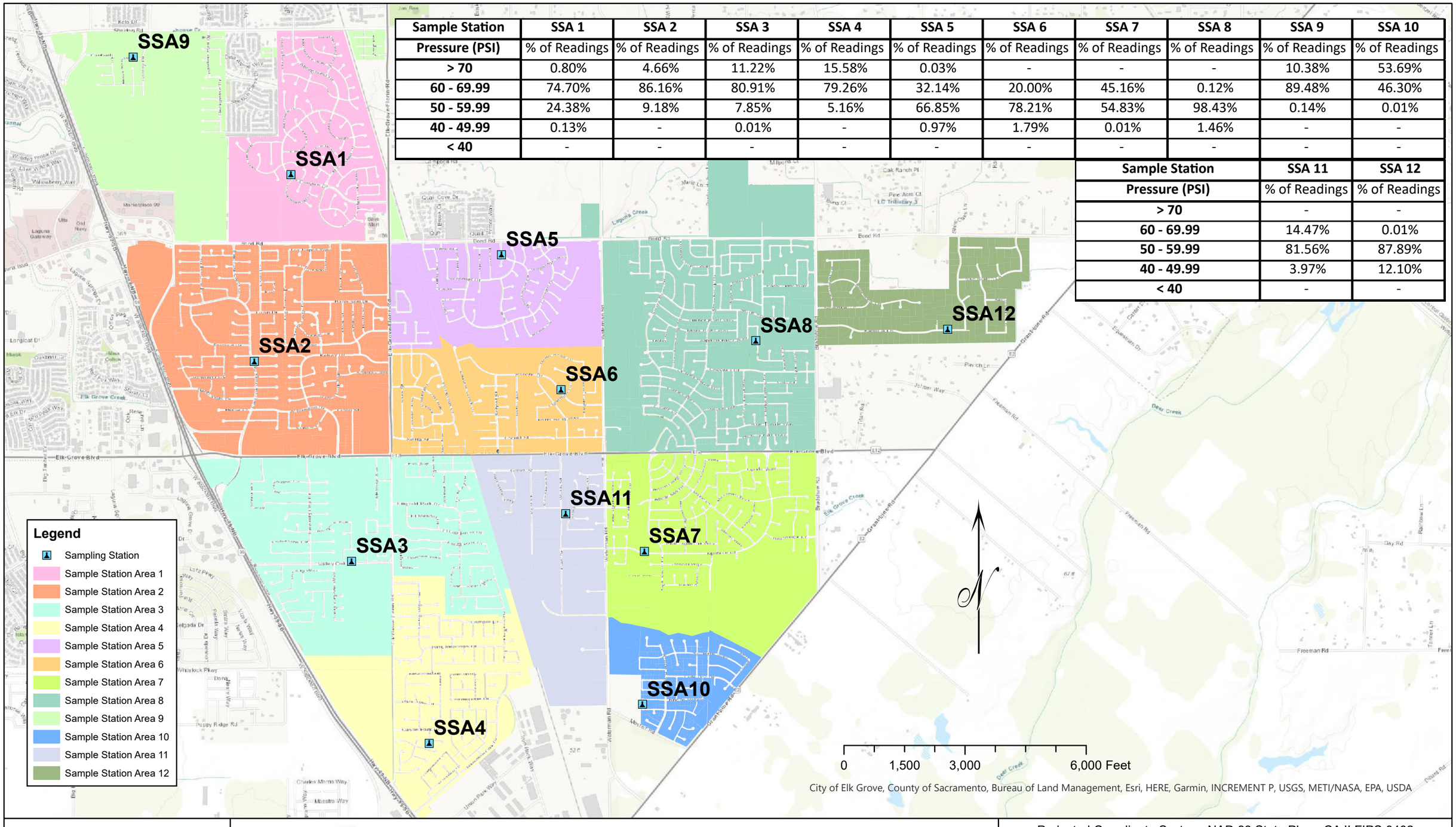
0 3,000 6,000 Feet

N W E S

Elk Grove Water District
Main & Service Line Leaks
Created by: Richard Ko
Date: October 4, 2023

Sample Station	SSA 1	SSA 2	SSA 3	SSA 4	SSA 5	SSA 6	SSA 7	SSA 8	SSA 9	SSA 10
Pressure (PSI)	% of Readings	% of Readings	% of Readings	% of Readings	% of Readings	% of Readings	% of Readings	% of Readings	% of Readings	% of Readings
> 70	0.80%	4.66%	11.22%	15.58%	0.03%	-	-	-	10.38%	53.69%
60 - 69.99	74.70%	86.16%	80.91%	79.26%	32.14%	20.00%	45.16%	0.12%	89.48%	46.30%
50 - 59.99	24.38%	9.18%	7.85%	5.16%	66.85%	78.21%	54.83%	98.43%	0.14%	0.01%
40 - 49.99	0.13%	-	0.01%	-	0.97%	1.79%	0.01%	1.46%	-	-
< 40	-	-	-	-	-	-	-	-	-	-

Sample Station	SSA 11	SSA 12
Pressure (PSI)	% of Readings	% of Readings
> 70	-	-
60 - 69.99	14.47%	0.01%
50 - 59.99	81.56%	87.89%
40 - 49.99	3.97%	12.10%
< 40	-	-



Sample Stations: 12

September 2023

Elk Grove Water District

Sample Station Areas

Projected Coordinate System: NAD 83 State Plane CA II FIPS 0402

Source: EGWD GIS Database

Modified by: Richard Ko

October 6, 2023