

ALAMEDA COUNTY WATER DISTRICT

43885 So. Grimmer Boulevard
Fremont, CA 94538

BOARD OF DIRECTORS

A G E N D A

February 9, 2023

6:00 P.M.

ACCESSIBLE PUBLIC MEETINGS: *Upon request, ACWD will provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in public meetings. Please send a written request at least 72 hours before the meeting to the District Secretary, ACWD, 43885 S. Grimmer Blvd., Fremont, CA 94538, or to gina.markou@acwd.com stating your name, mailing address, phone number, and brief description of the requested materials and preferred alternative format or auxiliary aid or service.*

MEMBERS OF THE PUBLIC MAY PARTICIPATE IN THIS MEETING IN PERSON AT THE DISTRICT OFFICE LOCATED AT 43885 SOUTH GRIMMER BOULEVARD, FREMONT OR VIA WEBINAR OR TELECONFERENCE DUE TO THE COVID-19 PANDEMIC AND IN ACCORDANCE WITH ASSEMBLY BILL 361, WHICH MODIFIES GOVERNMENT CODE SECTION 54953.

TO PARTICIPATE VIA ZOOM WEBINAR: USE THE FOLLOWING LINK: <https://us02web.zoom.us/j/83359856504?pwd=ZkxPUGVHWmVNTi8raFc2UIJGY3kzZz09> (PASSCODE: **438204**). ZOOM MAY REQUEST ENTRY OF A NAME AND EMAIL ADDRESS. ACWD IS UNABLE TO MODIFY THIS FEATURE. MEMBERS OF THE PUBLIC ARE NOT REQUIRED TO IDENTIFY THEMSELVES WHEN ATTENDING PUBLIC MEETINGS AND MAY ENTER “ANONYMOUS” UNDER NAME, AND ENTER A FICTIONAL EMAIL ADDRESS (e.g., “attendee@acwd.com”). TO MAKE COMMENTS OR ASK QUESTIONS DURING THE MEETING, “RAISE YOUR HAND” OR USE THE CHAT OR Q&A FEATURE IN THE ZOOM APP AT ANY TIME, OR UNMUTE AND SPEAK WHEN INVITED.

TO PARTICIPATE VIA TELECONFERENCE, CALL ANY OF THE FOLLOWING PHONE NUMBERS: 1-669-900-9128 OR 1-346-248-7799 OR 1-301-715-8592 FOLLOWED BY **833 5985 6504**. TO MAKE COMMENTS OR ASK QUESTIONS DURING THE MEETING, TYPE *9 ON YOUR DIAL PAD TO “RAISE” OR “LOWER” YOUR “HAND” AT ANY TIME, OR TYPE *6 TO MUTE OR UNMUTE AND SPEAK WHEN INVITED.

MEMBERS OF THE PUBLIC ARE ALSO ENCOURAGED TO SUBMIT COMMENTS TO THE DISTRICT SECRETARY AT gina.markou@acwd.com AT LEAST ONE HOUR PRIOR TO THE SCHEDULED START TIME OF THE MEETING.

THIS AGENDA AND ALL ACCOMPANYING MATERIALS CAN BE VIEWED ON THE ALAMEDA COUNTY WATER DISTRICT WEBSITE AT: www.acwd.org.

1. ROLL CALL

2. SALUTE TO THE FLAG

3. PUBLIC COMMENTS

Members of the public may address the Board on any issues not listed on the agenda which are within the purview of the Alameda County Water District. A 5-minute limit is customary; however the Board President may adjust the actual time allotted to accommodate the number of speakers. Members of the public who wish to address the Board on a scheduled agenda item will be given the opportunity to do so.

4. CONSENT CALENDAR

4.1 Approval of Minutes of Regular Board Meeting of January 12 and Special Board Meeting of January 26, 2023

4.2 Ratification of Payment of Audited Demands dated January 6, January 13, January 20, and January 27, 2023

5. ACTION CALENDAR

*Items recommended for action on the Consent Calendar are noted with an asterisk **

5.1* Consider and Reaffirm Resolution No. 21-058 Making Findings Pursuant to Assembly Bill 361 that the Proclaimed State of Emergency Continues to Impact the Ability to Meet Safely in Person

5.2* Authorization of Agreement for Headquarters Boiler Replacement

5.3* Resolution Honoring Rebecca Swann upon Her Retirement from District Service

5.4* Authorization of Change Order for the Advanced Metering Infrastructure Project

5.5* Resolution Authorizing the General Manager to Submit an Application and to Execute a Funding Agreement with the California Department of Water Resources for the ACWD Urban Community Drought Relief Projects

5.6* Authorization of Amendment to Professional Services Agreement for Groundwater Modeling of Alameda County Flood Control and Water Conservation District's Low-Flow Channel Modification

5.7 Public Hearing to Consider Revisions to the District's Water Rates, Adoption of Resolutions Amending the District's Rate and Fee Schedule Regarding Water-related Rates and Charges, Including Drought Surcharges and Private Fire Service Rates, the Customer Assistance Program, Facilities Connection Charges, and Miscellaneous Fees and Charges, and Finding that the Amendments are Exempt from the California Environmental Quality Act

5.8 Delivery of Groundwater Monitoring Report and Survey Report, and Adoption of Resolutions Relating to the Replenishment Assessment Act

6. REPORTS

The reports provided to the Board under Section 6.1 will not be routinely reviewed at the Board meeting, unless a request to do so is made by a member of the Board or a member of the public.

6.1 BOARD COMMITTEE REPORTS

6.1.1 Engineering & Information Technology Meeting of January 4, 2023

6.1.2 Legal, Intergovernmental & Community Affairs Meeting of January 10, 2023

6.1.3 Operations & Water Quality Meeting of January 11, 2023

6.1.4 Finance & Administration Meeting of January 17, 2023

6.1.5 Water Resources & Conservation Meeting of January 25, 2023

6.2 OPERATIONAL REPORTS

6.2.1 Rainfall Report

6.2.2 Water Production Report

6.2.3 Quarterly Well Level Report

6.2.4 Quarterly Projects Review

6.2.5 Quarterly Directors' Expense Report

6.2.6 Investment Report

6.2.7 Quarterly Budget Report

6.2.8 Quarterly Personnel Report

6.2.9 Distribution System Monthly Hardness Map

6.3 STAFF PRESENTATIONS

6.3.1 Review of Brown Act Changes: Board Participation in Board and Committee Meetings via Teleconferencing

6.4 GENERAL MANAGER'S REPORTS

7. DIRECTOR'S COMMENTS, REPORTS ON MEETINGS ATTENDED, AND AGENDA ITEM REQUESTS

7.1 Report from Directors Sethy and Weed on Association of California Water Agencies State Legislative Committee meeting on January 20, 2023, in Sacramento, California

7.2 Report from Directors Sethy and Weed on South Bay Engineers' Club meeting on February 2, 2023, in Pleasanton, California

8. ADJOURNMENT

FEBRUARY 2023 STANDING COMMITTEE MEETINGS

STANDING COMMITTEE	BOARD MEMBERS	TIME AND PLACE
Engineering & Information Technology	Directors Gunther (Chair) and Akbari	February 1, 4:15 P.M. – Board Room
Operations & Water Quality	Directors Sethy (Chair) and Gunther	February 7, 4:15 P.M. – Board Room
Legal, Intergovernmental & Community Affairs	Directors Akbari (Chair) and Huang	February 14, 4:15 P.M. – Board Room
Finance & Administration	Directors Weed (Chair) and Sethy	February 21, 3:00 P.M. – Board Room
Water Resources & Conservation	Directors Huang (Chair) and Weed	February 22, 4:15 P.M. – Board Room

Committee meetings are open to the public. No Board action will be taken.

ALAMEDA COUNTY WATER DISTRICT

MEMORANDUM

DATE: February 6, 2023
TO: Board of Directors
FROM: Ed Stevenson 
SUBJECT: Consent Calendar Items for Board Meeting of February 9, 2023

Attached for your information are items that will appear under the Consent Calendar.

- 4.1 Approval of Minutes of Regular Board Meeting of January 12 and Special Board Meeting of January 26, 2023
- 4.2 Ratification of Payment of Audited Demands dated January 6, January 13, January 20, and January 27, 2023

It is also recommended that Action Calendar Items 5.1 through 5.6 be added to the Consent Calendar.

mh
Attachments
cc: Executive Staff

Approved WS

January 12, 2023
Fremont, California

The regular monthly meeting of the Board of Directors of ALAMEDA COUNTY WATER DISTRICT was held on January 12, 2023, at the hour of 6:04 P.M.

Due to COVID-19 and in accordance with Assembly Bill 361, which modifies Government Code Section 54953, this meeting was conducted in person at the District's Headquarters and virtually by Zoom Webinar and Teleconference, and members of the public were invited to participate.

Present: Directors Gunther, Akbari, Huang, Weed, and Sethy

Staff members present: General Manager Ed Stevenson, Director of Operations & Maintenance Kurt Arends, Director of Finance & Administration Jonathan Wunderlich, Director of Water Resources Laura Hidas, Director of Engineering & Technology Girum Awoke, Project Engineering Manager Rekha Ippagunta, Project Engineering Supervisor Benjamin Egger, Business Analyst Manveen Bharaj (virtual), Customer Service and Systems Manager Katrina Bates (virtual), Administrative Analyst Ethan Burch, Water Supply Supervisor Leonard Ash, General Counsel Patrick Miyaki, and Assistant District Secretary Marian Hsu.

President Sethy presided.

Due to the consecutive Board meetings held that night, no additional Salute to the Flag was made.

3 – PUBLIC COMMENTS – Mr. Ken Nishimura, a Fremont resident, made a comment on the current intense California climate patterns and the District's long term water supply.

4 – CONSENT CALENDAR

A motion was made by Director Akbari to add Items 5.1, 5.2, 5.3, and 5.5 through 5.9 to the Consent Calendar, seconded by Director Gunther.

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy
NOES: None
ABSENT: None

A motion was made by Director Weed, seconded by Director Gunther to approve the following items on the Consent Calendar as amended.

- 4.1 Approval of Minutes of Regular Board Meeting of December 8, 2022
- 4.2 Ratification of Payment of Audited Demands dated December 2, December 9, December 16, December 23, and December 30, 2022

- 4.3 Resolution Approving and Authorizing Execution of Public Water System Extension Agreement with Merida Place LLC, Tract 8340 – Muse Court Condominiums, ACWD No. 2020-0003

RESOLUTION NO. 23-001

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
APPROVING AND AUTHORIZING EXECUTION OF PUBLIC WATER
SYSTEM EXTENSION AGREEMENT WITH MERIDA PLACE LLC, TRACT
8340 – MUSE COURT CONDOMINIUMS, ACWD NO. 2020-0003

- 5.1 Consider and Reaffirm Resolution No. 21-058 Making Findings Pursuant to Assembly Bill 361 that the Proclaimed State of Emergency Continues to Impact the Ability to Meet Safely in Person
- 5.2 Resolution Honoring Timothy Gruchow upon His Retirement from District Service
- 5.3 Authorization of Purchase Order for District Heavy Duty Equipment Fleet Vehicle
- 5.5 Authorization of Professional Services Agreement for Security Master Plan
- 5.6 Resolution Finding the Permit Approval Associated with the 42155 Vargas Road Well Construction Project to be Exempt from the California Environmental Quality Act
- 5.7 Resolution Authorizing the General Manager to Submit an Application and to Execute a Funding Agreement with the California Department of Water Resources for the ACWD Alternative Data Gap Monitoring Well Project
- 5.8 Approve Change Order No. 2 and Adopt Resolution Accepting Completion of Avalon Tank Hillside Slope Erosion Protection Project
- 5.9 Approve Change Order and Adopt Resolution Accepting Completion of the Removal, Disposal, and Installation of Filter Media in Filters 4, 5, and 6 at WTP No. 2 Project

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy

NOES: None

ABSENT: None

5 – ACTION CALENDAR

- 5.1* CONSIDER AND REAFFIRM RESOLUTION NO. 21-058 MAKING FINDINGS PURSUANT TO ASSEMBLY BILL 361 THAT THE PROCLAIMED STATE OF EMERGENCY CONTINUES TO IMPACT THE ABILITY TO MEET SAFELY IN PERSON

Assembly Bill 361 (AB 361) amended Government Code Section 54953 to allow legislative bodies to continue to meet remotely during a proclaimed state of emergency provided certain conditions are met and certain findings are made. On October 14, 2021, the Board adopted Resolution No.

21-058 finding that the state of emergency associated with the COVID-19 pandemic continues to directly impact the ability to meet safely in person, and state or local officials continue to impose or recommend measures to promote social distancing. Pursuant to Government Code Section 54953(e)(3), the Board must reaffirm those findings. Resolution No. 21-058 was attached to the staff report.

The Board of Directors has been holding its public Board and committee meetings virtually since March 17, 2020, following Governor Newsom’s March 4, 2020, emergency declaration and subsequent executive order suspending certain provisions of the Ralph M. Brown Act to help protect against the spread of COVID-19, maximize social distancing, and protect the health and safety of the public.

On September 16, 2021, and prior to the September 30th expiration of the Governor’s executive order, the Governor signed AB 361 into law as urgency legislation. AB 361 amends Government Code Section 54953 to allow legislative bodies to continue to meet remotely during a proclaimed state of emergency provided certain conditions are met and certain findings are made.

On October 14, 2021, the Board adopted Resolution No. 21-058 making the necessary findings to continue to hold public meetings virtually under AB 361. Pursuant to Government Code Section 54953(e)(3), the Board must reaffirm those findings.

In order to continue meeting virtually during the ongoing state of emergency, the Board will continue to:

- Ensure all virtual meetings are open to the public and all persons are permitted to attend and participate.
- Provide notice and post agendas and virtual access information.
- Conduct the virtual meetings in a manner that protects the statutory and constitutional rights of the public.
- Provide members of the public access to the meeting and an opportunity to address the Board and provide comments in real time.
- Suspend action on items in the meeting agenda in the event that there is a disruption in the ability of the meeting to be broadcast to members of the public or the ability for members of the public to comment.

The Board will continue to monitor the ongoing situation and will consider and reaffirm the resolution making these findings monthly and as appropriate to continue virtual meetings.

A motion was made by Director Weed and seconded by Director Gunther to consider and reaffirm Resolution No. 21-058 making findings pursuant to AB 361 that the proclaimed state of emergency continues to impact the ability to meet safely in person and state or local officials continue to impose or recommend measures to promote social distancing.

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy
NOES: None

ABSENT: None

5.2* RESOLUTION HONORING TIMOTHY GRUCHOW UPON HIS RETIREMENT FROM DISTRICT SERVICE

Timothy Gruchow retired on December 30, 2022, after more than 15 years of service with the District.

Timothy (Tim) began his career with the District on July 3, 2007, as an Electrician in the Facilities Maintenance Division. On September 2, 2013, Tim was promoted to Instrumentation Technician, then later to Senior Instrument Technician on December 3, 2017. Before working at the District, Tim had 10 years' experience owning his own electrical contracting company. Tim started his path into electricity and instrumentation when he joined the United States Marine Corps after graduating from college in 1975. In the Marines, Tim worked as an Electronics Technician on radio and encryption devices. After the Marines, Tim worked for several companies such as Litton Industries, Raychem Industries, and Lockheed. At these companies, Tim worked on automation controls and robotics systems. After joining the District, Tim fit right in and quickly came up to speed with the District's systems.

During his tenure at the District, Tim has continuously performed his duties with the highest levels of professionalism, integrity, reliability, and an attention to detail. Tim has been instrumental in maintaining and prolonging the equipment life at the District's production, distribution, and storage facilities. Though Tim is well rounded in his trades skills, at the District, his focus has primarily been in the development of preventative maintenance (PM) programs. In conjunction with the Systems Maintenance Supervisor and engineers from Facilities Engineering, Tim performed a key role in the review and updating of the District's instrumentation equipment and PM program. Tim has provided valuable input to many equipment and process upgrades and enhancements as well as work efficiencies. Tim has participated in several in-house team projects including the Water Treatment Plant Number 2 Programmable Logic Controller Upgrade and Liquid Oxygen projects, as well as various other projects. Tim will be missed by his many friends and co-workers at the District.

A motion was made by Director Weed and seconded by Director Gunther to adopt a resolution honoring Timothy Gruchow and expressing appreciation for his years of service.

RESOLUTION NO. 23-002

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
HONORING TIMOTHY GRUCHOW UPON HIS RETIREMENT FROM
DISTRICT SERVICE

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy
NOES: None
ABSENT: None

5.3* AUTHORIZATION OF PURCHASE ORDER FOR DISTRICT HEAVY DUTY EQUIPMENT FLEET VEHICLE

Staff identified the replacement of three vehicles within the District's heavy duty equipment fleet that meet established criteria and are recommended for replacement in FY 2022/23. The Board authorized the ordering of two of the three planned replacement heavy duty equipment fleet vehicles at its October 2022 Board meeting. Staff requests authorization to order and purchase the third heavy duty equipment fleet vehicle, 2023 Ford F-600 with a Knapheide utility body. Due to supply constraints, pre-orders are now necessary in order for the District to secure purchasing rights of vehicles for future delivery. This vehicle is expected to ship next fiscal year. The District utilizes a competitively bid cooperative agreement awarded by Sourcewell to National Auto Fleet Group for the purchase of heavy duty fleet vehicles. There is adequate funding within the District's FY 2022/23 Capital Improvement Program for this purchase. Board authorization to replace vehicles that are nearing the end of their useful life will assist the District in achieving its Strategic Plan Goal 1.1- Efficiently Manage and Maintain Our Infrastructure to Ensure Reliability.

The District has a vehicle and equipment replacement program established for the routine life cycle replacement of vehicles and equipment that are required for staff to conduct District related business activities. The program also has an established funding mechanism through the Capital Improvement Program (CIP) to replace vehicles and equipment that are nearing the end of their useful life. The program reduces maintenance costs and has resulted in improved vehicle and equipment reliability. As a result, District staff is able to provide consistent services using reliable vehicles and equipment.

Careful consideration was used in the selection of the optimal replacement vehicles. Staff familiarity with Ford motor vehicle products and associated diagnostic tools, life cycle operating costs, and overall efficiency in terms of fuel economy and emission output were considered in the selection process. Fleet management staff met with the end vehicle users to develop suitable replacement vehicle specifications that met operational needs as well as the above stated factors.

Pursuant to Section L of the District's Procurement Policy, the District, as a local governmental agency member, may purchase vehicles through the Sourcewell cooperative purchasing program. Sourcewell selects vendors to participate in the cooperative purchasing program through a competitive solicitation process and selected National Auto Fleet Group for the purchase of its fleet vehicles. Utilizing this cooperative agreement allows the District to leverage economies of scale obtaining pricing lower than Manufacturer Suggested Retail Price.

Staff included funding in the CIP for the purpose of purchasing three heavy duty vehicles in FY 2022/23. The vehicles that met the District's replacement criteria included one dump truck and two crane trucks. While evaluating the needs of the District, staff determined that the two crane trucks no longer met the functional needs of the District. Working with end users, it was determined that a single flatbed truck would better meet the needs of the District. At its November 2022 meeting, the Board authorized the purchase of a replacement dump truck and the flatbed truck. At that time, it was indicated that a third vehicle, a utility truck, would be needed for the newly created Senior Utility Mechanic position, but the vehicle was not yet available for pre-order. Staff has since been able to obtain a quote from the vendor that is now accepting a pre-order for this replacement heavy duty equipment fleet vehicle. Authorization is now being requested for the

purchase of one Ford F-600 with a Knapheide service body for a total amount not to exceed \$183,922.56.

A motion was made by Director Weed and seconded by Director Gunther to authorize the General Manager to execute a purchase order to National Auto Fleet Group in a total amount not to exceed \$183,922.56 for the purchase of one 2023 Ford F-600 with a Knapheide utility body.

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy

NOES: None

ABSENT: None

5.4 AUTHORIZATION OF PROFESSIONAL SERVICES AGREEMENT FOR EMERGENCY ACTION PLANS

Director Weed stated as an owner of property located within 500 feet one of the properties of interest, he would recuse himself from any participation in or discussion of Item 5.4. Director Weed left the Board Room at 6:12 P.M.

Mr. Arends reported that California laws require owners of State regulated dams of certain classifications to create inundation maps and related Emergency Action Plans (EAP) which are to be approved by the state. Six District facilities require such plans. Currently the District is compliant with six inundation maps and one EAP. A second EAP is currently under review by the State. Outside services are needed to expedite the completion and approval of the four remaining EAPs. There is adequate funding in the FY 2022/23 budget for this expenditure. As of the writing of this Staff Report, this topic is planned to be reviewed with the Operations and Water Quality Committee on January 11, 2023. Approval of this agreement will support the District's Strategic Plan Goal 1.3 – Continuously Improve Emergency Preparedness and Response Capabilities.

Senate Bill 92 added Sections 6160 and 6161 to the California Water Code that became effective on June 17, 2017. The laws require owners of State regulated dams that are classified as extremely high hazard, high hazard, and significant hazard to create inundation maps and related EAPs to prepare for possible dam failures. Dam owners must submit inundation reports to the California Department of Water Resources (DWR) Division of Safety of Dams (DSOD) and EAPs to the California Governor's Office of Emergency Services (CalOES) Dam Safety Planning Unit for approval. The EAPs include information about the dam owner and impacted stakeholder agencies' responsibilities, notification flowcharts, EAP response process, preparedness, plan maintenance, and inundation mapping.

DSOD classifies six District structures as being or having a dam, including three reservoirs (Decoto Reservoir – extremely high, Middlefield Reservoir – high, Patterson Reservoir – significant), two dikes (Quarry Pits Dam – high, Shinn Pit Dam – significant) and one traditional dam (Rubber Dam 3 – significant).

Currently the District is compliant with six inundation maps and one EAP. A second EAP is currently under review by CalOES. Outside services are needed to expedite the completion and

approval of the four remaining EAPs. The proposed scope of work includes plan creation and approval by CalOES using inundation maps approved by DSOD and stakeholder agency outreach. In addition to plan creation, the consultant will provide a closeout report detailing work completed as well as an implementation and maintenance plan for the EAPs.

Staff issued a Request for Proposals (RFP) on September 23, 2022, soliciting interested firms to submit proposals for the development of EAPs. On October 25, 2022, a total of six proposals were received. Each proposal was evaluated based upon established criteria contained in the RFP, including methodology and approach, qualifications and experience, and cost. Based upon the initial evaluation, two proposers were invited for an interview by the technical evaluation team. Upon a comprehensive evaluation of proposals and interviews, Water Resources Engineering, Inc. was the highest ranked firm and was determined to have the qualifications, experience, and proposed methodology and approach that best met the District's needs. The estimated cost for the requested services on a time and expense basis is \$188,820. Staff evaluated the proposed scope of work and level of effort and found the estimated level of effort and cost to be reasonable for the services to be provided.

Staff responded to inquiries from the Board.

A motion was made by Director Gunther and seconded by Director Akbari to authorize the General Manager to enter into an agreement for professional services for the development of four dam Emergency Action Plans with Water Resources Engineering, Inc. for an amount not to exceed \$188,820.

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, and Sethy
NOES: None
ABSENT: Director Weed

Director Weed returned to the Board Room at 6:17 P.M.

5.5* AUTHORIZATION OF PROFESSIONAL SERVICES AGREEMENT FOR SECURITY MASTER PLAN

The District's plans for security assessments and improvements include utilizing professional services for the preparation of a Security Master Plan that will guide the District through a comprehensive District-wide review and upgrade of its overall security program. This includes physical security at District sites, the systems that secure each site, and how security is managed. The project will assess the District's security program, make recommendations based on industry standards, and collaborate with the District to draft standards and an implementation plan. There is adequate funding in the FY 2022/23 budget for this expenditure. Security Master Planning was discussed with the Operations and Water Quality Committee in March 2022. Authorization of this agreement will help the District meet its Strategic Plan Goal 1.3 – Continuously Improve Emergency Preparedness and Response Capabilities.

Security threats continue to evolve from those of a physical nature, such as a person attempting to enter a facility, to include those of a digital nature including cyberattacks via systems like access control and video monitoring systems. Staff plans to conduct a comprehensive review of security systems and identification of potential upgrades to ensure ongoing reliability and the safety and security of District facilities and staff.

The development of the Security Master Plan will take place in three phases: Phase 1 – Assessment, Phase 2 – Development of the Master Plan, and Phase 3 – Development of an implementation plan. An optional service is included in the scope of work to assist with the drafting of solicitation documents for the procurement and installation of any new security systems or hardware.

Assessment of the security program will consist of physical security, security systems, ensuring security systems are not vulnerable to cyberattacks, and overall management of the program. The Security Master Plan will include three sections. Section one will provide physical security design standards for typical sites. These standards can be used both proactively when designing new facilities and to repair or upgrade a security component at an existing site. Section two will be a plan to update and integrate the security systems including burglar, fire, access control, and video monitoring systems. The upgrades and integration of these systems will reduce maintenance costs and staff time and allow for a centralized approach to security. Section three will be a security staffing plan. Currently, security staffing consists of District and contract employees who provide system monitoring, incident monitoring, system maintenance, and incident response. The staffing plan will be used to consolidate contracts, reduce incident response time, and make systems more efficient and easier for use.

The implementation plan will identify the capabilities and capacity of District and contract staff to implement the plan through the Capital Improvement and Security programs. The optional phase will draft solicitation documents to support the implementation plan.

Staff issued a Request for Proposals (RFP) on August 2, 2022, soliciting interested firms to submit proposals for the development of a Security Master Plan. On September 14, 2022, one proposal was received. The proposal was evaluated based upon established criteria contained in the RFP, including methodology and approach, qualifications and experience. Based upon the initial evaluation, the proposer was invited for an interview by the technical evaluation team. Upon a comprehensive evaluation of proposal and interview, Aanko Technologies, Inc. was determined to be well qualified to provide the required services and able to meet the District's needs. The estimated cost for the requested services on a time and expense basis is \$190,922 which includes \$165,922 in base services and \$25,000 in optional services. Staff evaluated the proposed scope of work and level of effort and found the estimated level of effort and cost to be reasonable for the services to be provided.

A motion was made by Director Weed and seconded by Director Gunther to authorize the General Manager to execute an agreement with Aanko Technologies, Inc. for the development of a Security Master Plan with a not-to-exceed amount of \$190,922, which includes \$165,922 in base services and \$25,000 in optional services.

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy
NOES: None
ABSENT: None

5.6* RESOLUTION FINDING THE PERMIT APPROVAL ASSOCIATED WITH THE
42155 VARGAS ROAD WELL CONSTRUCTION PROJECT TO BE EXEMPT FROM
THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

The District is the local permitting and enforcement agency for wells, exploratory holes, other excavations, and appurtenances in the cities of Fremont, Newark, and Union City under the statutory authority granted to the District under the Alameda County Water District Groundwater Protection Act and the District adopted Ordinance No. 2010-01. All work regulated by Ordinance No. 2010-01 requires a permit issued by the District. The 42155 Vargas Road Well Construction Project (Project) consists of the construction of a new water well that will supply less than two acre-feet per year of water at 42155 Vargas Road in Fremont. This Project is subject to the California Environmental Quality Act (CEQA). The City of Fremont filed a Notice of Exemption from CEQA for the Project on November 14, 2022 (see Attachment). The District is the responsible agency under CEQA issuing the well permit. The issuance of a drilling permit by the District for the Project meets the requirements necessary to be found categorically exempt from CEQA. Board authorization of this item will help meet the District’s Strategic Plan Goal 2.1. Maintain and Enhance Sustainability and Reliability of Local and Regional Water Supplies.

The District is the local permitting and enforcement agency for wells, exploratory holes, other excavations, and appurtenances in the cities of Fremont, Newark, and Union City under the statutory authority granted to the District under the Alameda County Water District Groundwater Protection Act (Division 12, Part 5, Chapter 1, Article 9.3, commencing with Section 31142.20 of the California Water Code) and Ordinance No. 2010-01. All work regulated by Ordinance No. 2010-01 requires a permit issued by the District.

The Project requires a District permit for the installation of a new water well located at 41255 Vargas Road in Fremont. The new water well will be located in the northeastern corner of the property. The proposed water well will be approximately 250 feet deep, will supply water to a nursery that sells drought tolerant and similar type plants, and will produce less than two acre-feet of water per year. Note that the District finds the proposed water well to be outside the Niles Cone Groundwater Basin. Therefore, it is not subject to the Governor of California Drought Executive Order N-07-22 dated March 28, 2022, which includes requirements regarding permitting of groundwater wells in basins subject to the Sustainable Groundwater Management Act.

This Project and the District’s associated drilling permit approval will not result in any significant environmental impacts or a serious disturbance to an environmental resource, does not involve unusual circumstances, uniquely sensitive environment, or significant cumulative impacts from similar projects. The Project is exempt from the CEQA because it falls within the following Categorical Exemptions: CEQA Guidelines Sections 15303 (Construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where

only minor modifications are made in the exterior of the structure); 15304 (Minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry and agricultural purposes); and 15332 (Projects characterized as in-fill development meeting the following conditions: (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations; (b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses; (c) The project site has no value as habitat for endangered, rare or threatened species; (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and (e) The site can be adequately served by all required utilities and public services).

A motion was made by Director Weed and seconded by Director Gunther to adopt a resolution 1) finding the drilling permit approval associated with the 42155 Vargas Road Well Construction Project to be exempt from the California Environmental Quality Act; and, 2) authorizing the General Manager or designee to file a Notice of Exemption with the Alameda County Clerk's Office.

RESOLUTION NO. 23-003

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
FINDING THE PERMIT APPROVAL ASSOCIATED WITH THE 42155
VARGAS ROAD WELL CONSTRUCTION PROJECT TO BE EXEMPT FROM
THE CALIFORNIA ENVIRONMENTAL QUALITY ACT.

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy
NOES: None
ABSENT: None

5.7* RESOLUTION AUTHORIZING THE GENERAL MANAGER TO SUBMIT AN
APPLICATION AND TO EXECUTE A FUNDING AGREEMENT WITH THE
CALIFORNIA DEPARTMENT OF WATER RESOURCES FOR THE ACWD
ALTERNATIVE DATA GAP MONITORING WELL PROJECT

On October 4, 2022, the California Department of Water Resources (DWR), released the Guidelines and Solicitation Package for Sustainable Groundwater Management (SGM) Grant Program's Sustainable Groundwater Management Act (SGMA) Implementation Round 2 under the California Budget Act of 2021 and 2022 (Budget Act of 2021 and 2022) and Proposition 68 Grant Programs. Staff identified the Alameda County Water District (ACWD) Alternative Data Gap Monitoring Well Project (Project), which includes the design, construction, and installation of a total of seventeen monitoring wells as a candidate for grant funding. The purpose of the Project is to acquire additional data to refine the District's understanding of the hydrodynamics within the Niles Cone Groundwater Basin (Niles Cone) in areas where data gaps exist. The additional monitoring wells will be incorporated into the District's monitoring network, and the information collected will be incorporated into the District's Alternative to a Groundwater Sustainability Plan annual reports and the next five-year update. On December 15, 2022, staff

submitted a grant application for the Project to DWR in order to meet the deadline for grant applications. A resolution authorizing submittal of a grant application and authorization to enter into a grant funding agreement is required as part of the application and must be provided prior to executing a funding agreement. Board authorization of the grant will help meet the District's Strategic Plan Goal 2.1– Maintain and Enhance Sustainability and Reliability of Local and Regional Water Supplies.

On December 29, 2021, the District submitted its Five-Year Periodic Evaluation of its Alternative to a Groundwater Sustainability Plan (Alternative Update), as required under the SGMA. To assist Groundwater Sustainability Agencies (GSAs) in meeting the requirements and improving on their Groundwater Sustainability Plans or Alternatives, DWR created the DWR-administered SGM Grant Program. This funding opportunity for the SGM Implementation Round 2 solicitation will provide over \$200 million from various funding sources and is being offered to implementation projects between \$1,000,000 and \$20,000,000 with no cost share requirements.

The purpose of the Project is to acquire additional data to refine the District's understanding of the hydrodynamics within the Niles Cone in areas where data gaps exist, to incorporate the additional data into the District's monitoring network, and to incorporate the information collected into the District's Alternative to a Groundwater Sustainability Plan annual reports and next five-year update. The Project is supported by recommendations made by Woodard & Curran, Inc. during the District's Groundwater Flow Basin Model Upgrade and Alternative Update Project, where they identified similar data gaps. The Project will also provide valuable information that could be used to identify future District water production well locations. As a result, the District submitted a Project grant application for the design, construction, and installation of new monitoring wells in the northeastern and southern portions of the Niles Cone where these data gaps exist.

The Project proposes the installation of 17 monitoring wells in multiple aquifers (in well clusters) in the Niles Cone to collect geologic and hydrogeologic data. Each site location consists of a number of proposed groundwater monitoring wells constructed and screened at different aquifer depths. Constructing multiple wells in different aquifers at the same site yields logistical efficiency by requiring fewer mobilizations of drilling equipment, which will provide cost-saving benefits. In addition, because the District plans to incorporate the groundwater monitoring wells into its existing groundwater monitoring program, installing multiple wells in separate aquifers at the same site increases monitoring efficiency, which will provide cost-saving benefits to the District.

On December 15, 2022, staff submitted a grant application for the Project to DWR. A resolution authorizing a grant application and authorization to enter into a grant funding agreement is required as part of the application and must be provided prior to executing a funding agreement. The total estimated cost to implement this Project is \$2,303,808.26 and since the SGM Grant Program does not have a cost share requirement, the application includes a request for grant funding for District labor and construction costs.

A motion was made by Director Weed and seconded by Director Gunther to adopt a resolution authorizing and directing the General Manager or designee to: 1) prepare and file the application for funding with the California Department of Water Resources for the ACWD Alternative Data Gap Monitoring Well Project (Project), and take such other actions necessary or appropriate to

obtain grant funding; 2) execute the funding agreement with the California Department of Water Resources and any amendments thereto; and, 3) submit any required documents, invoices, and reports required to obtain grant funding and to carry out the Project.

RESOLUTION NO. 23-004

OF THE BOARD OF DIRECTORS OF THE ALAMEDA COUNTY WATER DISTRICT AUTHORIZING THE GENERAL MANAGER TO SUBMIT AN APPLICATION AND TO EXECUTE A FUNDING AGREEMENT WITH THE CALIFORNIA STATE DEPARTMENT OF WATER RESOURCES FOR THE ACWD ALTERNATIVE DATA GAP MONITORING WELL PROJECT

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy
NOES: None
ABSENT: None

5.8* APPROVE CHANGE ORDER NO. 2 AND ADOPT RESOLUTION ACCEPTING COMPLETION OF AVALON TANK HILLSIDE SLOPE EROSION PROTECTION PROJECT

The Board previously awarded construction of the Avalon Tank Hillside Slope Erosion Protection Project (Project) to Disney Construction, Inc. (Disney Construction). The Project included retrofitting existing soil nails, and installing new soil nails, a concrete soil nail wall facing, bulkheads, and concrete access steps on the Avalon Tank hillside. Change Order No. 2 has been prepared to address final quantity adjustments, protecting in place and exposing the hillside above ground drainage pipe, and credit for coating modifications to the soil nail base plates. The Project was recently reviewed at the Engineering and Information Technology Committee on December 7, 2022. The final contract cost, including change orders, is \$2,286,649.96. There is adequate funding in the Capital Improvement Program budget for this expenditure. The Project is now complete. Completion of the Project helps meet the District’s Strategic Plan Goal 1.1 – Efficiently Manage and Maintain our Infrastructure to Ensure Reliability.

On April 12, 2022, the Board awarded construction of the Project to Disney Construction in the amount of \$2,133,333. The Engineer’s Estimate for the Project ranged from \$2,000,000 to \$2,200,000. The Project consists of retrofitting existing soil nails, and installing new soil nails, a concrete soil nail wall facing over all soil nails, bulkheads upslope of the drainage ditches where the hillside is left uncovered, and concrete access steps on the hillside slopes.

Change Order No. 1 in the amount of \$95,366.18 was previously authorized by the General Manager. The Change Order was prepared to perform scaling on the hillside to expose additional length on the existing soil nail bar which allows retrofits for the new shotcrete facing. Completion of the work required an additional 30 calendar days. Change Order No. 2 in the amount of \$57,950.78 has been prepared to account for the following work items: 1) final quantities for soil off haul and shotcrete (\$56,402.00), 2) protect in place and expose the existing above ground

drainage hillside pipe (\$3,162.78), and 3) credit for the modifications to the soil nail base plate coating system (-\$1,614.00).

The total construction cost, including all change orders, is \$2,286,649.96. Disney Construction’s work was completed successfully, the new erosion protection measures are in place, and the Project is now complete. The recommended costs and time extensions were evaluated and are determined by staff to be reasonable.

A motion was made by Director Weed and seconded by Director Gunther to 1) approve Change Order No. 2 in the amount of \$57,950.78 to Disney Construction and grant a time extension of 30 days; and 2) adopt a resolution accepting completion of the Avalon Tank Hillside Slope Erosion Protection Project, Job 21313.

RESOLUTION NO. 23-005

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
ACCEPTING COMPLETION OF THE AVALON TANK HILLSIDE SLOPE
EROSION PROTECTION PROJECT, CONTRACT NO. 4660, WITH DISNEY
CONSTRUCTION, INC., JOB NO. 21313

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy
NOES: None
ABSENT: None

5.9* APPROVE CHANGE ORDER AND ADOPT RESOLUTION ACCEPTING
COMPLETION OF THE REMOVAL, DISPOSAL, AND INSTALLATION OF FILTER
MEDIA IN FILTERS 4, 5, AND 6 AT WTP NO. 2 PROJECT

The Board previously awarded the removal, disposal, and installation of new filter media for three filters at Water Treatment Plant (WTP) No. 2 (Project) to ERS Industrial Services, Inc. (ERS). The filters are operational and the Project is complete. Change Order No.1 has been prepared to address additional work associated with Filter 5 Plenum repairs and includes a time extension of 24 days to address delays not caused by the contractor. This time extension does not affect the cost of the Project. The Project was reviewed with the Operations and Water Quality Committee on September 6, 2022. Completion of this Project helps meet the District’s Strategic Plan Goal 1.2 – Continue to Meet Water Quality Standards 100% of the Time.

On January 13, 2022, the Board awarded the construction contract to ERS in the amount of \$669,390.08 to remove, dispose, and install new filter media in filter numbers 4, 5, and 6 at WTP No. 2. The contract also contains provisions for the Contractor to: 1) remove, dispose, and install 3,750 new nozzles in filters 4, 5, and 6; 2) remove and replace approximately 300 linear feet of expansion joints in filters 4, 5, and 6; 3) remove and replace approximately 33 linear feet of expansion joints at the process decks between filters 3, 4, 5 and 6; and 4) inspect the underdrain forms and concrete in the filter plenum and filter basins 4, 5, and 6.

Change Order No. 1, in the amount of \$3,740.00, has been prepared to address a joint repair in the plenum of Filter No. 5 and to address a time extension of 24 calendar days for delays beyond the control of the contractor. The 24 calendar day time extension does not add additional cost to the project. The total project cost, including Change Order No. 1 and adjustment for final quantities, is \$673,130.08.

A motion was made by Director Weed and seconded by Director Gunther to 1) approve Change Order No. 1 in the amount of \$3,740.00, which includes a time extension of 24 calendar days, to the contract issued to ERS Industrial Services, Inc.; and 2) adopt a resolution accepting the completion of the Removal, Disposal, and Installation of Filter Media in Filters 4, 5, and 6 at WTP No. 2 Project, Job 21350.

RESOLUTION NO. 23-006

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
ACCEPTING COMPLETION OF THE REMOVAL, DISPOSAL, AND
INSTALLATION OF FILTER MEDIA IN FILTERS 4, 5, AND 6 AT WATER
TREATMENT PLANT NO. 2, CONTRACT NO. 4626, WITH ERS
INDUSTRIAL SERVICES, JOB NO. 21350

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy
NOES: None
ABSENT: None

5.10 APPROVING THE AMENDED AND RESTATED COOPERATIVE AGREEMENT
FOR WATER TRANSFER AND EXCHANGE PROJECT BETWEEN ALAMEDA
COUNTY WATER DISTRICT AND CONTRA COSTA WATER DISTRICT AND
RELATED ACTIONS

Ms. Hidas reported in 2022, the District signed an agreement with Contra Costa Water District (CCWD) which authorized CCWD to purchase transfer water under the Lower Yuba River Accord (Yuba Accord), temporarily store that water in Los Vaqueros Reservoir, and then transfer it to the District via an exchange. The source water was a unique class of water under the Yuba Accord, only available during spring months when it is not eligible for direct transfer to the District using the State Water Project (SWP) facilities. CCWD is uniquely able to acquire springtime water because of its ownership of diversion facilities in the Sacramento-San Joaquin River Delta (Delta). By storing the water in Los Vaqueros Reservoir, CCWD can hold the water on the District's behalf until the transfer window opens and the District can receive the water using SWP facilities. The 2022 Yuba Accord water ultimately was not available due to changed weather conditions and flow requirements in the Sacramento River, and the agreement ultimately resulted in no water transfer to the District.

CCWD together with the East Bay Municipal Utility District (EBMUD) have entered into a multiyear agreement with Yuba Water Agency (YWA) through 2025 to acquire this same water again in the future should it come available. The District and CCWD staff have similarly agreed

to pursue a renewal of the 2022 agreement through the same period. By doing so, the District will have a preauthorized agreement in place to approve CCWD's acquisition of Yuba Accord water on the District's behalf should it become available again and be desired by the District. The agreement makes no commitment of funds in the present and therefore has no budget impact. In the event water becomes available and staff recommends the District purchase the water, staff will request authorization from the Board and a reserve appropriation for the purchase as an extraordinary dry-year expense as well as authorization to file a Notice of Exemption for the transfer under the California Environmental Quality Act (CEQA). The cost will be the then-current market rate for water transfers from the Sacramento River Settlement Contractors less 10%, or as otherwise agreed to by CCWD, EBMUD, and the YWA.

Board approval of this action will help meet the District's Strategic Plan Goal 2.1 – Maintain and Enhance Sustainability and Reliability of Local and Regional Water Supplies and Goal 2.2 – Protect Existing Imported Water Supplies.

During this exceptional drought emergency, CCWD and the District have been exploring various integrated regional water management opportunities. Building on work done in 2022, staff is proposing to renew a cooperative agreement for water transfer and exchange to keep options open to pursue potential opportunities through 2025.

In 2022, the District and CCWD developed an agreement for a one-time water transfer in which CCWD would acquire water through a separate agreement with the YWA, purchasing up to 15,000 acre-feet (AF) of water made available under the Yuba Accord. CCWD would undertake the purchase in coordination with and for the benefit of several regional water agencies including EBMUD, the District, and, potentially, the San Francisco Public Utilities Commission (SFPUC). The District expressed an interest in receiving up to 5,000 AF of the Yuba Accord water. CCWD would acquire the District's share of the Yuba Accord water either in the spring between April 1, 2022, and June 30, 2022, or the summer between July 1, 2022, and September 30, 2022. The District is unable to take direct delivery of transfer water during those months due to operating restrictions of the SWP during spring months. Therefore, CCWD would utilize its existing infrastructure, including intakes, conveyance, and Los Vaqueros Reservoir, to acquire the Yuba Accord water on the District's benefit and store this water in Los Vaqueros Reservoir. Because purchased Yuba Accord water is sourced north of the Delta, it is subject to a 35% carriage water loss as determined by regulatory agencies. As the water would be stored in Los Vaqueros Reservoir, it would experience 8% per year of evaporation losses. The District would reimburse CCWD for the purchase cost of Yuba Accord water as well as the costs related to Los Vaqueros Reservoir storage and conveyance associated with the program. The purchase cost of the springtime water in 2022 was \$500 per AF and the purchase cost of the summertime water was \$600 per AF. With the addition of conveyance losses, conveyance costs, and storage, staff estimates the unit cost to be approximately \$980 per AF for springtime water or \$1,135 per AF for summertime water and upon delivery, totaling up to \$5,000,000. If it had been successful, the transfer may have been used to explore transfer opportunities of water between the District and the SFPUC Regional Water System.

Because CCWD and the District's distribution systems are not directly connected, completion of this transfer would have required an in-lieu exchange as was performed during the 2014 Alameda

County Water District (ACWD)-CCWD water transfer. CCWD would use the Yuba Accord water previously stored in Los Vaqueros Reservoir in lieu of diverting a portion of its Central Valley Project (CVP) allocation from CCWD’s Delta intakes. CCWD’s forgone CVP allocation would be diverted by DWR into the SWP Clifton Court Forebay for pumping at the Harvey O. Banks Pumping Plant and delivered to the District through the South Bay Aqueduct (SBA). Several regulatory approvals and agreements are necessary to implement this type of one-year water transfer, including from the State Water Resources Control Board (State Water Board), DWR, and the U.S. Bureau of Reclamation (Reclamation). Anticipated necessary approvals and agreements include: (1) a temporary change petition filed with the State Water Board to add DWR’s Banks Pumping Plant as a point of diversion or redirection to Reclamation’s CVP water rights; (2) a conveyance agreement with DWR to deliver CCWD’s CVP allocation through Banks Pumping Plant and the SBA; and, (3) Reclamation review of the exchange of a portion of CCWD’s CVP allocation to the District and approval pursuant to the National Environmental Policy Act. Because the water transfer would be classified as a ‘one-time transfer’ of drought emergency water supplies using existing facilities it is exempt from CEQA. The District would file a Notice of Exemption (NOE) under CEQA with the Alameda and Contra Costa County Clerks and the California Office of Planning and Research if it proceeds with pursuing a future one-year transfer.

The 2022 transfer ultimately did not occur because of changed weather conditions and flow requirements in the Sacramento River, and the agreement ultimately resulted in no water transfer to the District. However, this possibility for future years remains open. CCWD has since amended and restated the agreement it developed in 2022 for the initial acquisition of water from YWA. Accordingly, staff has worked with CCWD to amend and restate the ACWD-CCWD agreement so that the District could act quickly to acquire YWA should it come available and be needed during the coming years, as well as pursue all of the necessary approvals to execute a one-year transfer. The term considered is through 2025, which coincides with the term of the Yuba Accord itself.

Staff responded to inquiries from the Board and discussion ensued. Director Huang commented on the term length as a good example of ACWD foresight. Director Gunther also supported this item as a demonstration of agencies working together.

A motion was made by Director Huang and seconded by Director Akbari to authorize the General Manager to execute the Amended and Restated Cooperative Agreement for Water Transfer and Exchange Project Between Alameda County Water District and Contra Costa Water District and related actions.

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy
NOES: None
ABSENT: None

5.11 AUTHORIZATION TO ENTER INTO NEW CONTRACT WITH MISSIONSQUARE TO CONTINUE TO PROVIDE DEFERRED COMPENSATION PLAN SERVICES AND TO AMEND THE CONTRACT WITH MISSIONSQUARE FOR RETIREE HEALTH SAVINGS PLAN SERVICES

Mr. Wunderlich reported the District maintains two Deferred Compensation retirement plans that are available to employees for contributing pre-tax retirement savings out of their paychecks to supplement their CalPERS pension. MissionSquare is the District's Deferred Compensation plans' administrative and investment-related services provider and record keeper. To maintain continuity with these critical services, staff and MissionSquare recently began negotiating a new five-year contract (the current contract is set to expire in spring of 2023). All fees for MissionSquare's services are paid by Deferred Compensation plan participants as a percentage of their account balance.

The District also maintains a Retiree Health Savings Plan (RHSP), which is a retiree-only health plan that provides reimbursement of certain medical expenses. MissionSquare also provides administrative, investment-related and record keeping services for the RHSP under an existing contract for which an amendment has been proposed to extend the contract term and make other changes. Fees for MissionSquare's RHSP services are paid from participants' accounts and supplemented by a negotiated employee benefit of \$25 paid annually by the District to MissionSquare on behalf of each active employee (former employees pay the \$25 annual fee out of their account balance).

This item was reviewed with the Finance Committee on November 15, 2022. Approval of this item will help achieve District Strategic Plan Goal 4 – Improve Workforce Recruitment, Maintain Retention, and Enhance Employee Engagement.

MissionSquare, formally ICMA-RC, has provided Deferred Compensation plan services to the District and its employees/retirees under an initial contract and amendments to it since 2008. MissionSquare has provided RHSP services to the District and employees/retirees under a separate contract, since the RHSP was established in 2019. MissionSquare provides account management for participants, is the record keeper for all investments made by participants, serves as the point of contact for all employees and retirees, provides monthly participant meetings, provides quarterly financial education for participants, and works with retirees on plan disbursements, for the District's two Deferred Compensation plans (the 457(b) and 401(a) Plans), and the RHSP accounts.

As of third quarter 2022, the District's 457(b) Plan had assets of \$56,759,151 and 494 participants; the 401(a) Plan had assets of \$12,652,352 with 423 participants; and the RHSP had assets of \$260,963 with 84 participants. Overall, total assets are approximately \$69,411,503. The RHSP was established in 2019, when the District implemented the RHSP as a defined contribution retiree healthcare benefit plan for new hires, which is why participation and assets are lower in that plan.

The Deferred Compensation plans provide a supplement to CalPERS retirement benefits and allow employees to invest some of their earnings on a pre-tax basis, or after-tax ROTH contributions. Participants have the option to choose which plans to participate in and how much to contribute.

Participation in the RHSP plan, which provides a vehicle for retirees to be reimbursed for qualified medical expenses, is mandatory for new hires as of January 1, 2019, with a set District contribution.

The District, via Board action, established the Deferred Compensation Committee in 1999, comprised of employees in five specified positions, to serve as trustees of the District's Deferred Compensation plans, providing oversight to ensure investment fund options meet Committee established criteria and monitor investment fund performance. The Committee similarly oversees the RHSP. MissionSquare provides the services outlined above, to our employees and retirees, under the direction of the Deferred Compensation Committee and an expert consultant (the Hyas Group) that supports the Committee.

As part of a new five-year contract (which permits extensions beyond the initial term) for Deferred Compensation plan services, MissionSquare has agreed to reduce their record keeping fee, from 2.5 basis points to 1.6 basis points, and has agreed to maintain the Managed Account fee at 31 basis points (no change). Based upon research by the Hyas Group, this reflects a better than average reduction, and will put the District's record keeping fee at the second lowest of their clients (one client has a 1.5 basis points fee, but that client also has ten times the amount of plan assets).

Staff requests authority for the General Manager to enter into a new contract for Deferred Compensation plan services with MissionSquare, for an initial term of five years, as outlined, and consistent with section I of the District's Procurement Policy that authorizes single source contracts. This is a no cost item to the District, as all MissionSquare fees are paid by individual account holders based upon their account balances.

Staff also requests authority for the General Manager to enter into an amendment to the current RHSP services contract with MissionSquare, which would extend the term of that contract through 2028, and make other changes that have been reviewed and approved by the Deferred Compensation Committee. As a negotiated employee benefit, the District pays \$25 per year to MissionSquare on behalf of each active employee in the RHSP to help fund record keeping services and as a supplement to the fee applied on account balances. This \$25 annual contribution was initially negotiated with MissionSquare due to low account balances in a new program that make it impractical to fund record keeping services solely from fees that are a percentage of account balances.

Final terms and conditions for the new contract for Deferred Compensation plan services and the amendment to the RHSP services contract will be negotiated with MissionSquare, with input from the District's General Counsel.

A motion was made by Director Akbari and seconded by Director Weed to authorize the General Manager to enter into (1) the new MissionSquare contract for Deferred Compensation plan services, and (2) an amendment to the current MissionSquare contract for Retiree Health Savings Plan services, both in a final form approved by the General Manager and General Counsel.

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, Weed, and Sethy
NOES: None
ABSENT: None

5.12 RESOLUTION AMENDING THE COLLECTION AND RESIDENTIAL WATER SERVICE TERMINATION POLICY TO COLLECT DELINQUENT AND UNPAID CHARGES FOR OWNER OCCUPIED SINGLE FAMILY RESIDENTIAL ACCOUNTS ON THE PROPERTY TAX ROLL

Mr. Wunderlich reported that the Alameda County Water District’s (District) Collection and Residential Water Service Termination Policy (Policy) provides an overview of the District’s administrative actions for the collection of delinquent accounts, including notifications, fee assignments, and discontinuation of service. Updates to the Policy are proposed to reflect plans to begin collecting delinquencies for owner-occupied single family residential accounts on the property tax roll. This item was reviewed December 13, 2022, with the Finance Committee. Approval of this item will help the District achieve Strategic Plan Goal 3 – Improve the District’s Financial Stability and Transparency.

State of California Senate Bill 998, signed into law September 2018, set new restrictions on water service termination for non-payment of water utility bills, and required water utility agencies to adopt a written policy regarding the termination of residential water service for non-payment. The District adopted the Collection and Residential Water Service Termination Policy (Policy) on October 10, 2019, which included requirements set forth on Senate Bill 998. The District’s Policy, effective January 1, 2020, includes 1) alternative payment schedules, 2) translation into specific languages, 3) a formal appeals process, 4) timeline of notifications, including service termination, and 5) options for averting discontinuance of water service for non-payment.

Responsive to Board direction during Financial Workshops conducted on July 20 and August 25, 2022, accounts that are over sixty (60) days past due on owner-occupied, single-family residential accounts will be assigned to the Alameda County Assessor’s Office for collection on the property tax roll.

Alameda County requires an executed service agreement, an annual proposition 218 agreement, a legend number and administrative assignment before it will collect items on the property tax roll. The executed service agreement, proposition 218 agreement, and administrative assignment are items that will be completed by staff when the County makes them available. The legend number, which is a 3-digit code used to identify charges and collections in the County’s system, requires legal documentation, such as a Board resolution, that shows the authority to collect charges on the property tax roll.

Below is the timeline for collecting on the property tax roll:

- **January 2023** – Board approves this proposed resolution to provide the requisite authority for staff to begin the administrative process with Alameda County.

- **February/March 2023** – Letters to all single-family residential property owners will be mailed to inform property owners of program commencement.
- **June 1 of every year** – First warning notices for owner-occupied, single-family residential accounts with past due balances over 60 days.
- **July 1 of every year** – Letter of Intent to collect delinquent charges on property tax roll will be sent to affected customers.
- **July Board Meeting of every year** – Board resolution with list of accounts to be levied on the property tax roll. These are owner-occupied residential accounts with delinquent and unpaid charges for water and other services that have remained delinquent and unpaid for at least 60 days.
- **August 1 of every year** – Staff will upload to the county assessor’s portal the list of owner-occupied, single-family residential accounts that still have balances more than 60 days past due.

The proposed addition to the Policy will read:

15. *Delinquent and Unpaid Charges for Water and Other Services for Owner Occupied Single Family Residential Accounts Levied on the Property Tax Roll:*

Owner-occupied, single-family residential accounts that have delinquent and unpaid charges for water and other services that have been delinquent and unpaid over sixty (60) days will be assigned to the Alameda County Assessor’s Office to be levied on the property tax roll on an annual basis. To avoid delinquent and unpaid charges for water and other services being levied on the property tax roll, all charges and fees must be paid to the account no later than June 30 of each year. This process is a supplement to other processes outlined in this Policy and therefore these accounts will still be subject to delinquency penalties up to and including discontinuance of service if water bills are not paid throughout the year.

This Policy will be made available to the public on the District’s website and a reference to the Policy will be included on all District water bills, late fee notices, written disconnection notices, and notices of termination. The Policy will be available and posted on the District’s website in English, Spanish, Chinese, Tagalog, Vietnamese, Korean, Hindi and Farsi.

Director Weed requested staff to develop a metric of the number of referrals made to a collection agency, currently and in the future.

Staff responded to comments and inquiries from the Board and Mr. Nishimura.

A motion was made by Director Weed and seconded by Director Akbari to adopt a resolution amending the Collection and Residential Water Service Termination Policy regarding the collection on the property tax roll for delinquent and unpaid charges for water and other services on owner-occupied, single-family residential accounts and to authorize staff to take actions necessary to implement this amendment to the Policy, such as entering into agreements with the County of Alameda.

RESOLUTION NO. 23-007

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
AMENDING THE COLLECTION AND RESIDENTIAL WATER SERVICE
TERMINATION POLICY AND AUTHORIZE STAFF TO COLLECT
DELINQUENT AND UNPAID CHARGES FOR OWNER OCCUPIED SINGLE
FAMILY RESIDENTIAL ACCOUNTS ON THE PROPERTY TAX ROLL

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Weed, and Sethy
NOES: Director Huang
ABSENT: None

5.13 AUTHORIZATION TO EXECUTE A MEMORANDUM OF AGREEMENT TO
PARTICIPATE IN THE REGIONAL PURIFIED WATER PILOT PROJECT PHASE 2
– PUBLIC OUTREACH AND GRANT FUNDING OPPORTUNITIES

Ms. Hidas reported the District has been collaborating with the Dublin San Ramon Services District (DSRSD), Zone 7 Water Agency (Zone 7), City of Livermore, Livermore-Amador Valley Water Agency (LAVWMA), and Union Sanitary District (USD) on the potential development of a Regional Purified Water Pilot Project (Pilot Project). Based on the results of an initial feasibility study (Phase 1), the six agencies have all expressed interest in moving forward with Phase 2 of the Pilot Project, which would focus on public outreach and education efforts and identifying grant funding opportunities. Staff recommends that the Board of Directors authorize the General Manager to execute a Memorandum of Agreement for the District to participate and contribute \$25,000 in funding for the development of a Public Outreach Plan as part of Phase 2 of the Pilot Project. Staff presented this concept at the June 2022 regular Board meeting. Board approval of the Memorandum of Agreement will help meet the District’s Strategic Plan Goal 2.1 – Maintain and Enhance Sustainability and Reliability of Local and Regional Water Supplies.

The District has been engaged with DSRSD since 2021 in discussions exploring regional purified water project concepts in collaboration with other regional partner agencies. Purified water, or potable reuse, is produced using advanced treatment technologies to purify treated wastewater effluent to a high quality that is suitable for augmenting drinking water sources and is widely being explored by Bay Area water agencies to improve long-term water supply reliability and drought resiliency for the region. The recommended treatment processes for the pilot are designed to meet potable reuse water quality standards that are protective of public health as detailed in the California Code of Regulations (CCR), Title 22. In 2022, the District, DSRSD, Zone 7, LAVWMA, City of Livermore, and USD (Study Partners) completed an Alternative Water Supply Study – Regional Purified Water Pilot Concept Technical Memorandum (Phase 1 study). The concept of the Pilot Project would be to purify treated wastewater from DSRSD and the City of Livermore at a temporary advanced water purification facility located at the LAVWMA export facilities, where treated wastewater from Livermore’s Water Reclamation Plant combines with treated wastewater from DSRSD’s Wastewater Treatment Plant for discharge to San Francisco Bay. The Pilot Project would discharge approximately 0.2 million gallons per day of purified water into a nearby canal to supplement flows in Alameda Creek before ultimately being diverted

by the District for groundwater recharge at the Quarry Lakes. The Pilot Project would operate year-round with flows from DSRSD and Livermore, or seasonally with flows from only DSRSD. The purpose of the Pilot Project is to be a proof of concept that would demonstrate and build awareness around the benefits of purified water and regional collaboration and allow for the collection of data that could be used to inform potential full-scale reuse efforts. The Pilot would establish multiple beneficial uses of the concept including (1) reduced effluent discharges to the San Francisco Bay, (2) enhanced streamflow in Alameda Creek potentially benefiting resident threatened species, and (3) enhanced water supply. The concept would also leverage existing resources and infrastructure including DSRSD treatment facilities and the District's recharge facilities.

Based on the results of the Phase 1 study, the Study Partners expressed interest in moving forward with Phase 2 of the Pilot Project. Phase 2 involves initiating public outreach and education efforts to assess public acceptability around the Pilot Project and purified water projects in general. Phase 2 would also monitor funding opportunities that could be used to support public outreach efforts and potential future phases of the project.

A Memorandum of Agreement has been developed to formalize the Study Partners' commitment to collaborating on Phase 2 of the Pilot Project, which includes cost-sharing on the preparation of a Public Outreach Plan with the assistance of a hired consultant.

The key terms of the Memorandum of Agreement include:

- All parties would agree to work cooperatively on the Public Outreach Plan and share relevant engineering and operational data.
- ACWD would serve as the contract administrator and be responsible for procuring and managing the Public Outreach Plan consultant.
- The parties, not including LAVWMA, would collectively contribute a total of \$120,000 towards the funding of the Public Outreach Plan. The parties may also seek additional outside funding for the Public Outreach Plan. ACWD's cost-share portion would be \$25,000; other parties are contributing \$20,000 to \$25,000. LAVWMA is not contributing funds as its member agencies, DSRSD and City of Livermore, are participating and contributing funding separately.

If approved, the parties intend to execute the Memorandum of Agreement in January 2023. Phase 2 is anticipated to take 12 to 18 months to complete. At the completion of Phase 2, the parties would review the results of Phase 2 and evaluate potential interest in implementing future phases of the Pilot Project.

Participation in Phase 2 does not obligate any party to participate in future phases of the Pilot Project. Because Phase 2 is limited to public outreach and grant funding activities, no provisions related to construction or operation of facilities is included in the Memorandum of Agreement. ACWD staff would seek Board input and direction prior to participating in any future phases of the Pilot Project.

Discussion ensued. Staff and Mr. Miyaki responded to comments and inquiries from the Board and Mr. Nishimura.

No action was taken on this item. Staff was requested to bring this item back to the Board with additional information at an upcoming Board meeting.

5.14 APPROVAL OF CHANGE ORDER AND AUTHORIZATION OF SETTLEMENT AND RELEASE AGREEMENT FOR THE RUBBER DAM NO. 1/ALAMEDA COUNTY DROP STRUCTURE FISHWAY, RUBBER DAM NO. 1 CONTROL BUILDING MODIFICATIONS, AND SHINN POND FISH SCREENS PROJECT

Mr. Awoke reported that the Rubber Dam No. 1/Alameda County Drop Structure Fishway (RD1/DS Fishway), Rubber Dam No. 1 (RD1) Control Building Modifications and Shinn Pond Fish Screens (Shinn Screens) (collectively, the “Project”) are components of the Lower Alameda Creek Fish Passage Improvements intended to enhance steelhead migration through Lower Alameda Creek while sustaining the long-term reliability of the District’s groundwater recharge operations. The Project includes construction of a new fishway, a new Shinn Pond Fish Screens facility to replace existing unscreened diversions, dam foundation modifications, and upgrades to the existing RD1 control building and mechanical and control equipment. Change Order No. 14 has been prepared to address additional work related to addition of rock to the levee trail and access routes adjacent to the project, miscellaneous modifications to electrical and mechanical components, and minor changes to other project components, as well as to include a 242 calendar day time extension. In addition, a Settlement and Release Agreement has been prepared to resolve all disputes regarding the Project, with the exception of out of scope work associated with a work modification order regarding a crane transformer, and to provide for the reduction of the Letter of Credit that has been submitted in lieu of retention. There is adequate funding in the current fiscal year capital budget for this expenditure, and the Project is partially funded by the Alameda County Flood Control and Water Conservation District (County) as well as numerous grants. Board approval of this Contract Change Order and Settlement and Release Agreement will help meet the District’s Strategic Plan Goal 2.1 – Maintain and Enhance Sustainability and Reliability of Local and Regional Water Supplies.

On January 10, 2019, the Board awarded a construction contract in the amount of \$36,757,000 to Flatiron West, Inc. (Flatiron) for construction of the RD1/DS Fishway Project. Flatiron began work in the flood control channel on May 15, 2019, and most of the construction work is complete. Installation and testing of the debris removal davit crane is expected to be completed in late winter of 2023, independent of completion of other contract work and with no impact to facility operation.

Change Order Nos. 1 through 13 totaling \$1,518,227.56 (which is 4.1% of the initial contract value) were previously authorized to address multiple necessary changes including structural and other design modifications, additional dewatering of excavated areas and winterization of dewatering wells, changes to backfill materials and mechanical equipment, demolition of unexpected buried concrete structures, addition of site safety features, and changes to the RD1 Control Building electrical system. Among other things, change orders were also issued to pay for additional insurance required by permitting agencies, for the relocation of a construction laydown area, addition of a fishway davit crane pedestal, to credit the District for expediting procurement

of materials, and to memorialize Flatiron’s provision of a letter of credit as security in lieu of retention.

Change Order No. 14 in the amount of \$523,564.18 has been prepared to pay for modifications to the concrete curbs and imported material supporting the Shinn Screens, additional repairs and use of new material on the levee access road, addition of material adjacent to the Bay Area Rapid Transit (BART) bridge pier, pole relocation and additional electrical and communication wiring work for lighting and security cameras, dam re-inspection support, extending the breakaway fence to the Fishway facility, and deductions for scope reductions associated with project schedule submissions, project signage, and temporary storage of the rubber dam.

Completion of the work will require an additional 242 calendar days because of delays associated with obtaining materials due to supply chain disruptions and with obtaining a new environmental permit to make curb and fencing modifications within the channel.

Staff evaluated the cost for the additional work and has determined that it is reasonable and fair. The costs associated with the RD1 Control Building and Shinn Pond Fish Screens (amounting to \$201,110.31) will be borne by the District, and the cost for remaining change order work items will be split 50/50 between the District and the County, in accordance with a cost share agreement between the District and the County. In summary, the total cost of change orders for this project will be approximately 5.6% of the contract amount.

In addition, a Settlement and Release Agreement has been prepared to resolve all disputes regarding the Project, with the exception of out of scope work associated with a work modification order regarding a crane transformer, and to provide for the reduction of the Letter of Credit that has been submitted in lieu of retention. The reduced Letter of Credit covers the securities in lieu of retention amount required for the out of scope work that remains to be completed by Flatiron.

Director Akbari commended staff for all the work done on this project.

A motion was made by Director Sethy and seconded by Director Gunther to 1) approve Change Order No. 14 in the amount of \$523,564.18 and including granting a time extension of 242 calendar days, and 2) authorize the General Manager to enter into a Settlement and Release Agreement that resolves all disputes regarding the Project, except for remaining out of scope work, and that reduces the Standby Letter of Credit from \$1,881,242.97 to \$250,000, with Flatiron West, Inc., for the Rubber Dam No. 1/Alameda County Drop Structure Fishway, RD1 Control Building Modifications and Shinn Pond Fish Screens Project, Jobs 21006, 21012, and 21019.

The motion was passed by the following vote:

AYES: Directors Gunther, Akbari, Huang, and Sethy
NOES: None
ABSENT: None
ABSTAIN: Director Weed

President Sethy adjourned the meeting for a brief recess at 7:47 P.M. and reconvened the meeting at 8:05 P.M.

6 – REPORTS

6.1 BOARD COMMITTEE REPORTS

- Operations & Water Quality Meeting of December 6, 2022: 1) Headquarters Generator Replacement; 2) 2023 Main Cleaning Program; 3) Middlefield Pipeline Repair
- Engineering & Information Technology Meeting of December 7, 2022: 1) Microsoft 365 Renewal; 2) Update on Avalon Tank Slope Erosion Protection Project; 3) Quarry Lakes Parkway (Formerly East-West Connector), Union City
- Legal, Intergovernmental & Community Affairs Meeting of December 13, 2022: 1) Public Outreach Update; 3) One Saves Water and Drought Outreach Campaign Updates
- Finance Meeting of December 15, 2022: 1) COVID Update; 2) Use of Property Tax Bill for Collections; 3) Operating Revenue and Cost Projections; 4) Help on Tap Update; 5) Income Statement; 6) Budget Report
- Water Resources & Conservation Meeting of December 15, 2022: 1) Drought Update; 2) Water Resources Planning Model Update Approach; 3) Alameda County Water District and Contra Costa Water District Multi-Year Water Transfer and Exchange Project

6.2 OPERATIONAL REPORTS

- Rainfall Report
- Water Production Report
- Quarterly Groundwater Recharge Report
- Investment Report
- Distribution System Monthly Hardness Map – Mr. Nishimura commended the District for its hardness levels.

6.3 STAFF PRESENTATIONS

- My Smart Water Connect (New Customer Online Portal) Demonstration – Mr. Egger and Ms. Bharaj presented the new portal and demonstrated how it can help customers understand, track, and manage their water use. It also allows customers to conduct business with the District through secure billing and payments, customized water usage alerts, access to ACWD Customer Service, information on water conservation and efficiency resources, and more. The new portal (<https://portal.acwd.org/>) is accessible from the District website and a smart phone app.

Staff responded to inquiries and comments from the Board and Mr. Nishimura. The Board thanked staff and consultants for the new system and its features. President Sethy suggested giving customers the opportunity to fill out a survey on their experience of the portal.

- Help on Tap Customer Assistance Program Annual Update – Mr. Burch provided a comprehensive annual review of the Help on Tap program which assists low-income customers by reducing the cost of their water bills. Mr. Burch offered several options for the Board to consider to enhance the program. The ability to enhance the program benefit is

made possible by non-water revenue sources, such as property leases and late fees. The Board provided direction to include consideration of an increase to the benefit during the February Board meeting to cover the full cost of the bi-monthly service charge, which, if approved, would become effective March 1, 2023.

Staff responded to inquiries and comments from the Board and Mr. Nishimura.

- Drought and Recent Weather Updates – Mr. Ash provided an update on the ongoing drought with a review of recent weather events. Despite heavy rains, the District remains in drought conditions with the imported water supply situation remaining the same as much of 2022. Customers have continued to conserve, with current demands lower than the 15% reduction target. The recent rains and more importantly, the heavy snowfall in the Sierras, is helping, but it is too early to determine its impact on a three-year precipitation deficit. Locally, historic flows were recorded in Alameda Creek – 4th largest flow since 1892 and the heaviest rains since the flood control channel was built in the 1970s.

6.4 GENERAL MANAGER’S REPORTS

- Mr. Stevenson reminded the Board of the upcoming community informational meetings or special board meetings on rates: 1) in-person on January 19, 2023, at 6:00 P.M. at the Event Center in Fremont, California, and 2) virtually on January 26, 2023, at 6:00 P.M. on Zoom.
- Mr. Stevenson also informed the Board that there would be a small retirement reception for retired Newark Mayor Alan Nagy on February 5, 2023, 1:00 P.M. to 4:00 P.M.

7 – DIRECTOR’S COMMENTS, REPORTS ON MEETINGS ATTENDED, AND AGENDA ITEM REQUESTS

- President Sethy informed the Board that he and Director Weed are planning on attending the Association of California Water Agencies’ State Legislative Committee meeting on January 20, 2023, in Sacramento, California.
- Director Huang made an agenda item request for the Water Shortage Emergency Declaration to assess the need to continue and provide a status update be added to the February Board meeting.
- Director Weed informed the Board that the Alameda County Special District Association annual dinner is being held on March 20, 2023, in Castro Valley, California.
- Director Weed informed the Board of the Association of California Water Agencies Washington D.C. Conference on February 28 – March 2, 2023.

There being no further business to come before the Board, the meeting adjourned at 9:50 P.M.

Marian Hsu, Assistant District Secretary

Attest:

Paul S. Sethy, President

Approved ES

January 26, 2023
Fremont, California

A special meeting of the Board of Directors of ALAMEDA COUNTY WATER DISTRICT was held on January 26, 2023, at the hour of 6:03 P.M. Due to COVID-19 and in accordance with Assembly Bill 361, which modifies Government Code Section 54953, this meeting was conducted virtually by Zoom Webinar and Teleconference, and members of the public were invited to participate.

Present: Directors Gunther, Huang, Weed (arrived at 6:10 P.M.), and Sethy
Absent: Director Akbari

Staff members present: General Manager Ed Stevenson, Acting Director of Operations & Maintenance Mike Wickham, Director of Engineering Girum Awoke, Director of Finance & Administration Jonathan Wunderlich, Director of Water Resources Laura Hidas, Public Affairs Supervisor Sharene Gonzales, Financial Analysis Supervisor Sydney Oam, Senior Financial Analyst Martin Koran, Administrative Analyst Ethan Burch

President Sethy presided.

2 – PUBLIC COMMENTS – None

3 – COMMUNITY MEETING ON PROPOSED INCREASES TO WATER RATES AND DROUGHT SURCHARGES

The Community Informational Meeting was conducted as a Special Board Meeting as a quorum of the Board of Directors was present.

Mr. Stevenson provided an overview of the District, the rate setting process and why rate increases are necessary, as well as the steps the District takes to be efficient and control costs.

Mr. Wunderlich presented the District's budget overview, the proposed water rates and charges, considerations in determining whether the drought is over and when the District will rescind its Drought Emergency Declaration, and available customer assistance and conservation programs.

The public hearing regarding rate proposals will occur at the February 9, 2023, Board meeting, at 6:00 P.M. at District headquarters and via webinar.

Staff responded to comments and inquiries from the Board and members of the public.

There being no further business to come before the Board, the meeting adjourned at 7:22 P.M.

Ed Stevenson, General Manager

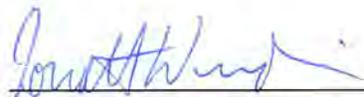
Minutes – January 26, 2023

Attest:

Paul S. Sethy, President

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
255129	1/4/2023	General Steamship International, LTD	PV	328963 001		Water Efficient Rebate	Landscape Rebate Program	4,600.00
							Payment Number 255129	4,600.00
255130	1/4/2023	Sharon Weiss Propas	PV	328961 001		Water Efficient Rebate	Lawn Be Gone Program	3,000.00
							Payment Number 255130	3,000.00
255131	1/4/2023	San Francisco PUC-Water Department	PV	328973 001		City / County / GOV	Acct# 8500000000	3,506.38
			PV	328974 001		City / County / GOV	Acct# 0800000000	10,606.00
			PV	328975 001		City / County / GOV	Acct# 0600000000	1,220.79
			PV	328976 001		City / County / GOV	Acct# 9500000000	3,835.50
			PV	328977 001		City / County / GOV	Acct# 7700000000	12,022.03
			PV	328978 001		City / County / GOV	Acct# 6700000000	1,811,355.58
			PV	328979 001		City / County / GOV	Acct# 1600000000	3,832.51
			PV	328980 001		City / County / GOV	Acct# 6500000000	577.00
							Payment Number 255131	1,846,955.79
255132	1/4/2023	Timothy Smith	PV	328964 001		Water Efficient Rebate	Landscape Rebate Program	2,160.00
							Payment Number 255132	2,160.00
255133	1/4/2023	Union Pacific Railroad Company	PV	328962 001		Fees		100.00
							Payment Number 255133	100.00
							Grand Total	1,856,815.79

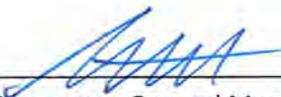
The undersigned affirms that each of the itemized demands set forth above is for materials and/or services rendered to the Alameda County Water District, that no demand has been previously paid in whole or in part, that proper procedures were followed in procurement of the materials and services, and that adequate budgeted funds were available.



Jonathan Wunderlich, Director of Finance/Treasurer

1/17/23

Date:



Ed Stevenson, General Manager

1/20/2023

Date:

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
29785	1/13/2023	Avista Technologies	P2	329134 001	00077103	Services	10 pails SMBS (deliver to NDF)	1,378.13
			P2	329134 003	00077103	Services	Other	6.25
			P2	329134 004	00077103	Services	Other	179.67
							Payment Number 29785	1,564.05
29786	1/13/2023	Bruce's Tire	P2	329066 001	00077215	Parts & Materials	Tires, Alignment, Mounting,	1,204.88
			P2	329093 001	00077306	Parts & Materials	Tires, Alignment, Mounting,	1,688.72
			P2	329095 001	00077308	Parts & Materials	Tires, Alignment, Mounting,	1,102.12
			P2	329096 001	00077309	Parts & Materials	Tires, Alignment, Mounting,	542.09
			P2	329097 001	00077310	Parts & Materials	Tires, Alignment, Mounting,	150.00
			P2	329098 001	00077311	Parts & Materials	Tires, Alignment, Mounting,	916.92
			P2	329099 001	00077312	Parts & Materials	Tires, Alignment, Mounting,	752.26
			P2	329112 001	00077331	Parts & Materials	Tires, Alignment, Mounting,	1,833.82
			P2	329113 001	00077330	Parts & Materials	Tires, Alignment, Mounting,	150.00
							Payment Number 29786	8,340.81
29787	1/13/2023	Direct Line Tele Response	P2	329074 001	00077344	Telecommunications	District Answering Service	1,405.00
							Payment Number 29787	1,405.00
29788	1/13/2023	Fiserv	PV	329121 001		Refund		228.00
							Payment Number 29788	228.00
29789	1/13/2023	JGC Government Relations, Inc.	P2	329081 001	00066318	Professional Services	State Advocacy	3,658.00
							Payment Number 29789	3,658.00
29790	1/13/2023	LSA Associates Inc	P2	329082 001	00076962	Professional Services	RD1 Fishway / RD1 Building /	2,560.50
				329130 001	00059840	Professional Services	Environmental Consulting	993.75
29791	1/13/2023	PsiNapse Ltd	PV	329119 001		Temp Services		5,596.80
				329120 001		Temp Services		6,699.00
29792	1/13/2023	R & D Technical Services	PV	329118 001		Temp Services		1,476.80
							Payment Number 29792	1,476.80
29793	1/13/2023	Water One Industries, Inc.	P2	329107 001	00077320	Services	Closed Loop Water Testing	250.00
							Payment Number 29793	250.00
255134	1/13/2023	42186 Palm Avenue Developers LLC	NO	328984 001		Refund	Refund WSE J200130	4,150.61
							Payment Number 255134	4,150.61
255135	1/13/2023	ACWD Operators Association	T7	328310 001		Employee Benefits		1,200.00
				329160 001		Employee Benefits		1,200.00
255136	1/13/2023	Airgas NCN Inc	P2	329064 001	00071106	Gas / Oil / Compr Air	Lox for WTP2 Amnd 2	2,990.56
							Payment Number 255136	2,990.56

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
255137	1/13/2023	All Environmental Inc	NO	328997 001		Refund	refund J203248	757.71
							Payment Number 255137	757.71
255138	1/13/2023	Arbor Tech Tree Care Inc	P2	329091 001	00077304	Services	Tree Maintenance Services	9,600.00
							Payment Number 255138	9,600.00
255139	1/13/2023	Association of California Water Agencies	PV	329116 001		City / County / GOV	2023 Annual Agency Dues	35,230.00
							Payment Number 255139	35,230.00
255140	1/13/2023	ATC an Atlas Company	NO	328999 001		Refund	Refund J203419	336.07
							Payment Number 255140	336.07
255141	1/13/2023	Badger Daylighting Corp	P2	329092 001	00077305	Services	Revision No. 1	4,513.95
							Payment Number 255141	4,513.95
255142	1/13/2023	Bay Equipment Sales & Service, Inc.	P2	329104 001	00077317	Equipment Rental	Product & Equipment Repair	532.51
							Payment Number 255142	532.51
255143	1/13/2023	Biomark, Inc.	P2	329057 001	00077361	Equip Sales and Service	Biomark data manager services	1,896.00
							Payment Number 255143	1,896.00
255144	1/13/2023	BKF Engineers	P2	329132 001	00077051	Construction Services	Amendment to 67465	2,607.00
							Payment Number 255144	2,607.00
255145	1/13/2023	Brown and Caldwell	P2	329072 001	00077058	Professional Services	Agreement No. 4635	11,500.00
			P2	329147 001	00077367	Professional Services	Agreement No. 4635	40,300.00
							Payment Number 255145	51,800.00
255146	1/13/2023	Burlingame Engineers Inc	P3	329138 001	00076967	Parts & Materials	VALVE PARTS KIT	562.28
							Payment Number 255146	562.28
255147	1/13/2023	Cal Engineering & Geology Inc	P2	329080 001	00077328	Construction Services	Amendment 4446-B	12,984.38
							Payment Number 255147	12,984.38
255148	1/13/2023	Cal Safety Inc.	P2	329094 001	00077307	Parts & Materials	Safety Equipment	360.00
							Payment Number 255148	360.00
255149	1/13/2023	CalPERS Long Term Care Program	T7	329157 001		Employee Benefits		212.14
							Payment Number 255149	212.14
255150	1/13/2023	Apollo Cayabyab	PV	329151 001		Water Efficient Rebate	Landscape Rebate Program	2,226.00
							Payment Number 255150	2,226.00
255151	1/13/2023	CDW Government Inc	P2	329165 001	00076949	Software Sales & Support	Fortinct maintenance renewal	46,080.15
							Payment Number 255151	46,080.15

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
255152	1/13/2023	Centerville Locksmith	P2	329084 001	00077288	Parts & Materials	Locks and Repair Services	4.98
							Payment Number 255152	4.98
255153	1/13/2023	Asoknath Chatterjee	PV	329149 001		Water Efficient Rebate	Landscape Rebate Program	3,000.00
							Payment Number 255153	3,000.00
255154	1/13/2023	CIT	P2	329154 001	00077365	Equipment Rental	Replacement Engineering Plotte	1,631.65
							Payment Number 255154	1,631.65
255155	1/13/2023	Classic 36304 Newark LP	NO	328993 001		Refund	Refund WSE J202383	332.83
							Payment Number 255155	332.83
255156	1/13/2023	ConvergeOnc, Inc.	P2	329055 001	00077013	Computer Sales & Support	FatPipe multisite network	6,648.00
							Payment Number 255156	6,648.00
255157	1/13/2023	Cornerstone Earth Group	NO	328987 001		Refund	Refund J203271 & J203548	4,857.12
							Payment Number 255157	4,857.12
255158	1/13/2023	DG Auto Body & Paint	P2	329100 001	00077313	Vehicle Sales and Service	Vehicle Body Damage	180.00
			P2	329101 001	00077314	Vehicle Sales and Service	Vehicle Body Damage	180.00
							Payment Number 255158	360.00
255159	1/13/2023	Ditch Witch Central California	P2	329108 001	00077322	Parts & Materials	Ditch Witch Parts and Services	325.46
							Payment Number 255159	325.46
255160	1/13/2023	ERM-West Inc	NO	328983 001		Refund	Refund J203508	6,551.06
							Payment Number 255160	6,551.06
255161	1/13/2023	Eurofins Eaton Analytical Inc	P2	329086 001	00077289	Laboratory	Commercial laboratory services	17,046.00
			P2	329087 001	00077290	Laboratory	Commercial laboratory services	2,250.00
							Payment Number 255161	19,296.00
255162	1/13/2023	Exaro Technologies Corp	NO	328995 001		Refund	Refund J203179	2,904.33
							Payment Number 255162	2,904.33
255163	1/13/2023	Fairfield Warm Springs LLC	PV	329128 001		Refund		9,893.60
							Payment Number 255163	9,893.60
255164	1/13/2023	Flo-Line Technology Inc	P2	329076 001	00076338	Parts & Materials	EagleBurgmann Single H12 seal	7,789.71
			P2	329076 002	00076338	Parts & Materials	Outside Materials	97.40
							Payment Number 255164	7,887.11
255165	1/13/2023	Fremont Minuteman Press	P2	328174 001	00076981	Printing	FY 21/22 Graphic design srvc	641.02
							Payment Number 255165	641.02
255166	1/13/2023	City of Fremont - Financial Services	PV	329126 001		City / County / GOV	12/1-12/15 Encroach Permits	8,564.00
							Payment Number 255166	8,564.00

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
255167	1/13/2023	Garney Construction	NO	328996 001		Refund	Refund J203196	845.23
							Payment Number 255167	845.23
255168	1/13/2023	Ross Gershenson	NO	329000 001		Refund	Refund J300005	1,253.14
							Payment Number 255168	1,253.14
255169	1/13/2023	Golden Gate Truck Center	P2	329068 001	00077265	Parts & Materials	Vehicle Parts and service	187.69
			P2	329069 001	00077264	Parts & Materials	Vehicle Parts and service	391.17
			P2	329070 001	00077263	Parts & Materials	Vehicle Parts and service	32.85
			P2	329071 001	00077259	Parts & Materials	Vehicle Parts and service	921.59
			P2	329102 001	00077315	Parts & Materials	Vehicle Parts and service	18.00
							Payment Number 255169	1,551.30
255170	1/13/2023	Granite Rock Company	P2	329110 001	00077334	Parts & Materials	Backfill Material Amd 2	3,452.82
			P2	329111 001	00077333	Parts & Materials	Backfill Material Amd 2	3,594.67
							Payment Number 255170	7,047.49
255171	1/13/2023	Hach Company	P3	329139 001	00077094	Laboratory	HACH SEAL, ACM	211.38
			P3	329142 001	00077094	Laboratory	HACH AUTO CLEANER WIPER	286.59
			P3	329142 002	00077094	Laboratory	Material & Supplies	0.01
			P3	329143 001	00077094	Laboratory	HACH VIAL	433.50
							Payment Number 255171	931.48
255172	1/13/2023	Haley & Aldrich Inc	NO	328998 001		Refund	Refund J203407	927.15
							Payment Number 255172	927.15
255173	1/13/2023	Elissa Hensley	T7	329162 001		City / County / GOV		600.00
							Payment Number 255173	600.00
255174	1/13/2023	Leon Hu	NO	328985 001		Refund	Refund WSE J200324	2,279.36
							Payment Number 255174	2,279.36
255175	1/13/2023	InfoSend Inc	P2	329135 001	00077297	Printing	FY 22-23 Aqueduct newsletter	32,814.16
							Payment Number 255175	32,814.16
255176	1/13/2023	Kemira Water Solutions Inc	P2	329059 001	00075785	Chemicals	Ferric Chloride for WTP2	13,350.33
							Payment Number 255176	13,350.33
255177	1/13/2023	Kennedy/Jenks Consultants Inc	P2	329131 001	00077101	Construction Services	Curtner Booster Station Upgrad	55,110.39
							Payment Number 255177	55,110.39
255178	1/13/2023	Sandra Dee Kim	T7	329161 001		City / County / GOV		75.00
							Payment Number 255178	75.00
255179	1/13/2023	Kleinfelder	P2	329133 001	00077219	Professional Services	As-Needed Special Inspection	5,297.50
							Payment Number 255179	5,297.50

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
255180	1/13/2023	Vishwajit Kumar	NO	329002 001		Refund	Refund J203595	710.16
							Payment Number 255180	710.16
255181	1/13/2023	LegalShield	T7	329159 001		Employee Benefits		524.30
							Payment Number 255181	524.30
255182	1/13/2023	Lennar Homes	PV	329125 001		Refund		75,620.20
							Payment Number 255182	75,620.20
255183	1/13/2023	Lennar Homes	NO	328988 001		Refund	Refund J203189	2,326.77
							Payment Number 255183	2,326.77
255184	1/13/2023	Lennar Homes of CA, Inc	NO	328982 001		Refund	Refund J203447-453, 203511-515	48,444.11
							Payment Number 255184	48,444.11
255185	1/13/2023	LMV QR BTC Leya Holdings, LLC	NO	328994 001		Refund	Refund J202794	2,638.56
							Payment Number 255185	2,638.56
255186	1/13/2023	Paul Lopez	PV	329124 001		Reimbursements	Class A Renewal	51.06
							Payment Number 255186	51.06
255187	1/13/2023	Winata Mahendra	PV	329152 001		Water Efficient Rebate	Landscape Rebate Program	1,440.00
							Payment Number 255187	1,440.00
255188	1/13/2023	Martin Marietta Materials, Inc.	P2	329129 001	00077362	Building Maintenance	Funds transfer from Lehigh to	20,763.63
							Payment Number 255188	20,763.63
255189	1/13/2023	Mission Peak Co	NO	328991 001		Refund	Refund WSE J202002	2,097.73
							Payment Number 255189	2,097.73
255190	1/13/2023	Mitsubishi Electric Power Products, Inc.	P2	329145 001	00072240	Services	1100A Extended Warranty	1,650.00
							Payment Number 255190	1,650.00
255191	1/13/2023	Napa Auto Parts	P2	329083 001	00077332	Parts & Materials	Auto Parts & Supplies	1,867.20
			P2	329103 001	00077316	Parts & Materials	Auto Parts & Supplies	56.97
							Payment Number 255191	1,924.17
255192	1/13/2023	National Auto Fleet Group	P2	329085 001	00077291	Vehicle Sales and Service	Various Medium & Heavy Duty	70,873.68
							Payment Number 255192	70,873.68
255193	1/13/2023	Shridhar Nayak	PV	329150 001		Water Efficient Rebate	Landscape Rebate Program	1,098.00
							Payment Number 255193	1,098.00
255194	1/13/2023	NFBTHS Ventures LLC	NO	328992 001		Refund	Refund WSE J201999	1,056.98
							Payment Number 255194	1,056.98
255195	1/13/2023	Concentra Medical Centers	P2	328183 001	00077025	Medical Services	Pre-employment & medical exams	155.00

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
			P2	329077 001	00077339	Medical Services	Pre-employment & medical exams	67.00
			P2	329078 001	00077339	Medical Services	Pre-employment & medical exams	64.00
							Payment Number 255195	286.00
255196	1/13/2023	Orkin Services of California	P2	329106 001	00077319	Services	Vertebrae/Pest Control Service	131.00
							Payment Number 255196	131.00
255197	1/13/2023	P&A Administrative Service, Inc.	PV	329117 001		Professional Services		1,270.54
							Payment Number 255197	1,270.54
255198	1/13/2023	Pacific Gas & Electric Co	PV	329122 001		Utility	Acct 6022620803-5	174,439.89
							Payment Number 255198	174,439.89
255199	1/13/2023	Parikh Consultants Inc	NO	328986 001		Refund	Refund J203588	1,572.25
							Payment Number 255199	1,572.25
255200	1/13/2023	Pitcher Services LLC	NO	328989 001		Refund	Refund J203204	1,265.59
							Payment Number 255200	1,265.59
255201	1/13/2023	Power Engineers Inc	P2	329155 001	00077369	Professional Services	Revision No. 2 to PO 67461	2,056.11
							Payment Number 255201	2,056.11
255202	1/13/2023	Primoris Service Company	NO	328990 001		Refund	Refund J203222	1,322.84
							Payment Number 255202	1,322.84
255203	1/13/2023	Prudential Overall Supply	P2	329136 001	00077299	Uniforms	Linen Service	633.28
			P2	329137 001	00077300	Uniforms	Laundered Uniform Services	2,519.64
							Payment Number 255203	3,152.92
255204	1/13/2023	Robson Homes LLC	NO	328981 001		Refund	Refund WSE J201392	3,280.31
							Payment Number 255204	3,280.31
255205	1/13/2023	RRM, Inc	PV	329123 001		Refund	Permit 2022-318 Refund	80.00
							Payment Number 255205	80.00
255206	1/13/2023	SafetySkills	P2	329164 001	00077324	Education / Training	Safety Training	9,100.00
							Payment Number 255206	9,100.00
255207	1/13/2023	SHAPE INCORPORATED	P2	329058 001	00077072	Parts & Materials	GOULDS P/N 8049-30904	600.86
							Payment Number 255207	600.86
255208	1/13/2023	Standard Meter Lab Inc	P2	328181 001	00077023	Services	STANDARD METER LABS	390.94
							Payment Number 255208	390.94
255209	1/13/2023	Thermo Orion	P3	329141 001	00076072	Laboratory	PRESSURE REGULATOR	1,422.23
			P3	329141 002	00076072	Laboratory	Inventory Freight Expense	38.98
							Payment Number 255209	1,461.21

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
255210	1/13/2023	Trench Plate Rental Co	P2	329088 001	00077302	Equipment Rental	Trench Plate Rental Services	178.25
			P2	329089 001	00077303	Equipment Rental	Trench Plate Rental Services	178.25
			P2	329090 001	00077301	Equipment Rental	Trench Plate Rental Services	310.83
			P2	329109 001	00077335	Equipment Rental	Trench Plate Rental Services	257.00
							Payment Number 255210	924.33
255211	1/13/2023	City of Union City	PV	329127 001		City / County / GOV		2,065.00
255212	1/13/2023	United Filters International	P3	329140 001	00076801	Materials	40" FILTER CARTRIDGE, 1 MICRON	24,501.96
			P3	329140 002	00076801	Materials	Inventory Freight Expense	90.96
			P3	329140 003	00076801	Materials	Inventory Freight Expense	1,598.18
							Payment Number 255212	26,191.10
255213	1/13/2023	Univar USA Inc	P2	329060 001	00075781	Chemicals	Sodium Hydroxide for	9,705.88
			P2	329061 001	00075787	Chemicals	Sodium Hypochlorite for	4,265.68
			P2	329062 001	00075787	Chemicals	Sodium Hypochlorite for	5,729.40
			P2	329063 001	00075781	Chemicals	Sodium Hydroxide for	9,600.21
							Payment Number 255213	29,301.17
255214	1/13/2023	Verizon Connect NWF, Inc	P2	329105 001	00077318	Services	Fleet Monitoring Devices	166.64
255215	1/13/2023	Verizon Wireless	PV	329146 001		Utility	Acct 572069838-00001	7,957.22
255216	1/13/2023	Western Truck Fab	P2	329067 001	00077266	Parts & Materials	Furnish/install Whelen lights	215.63
255217	1/13/2023	Zovich Construction	NO	329001 001		Refund	Refund J203591	1,899.64
255218	1/13/2023	ZunZun	P2	329114 001	00077347	Professional Services	Water Education Services	2,400.00
1012023	1/12/2023	Cal Public Employees' Retirement System	PM	329166 001		Employee Benefits	Jan 2023 Medical	441,690.17
1022023	1/12/2023	ICMA RHSA	PM	329167 001		Employee Benefits		5,689.47
1032023	1/12/2023	ICMA Def Comp 401a	PM	329168 001		Employee Benefits		89,247.74
1042023	1/12/2023	ICMA Def Comp 457	PM	329169 001		Employee Benefits		98,484.62

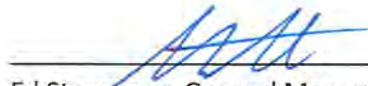
Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
1052023	1/12/2023	Internal Revenue Service	PM	329170 001		Taxes		226,209.77
							Payment Number 1052023	226,209.77
1062023	1/12/2023	California Employment Dev Dept	PM	329171 001		Taxes		68,650.93
							Payment Number 1062023	68,650.93
							Grand Total	1,839,715.00

The undersigned affirms that each of the itemized demands set forth above is for materials and/or services rendered to the Alameda County Water District, that no demand has been previously paid in whole or in part, that proper procedures were followed in procurement of the materials and services, and that adequate budgeted funds were available.



Jonathan Wunderlich, Director of Finance/Treasurer

Date: 1/17/23



Ed Stevenson, General Manager

Date: 1/19/2023

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
29794	1/20/2023	Badger Meter Inc	P2	329179 001	00076957	Professional Services	INTERFACE CONFIGURATION	6,063.75
							Payment Number 29794	6,063.75
29795	1/20/2023	Dave Kelly Trucking	P2	329205 001	00077355	Services	Truck Hauling Services	4,877.99
							Payment Number 29795	4,877.99
29796	1/20/2023	Fastenal Company	P3	329172 001	00076795	Parts & Materials	WIRE HAND SCRATCH BRUSH	67.47
			P3	329172 002	00076795	Parts & Materials	18" RIDGID BRAND PIPE WRENCH	299.29
			P3	329172 003	00076795	Parts & Materials	HD 1000 TWIN HEAD SERIES	330.69
			P3	329172 004	00076795	Parts & Materials	1 1/2" X 25 YDS EMERY CLOTH	1,538.65
			P3	329172 006	00076795	Parts & Materials	14" RIDGID BRAND PIPE WRENCH	493.35
			P3	329240 001	00077033	Parts & Materials	18"x.125" CURED CONCRETE BLADE	1,487.43
			P3	329261 001	00077033	Parts & Materials	PVC 721 PURPLE PIPE CEMENT	273.94
			P3	329262 001	00077033	Parts & Materials	PVC 721 PURPLE PIPE CEMENT	273.94
							Payment Number 29796	4,764.76
29797	1/20/2023	Kleinfelder	P2	329258 001	00077329	Professional Services	As-Needed Special Inspection	19,840.00
							Payment Number 29797	19,840.00
29798	1/20/2023	Lone Tree Trucking Inc	P2	329174 001	00077343	Services	Off Hauling of Sludge	2,512.50
			P2	329175 001	00077426	Services	Off Hauling of Sludge	2,078.13
			P2	329176 001	00077426	Services	Off Hauling of Sludge	2,946.88
							Payment Number 29798	7,537.51
29799	1/20/2023	R & D Technical Services	PV	329220 001		Temp Services		1,476.80
			PV	329230 001		Temp Services		2,953.60
							Payment Number 29799	4,430.40
29800	1/20/2023	ERP Suites	P2	329188 001	00077372	Software Sales & Support	App Customization and support	1,897.50
							Payment Number 29800	1,897.50
29801	1/20/2023	Wireless Watchdogs LLC	P2	329178 001	00077379	Telecommunications	Cell Device Management Support	741.00
							Payment Number 29801	741.00
255219	1/20/2023	Accurate Tube Bending Inc	P2	329182 001	00076469	Parts & Materials	CREEK STAFF GAUGES	9,388.01
							Payment Number 255219	9,388.01
255220	1/20/2023	AECOM Technical Services, Inc.	P2	329197 001	00065419	Professional Services	Professional Services Amd# 2	2,070.70
							Payment Number 255220	2,070.70
255221	1/20/2023	Airgas NCN Inc	P2	329251 001	00071106	Gas / Oil / Compr Air	Lox for WTP2 Amnd 2	2,981.46
			P2	329252 001	00071106	Gas / Oil / Compr Air	Lox for WTP2 Amnd 2	2,978.86
			P2	329253 001	00071106	Gas / Oil / Compr Air	Lox for WTP2 Amnd 2	2,897.59
			P2	329257 001	00071106	Gas / Oil / Compr Air	Lox for WTP2 Amnd 2	2,871.59
							Payment Number 255221	11,729.50
255222	1/20/2023	Alameda County Clerk	PV	329208 001		City / County / GOV		50.00
							Payment Number 255222	50.00

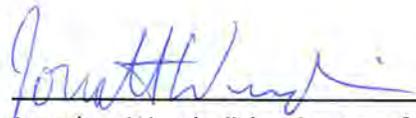
Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
255223	1/20/2023	Allied Auto Stores	P2	329202 001	00077358	Parts & Materials	Auto Parts	2,673.72
							Payment Number 255223	2,673.72
255224	1/20/2023	American Innovations Ltd	P2	329199 001	00077364	Services	Cathodic Protection - Remote	42.50
							Payment Number 255224	42.50
255225	1/20/2023	Apple One Employment Services	PV	329229 001		Temp Services		23,347.80
							Payment Number 255225	23,347.80
255226	1/20/2023	AT&T	PV	329224 001		Telecommunications	BAN 9391060066	203.40
			PV	329225 001		Telecommunications	BAN 9391052688	1,684.75
							Payment Number 255226	1,888.15
255227	1/20/2023	AT&T Mobility	PV	329223 001		Telecommunications	Acct #287024663616	591.36
							Payment Number 255227	591.36
255228	1/20/2023	Bay Area Traffic Solutions Inc	P2	329207 001	00077348	Construction Services	Traffic Control & Misc	2,000.00
							Payment Number 255228	2,000.00
255229	1/20/2023	Bay Area Water Supply & Conservation	PV	329218 001		Services	FY 22-23 2nd Qtr.	81,295.50
			PV	329219 001		Services	FY 22-23 3rd Qtr	81,295.50
			PV	329221 001		Services		1,068.70
							Payment Number 255229	163,659.70
255230	1/20/2023	Bay Equipment Sales & Service, Inc.	P2	328211 001	00076990	Equipment Rental	Product & Equipment Repair	215.43
							Payment Number 255230	215.43
255231	1/20/2023	Bay Valve Service & Engineering Inc	P2	329173 001	00074895	Parts & Materials	Auma Gearbox - GS63.3 FA12 LR	848.93
			P2	329173 002	00074895	Parts & Materials	Connecting Shaft ? 316SS	154.35
			P2	329173 003	00074895	Parts & Materials	Connecting Shaft Key ? SS 1/4" x	26.46
			P2	329173 004	00074895	Parts & Materials	Gearbox Key ? SS 3/8" x 2"	33.07
			P2	329173 005	00074895	Parts & Materials	Lovejoy Coupling ? SS- AL110	401.31
			P2	329173 006	00074895	Parts & Materials	Outside Materials	227.81
			P2	329173 007	00074895	Parts & Materials	Outside Materials	0.01
							Payment Number 255231	1,691.94
255232	1/20/2023	BKF Engineers	P2	329198 001	00076810	Construction Services	Amendment to 67465	4,922.50
							Payment Number 255232	4,922.50
255233	1/20/2023	Burlingame Engineers Inc	P2	329181 003	00077061	Parts & Materials	MILTON ROY ACC KIT	9,602.78
			P2	329181 004	00077061	Parts & Materials	Outside Materials	26.19
							Payment Number 255233	9,628.97
255234	1/20/2023	State of California	PV	329226 001		City / County / GOV	Customer 67	6,000.00
			PV	329227 001		City / County / GOV	Contract 160159	111,122.00
							Payment Number 255234	117,122.00

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
255235	1/20/2023	Comcast	PV	329228 001		Telecommunications	Acct #909134237	1,201.22
							Payment Number 255235	1,201.22
255236	1/20/2023	Core & Main LP	P2	329191 001	00077063	Parts & Materials	913 FCA FOR 12.84 OD PIPE, EPO	1,156.74
							Payment Number 255236	1,156.74
255237	1/20/2023	Dale Hardware	P2	329204 001	00077356	Parts & Materials	Materials & Supplies	363.69
							Payment Number 255237	363.69
255238	1/20/2023	Dell Marketing LP	P2	329185 001	00077218	Computer Sales & Support	Microsoft 365 Year 1 (2023)	165,326.50
			P2	329187 001	00077209	Computer Sales & Support	4 Latitude 5531 laptops	7,757.32
			P2	329187 002	00077209	Computer Sales & Support	Computer Hardware/Supplies	756.24
			P2	329195 001	00077106	Computer Sales & Support	Five Optiplex 700 desktops	5,690.55
			P2	329195 002	00077106	Computer Sales & Support	Computer Hardware/Supplies	108.80
							Payment Number 255238	179,639.41
255239	1/20/2023	Fast Response On-Site Testing, Inc.	P2	329189 001	00077385	Medical Services	Respiatory Fit Testing	1,626.00
							Payment Number 255239	1,626.00
255240	1/20/2023	Federal Express Corp	PV	329222 001		Services		25.65
							Payment Number 255240	25.65
255241	1/20/2023	FLEXI-LINER CORP.	P2	329190 001	00077375	Parts & Materials	H01 T-11B Liner Replacement	5,278.00
			P2	329190 002	00077375	Parts & Materials	H01 T-11B Liner Replacement	11,750.00
							Payment Number 255241	17,028.00
255242	1/20/2023	Forster & Kroeger Landscape Maintenan	P2	329201 001	00077359	Landscaping	Ind Amendment	6,384.00
							Payment Number 255242	6,384.00
255243	1/20/2023	Fremont Minuteman Press	P2	329231 001	00077370	Printing	FY 21/22 Graphic design srvc	1,336.83
							Payment Number 255243	1,336.83
255244	1/20/2023	Fremont Recycling & Transfer Station	P2	329200 001	00077360	Waste / Recycling / Garbage	Disposal Services	512.67
							Payment Number 255244	512.67
255245	1/20/2023	City of Fremont - Financial Services	PV	329210 001		City / County / GOV	Encroach. Permit Deposit	2,500.00
							Payment Number 255245	2,500.00
255246	1/20/2023	Hach Company	P2	329180 001	00077184	Laboratory	HACH CAL KIT LZYZ835	1,481.76
			P2	329180 002	00077184	Laboratory	Outside Materials	163.66
			P2	329180 003	00077184	Laboratory	Outside Materials	-0.01
			P3	329233 001	00077094	Laboratory	HACH SEAL, ACM	30.20
			P3	329233 002	00077094	Laboratory	Material & Supplies	-0.01
							Payment Number 255246	1,675.60
255247	1/20/2023	Harrington Industrial Plastics LLC	P2	329196 001	00077004	Parts & Materials	3" SKT BALL VALVE, PVC	659.52
			P2	329196 002	00077004	Parts & Materials	Outside Materials	26.52
			P3	329235 001	00077117	Parts & Materials	DUAL CHANEL BARRIER SWITCH	727.65

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
			P3	329235 002	00077117	Parts & Materials	Inventory Freight Expense	41.87
							Payment Number 255247	1,455.56
255248	1/20/2023	Noah S. Hausmann	PV	329255 001		Reimbursements	D2 License Renewal	60.00
							Payment Number 255248	60.00
255249	1/20/2023	Hyas Group, LLC	P2	329183 001	00061919	Professional Services	Deferred Compensation Advisory	6,551.39
			P2	329183 002	00061919	Professional Services	Amendment No. 2 AGMT 4179	4,281.94
							Payment Number 255249	10,833.33
255250	1/20/2023	Iconix Waterworks	P3	329234 001	00077104	Parts & Materials	REPAIR KIT CLAYTON REG 8" 100	945.17
							Payment Number 255250	945.17
255251	1/20/2023	InsightSoftware.com Inc	P2	329193 001	00077409	Software Sales & Support	Hubble Annual Maintenance	39,097.68
			P2	329194 001	00077409	Software Sales & Support	Hubble 3 licenses	8,235.62
							Payment Number 255251	47,333.30
255252	1/20/2023	Kemira Water Solutions Inc	P2	329242 001	00075785	Chemicals	Ferric Chloride for WTP2	12,813.64
			P2	329243 001	00075785	Chemicals	Ferric Chloride for WTP2	13,645.52
			P2	329244 001	00075785	Chemicals	Ferric Chloride for WTP2	13,779.71
							Payment Number 255252	40,238.87
255253	1/20/2023	Ryan C. Leasure	PV	329263 001		Reimbursements	Safety shoe-Reimburse	214.98
							Payment Number 255253	214.98
255254	1/20/2023	LegalShield	T7	328309 001		Employee Benefits		524.30
							Payment Number 255254	524.30
255255	1/20/2023	Griffin Miller	PV	329264 001		Reimbursements	Safety Shoe-Reimburse	148.78
							Payment Number 255255	148.78
255256	1/20/2023	Inter. Disposal Corp of Calif.	P2	329203 001	00077357	Waste / Recycling / Garbage	Disposal Services	21,519.00
							Payment Number 255256	21,519.00
255257	1/20/2023	P&A Administrative Service, Inc.	PV	329212 001		Professional Services		1,828.33
			PV	329213 001		Professional Services		3,940.73
			PV	329214 001		Professional Services		1,136.59
			PV	329215 001		Professional Services		1,923.32
			PV	329216 001		Professional Services		841.40
			PV	329217 001		Professional Services		190.36
							Payment Number 255257	9,860.73
255258	1/20/2023	Pace Supply Corp	P2	329184 001	00076332	Parts & Materials	VICTAULIC PLUG VALVE	1,659.51
							Payment Number 255258	1,659.51
255259	1/20/2023	PFM Asset Management LLC	P2	329192 001	00077377	Professional Services	Financial Advisory Services	1,265.00
							Payment Number 255259	1,265.00

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
255260	1/20/2023	Mayank Poddar	NO	328153 001		Refund	Refund J203536	695.94
							Payment Number 255260	695.94
255261	1/20/2023	Roberts & Brunc	P3	329236 001	00077351	Parts & Materials	2" COUPLER INSERT	412.06
			P3	329236 002	00077351	Parts & Materials	3" FXF GATE VALVE	4,405.59
			P3	329236 003	00077351	Parts & Materials	Material & Supplies	21.86
							Payment Number 255261	4,839.51
255262	1/20/2023	NV5 Inc	P2	329186 001	00077366	Services	Clean Energy Program	14,791.25
							Payment Number 255262	14,791.25
255263	1/20/2023	Inge and David Tay	PV	329256 001		Reimbursements	Damage Settlement	900.00
							Payment Number 255263	900.00
255264	1/20/2023	Thermo Orion	P3	329238 001	00076072	Laboratory	SOLUTION FLUORIDE STAND 100PPM	212.78
			P3	329238 002	00076072	Laboratory	SOLUTION, FLUORIDE STD 1000PPM	109.15
			P3	329238 003	00076072	Laboratory	SOLUTION, FLUORIDE STD 1000PPM	109.15
			P3	329238 004	00076072	Laboratory	Inventory Freight Expense	22.25
			P3	329259 001	00076072	Laboratory	FLUORIDE ELECTRODE	931.61
			P3	329259 002	00076072	Laboratory	Inventory Freight Expense	16.30
			P3	329260 001	00076072	Laboratory	FLUORIDE ELECTRODE	931.61
			P3	329260 002	00076072	Laboratory	Inventory Freight Expense	17.58
							Payment Number 255264	2,350.43
255265	1/20/2023	Univar USA Inc	P2	329245 001	00075781	Chemicals	Sodium Hydroxide for	9,705.88
			P2	329246 001	00075787	Chemicals	Sodium Hypochlorite for	5,722.52
			P2	329247 001	00075787	Chemicals	Sodium Hypochlorite for	5,729.11
			P2	329248 001	00075781	Chemicals	Sodium Hydroxide for	9,678.69
			P2	329249 001	00075787	Chemicals	Sodium Hypochlorite for	3,584.67
			P2	329250 001	00075787	Chemicals	Sodium Hypochlorite for	5,730.83
							Payment Number 255265	40,151.70
255266	1/20/2023	Verizon Connect NWF, Inc	P2	329206 001	00077354	Services	Fleet Monitoring Devices	1,895.05
							Payment Number 255266	1,895.05
255267	1/20/2023	Vertech Industrial Systems. LLC	P2	329241 001	00075059	Services	Blonding Facility SCADA	60,240.00
							Payment Number 255267	60,240.00
255268	1/20/2023	Watson-Marlow Inc	P3	329232 001	00076050	Parts & Materials	RUBBER HOSE FOR SP50	1,201.73
			P3	329232 002	00076050	Parts & Materials	Inventory Freight Expense	155.38
							Payment Number 255268	1,357.11
							Grand Total	877,904.52

The undersigned affirms that each of the itemized demands set forth above is for materials and/or services rendered to the Alameda County Water District, that no demand has been previously paid in whole or in part, that proper procedures were followed in procurement of the materials and services, and that adequate budgeted funds were available.



Jonathan Wunderlich, Director of Finance/Treasurer

Date: 1/24/23



Ed Stevenson, General Manager

Date: 1/30/2023

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
29999	1/27/2023	California Bank of Commerce	P2	329547 001	00077441	Construction Services	Curtner Road Booster Station	10,126.55
							Payment Number 29999	10,126.55
30000	1/27/2023	Chandler Asset Management, Inc.	P2	329542 001	00077427	Financial Services	Amendment to AGMNT 4363	8,882.57
							Payment Number 30000	8,882.57
30001	1/27/2023	Disney Construction	P2	329546 001	00077440	Construction Services	Curtner Road Booster Station	192,404.45
							Payment Number 30001	192,404.45
30002	1/27/2023	Dysert Environmental Inc	P2	329517 001	00077399	Services	NPDES Sampling services	682.50
							Payment Number 30002	682.50
30003	1/27/2023	Enterprise FM Trust	PV	329567 001		Vehicle Sales and Service		9,554.93
							Payment Number 30003	9,554.93
30004	1/27/2023	Fastenal Company	P2	329591 001	00077269	Parts & Materials	Materials, Supplies & Vending	813.85
							Payment Number 30004	813.85
30005	1/27/2023	Kleinfelder	P2	329540 001	00077408	Professional Services	As-Needed Special Inspection	10,858.00
							Payment Number 30005	10,858.00
30006	1/27/2023	New Resources Group Inc	P2	329539 001	00077383	Services	Water Conservation Kits	347.35
							Payment Number 30006	347.35
30007	1/27/2023	R & D Technical Services	PV	329570 001		Temp Services		738.40
							Payment Number 30007	738.40
30008	1/27/2023	State Water Contractors	PV	329569 001		Fees	System #0110001	5,675.00
							Payment Number 30008	5,675.00
30009	1/27/2023	TJC and Associates Inc.	P2	329544 001	00070775	Professional Services	SCADA Replacements Project	18,248.94
							Payment Number 30009	18,248.94
30010	1/27/2023	Wireless Watchdogs LLC	P2	329483 001	00077457	Telecommunications	Cell Device Management Support	69.13
			P2	329484 001	00077457	Telecommunications	Cell Device Management Support	69.13
							Payment Number 30010	138.26
255280	1/27/2023	ACWA JPIA	PV	329572 001		Insurance	Worker's Comp Qtr 2	119,492.79
							Payment Number 255280	119,492.79
255281	1/27/2023	ACWD Employees Association	T7	329163 001		Employee Benefits		44.00
			T7	329580 001		Employee Benefits		968.00
							Payment Number 255281	1,012.00
255282	1/27/2023	Airgas NCN Inc	P2	329515 001	00077394	Gas / Oil / Compr Air	Various gases (Lab only)	412.05
							Payment Number 255282	412.05

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
255283	1/27/2023	Anchor Engineering, Inc.	P2	329589 001	00066151	Professional Services	Fish Passage CM Amend 1	15,420.26
			P2	329589 002	00066151	Professional Services	Fish Passage AM Amend 2	34,683.86
							Payment Number 255283	50,104.12
255284	1/27/2023	Arbor Tech Tree Care Inc	P2	329512 001	00077404	Services	Revision No. 1 to PO 72571 OB	3,710.00
							Payment Number 255284	3,710.00
255285	1/27/2023	ASirepro.com	P2	329541 001	00077403	Printing	Reproduction Services	189.94
							Payment Number 255285	189.94
255286	1/27/2023	AT&T	PV	329590 001		Telecommunications	BAN #9391035569	5,910.69
							Payment Number 255286	5,910.69
255287	1/27/2023	Automatic Controls Engineering Corp	P2	329511 001	00077405	Services	HAVC BMS Maintenance and Repai	1,790.00
							Payment Number 255287	1,790.00
255288	1/27/2023	Badger Daylighting Corp	P2	329509 001	00077410	Services	Hydro-Vac Rental	3,295.88
			P2	329510 001	00077407	Services	Revision No. 1	3,542.98
							Payment Number 255288	6,838.86
255289	1/27/2023	Bay Equipment Sales & Service, Inc.	P2	329506 001	00077413	Equipment Rental	Product & Equipment Repair	297.38
			P2	329507 001	00077412	Equipment Rental	Product & Equipment Repair	276.95
			P2	329508 001	00077411	Equipment Rental	Product & Equipment Repair	324.91
							Payment Number 255289	899.24
255290	1/27/2023	Beck's Shoes Inc	PV	329579 001		Safety		324.56
							Payment Number 255290	324.56
255291	1/27/2023	Brink's Incorporated	P2	329543 001	00077428	Services	Armored Car Services (4190)	783.19
							Payment Number 255291	783.19
255292	1/27/2023	California Dept of Tax and Fee Admin	PV	329571 001		Fees	Acct #044-033795	1,419.00
							Payment Number 255292	1,419.00
255293	1/27/2023	State of California	PV	329585 001		City / County / GOV	Contract 160159	2,554,508.00
			PV	329586 001		City / County / GOV	Contract 160159	1,715.00
							Payment Number 255293	2,556,223.00
255294	1/27/2023	California Generator Service	P2	329500 001	00077419	Services	AGMNT 4546 - Gen Maintenance	1,060.00
				329502 001	00077417	Services	AGMNT 4546 - Gen Maintenance	1,060.00
				329503 001	00077416	Services	AGMNT 4546 - Gen Maintenance	1,060.00
				329504 001	00077415	Services	AGMNT 4546 - Gen Maintenance	900.00
							Payment Number 255294	4,080.00
255295	1/27/2023	California UST Services	P2	329513 001	00077391	Services	Underground Storage Tank	400.00
							Payment Number 255295	400.00
255296	1/27/2023	California Water Efficiency Partnership	PV	329574 001		Memberships		7,956.93

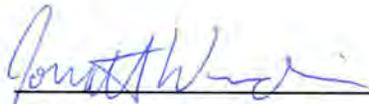
Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
							Payment Number 255296	7,956.93
255297	1/27/2023	CalPERS Long Term Care Program	T7	329582 001		Employee Benefits		212.14
							Payment Number 255297	212.14
255298	1/27/2023	N Harris Computer Corporation	P2	329531 001	00070514	Software Sales & Support	PSA-A1 Cayenta Integration Ser	4,095.00
			P2	329532 001	00070514	Software Sales & Support	PSA-A1 Cayenta Integration Ser	4,725.00
			P2	329533 001	00070514	Software Sales & Support	PSA-A1 Cayenta Integration Ser	1,470.00
			P2	329534 001	00070514	Software Sales & Support	PSA-A2 Cayenta Integration Ser	1,890.00
			P2	329535 001	00070514	Software Sales & Support	PSA-A2 Cayenta Integration Ser	2,310.00
			P2	329537 001	00070514	Software Sales & Support	PSA-A2 Cayenta Integration Ser	11,077.50
			P2	329587 001	00070514	Software Sales & Support	PSA-A2 Cayenta Integration Ser	4,620.00
							Payment Number 255298	30,187.50
255299	1/27/2023	Classic Graphics	P2	329501 001	00077418	Parts & Materials	Miscellaneous Vehicle Supplies	106.32
							Payment Number 255299	106.32
255300	1/27/2023	DG Auto Body & Paint	P2	329497 001	00077423	Vehicle Sales and Service	Vehicle Body Damage	180.00
			P2	329498 001	00077421	Vehicle Sales and Service	Vehicle Body Damage	180.00
			P2	329499 001	00077420	Vehicle Sales and Service	Vehicle Body Damage	180.00
							Payment Number 255300	540.00
255301	1/27/2023	Ernst & Young LLP	PV	329577 001		Professional Services		2,859.00
							Payment Number 255301	2,859.00
255302	1/27/2023	Eurofins Eaton Analytical Inc	P2	329519 001	00077393	Laboratory	Commercial laboratory services	2,077.00
							Payment Number 255302	2,077.00
255303	1/27/2023	Ewing Irrigation Products Inc	P2	329496 001	00077424	Landscaping	Irrigation Parts and Supplies	38.44
							Payment Number 255303	38.44
255304	1/27/2023	Forster & Kroeger Landscape Maintenanc	P2	329495 001	00077425	Landscaping	2nd Amendment	5,107.20
							Payment Number 255304	5,107.20
255305	1/27/2023	Fremont Ford	P2	329493 001	00077431	Vehicle Sales and Service	Vehicle Parts and Repairs	412.54
			P2	329494 001	00077429	Vehicle Sales and Service	Vehicle Parts and Repairs	288.45
							Payment Number 255305	700.99
255306	1/27/2023	Hach Company	P2	329545 001	00077184	Laboratory	HACH CAL ROD 0.1 NTU	3,089.21
							Payment Number 255306	3,089.21
255307	1/27/2023	Hanson Bridgett LLP	PV	329555 001		Legal Services	015863.000001 General	8,516.40
			PV	329556 001		Legal Services	015863.000002 Brd of Dir-Mtgs	1,947.90
			PV	329557 001		Legal Services	015863.000003 Real Property	679.50
			PV	329558 001		Legal Services	015863.000004 Contracts	3,941.10
			PV	329559 001		Legal Services	015863.000005 Financial Matter	2,853.90
			PV	329560 001		Legal Services	015863.000006 Labor, Personnel	770.10
			PV	329561 001		Legal Services	015863.000061 Employ Ben Plans	29,408.30

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
			PV	329562 001		Legal Services	015863.000093 Groundwater	10,645.50
			PV	329563 001		Legal Services	015863.000404 Rubber Dam Dispu	4,875.30
			PV	329564 001		Legal Services	015863.000605 Personnel Mat. 3	9,581.50
			PV	329565 001		Legal Services	015863.000823 PFAS & PFOA Eval	2,355.60
			PV	329566 001		Legal Services	015863.000901 Los Vaq Res	181.20
						Payment Number 255307		75,756.30
255308	1/27/2023	Harrington Industrial Plastics LLC	P2	329528 001	00077380	Parts & Materials	Non-stock inventory parts	3,946.65
						Payment Number 255308		3,946.65
255309	1/27/2023	Hazmat TSDF, Inc.	P2	329516 001	00077395	Safety	Hazwaste Pick up and Disposal	4,161.25
			P2	329518 001	00077398	Safety	Hazwaste Pick up and Disposal	606.25
			P2	329520 001	00077397	Safety	Hazwaste Pick up and Disposal	2,326.25
						Payment Number 255309		7,093.75
255310	1/27/2023	Elissa Hensley	T7	329584 001		City / County / GOV		600.00
						Payment Number 255310		600.00
255311	1/27/2023	Idexx Distribution Inc	P2	329521 001	00077387	Parts & Materials	IDEXX Products	2,600.61
			P2	329522 001	00077388	Parts & Materials	IDEXX Products	1,909.12
			P2	329523 001	00077389	Parts & Materials	IDEXX Products	310.47
			P2	329524 001	00077390	Parts & Materials	IDEXX Products	9,793.58
						Payment Number 255311		14,613.78
255312	1/27/2023	InfoSend Inc	P2	329481 001	00077448	Printing	FY 22-23 Bill Postage	14,665.39
			P2	329482 001	00077449	Printing	FY 22-23 Bill Print & Srvces	4,983.90
						Payment Number 255312		19,649.29
255313	1/27/2023	Sandra Dee Kim	T7	329583 001		City / County / GOV		75.00
						Payment Number 255313		75.00
255314	1/27/2023	Ava Lazor	PV	329592 001			Commuter Benefit	322.15
						Payment Number 255314		322.15
255315	1/27/2023	Micro Motion Inc	P2	329578 001	00075493	Parts & Materials	MAGMETER REMOTE MOUNT WIRING	496.13
						Payment Number 255315		496.13
255316	1/27/2023	Motion and Flow Control Products	P2	329491 001	00077433	Parts & Materials	Parts & Materials	52.20
			P2	329492 001	00077432	Parts & Materials	Parts & Materials	121.16
						Payment Number 255316		173.36
255317	1/27/2023	Napa Auto Parts	P2	329490 001	00077434	Parts & Materials	Auto Parts & Supplies	537.53
			P2	329490 002	00077434	Parts & Materials	Auto Parts & Supplies	377.44
						Payment Number 255317		914.97
255318	1/27/2023	Occu-Med Ltd	P2	329527 001	00077443	Services	Employment Exams	712.40
						Payment Number 255318		712.40

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
255319	1/27/2023	Concentra Medical Centers	P2	329554 001	00077444	Medical Services	Pre-employment & medical exams	264.00
							Payment Number 255319	264.00
255320	1/27/2023	Operating Engineers Local No 3	T7	329158 001		Employee Benefits		6,392.00
							Payment Number 255320	6,392.00
255321	1/27/2023	P&A Administrative Service, Inc.	PV PV	329575 001 329576 001		Professional Services Professional Services		5,580.32 2,331.93
							Payment Number 255321	7,912.25
255322	1/27/2023	Power Engineers Inc	P2 P2	329548 001 329588 001	00061299 00075951	Professional Services Professional Services	Cityworks PLL Implementation Internal Use Only	1,921.25 9,999.00
							Payment Number 255322	11,920.25
255323	1/27/2023	Pump Repair Service Co	P2	329551 001	00077455	Equip Sales and Service	B12 & B13 Chest 155 conversion	8,363.57
							Payment Number 255323	8,363.57
255324	1/27/2023	Puretec Industrial Water	P2	329514 001	00077392	Laboratory	Deionized water service	778.08
							Payment Number 255324	778.08
255325	1/27/2023	Red Wing Shoes	PV	329573 001		Safety		1,987.01
							Payment Number 255325	1,987.01
255326	1/27/2023	Schaaf & Wheeler, Consulting Civil Eng	P2 P2 P2	329529 001 329530 001 329530 002	00068757 00068757 00068757	Professional Services Professional Services Professional Services	Curtner Road Booster Station Curtner Road Booster Station Curtner Road Booster Station	19,236.90 10,387.71 21,466.07
							Payment Number 255326	51,090.68
255327	1/27/2023	ShareSquared Inc	P2	329538 001	00070392	Computer Sales & Support	Office 365 & Sharepoint	92.50
							Payment Number 255327	92.50
255328	1/27/2023	State Water Resources Control Board	PV	329568 001		Fees	Ann. Fee-Water System FY 22/23	216,378.75
							Payment Number 255328	216,378.75
255329	1/27/2023	Trench Plate Rental Co	P2 P2 P2	329486 001 329487 001 329489 001	00077438 00077437 00077435	Equipment Rental Equipment Rental Equipment Rental	Trench Plate Rental Services Trench Plate Rental Services Trench Plate Rental Services	223.46 55.87 244.30
							Payment Number 255329	523.63
255330	1/27/2023	U.S. Bank National Association	P2 P2 P2	329485 001 329552 001 329553 001	00077456 00075251 00075251	Equipment Rental Equipment Rental Equipment Rental	Printer Leasing Computer Services Computer Services	459.91 3,605.90 238.66
							Payment Number 255330	4,304.47
255331	1/27/2023	VWR International LLC	P2	329525 001	00077386	Chemicals	Laboratory Equip. and Supplies	14,204.58
							Payment Number 255331	14,204.58
255332	1/27/2023	WestAir Gases and Equipment, Inc.	P2	329526 001	00071092	Chemicals	Revision to existing PO	8,614.30

Check Number	Check Date	Payee	Document Type	Document Number	Purchase Order Number	Classification	Description	Amount
							Payment Number 255332	8,614.30
1172023	1/24/2023	Cal Public Employees' Retirement System	PM	329477 001		Employee Benefits		200.00
							Payment Number 1172023	200.00
1182023	1/24/2023	Cal Public Employees' Retirement System	PM	329478 001		Employee Benefits		81,515.88
							Payment Number 1182023	81,515.88
1192023	1/24/2023	Cal Public Employees' Retirement System	PM	329479 001		Employee Benefits		220,129.73
							Payment Number 1192023	220,129.73
1202023	1/24/2023	California Dept of Tax and Fee Admin	PM	329480 001		Fees		11,197.88
							Payment Number 1202023	11,197.88
1212023	1/26/2023	Calpers	PM	329593 001		Employee Benefits		230,166.33
							Payment Number 1212023	230,166.33
1222023	1/26/2023	California Employment Dev Dept	PM	329594 001		Taxes		75,477.05
							Payment Number 1222023	75,477.05
1242023	1/26/2023	Internal Revenue Service	PM	329595 001		Taxes		247,262.06
							Payment Number 1242023	247,262.06
1252023	1/26/2023	ICMA Def Comp 401a	PM	329596 001		Employee Benefits		76,102.38
							Payment Number 1252023	76,102.38
1262023	1/26/2023	ICMA Def Comp 457	PM	329597 001		Employee Benefits		184,399.69
							Payment Number 1262023	184,399.69
1272023	1/26/2023	ICMA RHSA	PM	329598 001		Employee Benefits		5,876.01
							Payment Number 1272023	5,876.01
							Grand Total	4,654,441.83

The undersigned affirms that each of the itemized demands set forth above is for materials and/or services rendered to the Alameda County Water District, that no demand has been previously paid in whole or in part, that proper procedures were followed in procurement of the materials and services, and that adequate budgeted funds were available.



Jonathan Wunderlich, Director of Finance/Treasurer

Date:

1/26/23



Ed Stevenson, General Manager

Date:

1/30/2023

ALAMEDA COUNTY WATER DISTRICT

MEMORANDUM

DATE: February 6, 2023
TO: Board of Directors
FROM: Ed Stevenson 
SUBJECT: STAFF REPORT, ACTION CALENDAR ITEMS FOR FEBRUARY 9, 2023

5.1* CONSIDER AND REAFFIRM RESOLUTION NO. 21-058 MAKING FINDINGS PURSUANT TO ASSEMBLY BILL 361 THAT THE PROCLAIMED STATE OF EMERGENCY CONTINUES TO IMPACT THE ABILITY TO MEET SAFELY IN PERSON

SUMMARY: Assembly Bill 361 (AB 361) amended Government Code Section 54953 to allow legislative bodies to continue to meet remotely during a proclaimed state of emergency provided certain conditions are met and certain findings are made. On October 14, 2021, the Board adopted Resolution No. 21-058 finding that the state of emergency associated with the COVID-19 pandemic continues to directly impact the ability to meet safely in person, and state or local officials continue to impose or recommend measures to promote social distancing. Pursuant to Government Code Section 54953(e)(3), the Board must reaffirm those findings. Resolution No. 21-058 is attached to this staff report.

This action supports the District's Strategic Plan Goal 5.1 – Increase Awareness of District Services, Mission, and Value in the Community by ensuring that all members of the public can participate in Board discussions regardless of their location and despite the ongoing pandemic.

RECOMMENDATION: By motion, consider and reaffirm Resolution No. 21-058 making findings pursuant to AB 361 that the proclaimed state of emergency continues to impact the ability to meet safely in person and state or local officials continue to impose or recommend measures to promote social distancing.

DISCUSSION: The Board of Directors has been holding its public Board and committee meetings virtually since March 17, 2020, following Governor Newsom's March 4, 2020, emergency declaration and subsequent executive order suspending certain provisions of the Ralph M. Brown Act to help protect against the spread of COVID-19, maximize social distancing, and protect the health and safety of the public.

On September 16, 2021, and prior to the September 30th expiration of the Governor's executive order, the Governor signed AB 361 into law as urgency legislation. AB 361 amends Government Code Section 54953 to allow legislative bodies to continue to meet remotely during a proclaimed state of emergency provided certain conditions are met and certain findings are made.

On October 14, 2021, the Board adopted Resolution No. 21-058 making the necessary findings to continue to hold public meetings virtually under AB 361. Pursuant to Government Code Section 54953(e)(3), the Board must reaffirm those findings.

In order to continue meeting virtually during the ongoing state of emergency, the Board will continue to:

- Ensure all virtual meetings are open to the public and all persons are permitted to attend and participate.
- Provide notice and post agendas and virtual access information.
- Conduct the virtual meetings in a manner that protects the statutory and constitutional rights of the public.
- Provide members of the public access to the meeting and an opportunity to address the Board and provide comments in real time.
- Suspend action on items in the meeting agenda in the event that there is a disruption in the ability of the meeting to be broadcast to members of the public or the ability for members of the public to comment.

The Board will continue to monitor the ongoing situation and will consider and reaffirm the resolution making these findings monthly and as appropriate to continue virtual meetings.

5.2* AUTHORIZATION OF AGREEMENT FOR HEADQUARTERS BOILER REPLACEMENT

SUMMARY: The District has two boilers that are used to heat the air on the Heating, Ventilation, and Air Conditioning (HVAC) system at the District's Headquarters building. One boiler was replaced in 2017 and the other is reaching the end of its useful life. An Invitation for Bids was issued on November 16, 2022 for a replacement boiler. On December 21, 2022, two bids were received and ranged from \$128,222 to \$155,484. Southland Industries of Union City, CA was the lowest responsive and responsible bidder. Adequate funds have been included in the FY 2022/23 budget to cover this expense. Board authorization of this agreement will assist the District in achieving its Strategic Plan Goal 1.1- Efficiently Manage and Maintain Our Infrastructure to Ensure Reliability.

RECOMMENDATION: By motion, authorize the General Manager to enter into an agreement with Southland Industries to replace an existing boiler at the District's Headquarters facility with a new Aerco Benchmark BMK 2000 for a total not to exceed amount of \$128,222.

DISCUSSION: The District has two boilers that are used to heat the air on the HVAC system at the headquarters facility that were originally installed in 2003 when a major HVAC remodel occurred. One of the two boilers was replaced in 2017 after it prematurely failed. The other existing boiler is nearing the end of its useful life. The boilers have a life expectancy of 20 years. The existing boiler is showing signs of wear and is in need of repairs. Considering its age and life expectancy, staff is recommending replacement of the boiler at this time.

On November 16, 2022, an Invitation for Bids was advertised, and two bids were received and opened on December 21, 2022. The bids ranged from \$128,222 to \$155,484. There were no irregularities in the low bid submitted by Southland Industries.

The approval of this item will authorize the replacement of one boiler at the District's headquarters building with a new Aerco Benchmark BMK 2000 boiler. The total cost for the boiler unit and associated installation work is \$128,222.

5.3* RESOLUTION HONORING REBECCA SWANN UPON HER RETIREMENT FROM
DISTRICT SERVICE

SUMMARY: Rebecca Swann recently retired after more than 21 years of service with the District, and her last day with the District was January 21, 2023.

RECOMMENDATION: By motion, adopt a resolution honoring Rebecca Swann and expressing appreciation for over 21 years of dedicated service to the District.

DISCUSSION: Rebecca started her career with the District on September 4, 2001, as a Human Resources Assistant. On June 23, 2003, Rebecca was the successful candidate for the Human Resources Technician position. After about three years in that role, Rebecca was promoted into the position of Human Resources Analyst II on August 14, 2006. Rebecca has held this position since then and retired within this classification.

During her tenure at the District, Rebecca has performed a variety of tasks within the Human Resources Division assisting employees throughout their District career. Rebecca has been the subject matter expert in employee benefits and led open enrollment for many years assisting District employees every step of the way. Rebecca was the lead in managing human resources functions in the District's enterprise resource system, JD Edwards, and ensured compliance with applicable laws and District policies. Rebecca has been instrumental in the Human Resources division and has successfully completed several trainings and received a number of certificates including completing the District's Leadership Development Training program. Her knowledge of Human Resources functions is recognized by many. Rebecca will be greatly missed by all of her colleagues here at the District.

5.4* AUTHORIZATION OF CHANGE ORDER FOR THE ADVANCED METERING
INFRASTRUCTURE PROJECT

SUMMARY: The District is currently implementing AMI technology throughout its service area through a contract with Badger Meter, Inc. (Badger) as part of its Advanced Metering Infrastructure (AMI) Project (Project). The Project scope includes provision and installation of AMI metering equipment, compatible meter box lids, and other miscellaneous meter setting parts and consumables. During Project construction, the need for additional non-standard meter box lid sizes, types, and AMI system endpoint mounts have been identified. In addition, the discovery of a protected special status species during construction resulted in a temporary suspension of work and additional overhead and direct costs to Badger. Staff recommends a contract change order to address these issues. There is adequate funding in the approved two-year budget for this Change Order. The temporary work suspension and related impacts were

discussed with the Engineering and Information Technology Committee on September 7, 2022. This Project will help meet numerous District Strategic Plan Goals including 1.4 – Invest in System Improvements to Increase Customer Water Use Efficiency and Engagement, and 5.2 – Enhance Customer Outreach and Engagement with New Tools.

RECOMMENDATION: By motion, authorize the General Manager to execute Change Order No. 6 in the amount of \$107,566.25 and a contract time extension of 23 calendar days to Badger Meter, Inc. for the Advanced Metering Infrastructure Project, Job 10062.

DISCUSSION: On May 21, 2021, the Board awarded a contract to Badger in the amount of \$32,974,157.26 for the deployment of AMI throughout the District's service area. Change Order No. 1 in the amount of \$3,031,208.29 was authorized by the Board on July 9, 2020, to change 65,369 meters from positive displacement type to American Water Works Association (AWWA) standard C715 ultrasonic meters. Change order Nos. 2 through 5 totaling \$771,619.20 were previously authorized to address multiple changes including clarification of bonding requirements through the warranty maintenance period, substitution of Badger's installation subcontractor to Professional Meters, Inc. (PMI), performance of out-of-scope regulatory surveying of customer service line material types at each meter box, and accommodation of Alameda County tax increases that became effective on July 1, 2021, which impacted the cost of equipment and material used in the AMI meter installation process.

Contract Change Order No. 6 in the amount of \$107,566.25 has been prepared to address the following additional changes: acquisition of additional B-36-meter box lids to help the District meet immediate inventory needs and alleviate shortages caused by supply chain issues; a modified process for mounting endpoints attached to meters that are above ground, typically meters associated with private fire services; variation in quantity of endpoint installation and debris removal in meter boxes; and the need to drill holes in certain existing meter lids to allow for installation of AMI endpoints.

This change order also addresses a cost increase and a contract time extension for Project construction delays beyond Badger's control. The delays resulted from the encounter of a California Tiger Salamander, a special status species under the Endangered Species Act, during project work in August. The Project was required to pause construction for 68 calendar days while the District consulted with the United States Bureau of Reclamation and United States Fish and Wildlife Service in accordance with the terms of the WaterSMART Water and Energy Efficiency Grant which partially funds the Project. Because the Project construction contract allows for 45 days of delays available to the District in the original 910 calendar day construction schedule, this work stoppage resulted in a net 23 calendar day extension to the work schedule. The cost impacts from this change include extended overhead and direct costs to Badger's operations totaling \$86,383.

Staff has negotiated the costs associated with these changes and has determined that they are fair and reasonable. There is adequate funding in the approved 2-year budget to accommodate this change order.

5.5* RESOLUTION AUTHORIZING THE GENERAL MANAGER TO SUBMIT AN APPLICATION AND TO EXECUTE A FUNDING AGREEMENT WITH THE CALIFORNIA DEPARTMENT OF WATER RESOURCES FOR THE ACWD URBAN COMMUNITY DROUGHT RELIEF PROJECTS

SUMMARY: On October 10, 2022, the California Department of Water Resources (DWR) Division of Financial Assistance released the Guidelines and Proposal Solicitation Package for the 2022 Urban Community Drought Relief Grant Program (Program). This Program is funded by the Budget Act of 2021 (Stats. 2021, ch. 240, § 80) as amended (Stats. 2022., ch. 44, § 25), which allocates approximately \$300 million to the California Department of Water Resources to deliver grants for drought relief to urban communities during the 2022 Program grant solicitation. Staff has identified three projects that align with the eligibility criteria for grant funding given their benefits to support the District's drought response and long-term water supply strategies. The three projects, collectively referred to as the Alameda County Water District (ACWD) Urban Community Drought Relief Projects, include: 1) Conservation Rebate Program Enhancements , 2) New Mowry Deep Aquifer Production Well Project, and 3) Groundwater PFAS Treatment Facility - Phase 1. Accordingly, staff submitted an application on January 30, 2023. A resolution authorizing a grant application, acceptance, and authorization to enter into a grant funding agreement is required as part of the application or shortly thereafter and must be provided prior to executing a funding agreement. Board authorization of this item will help meet the District's Strategic Plan Goal 2.1– Maintain and Enhance Sustainability and Reliability of Local and Regional Water Supplies.

RECOMMENDATION: By motion, adopt a resolution authorizing and directing the General Manager or designee to 1) prepare and file an application for funding with the Department of Water Resources, and take such other actions necessary or appropriate to obtain grant funding; 2) execute the funding agreement with the Department of Water Resources and any amendments thereto; and 3) submit any required documents, invoices, and reports required to obtain grant funding for the ACWD Urban Community Drought Relief Projects.

DISCUSSION: On October 10, 2022, DWR Division of Financial Assistance released the Guidelines and Proposal Solicitation Package for the 2022 Urban Community Drought Relief Grant Program. The Program is being funded by the Budget Act of 2021 (Stats. 2021, ch. 240, § 80) as amended (Stats. 2022., ch. 44, § 25), which allocates approximately \$300 million to the California Department of Water Resources to deliver grants for drought relief to urban communities during the 2022 Program grant solicitation. January 31, 2023 was the deadline for projects to be considered. The examples of eligible grant project types in the solicitation package includes projects that support immediate drought response such as conservation activities, new wells, and projects that help alleviate drought impacts, and other such projects. The Program requires a minimum request of \$3 Million for funding applications but has no maximum for requests.

Staff identified three projects as candidates for grant funding given their benefits to support the District's drought response and long-term water supply strategies. The three projects, collectively referred to as the ACWD Urban Community Drought Relief Projects, include: 1) Conservation Rebate Program Enhancements, 2) New Mowry Deep Aquifer Production Well Project, and 3) Groundwater PFAS Treatment Facility - Phase 1. In addition to being eligible

project types, the Projects met the other requirements for grant funding through this program, including the required completion timeline. Cost sharing of 25% is required for this Program.

Staff prepared a grant application to submit by the January 31 deadline for consideration. Based on the Program requirements and the Project's timeline and tasks, staff included a request for \$20,377,454 million in funding. In order to qualify for funding through the Program, at the time of application or shortly thereafter the District must provide a resolution authorizing an application for the funding and the execution of a funding agreement for the Program. Providing this resolution demonstrates that the District has the authority to enter into a funding agreement with DWR, similar to what has been required for previous grant funding applications. Staff and General Counsel have reviewed the DWR template agreement for funding and believe the terms can be met. Should the District be selected for a funding award through this Program, a final project-specific funding agreement would be developed with DWR and reviewed by District staff and General Counsel to confirm the terms are acceptable prior to execution.

5.6* AUTHORIZATION OF AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT FOR GROUNDWATER MODELING OF ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT'S LOW-FLOW CHANNEL MODIFICATION

SUMMARY: The Alameda County Flood Control and Water Conservation District's (ACFCD) Lower Alameda Creek Fish Passage Restoration in Flood Control District Zone 5 (Project), includes a Low-Flow Channel Modification that will facilitate sediment transport downstream but may impact the District's groundwater supply through upwelling into the channel. District staff has discussed these concerns with ACFCD and their consultant and identified that a refined and detailed analysis is needed to assess the extent to which the Low-Flow Channel Modification may induce upwelling and potentially affect the water supply during various conditions. This work needs to be evaluated expeditiously as State and Federal permits are in process. As such, the General Manager authorized a professional services agreement (PSA) with Woodard & Curran for groundwater modeling of ACFCD's Low-Flow Channel Modification to determine potential impacts of the channel modification to the District's groundwater water supply on January 13, 2023, in an amount of \$93,990. Additional services will be needed and staff is requesting an added proposed Scope of Work for the PSA to include on-call services based on time and materials in support of the modeling efforts due to the proposed Low-Flow Channel Modification in an amount not to exceed \$150,000, for a total estimated final cost, including the proposed amendment, of \$243,990. There is adequate funding in the Fiscal Year 2022/23 budget for this expenditure. This item was reviewed with the Water Resources & Conservation Committee on January 25, 2023. Board authorization of the amendment will help meet the District's Strategic Plan Goal No. 2.1– Maintain and Enhance Sustainability and Reliability of Local and Regional Water Supplies.

RECOMMENDATION: By motion, authorize the General Manager to execute an amendment to the professional services agreement with Woodard & Curran in an amount not to exceed \$150,000 for professional services in support of Groundwater Modeling of Alameda County Flood Control and Water Conservation District's Alameda Creek Low-Flow Channel Modification.

DISCUSSION: The Project, within the cities of Fremont and Union City extends approximately 5.6 miles within the U.S. Army Corps of Engineers (USACE) Flood Control Channel between the BART Weir fish ladder upstream to 600 feet below the UPRR crossing in Union City, near Lowry Road. The proposed Project involves a number of activities, including: modification of the existing low flow channel within the 230 feet wide flood control channel from the scour pool immediately downstream of the BART Weir to about 600 feet downstream of the UPRR crossing; modification of existing grade control structures; modification of bridge footings in the channel; modification of UPRR bridge footing in the channel; installation of a new modified grade control structure; install boulders to improve habitat; and plant native shrubs and grasses on the configured channel terrace between the levees. The Project, through a Low-Flow Channel Modification, will also facilitate sediment transport downstream and thereby reduce the maintenance desilting frequency of the flood control channel.

ACFCD and District staff recently discussed potential upwelling due to the Low-Flow Channel Modification, specific to the excavation beyond the original USACE bottom of channel and District staff determined that a more refined and detailed analysis is needed to understand the extent to which the Low-Flow Channel Modification may induce upwelling and potentially affect the water supply under various hydrologic conditions.

This work needs to be evaluated expeditiously as State and Federal permits for the Project are in process. Since Woodard & Curran recently upgraded the District's Groundwater Model through the District's Sustainable Groundwater Management efforts, they have unique knowledge, expertise, and experience in helping the District with this work in order to meet the expedited timeline. As such, the General Manager authorized a PSA with Woodard & Curran for groundwater modeling of Alameda County Flood Control and Water Conservation District's Alameda Creek Low-Flow Channel Modification to determine potential impacts of the channel modification to the District's groundwater water supply on January 13, 2023, in an amount of \$93,990.

The initial Scope of Work is the assessment of potential impacts of the Low-Flow Channel Modification using the Niles East Bay Integrated Model (NEBIM); however, based on the results using NEBIM, the development of a refined spatial and vertical resolution model, or "child model," is likely necessary. The NEBIM is a basin-scale regional groundwater model, and child models are sometimes needed to carve out a specific area of a model domain, such as near creeks whose interaction with groundwater is highly dynamic and variable. Additional services will be needed and staff is requesting an added Scope of Work for the PSA to include on-call services based on time and materials in support of the modeling efforts due to the proposed Low-Flow Channel Modification. For example, tasks that will be required include; development of a child model, evaluating the project's potential impact to groundwater quality as a result of the anticipated tidal influence moving further inland, preparation of text and/or figures, and attending meetings.

Therefore, staff is recommending the existing PSA totaling \$93,990, previously approved by the General Manager, be amended with the on-call services and an additional \$150,000 be added to the PSA. This amendment is needed to accommodate the expedited timeline and complexity

related to the groundwater modeling efforts. The estimated final total cost, including the proposed amendment, for the PSA is \$243,990.

5.7 PUBLIC HEARING TO CONSIDER REVISIONS TO THE DISTRICT'S WATER RATES; ADOPTION OF RESOLUTIONS AMENDING THE DISTRICT'S RATE AND FEE SCHEDULE REGARDING WATER-RELATED RATES AND CHARGES, INCLUDING DROUGHT SURCHARGES AND PRIVATE FIRE SERVICE RATES, THE CUSTOMER ASSISTANCE PROGRAM, FACILITIES CONNECTION CHARGES, AND MISCELLANEOUS FEES AND CHARGES, AND FINDING THAT THE AMENDMENTS ARE EXEMPT FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

SUMMARY: Over the past year, the District has conducted four public Board Financial Workshops to review and analyze the forecasted revenues and expenses, water demand, and discuss and evaluate the water rates update and financial plan, rate structure options and drought surcharges. On December 8, 2022, the Board received staff recommendations and called for a Public Hearing for February 9, 2023, to receive and consider comments on proposed revisions to the District's water-related rates. Proposition 218 notices were mailed to all property owners, all customers responsible for paying District water bills, and all other District service area mailing addresses on December 23, 2022, notifying them of a proposed water rate increase of 4% effective March 1, 2023 and 4% effective March 1, 2024 to both the service charge and consumption charges. The notice also included proposed adjustments to the private fire service rates and drought surcharges.

Notices of the public hearing were posted on the District's website, social media outlets, local newspapers, and local city halls and libraries. In addition, staff has performed a number of different public outreach efforts including two community meetings in January 2023. As of noon on February 6, 2023, the District has received 241 protest submissions comprised of 231 online form submittals, 6 emails, and 4 mailed letters.

If adopted by the Board of Directors, the proposed two-year water rates, private fire service rates, and drought surcharges will become effective March 1, 2023 and March 1, 2024. Revisions for other rates and charges are also proposed to be effective on March 1, 2023. This includes Board consideration of an increase in the Help on Tap benefit amount from \$40 bimonthly to the value of the 5/8" and 3/4" service charge amount (Help on Tap is the District's low-income rate assistance program). Staff also recommends updating the District's Rate and Fee Schedule to reflect previously approved changes to the Facilities Connection Charges (FCC) with the adjustment for inflation based on the Engineering News-Record Construction Cost Index for the San Francisco Bay Area and final phase-in of the equity buy-in component. The Rate and Fee Schedule will be amended with the proposed revisions. The Board resolutions will authorize all rates and charges as shown in the amended Rate and Fee Schedule. Under state law, there is a 120-day statute of limitations for challenging any new, increased, or extended fee or charge. This item will be supplemented with a staff presentation. Board approval of this item will help achieve District Strategic Plan Goal 3 – Improve the District's Financial Stability and Transparency.

RECOMMENDATION: 1) Conduct a public hearing to receive comments on the proposed revisions to the District's water-related rates, including service charges, consumption charges, private fire service rates, and the drought surcharges; and 2) by motion, adopt resolutions amending the rate and fee schedule to A) implement the recommended amendments to the District's miscellaneous fees and charges and Help on Tap customer assistance program, and reflect previously approved adjustments to Facilities Connection Charges with the inflationary update and final phase-in of the equity buy-in component, B) implement the recommended amendments to the District's water-related rates and charges, including service charges, commodity charges, private fire service rates, and outside District commodity charges, and C) implement the recommended amendments to the drought surcharges, and finding that all the above amendments are exempt from the California Environmental Quality Act.

DISCUSSION: Over the last year, the District has worked closely with HF&H Consultants (HF&H) through a number of Board workshops to complete a wide-ranging analysis of the District's commodity rate and service charge and to provide various options going forward. The full HF&H "Water Rate Update and Financial Plan" report, dated November 28, 2022, was included in the December 8, 2022 Board meeting packet and is available at www.acwd.org/rates. The report contains the detailed assumptions, analysis, and calculations made in support of the rate proposals, and is incorporated by this reference. The report is based upon a full cost of service study prepared in 2021 which is also available at www.acwd.org/rates.

The District's updated financial analyses make it clear that the proposed rate increase is necessary to maintain service levels, maintain long-term financial sustainability, and ensure high water quality and reliability. The funds are needed to:

- Attract and maintain a specialized workforce with competitive salaries and benefits
- Construct and modernize capital infrastructure to meet increasing environmental and water quality regulations and standards, including a new water treatment facility to remove PFAS from water. The regional Construction Cost Index increased 13.7% over the past year
- Fund significant water supply and water quality initiatives, including Los Vaqueros Reservoir Expansion and Delta Conveyance, and ensuring the preservation and protection of the southern Alameda Creek watershed, a critical source of the District's water supply
- Meet debt covenants
- Maintain sufficient emergency reserves and ACWD's excellent AAA bond rating which lowers borrowing costs
- Address current and anticipated cost increases from wholesale water provider San Francisco Public Utilities Commission (15.9% in 2022)
- Ensure ACWD can withstand financial pressures that could result from increased regulation of water supply sources and mitigation of contaminants of emerging concern

The District has taken numerous steps to reduce costs and improve efficiencies to minimize the need to increase customer water rates. These cost-reduction and efficiency measures include both ongoing long standing practices and new initiatives such as:

District’s Long-Standing Practices:

- Managing water supplies to maximize use of lowest-cost water
- Refinancing existing debt to lower debt service costs, including a refinancing in 2022
- Partnering with other agencies to execute joint projects to reduce costs and community impacts
- Teaming with other agencies to secure lower prices on necessary chemicals

District’s New Initiatives:

- Implementing Advanced Metering Infrastructure (AMI) to provide customers better tools to track their water use, improve metering accuracy, and to provide long-term operational savings
- Increasing energy efficiency and installing solar facilities to reduce power costs
- Lowering costs related to our vehicle fleet by transitioning to a leasing program

Bimonthly Service Charge

The District's bimonthly service charge has been set to recover a share of fixed costs, including meter reading, billing, and customer service, meter, service line and main maintenance and replacement, and capacity related infrastructure costs.

The proposed service charges shown in the table below include the 4% proposed increase for each of the next two years.

Meter Sizes	Current Effective March 1, 2022 Service Charges	Proposed Effective March 1, 2023 Service Charges	Proposed Effective March 1, 2024 Service Charges
5/8 & 3/4"	\$58.94	\$61.30	\$63.75
1	\$94.18	\$97.95	\$101.87
1 ½	\$182.25	\$189.54	\$197.12
2	\$287.95	\$299.47	\$311.45
3	\$622.64	\$647.55	\$673.45
4	\$1,115.87	\$1,160.50	\$1,206.92
6	\$2,824.56	\$2,937.54	\$3,055.04
8	\$4,938.41	\$5,135.95	\$5,341.38
10	\$7,404.57	\$7,700.75	\$8,008.78

Commodity Rate

The commodity rate revenue helps recover the cost of water supplies, operations, and administrative expenses as well as to help fund the remaining share of certain fixed costs not fully funded by the service charge such as capital projects needed to comply with State and Federal drinking water regulations and to maintain the reliability of the water system.

The proposed increase for the commodity rate for both inside and outside District customers is 4% for each of the next two years with the results as shown in the below table. A unit is one-hundred cubic feet of water or about 748 gallons.

	Current Effective March 1, 2022 Commodity Rate	Proposed Effective March 1, 2023 Commodity Rate	Proposed Effective March 1, 2024 Commodity Rate
Inside District	\$4.596/unit	\$4.78/unit	\$4.97/unit
Outside District	\$5.253/unit	\$5.46/unit	\$5.68/unit

Private Fire Services

Water systems provide two types of fire protection: public fire protection for firefighting, which is generally visible as hydrants on the street, and private fire protection that provides water flow to building and other structure fire sprinkler systems for fire suppression within private improvements. The private fire service rates are calculated to recover the costs associated with private fire service capacity in the water distribution system. The proposed increase for the private fire service rates is 4% for each of the next two years with the results as shown in the table below:

Private Fire Service Diameter	Current Effective March 1, 2022 Private Fire Service Rates	Proposed Effective March 1, 2023 Private Fire Service Rates	Proposed Effective March 1, 2024 Private Fire Service Rates
3/4 "	\$7.93	\$8.25	\$8.58
1	\$8.12	\$8.44	\$8.78
2	\$9.97	\$10.37	\$10.78
4	\$21.46	\$22.32	\$23.21
6	\$47.57	\$49.47	\$51.45
8	\$92.59	\$96.29	\$100.15
10	\$160.32	\$166.73	\$173.40
12	\$254.19	\$264.36	\$274.93

Drought Surcharges

Staff is proposing a corresponding 4% increase for the drought surcharges (formerly called water shortage emergency stage rates) which would ensure the District receives sufficient revenues to cover its cost of providing water service when consumption decreases during a water shortage emergency, such as a drought. Drought surcharges are set up incrementally to reflect the levels of water shortage emergency the District has defined in its existing Urban Water Management Plan, specifically the Water Shortage Contingency Plan. At a December 9, 2021 public hearing, the Board adopted an ordinance declaring a water shortage emergency and issued mandatory water use reductions of 15% (Stage 2a). In the event of a declared water shortage emergency and mandatory water-use reductions, the drought surcharges may be applied to the water consumption charge for different stages as shown in the table below:

Water Shortage Contingency Plan Stage	Reduction in Water Demand	Projected Water Sales (Acre-foot)	Current Unit Drought Surcharge	Proposed Effective March 1, 2023 Unit Drought Surcharge	Proposed Effective March 1, 2024 Unit Drought Surcharge	Proposed Effective March 1, 2023 Commodity Rate Per Stage*	Proposed Effective March 1, 2024 Commodity Rate Per Stage*
0	0%	35,038	\$0.000	\$0.00	\$0.00	\$4.78	\$4.97
1	10%	31,534	\$0.496	\$0.52	\$0.54	\$5.30	\$5.51
2a	15%	29,782	\$0.787	\$0.82	\$0.85	\$5.60	\$5.82
2b	20%	28,030	\$1.115	\$1.16	\$1.21	\$5.94	\$6.18
3a	25%	26,279	\$1.486	\$1.55	\$1.61	\$6.33	\$6.58
3b	30%	24,527	\$1.920	\$2.00	\$2.08	\$6.78	\$7.05
4	40%	21,023	\$3.000	\$3.12	\$3.25	\$7.90	\$8.22
5	50%	17,519	\$4.443	\$4.62	\$4.81	\$9.40	\$9.78
6	60%	14,015	\$5.852	\$6.90	\$7.18	\$11.68	\$12.15

*Outside District Customers should add the drought surcharge to their base rate

Drought surcharges would only be implemented in the event that water supplies are not sufficient to meet customer water demands due to a water shortage emergency. Since the District was in a declared water shortage emergency when the Proposition 218 notice was issued on December 23, 2022, the Proposition 218 notice included the appropriate notice to implement increased drought surcharges consistent with the implementation of proposed rate changes.

The chart below shows an example of how an average customer bill might be affected in the scenario of a Stage 2a water shortage emergency assuming a base 16 units of consumption (approximately 197 gallons per day). The current and proposed base charges are shown for reference. Note that even though including an additional Stage 2a rate of \$0.82/unit increases the example bill to a total of \$150.90 based on 16 units of consumption, customers who are able to reduce consumption by 15% during a Stage 2a water shortage emergency will not see an increase in their bill. Customers who are already very water thrifty may not be able to conserve 15% and would see an increase in their total bill; however, because the stage rates are per unit of water consumption these customers would still pay less than customers who use more water.

Example of Stage 2a and Conservation Impacts for an Average Single Family Residential Customer Bill			
	Commodity Rate	Service Charge	New Total Overall Bill
Current Effective March 1, 2022	\$73.54	\$58.94	\$132.48
Proposed Effective March 1, 2023	\$76.48	\$61.30	\$137.78
Stage 2a (\$5.60/unit)	\$89.60	\$61.30	\$150.90
With 15% Conservation	\$76.16	\$61.30	\$137.46

Effect on Total Bill

The proposed service charge and commodity rate increases would impact the total bi-monthly water bill for an average residential customer using 16 units of water as shown in the summary table below. The current average single family residential bi-monthly bill is \$132.48, which is comprised of \$73.54 for the commodity portion and \$58.94 for the service charge. The proposed increase would mean an average single family residential bi-monthly bill of \$137.78, which would be comprised of \$76.48 for the commodity portion and \$61.30 for the service charge. The proposed 4% second year increase would mean an average single family residential bi-monthly bill of \$143.27, which would be comprised of \$79.52 for the commodity portion and \$63.75 for the service charge.

The District has updated the average water bill comparison survey of 30 other Bay Area water agencies. The proposed rate increase would place the District's average residential water bill at the 9th lowest of the agencies surveyed.

	Proposed Increase Impacts for an Average Single Family Residential Customer Bill (16 units)					
	Commodity Rate	Service Charge	New Total Overall Bill	Increase Per Bill	Increase Per Month	Increase Per Day
Current Effective March 1, 2022	\$73.54	\$58.94	\$132.48	-	-	-
Proposed Effective March 1, 2023	\$76.48	\$61.30	\$137.78	\$5.32	\$2.65	\$0.087
Proposed Effective March 1, 2024	\$79.52	\$63.75	\$143.27	\$5.49	\$2.74	\$0.090

Public Outreach Plan

Staff pursued a number of different ways for public outreach including: 1) two public informational meetings – the first meeting was held in person on January 19, 2023, and a second meeting was held in a virtual format on January 26, 2023; 2) notices on the District website, social media and local newspapers as well as postings at the local city halls and libraries; and 3) issuance of a Proposition 218 notice of the proposed increase to all tri-city residents and property owners. Additionally, staff was available to make presentations to elected bodies and non-governmental organizations upon request.

Proposition 218 Notifications

The District mailed 139,498 Proposition 218 notifications to all property owners, customers, and all other mailing addresses in the District with the proposed increases to the water related rates and charges on December 23, 2022. The notice also informed property owners and customers that there is a 120-day statute of limitations to challenge any new, increased, or extended fee or charge. This met the 45-day notice requirement for the February 9, 2023 public hearing. The mailed notice provides the current and proposed commodity rates, bimonthly service charges, private fire service rates, drought surcharges, the effect of the rate increase on an average residential customer's bill, and reasons for the proposed increase.

There are 86,948 parcels in the District’s boundaries that currently have a direct service connection, which represents the most conservative approach to determining the threshold for a majority protest. The District must receive 43,475 protests to constitute a majority protest, which would prohibit the Board from adopting the proposed rate increase.

In the interest of enhancing public input, the District has allowed electronically submitted protests in addition to written protests, and provided online protest information in its Proposition 218 notice. The electronic protest form is available on the District website and accessible through www.acwd.org/rates as described in the Proposition 218 notice.

Miscellaneous Rates and Charges

Staff has reviewed the relevant cost data for other miscellaneous fees and charges, as well as various operational and process issues. Based on these items, additional revisions to the Rate and Fee Schedule are proposed. The proposed changes shown below will become effective March 1, 2023, except the meter installation charges will be effective May 1, 2023. The miscellaneous fees for which there are no proposed changes are not listed. The proposed meter installation charges are primarily based on installing an ultrasonic meter (current charges are based on installing a positive displacement meter). All these fees and charges are proposed to cover the cost of service.

	Current	Proposed Effective March 1, 2023
Field Charge	\$46.00	\$48.00
Damaged Angle Stop Charge	\$313.00	\$327.00
Reconnection Charges		
Weekdays - 8:00 a.m. to 4:00 p.m.	\$46.00	\$48.00
Replacement of a Pulled Meter & Turn On	\$104.00	\$110.00
Inspection/Testing of Backflow Prevention Device	\$85.00	\$87.00

	Current	Proposed Effective May 1, 2023
Meter Installation Charges:		
3/4” Meter	\$261.00	\$306.00
1” Meter	\$273.00	\$364.00
1-1/2” Meter	\$468.00	\$554.00

Staff proposes to add the meter tampering charges to the District’s Rate and Fee Schedule related to customer tampering with AMI meters that generate service alerts or otherwise prevent the AMI meter from transmitting usage data. The proposed new fees are as shown in the below table:

	Current	Proposed Effective March 1, 2023
Meter Tampering Investigation	\$0	\$75.00

	Current	Proposed Effective March 1, 2023
Meter Tampering/End Point Replacement	\$0	\$150.00
Meter Tampering/Meter Replacement		
3/4" Meter	\$0	\$306.00
1" Meter	\$0	\$364.00
1-1/2" Meter	\$0	\$554.00

Facilities Connection Charges

On February 7, 2019, the Board approved updates to charges for new or expanded water service connections (Facilities Connection Charges or FCCs). A five-year phase-in of a new equity buy-in component was added to the FCC. The fifth and final year of the phase-in is scheduled to go into effect May 1, 2023. Additionally, a 13.65% inflationary increase to FCCs will be effective May 1, 2023. This increase was calculated based on the July 2021 – July 2022 increase in the Engineering News-Record Construction Cost Index for the San Francisco Bay Area as approved by the Board's February 2019 action revising the District's FCCs. Notice of the updated FCCs were included in the District's annual developer letter distributed on January 2, 2023 and posted on the District's website. One of the resolutions presented with this item includes these FCC updates to the Rate and Fee Schedule to reflect the previously approved inflationary increase and phase-in of the equity buy-in component.

Customer Assistance Program – Help on Tap

The District operates a customer assistance program known as Help on Tap. The Help on Tap program, established in 2017, is the District's income-qualified Low Income Rate Assistance Program that provides assistance to income-qualified customers. Help on Tap currently provides a \$40 bimonthly credit toward the service charge. The Help on Tap program income limit is the greater of 50% of the Area Median Income or 250% of the Federal Poverty Level. There are currently 1,269 District customers participating in the program. At the January 12, 2023 Board meeting, the Board evaluated increasing the Help on Tap program credit to the amount equal to 100% of the bimonthly service charge and directed staff to prepare a Board resolution to that effect. One of the resolutions presented with this item includes an increase to the Help on Tap credit equal to the service charge for a 5/8" and 3/4" meter, which would be \$61.30 effective March 1, 2023 and \$63.75 effective March 1, 2024.

California Environmental Quality Act (CEQA) Exemption

The California Environmental Quality Act (CEQA), Public Resources Code §21080(b)(8), includes an exemption for revisions to rates and charges that are for the purpose of: 1) meeting operating expenses; 2) purchasing or leasing supplies, equipment, and materials; 3) meeting financial reserve requirements; or, 4) obtaining funds for capital projects necessary to maintain services and system reliability within existing service areas. Staff and General Counsel recommend that the Board find that all proposed rate and charge changes are for the purpose of providing for the CEQA enumerated items:

1. Operating expenses
2. Leasing supplies, equipment, and materials, which are also a part of operating expenses
3. Financial reserves: The District maintains various reserves such as the Emergency Reserve and the Operations & Maintenance and Capital Reserve.
4. Capital Projects

5.8 DELIVERY OF GROUNDWATER MONITORING REPORT AND SURVEY REPORT, AND ADOPTION OF RESOLUTIONS RELATING TO THE REPLENISHMENT ASSESSMENT ACT

SUMMARY: As required by the Replenishment Assessment Act of the Alameda County Water District (Replenishment Assessment Act), the District must prepare an Engineering Survey and Report on Groundwater Conditions (Survey Report) and the Board must adopt the necessary resolutions of intent on or before the second Tuesday of March as prerequisites to a Public Hearing, which must be held on the second Tuesday of April. The purpose of the Public Hearing is to allow public comment on both the Survey Report and the proposed replenishment assessment rate. The Survey Report includes a recommendation for a 4.9% increase in the replenishment assessment rate for groundwater pumped or extracted for other than agricultural and municipal recreational purposes, effective on July 1, 2023. This proposed increase is subject to public notification requirements that were established through Proposition 218. This recommendation is based on projected activities needed to sustain the groundwater basin in FY 2023/24, with consideration of groundwater levels and quality documented in the 2022 Groundwater Monitoring Report. Under state law, there is a 120 day statute of limitations for challenging any new, increased, or extended fee or charge. Approval of this item is consistent with Strategic Plan Goal 2.1 – Maintain and Enhance Sustainability and Reliability of Local and Regional Water Supplies and Strategic Plan Goal 3 – Improve the District’s Financial Stability and Transparency.

RECOMMENDATION: Receive the 2022 Groundwater Monitoring Report and the Survey Report on Groundwater Conditions, February 2023 and by motion, 1) adopt a resolution declaring the Board’s intention to continue use of replenishment assessment revenue to fund a portion of groundwater basin costs in FY 2023/24, setting April 11, 2023, at 6:00 p.m. as the date and time for a public hearing for consideration of the proposed increase to the replenishment assessment, and directing staff to mail to owners and operators of wells that would be subject to the replenishment assessment notification of the proposed increase and public hearing details, and 2) adopt a resolution extending the deadline for installation of measuring devices on certain non-metered wells.

DISCUSSION: The Replenishment Assessment Act was established by the State of California in Chapter 1942 of the Statutes of 1961, and amended by Chapter 947 of the Statutes of 1970 and Chapter 828 of the Statutes of 1974. The Replenishment Assessment Act gives the District the authority to take measures to ensure the quantity and quality of groundwater for the benefit of all users of the groundwater basin. Such measures include constructing, operating, and maintaining facilities for groundwater recharge; importing supplemental water for groundwater recharge; requiring metering of wells; and levying a replenishment assessment.

The Replenishment Assessment Act requires the Board to order an Engineering Survey and Report on Groundwater Conditions as the first step in the process to establish a replenishment assessment for the next fiscal year. The Survey Report on Groundwater Conditions must be provided to the Board in February to meet subsequent deadlines set forth by Proposition 218 and the Replenishment Assessment Act. On February 1, 2023, staff sent letters to all well owners/operators and interested parties identified as part of the Sustainable Groundwater Management Act informing them that the Board would be discussing and considering items pertaining to the Replenishment Assessment Act at the February 9, March 9, and April 11, 2023, Regular Board meetings.

The Survey Report, ordered by the Board on November 10, 2022, has been completed. The 2022 Groundwater Monitoring Report, which is referenced by the Survey Report, has also been completed. The remaining actions and schedule for increasing the replenishment assessment rate are as follows:

- February 9, 2023 – Regular Board Meeting: On or before the second Tuesday in March, the Board must adopt a resolution declaring that replenishment assessment revenue should continue over the coming fiscal year to fund a portion of groundwater basin costs. Following adoption of this resolution, the Board must adopt a second resolution to extend the deadline for metering of certain non-metered wells for which annual water production is minimal and would not result in revenues justifying the costs to install meters.
- February 10-17, 2023, 2022: To comply with Proposition 218 notification requirements, staff will mail notices of the proposed rate increase to owners and operators of wells producing water for purposes other than agricultural and municipal recreation. The notices will include the amount of the proposed rate increase and the date and time of the public hearing (see below).
- March 9, 2023 – Regular Board Meeting: Staff will provide a presentation to assist the Board and the public in its review of the Survey Report and the 2022 Groundwater Monitoring Report.
- April 11, 2023 – Regular Board Meeting/Public Hearing: The Board will receive public comment and consider the adoption of resolutions that will increase the replenishment assessment rate for groundwater pumped or extracted for other than agricultural and municipal recreational purposes, effective in FY 2023/24.

Additional work sessions on the Survey Report can be held at the Board's discretion. The Public Hearing, which must begin April 11, 2023, may be adjourned from time to time, but must be completed no later than May 2, 2023. The resolutions tentatively scheduled for consideration on April 11, 2023, may not be acted upon until completion of the Public Hearing, but must be adopted no later than May 9, 2023.

Attachments
cc: Executive Staff

RESOLUTION NO. 21-058

OF THE BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
MAKING FINDINGS PURSUANT TO ASSEMBLY BILL 361 THAT THE
PROCLAIMED STATE OF EMERGENCY CONTINUES TO IMPACT THE
ABILITY TO MEET SAFELY IN PERSON

WHEREAS, on March 4, 2020, Governor Newsom declared a State of Emergency to exist in California as a result of the threat of COVID-19;

WHEREAS, on March 17, 2020, the Governor issued Executive Order N-29-20 suspending certain provisions of the Ralph M. Brown Act related to teleconferencing to allow legislative bodies to conduct meetings remotely to help protect against the spread of COVID-19 and to protect the health and safety of the public;

WHEREAS, on June 11, 2021, the Governor issued Executive Order N-08-21, which specified that Executive Order N-29-20 remains in effect through September 30, 2021, and then expires;

WHEREAS, on September 16, 2021, the Governor signed Assembly Bill 361 (AB 361) in to law, as urgency legislation that goes into effect immediately, that amends Government Code Section 54953 to allow legislative bodies to continue to meet remotely during a proclaimed state of emergency provided certain conditions are met and certain findings are made;

WHEREAS, on September 20, 2021, the Governor issued Executive Order N-15-21 that generally suspends the AB 361 amendments to Government Code Section 54953 until October 1, 2021, and therefore clarifying that Executive Order N-29-20 controls through the end of September 2021;

WHEREAS, the Governor's proclaimed State of Emergency remains in effect, and state and local officials, including the Alameda County Health Officer, the California Department of Public Health, and the Department of Industrial Relations, have imposed or recommended measures to promote social distancing; and

WHEREAS, to help protect against the spread of COVID-19 and its variants, and to protect the health and safety of the public, the Board of Directors desires to take the actions necessary to comply with AB 361 and to continue to hold its Board and committee meetings remotely.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Alameda County Water District has considered the circumstances of the proclaimed State of Emergency, and finds that the State of Emergency continues to directly impact the ability of the members to meet safely in person, and state or local officials continue to impose or recommend measures to promote social distancing.

BE IT FURTHER RESOLVED that the District will comply with the requirements of Government Code Section 54953(e)(2) when holding Board and committee meetings pursuant to this Resolution.

BE IT FURTHER RESOLVED that the Board will consider the findings in this Resolution every 30 days and may, by motion, reaffirm these findings.

PASSED AND ADOPTED this 14th day of October, 2021, by the following vote:

AYES: Directors Weed, Gunther, Huang, Sethy, and Akbari

NOES: None

ABSENT: None

/s/ JOHN H. WEED
John H. Weed, Vice President
Board of Directors
Alameda County Water District

ATTEST:

APPROVED AS TO FORM:

/s/ MARIAN HSU
Marian Hsu, Assistant District Secretary
Alameda County Water District
(Seal)

/s/ PATRICK T. MIYAKI
Patrick T. Miyaki, General Counsel
Alameda County Water District

RESOLUTION NO. _____

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
HONORING REBECCA SWANN UPON HER RETIREMENT FROM
DISTRICT SERVICE

WHEREAS, the BOARD OF DIRECTORS of ALAMEDA COUNTY WATER DISTRICT desires to officially express the District's appreciation for the services so ably rendered by Rebecca Swann for serving continuously as an employee from September 4, 2001, to her retirement on January 21, 2023; and

WHEREAS, during her over 21 years of service, she consistently demonstrated a high degree of dedication and loyalty to the District and to her fellow employees.

NOW, THEREFORE, BE IT RESOLVED by the BOARD OF DIRECTORS of ALAMEDA COUNTY WATER DISTRICT that there be and hereby is proclaimed, individually and on behalf of the people of the District, an expression of appreciation for the distinguished service of Rebecca Swann in her official duties as an employee of the District.

BE IT FURTHER RESOLVED that the Resolution of official recognition and appreciation be spread upon the official records of the District.

PASSED AND ADOPTED the 9th day of February 2023, by the following vote:

AYES:

NOES:

ABSENT:

Paul S. Sethy, President
Board of Directors
Alameda County Water District

ATTEST:

Gina Markou, District Secretary
Alameda County Water District
(Seal)

RESOLUTION NO. _____

OF THE BOARD OF DIRECTORS OF THE ALAMEDA COUNTY WATER DISTRICT AUTHORIZING THE GENERAL MANAGER TO SUBMIT AN APPLICATION AND TO EXECUTE A FUNDING AGREEMENT WITH THE CALIFORNIA DEPARTMENT OF WATER RESOURCES FOR THE ACWD URBAN COMMUNITY DROUGHT RELIEF PROJECTS

WHEREAS, the Budget Act of 2021 (Stats. 2021, ch. 240, § 80) as amended (Stats. 2022., ch. 44, § 25), for the State of California allocated approximately \$300 million to the California Department of Water Resources to deliver grants for drought relief to urban communities; and

WHEREAS, the California Department of Water Resources has established necessary procedures for the awarding of grant funds; and

WHEREAS, said procedures established by the California Department of Water Resources require a resolution from the governing body of the grantee that confirms its approval of the project and grant funds; and

WHEREAS, and the Alameda County Water District (ACWD) proposes to implement the Conservation Rebate Program Enhancements, the New Mowry Deep Aquifer Production Well Project, and the Groundwater PFAS Treatment Facility – Phase 1, collectively referred to as the ACWD Urban Community Drought Relief Projects; and

WHEREAS, Alameda County Water District has the legal authority and is authorized to enter into a funding agreement with the State of California; and

WHEREAS, the Alameda County Water District intends to apply for grant funding from the California Department of Water Resources for the ACWD Urban Community Drought Relief Projects.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the ALAMEDA COUNTY WATER DISTRICT that:

1. Pursuant and subject to all of the terms and provisions of Budget Act of 2021 (Stats. 2021, ch. 240, § 80), as amended (Stats. 2022., ch. 44, § 25), the General Manager of the Alameda County Water District, or designee, is hereby authorized and directed to

prepare and file an application for funding for the ACWD Urban Community Drought Relief Projects with the Department of Water Resources, and take such other actions necessary or appropriate to obtain such grant funding;

2. The General Manager of the Alameda County Water District, or designee, is hereby authorized and directed to execute the funding agreement with the Department of Water Resources and any amendments thereto; and
3. The General Manager of the Alameda County Water District, or designee, is hereby authorized and directed to submit any required documents, invoices, and reports required to obtain grant funding.

PASSED AND ADOPTED at this meeting of the Alameda County Water District this 9th day of February 2023, by the following vote:

AYES:

NOES:

ABSENT:

Paul S. Sethy, President
Board of Directors
Alameda County Water District

ATTEST:

APPROVED AS TO FORM:

Gina Markou, District Secretary
Alameda County Water District
(Seal)

Patrick T. Miyaki, General Counsel
Alameda County Water District

CERTIFICATION

I do hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the Alameda County Water District held on the 9th day of February 2023.

Clerk/Secretary: _____

RESOLUTION NO. _____

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
AMENDING THE RATE AND FEE SCHEDULE REGARDING
MISCELLANEOUS FEES AND CHARGES, THE CUSTOMER ASSISTANCE
PROGRAM, AND FACILITIES CONNECTION CHARGES, AND FINDING
THE AMENDMENTS EXEMPT FROM THE CALIFORNIA
ENVIRONMENTAL QUALITY ACT

This resolution is adopted with reference to the following facts and circumstances that are found by the Board of Directors:

1. The Board of Directors of Alameda County Water District (District) desires to revise certain fees and charges to be collected by the District for the purposes of recovering the costs of providing the service for which the fee or charge is imposed including miscellaneous water-related fees and charges.

2. All these proposed changes to the Rate and Fee Schedule were discussed at the December 8, 2022 Board meeting.

3. The Board desires to amend the Rate and Fee Schedule to increase the Help on Tap program benefit amount to 100% of bimonthly service charge for a 5/8" and 3/4" meter, which would be \$61.30 effective March 1, 2023 and \$63.75 effective March 1, 2024.

4. The Board desires to revise Section 4 of the Rate and Fee Schedule, to include Subsection "J. Meter Tampering" to allow for the District to charge for customer tampering with the Advanced Metering Infrastructure (AMI) meters that generate service alerts or otherwise prevent the AMI meter from transmitting data.

5. The Board desires to update the Rate and Fee Schedule to reflect previously approved facilities connection charge updates to adjust for inflation based on the July to July increase in the Engineering News-Record Construction Cost Index for the San Francisco Bay Area.

6. The Board finds that the amendments to the Rate and Fee Schedule are reasonable

and required for proper operation of the District and do not exceed the amount of the estimated costs required to provide the services or facilities for which the rates and charges are levied.

7. The Board further finds that the modifications to the rates and charges are exempt from the requirements of the California Environmental Quality Act, pursuant to Public Resources Code §21080(b)(8) of the Public Resources Code, because they are for the purposes of (1) meeting operating expenses, (2) purchasing or leasing supplies, equipment and materials, (3) meeting financial reserve requirements, and (4) obtaining funds for capital projects necessary to maintain service and system reliability within existing service areas.

NOW, THEREFORE BE IT RESOLVED by the Board of Directors of the Alameda County Water District that the Title Page, Section 1, Section 2, Section 3, and Section 4 in the Rate and Fee Schedule, as last generally amended through Resolution No. 22-052 are amended as follows:

Title Page

The Title Page is amended by changing the year from “2022” to “2023,” and the effective date from “March 1, 2022” to “March 1, 2023”

Section 1 Subsection K

Section 1 Subsection K, titled “Customer Assistance Program,” is amended to read as follows:

Eligible customers may apply for financial assistance by completing a Help on Tap application. Qualified customers who satisfy the District eligibility guidelines will receive a credit equal to 100% of the bimonthly service charge for a 5/8” and 3/4” meter for 18-billing cycles or three-years. Qualified customers may reapply after the term expires. The income limit for eligibility is the greater of 50% of Area Median Income or 250% of the Federal Poverty Level.

Section 2 Subsection A

Section 2 Subsection A, titled “Facilities Connection Charges (FCC)” Subsection 1, Subsection 2, and Subsection 3 are amended to read as follows:

A. Facilities Connection Charges (FCC)

There is a five-year phase-in of increases to the Facilities Connection Charges due to the implementation of a revised comprehensive calculation method. The fifth year of the phase-in is scheduled to go into effect May 1, 2023 based on the July to July increase in the Engineering News-Record Construction Cost Index for the San Francisco Bay Area.

All applicants, prior to connecting to a water main, prior to increasing the size of an existing water meter, shall pay the comprehensive Facilities Connection Charges, effective May 1, 2023 as listed below.

1. Residential Meter Facilities Connection Charges (FCC)

<u>Category</u>	
SFR Incremental Portion	\$6,194
<u>SFR Equity Buy-In Portion</u>	<u>\$3,734</u>
1. SFR Comprehensive FCC	\$9,928
MFR Incremental Portion	\$5,202
<u>MFR Equity Buy-In Portion</u>	<u>\$3,137</u>
2. MFR Comprehensive FCC	\$8,339

Category 1 includes single family residential (SFR) detached houses whose combined domestic and irrigation water demands can be met with up to a 1-1/2 inch meter. Single family detached houses whose combined domestic and irrigation water demands can be met only with a meter sized 2-inches or larger shall pay Facilities Connection Charges set forth in Section 2.A.3. Category 2 includes multi-family residential (MFR) where there are multiple dwelling units such as duplexes; mobile homes; new accessory dwelling units (as defined by Government Code §65852.2(i)(4)) constructed along with a new single family residential unit on the same lot; live/work units; and apartments, condominiums, townhouses or other buildings with two or more dwelling units, except those that meet the criteria for the Residential Dormitory Meter Facilities Connection Charges set forth in Section 2.A.2 (a) through (e).

2. Residential Dormitory Meter Facilities Connection Charges (FCC)

<u>Category</u>	
Dorm Incremental Portion	\$3,715
<u>Dorm Equity Buy-In Portion</u>	<u>\$2,241</u>
Dorm Comprehensive FCC	\$5,956

Only for those developments that meet all of the following criteria:

- a) Three (3) or more residential units;
- b) One bedroom or studio, single occupancy units;
- c) One bathroom maximum;
- d) Individual unit area less than or equal to 540 square-feet; and
- e) Common kitchen facilities and only limited kitchen facilities in each unit.

3. Non-Residential Meter Facilities Connection Charges (FCC) (potable)

<u>Meter Size</u>	
3/4" Incremental Portion	\$9,291
<u>3/4" Equity Buy-In Portion</u>	<u>\$5,603</u>
3/4" Comprehensive FCC	\$14,894
1" Incremental Portion	\$15,487
<u>1" Equity Buy-In Portion</u>	<u>\$9,340</u>
1" Comprehensive FCC	\$24,827

1.5" Incremental Portion	\$30,977
<u>1.5" Equity Buy-In Portion</u>	<u>\$18,681</u>
1.5" Comprehensive FCC	\$49,658
2" Incremental Portion	\$49,563
<u>2" Equity Buy-In Portion</u>	<u>\$29,889</u>
2" Comprehensive FCC	\$79,452
3" Incremental Portion	\$108,423
<u>3" Equity Buy-In Portion</u>	<u>\$65,385</u>
3" Comprehensive FCC	\$173,808
4" Incremental Portion	\$185,872
<u>4" Equity Buy-In Portion</u>	<u>\$112,091</u>
4" Comprehensive FCC	\$297,963
6" Incremental Portion	\$418,216
<u>6" Equity Buy-In Portion</u>	<u>\$252,207</u>
6" Comprehensive FCC	\$670,423
8" Incremental Portion	\$495,663
<u>8" Equity Buy-In Portion</u>	<u>\$298,912</u>
8" Comprehensive FCC	\$794,575

Charges in Section 2.A.3 shall not be assessed for dedicated irrigation meters serving limited common area landscaping located on private property within a residential project with a residential homeowners association serving as the account holder for a separate irrigation meter.

If the District determines that the category of water use for a meter does not fit the above-described categories of water use, then the Board shall set a specific Facilities Connection Charge for that meter based on the projected demand on District facilities.

No application for meters sized larger than 2-inches shall be accepted by the District until the applicant has submitted standardized calculations, in a form acceptable to the District, confirming the requested meter size conforms to the applicable American Water Works Association Standard and is appropriate for the application. The District reserves the right to determine the appropriate meter size for any application and may determine such information is necessary in support of any application, regardless of requested meter size.

No meter will be installed until all applicable charges for District work and the applicable Facilities Connection Charge have been paid. No application for connection to a water main will be accepted by the District until and unless one of the following applicable criteria has been met:

1. Meter or water service to be connected to an existing main

Determination by the District of the issuance of a valid building permit from the appropriate city and agreement to the terms specified on the District's application.

2. Meter or water service to be connected to a new main installed by applicant

Determination by the District of the issuance of a valid building permit from the appropriate city, agreement to the terms specified on the District's application, execution of a

Public Water System Extension Agreement, and conformance with the terms and conditions thereof.

Section 2 Subsection B

Section 2 Subsection B, titled "Meter Installation Charges", is amended to change "\$261.00" to "\$306.00"; "\$273.00" to "\$364.00", "\$468.00" to "\$554.00".

Section 3 Subsection B

Section 3 Subsection B, titled "Field Charge (FC)", is amended to change "\$46.00" to "\$48.00"

Section 3 Subsection D

Section 3 Subsection D, titled "Damaged Angle Stop Charge", is amended to change "\$313.00" to "\$327.00".

Section 3 Subsection F

Section 3 Subsection F, titled "Reconnection Charge", is amended to change "\$46.00" to "\$48.00"; "\$104.00" to "\$110.00"

Section 4 Subsection B

Section 4 Subsection B, titled "Inspection/Testing of Backflow Prevention Device" is amended to change "\$85.00" to "\$87.00"

Section 4 Subsection I

Section 4 Subsection I, is added to read as follows:

The following charges are hereby fixed as the service charges to be paid by any persons who have been determined to have tampered with the Advanced Metering Infrastructure (AMI) meters that generate service alerts or otherwise prevent the AMI meter from transmitting data.

- | | |
|---|----------|
| (1) Meter Tampering Investigation | \$75.00 |
| (2) Meter Tampering/End Point Replacement | \$150.00 |
| (3) Meter Tampering/Meter Replacement | |
| • 3/4" Meter | \$306.00 |
| • 1" Meter | \$364.00 |
| • 1-1/2" Meter | \$554.00 |

BE IT FURTHER RESOLVED that the General Manager is directed to incorporate these changes into an amended Rate and Fee Schedule and that all the charges identified in the updated Rate and Fee Schedule shall remain in full force and effect until further order of this Board.

BE IT FURTHER RESOLVED that the General Manager is authorized to file a Notice of Exemption with the Alameda County Clerk's Office.

PASSED AND ADOPTED THIS 9th day of February 2023, by the following vote:

AYES:

NOES:

ABSENT:

Paul S. Sethy, President
Board of Directors
Alameda County Water District

ATTEST:

APPROVED AS TO FORM:

Gina Markou, District Secretary
Alameda County Water District
(Seal)

Patrick T. Miyaki, General Counsel
Alameda County Water District

RESOLUTION NO. _____

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
AMENDING THE RATE AND FEE SCHEDULE REGARDING WATER
CONSUMPTION CHARGES, WATER SERVICE CHARGES, AND PRIVATE
FIRE SERVICE RATES, AND FINDING THE AMENDMENTS EXEMPT
FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

This resolution is adopted with reference to the following facts and circumstances that are found by the Board of Directors:

1. The Board of Directors of Alameda County Water District (District) desires to revise certain fees and charges to be collected by the District for the purposes of recovering the costs of providing the service for which the fee or charge is imposed, including water commodity charges, the bimonthly service charge, and private fire service rates.

2. Water Code § 31007 authorizes the Board to establish rates and charges to yield an amount sufficient to pay operating expenses of the District, to provide for repairs and depreciation of facilities owned or operated by the District, to pay interest on bonded debt, and to provide a fund to pay principal on bonded debt.

3. In August 1995, the Board of Directors adopted an Integrated Resources Plan (IRP) which sets forth a comprehensive long-term plan for future facility and resource development. The goals of the IRP include (1) maximizing water quality in order to meet, or exceed, existing and anticipated future state and federal regulatory mandates aimed at protecting human health, and (2) meeting a water supply reliability standard of avoiding shortages greater than 10%. There was also a Board review of the IRP in 2006 and again in 2013.

4. The Board believes that the projects identified in the IRP are important to the safe and efficient operation of the District's water system and should not be foregone or deferred. The Board also believes that the reserves established by Board policy are prudent and reasonable and need to be maintained.

5. The District engaged HF&H Consultants to complete the Water Rates Update and Financial Plan (Financial Plan), which is based upon the 2021 Cost of Service Study and based on a comprehensive Financial Planning Model that analyzes projected revenues, operating expenses, capital expenditures, and reserve requirements. The Financial Plan proposed adjustments to the District's bimonthly service charge, consumption charge, and private fire service rates.

6. The District conducted four public Financial Workshops to discuss and evaluate the financial plan, review budget assumptions, and address financial challenges.

7. At the December 8, 2022 Board of Directors meeting, which was noticed and open to the public, staff reviewed proposed water-related rate and charge adjustments and the Board set February 9, 2023 as the date for a public hearing to consider the proposed water-related rates and charges.

8. The District prepared a notice that provided the details of the public hearing, information on how to protest proposed rate adjustments, and that described the amount, residential bill impact, and the reasons for the increased bimonthly service charge, consumption charge, and adjusted private fire service rate, and mailed the written notice to all property owners in the District, property owners outside the District but receive water service from the District, all customers responsible for payment of water service from the District, and all other District mailing addresses at least 45 days before the date of the public hearing.

9. The District published a notice of the public hearing in the newspaper and on the District's website, and made presentations regarding the proposed increases to its water rates at two community meetings.

10. The District held the public hearing at the February 9, 2023 Board of Directors meeting, accepted comments and protests before and through the conclusion of the public hearing, considered all comments and protests received, and discussed the proposed increases to its rates and charges.

11. The Board finds that the amendments to the Rate and Fee Schedule are reasonable and required for proper operation of the District and do not exceed the amount of the estimated costs required to provide the services or facilities for which the rates and charges are levied.

12. The Board further finds that the modifications to the rates and charges are exempt from the requirements of the California Environmental Quality Act, pursuant to Public Resources Code §21080(b)(8) of the Public Resources Code, because they are for the purposes of (1) meeting operating expenses, (2) purchasing or leasing supplies, equipment and materials, (3) meeting financial reserve requirements, and (4) obtaining funds for capital projects necessary to maintain service and system reliability within existing service areas.

NOW, THEREFORE BE IT RESOLVED by the Board of Directors of the Alameda County Water District that the Title Page, and Section 1 in the Rate and Fee Schedule, as last generally amended through Resolution No. 22-052 are amended as follows:

Title Page

The Title Page is amended by changing the year from “2022” to “2023,” and the effective date from “March 1, 2022” to “March 1, 2023”.

Section 1 Subsection A

Section 1 Subsection A, titled "Rate Schedule for Water Service Inside District," is amended to read as follows:

A. Rate Schedule for Water Service Inside District

Bills for all metered services inside the boundaries of the District excepting Private Fire Services shall consist of:

1. Bimonthly Service Charge Based on the size of the meter:

<u>Meter Size</u>	<u>Charge per Meter</u> <u>Eff. 3-1-2023</u>	<u>Charge per Meter</u> <u>Eff. 3-1-2024</u>
5/8" & 3/4" meter	\$61.30	\$63.75
1" meter	\$97.95	\$101.87
1-1/2" meter	\$189.54	\$197.12
2" meter	\$299.47	\$311.45
3" meter	\$647.55	\$673.45
4" meter	\$1,160.50	\$1,206.92
6" meter	\$2,937.54	\$3,055.04
8" meter	\$5,135.95	\$5,341.38
10" meter	\$7,700.75	\$8,008.78

The service charge for a special type of meter or for a battery of meters installed on one service in lieu of one meter will be based on the size of a single standard type of meter of equivalent capacity.

The service charge for any meter to a single-family residence which has been oversized for purposes of accommodating a fire sprinkler system shall be based on the smallest meter which could have furnished adequate water service if a fire sprinkler system had not been installed.

All first and last month customer bills, and at rate changes, will be prorated in regard to the bimonthly service charge according to the number of days of the billing.

2. Consumption Charge Based on two-month meter readings:

	<u>Per Hundred Cu. Ft.</u> <u>Eff. 3-1-2023</u>	<u>Per Hundred Cu. Ft.</u> <u>Eff. 3-1-2024</u>
All usage	\$4.78/unit	\$4.97/unit

For all billings that include service before and on or after the effective date of a rate change, charges will be prorated based on the number of days in the billing period before and on or after the effective date of the rate change.

Section 1 Subsection B

Section 1 Subsection B. titled "Rate Schedule for Water Service Outside District," is amended to read as follows:

B. Rate Schedule for Water Service Outside District

Bills for all metered services, excepting Private Fire Services, located outside the boundaries of the District shall consist of:

1. Bimonthly Service Charge Based on the size of the meter:

<u>Meter Size</u>	<u>Charge per Meter</u> <u>Eff. 3-1-2023</u>	<u>Charge per Meter</u> <u>Eff. 3-1-2024</u>
5/8" & 3/4" meter	\$61.30	\$63.75
1" meter	\$97.95	\$101.87
1-1/2" meter	\$189.54	\$197.12
2" meter	\$299.47	\$311.45
3" meter	\$647.55	\$673.45
4" meter	\$1,160.50	\$1,206.92
6" meter	\$2,937.54	\$3,055.04
8" meter	\$5,135.95	\$5,341.38
10" meter	\$7,700.75	\$8,008.78

The service charge for a special type of meter or for a battery of meters installed on one service in lieu of one meter will be based on the size of a single standard type of meter of equivalent capacity.

The service charge for any meter to a single-family residence which has been oversized for purposes of accommodating a fire sprinkler system shall be based on the smallest meter which could have furnished adequate water service if a fire sprinkler system had not been installed.

All first and last month customer bills, and at rate changes, will be prorated in regard to the bimonthly service charge according to the number of days of the billing.

2. Consumption Charge Based on two-month meter readings:

	<u>Per Hundred Cu. Ft.</u> <u>Eff. 3-1-2023</u>	<u>Per Hundred Cu. Ft.</u> <u>Eff. 3-1-2024</u>
All usage	\$5.46/unit	\$5.68/unit

For all billings that include service before and on or after the effective date of a rate change, charges will be prorated based on the number of days in the billing period before and on or after the effective date of the rate change.

Section 1 Subsection D

Section 1 Subsection D, titled "Private Fire Services," is amended to read as follows:

D. Private Fire Services

1. Bimonthly Service Charge Based on the size of the fire service diameter:

<u>Fire Service Diameter</u>	<u>Fire Service Rates Eff. 3-1-2023</u>	<u>Fire Service Rates Eff. 3-1-2024</u>
3/4"	\$8.25	\$8.58
1"	\$8.44	\$8.78
2"	\$10.37	\$10.78
4"	\$22.32	\$23.21
6"	\$49.47	\$51.45
8"	\$96.29	\$100.15
10"	\$166.73	\$173.40
12"	\$264.36	\$274.93

Private Fire Services may not be used for any purpose other than fire protection without the express written consent of the District, the holder of the Private Fire Service account, and all other affected agencies with jurisdiction over the proposed use. There shall be no charge for water used through such services in extinguishing accidental fires, but any water lost through leakage or used in violation of the District's Regulations shall be paid for at double the rate for general use, and such use may be subject to other penalties and costs.

BE IT FURTHER RESOLVED that for all billings that include service before and on or after the effective date of a rate change, charges will be prorated based on the number of days in the billing period before and on or after the effective date of the rate change.

BE IT FURTHER RESOLVED that the General Manager is directed to incorporate these changes into an amended Rate and Fee Schedule and that all the charges identified in the updated Rate and Fee Schedule shall remain in full force and effect until further order of this Board.

BE IT FURTHER RESOLVED that the General Manager is authorized to file a Notice of Exemption with the Alameda County Clerk's Office.

PASSED AND ADOPTED THIS 9th day of February 2023, by the following vote:

AYES:

NOES:

ABSENT:

Paul S. Sethy, President
Board of Directors
Alameda County Water District

ATTEST:

APPROVED AS TO FORM:

Gina Markou, District Secretary
Alameda County Water District
(Seal)

Patrick T. Miyaki, General Counsel
Alameda County Water District

RESOLUTION NO. _____

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
AMENDING THE RATE AND FEE SCHEDULE REGARDING DROUGHT
SURCHARGES AND FINDING THE AMENDMENTS EXEMPT FROM THE
CALIFORNIA ENVIRONMENTAL QUALITY ACT

This resolution is adopted with reference to the following facts and circumstances that are found by the Board of Directors:

1. The Board of Directors of Alameda County Water District (District) desires to revise certain fees and charges to be collected by the District for the purposes of recovering the costs of providing the service for which the fee or charge is imposed, including drought surcharges (formerly called water shortage emergency stage rates).

2. Water Code § 31007 authorizes the Board to establish rates and charges to yield an amount sufficient to pay operating expenses of the District, to provide for repairs and depreciation of facilities owned or operated by the District, to pay interest on bonded debt, and to provide a fund to pay principal on bonded debt.

3. In August 1995, the Board of Directors adopted an Integrated Resources Plan (IRP) which sets forth a comprehensive long-term plan for future facility and resource development. The goals of the IRP include (1) maximizing water quality in order to meet, or exceed, existing and anticipated future state and federal regulatory mandates aimed at protecting human health, and (2) meeting a water supply reliability standard of avoiding shortages greater than 10%. There was also a Board review of the IRP in 2006 and again in 2013.

4. The Board believes that the projects identified in the IRP are important to the safe and efficient operation of the District's water system and should not be foregone or deferred. The

Board also believes that the reserves established by Board policy are prudent and reasonable and need to be maintained.

5. The District engaged HF&H Consultants to complete the Water Rates Update and Financial Plan (Financial Plan), which is based upon the 2021 Cost of Service Study, and based on a comprehensive Financial Planning Model that analyzes projected revenues, operating expenses, capital expenditures, and reserve requirements. The Financial Plan proposed adjustments to the drought surcharges.

6. The District conducted four public Financial Workshops to discuss and evaluate the financial plan, review budget assumptions, and address financial challenges.

7. At the December 8, 2022 Board of Directors meeting, which was noticed and open to the public, staff reviewed the proposed adjustments to the drought surcharges and the Board set February 9, 2023 as the date for a public hearing to consider the proposed drought surcharges.

8. The District prepared a notice that provided information on attending the public hearing and how to protest proposed drought surcharges, and described the amount, residential bill impact, and the reasons for the increased drought surcharges and mailed the written notice to all property owners in the District, property owners outside the District but receive water service from the District, all customers responsible for payment of water service from the District, and all other District mailing addresses at least 45 days before the date of the public hearing.

9. The District published a notice of the public hearing in the newspaper and on the District's website and made presentations regarding the proposed increase to its drought surcharges at two community meetings.

10. The District held the public hearing at the February 9, 2023 Board of Directors

meeting, accepted comments and protests before and through the conclusion of the public hearing, considered all comments and protests received, and discussed the proposed increase to its drought surcharges.

11. The Board finds that the amendments to the Rate and Fee Schedule are reasonable and required for proper operation of the District and do not exceed the amount of the estimated costs required to provide the services or facilities for which the rates and charges are levied.

12. The Board further finds that the modifications to the rates and charges are exempt from the requirements of the California Environmental Quality Act, pursuant to Public Resources Code §21080(b)(8) of the Public Resources Code, because they are for the purposes of (1) meeting operating expenses, (2) purchasing or leasing supplies, equipment and materials, (3) meeting financial reserve requirements, and (4) obtaining funds for capital projects necessary to maintain service and system reliability within existing service areas.

NOW, THEREFORE BE IT RESOLVED by the Board of Directors of the Alameda County Water District that the Title Page, and Section 1 in the Rate and Fee Schedule, as last generally amended through Resolution No. 22-052 are amended as follows:

Title Page

The Title Page is amended by changing the year from “2022” to “2023,” and the effective date from “March 1, 2022” to “March 1, 2023”.

Section 1 Subsection L

Section 1 Subsection L. titled "Water Shortage Emergency Stage Rates," is amended to read as follows:

L. Drought Surcharges

To ensure that the District receives sufficient revenues to cover its cost of providing water service when consumption decreases due to a water shortage emergency, such as a drought, the District has adopted drought surcharges. Drought surcharges are set up incrementally to reflect the levels of water shortage emergency the District has defined in its Urban Water Management Plan,

specifically the Water Shortage Contingency Plan. In a declared water shortage emergency, drought surcharges, as shown below, and if implemented by the Board of Directors, will be in addition to, and on top of, the base per unit water consumption rate for both inside and outside District customers as set forth in previous subsections 1.A. and 1.B.

Water Shortage Contingency Plan Stage	Reduction in Water Demand	Effective	Effective	Effective	Effective
		March 1, 2023	March 1, 2024	March 1, 2023	March 1, 2024
		Unit Drought Surcharge (\$/unit)	Unit Drought Surcharge (\$/unit)	Commodity Rate Plus Drought Surcharge (\$/unit)	Commodity Rate Plus Drought Surcharge (\$/unit)
0	0%	\$0.00	\$0.00	\$4.78	\$4.97
1	10%	\$0.52	\$0.54	\$5.30	\$5.51
2a	15%	\$0.82	\$0.85	\$5.60	\$5.82
2b	20%	\$1.16	\$1.21	\$5.94	\$6.18
3a	25%	\$1.55	\$1.61	\$6.33	\$6.58
3b	30%	\$2.00	\$2.08	\$6.78	\$7.05
4	40%	\$3.12	\$3.25	\$7.90	\$8.22
5	50%	\$4.62	\$4.81	\$9.40	\$9.78
6	60%	\$6.90	\$7.18	\$11.68	\$12.15

Drought surcharges are a contingency and may be implemented in the event that water supplies are not sufficient to meet customer water demands and the District is in a declared water shortage emergency. The District will provide customers with 30 days advance notice before implementing any drought surcharges. Drought surcharges will be rescinded no later than at the conclusion of the water shortage emergency.

BE IT FURTHER RESOLVED that for all billings that include service before and on or after the effective date of a rate change, charges will be prorated based on the number of days in the billing period before and on or after the effective date of the rate change.

BE IT FURTHER RESOLVED that the Stage 2a rate of \$0.82/unit shall be effective March 1, 2023 and \$0.85/unit effective March 1, 2024, in accordance with the notice mailed to all property owners and customers at least 45 days prior to the public hearing so long as the stage 2 water shortage emergency as declared by the District December 9, 2021, that calls for systemwide conservation of 15 percent, remains in effect and no other action has been taken by the Board to

revise or rescind the drought surcharge.

BE IT FURTHER RESOLVED that the General Manager is directed to incorporate these changes into an amended Rate and Fee Schedule and that all the charges identified in the updated Rate and Fee Schedule shall remain in full force and effect until further order of this Board.

BE IT FURTHER RESOLVED that the General Manager is authorized to file a Notice of Exemption with the Alameda County Clerk's Office.

PASSED AND ADOPTED THIS 9th day of February 2023, by the following vote:

AYES:

NOES:

ABSENT:

Paul S. Sethy, President
Board of Directors
Alameda County Water District

ATTEST:

Gina Markou, District Secretary
Alameda County Water District
(Seal)

APPROVED AS TO FORM:

Patrick T. Miyaki, General Counsel
Alameda County Water District

**2022
GROUNDWATER
MONITORING REPORT**

February 2, 2023

Water Resources Department
Groundwater Resources Division

Author: Eileen Chen, Groundwater Resources Scientist
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TABLE OF CONTENTS

- I. OVERVIEW 1
- II. INTRODUCTION 1
 - A. Niles Cone Groundwater Basin Boundary 2
 - B. Monitoring Programs 3
 - C. Other Niles Cone Groundwater Basin Studies 4
- III. PURPOSE 4
- IV. WATER RESOURCES AND HYDROGEOLOGY 5
 - A. Water Resources 5
 - B. Hydrogeology..... 5
 - 1. Niles Cone Groundwater Basin 5
 - 2. Dry Creek Cone 7
 - 3. Mission Alluvial Apron and Mission Upland 7
 - 4. Warm Springs Alluvial Apron 7
 - C. Groundwater Quality 8
 - 1. Saltwater Intrusion 8
 - 2. Other Groundwater Quality Data 9
- V. FALL 2022 FIELD WORK 9
- VI. WATER ELEVATION RESULTS 10
 - A. Horizontal Gradients 11
 - B. Vertical Gradients 12
- VII. WATER SAMPLE RESULTS 13
 - A. Chloride Results 14
 - 1. Comparison Between Fall 2022 and Fall 2021 14
 - a. Above Hayward Fault Aquifer 14
 - b. Newark Aquifer 14
 - c. Centerville-Fremont, Centerville, and Fremont Aquifers 15
 - d. Deep Aquifers 16
 - 2. Comparison Between Fall 2022 and Fall 1962 17
 - B. Total Dissolved Solids Sample Results 18
- VIII. CONCLUSIONS 19
- IX. REFERENCES 21

APPENDICES

Appendix A - Tables

1. 2022 Groundwater Monitoring Program Summary
2. Vertical Gradients at Selected Clustered Wells
3. Aquifer Reclamation Program Well Production

Appendix B - Figures

1. Local Agency Boundaries
2. Niles Cone Groundwater Basin and ACWD Facilities
3. Conceptual Diagram of Historical Intrusion of Saltwater Into the Niles Cone
4. Water Elevation, Above Hayward Fault Aquifer, Spring 2022
5. Water Elevation, Newark Aquifer, Spring 2022
6. Water Elevation, Centerville-Fremont Aquifer, Spring 2022
7. Water Elevation, Deep Aquifer, Spring 2022
8. Water Elevation, Above Hayward Fault Aquifer, Fall 2022
9. Water Elevation, Newark Aquifer, Fall 2022
10. Water Elevation, Centerville-Fremont Aquifer, Fall 2022
11. Water Elevation, Deep Aquifer, Fall 2022
12. Chloride and Total Dissolved Solids, Above Hayward Fault Aquifer, Fall 2022
13. Chloride, Newark Aquifer, Fall 2022
14. Chloride, Centerville-Fremont Aquifer, Fall 2022
15. Chloride, Deep Aquifer, Fall 2022
16. Area of Improvement - Newark Aquifer
17. Area of Improvement - Centerville-Fremont Aquifer
18. Area of Improvement - Deep Aquifer
19. Comparison of 250 ppm Chloride Contours in the Newark Aquifer, Fall 1962 to Fall 2022
20. Comparison of 250 ppm Chloride Contours in the Centerville-Fremont Aquifer, Fall 1962 to Fall 2022
21. Comparison of 250 ppm Chloride Contours in the Deep Aquifer, Fall 1962 to Fall 2022
22. Total Dissolved Solids, Newark Aquifer, Fall 2022
23. Total Dissolved Solids, Centerville-Fremont Aquifer, Fall 2022
24. Total Dissolved Solids, Deep Aquifer, Fall 2022

Appendix C - Observed Historical Groundwater Elevations

Appendix D - Spring 2022 Groundwater Monitoring Records

Appendix E - Fall 2022 Groundwater Monitoring Records

Appendix F - Abbreviations

I. OVERVIEW

The Alameda County Water District's (ACWD) Spring 2022 monitoring program was conducted during March and April 2022 and included 294 wells within the Niles Cone Groundwater Basin (Niles Cone Subbasin 2-09.01 or Niles Cone). Water levels were measured in 247 wells, and water samples were collected for chloride and total dissolved solids (TDS) analyses from 103 wells. The results from this effort and the status of the wells are documented in Appendix D.

The Fall 2022 monitoring program, which included 296 wells, was conducted during August and September 2022. Water levels were measured in 255 wells, and water samples were collected for chloride and TDS analyses from 204 wells. The status of each well, water elevations, and water quality results are summarized in Appendix E. Water elevation data were used to develop hydrographs to track water level trends over time and piezometric head contour maps which enable ACWD to approximate groundwater flow patterns within the Niles Cone. The direction of groundwater flow is generally toward the production wellfield in the Above Hayward Fault (AHF) sub-basin. The direction of groundwater flow is generally away from the recharge area in all three aquifers in the Below Hayward Fault (BHF) sub-basin. The overall changes in the groundwater basin's water quality were interpreted through the use of chloride and TDS concentration contour maps.

II. INTRODUCTION

For over 100 years, ACWD has managed the groundwater of the Niles Cone Groundwater Basin. ACWD's statutory authority for groundwater management is provided under the County Water District Law, the Replenishment Assessment Act of Alameda County Water District, and the Alameda County Water District Groundwater Protection Act. ACWD's management activities, under these statutory authorities, ensure a reliable and sustainable supply of high-quality water that satisfies present and future water needs for ACWD's distribution system customers and owners and operators of water wells.

ACWD's groundwater statutory service area includes the City of Fremont, the City of Newark, the City of Union City, and the southern portion of the City of Hayward in the San Francisco Bay Area of California (Figure 1). ACWD also has groundwater protection authority throughout the entirety of the cities of Fremont, Newark, and Union City which extends west into the San Francisco Bay and east into the Diablo Range.

ACWD primarily provides retail water service to approximately 346,000 people in the cities of Fremont, Newark, and Union City. The portion of ACWD's water supply produced from wells in the Niles Cone Groundwater Basin has historically been between 30 and 62 percent annually, depending upon seasonal and annual demand requirements and availability of water from other sources. During fiscal year (FY) 2021/22, groundwater accounted for 37% of ACWD's distribution water supply. ACWD's municipal pumping accounted for approximately 94% of the groundwater pumped from the Niles Cone. Pumping by the Aquifer Reclamation Program and by owners and operators of other water wells accounted for the remaining 6% (ACWD, 2023).

On September 16, 2014, Governor Jerry Brown signed a three-bill package known as the Sustainable Groundwater Management Act (SGMA) into law that establishes a new structure for

groundwater management, recognizing that groundwater management in California is best accomplished locally. SGMA identifies ACWD as one of 18 agencies that were created by statute to manage groundwater and deemed the exclusive local agency to comply with SGMA. On November 10, 2016, ACWD's Board of Directors adopted Resolution No. 16-069 deciding to become the Groundwater Sustainability Agency (GSA) for the Niles Cone Subbasin 2-09.01 and on December 8, 2016, ACWD's Board of Directors adopted Resolution No. 16-075 authorizing the submittal of an Alternative to a Groundwater Sustainability Plan for the Niles Cone Subbasin 2-09.01 (Alternative).

The California Department of Water Resources (DWR) reviewed ACWD's Alternative, and in a letter dated July 17, 2019, concluded that the Alternative satisfies the objectives of SGMA and was approved. Accompanying DWR's letter of approval and staff report was a Statement of Findings Regarding the Approval of the Niles Cone Subbasin Alternative which included seven recommended actions from the staff report for ACWD to incorporate in ACWD's five-year update, which was due January 1, 2022. The Alternative Update is not a plan amendment but is a written assessment that describes and provides an update on ACWD's groundwater management efforts, an explanation of how the Alternative Update is functionally equivalent to elements of a Groundwater Sustainability Plan, incorporates DWR's seven recommended actions, and information on proposed projects and next steps. ACWD submitted the Alternative Update to DWR on December 29, 2021. ACWD's Alternative Update together with pre-existing authority by which the ACWD has carried out groundwater management efforts will allow ACWD to continue the successful management of the Niles Cone Groundwater Basin.

Annually, ACWD issues the *Groundwater Monitoring Report*, which provides information collected during the Spring and Fall Groundwater Monitoring Programs. The report contains water elevation data, groundwater quality data (specifically, chloride and TDS), and a description of the movement of groundwater and trends. In addition, ACWD prepares an annual *Survey Report on Groundwater Conditions*, which summarizes the total well production, estimated recharge, and changes in groundwater storage for the period of reporting and includes forecasts for the various categories of groundwater pumping for the following year. The report includes a recommendation for the amount of supplemental water to be purchased in order to maintain basin water levels and is presented to the Board of Directors.

As part of Article 7, Annual Reports and Periodic Evaluations by the Agency, of the Groundwater Sustainability Plan Emergency Regulations (Emergency Regulations), DWR requires each agency to submit an annual report to DWR by April 1 of each year. In order to meet the functional equivalency and provide the components required by the Emergency Regulations, ACWD prepares and submits a SGMA annual report that includes the *Survey Report on Groundwater Conditions*, the *Groundwater Monitoring Report*, and other information as required.

A. Niles Cone Groundwater Basin Boundary

ACWD's groundwater statutory service area boundary approximately coincides with the Niles Cone Groundwater Basin as defined by DWR which shows the basin as being the southern portion of the east bay area bounded on the south by the Alameda-Santa Clara County boundary and on the north by the boundary of ACWD and southern portions of the City of Hayward (DWR, 2016).

The Niles Cone consists of several regional aquifers of varying thicknesses and depths (Figure 3). The Newark and Centerville Aquifers extend beyond ACWD's boundaries to the San Francisco peninsula to the west (DWR, 1968), and the Deep Aquifers are hydraulically connected to the South East Bay Plain Basin, albeit with some impedance, to the north (Luhdorff and Scalmanini, 2003). Since 1914, ACWD has actively managed and protected the Niles Cone and conserved the water of the Alameda Creek Watershed.

B. Monitoring Programs

ACWD has been monitoring the Niles Cone since its formation in 1914, and as a result, a variety of monitoring programs were implemented and modified over time due to historical groundwater management needs, specific groundwater related studies, compliance with water rights reporting, and direction of the ACWD Board of Directors. Changes in the monitoring programs also reflect the destruction or loss of wells due to development, and the availability of newly constructed wells. Currently, ACWD monitors 7 wells on a weekly basis and 49 wells on a monthly basis.

Data from 26 wells with monthly water level measurements were submitted to DWR as part of the California Statewide Groundwater Elevation Monitoring (CASGEM) Program, which was authorized by SBX7-6, enacted in November 2009. The CASGEM Program was created by DWR pursuant to Water Code Sections 10920-10936, which mandates a statewide groundwater elevation monitoring program to track seasonal and long-term groundwater elevation trends in California's groundwater basins. Groundwater elevation data collected for the program were submitted semiannually to the CASGEM online database by January 1st and July 1st of every calendar year. In 2021, DWR determined that CASGEM and SGMA required groundwater monitoring are equivalent and both meet Water Code Section 10920 et seq. To eliminate duplicative data submission requirements, DWR asked basins or sub-basins with an approved Alternative to upload the SGMA monitoring network and the fall 2021 groundwater elevation data to the SGMA Monitoring Network Module (MNM) in lieu of the CASGEM database by January 1, 2022. ACWD uploaded the monitoring network and associated water elevation data to the MNM on December 29, 2021. Subsequently, ACWD uploaded water elevation data collected during the spring and fall of 2022 and will continue to submit groundwater elevation data from designated SGMA wells to the MNM for compliance with SGMA and CASGEM.

The Spring and Fall Groundwater Monitoring Programs, are semiannual field efforts to document the status of wells, obtain water level measurements, and collect groundwater samples. The Spring Program is normally conducted in March and April, and the Fall Program is conducted primarily in September. The Spring Program is conducted to provide insight into subsurface conditions throughout the service area when water levels tend to be at their seasonal high. The Fall Program's purpose is to update information on groundwater flow and quality and to provide insight into subsurface conditions when water levels tend to be at their seasonal low. To verify the consistency of data and to further define the isocontour lines based on water quality conditions, a larger set of wells is sampled during the Fall Program due to the susceptibility of the basin to saltwater intrusion via the Newark Aquifer. Monitoring wells are selected based on overall coverage, accessibility, and available historic data and well construction information.

This report describes the Fall 2022 data acquisition effort, presents the water elevation and water quality data, and provides comparisons of current year results to historical data to document long-term trends and basin conditions. The Spring 2022 data are included in Appendix D and in Figures 4, 5, 6, and 7.

C. Other Niles Cone Groundwater Basin Studies

The U.S. Geological Survey (USGS) (Clark, 1915) conducted the first hydrogeologic study in this groundwater basin. Several hydrogeologic studies have been conducted by DWR: 1960, 1963, 1967, 1968, 1973, and 1975. The most comprehensive of these studies is *Evaluation of Groundwater Resources, South Bay* (1968) and *Appendix A: Geology* (1967). Christine Kolterman's 1993 dissertation (Stanford University) applied a process imitating approach to characterizing spatial variability in unconsolidated sediments for the Niles Cone Groundwater Basin. The USGS produced two companion reports providing a database of wells and a regional general hydrogeology for the South San Francisco Bay (Leighton, Fio, and Metzger, 1995 and Fio and Leighton, 1995). The California Regional Water Quality Control Board produced a report that documented hydrogeology, existing beneficial uses, ambient groundwater quality, and groundwater protection programs in the Niles Cone and two other South Bay groundwater basins (2003). In February 2019, USGS published a report titled *Hydrogeologic Controls and Geochemical Indicators of Groundwater Movement in the Niles Cone and Southern East Bay Plain Groundwater Subbasins, Alameda County, California*.

Other investigations that have further refined the characterization of the Niles Cone include four studies ACWD conducted with the support of the Local Groundwater Assistance Grant Program (ACWD 2006, 2007, 2010, and 2016) administered by DWR. In 2022, ACWD also completed the Niles Cone Groundwater Extraction Well Site Evaluation Project with the support of Prop 1 Groundwater Grant Program funding. The project entailed installing three test wells and eight monitoring wells to evaluate three locations in the Niles Cone for the potential removal of brackish water from the Centerville-Fremont Aquifer and preventing brackish water from migrating towards ACWD's Mowry Wellfield.

III. PURPOSE

The Spring and Fall Groundwater Monitoring Programs serve a number of purposes:

- To evaluate the status of wells in the program owned by ACWD, other public agencies (e.g., East Bay Regional Park District, Bay Area Rapid Transit, and Cities of Fremont, Hayward, Newark, and Union City), and private owners;
- To conduct water level measurements and collect water samples;
- To describe the movement of groundwater;
- To characterize effects of legacy saltwater intrusion on groundwater quality within the basin;
- To track water level and quality trends in the groundwater basin;

- To collect and submit data to the MNM as part of ACWD's participation of the CASGEM Program ; and
- To comply with components of SGMA.

IV. WATER RESOURCES AND HYDROGEOLOGY

A. Water Resources

ACWD obtains water from local and imported sources. The local sources of water are runoff from the Alameda Creek Watershed, deep percolation of precipitation, and applied water. Imported water is obtained from the State Water Project through the South Bay Aqueduct and from the San Francisco Public Utilities Commission through the Hetch Hetchy Aqueduct (Figure 2). Watershed runoff and a portion of the State Project water are diverted to Alameda Creek and Quarry Lakes Regional Recreation Area and adjacent areas (together referred to in this report as recharge ponds) for recharge of the groundwater basin. Many of the recharge ponds were former gravel quarry pits that were mined to depths ranging from 70 to 120 feet below the surrounding ground surface. The principal hydrogeologic structure beneath ACWD is the Niles Cone Groundwater Basin. The main point of surface water entry into the Niles Cone Groundwater Basin occurs through Alameda Creek and its tributaries, and the recharge ponds. Groundwater is extracted from the basin through pumping of ACWD's production wells, ACWD's Aquifer Reclamation Program (ARP) wells, wells owned by other public agencies, and privately owned wells.

B. Hydrogeology

1. Niles Cone Groundwater Basin

The Niles Cone Groundwater Basin is an alluvial aquifer system consisting of unconsolidated gravel, sand, silt, and clay. The gravel and sand deposits have the highest permeability and thus comprise the aquifers; conversely, silt and clay layers have low permeability and form the aquitards. An aquifer is a water-bearing geologic formation which will yield an appreciable or economically beneficial supply of water. In 1968, DWR used the term aquiclude, a saturated geologic unit that is incapable of transmitting significant quantities of water under ordinary hydraulic gradients (Freeze and Cherry, 1979), for the low permeability beds that confine the aquifers. In 1973, DWR reclassified these confining beds as aquitards, which are relatively low permeability geologic beds in a stratigraphic sequence that store water but will not transmit it rapidly enough to supply wells or springs. These beds may be permeable enough to transmit water in quantities that are significant for the study area, even though water movement per acre is insignificant (DWR, 1973).

The Niles Cone Groundwater Basin is divided by the Hayward Fault (Figure 2). The Hayward Fault is an active fault with low permeability that impedes the lateral flow of groundwater. Large differences in water levels on either side of the fault demonstrate the relatively impermeable nature of the fault. The AHF sub-basin on the east side of the Hayward Fault is composed of highly permeable sediments referred to as the AHF Aquifer.

The BHF sub-basin is composed of a series of relatively flat lying aquifers separated by extensive clay aquitards. Figure 3 is a generalized illustration of the basin and the aquifers based on a DWR conceptual figure (DWR, 1968). Due to the different hydrogeological settings of the AHF and BHF sub-basins, ACWD operates the two sub-basins as separate management areas.

Over time, the alluvial/fluvial depositional environment produced thick coarse grain sediments along present day Alameda Creek and also along historic stream channels (now buried). With distance westward, both the thickness and grain size of the aquifers decreases while the intervening clay aquitards become thicker (DWR, 1967). The aquitards appear to be absent just west of the Hayward Fault in the hydrogeologic region called the forebay area.

The shallowest regional aquifer in the BHF sub-basin, the Newark Aquifer, is an extensive permeable gravel and sand layer between 40 and 140 feet below ground surface (bgs), except in the forebay area where it begins at the surface. The thickness of the Newark Aquifer ranges from less than 20 feet at the western edge of the basin to more than 140 feet at the Hayward Fault (DWR, 1968). The Newark Aquifer is overlain in most of the sub-basin by a thick layer of silt and clay called the Newark Aquiclude (DWR, 1968). The Newark Aquiclude is absent in the forebay area, allowing direct recharge to the Newark Aquifer from Alameda Creek and the recharge ponds. Within the Newark Aquiclude, layers of sand and silt comprise a non-regional hydrogeologic unit known commonly as the shallow water-bearing zone.

An extensive thick clay aquitard separates the Newark Aquifer from the Centerville Aquifer. The Centerville Aquifer, the top of which lies at an average depth of 180 to 200 feet bgs, overlies a thick clay aquitard, which in turn overlies the Fremont Aquifer which exists in the interval of 300 to 390 feet bgs. The Centerville and Fremont Aquifers are considered as one combined aquifer (Centerville-Fremont Aquifer) in some parts of the basin, based on lithology and water level data that indicate that they are in good hydrogeologic connection. However, water level and water chemistry results indicate that in some areas of the basin, these two aquifers are more isolated from each other. Lithologic analysis also confirms their separation in portions of the basin. This isolation is best seen at some of the well clusters with wells screened in each aquifer. An example of this is seen in well cluster 4S/2W-36N011 (Centerville Aquifer) and 4S/2W-36N010 (Fremont Aquifer), with chloride concentrations of 258 and 1,087 parts per million (ppm), respectively, and an approximate 4.5 foot difference in water elevations.

The deepest water-bearing units, referred to collectively as the Deep Aquifers, are present at approximately 400 feet bgs and deeper. They are separated from the overlying Fremont Aquifer by a regional aquitard. Also, based on ACWD's lithologic data and DWR (1967), these deep aquifers are both hydraulically separated and connected by the presence or absence of intervening clays dependent on the location in the basin, and extend beyond the limits of the Niles Cone Groundwater Basin to act as conductive layers for the migration of groundwater out of the basin. More recent area focused studies have also indicated that the Deep Aquifers are hydraulically connected, albeit with some impedance, to the South East Bay Plain Basin to the north (Luhdorff and Scalmanini, 2003).

The AHF Aquifer is both unconfined and confined due to the presence of local low permeability layers. The Newark Aquifer is confined in all areas except in the forebay area, where the overlying aquitard is absent. The Centerville-Fremont and Deep Aquifers are both confined.

In addition to the Niles Cone alluvium, there are four additional smaller physiographic alluvial deposits defined by DWR: Dry Creek Cone, Mission Alluvial Apron, Mission Upland, and Warm Springs Alluvial Apron (Figure 2) (DWR, 1967 and 1968). Each of these areas is described in the following sections.

2. Dry Creek Cone

A separate physiographic feature located in the northeast corner of ACWD is the Dry Creek Cone. The Dry Creek Cone is younger alluvium that overlies the Niles Cone Alluvium. The Dry Creek fan extends approximately three miles southwest from the hills and reaches a maximum thickness of 350 feet (DWR, 1967 and 1968). The sand and gravel aquifers in the Dry Creek Cone are thin and discontinuous and most of the cone consists of clay. The number and thicknesses of aquifers increases toward the point where Dry Creek emerges from the hills (DWR, 1967 and 1968).

3. Mission Alluvial Apron and Mission Upland

The Mission Alluvial Apron and the Mission Upland are located in the southeast corner of ACWD, east of the Hayward Fault. The Mission Alluvial Apron is comprised of shallow alluvium overlying the Santa Clara Formation. Well data, in the northern portion of the Mission Alluvial Apron, indicate that the upper 100 feet of material contain over 50 percent gravel with higher gravel percentages below 100 feet (DWR, 1967 and 1968). Recharge is primarily from infiltration of stream flow and precipitation with groundwater moving in a northwesterly direction into the alluvium of the Niles Cone east of the Hayward Fault.

The Mission Upland includes all exposed portions of the Santa Clara Formation. The Santa Clara Formation thicknesses may exceed 500 feet (DWR, 1986). Although highly permeable, movement of water westerly to the Warm Springs Alluvial Apron is limited because of the Hayward Fault and the easterly dip of the Santa Clara formation.

4. Warm Springs Alluvial Apron

The Warm Springs Alluvial Apron is located in the southeast corner of ACWD, just west of the Mission Upland. The aquifers in the Warm Springs Alluvial Apron are thin and fine-grained, with limited recharge. Well logs indicate that the upper 100 feet of the aquifer material contains less than 17 - 24 percent gravel (DWR, 1967 and 1968). Alluvium between 100 and 200 feet below ground surface is more permeable than either shallower or deeper intervals, and up to 37% gravel has been noted from well logs. Groundwater in the alluvial apron flows to the west, but flow is limited due to low permeability deposits.

C. Groundwater Quality

1. Saltwater Intrusion

Groundwater in the AHF Aquifer is generally of good quality and has not been impacted by saltwater intrusion, however, groundwater quality in certain areas of the BHF aquifers has been degraded by saltwater intrusion. The saltwater intrusion occurred due to persistent pumping from the basin and was first noticed in the 1920's. Many years of chronic overdraft caused the groundwater levels in the Newark Aquifer to drop below sea level. This relative elevation difference between the groundwater in the basin and the water from San Francisco Bay caused a landward direction of groundwater flow through the Newark Aquifer and intrusion of saltwater into the groundwater basin. Several decades of saltwater intrusion occurred and saline water migrated as far inland as the forebay area. The piezometric heads in the deeper aquifers are generally lower than that of the Newark Aquifer, and the aquitards separating the aquifers are thin to absent in the forebay area. As a result, saline water in the forebay area migrated downward from the Newark Aquifer into the lower aquifers. Also, saline water may have migrated downward from the Newark Aquifer to the deeper aquifers through abandoned and improperly sealed water wells. A DWR conceptual illustration of saline water movement into the basin during overdraft conditions is shown in Figure 3.

Since 1962, ACWD has purchased State Water Project water supplies to supplement local recharge and raise groundwater levels. This has resulted in bringing the water table above sea level as of 1972 (BHF historical indicator well 4S/1W-28D002) and returning the hydraulic gradient to its natural bayward direction in the Newark Aquifer. Although there has been substantial improvement in the basin, a considerable volume of saline water still remains in the aquifers.

In order to manage water supplies more effectively, ACWD has implemented the following to sustainably manage the basin and improve water quality:

- Artificial Recharge - Improve the recharge capability by constructing inflatable dams in Alameda Creek and increasing percolation capacity in the abandoned gravel quarries.
- Aquifer Reclamation Program (ARP) - Pump entrapped saltwater from the basin to either the Newark Desalination Facility or San Francisco Bay to produce greater usable storage and prevent movement of saltwater toward the forebay and the Mowry Wellfield.
- Newark Desalination Facility (dedicated on September 19, 2003) - Treat saline groundwater from selected ARP wells using reverse osmosis, blend the resulting water (permeate) with other supplies before delivery to ACWD's customers, and discharge concentrate to San Francisco Bay under a National Pollutant Discharge Elimination System general permit. The facility was expanded to increase permeate production capability from 5 million gallons per day (MGD) to 10 MGD for a total blended production of up to 12.5 MGD. The expansion was completed on August 24, 2010.

2. Other Groundwater Quality Data

The Groundwater Monitoring Report focuses specifically on the characterization of legacy saltwater intrusion through the reporting of chloride and TDS data. Water quality at ACWD's production wells and standby wells are monitored in accordance with ACWD's *Water Quality Monitoring Plan* (ACWD 2020), which was approved by State Water Resources Control Board Division of Drinking Water (DDW) in March 2020. The results are summarized in ACWD's *Annual Water Quality Report*, which is available on the ACWD website: <https://www.acwd.org>. ACWD's Alternative Update and SGMA Annual Report discusses other water quality characteristics of the Niles Cone and can be found on DWR's SGMA portal: <https://sgma.water.ca.gov/portal/>.

V. FALL 2022 FIELD WORK

The field effort of the Fall 2022 Groundwater Monitoring Program was conducted between August 22 and September 23, 2022. Field personnel recorded the status of program wells and water levels in 255 wells. A total of 213 representative wells were selected for groundwater sampling and analyses. However, groundwater samples could only be collected from 204 of these wells due to access problems or wells not operating during the time of sampling. Fifteen water samples were collected between August 8 and August 17, prior to the scheduled program time frame in order to accommodate ACWD well operating schedules. To facilitate compliance with SGMA, wells in the Spring and Fall Programs were reorganized into two groups: SGMA Wells and Secondary Wells. In general, SGMA Wells are mostly ACWD owned wells with known well construction information and minimum access issues. Secondary Wells are mostly owned by private or other public entities with missing well construction information and or inconsistent access issues. Data from SGMA Wells are used to generate water level, chloride, and total dissolved solid contour maps. Data from the Secondary Wells are not used in the contouring process; however, the wells are monitored, and the data are shown on the corresponding maps (gray dots annotated with gray labels) as they provide valuable historical information and can be used for trend analysis. As new ACWD monitoring wells are constructed, they will be evaluated to potentially become SGMA Wells.

Groundwater samples collected during the Fall 2022 program were analyzed for chloride and TDS. Chloride results are indicative of saltwater intrusion impacts in the Niles Cone Groundwater Basin, especially west of the I-880 freeway. Chloride is a surrogate for TDS in water that is significantly influenced by sea water since chloride is a major portion of the TDS in sea water and since it is conserved in the environment due to its non-reactive nature. TDS is also used as a common description of water quality and is essentially synonymous with salinity (Drever, 1988).

All samples were transported under chain of custody protocol to ACWD's analytical laboratory, a California Environmental Laboratory Accreditation Program (ELAP) accredited laboratory, for analyses. Quality assurance and quality control measures were conducted, include comparing current data with historical results and data from neighboring wells, evaluating the ratio of chemical results, and resampling and reanalyzing selected samples as needed.

VI. WATER ELEVATION RESULTS

Appendix D and E summarize all well data collected for the Spring 2022 and Fall 2022 programs, respectively. Water level measurements ranged from artesian conditions to approximately 78 feet bgs. All water levels were collected within the same week in September. In the AHF sub-basin, water elevation decreases toward the center of the sub-basin and Peralta-Tyson Wellfield. In general, water elevation in the BHF sub-basin increases within each aquifer toward the recharge area and decreases with depth from the Newark Aquifer to the Centerville-Fremont Aquifer, and from the Centerville-Fremont Aquifer to the Deep Aquifers (for more explanation see Section VI.B, Vertical Gradients). Water elevations were calculated by subtracting the depth-to-water measurement from the well reference point elevation, which is referenced to the National Geodetic Vertical Datum of 1929 (NGVD 1929).

ACWD's indicator wells were used to quantify changes in water elevations between Fall 2021 and 2022. Water level in the primary AHF Aquifer indicator well, 4S/1W-27D008 (Figure 2), decreased by 0.21 feet, from 30.55 to 30.34 feet. The decrease in water level is also evident in varying degrees throughout the AHF sub-basin.

Water level in the primary BHF indicator well, 4S/1W-29A006, in the Newark Aquifer (Figure 2), decreased by 0.81 feet from 7.73 to 6.92 feet. Water level in the Newark Aquifer indicator well, 4S/2W-25M001, decreased by 0.53 feet from 6.30 to 5.77 feet. The decrease in water levels is also evident in varying degrees throughout the Newark Aquifer. Water levels in the Centerville-Fremont Aquifer indicator well, 4S/1W-19L002, decreased by 1.74 feet from -5.44 to -7.18 feet; and water levels in the Deep Aquifer indicator well, 4S/1W-31B003, decreased by 1.85 feet from -7.08 to -8.93 feet. In general, decreases in water levels observed in the Centerville-Fremont Aquifer and Deep Aquifer indicator wells are also evident regionally, by varying degrees, in wells in each respective aquifer.

The long-term critical minimum operating levels, as measured in ACWD's two primary indicator monitoring wells, are +15 feet (NGVD 1929) for the AHF Sub-basin and 0 feet (NGVD 1929) for the BHF Sub-basin. A short-term level of -5 feet (NGVD 1929) at the BHF primary indicator well is the current expected worst case for a multi-year critical drought. Although decreases in water levels were observed in the majority of wells and related aquifers, water levels remain within ACWD's operational criteria and well above the SGMA minimum thresholds despite the current drought conditions.

For long-term water level trends, hydrographs for selected wells with historical data are in Appendix C. Water level data from historical AHF Aquifer well, 4S/1W-21R002, which was destroyed in 1990, were plotted together with water level data from nearby well, 4S/1W-27D008, in order to capture the general water level trend for the AHF Aquifer from the 1960's to the present. Similarly, historical Newark Aquifer well, 4S/1W-28D002, which has water level data dating back to the 1930's, became inaccessible in the 1990's; therefore, water levels from the well were plotted together with newer Newark Aquifer wells to document general aquifer water level trends. Locations of the wells in Appendix C are shown in Figure 2. Drastic increases in water levels were observed in all BHF aquifers between 1960 and mid-1970s. This is a result of effective management practices, legal authorities, and infrastructure acquired over the years to support the long-term beneficial uses of the Niles Cone.

A. Horizontal Gradients

Water elevations are higher for the AHF sub-basin compared to the BHF sub-basin; a difference as high as 31.3 feet during water year (WY) 2021/22 between BHF indicator well, 4S/1W-29A006, and AHF indicator well, 4S/1W-27D008, and as high as 70 feet historically according to DWR (1967). This water level differential creates a strong gradient from the AHF toward the BHF sub-basins. However, the Hayward Fault is relatively impermeable and impedes the lateral flow of groundwater.

Water elevations are presented on contour maps for the AHF and BHF aquifers (Figures 4, 5, 6, and 7 for Spring 2022 and Figures 8, 9, 10, and 11 for Fall 2022). Water elevation contours were produced by computer software interpolation of the data and then modified manually based on contouring logic as needed. For contouring, an attempt was made to use only static water elevations and to not include water elevations from operating wells. The water elevations are piezometric heads, which are the levels to which water will rise in a well if it is not being pumped. The piezometric head is the level of the water surface in an unconfined aquifer and is the combination of elevation and pressure heads in a confined aquifer at atmospheric pressure. Artesian wells were noted as being artesian but not measured and therefore not used in the contouring process. Groundwater movement is driven by the groundwater gradient, from high to low values of piezometric head. The discussion below focuses mainly on the data collected during the Fall 2022 program when groundwater tends to be at the seasonal low and most susceptible to saltwater intrusion.

Water elevations from wells screened in the AHF Aquifer, along with contours constructed from these elevations, are presented on Figure 8. The water elevations indicate that groundwater flows radially toward the middle of the sub-basin and Peralta-Tyson Wellfield. This groundwater flow is probably due to recharge from the hills surrounding the basin, Alameda Creek, ACWD's recharge ponds; thinning of the alluvial aquifer along its borders; and pumping at the Peralta-Tyson Wellfield. The groundwater gradient generally varies with the regional topography, except in the vicinity of the recharge ponds and Peralta-Tyson Wellfield.

Water elevations from wells screened in the Newark Aquifer, along with contours constructed from these elevations, are presented on Figure 9. The water elevation contours indicate groundwater flows radially from the recharge ponds outward to the northwest, west, and southwest, and locally toward the Mowry Wellfield. The average basin wide horizontal groundwater gradient in the Newark Aquifer is approximately 0.0002 ft./ft.

Water elevations from wells screened in the Centerville-Fremont Aquifer, along with contours constructed from these elevations, are presented on Figure 10. The water elevation contours indicate that groundwater flows radially inward toward the vicinity of Cherry Street and Central Avenue. The groundwater depression near Cherry Street and Central Avenue is due mostly to the operation of Aquifer Reclamation Program wells (now Newark Desalination Facility supply wells) Cedar 1 (4S/1W-31N001), Darvon 2 (4S/2W-36A007), Bellflower (5S/1W-06H004), and Farwell (5S/1W-05C001). Groundwater flows from the recharge ponds toward the depression with an average gradient of approximately 0.0005 ft./ft. Pumping from the Centerville-Fremont Aquifer at the Mowry Wellfield has decreased since the increase in water production at the Newark Desalination Facility in 2010. Cedar 1, Bellflower, and

Farwell were turned-off or ran at reduced capacity during part of the Fall Program due to maintenance activities,

Between 2004 and 2014, 22 Centerville and Fremont Aquifer wells were installed as part of four DWR Local Groundwater Assistance Grants that were supplemented with cost share funding from ACWD. The wells were installed to investigate the movement of saltwater, characterize lithologic properties, and fill in monitoring gaps within the Centerville and Fremont Aquifers. The results of the four studies conducted are documented individually in the following reports: *Northwest Niles Cone Monitoring Wells Project* (ACWD, 2006), *Southwest Niles Cone Monitoring Wells Project* (ACWD, 2007), *Inland Saltwater Intrusion Monitoring Wells Project* (ACWD, 2010), and *The Niles Cone Saltwater Intrusion and Aquifer Characterization Project* (ACWD, 2016). Lithologic data collected during these studies allowed for improved characterization of the Centerville and Fremont Aquifers and the reclassification of older monitoring wells as being either screened in the Centerville Aquifer or Fremont Aquifer. The groundwater contours in Figures 6 and 10 are based on water levels measured from wells screened solely in the Centerville Aquifer. Fremont Aquifer water levels are also shown on the figures (annotated in red) but are not used in the contouring. A separate water elevation contour was not generated for the Fremont Aquifer because it is hydraulically connected to the Centerville Aquifer, and there are relatively fewer monitoring wells that are solely screened in the Fremont Aquifer.

Water elevations from wells screened in the Deep Aquifers, along with contours constructed from these elevations, are presented on Figure 11. Data from the Deep Aquifers are limited, but the water elevation contours indicate that groundwater gradient is relatively flat with groundwater flowing mainly from the recharge ponds toward local depressions due to pumping of agricultural and industrial wells from the Deep Aquifer. Historically, DWR interpreted a northerly direction of groundwater flow in the Deep Aquifer (DWR, 1967).

B. Vertical Gradients

Vertical gradients are important to determine the vertical direction of groundwater flow within and between aquifers and the magnitude of pressure driving the water. Vertical gradients can only be accurately determined if wells are either nested (multiple wells in the same borehole) or clustered (separate wells in close proximity) to eliminate the horizontal component of head.

ACWD acquired a well cluster (4S/1W-20R003, 4S/1W-20R004, and 4S/1W-20R005) from the Union Pacific Railroad that is solely screened within the Newark Aquifer (Table 2). This well cluster is located adjacent to Alameda Creek, and their water elevations indicate a downward gradient in this area of the basin within the Newark Aquifer.

Changes in head of water and water chemistry allow evaluation of the vertical direction of groundwater flow and the potential impact of one aquifer affecting water quality in shallower or deeper aquifers. Table 2 shows seven clusters selected in order to create a general understanding across the BHF sub-basin. All of the clustered wells in Table 2 indicate that the gradient from the Newark Aquifer is higher than other gradients between deeper aquifers. The high gradient between the Newark Aquifer and the deeper aquifers indicates that the Newark Aquifer is more hydraulically isolated at these cluster locations than the deeper aquifers due to the low permeability aquitard below the Newark Aquifer. Water levels in all of the clustered wells in Table 2 indicate a generally continuously downward gradient from the Newark

Aquifer to the immediately underlying aquifer (Centerville Aquifer). The vertical gradient in the deeper aquifers is more variable. Both upward and downward gradients were observed between the Centerville Aquifer and the Fremont Aquifer and downward gradient was observed between the Fremont Aquifer and the Deep Aquifers.

The only exception to the general downward gradient from the Newark Aquifer to the underlying Centerville Aquifer is observed at a well cluster located at the southwest corner of the basin, near Plummer Creek. The wells were installed in late 2006 and early 2007, as part of the Southwest Niles Cone Monitoring Wells Project funded by the DWR local Groundwater Assistance Grant Program. The water elevation for the Newark Aquifer well (5S/2W-14E008) during Fall 2022 was 2.87 feet while water elevation in the Centerville Aquifer well (5S/2W-14E007) was 6.16 feet.

The Newark Aquifer appears to be hydraulically connected to the surrounding salt ponds and salt marsh in the vicinity of well 5S/2W-14E008, located near the bay, as indicated by the high chloride concentration (41,652 ppm) detected. The deeper aquifers beneath the Newark Aquifer appear more confined. The well cluster is located south of Coyote Hills, near an area with relatively shallow bedrock. The Deep Aquifer wells in this cluster have water elevations that are significantly higher than water levels in the corresponding aquifer that are more inland. Due to the limited data available in the area, the relationships between the deeper water-bearing zones and the aquifers east of Coyote Hills are unclear. As a result, additional studies are needed to provide further insight.

VII. WATER SAMPLE RESULTS

The chloride and TDS analytical results from Spring 2022 and Fall 2022 are in Appendix D and E, respectively. Historically, chloride concentrations have been highest in the Newark Aquifer close to the bay, decreasing with depth to the Centerville-Fremont Aquifer, and again decreasing with depth to the Deep Aquifers. During Fall 2022, the highest chloride concentration was again detected from a Newark Aquifer well. The wide range of concentrations observed in the Newark Aquifer reflects the influence of water from the recharge area in the east and the influence of higher salinity sources in the west. Also, the heterogeneous and anisotropic nature of the permeable sediments influences the complexity of the patterns seen on the contour maps.

ACWD has consistently analyzed water samples for chloride and occasionally analyzed them for additional inorganic and organic constituents. Chloride analysis is used to indicate saltwater intrusion since chloride makes up approximately 54% of total dissolved solids in sea water and it is conservative (non-reactive). The Secondary Maximum Contaminant Level (Secondary MCL) range for chloride is 250 ppm (recommended) to 500 ppm (upper).

“TDS or Total Dissolved Solids is defined as the total amount of solids remaining when a water sample is evaporated to dryness... [and]...salinity means essentially the same as TDS” (Drever, 1988). “In principle, it is the sum of all dissolved constituents, with bicarbonate converted to equivalent carbonate” (Drever, 1988). The Secondary MCL range for TDS is 500 ppm (recommended) to 1,000 ppm (upper).

Water quality contours were produced by computer interpolation of the data and then manually modified based on contouring logic and on historical information. The chloride and TDS contours were prepared primarily for groundwater protection purposes. Therefore, if multiple water quality results within a water-bearing zone were available for a given location, then the higher concentration was used to derive the contour lines.

A. Chloride Results

Fall 2022 chloride results are presented on maps for the AHF Aquifer and each of the BHF aquifers on Figures 12, 13, 14, and 15.

1. Comparison Between Fall 2022 and Fall 2021

Differences between the Fall 2022 chloride figures and the Fall 2021 figures can be best explained by the availability and accessibility of certain wells for sampling, wells used for contouring, and slight variations in chloride concentrations from year to year.

a. Above Hayward Fault Aquifer

Chloride and TDS data for the AHF Aquifer are presented on Figure 12. The AHF Aquifer has never been affected by saltwater intrusion because the Hayward Fault acts as a low permeability barrier between BHF aquifers and the AHF Aquifer. In general, the Fall 2022 chloride concentrations for the AHF Aquifer are slightly lower compared to the Fall 2021 chloride concentrations. During Fall 2022, chloride concentrations at the Peralta-Tyson Wellfield ranged between 72 ppm to 75 ppm, while during the previous year chloride concentrations ranged between 75 ppm to 82 ppm. All chloride concentrations in the AHF Aquifer are well below the Secondary MCL of 250 ppm.

b. Newark Aquifer

The Newark Aquifer chloride contours for Fall 2022 are similar to the Fall 2021 contours. Newark Aquifer wells 4S/1W-19E002, 4S/1W-30E004, and 5S/1W-05M001 located at various locations in the basin all have shown an overall improvement in water quality over at least the last thirty-three years (Figure 16). Chloride concentrations from well 4S/1W-19E002, located closest to the recharge ponds, decreased from a maximum of 1,030 ppm in 1985 to 75 ppm in 2022. Chloride concentrations for well 4S/1W-30E004 decreased from a maximum of 2,600 ppm in 1981 to 111 ppm in 2022. Chloride concentrations in Newark Aquifer well 5S/1W-05M001, located near Mowry Avenue west of I-880, decreased from a maximum of 11,500 ppm in 1989 to 724 ppm in 2022 (Figure 16).

Total production from the ARP wells in the Newark Aquifer decreased this past year from a total of 1,454 acre-feet (AF) the previous year to 1,312 AF (Table 3 - beginning of October 2021 through September 2022). Lowry (4S/2W-14N001) was pumped and sampled during Fall 2022. In 2002, Cedar 2 (4S/1W-31N003) and Darvon 1 (4S/2W-36A006) were retrofitted in order to convert the wells into supply sources for the Newark Desalination Facility. Out of the 1,312 AF of water pumped from all Newark Aquifer ARP wells, 1,299 was used as a supply source for the Desalination Facility.

c. Centerville-Fremont, Centerville, and Fremont Aquifers

The Centerville-Fremont Aquifer chloride contours for Fall 2022 are similar to the Fall 2021 contours. Improvements in water quality over at least the last forty-five years in the Centerville-Fremont Aquifer were observed in wells 4S/1W-19L002, 4S/1W-19N003, and 4S/1W-29J003 located near the recharge ponds (Figure 17). Former irrigation well 4S/1W-19N003 was not sampled during Fall 2022 because the well requires repairs prior to sampling. Chloride concentrations at 4S/1W-19N003 had decreased from a maximum of 1,560 ppm in 1976 to 205 ppm in 2020. The well was constructed in 1950 and is screened in both the Centerville and Fremont Aquifers. Even though 4S/1W-19N003 was not sampled, two ACWD monitoring wells 4S/1W-19N005 (screened in the Centerville Aquifer) and 4S/1W-19N004 (screened in the Fremont Aquifer), located approximately 200 feet from 4S/1W-19N003, were sampled. Chloride concentrations detected at these two wells during Fall 2022 were 73 ppm and 217 ppm, respectively. The higher chloride concentrations from 4S/1W-19N004 are plotted in Figure 17 with chloride concentrations from 4S/1W-19N004 to help capture the current chloride concentration trend in the area.

The bulge of saline water inland of Fremont Boulevard near Mowry Avenue, as represented by wells 4S/1W-28P007 and 4S/1W-28F024 is of special significance due to the close proximity of the saline water to the Mowry Wellfield. Since 2011, chloride concentrations from 4S/1W-28P007 have decreased from 1,000 ppm to 473 ppm in 2022. Similarly, chloride concentrations at 4S/1W-28F024 have decreased from 290 ppm in 2010 to 116 ppm in 2022. Chloride concentrations at monitoring well 4S/1W-32K011, located approximately a mile southwest of 4S/1W-28P007, have increased from 788 ppm in 2007 to 985 ppm in 2022. 4S/1W-32K011 was installed in 2007 as part of the Inland Saltwater Intrusion Monitoring Wells Project funded by the DWR Local Groundwater Assistance Grant Program. The increase in chloride concentration appears to be localized. Monitoring wells surrounding 4S/1W-32K011 that are screened in the same aquifer do not exhibit similar increases. In general, chloride levels in the Centerville Aquifer are lower than chloride levels in the Fremont Aquifer, with the exception of an area extending from near Stevenson Boulevard and Blacow Road to Cherry Street and Boyce Road, and at the southern end of Coyote Hills.

The highest chloride concentration (36,792 ppm) was detected in Centerville Aquifer well 5S/2W-03H004, which was installed in the fall of 2014, as part of the Niles Cone Saltwater Intrusion and Aquifer Characterization Project funded by the DWR Local Groundwater Assistance Grant Program and is located at the southern end of Coyote Hills. The purpose of the project was to further define the extent of saline water in the Centerville and Fremont Aquifers near the southwestern portion of the basin. The elevated chloride concentration detected at 5S/2W-03H004 indicates a potential interconnection of the Centerville Aquifer with the upper Newark Aquifer where chloride concentrations in the area ranged between 17,770 ppm to 23,825 ppm. ACWD has identified historical abandoned irrigation wells located near 5S/2W-03H004, which may be acting as conduits for the vertical migration of saline water. Two of the abandoned legacy wells were located and destroyed with local and Proposition 1 Groundwater Grant Program funding. The well destruction project was completed in March 2022. Well 5S/2W-03H004 is part of a two well cluster. The other well 5S/2W-

03H005 in the cluster is screened in the deeper Fremont Aquifer and has a chloride concentration of 26 ppm, which indicates the Centerville and Fremont Aquifers are hydraulically separated in this area.

Total production from the ARP wells in the Centerville-Fremont Aquifer decreased from a total of 10,292 AF the previous year to 9,115 AF this year (Table 3). Cedar 1 (4S/1W-31N001) and Darvon 2 (4S/2W-36A007) were retrofitted in 2002 as supply sources for the Newark Desalination Facility. As part of the expansion of the Newark Desalination Facility, Bellflower (5S/1W-06H004) and Farwell (5S/1W-05C001) ARP wells were also retrofitted in 2009 to become supply sources to the facility. As permeate production capability increased from 5 MGD to 10 MGD, total blended production was increased up to 12.5 MGD. Out of the 9,115 AF of water produced from all Centerville-Fremont Aquifer ARP wells, 9,061 AF was used as a supply source for the Desalination Facility.

d. Deep Aquifers

During the Fall 2022 program, the highest chloride concentration in the Deep Aquifers was detected from well 4S/2W-09F014, located west of I-880 next to Old Alameda Creek. Since the well was installed in 2005, chloride concentrations have decreased from a maximum concentration of 730 ppm in 2006 to 612 ppm in 2022. The well is located near former salt ponds where a number of abandoned water wells have been identified. These abandoned wells could have allowed saline water from either the salt ponds or the Newark Aquifer to enter into the Deep Aquifers. The former salt ponds are currently being restored into tidal wetlands as part of the South Bay Salt Pond Restoration Project. Since 2002, ACWD has worked with project proponents to locate and destroy abandoned wells within the project area. As of May 2007, a total of 68 wells were identified in the area near well 4S/2W-09F014, and 43 of the 68 wells were located and destroyed. Attempts to locate the remaining 25 wells have been unsuccessful; most of these wells are believed to be located within Old Alameda Creek or beneath channel levees. ACWD will continue to oversee the proper destruction of any abandoned wells discovered in the area.

Field efforts were successfully coordinated with the City of Hayward to sample the City's Emergency Well C, where 130 ppm of chloride was detected. Well B was not sampled because it was not operational during the program. As the GSA for the portion of the East Bay Plain Subbasin (2-09.04) which underlies Hayward city limits, the City of Hayward will be reporting data associated with Well E.

Increases in chloride concentrations in the Deep Aquifers were observed after 2000 at one monitoring well (4S/2W-13P005) located west of Decoto Road. Chloride concentrations increased from 260 ppm in 2000 to 561 ppm in 2022, however, concentrations decreased slightly during 2021 and 2022. The elevated chloride concentration observed at 4S/2W-13P005 appears to be localized and does not appear to be new saltwater intrusion, since similar increases in chloride concentrations are not observed in surrounding Deep Aquifer wells nor other nearby wells. The well will continue to be monitored for changes in chloride concentration trends.

The Fall 2022 chloride contours for the Deep Aquifers are similar to the Fall 2021 contours. Dashed contour lines were used to approximate chloride and TDS concentrations in the areas near water wells 4S/2W-36D003 (located near Brittany Avenue and Newark Boulevard) and 5S/2W-12B008 (located near Central Avenue and Cherry Street). Well 4S/2W-36D003 was last sampled in 2012 and 587 ppm of chloride and 1,400 ppm of TDS were detected. The well could not be sampled this year because the well was not operational during the program. Chloride and TDS concentrations of 487 ppm and 1,100 ppm respectively were detected at private well 5S/2W-12B008.

Improvement in water quality over the last 40 to 50 years was observed in the Deep Aquifers just south and southwest of the recharge ponds as exhibited by the water quality history of wells 4S/1W-31B003, 4S/1W-30E003, and 4S/1W-31J001 (Figure 18). Maximum chloride concentrations were detected at these three wells in 1971, 1981, and 1979 at 1,520 ppm, 825 ppm, and 805 ppm, respectively. Since then, chloride concentrations have decreased at these three wells to 271 ppm, 133 ppm, and 210 ppm, respectively.

There was no ARP well production from the Deep Aquifers this past year. The only Deep Aquifer ARP well, Willowood 1 (4S/1W-31B003), has not been operated since August 2001.

2. Comparison Between Fall 2022 and Fall 1962

Since 1962, ACWD has recharged the Niles Cone through the recharge ponds with local runoff and purchased water from the State Water Project. During normal to wet years, groundwater recharge consists of mostly local runoff. As a result of the recharge activities, water levels in the Newark Aquifer have increased over time, restoring the bayward direction of groundwater flow by early to mid-1970s, thereby stopping additional saltwater intrusion into the basin. This recharge effort has also moved the 250 ppm contour line away from ACWD's Mowry Wellfield restoring an area of saline water to potable water.

Comparisons of the 250 ppm contour line for Fall 1962 and Fall 2022 aim to illustrate the difference in chloride distribution between these two time periods relative to the 250 ppm contour line. The figures do not provide information regarding concentration trends in recent years (see Section VII.A.1 for discussion of changes in recent years).

A comparison between Fall 1962 and Fall 2022 250 ppm contour lines in the Newark Aquifer (Figure 19) indicates a decrease in chloride concentrations from the Hayward Fault to approximately Highway 880.

A comparison between Fall 1962 and Fall 2022 250 ppm contour lines in the Centerville-Fremont Aquifer (Figure 20) indicates: a decrease in chloride levels in the recharge ponds area to beyond Fremont Boulevard, a decrease in chloride levels in a small southwest portion of the sub-basin near Cherry Street, and an increase in chloride levels in areas west and east of the Fall 1962 250 ppm contour line. An increase in area, as defined by the 250 ppm contour line near Mowry Avenue and Paseo Padre Parkway is of special significance due to its proximity to the Mowry Wellfield.

A comparison between Fall 1962 and Fall 2022 250 ppm contour lines in the Deep Aquifers (Figure 21) indicates: a decrease in chloride levels in the vicinity of the recharge ponds, a decrease in chloride levels just north of Darvon 1 & 2, and an increase in chloride levels around most of the Fall 1962 250 ppm contour line. The increase in chloride levels in the west and northwestern portion of the basin is interpreted as extending from Mowry Avenue to Highway 92. The northwestern portion of the increase is based on samples collected from monitoring wells installed in 2005 as part of the Northwest Niles Cone Monitoring Wells Project funded by the DWR local Groundwater Assistance Grant Program. However, it is unknown exactly when elevated chloride levels first appeared in this area of the basin.

In general, recharging the groundwater basin with watershed runoff and imported water since 1962 has decreased the chloride content near the recharge ponds and some distance toward the bay in all three aquifers, but especially in the Newark Aquifer. The increase in chloride concentrations in both the Centerville-Fremont and the Deep Aquifers surrounding the Fall 1962 areas may be due to changes in the monitoring network over time as historical wells are destroyed due to damage or development and new wells are installed, and mixing between highly saline water (>250 ppm) with less saline water (<250 ppm) as infiltration from the recharge area dilutes and disperses the saline water. It may also be due to vertical movement of saline water from other aquifers through poorly constructed wells or natural weaknesses in the aquitards or both.

B. Total Dissolved Solids Sample Results

The Fall 2022 TDS results are presented on maps for the AHF Aquifer and each of the BHF aquifers on Figures 12, 22, 23, and 24. TDS concentrations in the AHF Aquifer at the Peralta-Tyson Wellfield ranged between 430 ppm and 570 ppm, which is slightly higher than the previous year's range of 430 ppm and 510 ppm. TDS concentrations have historically been higher near Lake Elizabeth as indicated by well 4S/1W-34C001. Since 2000, the average TDS concentration detected at the well is approximately 1,023 ppm.

The 1,000 ppm contour line for TDS in the Newark Aquifer (Figure 22) appears to have the general shape of the 250 ppm chloride line (Figure 13). Three Newark Aquifer wells at the Mowry Wellfield were sampled and up to 490 ppm of TDS was detected during Fall 2022. Since 2000 (when ACWD first produced TDS contour figures), TDS concentrations have ranged from approximately 400 to 600 ppm.

In the Centerville-Fremont and Deep Aquifers, the 750 ppm contour lines for TDS (Figures 23 and 24) both appear to have roughly similar shapes as the 250 ppm chloride lines (Figures 14 and 15, respectively). Similar to the chloride results, elevated levels of TDS (exceeding 1,000 ppm) in the Centerville-Fremont Aquifer were detected inland of Fremont Boulevard near Mowry Avenue, south of the Mowry Wellfield. In general, since 2000, TDS concentrations for the Centerville-Fremont and Deep Aquifers have ranged between 500 ppm and 1,000 ppm in the Mowry Wellfield with an average of 527 ppm.

VIII. CONCLUSIONS

In general, compared to levels observed during Fall 2021, groundwater levels observed during Fall 2022 are lower in the Newark Aquifer and the other BHF aquifers. Water level at the primary BHF indicator well, 4S/1W-29A006, decreased by 0.81 feet from 7.73 to 6.92 feet. Water levels at the AHF Aquifer are also lower during Fall 2022 compared with Fall 2021. Water level at the AHF primary indicator well, 4S/1W-27D008, decreased by 0.21 feet, from 30.55 to 30.34 feet.

The long-term critical minimum operating levels, as measured in ACWD's two primary indicator monitoring wells, are +15 feet (NGVD 1929) for the AHF Sub-basin and 0 feet (NGVD 1929) for the BHF Sub-basin. A short-term level of -5 feet (NGVD 1929) at the BHF primary indicator well is the current expected worst case for a multi-year critical drought. Although decreases in water levels were observed in the majority of wells and related aquifers, groundwater levels remain within ACWD's operational criteria and well above the SGMA minimum thresholds despite current drought conditions.

Groundwater in the AHF Aquifer flows toward the center of the sub-basin and Peralta-Tyson Wellfield. In general, groundwater gradient varies with the regional topography, except in the vicinity of the recharge ponds and the Peralta-Tyson Wellfield. Groundwater in the Newark Aquifer flows radially from the recharge area outward to the northwest, west, and southwest, and locally toward the Mowry Wellfield. The average basin wide horizontal groundwater gradient in the Newark Aquifer is approximately 0.0002 ft./ft. Groundwater in the Centerville-Fremont Aquifer flows inward toward the vicinity of Cherry Street and Central Avenue near the vicinity of Aquifer Reclamation Program wells Cedar 1 (4S/1W-31N001), Darvon 2 (4S/2W-36A007), Bellflower (5S/1W-06H006), and Farwell (5S/1W-05C001). Data from the Deep Aquifers are limited, but the water elevation contours indicate that groundwater gradient is relatively flat with groundwater flowing mainly from the recharge ponds toward local depressions.

Chloride concentrations at the AHF Aquifer are slightly lower during Fall 2022 compared to Fall 2021; all chloride concentrations are below the Secondary MCL. Chloride concentrations for the Newark, Centerville-Fremont, and Deep Aquifers are similar between the two programs. The relatively small differences in the chloride contours between Fall 2022 and Fall 2021 in these aquifers are best explained by the availability and accessibility of certain wells for sampling, wells used for contouring, and variations in chloride concentrations from year to year. Chloride concentrations at Centerville-Fremont Aquifer well 4S/1W-28F024, located between the Mowry Wellfield and the bulge of saline water inland of Fremont Boulevard, decreased slightly from 122 ppm to 116 ppm. Changes in chloride concentration are of special significance in this area due to the close proximity of the Mowry Wellfield to the bulge of saline water.

In order to understand changes in water quality over several years, it is best to interpret water sample results from individual wells. In general, Figures 16, 17, and 18 indicate that recharging the groundwater basin with watershed runoff and imported water since 1962 has decreased the chloride levels in all three aquifers near the recharge ponds and some distance toward the bay in all three aquifers.

Comparisons of the 250 ppm contour line for Fall 1962 and Fall 2022 aim to illustrate the difference in chloride distribution between these two time periods relative to the 250 ppm contour line. A decrease in chloride content near the recharge ponds and some distance toward the bay is

observed in the BHF aquifers, especially in the Newark Aquifer. However, an increase in chloride concentrations is also observed surrounding some historically impacted areas in the Centerville-Fremont and the Deep Aquifers (Figures 19, 20, and 21). This increase in area may be due to changes in the monitoring network over time as historical wells are destroyed due to damage or development and new wells are installed, and mixing between highly saline water (>250 ppm) with less saline water (<250 ppm) as infiltration from the recharge area dilutes and disperses the saline water. It may also be due to vertical movement of saline water from other aquifers through poorly constructed wells or natural weaknesses in the aquitards or both. ACWD will continue to monitor the residual impact of the historical saltwater intrusion and identify potential vertical conduits and mitigate them as appropriate.

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APPENDIX A

TABLES

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TABLE 1

2022 GROUNDWATER MONITORING PROGRAM SUMMARY

GROUPING OF WELLS	NUMBER OF WELLS	NUMBER OF WELLS
	Spring	Fall
WELLS SAMPLED (METHOD OF SAMPLING)		
Owner's Pump	11	23
Wells With Air Compressor	73	157
ACWD's Dedicated Pump	19	24
TOTAL WELLS SAMPLED*	103	204
WELLS SAMPLED, BUT UNABLE TO MEASURE WATER LEVEL	15	20
WELLS THAT WERE MEASURED FOR WATER LEVELS	247	255
TOTAL WELLS SAMPLED OR MEASURED	262	275
TOTAL WELLS NOT SAMPLED AND NOT MEASURED	32	21
TOTAL NUMBER OF WELLS IN THE PROGRAM	294	296

*WELLS SAMPLED BY AQUIFER

Newark Aquifer	32	72
Centerville-Fremont Aquifer	44	80
Deep Aquifer	15	34
Above Hayward Fault Aquifer	12	18
TOTAL IN ALL AQUIFERS	103	204

TABLE 2
GROUNDWATER MONITORING PROGRAM FALL 2022
VERTICAL GRADIENTS AT
SELECTED CLUSTERED WELLS

Well Number	Aquifer	Water Depth (feet)	Ref Point Elevation* (feet)	Water Elevation* (feet)	Screen Pack (feet)	Center of Screen (feet)	Vertical Gradient	Direction	Chloride (ppm)	TDS (ppm)
4S/1W-20R003	N	48.79	59.11	10.32	38.0-58.0	48	-0.052	▼	---	---
4S/1W-20R004	N	50.52	59.2	8.68	74.5-84.5	79.5	-0.036	▼	---	---
4S/1W-20R005	N	51.48	59.06	7.58	105.0-115.0	110	---	---	---	---
5S/1W-05H006	N	27.46	34.29	6.83	50-80	65	-0.096	▼	167	1,100
5S/1W-05H005	C	44.71	34.31	-10.40	230-260	245	0.010	▲	332	1,000
5S/1W-05H004	F	43.74	34.25	-9.49	330-340	335	-0.017	▼	24	360
5S/1W-05H003	D	45.96	34.31	-11.65	450-480	465	---	---	26	340
4S/1W-28P008	N	47.03	53.53	6.50	60-100	80	-0.120	▼	98	700
4S/1W-28P004	C	61.43	53.56	-7.87	190-210	200	-0.009	▼	81	550
4S/1W-28P007	F	62.71	53.50	-9.21	330-340, 350-380	355	-0.0002	▼	473	1,200
4S/1W-28P006	D	62.89	53.66	-9.23	430-460	445	---	---	202	680
4S/2W-13P004	N	18.58	25.90	7.32	48-58, 68-78	63	-0.087	▼	105	670
4S/2W-13P007	C	33.72	26.00	-7.72	180-290	235	-0.003	▼	115	710
4S/2W-13P006	F	34.19	26.15	-8.04	340-360	350	-0.009	▼	169	730
4S/2W-13P005	D	34.57	25.98	-8.59	400-420	410	---	---	561	1,400
4S/2W-36N012	N	9.74	15.86	6.12	50-70, 90-110	80	-0.171	▼	5,969	12,000
4S/2W-36N011	C	32.81	17.50	-15.31	190-220	205	0.050	▲	258	710
4S/2W-36N010	F	27.58	16.77	-10.81	280-310	295	---	---	1,087	2,000
4S/2W-12K011	N	45.57	53.67	8.10	110-150	130	-0.155	▼	34	360
4S/2W-12K010	C	60.03	53.39	-6.64	210-240	225	-0.013	▼	62	540
4S/2W-12K009	F	61.06	53.41	-7.65	300-310	305	-0.006	▼	142	570
4S/2W-12K008	D	61.91	53.11	-8.80	470-510	490	---	---	41	360
4S/1W-19N014	N	33.23	40.5	7.27	60-100	80	-0.110	▼	74	430
4S/1W-19N005	C	48.12	40.55	-7.57	200-230	215	-0.010	▼	73	420
4S/1W-19N004	F	48.97	40.68	-8.29	270-310	290	-0.001	▼	217	730
4S/1W-19N002	D	48.81	40.45	-8.36	370-410	390	---	---	315	1,000

N = Newark, C = Centerville, F = Fremont, D = Deep

*NGVD 1929

TABLE 3

AQUIFER RECLAMATION PROGRAM WELL PRODUCTION

WELL NAME	OCTOBER 2019 THROUGH SEPTEMBER 2020 (ACRE-FEET)	OCTOBER 2020 THROUGH SEPTEMBER 2021 (ACRE-FEET)	OCTOBER 2021 THROUGH SEPTEMBER 2022 (ACRE-FEET)
NEWARK AQUIFER			
CEDAR 2 (ARP)	2	1	4
CEDAR 2 (Desal)	1,481	1,445	1,299
DARVON 1 (ARP)	255	6	8
DARVON 1 (Desal)	0	0	0
LOWRY	1	1	1
SITE A	1	1	0
SITE B	0	0	0
SITE C	0	0	0
SITE D	0	0	0
SITE E	0	0	0
Supply for Desalination Facility Subtotal	1,481	1,445	1,299
ARP Pumping Subtotal	259	9	13
Aquifer Total	1,740	1,454	1,312
CENTERVILLE FREMONT AQUIFER			
BELLFLOWER (ARP)	10	1	12
BELLFLOWER (Desal)	2,498	2,837	2,433
CEDAR 1 (ARP)	35	4	25
CEDAR 1 (Desal)	2,088	1,960	1,459
DARVON 2 (ARP)	0	202	2
DARVON 2 (Desal)	3,123	2,505	2,878
FARWELL (ARP)	1	2	15
FARWELL (Desal)	2,595	2,781	2,291
WILLOWOOD 2	0	0	0
Supply for Desalination Facility Subtotal	10,304	10,083	9,061
ARP Pumping Subtotal	46	209	54
Aquifer Total	10,350	10,292	9,115
DEEP AQUIFER			
WILLOWOOD 1	0	0	0
Aquifer Total	0	0	0
TOTAL FROM ALL AQUIFERS			
Supply for Desalination Facility	11,785	11,528	10,360
ARP Pumping	305	218	67
Total Pumping	12,090	11,746	10,427

ARP = Aquifer Reclamation Program Pumping

Desal = Source Supply for Newark Desalination Facility

*Production values were adjusted based on updated information

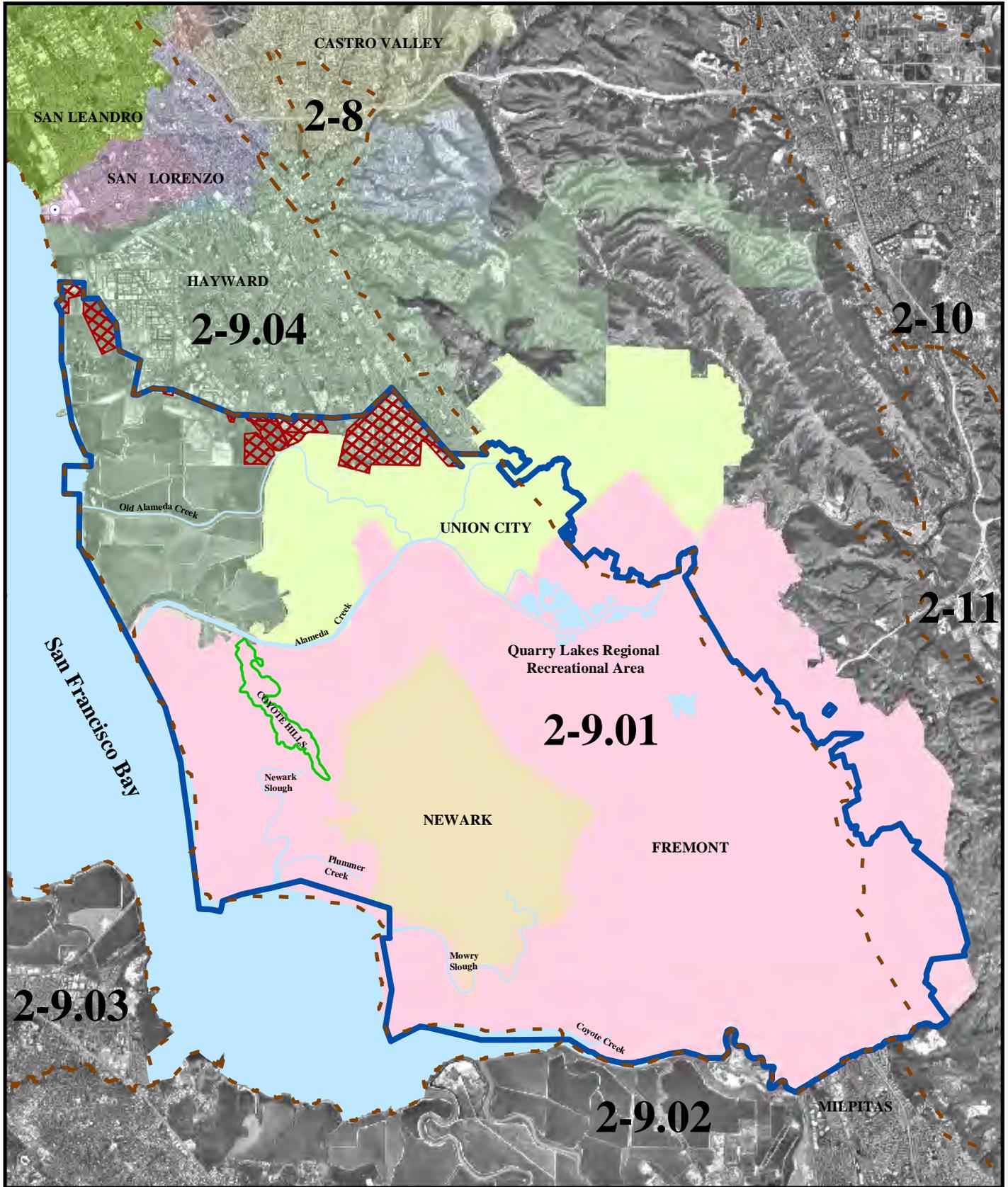
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APPENDIX B

FIGURES

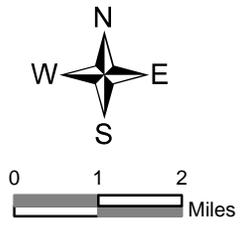
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FIGURE 1: LOCAL AGENCY BOUNDARIES

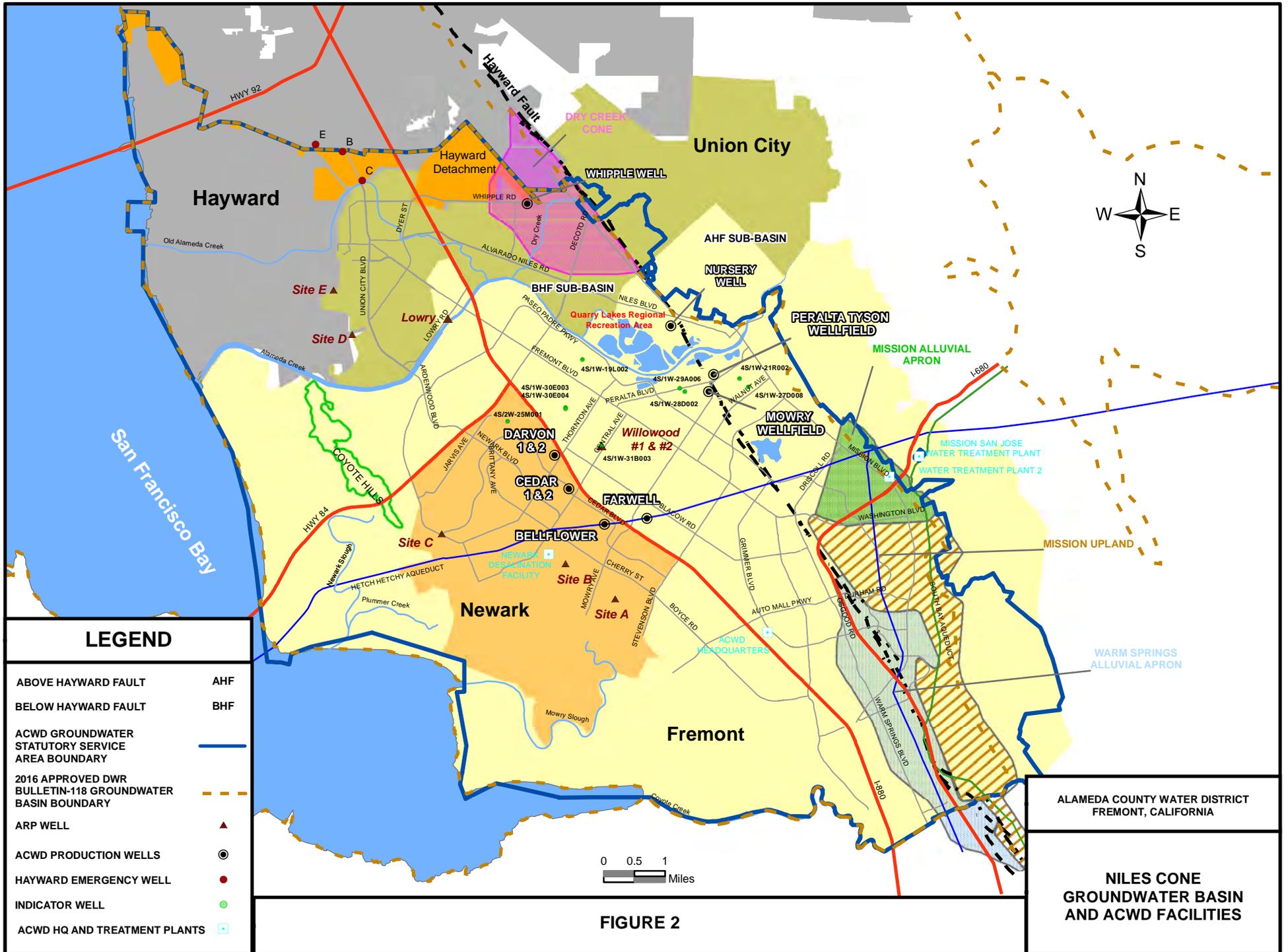


 ACWD GROUNDWATER STATUTORY SERVICE AREA BOUNDARY
 2016 APPROVED DWR BULLETIN-118 GROUNDWATER BASIN BOUNDARY

 Hayward Detachment
 EBMUD Bayside Groundwater Project Location

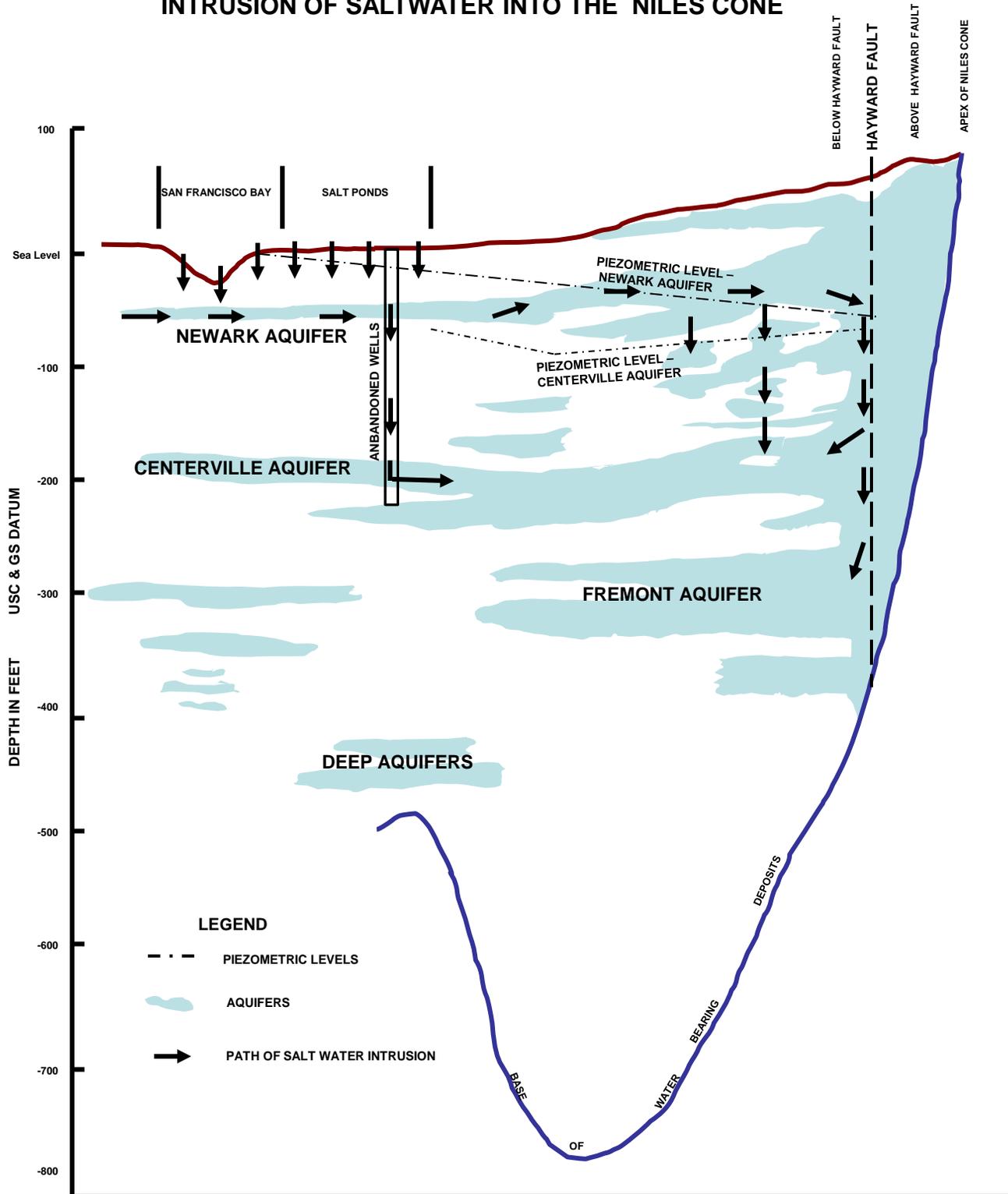


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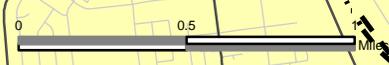
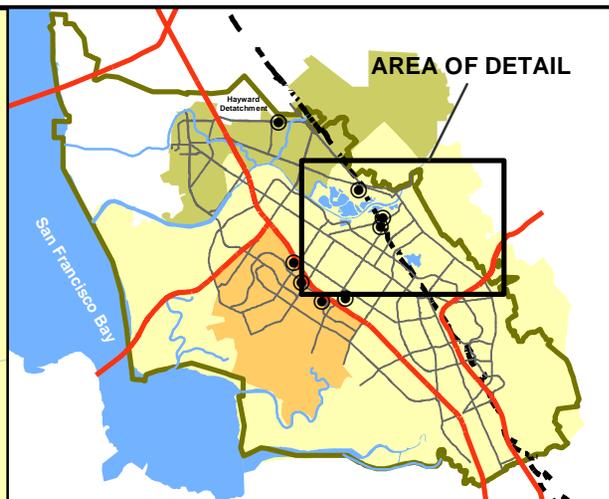
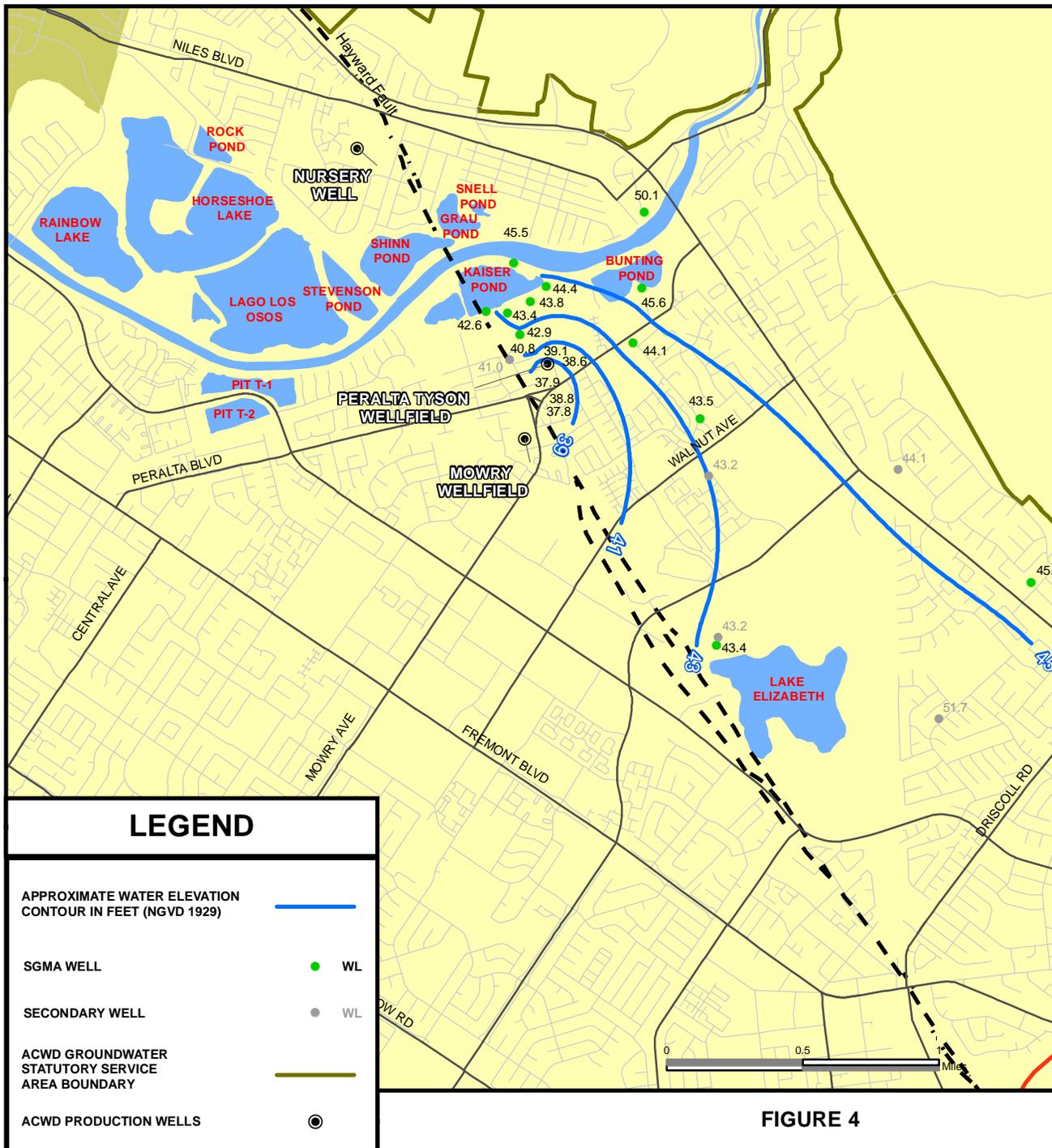
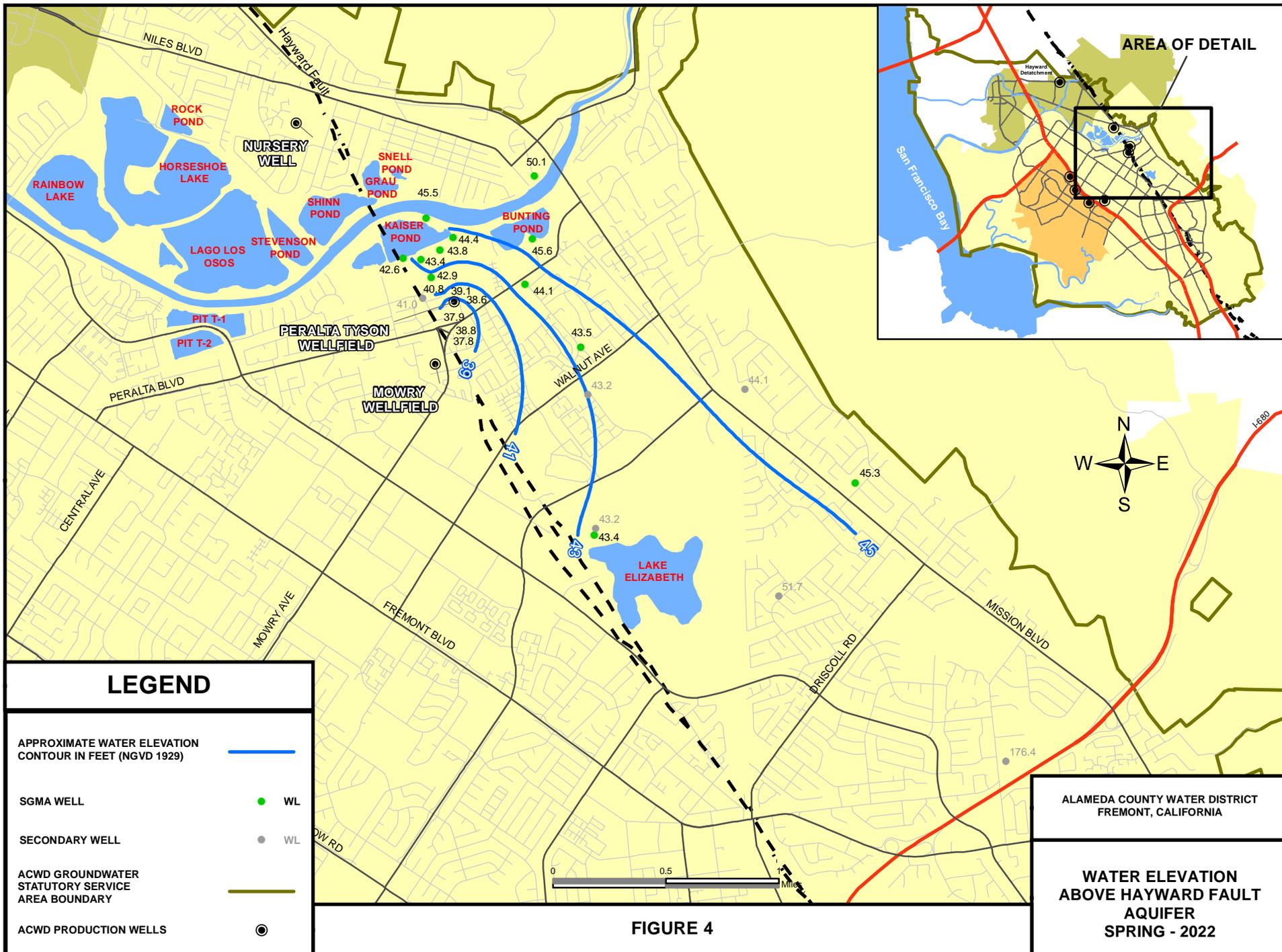
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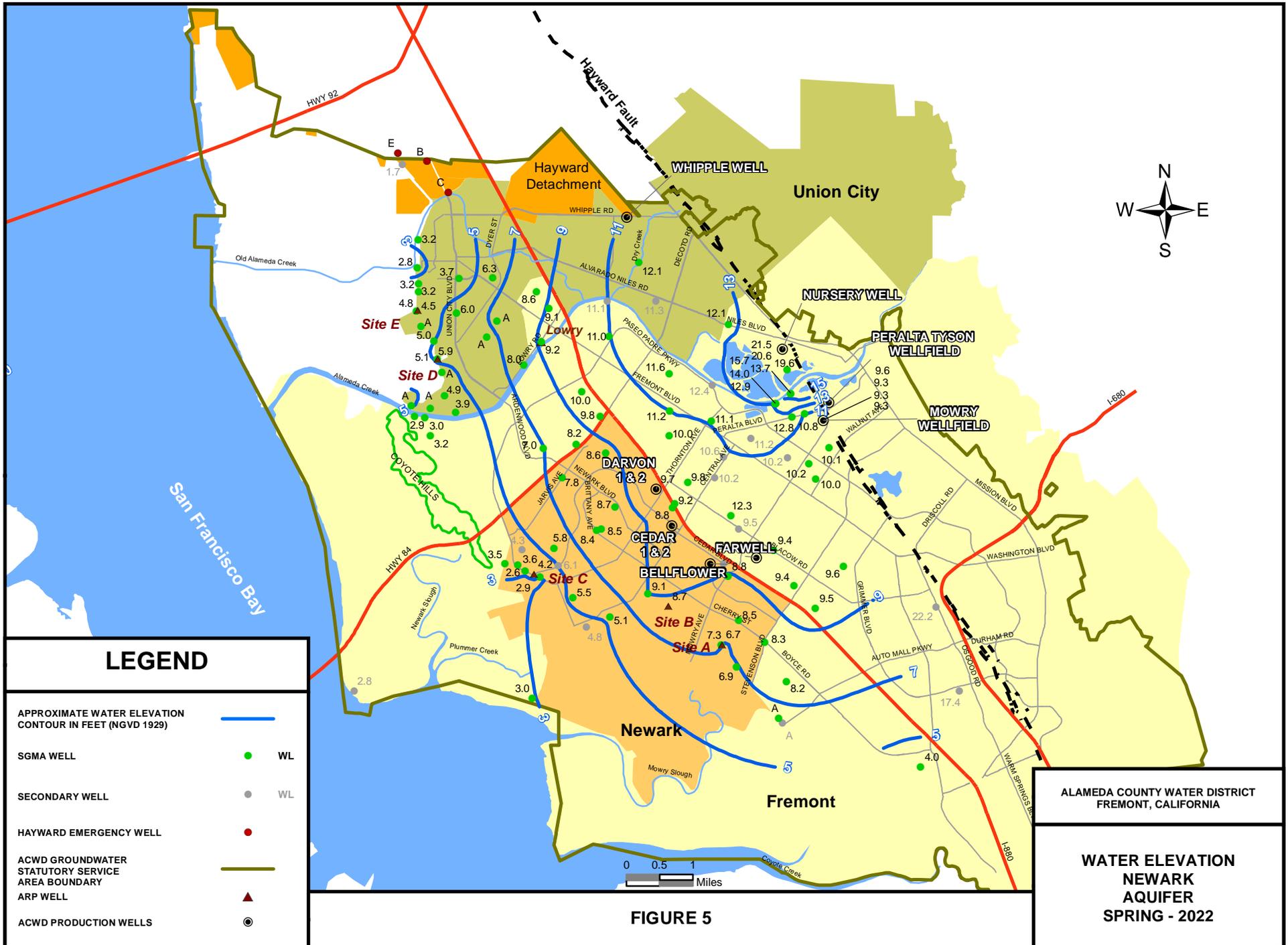
FIGURE 3: CONCEPTUAL DIAGRAM OF HISTORICAL INTRUSION OF SALTWATER INTO THE NILES CONE

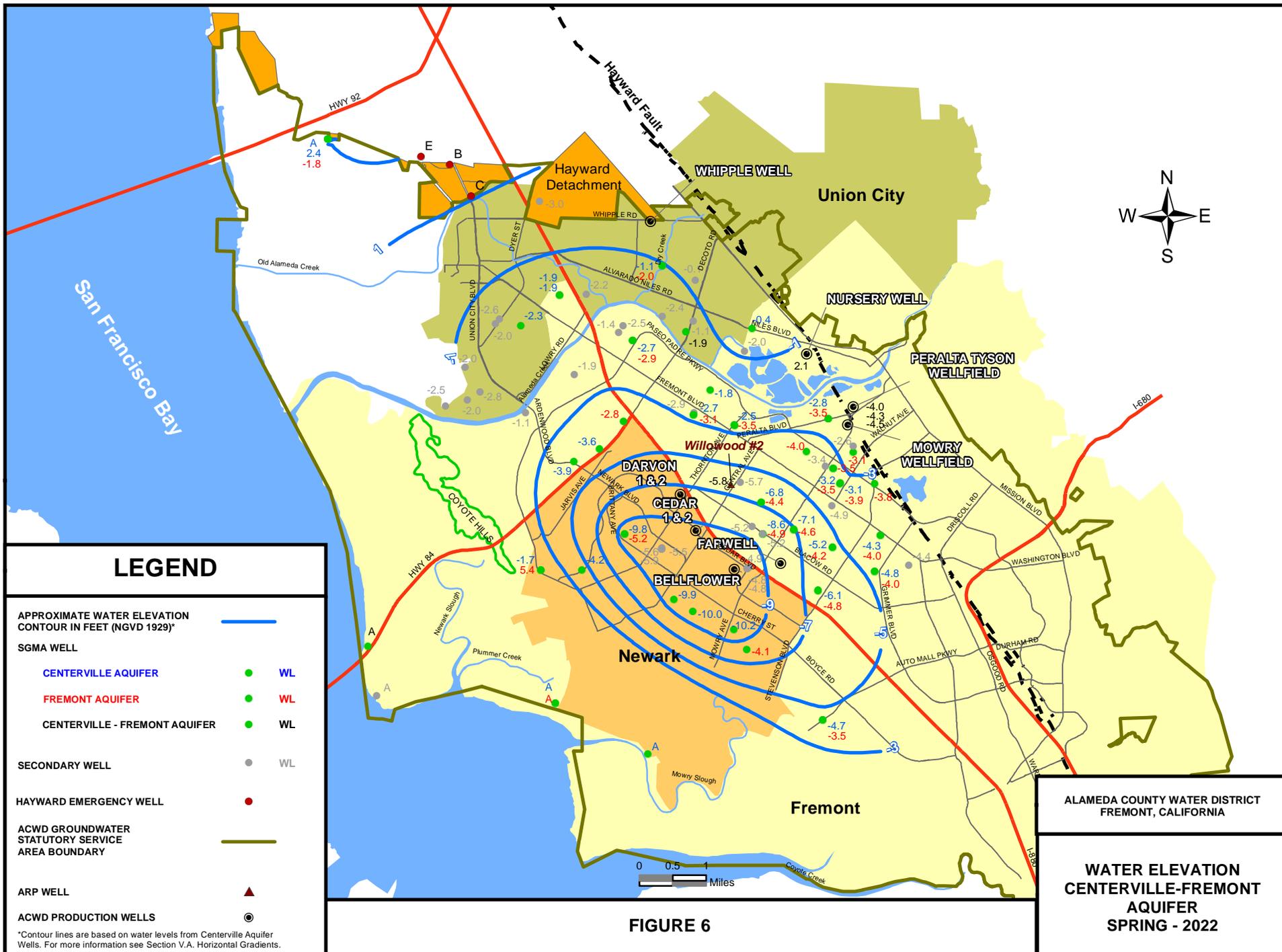


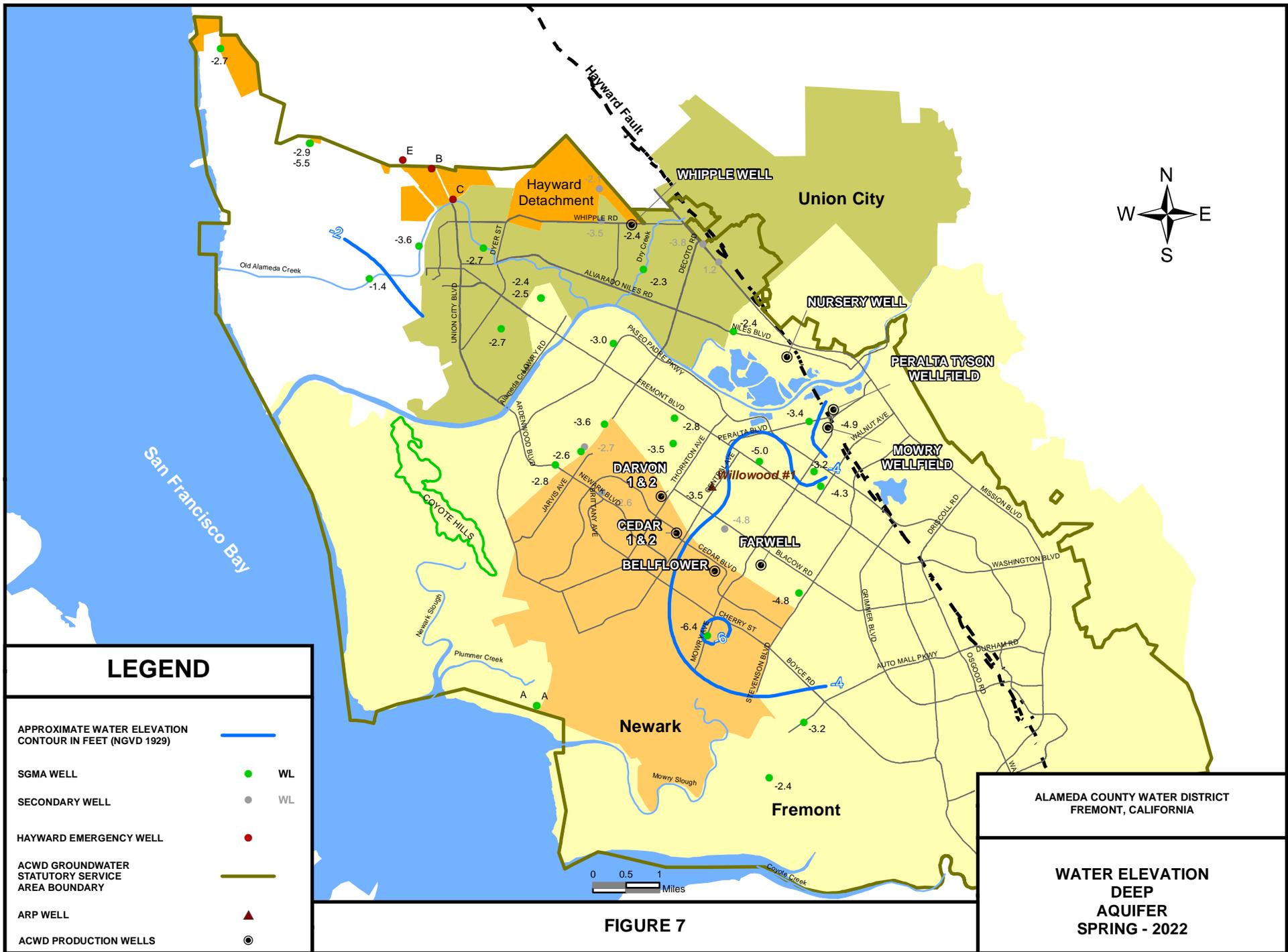
Adapted from State of California Department of Water Resources. 1968. *Evaluation of Groundwater Resources, South Bay, Volume 1: Fremont Study Area, Bulletin No. 118-1.*

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LEGEND

APPROXIMATE WATER ELEVATION CONTOUR IN FEET (NGVD 1929)

SGMA WELL
SECONDARY WELL

HAYWARD EMERGENCY WELL

ACWD GROUNDWATER STATUTORY SERVICE AREA BOUNDARY

ARP WELL

ACWD PRODUCTION WELLS



WL



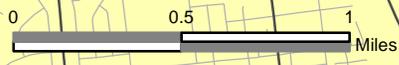
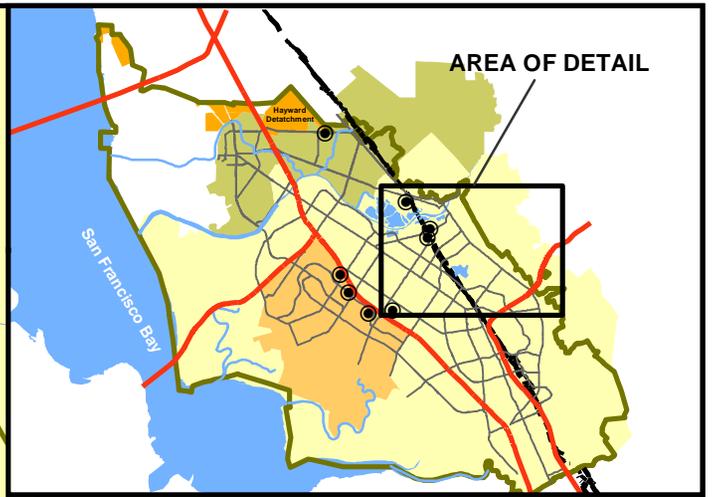
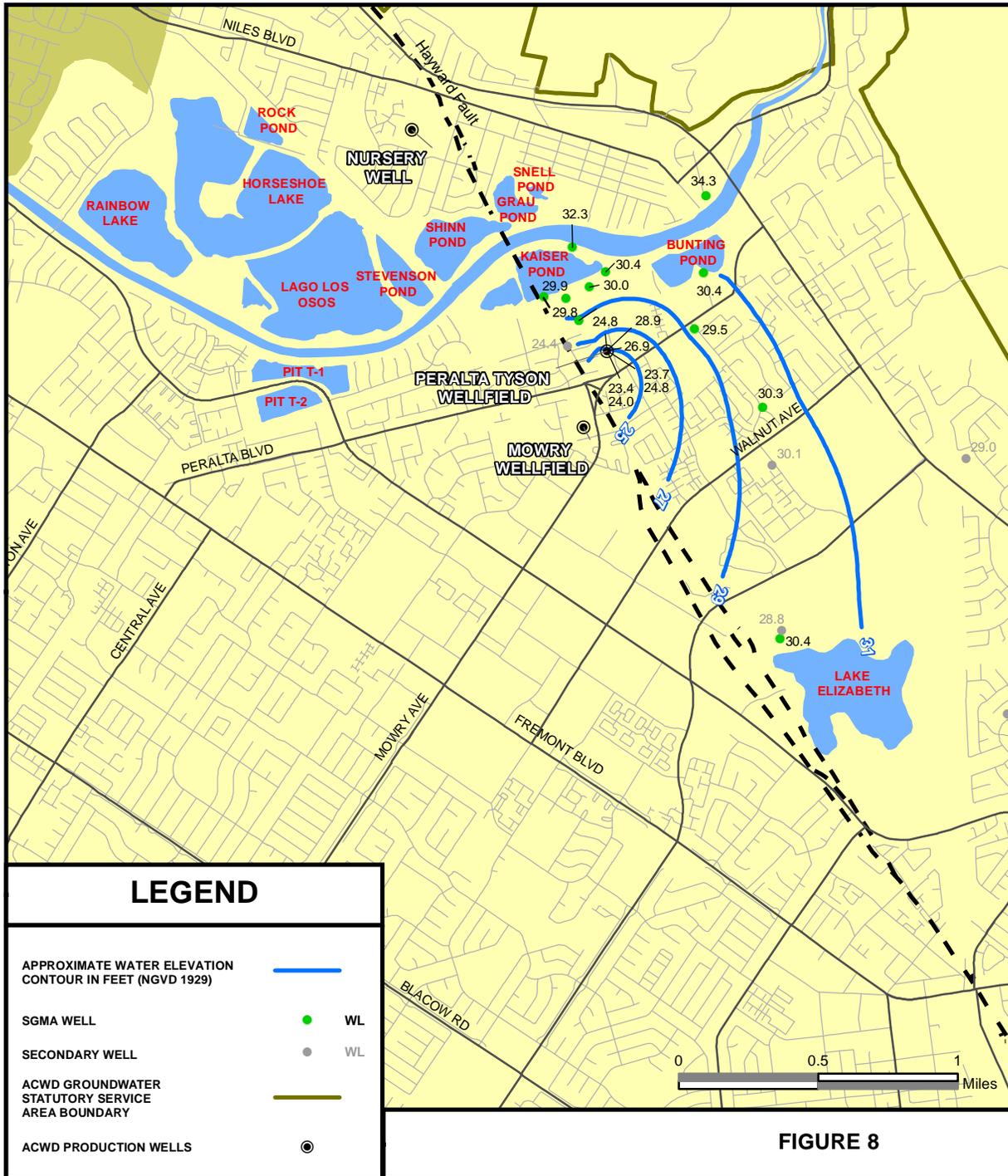
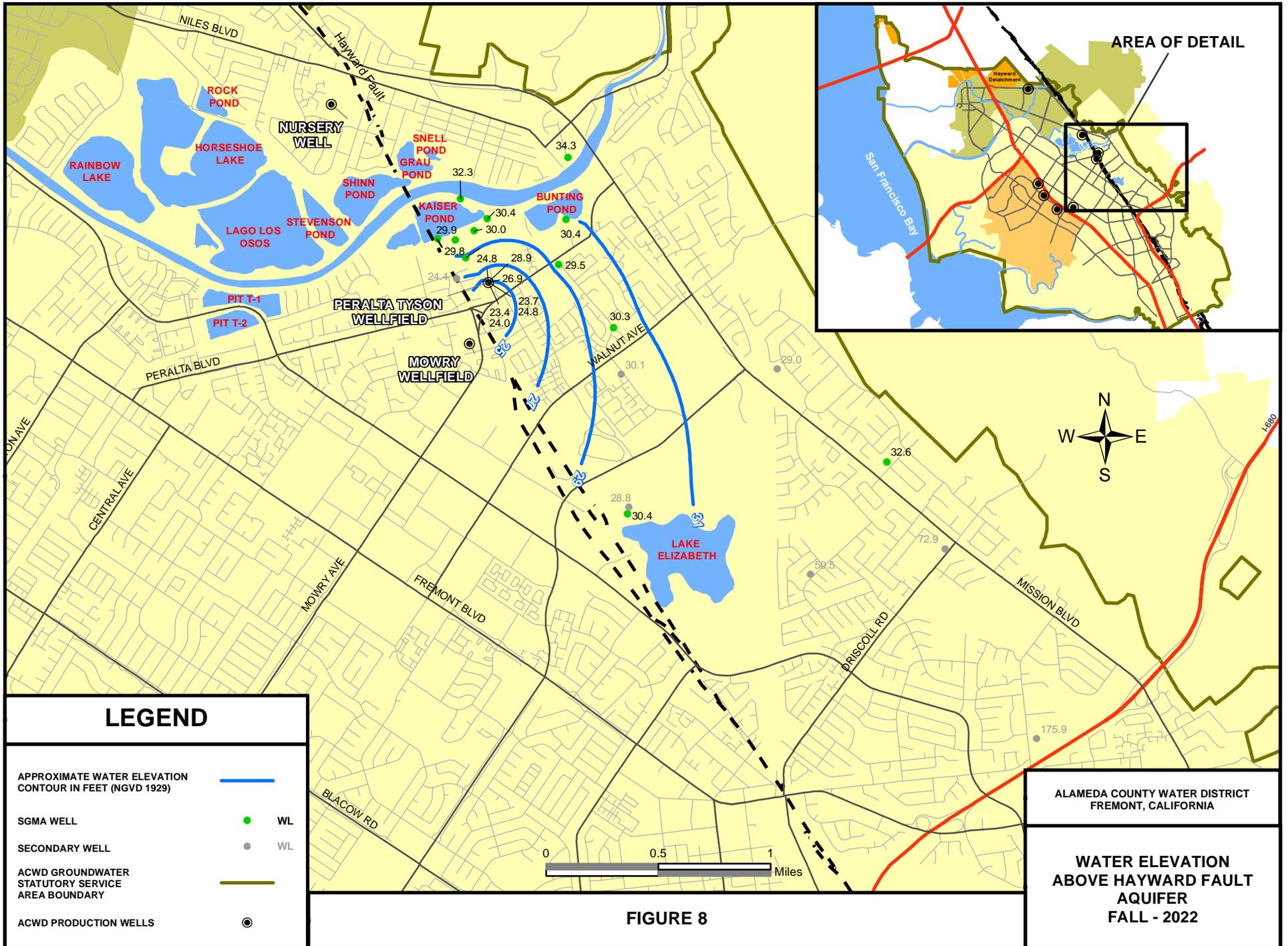
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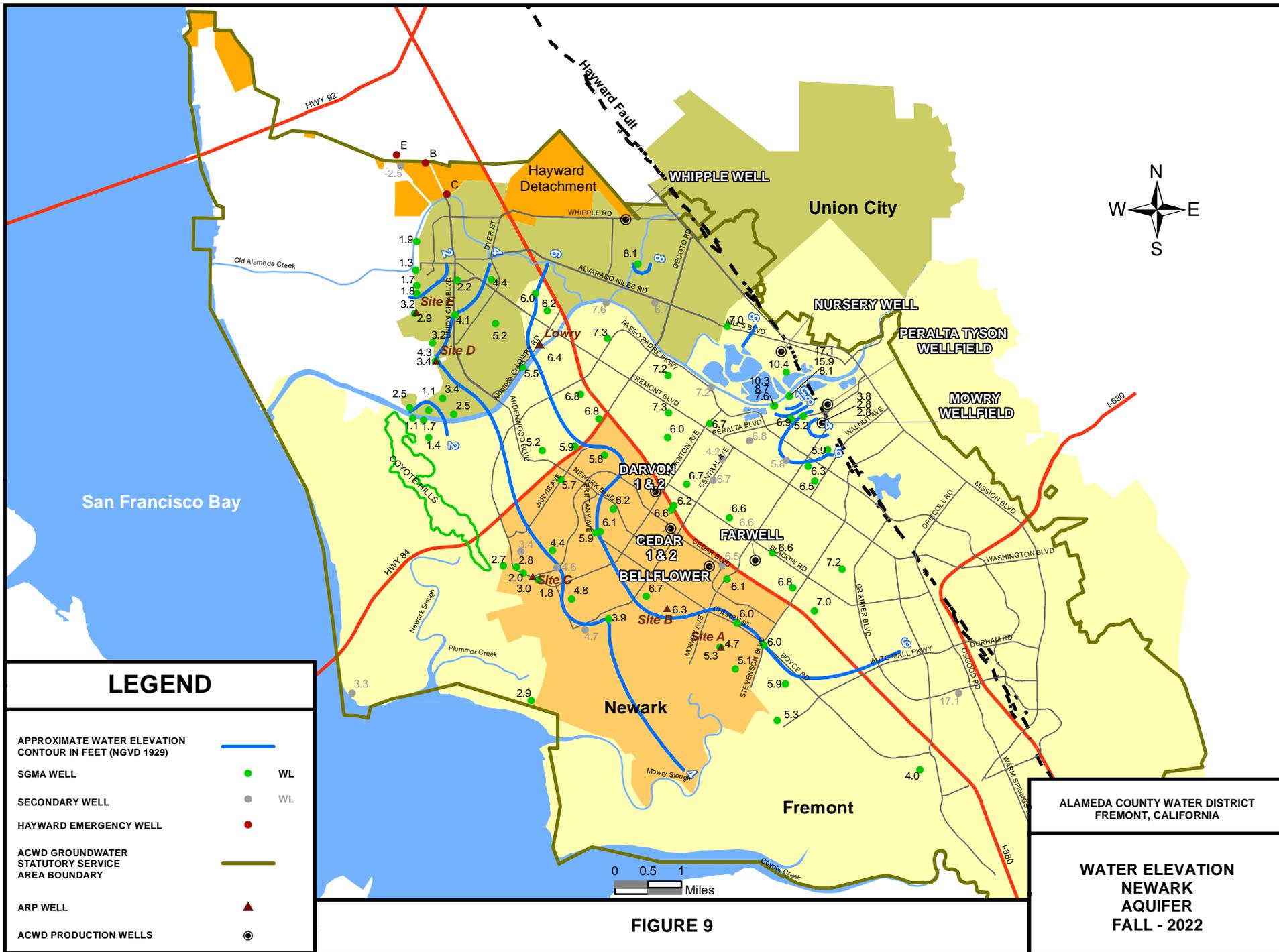


FIGURE 7

**ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA**

**WATER ELEVATION
DEEP
AQUIFER
SPRING - 2022**





LEGEND

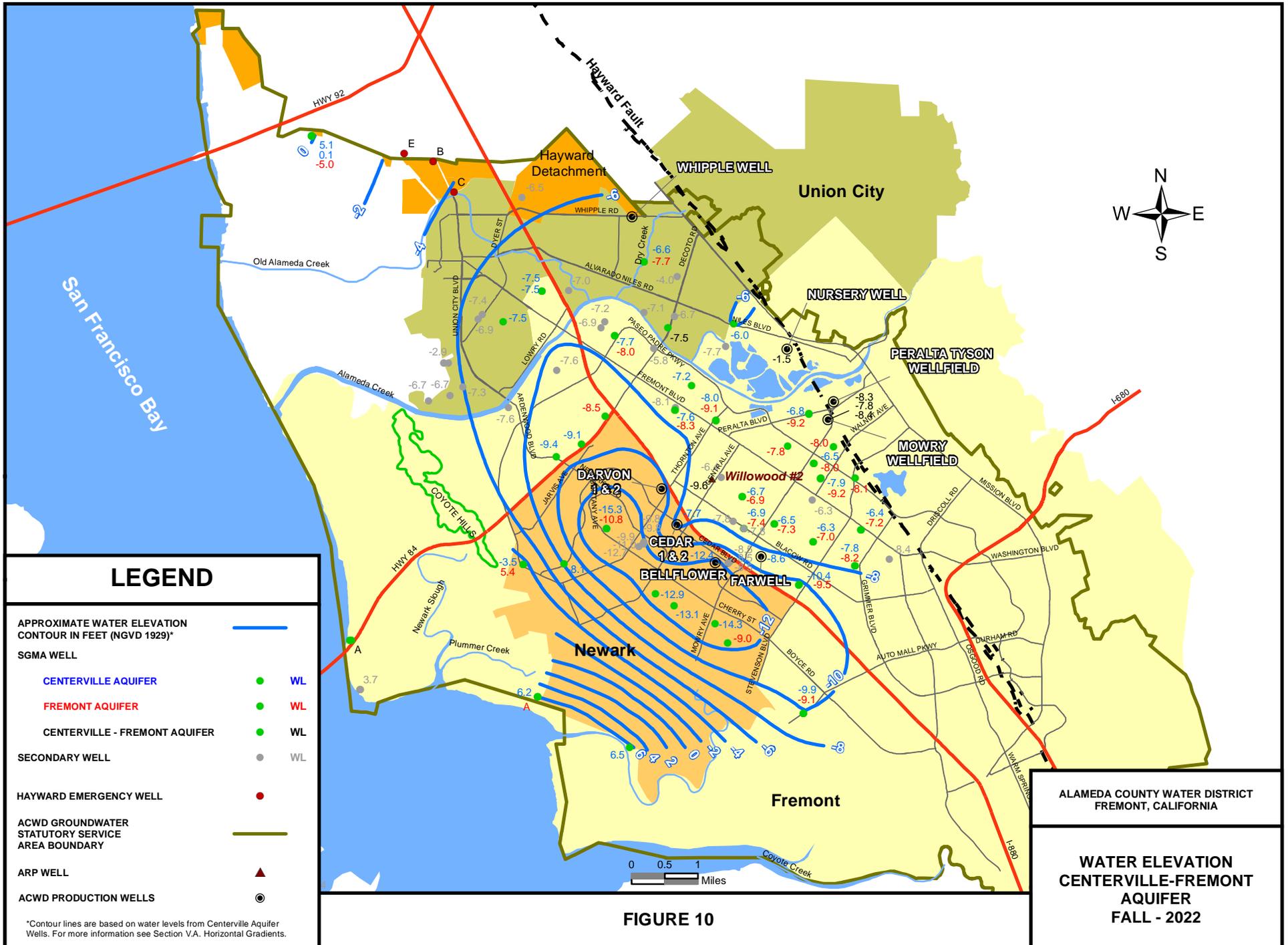
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- SECONDARY WELL ● WL
- HAYWARD EMERGENCY WELL ●
- ACWD GROUNDWATER STATUTORY SERVICE AREA BOUNDARY —
- ARP WELL ▲
- ACWD PRODUCTION WELLS ●

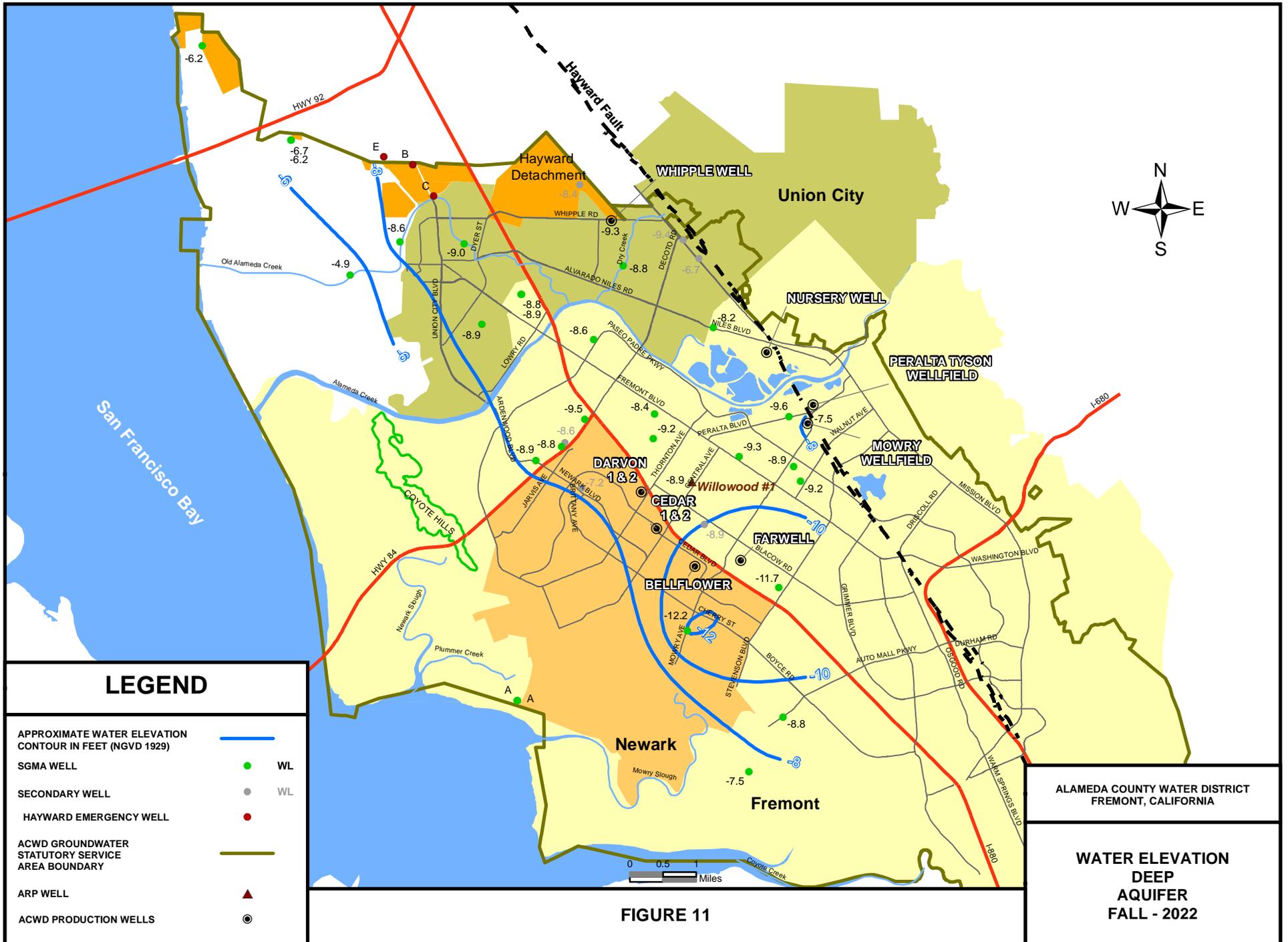


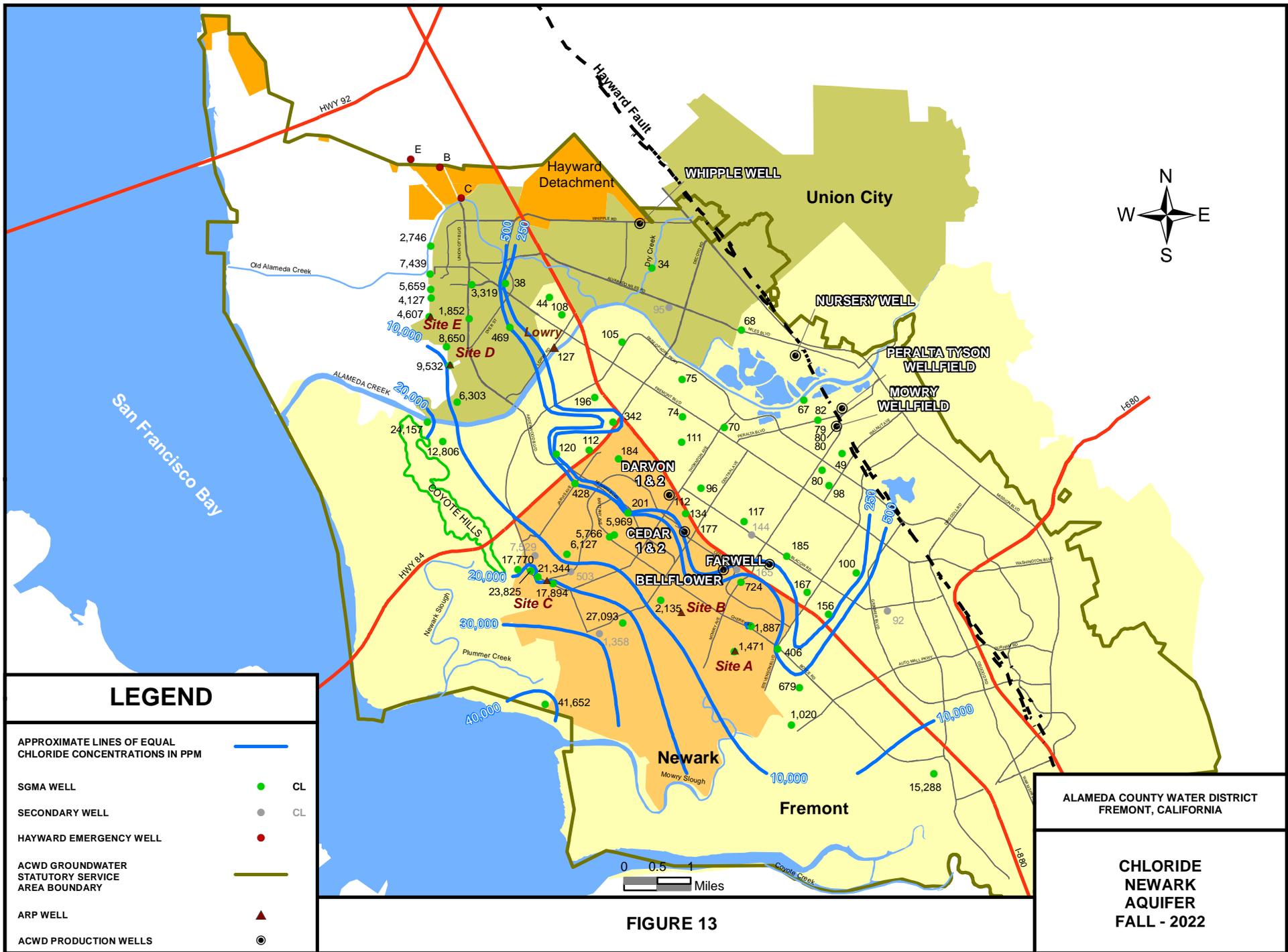
FIGURE 9

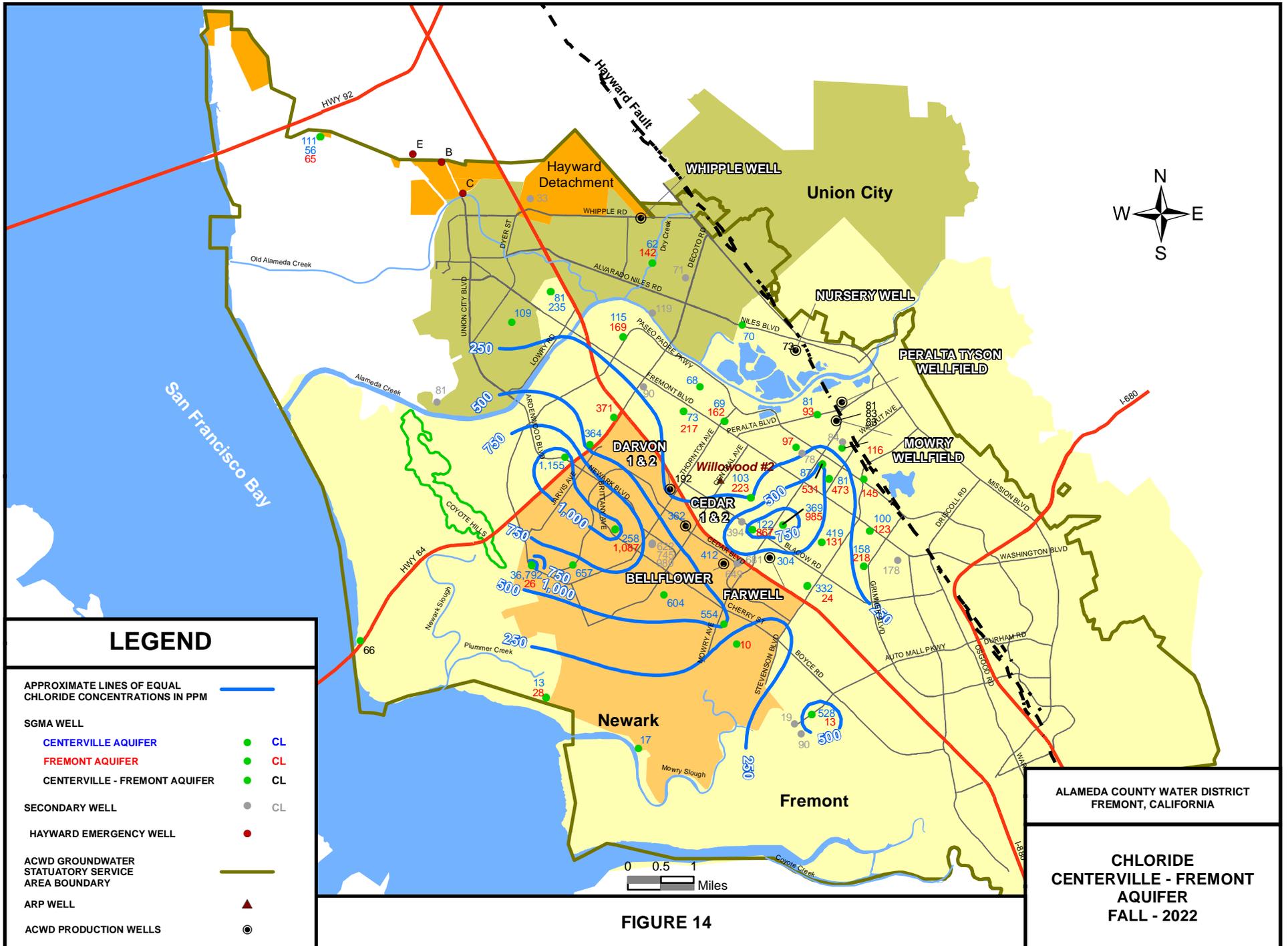
ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

**WATER ELEVATION
NEWARK
AQUIFER
FALL - 2022**









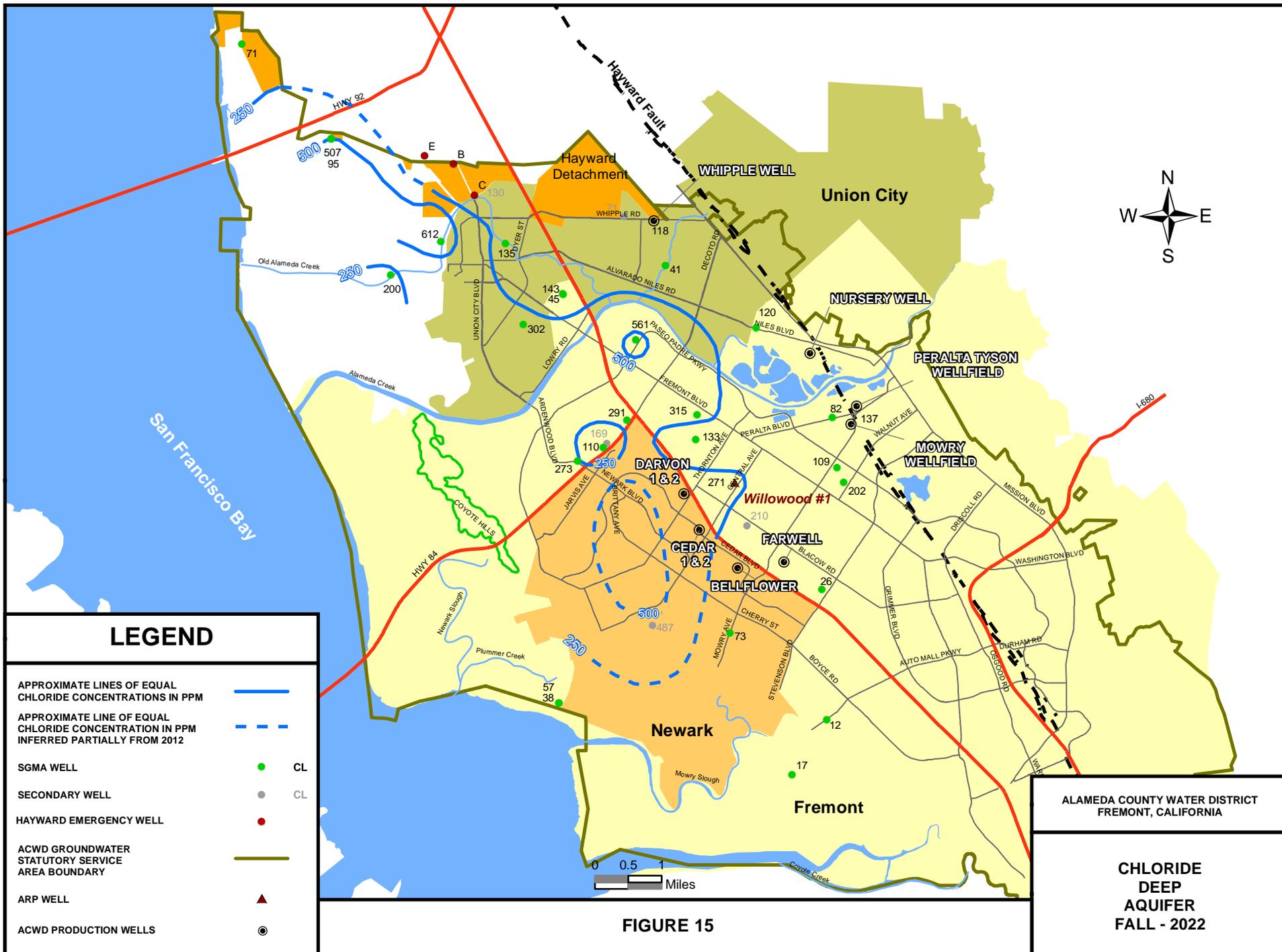
LEGEND

- APPROXIMATE LINES OF EQUAL CHLORIDE CONCENTRATIONS IN PPM ————
- SGMA WELL
 - CENTERVILLE AQUIFER ● CL
 - FREMONT AQUIFER ● CL
 - CENTERVILLE - FREMONT AQUIFER ● CL
- SECONDARY WELL ● CL
- HAYWARD EMERGENCY WELL ●
- ACWD GROUNDWATER STATUTORY SERVICE AREA BOUNDARY ————
- ARP WELL ▲
- ACWD PRODUCTION WELLS ●

FIGURE 14

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

**CHLORIDE
CENTERVILLE - FREMONT
AQUIFER
FALL - 2022**



LEGEND

- APPROXIMATE LINES OF EQUAL CHLORIDE CONCENTRATIONS IN PPM —
- APPROXIMATE LINE OF EQUAL CHLORIDE CONCENTRATION IN PPM INFERRED PARTIALLY FROM 2012 - - -
- SGMA WELL ● CL
- SECONDARY WELL ● CL
- HAYWARD EMERGENCY WELL ●
- ACWD GROUNDWATER STATUTORY SERVICE AREA BOUNDARY —
- ARP WELL ▲
- ACWD PRODUCTION WELLS ◎

0 0.5 1 Miles

FIGURE 15

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

**CHLORIDE DEEP AQUIFER
FALL - 2022**

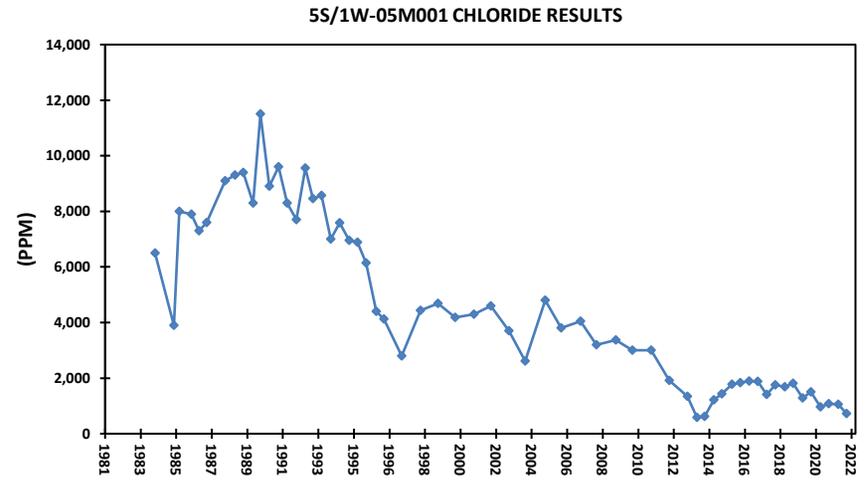
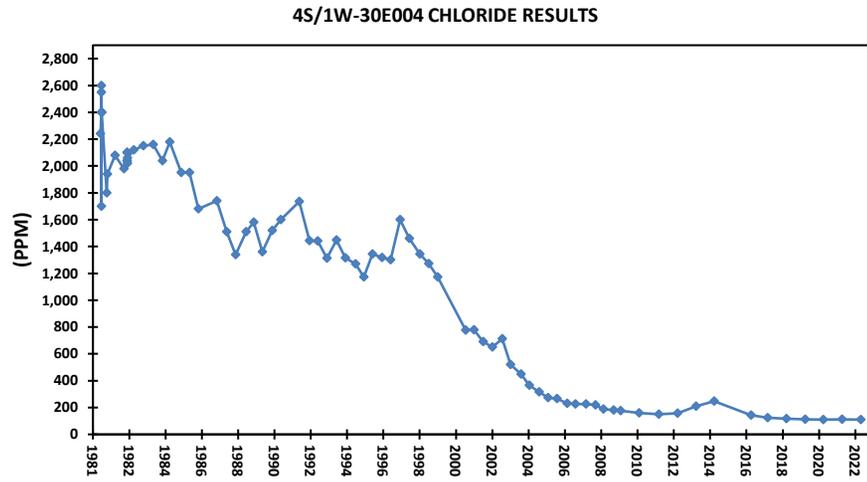
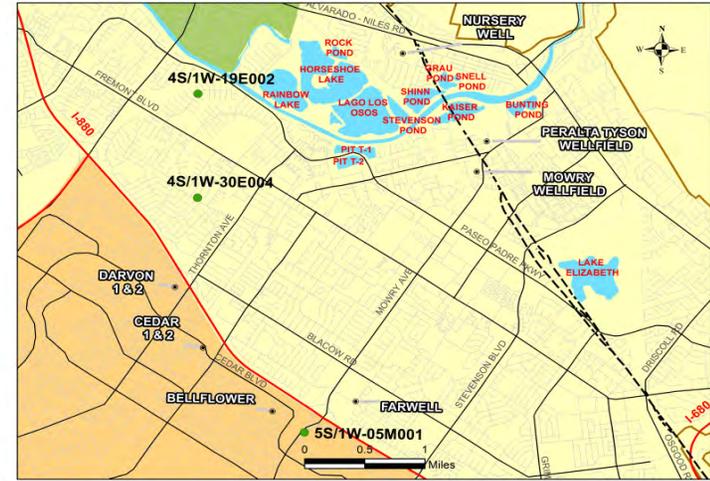
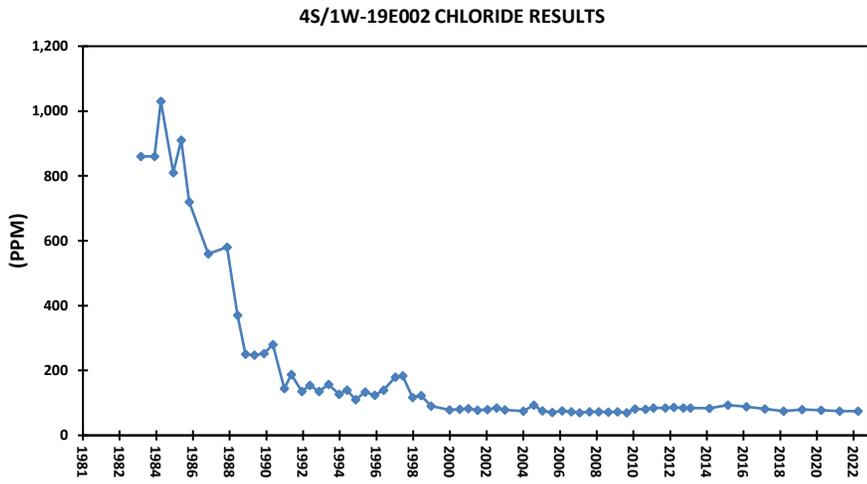
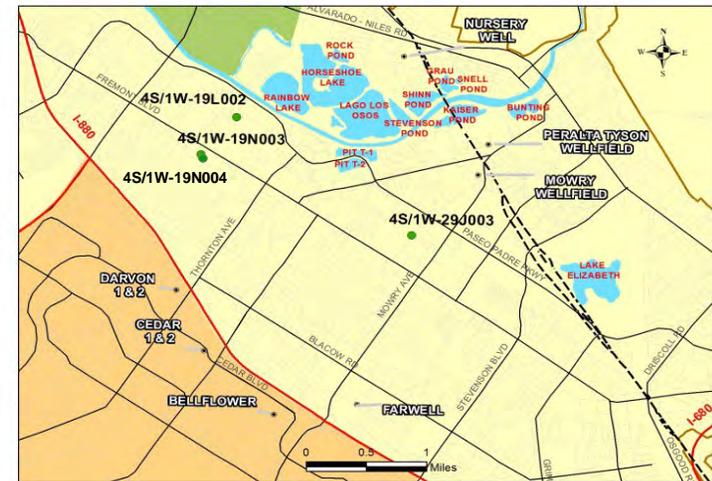
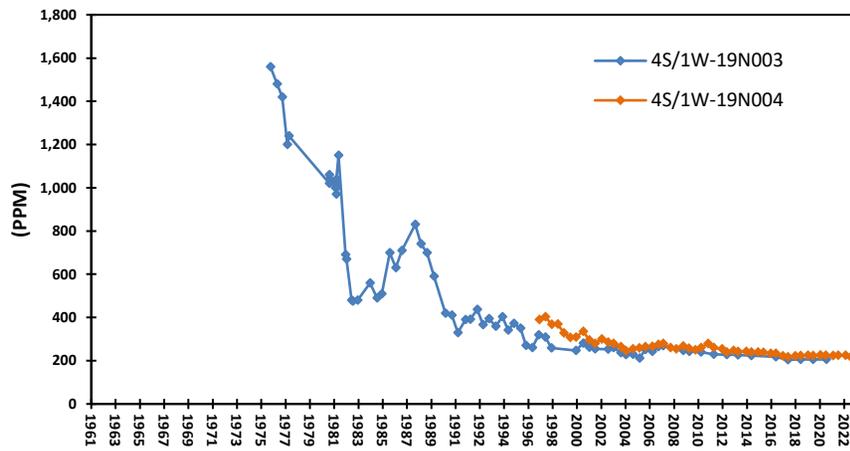
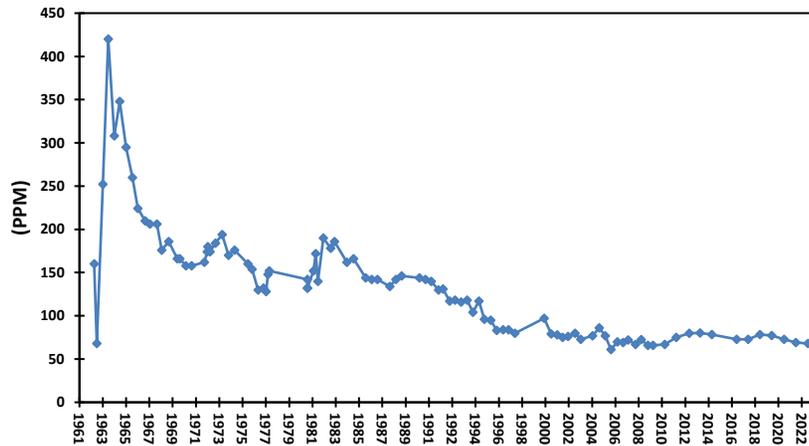


Figure 16
AREA OF IMPROVEMENT NEWARK AQUIFER

4S/1W-19N003 and 4S/1W-19N004 CHLORIDE RESULTS



4S/1W-19L002 CHLORIDE RESULTS



4S/1W-29J003 CHLORIDE RESULTS

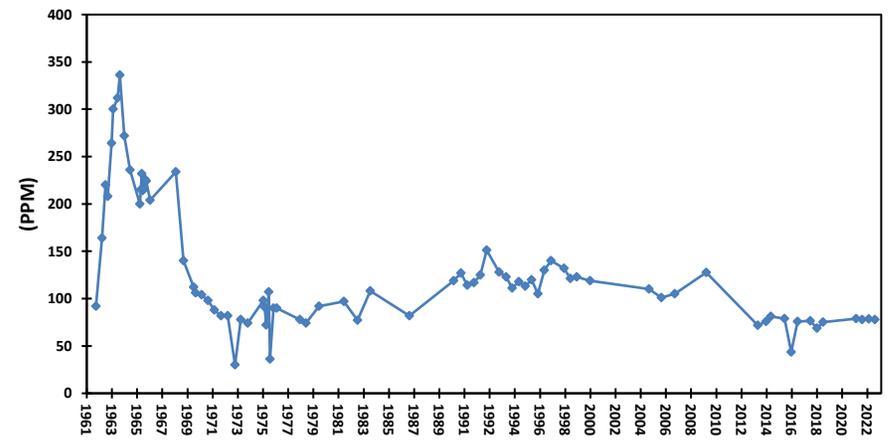


Figure 17
AREA OF IMPROVEMENT CENTERVILLE - FREMONT AQUIFER

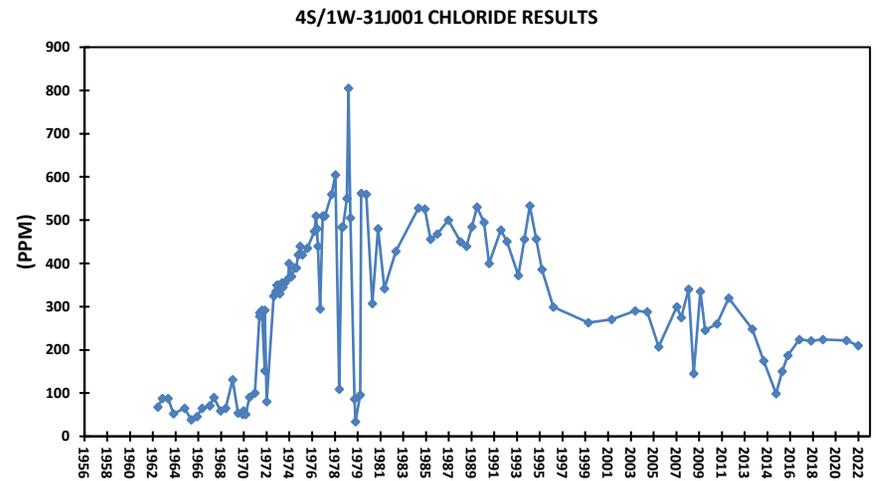
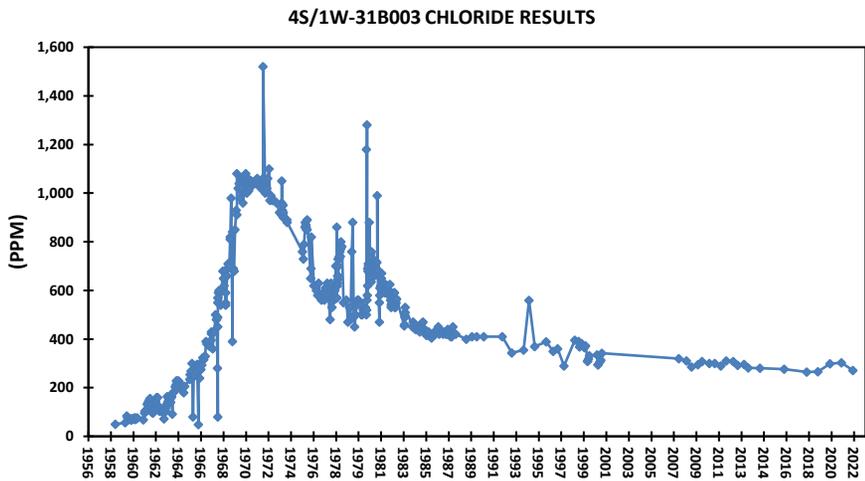
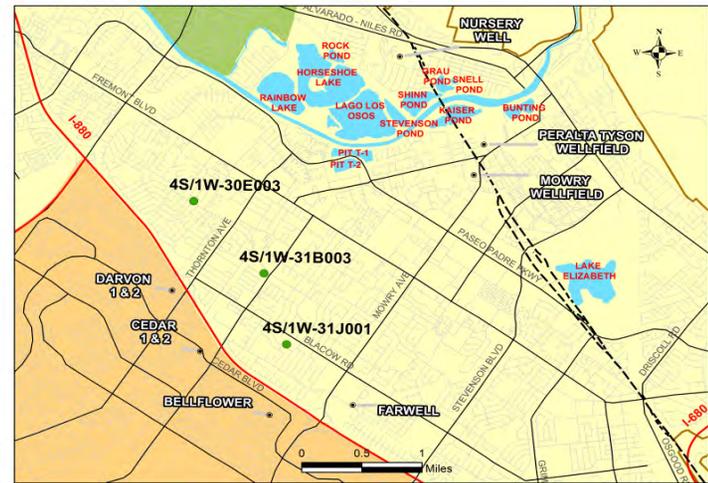
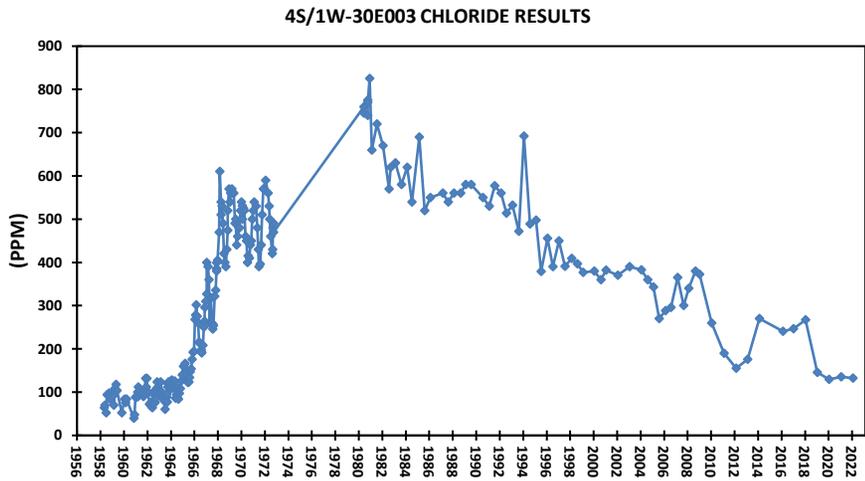
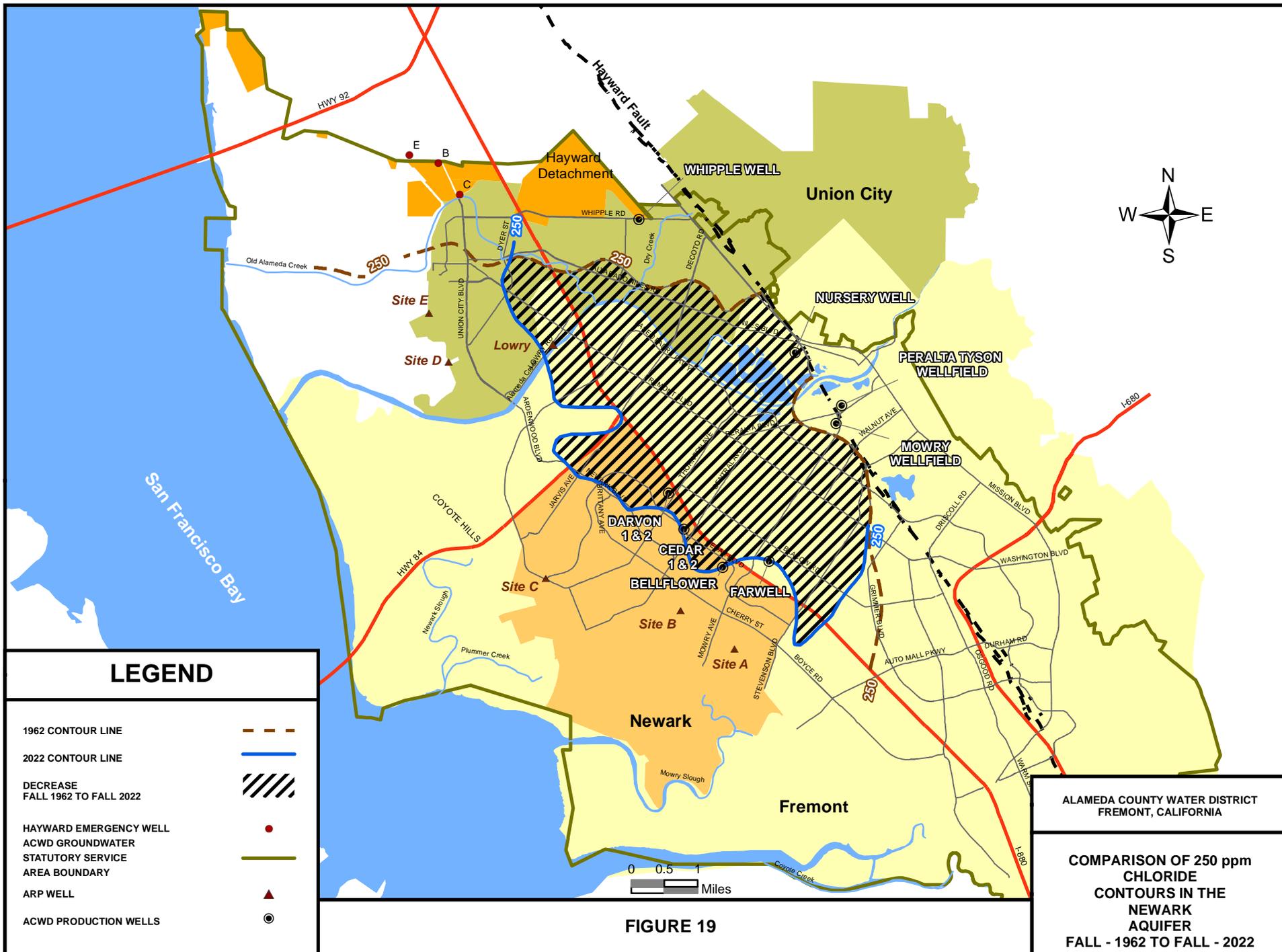


Figure 18
AREA OF IMPROVEMENT DEEP AQUIFER



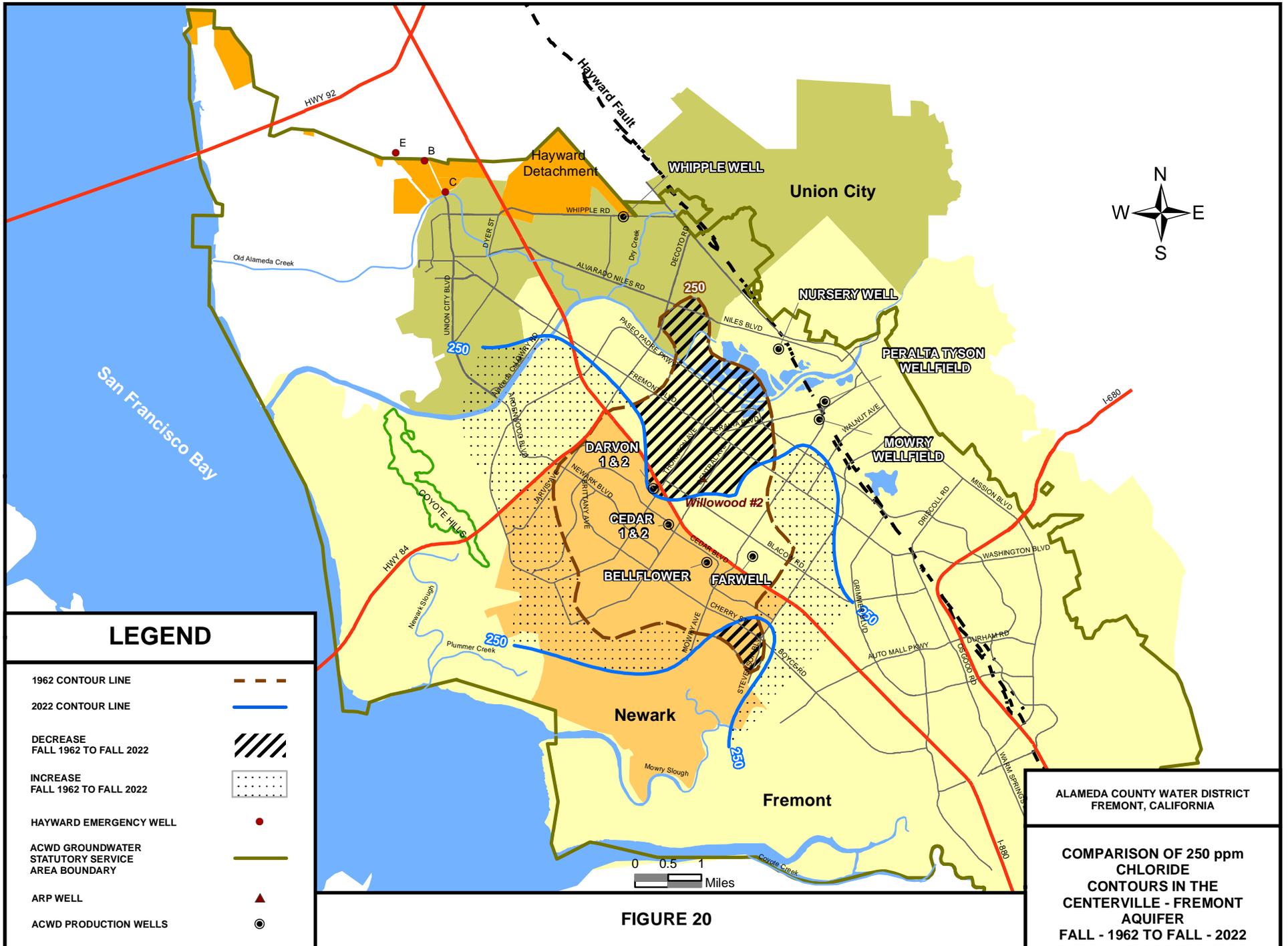
LEGEND

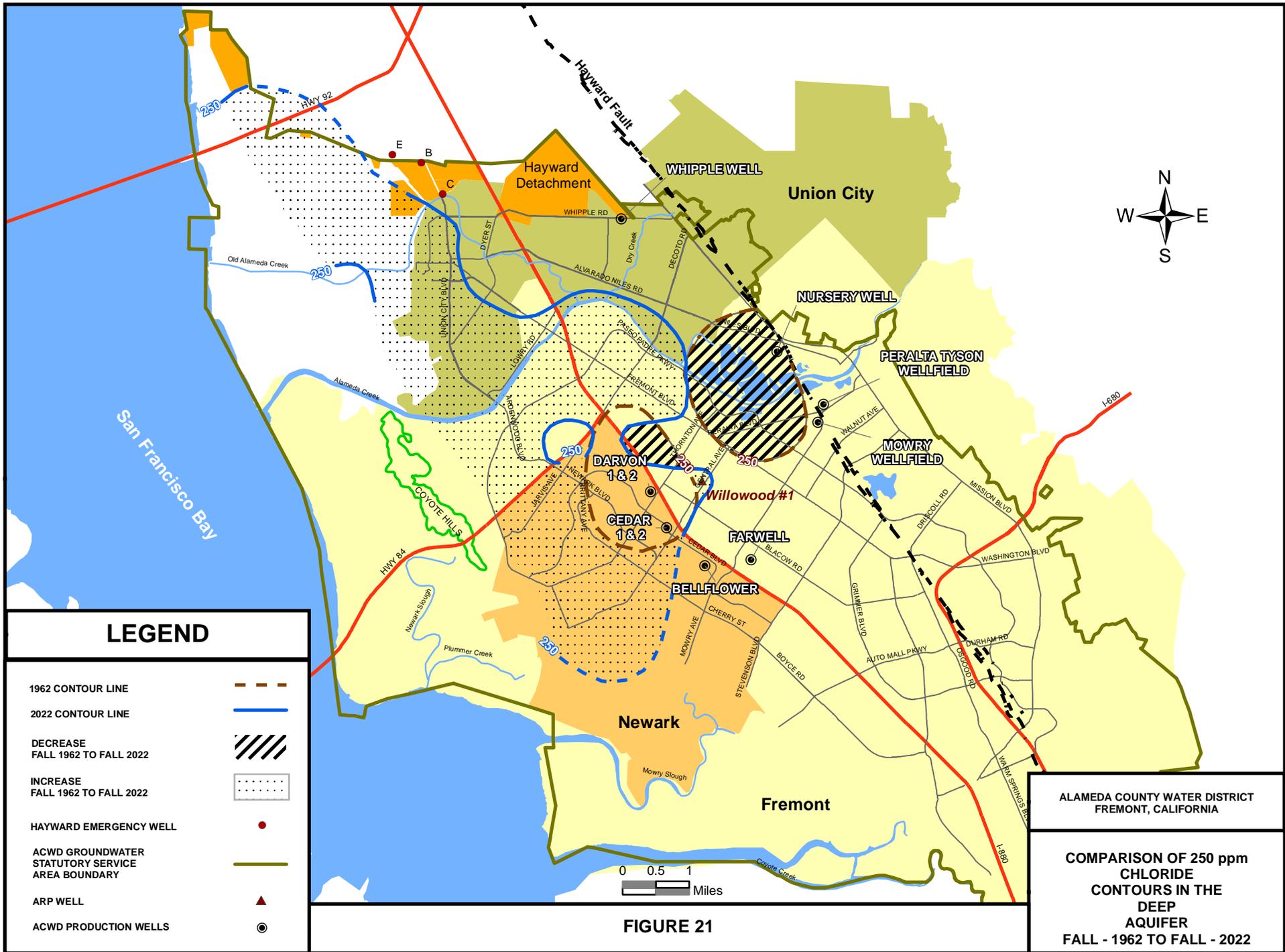
- 1962 CONTOUR LINE
- 2022 CONTOUR LINE
- DECREASE FALL 1962 TO FALL 2022
- HAYWARD EMERGENCY WELL ACWD GROUNDWATER STATUTORY SERVICE AREA BOUNDARY
- ARP WELL
- ACWD PRODUCTION WELLS

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

COMPARISON OF 250 ppm
CHLORIDE
CONTOURS IN THE
NEWARK
AQUIFER
FALL - 1962 TO FALL - 2022

FIGURE 19





LEGEND

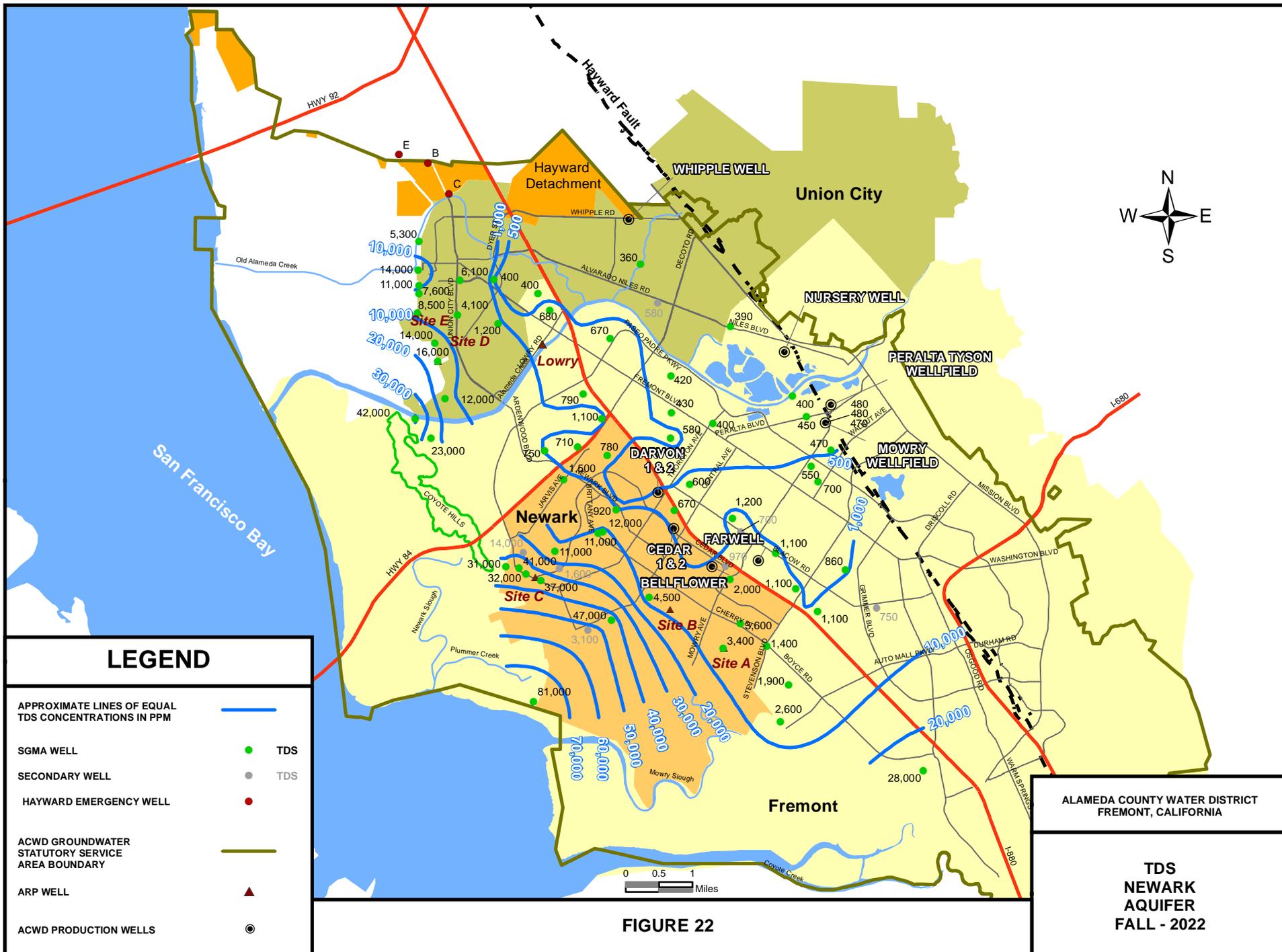
- 1962 CONTOUR LINE ---
- 2022 CONTOUR LINE —
- DECREASE
FALL 1962 TO FALL 2022 ▨
- INCREASE
FALL 1962 TO FALL 2022 ⋯
- HAYWARD EMERGENCY WELL ●
- ACWD GROUNDWATER
STATUTORY SERVICE
AREA BOUNDARY —
- ARP WELL ▲
- ACWD PRODUCTION WELLS ⊙

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

**COMPARISON OF 250 ppm
CHLORIDE
CONTOURS IN THE
DEEP
AQUIFER
FALL - 1962 TO FALL - 2022**

0 0.5 1
Miles

FIGURE 21



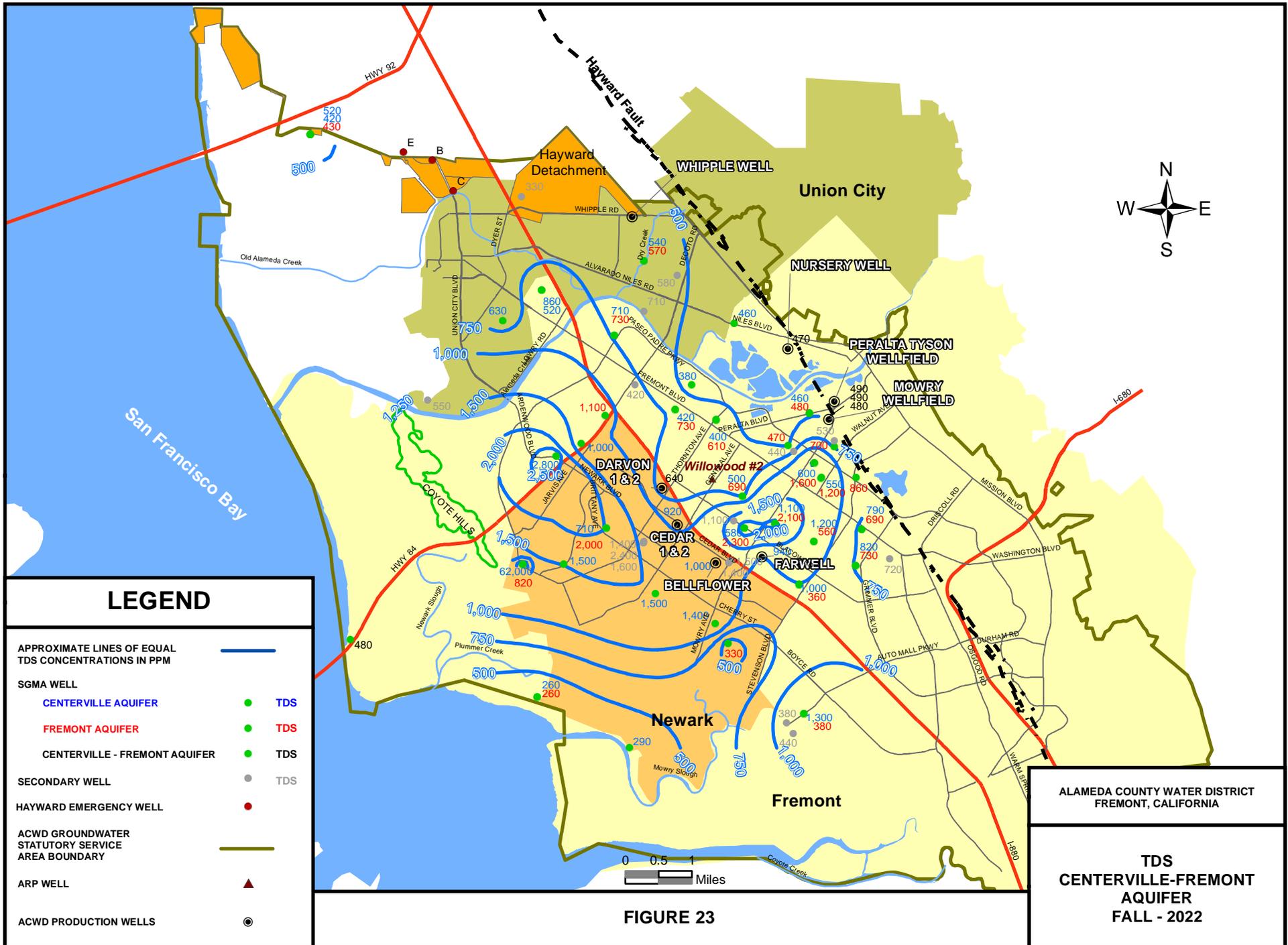
LEGEND

- APPROXIMATE LINES OF EQUAL TDS CONCENTRATIONS IN PPM —
- SGMA WELL ● TDS
- SECONDARY WELL ● TDS
- HAYWARD EMERGENCY WELL ●
- ACWD GROUNDWATER STATUTORY SERVICE AREA BOUNDARY —
- ARP WELL ▲
- ACWD PRODUCTION WELLS ●

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

**TDS
NEWARK
AQUIFER
FALL - 2022**

FIGURE 22



LEGEND

- | | | |
|--|--|-----|
| APPROXIMATE LINES OF EQUAL TDS CONCENTRATIONS IN PPM | | |
| SGMA WELL | | |
| CENTERVILLE AQUIFER | | TDS |
| FREMONT AQUIFER | | TDS |
| CENTERVILLE - FREMONT AQUIFER | | TDS |
| SECONDARY WELL | | TDS |
| HAYWARD EMERGENCY WELL | | |
| ACWD GROUNDWATER STATUTORY SERVICE AREA BOUNDARY | | |
| ARP WELL | | |
| ACWD PRODUCTION WELLS | | |

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

TDS
CENTERVILLE-FREMONT
AQUIFER
FALL - 2022

FIGURE 23

0 0.5 1 Miles

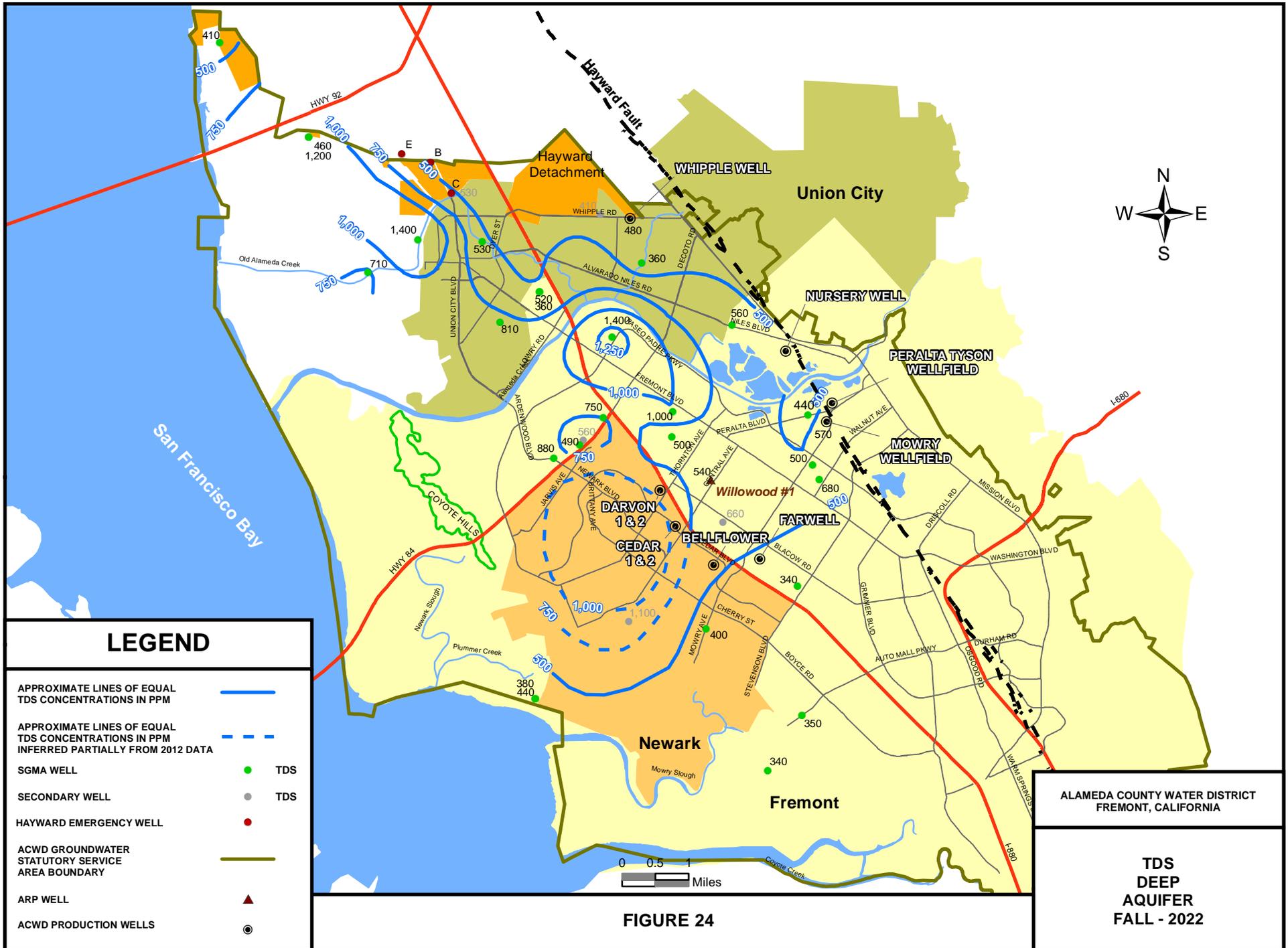


FIGURE 24

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

TDS
DEEP
AQUIFER
FALL - 2022

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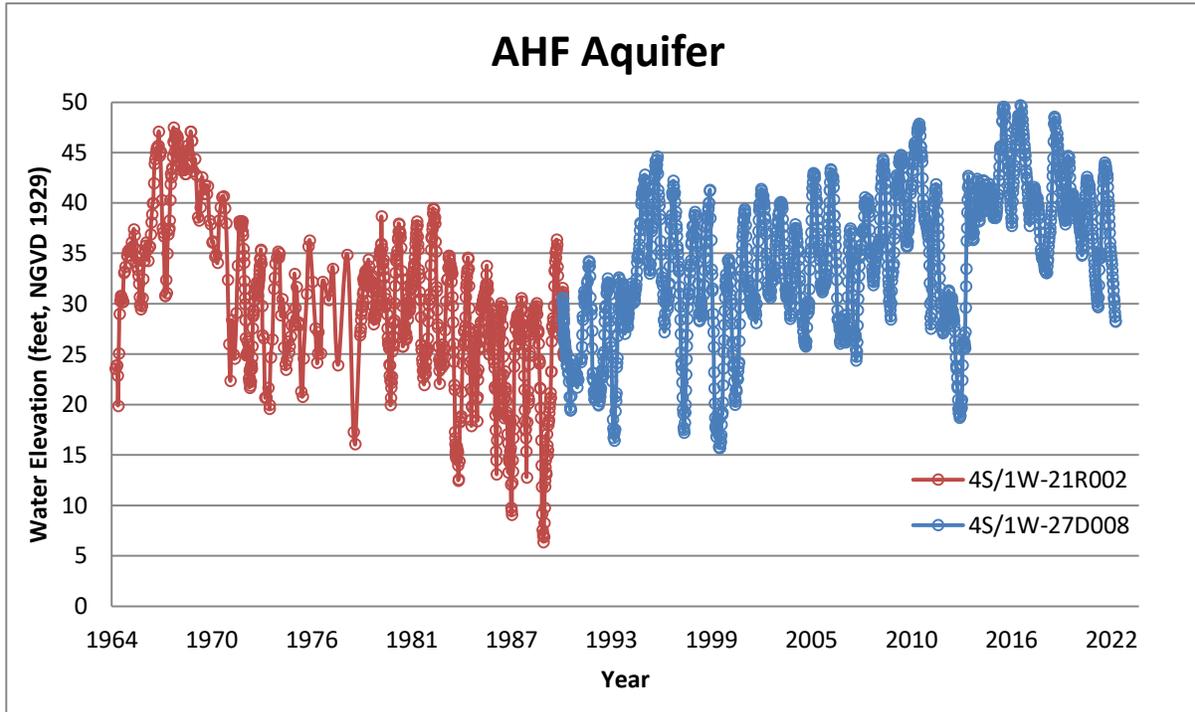
APPENDIX C

OBSERVED HISTORICAL GROUNDWATER ELEVATIONS

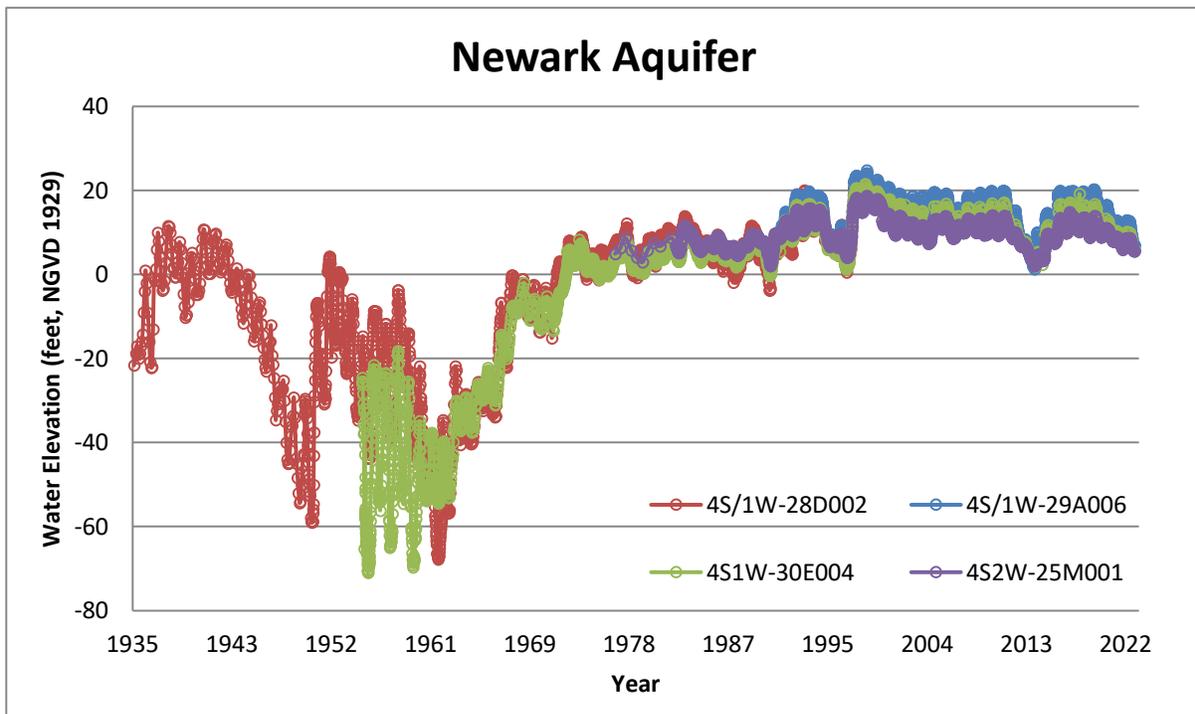
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Observed Historical Groundwater Elevations

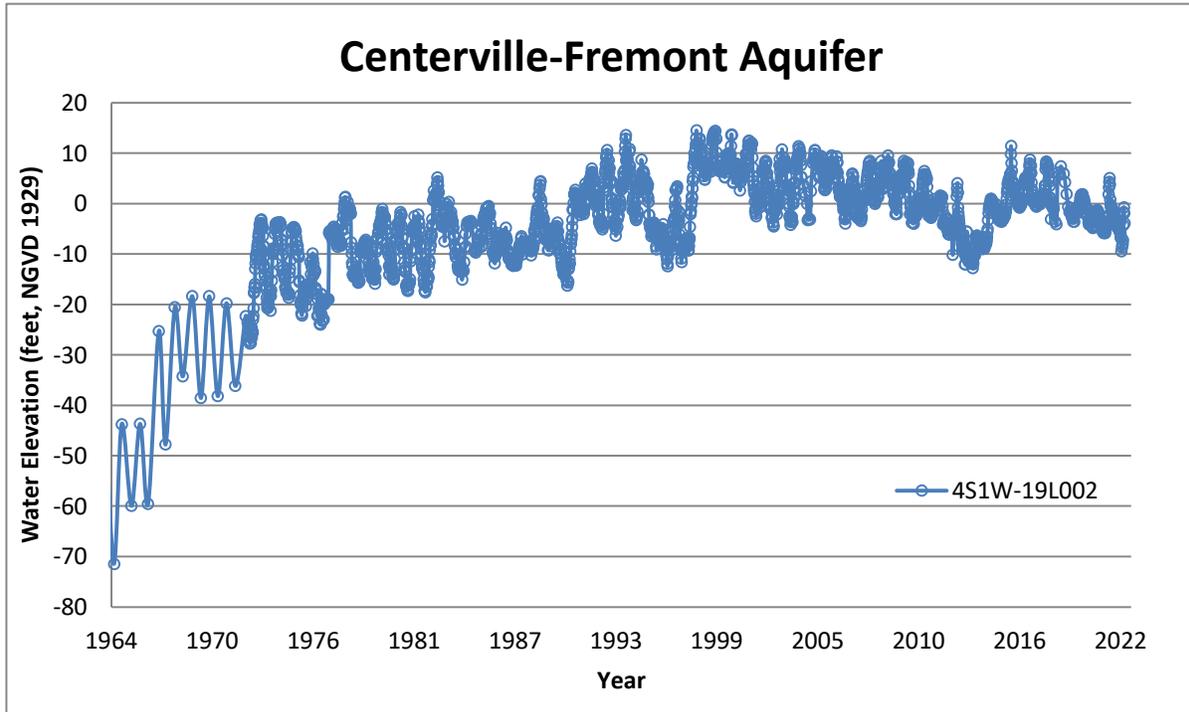
A



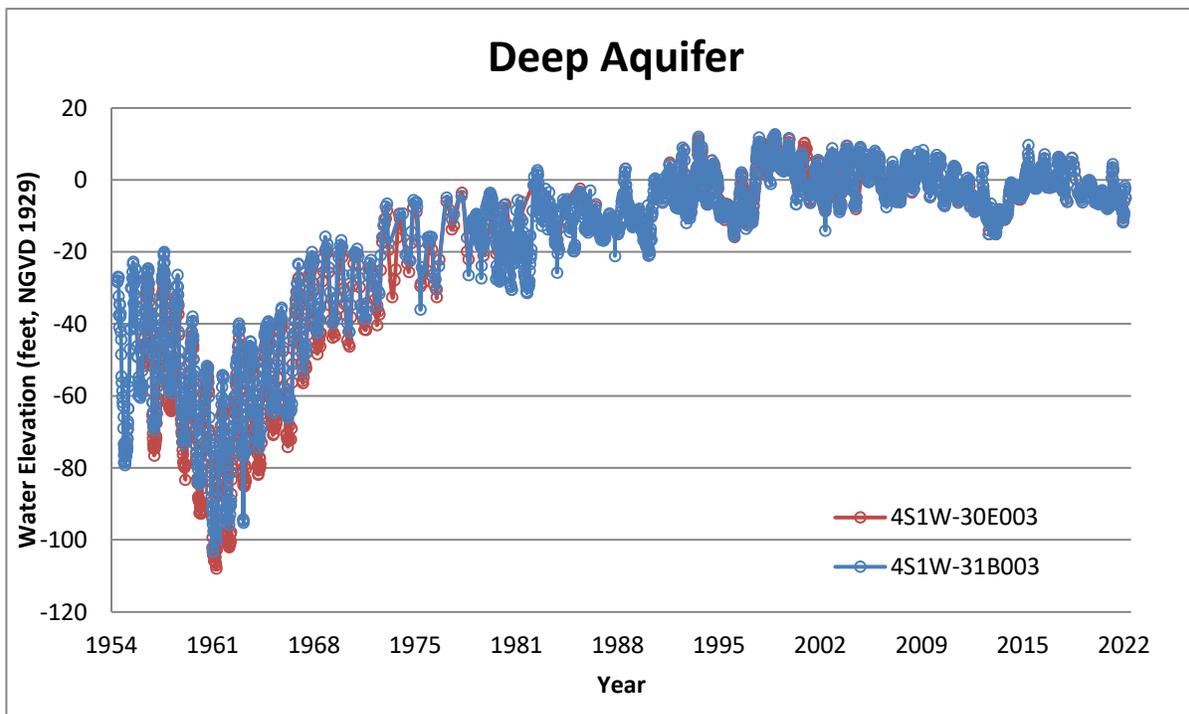
B



C



D



APPENDIX D

SPRING 2022 GROUNDWATER MONITORING RECORDS

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Alameda County Water District
Groundwater Monitoring Program
Spring 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
3S/3W-25C020	WD2	D	Alameda County Water District	3/30/2022	8.84	-2.67	3/30/2022	73	440	PWC
4S/1W-07G001		D	East Bay Community Foundation	3/28/2022	83.56	-3.80				
4S/1W-07K001		D	Masonic Homes of California	3/28/2022	67.40	1.20				PI
4S/1W-07N005		CF	City of Union City	3/28/2022	55.29	-0.10				Call CoUC for sample
4S/1W-17M006	Well L	D	Alameda County Water District	3/29/2022	49.90	-2.42				M PWC needs ID paint
4S/1W-17M007	Well M	C	Alameda County Water District	3/29/2022	50.00	-0.37				M PWC needs ID paint
4S/1W-17M008	Well N	N	Alameda County Water District	3/29/2022	49.62	12.06				PWC
4S/1W-18K005		F	City of Union City		48.60		3/29/2022	67	420	NMP Sample from sprinkler - call CoUC
4S/1W-18M010		C	Frank J & Catherine M Thrall	3/29/2022	39.92	-1.07				UTS Call to open gate
4S/1W-18N004		C	Eleanor Kabrich		41.60					NMP UTM UTS NSP
4S/1W-19A003		F	Alameda County Flood Control	3/28/2022	54.37	-2.00				
4S/1W-19E002	PIEZ#4	N	Alameda County Water District	3/29/2022	37.95	11.58				PWC
4S/1W-19J006		N	Alameda County Flood Control	3/28/2022	51.28	12.42				PWC
4S/1W-19L002	HUDSON/NICOLET	C	Alameda County Water District	3/29/2022	40.39	-1.82				OBS@160' PWC
4S/1W-19N002	Well H	D	Alameda County Water District	3/29/2022	40.45	-2.81	3/24/2022	320	900	PWC
4S/1W-19N003	WESTRIDGE PARK	C	CITY OF FREMONT	3/29/2022	39.81	-2.87				PWC Well not secure
4S/1W-19N004	Well I	F	Alameda County Water District	3/29/2022	40.68	-3.06	3/24/2022	225	730	PWC
4S/1W-19N005	Well J	C	Alameda County Water District	3/29/2022	40.55	-2.66	3/24/2022	75	440	PWC
4S/1W-19N014	Well K	N	Alameda County Water District	3/29/2022	40.50	11.18	3/24/2022	76	430	PWC
4S/1W-20A003	Nursery Well	CF	Alameda County Water District	3/28/2022	63.42	2.08				OFF
4S/1W-20G001	Montecito Well	CFD	Alameda County Water District	3/28/2022	60.72	3.97				UTS
4S/1W-20H003	DH-4	N	Alameda County Water District	3/28/2022	67.52	19.58				PWC
4S/1W-20J004	UP-1A	N	Alameda County Water District	3/28/2022	58.90	21.52				PWC
4S/1W-20J005	UP-1C	N	Alameda County Water District	3/28/2022	59.14	13.67				PWC small lid, leftmost facing creek
4S/1W-20J006	UP-1B	N	Alameda County Water District	3/28/2022	59.07	20.61				PWC smaller lid
4S/1W-20R003	UP-2A	N	Alameda County Water District	3/28/2022	59.11	15.70				PWC
4S/1W-20R004	UP-2B	N	Alameda County Water District	3/28/2022	59.20	14.00				PWC
4S/1W-20R005	UP-2C	N	Alameda County Water District	3/28/2022	59.06	12.91				PWC Leftmost Well
4S/1W-21F005	KAISER #5	AHF	Alameda County Water District	3/28/2022	69.70	45.55				
4S/1W-21H002	Vallejo St. @ End	AHF	Alameda County Water District	3/29/2022	75.08	50.07				PWC
4S/1W-21J003	EB-1	AHF	Alameda County Water District	3/28/2022	77.30	45.61				PWC
4S/1W-21L003		AHF	Alameda County Water District	3/28/2022	66.57	42.85				
4S/1W-21L005	DH-6	AHF	Alameda County Water District	3/28/2022	67.46	43.35				PWC
4S/1W-21L006	DH-5	AHF	Alameda County Water District	3/28/2022	67.81	43.78				
4S/1W-21L007	KAISER #1	AHF	Alameda County Water District	3/28/2022	70.62	44.44				
4S/1W-21L008	KAISER #4	AHF	Alameda County Water District	3/28/2022	66.94	42.62				PWC
4S/1W-21P004		AHF	CITY OF FREMONT	3/28/2022	65.29	41.04				
4S/1W-21P006	P.T. #1	AHF	Alameda County Water District		66.37		3/7/2022	74	520	RUN
4S/1W-21P007	P.T. #2	AHF	Alameda County Water District		66.77		3/9/2022	72	470	RUN
4S/1W-21P008	P.T. #3	AHF	Alameda County Water District	3/28/2022	66.54	37.86	4/5/2022	73	440	
4S/1W-21P009	P.T. #4	AHF	Alameda County Water District	3/31/2022	66.44	37.77	3/9/2022	71	450	
4S/1W-21P010	P.T. #5	AHF	Alameda County Water District	3/28/2022	67.28	38.78	3/16/2022	72	440	
4S/1W-21P011	P.T. #6	AHF	Alameda County Water District	3/28/2022	67.69	38.60	3/14/2022	74	440	
4S/1W-21P012	P.T. #7	AHF	Alameda County Water District	3/28/2022	68.36	40.84	4/4/2022	75	450	
4S/1W-21P013	P. T. #8	AHF	Alameda County Water District	3/30/2022	68.86	39.14	3/28/2022	78	450	
4S/1W-21R007	MW-12(offsite)	AHF	Alameda County Water District	3/28/2022	72.21	44.12				PWC
4S/1W-26L006		AHF	CITY OF FREMONT	3/28/2022	67.79	45.28	3/28/2022	92	590	Sample from sprinkler
4S/1W-26Q011		AHF	ERNIE SILVA		96.44					DA UTM, no reply to voicemail
4S/1W-27A002		AHF	Fremont Community Church	3/28/2022	71.09	44.09	3/28/2022	126	870	
4S/1W-27D008	AHF Indicator	AHF	Alameda County Water District	3/29/2022	66.59	43.52				PWC

Alameda County Water District
Groundwater Monitoring Program
Spring 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
4S/1W-27E001		AHF	CHURCH OF JESUS CHRIST	3/28/2022	62.86	43.19				PI UTS
4S/1W-27G002		AHF	CITY OF FREMONT				3/28/2022	77	750	Sample from well head
4S/1W-27P001		AHF	CITY OF FREMONT	3/28/2022	54.04	43.36				PI UTS Sample from sprinkler
4S/1W-27P002		AHF	CITY OF FREMONT	3/30/2022	52.65	43.17				PI UTS
4S/1W-28C001	Mowry #1	N	Alameda County Water District	3/29/2022	64.81	9.25	3/15/2022	81	490	
4S/1W-28C014	Mowry #2	D	Alameda County Water District	3/29/2022	63.64	-4.87	3/21/2022	141	560	
4S/1W-28C015	Mowry #3	CF	Alameda County Water District	3/29/2022	63.87	-4.04				
4S/1W-28C016	Mowry #4	N	Alameda County Water District	3/29/2022	66.08	9.30	3/7/2022	82	470	
4S/1W-28C018	Mowry #6	CF	Alameda County Water District	3/29/2022	64.80	-4.31				
4S/1W-28C019	Mowry #7	N	Alameda County Water District	3/29/2022	63.82	9.55	3/23/2022	80	500	
4S/1W-28C020	Mowry #8	N	Alameda County Water District	3/29/2022	64.13	9.27				
4S/1W-28C021	Mowry #9	CF	Alameda County Water District	3/29/2022	65.02	-4.45	3/8/2022	85	470	
4S/1W-28D001	Well A	D	Alameda County Water District	3/29/2022	63.03	-3.39				PWC
4S/1W-28D008	Well B	F	Alameda County Water District	3/29/2022	62.77	-3.49				PWC
4S/1W-28D011	Well C	C	Alameda County Water District	3/29/2022	62.90	-2.79				PWC
4S/1W-28D012	Well D	N	Alameda County Water District	3/29/2022	62.86	10.85				PWC
4S/1W-28F018	BART Way - N	N	Alameda County Water District	3/29/2022	58.71	10.10	3/23/2022	47	470	PWC
4S/1W-28F024	BART WAY-F	F	Alameda County Water District	3/29/2022	59.15	-3.12	3/23/2022	118	730	PWC
4S/1W-28G005		C	Washington Township Healthcare Dist	3/29/2022	57.79	-2.57	3/29/2022	85	510	
4S/1W-28M002	HASTINGS - N	N	Alameda County Water District	3/29/2022	53.81	10.15	3/22/2022	81	550	PWC
4S/1W-28M005	HASTINGS - D	D	Alameda County Water District	3/29/2022	54.12	-3.24	3/22/2022	121	520	PWC
4S/1W-28M006		C	Mercedes Williams	3/29/2022	57.09	-3.36				PI UTS
4S/1W-28M009	HASTINGS - F	F	Alameda County Water District	3/29/2022	54.21	-3.50	3/22/2022	547	1,400	PWC
4S/1W-28M010	HASTINGS - C	C	Alameda County Water District	3/29/2022	54.20	-3.19	3/22/2022	90	580	PWC
4S/1W-28P004	BEACON	C	Alameda County Water District	3/29/2022	53.56	-3.11	4/1/2022	82	550	M PWC needs ID paint
4S/1W-28P006	Well E	D	Alameda County Water District	3/29/2022	53.66	-4.32	4/1/2022	207	680	M PWC needs ID paint
4S/1W-28P007	Well F	F	Alameda County Water District	3/29/2022	53.50	-3.92	4/1/2022	494	1,200	M PWC needs ID paint
4S/1W-28P008	Well G	N	Alameda County Water District	3/29/2022	53.53	9.98	4/1/2022	96	680	M PWC needs ID paint
4S/1W-28R003	Fmt. Library F	F	Alameda County Water District	3/29/2022	59.70	-3.77	3/22/2022	148	890	PWC
4S/1W-29A006	BHF Indicator	N	Alameda County Water District	3/29/2022	61.23	12.77				PWC
4S/1W-29F002		N	Robert D & Virginia W. Grate	3/29/2022	51.93	11.23				PWC
4S/1W-29H002	Centerville Par	F	Alameda County Water District	3/29/2022	52.44	-3.97	3/22/2022	99	480	PWC
4S/1W-29J003		C	CITY OF FREMONT		55.28		3/28/2022	79	450	UTM Sample from sprinkler. Well paved over
4S/1W-29J008		N	Eugene Dias	4/6/2022	58.48	10.16				PI UTS
4S/1W-29L012	Fremont Mattos	D	Alameda County Water District	3/29/2022	50.62	-4.99				PWC Need 2" pipe
4S/1W-30A002	Well O	FD	Alameda County Water District	3/29/2022	51.81	-3.47				PWC
4S/1W-30A004	Well Q	C	Alameda County Water District	3/29/2022	52.01	-2.50				PWC
4S/1W-30A005	Well R	N	Alameda County Water District	3/29/2022	52.20	11.07				PWC
4S/1W-30E003	CORONADO 2	D	Alameda County Water District	3/29/2022	42.12	-3.49				PWC transducer
4S/1W-30E004	CORONADO 1	N	Alameda County Water District	3/29/2022	42.17	9.97				PWC
4S/1W-30J002	Central Apts.	N	Jeffery H. Lee	3/29/2022	46.74	10.55				PWC
4S/1W-30L006		D	Joseph G. Dutra		42.23					DA UTM UTS , can't obtain permission
4S/1W-30L008		N	Joseph G. Dutra		41.90					DA UTM UTS , can't obtain permission
4S/1W-30R002		C	Frank G. & Alice C. Garcia	3/30/2022	46.14	-5.73				PI leave card w/water levels for owner
4S/1W-30R004		N	Frank G. & Alice C. Garcia	3/30/2022	45.19	10.18				leave card w/water level for owner
4S/1W-31B003	Willowood #1	D	Alameda County Water District	3/29/2022	43.54	-3.46				PWC
4S/1W-31B011	Willowood # 2	CF	Alameda County Water District	3/29/2022	44.47	-5.84				Measured from sole plate
4S/1W-31C003	Towers @ Hansen	N	Alameda County Water District	3/30/2022	36.56	9.82	3/22/2022	93	600	PWC
4S/1W-31J001		D	GLENMOOR GARDENS HOMEOWNERS ASSOCIATION	3/28/2022	38.94	-4.81				
4S/1W-31L008	off Blacow@Line F-	N	Alameda County Water District	3/30/2022	36.76	9.24				PWC

Alameda County Water District
Groundwater Monitoring Program
Spring 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
4S/1W-31L011		N	Alameda County Water District	3/30/2022	34.47	8.81				PWC
4S/1W-31N001	Cedar #1	C	Alameda County Water District		35.37		3/9/2022	377	950	RUN
4S/1W-31N003	Cedar #2	N	Alameda County Water District		35.20		3/9/2022	176	810	RUN
4S/1W-32E011	Meyer Park - C	C	Alameda County Water District	3/30/2022	43.68	-6.79				PWC
4S/1W-32E012	Meyer Park - F	F	Alameda County Water District	3/30/2022	43.89	-4.44				PWC
4S/1W-32K011	Serra Place-F	F	Alameda County Water District	3/30/2022	43.39	-4.61				PWC
4S/1W-32K014	Serra-C	C	Alameda County Water District	3/30/2022	43.28	-7.13				M PWC Needs ID paint.
4S/1W-32M010	Eggers near Patti's	N	Alameda County Water District	3/30/2022	38.67	12.35				PWC Well head is crooked
4S/1W-32N001	Blacow - C	C	Alameda County Water District	3/30/2022	37.65	-8.59	3/31/2022	131	580	PWC
4S/1W-32N002	Blacow - F	F	Alameda County Water District	3/30/2022	37.59	-4.89	3/31/2022	889	1,900	PWC
4S/1W-32N003		N	Alameda County Water District	3/30/2022	37.11	37.11	3/31/2022	139	680	PWC
4S/1W-32N004		F	Alameda County Water District	3/30/2022	38.046	38.05	3/31/2022	415	1,000	PWC
4S/1W-32N005		F	Alameda County Water District	3/30/2022	37.169	37.17				
4S/1W-33E001	Walnut Ave.Well	CF	City of Fremont	3/30/2022	49.62	-4.87				
4S/1W-33N002	Knoll Park	C	Alameda County Water District	3/30/2022	43.75	-5.23	3/22/2022	456	1,300	PWC
4S/1W-33N003	Knoll Park - F	F	Alameda County Water District	3/30/2022	43.64	-4.24	3/22/2022	134	570	PWC
4S/1W-33R007	Margery/BI - C	C	Alameda County Water District	3/30/2022	53.25	-4.26				PWC
4S/1W-33R008	Margery/BI - F	F	Alameda County Water District	3/30/2022	53.18	-4.05				PWC
4S/1W-34A002		AHF	Elsie Nines	3/30/2022	60.00	51.71				
4S/1W-34C001	Swim Lagoon	AHF	CITY OF FREMONT		61.30		3/28/2022	137	930	NMP UTM
4S/1W-35R003		AHF	Mary A Souza	3/30/2022	190.16	176.37				
4S/2W-02H001	BART @ Whipple	D	Bay Area Rapid Transit District	3/31/2022	36.21	-2.14				Durham WLI needed, Flashlight
4S/2W-03R003		CF	F E DUBOIS	3/31/2022	12.00	-3.01				
4S/2W-04E002	E-3	N	Alameda County Water District	3/29/2022	4.72	1.69				M NA PWC New lock on gate/Locked out ACWD lock
4S/2W-05G001	Eden Landing F1	F	Alameda County Water District	3/29/2022	6.75	-1.80				PWC
4S/2W-05G002	Eden Landing D1	D	Alameda County Water District	3/29/2022	6.35	-2.87				PWC
4S/2W-05G003	Eden Landing D2	D	Alameda County Water District	3/29/2022	5.82	-5.53				PWC
4S/2W-05G004	Eden Landing C2	C	Alameda County Water District	3/29/2022	6.73	2.41				PWC
4S/2W-05G005	Eden Landing	C	Alameda County Water District	3/29/2022	6.93	A				PWC
4S/2W-08R001	2D2	D	Alameda County Water District	3/29/2022	9.25	-1.35				M PWC Need to raise 4x4' pad or cut PVC well casing
4S/2W-09F014	Veasy Bridgegat	D	Alameda County Water District	3/29/2022	8.25	-3.56				PWC transducer
4S/2W-09L002	E-12	N	Alameda County Water District	3/28/2022	9.11	3.17				PWC
4S/2W-09P010	E-17	N	Alameda County Water District	3/28/2022	11.31	2.78	3/31/2022	7,432	14,000	PWC
4S/2W-10E004	Tidewater	D	Alameda County Water District	3/30/2022	14.54	-2.68	3/30/2022	137	530	PWC transducer
4S/2W-11A003		D	U.S. PIPE HOLDINGS CORPORATION	3/31/2022	40.58	-3.53				RUN
4S/2W-12C001	Whipple Well	D	Alameda County Water District	3/31/2022	68.61	-2.41				
4S/2W-12K008	Pacific & Lewis - D	D	Alameda County Water District	3/29/2022	53.11	-2.31				PWC Transducer
4S/2W-12K009	Pacific & Lewis - F	F	Alameda County Water District	3/29/2022	53.41	-1.97				PWC transducer
4S/2W-12K010	Pacific & Lewis - C	C	Alameda County Water District	3/29/2022	53.39	-1.05				PWC transducer
4S/2W-12K011	Pacific & Lewis - N	N	Alameda County Water District	3/29/2022	53.67	12.05				PWC transducer
4S/2W-13E003		N	ALAMEDA COUNTY FLOOD CONTROL	3/30/2022	27.93	11.05				PWC
4S/2W-13H004		N	CITY OF UNION CITY	3/29/2022	37.55	11.28	3/28/2022	96	590	UTS measuring pt is under gray plastic cap
4S/2W-13K004		C	RAYMOND N. NELSEN	3/28/2022	35.04	-2.41				Need Wrench
4S/2W-13M005		C	ROSIE & JOEY OROCCHI	3/30/2022	26.46	-1.39				
4S/2W-13M006		C	ROSEMARY & ROBERT MAZZA	3/30/2022	27.42	-2.50				Tape
4S/2W-13P004	PIEZ#3	N	Alameda County Water District	3/30/2022	25.90	10.98	3/30/2022	106	670	PWC Transducer
4S/2W-13P005	WELL G-1	D	Alameda County Water District	3/30/2022	25.98	-2.95	3/30/2022	578	1,300	PWC
4S/2W-13P006	WELL H-1	F	Alameda County Water District	3/30/2022	26.15	-2.90	3/30/2022	172	720	PWC
4S/2W-13P007	WELL I-1	C	Alameda County Water District	3/30/2022	26.00	-2.68	3/30/2022	118	680	PWC
4S/2W-13R007	Morello/Cherry Bloss	CF	Alameda County Water District	3/28/2022	37.62	-1.89				

Alameda County Water District
Groundwater Monitoring Program
Spring 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
4S/2W-14C001		CF	HARVEY, T.	3/28/2022	23.27	-2.18				
4S/2W-14D003	Lake Chad	D	Alameda County Water District	3/29/2022	13.95	-2.36	3/23/2022	45	380	PWC Transducer
4S/2W-14D004	LAKE CHAD - D	D	Alameda County Water District	3/29/2022	13.90	-2.45	3/23/2022	145	540	PWC Transducer
4S/2W-14D005	LAKE CHAD - C	C	Alameda County Water District	3/29/2022	14.10	-1.95	3/23/2022	237	700	PWC
4S/2W-14D006	LAKE CHAD - C	C	Alameda County Water District	3/29/2022	14.18	-1.95	3/23/2022	82	510	PWC
4S/2W-14D007	LAKE CHAD - N	N	Alameda County Water District	3/29/2022	14.07	8.55	3/23/2022	39	390	PWC
4S/2W-14H003		N	ACFC & WCD		25.22					DA NMP UTM
4S/2W-14L006	PIEZ#2	N	Alameda County Water District	3/28/2022	14.97	9.05				PWC
4S/2W-14N001	Lowry	N	Alameda County Water District	3/28/2022	20.73	9.20				
4S/2W-15C007	PIEZ#1	N	Alameda County Water District	3/28/2022	9.31	6.25	3/23/2022	64	490	PWC
4S/2W-15L005	Contempo Pk	D	Alameda County Water District	3/30/2022	7.63	-2.67	3/30/2022	306	820	PWC Transducer
4S/2W-15L006	Contempo - C	C	Alameda County Water District	3/30/2022	7.59	-2.28	3/30/2022	112	620	PWC
4S/2W-15L007	Contempo - N	N	Alameda County Water District	3/30/2022	7.66	A	3/30/2022	417	1,100	PWC
4S/2W-15M003		C	CITY OF UNION CITY	3/30/2022	7.77	-2.57				Call for access
4S/2W-15M004		C	CITY OF UNION CITY	3/28/2022	7.73	-1.99				
4S/2W-15P001	PIEZ#10	N	Alameda County Water District	3/28/2022	6.10	A				PWC Artesian
4S/2W-16A008	Alvarado @ UC Blvd	N	Alameda County Water District	3/28/2022	5.64	3.66	3/31/2022	3,533	6,900	PWC
4S/2W-16C011	E-19	N	Alameda County Water District	3/28/2022	10.31	3.22				PWC
4S/2W-16C012	E-20	N	Alameda County Water District	3/28/2022	4.62	3.24	3/31/2022	4,093	7,900	PWC
4S/2W-16J002	E-23	N	Alameda County Water District	3/28/2022	8.38	5.99				PWC
4S/2W-16L011	E-26	N	Alameda County Water District	3/28/2022	3.34	A				NA PWC UTS Ground too soft for Pump Truck
4S/2W-16L014	E-101	N	Alameda County Water District	3/28/2022	8.50	4.75				PWC New Flat Cap
4S/2W-16L015	Site E	N	Alameda County Water District	3/28/2022	11.82	4.50				
4S/2W-16Q001	E-27	N	Alameda County Water District	3/30/2022	9.13	4.97				M PWC Well casing broken 1.5' below grade
4S/2W-21B007	Site D	N	Alameda County Water District	3/30/2022	10.94	5.94				
4S/2W-21G001		CF	ALAMEDA COUNTY FLOOD CONTROL	3/30/2022	8.08	-2.01				UTS
4S/2W-21G004	E-31	N	Alameda County Water District	3/30/2022	8.79	5.10				PWC
4S/2W-21G006	E-33	N	Alameda County Water District	3/30/2022	4.11	A				PWC
4S/2W-21G009	E-109	N	Alameda County Water District		8.96					M OBS@4' PWC UTM
4S/2W-21J001		CF	ALAMEDA COUNTY FLOOD CONTROL	3/30/2022	7.07	-2.78				
4S/2W-21N001	E-40	N	Alameda County Water District	3/30/2022	5.49	A				PWC
4S/2W-21P001		C	ALAMEDA COUNTY FLOOD CONTROL	3/30/2022	8.17	-2.48				OBS@140' PWC
4S/2W-21P003	E-39	N	Alameda County Water District	3/30/2022	3.96	A				PWC
4S/2W-21Q001		C	ALAMEDA COUNTY FLOOD CONTROL	3/30/2022	5.73	-1.99				PWC
4S/2W-21Q002	E-36	N	Alameda County Water District	3/30/2022	5.57	4.92				M PWC well head needs to be cut, lid doesn't close
4S/2W-22H003	Lowry @ Novato	N	Alameda County Water District	3/28/2022	18.16	8.04				PWC
4S/2W-22P002	#8	CF	EAST BAY REGIONAL PARK DIST.	3/29/2022	10.91	-1.12				OFF UTS
4S/2W-23F002	#2	C	CITY OF FREMONT	3/29/2022	15.76	-1.87				UTS Call to sample
4S/2W-23J002	AC So. Siward Dr.	N	Alameda County Water District	3/29/2022	24.14	9.99				PWC
4S/2W-24A007		C	DINO R & RINA M CIARLO		42.70					DA NA UTM
4S/2W-24L001		C	O.G. JOHNSON		31.63					NA PI UTM covered by building, sampled by spigot
4S/2W-24L003		C	Sohan S & Bhupinder K Virdee		33.43					DA UTM well runs periodically,
4S/2W-24L006		F	BETTY KITANI		32.00					DA UTM
4S/2W-25D001	CLSTR#1	D	Alameda County Water District	3/29/2022	22.23	-3.58	3/25/2022	296	760	PWC transducer
4S/2W-25D002	CLSTR#1	F	Alameda County Water District	3/29/2022	23.47	-2.84	3/25/2022	376	1,000	PWC
4S/2W-25D003	CLSTR#1	N	Alameda County Water District	3/29/2022	22.99	9.83	3/25/2022	534	1,400	PWC
4S/2W-25M001	Ramsgate	N	Alameda County Water District	3/29/2022	22.14	8.58	3/29/2022	146	510	PWC
4S/2W-26H001		D	EAST BAY REGIONAL PARK DIST.	3/29/2022	19.94	-2.67				UTS
4S/2W-26K004	CLSTR#2	D	Alameda County Water District	3/29/2022	20.31	-2.60				PWC
4S/2W-26K005	CLSTR#2	C	Alameda County Water District	3/29/2022	19.91	-3.59				PWC

Alameda County Water District
Groundwater Monitoring Program
Spring 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
4S/2W-26K006	CLSTR#2	N	Alameda County Water District	3/29/2022	19.77	8.24				PWC
4S/2W-26L001	CLSTR#3	D	Alameda County Water District	3/29/2022	15.74	-2.83	3/25/2022	261	840	M PWC cracked pad
4S/2W-26L002	CLSTR#3	C	Alameda County Water District	3/29/2022	15.26	-3.85	3/25/2022	1,180	2,500	PWC
4S/2W-26M008	CLSTR#3	N	Alameda County Water District	3/29/2022	14.38	6.95	3/25/2022	123	760	M PWC Lid, need cut down pvc to close lid
4S/2W-27L001	#10	C	Founders Title Co.		9.18					OBS@8" UTM UTS
4S/2W-28A001	E-37	N	Alameda County Water District	3/30/2022	6.97	3.89				PWC
4S/2W-28C001	E-42	N	Alameda County Water District	3/30/2022	4.69	2.97				PWC
4S/2W-28D001	E-43	N	Alameda County Water District	3/30/2022	4.84	2.94				PWC
4S/2W-28G001	E-41	N	Alameda County Water District	3/29/2022	6.71	3.21	4/5/2022	12,446	24,000	PWC
4S/2W-35B002		N	Alameda County Water District	3/29/2022	15.05	7.81				M PWC well head needs replacement
4S/2W-36A006	Darvon #1	N	Alameda County Water District	3/30/2022	34.06	9.65	3/9/2022	116	590	OFF UTS scada
4S/2W-36A007	Darvon #2	CF	Alameda County Water District		33.60		3/9/2022	196	630	RUN
4S/2W-36D003		D	CITY OF NEWARK	3/29/2022	22.62	-2.63				UTS
4S/2W-36F005	PIEZ#5	N	Alameda County Water District	3/29/2022	21.43	8.74				PWC
4S/2W-36N006	Cherry&Montcalm-N	N	Alameda County Water District	3/29/2022	14.67	8.38				PWC
4S/2W-36N010	Well T	F	Alameda County Water District	3/29/2022	16.77	-5.23	3/23/2022	1,120	2,300	PWC
4S/2W-36N011	Well U	C	Alameda County Water District	3/29/2022	17.50	-9.81	3/23/2022	265	710	PWC
4S/2W-36N012	Well V	N	Alameda County Water District	3/29/2022	15.86	8.52	3/23/2022	5,339	9,900	PWC
5S/1W-02N001	Williams #23	N	Dean A. & Donna H. Olsen	4/1/2022	38.01	22.19				
5S/1W-03C007		C	PRESBYTERY OF SAN FRANCISCO	3/29/2022	50.39	-4.43				
5S/1W-03G003		N	LEONCIO H & MAGDELENA C ISLAYA		49.24					NMP OBS@surface UTM
5S/1W-03N004	Inv.Park/LibraryWell	N	CITY OF FREMONT		36.99		3/31/2022	77	640	NMP UTM
5S/1W-04H003	PIEZ#9	N	Alameda County Water District	3/30/2022	42.88	9.64				OBS@120' PWC
5S/1W-04H004	Robin & Ladner	C	Alameda County Water District	3/30/2022	45.11	-4.84				PWC
5S/1W-04H005	Robin & Ladner	F	Alameda County Water District	3/30/2022	44.92	-4.01				PWC
5S/1W-04P002	Curtis St. MW	N	Alameda County Water District	3/30/2022	28.16	9.46	4/1/2022	163	1,000	PWC
5S/1W-05B001	Blacow Rd.	N	Alameda County Water District	3/29/2022	38.26	9.41				PWC
5S/1W-05C001	Farwell	C	Alameda County Water District		38.29		3/9/2022	318	950	RUN UTM
5S/1W-05H003	WELL C-1	D	Alameda County Water District	3/30/2022	34.31	-4.81				M PWC lid cracked
5S/1W-05H004	WELL D-1	F	Alameda County Water District	3/30/2022	34.25	-4.84				PWC
5S/1W-05H005	WELL E-1	C	Alameda County Water District	3/30/2022	34.31	-6.07				PWC
5S/1W-05H006	WELL F-1	N	Alameda County Water District	3/30/2022	34.29	9.36				PWC
5S/1W-05M001	PIEZ#7	N	Alameda County Water District	3/30/2022	29.42	8.85	3/25/2022	1,057	2,500	M PWC Lock on lid does not lock
5S/1W-06H001		CF	Sam L. Arnold		28.54					EPD UTM
5S/1W-06H004	Bellflower	C	Alameda County Water District		30.25		3/9/2022	415	1,000	RUN UTM
5S/1W-06H009		F	Alameda County Water District	3/30/2022	33.04	-4.86	3/29/2022	689	1,500	PWC
5S/1W-06H010		F	Alameda County Water District	3/30/2022	32.55	-4.84				
5S/1W-06H011		N	Alameda County Water District	3/30/2022	32.59	9.20	3/29/2022	168	960	PWC
5S/1W-06H012		F	Alameda County Water District	3/30/2022	32.59	-4.85	3/29/2022	659	1,500	PWC
5S/1W-06N006	Site B	N	Alameda County Water District	3/31/2022	21.04	8.69				
5S/1W-06N007	MW in site B	C	Alameda County Water District	3/31/2022	21.65	-10.03				UTS
5S/1W-07B036	Silliman - MW	C	Alameda County Water District	3/30/2022	16.00	-10.16	3/29/2022	592	1,300	PWC
5S/1W-07G010	Y	D	Alameda County Water District	3/30/2022	13.06	-6.42				M PWC Well Cap Cracked
5S/1W-07H002		CF	Brook R. & Forrest E. Heath		10.37					EPD OBS@-14 UTM
5S/1W-07J001	E-77	N	Alameda County Water District	3/30/2022	9.51	7.32	3/29/2022	1,535	3,400	PWC
5S/1W-07J003	Site A	N	Alameda County Water District	3/30/2022	11.48	6.68				OFF probe can get stuck
5S/1W-07J005	Site A -MW	F	Alameda County Water District	3/30/2022	11.45	-4.06				PWC
5S/1W-08D001	E-117	N	Alameda County Water District	3/31/2022	18.15	8.48				PWC
5S/1W-08G002	E-81	N	Alameda County Water District	3/29/2022	15.36	8.26				PWC
5S/1W-08P004	E-82	N	Alameda County Water District	3/29/2022	8.70	6.93				PWC Pumps sand

Alameda County Water District
Groundwater Monitoring Program
Spring 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
5S/1W-10K002		C	SOUTHLAKE MOBIL HOME PARK		26.96					OBS@- 56'
5S/1W-14B003		N	J.C. & A.C. LOPES	3/29/2022	38.26	17.38				
5S/1W-16M006	AutoMall-C	C	Alameda County Water District	3/29/2022	11.67	-4.65	3/22/2022	553	1,400	PWC
5S/1W-16M007	AutoMall-F	F	Alameda County Water District	3/29/2022	11.91	-3.55	3/22/2022	13	390	PWC
5S/1W-16M008	AutoMall D1	D	Alameda County Water District	3/29/2022	11.86	-3.24	3/22/2022	12	350	PWC
5S/1W-17A003	E-115	N	Alameda County Water District	3/31/2022	10.20	8.15				M PWC well lid not secure, New entry found
5S/1W-17J001		CF	OAKLAND SCAVENGER CO.		6.47					NMP UTM
5S/1W-17J004	E-88	N	Alameda County Water District	3/29/2022	6.74	A				M Well flooded, bush overgrowth
5S/1W-17J006	E-113	N	Alameda County Water District	3/29/2022	6.25	A				PWC
5S/1W-17R021		CF	WASTE MANAGEMENT OF ALAMEDA COUNTY		9.67		3/29/2022	96	440	NMP UTM
5S/1W-20G001	WM-C	D	Alameda County Water District	3/29/2022	8.29	-2.41	3/24/2022	18	360	PWC
5S/1W-22H001	E-100	N	Alameda County Water District	3/31/2022	10.42	4.02				PWC
5S/2W-01B002		C	J.S. OLIVEIRA		18.59					DA M OBS@100' PWC, resident not home
5S/2W-01B009	1-MF	F	Alameda County Water District	3/30/2022	22.419	22.42	4/1/2022	741	1,600	PWC
5S/2W-01B010	1-MC	C	Alameda County Water District	3/30/2022	22.136	22.14	4/1/2022	623	1,400	PWC
5S/2W-01B011	1-SF	F	Alameda County Water District	3/30/2022	22.068	22.07	4/1/2022	992	2,400	PWC
5S/2W-01B012	1-TF	F	Alameda County Water District	3/30/2022	23.9	23.90				
5S/2W-01R001	E-68	N	Alameda County Water District	3/29/2022	17.04	9.05				PWC
5S/2W-01R014	DESAL. PLANT MW	C	Alameda County Water District	3/29/2022	18.28	-9.92	3/24/2022	618	1,400	PWC
5S/2W-02C005	E-123	N	Alameda County Water District	3/29/2022	9.81	5.80				PWC
5S/2W-02E001	E-49	N	Alameda County Water District	3/30/2022	5.11	2.92				PWC
5S/2W-02F003	Well W	C	Alameda County Water District	3/29/2022	10.36	-4.24	3/24/2022	763	1,700	PWC
5S/2W-02F004	Well X	N	Alameda County Water District	3/29/2022	10.34	6.13	3/24/2022	509	1,600	PWC
5S/2W-02M006	E-51	N	Alameda County Water District	3/30/2022	7.93	2.56				M PWC Post mislabeled
5S/2W-02M007	Site C	N	Alameda County Water District	3/30/2022	11.08	4.19				M UTS ACWD lock is broken
5S/2W-02Q001	OBSER. WELL #1	N	Alameda County Water District	3/31/2022	9.50	5.55				measured from ground surface
5S/2W-03A003	E-48	N	Alameda County Water District	3/30/2022	5.47	4.31				M PWC Well lid does not secure
5S/2W-03G001	E-44	N	Alameda County Water District	3/29/2022	6.90	3.55	4/1/2022	18,206	32,000	PWC
5S/2W-03H002	E-47	N	Alameda County Water District	3/30/2022	4.89	3.59	3/31/2022	26,919	39,000	PWC
5S/2W-03H004	Old Jarvis - C	C	Alameda County Water District	3/30/2022	5.84	-1.66	3/31/2022	38,010	62,000	PWC
5S/2W-03H005	Old Jarvis - F	F	Alameda County Water District	3/30/2022	5.80	5.40				PWC
5S/2W-08M011	Dumbarton - F	CF	Alameda County Water District	3/29/2022	6.45	A	3/30/2022	65	470	PWC
5S/2W-11H002	E-60	N	Alameda County Water District	3/31/2022	9.47	4.85				PWC
5S/2W-12B008		D	LESLIE SALT CO.		12.49		4/1/2022	493	1,100	NMP RUN UTM capped M.P.
5S/2W-12B012	50733-1		CARGILL SALT		13.01					NMP UTM UTS NSP
5S/2W-12C003	E-62	N	Alameda County Water District	3/31/2022	10.10	5.10				PWC
5S/2W-14E005	DE1-D1	D	Alameda County Water District	4/1/2022	7.92	A				PWC
5S/2W-14E006	DE1-F	F	Alameda County Water District	4/1/2022	7.96	A				PWC
5S/2W-14E007	DE1-C	C	Alameda County Water District	4/1/2022	7.77	A				PWC
5S/2W-14E008	DE1-N	N	Alameda County Water District	4/1/2022	7.75	2.95				PWC
5S/2W-14E009	DE1-D2	D	Alameda County Water District	4/1/2022	7.88	A				PWC
5S/2W-17F002		N	LESLIE SALT CO.	3/31/2022	7.70	2.81				M label wells
5S/2W-17F003		C	LESLIE SALT CO.	3/31/2022	7.80	A				M label wells
5S/2W-24B003	Mowry Slough - C	C	Alameda County Water District	4/1/2022	8.73	A				PWC

*NGVD 1929

APPENDIX E

FALL 2022 GROUNDWATER MONITORING RECORDS

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Alameda County Water District
Groundwater Monitoring Program
Fall 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
3S/3W-25C020	WD2	D	Alameda County Water District	9/21/2022	8.84	-6.22	9/21/2022	71	410	PWC
4S/1W-07G001		D	East Bay Community Foundation	9/20/2022	83.56	-9.40				
4S/1W-07K001		D	Masonic Homes of California	9/20/2022	67.40	-6.74				PI
4S/1W-07N005		CF	City of Union City	9/23/2022	55.29	-4.05	9/20/2022	71	580	Call CoUC for sample (Last run 9/19)
4S/1W-17M006	Well L	D	Alameda County Water District	9/20/2022	49.90	-8.17	9/20/2022	120	560	M PWC
4S/1W-17M007	Well M	C	Alameda County Water District	9/20/2022	50.00	-5.96	9/20/2022	70	460	M PWC
4S/1W-17M008	Well N	N	Alameda County Water District	9/20/2022	49.62	7.00	9/20/2022	68	390	PWC
4S/1W-18K005		F	City of Union City		48.60					NMP UTM Sample from sprinkler - call CoUC
4S/1W-18M010		C	Frank J & Catherine M Thrall	9/20/2022	39.92	-6.70				UTS Call to open gate
4S/1W-18N004		C	Eleanor Kabrich		41.60					NMP UTM UTS NSP
4S/1W-19A003		F	Alameda County Flood Control	9/20/2022	54.37	-7.73				
4S/1W-19E002	PIEZ#4	N	Alameda County Water District	9/20/2022	37.95	7.23	8/24/2022	75	420	PWC
4S/1W-19J006		N	Alameda County Flood Control	9/20/2022	51.28	7.22				PWC
4S/1W-19L002	HUDSON/NICOLET	C	Alameda County Water District	9/20/2022	40.39	-7.18	8/24/2022	68	380	OBS@160' PWC
4S/1W-19N002	Well H	D	Alameda County Water District	9/20/2022	40.45	-8.36	8/23/2022	315	1,000	PWC
4S/1W-19N003	WESTRIDGE PARK	C	CITY OF FREMONT	9/20/2022	39.81	-8.14				PWC Well not secure
4S/1W-19N004	Well I	F	Alameda County Water District	9/20/2022	40.68	-8.29	8/23/2022	217	730	PWC
4S/1W-19N005	Well J	C	Alameda County Water District	9/20/2022	40.55	-7.57	8/23/2022	73	420	PWC
4S/1W-19N014	Well K	N	Alameda County Water District	9/20/2022	40.50	7.27	8/23/2022	74	430	PWC
4S/1W-20A003	Nursery Well	CF	Alameda County Water District	9/23/2022	63.42	-1.50	9/21/2022	73	470	OFF
4S/1W-20G001	Montecito Well	CFD	Alameda County Water District	9/21/2022	60.72	-0.84				UTS
4S/1W-20H003	DH-4	N	Alameda County Water District	9/21/2022	67.52	10.37				PWC
4S/1W-20J004	UP-1A	N	Alameda County Water District	9/21/2022	58.90	17.11				PWC
4S/1W-20J005	UP-1C	N	Alameda County Water District	9/21/2022	59.14	8.08	8/26/2022	67	400	PWC small lid, leftmost facing creek
4S/1W-20J006	UP-1B	N	Alameda County Water District	9/21/2022	59.07	15.89				PWC smaller lid
4S/1W-20R003	UP-2A	N	Alameda County Water District	9/21/2022	59.11	10.32				PWC
4S/1W-20R004	UP-2B	N	Alameda County Water District	9/21/2022	59.20	8.68				PWC
4S/1W-20R005	UP-2C	N	Alameda County Water District	9/21/2022	59.06	7.58				PWC Leftmost Well
4S/1W-21F005	KAISER #5	AHF	Alameda County Water District	9/21/2022	69.70	32.31				
4S/1W-21H002	Vallejo St. @ End	AHF	Alameda County Water District	9/20/2022	75.08	34.33				PWC
4S/1W-21J003	EB-1	AHF	Alameda County Water District	9/21/2022	77.30	30.42	8/26/2022	77	470	PWC
4S/1W-21L003		AHF	Alameda County Water District	9/21/2022	66.57	28.89				
4S/1W-21L005	DH-6	AHF	Alameda County Water District	9/21/2022	67.46	29.94	8/26/2022	73	450	PWC
4S/1W-21L006	DH-5	AHF	Alameda County Water District	9/21/2022	67.81	30.01				
4S/1W-21L007	KAISER #1	AHF	Alameda County Water District	9/21/2022	70.62	30.42				
4S/1W-21L008	KAISER #4	AHF	Alameda County Water District	9/21/2022	66.94	29.82				PWC
4S/1W-21P004		AHF	CITY OF FREMONT	9/21/2022	65.29	24.35				
4S/1W-21P006	P.T. #1	AHF	Alameda County Water District		66.37		8/15/2022	74	570	RUN
4S/1W-21P007	P.T. #2	AHF	Alameda County Water District	9/23/2022	66.77	23.74	8/15/2022	73	490	
4S/1W-21P008	P.T. #3	AHF	Alameda County Water District	9/21/2022	66.54	24.02	8/15/2022	73	460	
4S/1W-21P009	P.T. #4	AHF	Alameda County Water District	9/21/2022	66.44	23.37	8/15/2022	72	510	
4S/1W-21P010	P.T. #5	AHF	Alameda County Water District	9/21/2022	67.28	24.81	8/15/2022	74	440	
4S/1W-21P011	P.T. #6	AHF	Alameda County Water District	9/21/2022	67.69	24.77	8/15/2022	74	430	
4S/1W-21P012	P.T. #7	AHF	Alameda County Water District	9/21/2022	68.36	26.91	8/17/2022	73	430	
4S/1W-21P013	P. T. #8	AHF	Alameda County Water District		68.86		8/17/2022	75	430	RUN
4S/1W-21R007	MW-12(offsite)	AHF	Alameda County Water District	9/21/2022	72.21	29.51	8/24/2022	72	430	PWC
4S/1W-26L006		AHF	CITY OF FREMONT	9/22/2022	67.79	32.63	9/22/2022	91	580	Sample from sprinkler
4S/1W-26Q011		AHF	ERNIE SILVA	9/20/2022	96.44	72.86	9/20/2022	80	610	No reply to voicemail
4S/1W-27A002		AHF	Fremont Community Church	9/20/2022	71.09	29.01	9/20/2022	125	910	
4S/1W-27D008	AHF Indicator	AHF	Alameda County Water District	9/20/2022	66.59	30.34	9/15/2022	73	730	PWC
4S/1W-27E001		AHF	CHURCH OF JESUS CHRIST	9/21/2022	62.86	30.05				PI UTS

Alameda County Water District
Groundwater Monitoring Program
Fall 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
4S/1W-27G002		AHF	CITY OF FREMONT				9/22/2022	77	800	Sample from well head, last run 9/2/22
4S/1W-27P001		AHF	CITY OF FREMONT	9/22/2022	54.04	30.38				UTS Under Repair
4S/1W-27P002		AHF	CITY OF FREMONT	9/22/2022	52.65	28.80	9/22/2022	114	920	Last run 6 weeks ago, sampled from well head
4S/1W-28C001	Mowry #1	N	Alameda County Water District		64.81		8/15/2022	80	480	RUN
4S/1W-28C014	Mowry #2	D	Alameda County Water District	9/23/2022	63.64	-7.48	8/22/2022	137	570	
4S/1W-28C015	Mowry #3	CF	Alameda County Water District	9/21/2022	63.87	-7.85	8/22/2022	83	480	
4S/1W-28C016	Mowry #4	N	Alameda County Water District	9/21/2022	66.08	3.84				Measured from sole plate
4S/1W-28C018	Mowry #6	CF	Alameda County Water District	9/21/2022	64.80	-8.25	8/22/2022	81	490	
4S/1W-28C019	Mowry #7	N	Alameda County Water District	9/21/2022	63.82	2.83	8/22/2022	79	480	
4S/1W-28C020	Mowry #8	N	Alameda County Water District	9/21/2022	64.13	2.78	8/22/2022	80	470	
4S/1W-28C021	Mowry #9	CF	Alameda County Water District	9/21/2022	65.02	-8.37	8/22/2022	83	490	
4S/1W-28D001	Well A	D	Alameda County Water District	9/21/2022	63.03	-9.56	8/24/2022	82	440	PWC
4S/1W-28D008	Well B	F	Alameda County Water District	9/21/2022	62.77	-9.15	8/24/2022	93	480	PWC
4S/1W-28D011	Well C	C	Alameda County Water District	9/21/2022	62.90	-6.79	8/24/2022	81	460	PWC
4S/1W-28D012	Well D	N	Alameda County Water District	9/21/2022	62.86	5.23	8/24/2022	82	450	PWC
4S/1W-28F018	BART Way - N	N	Alameda County Water District	9/21/2022	58.71	5.93	8/25/2022	49	470	PWC
4S/1W-28F024	BART WAY-F	F	Alameda County Water District	9/21/2022	59.15	-7.97	8/25/2022	116	700	PWC
4S/1W-28G005		C	Washington Township Healthcare Dist		57.79		9/20/2022	84	530	RUN
4S/1W-28M002	HASTINGS - N	N	Alameda County Water District	9/21/2022	53.81	6.25	8/23/2022	80	550	PWC
4S/1W-28M005	HASTINGS - D	D	Alameda County Water District	9/21/2022	54.12	-8.94	8/23/2022	109	500	PWC
4S/1W-28M006		C	Mercedes Williams		57.09					PI UTM UTS New fence, left message for owner
4S/1W-28M009	HASTINGS - F	F	Alameda County Water District	9/21/2022	54.21	-8.01	8/23/2022	531	1,600	PWC
4S/1W-28M010	HASTINGS - C	C	Alameda County Water District	9/21/2022	54.20	-6.53	8/23/2022	87	600	PWC
4S/1W-28P004	BEACON	C	Alameda County Water District	9/20/2022	53.56	-7.87	8/26/2022	81	550	PWC
4S/1W-28P006	Well E	D	Alameda County Water District	9/20/2022	53.66	-9.23	8/26/2022	202	680	PWC
4S/1W-28P007	Well F	F	Alameda County Water District	9/20/2022	53.50	-9.21	8/26/2022	473	1,200	PWC
4S/1W-28P008	Well G	N	Alameda County Water District	9/20/2022	53.53	6.50	8/26/2022	98	700	PWC
4S/1W-28R003	Fmt. Library F	F	Alameda County Water District	9/21/2022	59.70	-8.07	8/24/2022	145	860	PWC
4S/1W-29A006	BHF Indicator	N	Alameda County Water District	9/20/2022	61.23	6.92				PWC
4S/1W-29F002		N	Robert D & Virginia W. Grate	9/21/2022	51.93	6.84				PWC
4S/1W-29H002	Centerville Par	F	Alameda County Water District	9/21/2022	52.44	-7.82	8/24/2022	97	470	PWC
4S/1W-29J003		C	CITY OF FREMONT		55.28		9/22/2022	78	440	UTM Sample from sprinkler. Well paved over
4S/1W-29J008		N	Eugene Dias	9/20/2022	58.48	5.82				PI UTS
4S/1W-29L012	Fremont Mattos	D	Alameda County Water District	9/21/2022	50.62	-9.27				PWC Need 2" pipe
4S/1W-30A002	Well O	FD	Alameda County Water District	9/20/2022	51.81	-9.10	9/20/2022	162	610	PWC
4S/1W-30A004	Well Q	C	Alameda County Water District	9/20/2022	52.01	-7.97	9/20/2022	69	400	PWC
4S/1W-30A005	Well R	N	Alameda County Water District	9/20/2022	52.20	6.70	9/20/2022	70	400	PWC
4S/1W-30E003	CORONADO 2	D	Alameda County Water District	9/20/2022	42.12	-9.21	9/14/2022	133	500	PWC transducer
4S/1W-30E004	CORONADO 1	N	Alameda County Water District	9/20/2022	42.17	5.97	9/14/2022	111	580	PWC
4S/1W-30J002	Central Apts.	N	Jeffery H. Lee	9/22/2022	46.74	4.15				PWC
4S/1W-30L006		D	Joseph G. Dutra		42.23					DA UTM UTS, call first for permission
4S/1W-30L008		N	Joseph G. Dutra		41.90					DA UTM UTS, call first for permission
4S/1W-30R002		C	Frank G. & Alice C. Garcia	9/22/2022	46.14	-6.36				PI leave card w/water levels for owner
4S/1W-30R004		N	Frank G. & Alice C. Garcia	9/22/2022	45.19	6.70				leave card w/water level for owner
4S/1W-31B003	Willowood #1	D	Alameda County Water District	9/20/2022	43.54	-8.93	9/2/2022	271	540	PWC
4S/1W-31B011	Willowood # 2	CF	Alameda County Water District	9/20/2022	44.47	-9.57				Measured from sole plate
4S/1W-31C003	Towers @ Hansen	N	Alameda County Water District	9/22/2022	36.56	6.65	9/22/2022	96	600	PWC
4S/1W-31J001		D	GLENMOOR GARDENS HOMEOWNERS ASSOCIA	9/23/2022	38.94	-8.92	9/23/2022	210	660	Sampled from tank
4S/1W-31L008	off Blacow@Line F-1	N	Alameda County Water District	9/22/2022	36.76	6.57				PWC
4S/1W-31L011		N	Alameda County Water District	9/22/2022	34.47	6.21	9/2/2022	134	670	PWC
4S/1W-31N001	Cedar #1	C	Alameda County Water District	9/23/2022	35.37	-7.67	8/8/2022	362	920	RUN

Alameda County Water District
Groundwater Monitoring Program
Fall 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
4S/1W-31N003	Cedar #2	N	Alameda County Water District	9/23/2022	35.20	6.96	8/8/2022	177	830	RUN
4S/1W-32E011	Meyer Park - C	C	Alameda County Water District	9/22/2022	43.68	-6.70	8/26/2022	103	500	PWC
4S/1W-32E012	Meyer Park - F	F	Alameda County Water District	9/22/2022	43.89	-6.94	8/26/2022	223	690	PWC
4S/1W-32K011	Serra Place-F	F	Alameda County Water District	9/22/2022	43.39	-7.26	8/30/2022	985	2,100	PWC
4S/1W-32K014	Serra-C	C	Alameda County Water District	9/22/2022	43.28	-6.49	8/30/2022	369	1,100	PWC
4S/1W-32M010	Eggers near Patti's	N	Alameda County Water District	9/22/2022	38.67	6.58	8/26/2022	117	1,200	PWC Well head is crooked
4S/1W-32N001	Blacow - C	C	Alameda County Water District	9/22/2022	37.65	-6.93	8/30/2022	122	580	PWC
4S/1W-32N002	Blacow - F	F	Alameda County Water District	9/22/2022	37.59	-7.42	8/30/2022	867	2,300	PWC
4S/1W-32N003	3-MN	N	Alameda County Water District	9/22/2022	37.11	6.57	8/30/2022	144	700	PWC
4S/1W-32N004	3-SF	F	Alameda County Water District	9/22/2022	38.05	-7.77	8/30/2022	394	1,100	PWC
4S/1W-32N005	3-TF	F	Alameda County Water District	9/22/2022	37.17	-7.75				
4S/1W-33E001	Walnut Ave.Well	CF	City of Fremont	9/22/2022	49.62	-6.29				
4S/1W-33N002	Knoll Park	C	Alameda County Water District	9/22/2022	43.75	-6.30	8/30/2022	419	1,200	PWC
4S/1W-33N003	Knoll Park - F	F	Alameda County Water District	9/22/2022	43.64	-6.98	8/30/2022	131	560	PWC
4S/1W-33R007	Margery/BI - C	C	Alameda County Water District	9/22/2022	53.25	-6.41	8/30/2022	100	790	PWC
4S/1W-33R008	Margery/BI - F	F	Alameda County Water District	9/22/2022	53.18	-7.24	8/30/2022	123	690	PWC
4S/1W-34A002		AHF	Elsie Nines	9/22/2022	60.00	50.54				
4S/1W-34C001	Swim Lagoon	AHF	CITY OF FREMONT		61.30		9/22/2022	136	920	NMP UTM last run 9/20/22
4S/1W-35R003		AHF	Mary A Souza	9/22/2022	190.16	175.88				
4S/2W-02H001	BART @ Whipple	D	Bay Area Rapid Transit District	9/21/2022	36.21	-8.40				Durham WLI needed, Flashlight
4S/2W-03R003		CF	F E DUBOIS	9/19/2022	12.00	-6.54	9/21/2022	33	330	
4S/2W-04E002	E-3	N	Alameda County Water District	9/19/2022	4.72	-2.54				M NA PWC New lock on gate/Locked out ACWD lock
4S/2W-04F001	Well B	D	City of Hayward							OFF
4S/2W-04R001	Hayward Emergen	D	City of Hayward				9/14/2022	130	530	RUN
4S/2W-05G001	Eden Landing F1	F	Alameda County Water District	9/21/2022	6.75	-4.97	9/21/2022	65	430	PWC
4S/2W-05G002	Eden Landing D1	D	Alameda County Water District	9/21/2022	6.35	-6.73	9/21/2022	95	460	PWC
4S/2W-05G003	Eden Landing D2	D	Alameda County Water District	9/21/2022	5.82	-6.18	9/21/2022	507	1,200	PWC
4S/2W-05G004	Eden Landing C2	C	Alameda County Water District	9/21/2022	6.73	0.09	9/21/2022	56	420	PWC
4S/2W-05G005	Eden Landing	C	Alameda County Water District	9/21/2022	6.93	5.11	9/21/2022	111	520	PWC
4S/2W-08Q001	2D2	D	Alameda County Water District	9/21/2022	9.25	-4.90	9/21/2022	200	710	M PWC Need to raise 4x4' pad or cut PVC well casing
4S/2W-09F014	Veasy Bridgegat	D	Alameda County Water District	9/21/2022	8.25	-8.64	9/21/2022	612	1,400	PWC transducer
4S/2W-09L002	E-12	N	Alameda County Water District	9/21/2022	9.11	-7.78	9/21/2022	2,746	5,300	PWC
4S/2W-09P010	E-17	N	Alameda County Water District	9/20/2022	11.31	1.33	9/9/2022	7,439	14,000	PWC
4S/2W-10E004	Tidewater	D	Alameda County Water District	9/20/2022	14.54	-9.00	9/2/2022	135	530	PWC transducer
4S/2W-11A003		D	U.S. PIPE HOLDINGS CORPORATION	9/21/2022	40.58		9/21/2022	71	410	RUN
4S/2W-12C001	Whipple Well	D	Alameda County Water District	9/21/2022	68.61	-9.29	9/21/2022	118	480	
4S/2W-12K008	Pacific & Lewis - D	D	Alameda County Water District	9/20/2022	53.11	-8.80	9/1/2022	41	360	PWC Transducer
4S/2W-12K009	Pacific & Lewis - F	F	Alameda County Water District	9/20/2022	53.41	-7.65	9/1/2022	142	570	PWC transducer
4S/2W-12K010	Pacific & Lewis -C	C	Alameda County Water District	9/20/2022	53.39	-6.64	9/1/2022	62	540	PWC transducer
4S/2W-12K011	Pacific & Lewis - N	N	Alameda County Water District	9/20/2022	53.67	8.10	9/1/2022	34	360	PWC transducer
4S/2W-13E003		N	ALAMEDA COUNTY FLOOD CONTROL	9/19/2022	27.93	7.56				PWC
4S/2W-13H004		N	CITY OF UNION CITY	9/19/2022	37.55	6.69	9/22/2022	95	580	UTS measuring pt is under gray plastic cap
4S/2W-13K004		C	RAYMOND N. NELSEN	9/21/2022	35.04	-7.08	9/21/2022	119	710	Need Wrench
4S/2W-13M005		C	ROSIE & JOEY OROCCHI	9/22/2022	26.46	-6.89				Mark (son) lives next door
4S/2W-13M006		C	ROSEMARY & ROBERT MAZZA	9/19/2022	27.42	-7.16				Tape
4S/2W-13P004	PIEZ#3	N	Alameda County Water District	9/20/2022	25.90	7.32	9/6/2022	105	670	PWC Transducer
4S/2W-13P005	WELL G-1	D	Alameda County Water District	9/20/2022	25.98	-8.59	9/6/2022	561	1,400	PWC
4S/2W-13P006	WELL H-1	F	Alameda County Water District	9/20/2022	26.15	-8.04	9/6/2022	169	730	PWC
4S/2W-13P007	WELL I-1	C	Alameda County Water District	9/20/2022	26.00	-7.72	9/6/2022	115	710	PWC
4S/2W-13R007	Morello/Cherry Blossm	CF	Alameda County Water District	9/19/2022	37.62	-7.49				
4S/2W-14C001		CF	HARVEY, T.	9/21/2022	23.27	-7.05				

Alameda County Water District
Groundwater Monitoring Program
Fall 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
4S/2W-14D003	Lake Chad	D	Alameda County Water District	9/20/2022	13.95	-8.79	9/8/2022	45	360	PWC Transducer
4S/2W-14D004	LAKE CHAD - D	D	Alameda County Water District	9/20/2022	13.90	-8.91	9/8/2022	143	520	PWC Transducer
4S/2W-14D005	LAKE CHAD - C	C	Alameda County Water District	9/20/2022	14.10	-7.53	9/8/2022	235	860	PWC
4S/2W-14D006	LAKE CHAD - C	C	Alameda County Water District	9/20/2022	14.18	-7.54	9/8/2022	81	520	PWC
4S/2W-14D007	LAKE CHAD - N	N	Alameda County Water District	9/20/2022	14.07	6.01	9/8/2022	44	400	PWC
4S/2W-14H003		N	ACFC & WCD		25.22					DA NMP UTM
4S/2W-14L006	PIEZ#2	N	Alameda County Water District	9/19/2022	14.97	6.15	9/8/2022	108	680	PWC
4S/2W-14N001	Lowry	N	Alameda County Water District	9/19/2022	20.73	6.39	9/22/2022	127	690	
4S/2W-15C007	PIEZ#1	N	Alameda County Water District	9/19/2022	9.31	4.40	9/9/2022	38	400	PWC
4S/2W-15L005	Contempo Pk	D	Alameda County Water District	9/20/2022	7.63	-8.95	9/6/2022	302	810	PWC Transducer
4S/2W-15L006	Contempo - C	C	Alameda County Water District	9/20/2022	7.59	-7.52	9/6/2022	109	630	PWC
4S/2W-15L007	Contempo - N	N	Alameda County Water District	9/20/2022	7.66	5.18	9/6/2022	469	1,200	PWC
4S/2W-15M003		C	CITY OF UNION CITY	9/22/2022	7.77	-6.91				
4S/2W-15M004		C	CITY OF UNION CITY	9/19/2022	7.73	-7.44				
4S/2W-15P001	PIEZ#10	N	Alameda County Water District	9/19/2022	6.10	A				PWC
4S/2W-16A008	Alvarado @ UC Blvd	N	Alameda County Water District	9/19/2022	5.64	2.23	9/7/2022	3,319	6,100	PWC
4S/2W-16C011	E-19	N	Alameda County Water District	9/20/2022	10.31	1.70	9/9/2022	5,659	11,000	PWC
4S/2W-16C012	E-20	N	Alameda County Water District	9/20/2022	4.62	1.75	9/9/2022	4,127	7,600	PWC
4S/2W-16J002	E-23	N	Alameda County Water District	9/19/2022	8.38	4.07	9/2/2022	1,852	4,100	PWC
4S/2W-16L011	E-26	N	Alameda County Water District	9/20/2022	3.34	A				NA PWC UTS Ground too soft for Pump Truck
4S/2W-16L014	E-101	N	Alameda County Water District	9/20/2022	8.50	3.18	9/9/2022	4,607	8,500	PWC New Flat Cap
4S/2W-16L015	Site E	N	Alameda County Water District	9/20/2022	11.82	2.92				
4S/2W-16Q001	E-27	N	Alameda County Water District	9/20/2022	9.13	3.22	9/12/2022	8,650	14,000	M PWC Well casing broken 1.5' below grade
4S/2W-21B007	Site D	N	Alameda County Water District	9/20/2022	10.94	4.34				
4S/2W-21G001		CF	ALAMEDA COUNTY FLOOD CONTROL	9/20/2022	8.08	-2.94				UTS
4S/2W-21G004	E-31	N	Alameda County Water District	9/20/2022	8.79	3.41	9/9/2022	9,532	16,000	PWC
4S/2W-21G006	E-33	N	Alameda County Water District		4.11					NA PWC Fence
4S/2W-21G009	E-109	N	Alameda County Water District		8.96					M OBS@4' PWC UTM
4S/2W-21J001		CF	ALAMEDA COUNTY FLOOD CONTROL	9/21/2022	7.07	-7.30				
4S/2W-21N001	E-40	N	Alameda County Water District	9/21/2022	5.49	2.47				PWC
4S/2W-21P001		C	ALAMEDA COUNTY FLOOD CONTROL	9/20/2022	8.17	-6.65	9/12/2022	81	550	OBS@140' PWC
4S/2W-21P003	E-39	N	Alameda County Water District	9/21/2022	3.96	1.05				PWC
4S/2W-21Q001		C	ALAMEDA COUNTY FLOOD CONTROL	9/21/2022	5.73	-6.70				PWC
4S/2W-21Q002	E-36	N	Alameda County Water District	9/21/2022	5.57	3.35	9/12/2022	6,303	12,000	M PWC well head needs to be cut
4S/2W-22H003	Lowry @ Novato	N	Alameda County Water District	9/19/2022	18.16	5.47				PWC
4S/2W-22P002	#8	CF	EAST BAY REGIONAL PARK DIST.	9/20/2022	10.91	-7.61				OFF UTS
4S/2W-23F002	#2	C	CITY OF FREMONT	9/19/2022	15.76	-7.56				UTS Call to sample
4S/2W-23J002	AC So. Siward Dr.	N	Alameda County Water District	9/19/2022	24.14	6.78	9/2/2022	196	790	PWC
4S/2W-24A007		C	DINO R & RINA M CIARLO	9/22/2022	42.70	-5.79				DA NA UTM call Rina for appt
4S/2W-24L001		C	O.G. JOHNSON		31.63					NA PI UTM covered by building, sampled by spigget
4S/2W-24L003		C	Sohan S & Bhupinder K Virdee		33.43		9/21/2022	90	420	DA UTM, well runs periodically, sampled by closest spigget
4S/2W-24L006		F	BETTY KITANI		32.00					DA UTM call for appointment
4S/2W-25D001	CLSTR#1	D	Alameda County Water District	9/20/2022	22.23	-9.54	8/31/2022	291	750	PWC transducer
4S/2W-25D002	CLSTR#1	F	Alameda County Water District	9/20/2022	23.47	-8.49	8/31/2022	371	1,100	PWC
4S/2W-25D003	CLSTR#1	N	Alameda County Water District	9/20/2022	22.99	6.84	8/31/2022	342	1,100	PWC
4S/2W-25M001	Ramsgate	N	Alameda County Water District	9/20/2022	22.14	5.77	9/20/2022	184	780	PWC
4S/2W-26H001		D	EAST BAY REGIONAL PARK DIST.	9/19/2022	19.94	-8.61	9/19/2022	169	560	UTS
4S/2W-26K004	CLSTR#2	D	Alameda County Water District	9/19/2022	20.31	-8.80	8/31/2022	110	490	PWC
4S/2W-26K005	CLSTR#2	C	Alameda County Water District	9/19/2022	19.91	-9.12	8/31/2022	364	1,000	PWC
4S/2W-26K006	CLSTR#2	N	Alameda County Water District	9/19/2022	19.77	5.88	8/31/2022	112	710	PWC
4S/2W-26L001	CLSTR#3	D	Alameda County Water District	9/20/2022	15.74	-8.87	8/30/2022	273	880	M PWC cracked pad

Alameda County Water District
Groundwater Monitoring Program
Fall 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
4S/2W-26L002	CLSTR#3	C	Alameda County Water District	9/20/2022	15.26	-9.45	8/30/2022	1,155	2,800	PWC
4S/2W-26M008	CLSTR#3	N	Alameda County Water District	9/20/2022	14.38	5.21	8/30/2022	120	750	M PWC Lid, need cut down pvc
4S/2W-27L001	#10	C	Founders Title Co.		9.18					OBS@8" UTM UTS
4S/2W-28A001	E-37	N	Alameda County Water District	9/21/2022	6.97	2.55				PWC
4S/2W-28C001	E-42	N	Alameda County Water District	9/19/2022	4.69	1.67				PWC
4S/2W-28D001	E-43	N	Alameda County Water District	9/19/2022	4.84	1.12	8/31/2022	24,157	42,000	PWC
4S/2W-28G001	E-41	N	Alameda County Water District	9/20/2022	6.71	1.43	9/15/2022	12,806	23,000	PWC
4S/2W-35B002		N	Alameda County Water District	9/19/2022	15.05	5.73	9/1/2022	428	1,500	M PWC well head needs replacement
4S/2W-36A007	Darvon #1	N	Alameda County Water District		34.06		8/8/2022	112	590	OFF UTS NA
4S/2W-36A007	Darvon #2	CF	Alameda County Water District		33.60		8/8/2022	192	640	RUN scada
4S/2W-36D003		D	CITY OF NEWARK	9/22/2022	22.62	-7.21				UTS
4S/2W-36F005	PIEZ#5	N	Alameda County Water District	9/19/2022	21.43	6.19	9/1/2022	201	920	PWC
4S/2W-36N006	Cherry&Montcalm-N	N	Alameda County Water District	9/19/2022	14.67	5.89	9/1/2022	5,766	11,000	PWC
4S/2W-36N010	Well T	F	Alameda County Water District	9/20/2022	16.77	-10.81	9/1/2022	1,087	2,000	PWC
4S/2W-36N011	Well U	C	Alameda County Water District	9/20/2022	17.50	-15.31	9/1/2022	258	710	PWC
4S/2W-36N012	Well V	N	Alameda County Water District	9/20/2022	15.86	6.12	9/1/2022	5,969	12,000	PWC
5S/1W-02N001	Williams #23	N	Dean A. & Donna H. Olsen		38.01					DA Property Owner Not Home
5S/1W-03C007		C	PRESBYTERY OF SAN FRANCISCO	9/21/2022	50.39	-8.45	9/21/2022	178	720	Homeless encampment
5S/1W-03G003		N	LEONCIO H & MAGDELENA C ISLAYA		49.24					NMP OBS@surface UTM
5S/1W-03N004	Irv.Park/LibraryWell	N	CITY OF FREMONT		36.99		9/23/2022	92	750	NMP UTM
5S/1W-04H003	PIEZ#9	N	Alameda County Water District	9/21/2022	42.88	7.16	8/23/2022	100	860	OBS@120' PWC
5S/1W-04H004	Robin & Ladner	C	Alameda County Water District	9/21/2022	45.11	-7.75	8/23/2022	158	820	PWC
5S/1W-04H005	Robin & Ladner	F	Alameda County Water District	9/21/2022	44.92	-8.22	8/23/2022	218	730	PWC
5S/1W-04P002	Curtis St. MW	N	Alameda County Water District	9/21/2022	28.16	7.02	8/26/2022	156	1,100	PWC
5S/1W-05B001	Blacow Rd.	N	Alameda County Water District	9/21/2022	38.26	6.60	8/26/2022	185	1,100	PWC
5S/1W-05C001	Farwell	C	Alameda County Water District	9/22/2022	38.29	-8.60	8/8/2022	304	940	OFF
5S/1W-05H003	WELL C-1	D	Alameda County Water District	9/20/2022	34.31	-11.65	9/20/2022	26	340	M PWC lid cracked
5S/1W-05H004	WELL D-1	F	Alameda County Water District	9/20/2022	34.25	-9.49	9/20/2022	24	360	PWC
5S/1W-05H005	WELL E-1	C	Alameda County Water District	9/20/2022	34.31	-10.40	9/20/2022	332	1,000	PWC
5S/1W-05H006	WELL F-1	N	Alameda County Water District	9/20/2022	34.29	6.83	9/20/2022	167	1,100	PWC
5S/1W-05M001	PIEZ#7	N	Alameda County Water District	9/20/2022	29.42	6.12	9/14/2022	724	2,000	M PWC Lock on lid does not lock
5S/1W-06H001		CF	Sam L. Arnold		28.54					EPD NMP UTM
5S/1W-06H004	Bellflower	C	Alameda County Water District	9/20/2022	30.25	-12.43	8/8/2022	412	1,000	OFF
5S/1W-06H009	2-SF	F	Alameda County Water District	9/21/2022	33.04	-8.49	9/7/2022	681	1,500	PWC
5S/1W-06H010	2-TF	F	Alameda County Water District	9/21/2022	32.55	-8.49				
5S/1W-06H011	2-MN	N	Alameda County Water District	9/21/2022	32.59	6.49	9/7/2022	165	970	PWC
5S/1W-06H012	2-MF	F	Alameda County Water District	9/21/2022	32.59	-8.51	9/7/2022	649	1,400	PWC
5S/1W-06N006	Site B	N	Alameda County Water District	9/20/2022	21.04	6.29				
5S/1W-06N007	MW in site B	C	Alameda County Water District	9/20/2022	21.65	-13.11				UTS
5S/1W-07B036	Silliman - MW	C	Alameda County Water District	9/20/2022	16.00	-14.30	8/25/2022	554	1,400	PWC
5S/1W-07G010	Y	D	Alameda County Water District	9/20/2022	13.06	-12.20	8/25/2022	73	400	M PWC Wel Cap Cracked
5S/1W-07H002		CF	Brook R. & Forrest E. Heath		10.37					EPD OBS@-15 UTM
5S/1W-07J001	E-77	N	Alameda County Water District	9/20/2022	9.51	5.35	8/25/2022	1,471	3,400	PWC
5S/1W-07J003	Site A	N	Alameda County Water District	9/20/2022	11.48	4.68				OFF probe can get stuck
5S/1W-07J005	Site A -MW	F	Alameda County Water District	9/20/2022	11.45	-8.97	8/25/2022	10	330	PWC
5S/1W-08D001	E-117	N	Alameda County Water District	9/21/2022	18.15	6.02	8/31/2022	1,887	3,600	PWC
5S/1W-08G002	E-81	N	Alameda County Water District	9/20/2022	15.36	6.01	8/25/2022	406	1,400	PWC
5S/1W-08P004	E-82	N	Alameda County Water District	9/20/2022	8.70	5.11				PWC Pumps sand
5S/1W-10K002		C	SOUTHLAKE MOBIL HOME PARK		26.96					NMP OBS@- 56' UTS : (Well pump not working 9/20/22)
5S/1W-14B003		N	J.C. & A.C. LOPES	9/20/2022	38.26	17.06				
5S/1W-16M006	AutoMall-C	C	Alameda County Water District	9/20/2022	11.67	-9.93	8/23/2022	528	1,300	PWC

Alameda County Water District
Groundwater Monitoring Program
Fall 2022

Well Number	Alternate Well ID	Aquifer	Owner	Date of Water Level	Reference Elevation* (feet)	Water Elevation* (feet)	Water Sample Date	Chloride (ppm)	TDS (ppm)	Remarks
5S/1W-16M007	AutoMall-F	F	Alameda County Water District	9/20/2022	11.91	-9.13	8/23/2022	13	380	PWC
5S/1W-16M008	AutoMall D1	D	Alameda County Water District	9/20/2022	11.86	-8.77	8/23/2022	12	350	PWC
5S/1W-17A003	E-115	N	Alameda County Water District	9/22/2022	10.20	5.86	9/22/2022	679	1,900	M PWC well lid not secure, New entry found
5S/1W-17J001		CF	OAKLAND SCAVENGER CO.		6.47		9/20/2022	19	380	NMP UTM
5S/1W-17J004	E-88	N	Alameda County Water District	9/23/2022	6.74	A				M Well flooded, bush overgrowth
5S/1W-17J006	E-113	N	Alameda County Water District	9/22/2022	6.25	5.31	9/22/2022	1,020	2,600	PWC
5S/1W-17R021		CF	WASTE MANAGEMENT OF ALAMEDA COUNTY		9.67		9/20/2022	90	440	NMP UTM
5S/1W-20G001	WM-C	D	Alameda County Water District	9/22/2022	8.29	-7.47	8/25/2022	17	340	PWC
5S/1W-22H001	E-100	N	Alameda County Water District	9/20/2022	10.42	4.04	9/23/2022	15,288	28,000	PWC
5S/2W-01B002		C	J.S. OLIVEIRA	9/22/2022	18.59	-12.66				DA M OBS@100' PWC casing damaged, photo, resident not home
5S/2W-01B009	1-MF	F	Alameda County Water District	9/21/2022	22.42	-9.78	9/7/2022	745	1,600	PWC
5S/2W-01B010	1-MC	C	Alameda County Water District	9/21/2022	22.14	-9.76	9/7/2022	622	1,400	PWC
5S/2W-01B011	1-SF	F	Alameda County Water District	9/21/2022	22.07	-9.89	9/7/2022	989	2,400	PWC
5S/2W-01B012	1-TF	F	Alameda County Water District	9/21/2022	23.90	-11.00				
5S/2W-01R001	E-68	N	Alameda County Water District	9/20/2022	17.04	6.70	9/15/2022	2,135	4,500	PWC
5S/2W-01R014	DESAL.PLANT MW	C	Alameda County Water District	9/20/2022	18.28	-12.92	8/25/2022	604	1,500	PWC
5S/2W-02C005	E-123	N	Alameda County Water District	9/20/2022	9.81	4.41	8/30/2022	6,127	11,000	PWC
5S/2W-02E001	E-49	N	Alameda County Water District	9/22/2022	5.11	2.01	8/31/2022	17,894	32,000	PWC
5S/2W-02F003	Well W	C	Alameda County Water District	9/20/2022	10.36	-8.11	9/1/2022	657	1,500	PWC
5S/2W-02F004	Well X	N	Alameda County Water District	9/20/2022	10.34	4.56	9/1/2022	503	1,600	PWC
5S/2W-02M006	E-51	N	Alameda County Water District	9/20/2022	7.93	1.81	9/15/2022	21,344	37,000	M PWC Post mislabeled
5S/2W-02M007	Site C	N	Alameda County Water District	9/21/2022	11.08	3.04				M UTS ACWD lock is broken
5S/2W-02Q001	OBSER. WELL #1	N	Alameda County Water District	9/21/2022	9.63	4.81				measured from ground surface
5S/2W-03A003	E-48	N	Alameda County Water District	9/21/2022	5.47	3.44	9/22/2022	7,529	14,000	M PWC Well lid does not secure
5S/2W-03G001	E-44	N	Alameda County Water District	9/21/2022	6.90	2.67	9/12/2022	17,770	31,000	PWC
5S/2W-03H002	E-47	N	Alameda County Water District	9/21/2022	4.89	2.77	9/22/2022	23,825	41,000	PWC
5S/2W-03H004	Old Jarvis - C	C	Alameda County Water District	9/21/2022	5.84	-3.45	9/22/2022	36,792	62,000	PWC
5S/2W-03H005	Old Jarvis - F	F	Alameda County Water District	9/21/2022	5.80	5.39	9/13/2022	26	820	PWC
5S/2W-08M011	Dumbarton - F	CF	Alameda County Water District	9/21/2022	6.45	A	9/2/2022	66	480	PWC
5S/2W-11H002	E-60	N	Alameda County Water District	9/22/2022	9.47	4.73	9/15/2022	1,358	3,100	PWC
5S/2W-12B008		D	LESLIE SALT CO.		12.49		9/22/2022	487	1,100	NMP RUN UTM capped M.P.
5S/2W-12B012	50733-1		CARGILL SALT		13.01					NMP UTM UTS no sampling port
5S/2W-12C003	E-62	N	Alameda County Water District	9/22/2022	10.10	3.94	9/15/2022	27,093	47,000	PWC
5S/2W-14E005	DE1-D1	D	Alameda County Water District	9/22/2022	7.92	A	9/13/2022	38	380	PWC
5S/2W-14E006	DE1-F	F	Alameda County Water District	9/22/2022	7.96	A	9/13/2022	28	260	PWC
5S/2W-14E007	DE1-C	C	Alameda County Water District	9/22/2022	7.77	6.16	9/13/2022	13	260	PWC
5S/2W-14E008	DE1-N	N	Alameda County Water District	9/22/2022	7.75	2.87	9/13/2022	41,652	81,000	PWC
5S/2W-14E009	DE1-D2	D	Alameda County Water District	9/22/2022	7.88	A	9/13/2022	57	440	PWC
5S/2W-17F002		N	LESLIE SALT CO.	9/23/2022	7.70	3.32				M label wells
5S/2W-17F003		C	LESLIE SALT CO.	9/23/2022	7.80	3.67				M label wells
5S/2W-24B003	Mowry Slough - C	C	Alameda County Water District	9/22/2022	8.73	6.53	9/13/2022	17	290	PWC

*NGVD 1929

APPENDIX F
ABBREVIATIONS

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GROUNDWATER MONITORING RECORDS

DESCRIPTION OF ABBREVIATIONS

Alternate Well Identifications

Clstr#1	Cluster Well
Peiz#4	Piezometer

Aquifer Codes

AHF	Above Hayward Fault
CF	Centerville-Fremont
C	Centerville
F	Fremont
D	Deep
N	Newark

Water Sample and Water Level Remarks

BRD	Buried
BOT	Bottles were not filled by owner/operator
C2T	Cap too tight
DA	Denied access (owner/operator refusal or locked gate)
EPD	Electrical power disconnected
NA	Not accessible (physically unable to access the well)
NMP	No measuring port
OBS@##	Obstruction at ## depth (feet)
OFF	Pump off therefore unable to obtain a water sample
PI	Pump inoperative
PWC	Pump with compressor
Run	Pump running
T	Sample obtained from tank
UTL	Unable to locate
UTM	Unable to measure depth to water
UTS	Unable to sample

Other Abbreviations

A	Flowing Artesian Conditions (Water level is above the ground surface)
CL	Chloride
M	Maintenance Needed
ppm	Parts per million
NGVD 1929	National Geodetic Vertical Datum of 1929
TDS	Total Dissolved Solids
WL	Water Level
--	Not measured or not sampled

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SURVEY REPORT
ON
GROUNDWATER CONDITIONS

February 2023

ALAMEDA COUNTY WATER DISTRICT

Fremont, California



BOARD MEMBERS

43885 SOUTH GRIMMER BOULEVARD • FREMONT, CALIFORNIA 94538
(510) 668-4200 • www.acwd.org

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Water Resources
JONATHAN WUNDERLICH
Finance and Administration

February 9, 2023

Mr. Paul S. Sethy, President
Board of Directors
Alameda County Water District
43885 South Grimmer Boulevard
Fremont, California 94538

Dear President Sethy:

Subject: Survey Report on Groundwater Conditions, February 2023

Submitted herewith is the Survey Report on Groundwater Conditions, as requested by the Board on November 10, 2022. It presents information on groundwater conditions together with estimates of FY 2023/24 costs of replenishing and maintaining the groundwater basin. This report is a prerequisite to consideration by the Board of the increase to the rate of replenishment assessment for FY 2023/24, under provisions of Chapter 1942, Statutes of 1961. It provides all the data required pursuant to Section 7 of this statute.

Staff is recommending a 4.9% increase in the replenishment assessment rate for production for purposes other than agricultural and municipal recreation to generate sufficient revenue to help pay necessary costs to ensure the supply and quality of groundwater in the basin. In recent years, Alameda County Water District has made substantial upgrades and repairs to aging recharge facilities to render them in compliance with the Endangered Species Act. Although grant funding has helped offset the cost of these projects, an increase in the replenishment assessment rate is necessary to help pay for remaining work, invest in long-term water storage and supply initiatives, and pay for other necessary upcoming capital costs identified in the Capital Improvement Program for the groundwater basin. The water storage and supply initiatives are critical to ensure reliability of sources of groundwater replenishment for the long-term as each of the District's sources is subject to future uncertainties related to climate change and regulatory and environmental pressures.

Sincerely,

Ed Stevenson
General Manager

PROFESSIONAL CERTIFICATION

The 2023 Survey Report on Groundwater Conditions was prepared by Mikel S. Halliwell, Senior Engineer, under the direction of Michelle Walden, Groundwater Resources Manager, and Laura Hidas, Director of Water Resources. The information and other content in this report, including quantities provided in the tables, text, and figures, were developed with a level of effort and methods considered adequate for the purpose of this report's creation; that is, to provide a reasonable basis for the Board of Directors of Alameda County Water District to determine the need for, and rate of, replenishment assessment for the coming fiscal year, pursuant to the requirements of the Replenishment Assessment Act of the Alameda County Water District.



Mikel S. Halliwell

Mikel S. Halliwell, P.E.
Senior Engineer
Groundwater Resources Division

February 3, 2023

Date

TABLE OF CONTENTS

	<u>PAGE NO.</u>
INTRODUCTION	1
CONCLUSIONS AND RECOMMENDATIONS.....	2
GROUNDWATER BASIN CONDITIONS.....	3
Background	3
Production of Groundwater.....	6
Replenishment Assessment Meters.....	10
Annual Overdraft	10
Change in Piezometric Heads	12
Extent of Salinity Intrusion	13
Accumulated Overdraft.....	13
AMOUNT AND AVAILABILITY OF SUPPLEMENTAL WATER SUPPLIES	14
Supplemental Water Supplies Available to the District.....	14
External Water Transfer for Future Use.....	15
Comprehensive Water Supply/Demand Inventory	15
GROUNDWATER COSTS AND FUNDING	16
Estimated Groundwater Costs.....	16
Estimated Cost of FY 2023/24 Supplemental Water Supply	16
Groundwater Program Funding and Replenishment Assessment	19

TABLE OF CONTENTS (Continued)

	<u>Tables</u>	<u>PAGE NO.</u>
Table 1	Land Use in ACWD Groundwater Statutory Service Area, 2017.....	4
Table 2	Production of Groundwater	7
Table 3	Annual Overdraft.....	11
Table 4	Supplemental Water Supplies	15
Table 5	Estimated Groundwater Costs.....	17
Table 6	Groundwater Program Funding and Replenishment Assessment	20

Figures

Figure 1	Land Use in ACWD Groundwater Statutory Service Area, 2017.....	5
Figure 2	Historical Groundwater Pumping in ACWD Groundwater Statutory Service Area (Actual through FY 2021/22)	8
Figure 3	ACWD Distribution System Source of Supply (FY 2021/22 through FY 2023/24)	9
Figure 4	Replenishment Assessment Rates (Historical FY 1970/71 to FY 2022/23 and Proposed FY 2023/24)	21

Plates

Plate 1	Local Agency Boundaries	
Plate 2	Conceptual Diagram of Historical Intrusion of Saltwater into the Niles Cone	
Plate 3	Historical Water Levels in the Newark Aquifer (Forebay Area)	
Plate 4	ACWD Groundwater Basin Monthly Well Level Elevations	
Plate 5	Water Elevation-Newark Aquifer, Fall 2022	
Plate 6	Water Elevation-Centerville-Fremont Aquifer, Fall 2022	

TABLE OF CONTENTS (Continued)

Plates (Continued)

Plate 7	Water Elevation-Deep Aquifer, Fall 2022
Plate 8	Comparison of 250 ppm Chloride Contours in the Newark Aquifer, Fall 1962 to Fall 2022
Plate 9	Comparison of 250 ppm Chloride Contours in the Centerville-Fremont Aquifer, Fall 1962 to Fall 2022
Plate 10	Comparison of 250 ppm Chloride Contours in the Deep Aquifer, Fall 1962 to Fall 2022
Plate 11	ACWD Water Supply/Demand Inventory, FY 2021/22 (Actual)
Plate 12	ACWD Water Supply/Demand Inventory, FY 2022/23 (Forecast)
Plate 13	ACWD Water Supply/Demand Inventory, FY 2023/24 (Forecast)

INTRODUCTION

On November 10, 2022, the Board of Directors (Board) of the Alameda County Water District (ACWD or District) ordered the preparation of a Survey Report on Groundwater Conditions. The purpose of the report is to provide information on the Niles Cone Groundwater Basin (Niles Cone) in accordance with Section 7, Chapter 1942, Statutes of 1961, referred to as the Replenishment Assessment Act of the Alameda County Water District (Replenishment Assessment Act).

The report contains the results of an annual study which: 1) estimates the total amount of groundwater production for the coming year; 2) estimates the total amount of groundwater recharge required; 3) determines the extent of any salinity intrusion into the groundwater basin; and 4) analyzes the effects on groundwater levels within the basin due to production and other well pumping, recharge, and sea level. The study reflects actual values of pumping, recharge, and sea level from July 2021 through November 2022 (except for private pumping which is projected after September 2022), and projected values for the remainder of Fiscal Year (FY) 2022/23 and the entirety of FY 2023/24. The projections, which were developed in December 2022, are based on a scenario of above-median rainfall in December 2022, and then a repeat of 2022 rainfall for the months of 2023 through November, followed by a median rainfall pattern for December 2023 through June 2024.

In addition, the report recommends the amount of supplemental water to be purchased in order to maintain basin water levels and summarizes the cost of the District's groundwater program including the estimated cost of the recommended supplemental supply. The amount of these costs is the basis for the determination by the Board of the need for, and the rate of, a replenishment assessment for FY 2023/24. The recommendations remain valid despite the succession of high rainfall events experienced from late December 2022 through mid-January 2023, between the time of completion of the hydrologic analysis and the finalization of this report.

The Replenishment Assessment Act requires the Board to perform certain actions prior to specific dates in the process of setting a replenishment assessment rate for the coming fiscal year. In addition, a proposal to increase the replenishment assessment rate is subject to the Proposition 218 notification requirement.

Listed below are the required actions for raising funds by replenishment assessment in FY 2023/24:

<u>REQUIRED ACTIONS</u>	<u>TENTATIVE DATE</u>	<u>LATEST DATE</u>
1. Order an Engineering Survey and Report.	Completed on Nov. 10, 2022	
2. To comply with the Sustainable Groundwater Management Act, mail written notices of scheduled Board actions on replenishment assessment to interested parties.	Completed on Feb. 1, 2023	
3. Declare whether water funds will be raised by (a) a water charge, (b) by a replenishment assessment, or (c) a combination of both.	Feb. 9, 2023	Mar. 14, 2023
4. To comply with Proposition 218, mail written notices of the proposed increase in the replenishment assessment rate to well owners or operators that would be subject to the new rate.	Feb. 10, 2023	Feb. 17, 2023
5. Publish a notice of Public Hearing.	Mar. 24, 2023	Mar. 31, 2023
6. Hold a Public Hearing - required on 2 nd Tuesday of April.	Apr. 11, 2023	Apr. 11, 2023
7. Complete Public Hearing.	Apr. 11, 2023	May 2, 2023
8. Make formal findings on groundwater conditions and costs, and rate of replenishment assessment.	Apr. 11, 2023	May 9, 2023

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. The water level in the Newark Aquifer has remained above sea level (the local mean level of San Francisco Bay). The aquifer was not overdrawn and there is no indication that saltwater entered the basin between fall of 2021 and fall of 2022.
2. The estimated volume of supplemental water needed for the replenishment of groundwater supplies in FY 2023/24 is 3,800 acre-feet.
3. Funds will be required in FY 2023/24 to pay capital and operating costs that benefit the groundwater basin, including State Water Project and Semitropic Water Storage District contract costs.
4. The estimate of the District's groundwater program costs for FY 2023/24 is summarized below:

Fixed and Capital Costs	\$10,354,000
Variable and Operating Costs	<u>\$13,056,000</u>
TOTAL	\$23,410,000

Recommendations

1. The District should purchase and/or take delivery of supplemental water from the State Water Project, Lake Del Valle, the Semitropic Water Storage District, and/or through other sources as they become available.
2. The District should levy a Replenishment Assessment to recover a portion of its groundwater program costs in FY 2023/24.

<u>Category</u>	<u>Existing</u>	<u>Proposed</u>
Agricultural and Municipal Recreation	\$ 8/acre-foot	\$ 8/acre-foot
All Other Purposes	\$ 513/acre-foot	\$ 538/acre-foot

GROUNDWATER BASIN CONDITIONS

Background

The ACWD Groundwater Statutory Service Area, approximately 107 square miles (68,600 acres), is shown on Plate 1. Table 1 is a tabulation of 2017 land use, and Figure 1 illustrates 2017 land use in pie chart format. The categories in Table 1 and Figure 1 were established with consideration of hydrologic characteristics as well as potential water use. The “Salt Ponds and Marsh” category generally refers to the surface water and marsh system (salt ponds, levees, sloughs, small flood control channels, and marshes) extending from the westerly edge of urban development to the coastline of San Francisco Bay. However, the Alameda Creek Flood Control Channel and re-channelized Alameda Creek, which run through salt pond and marsh areas, are included under “Non-Developed.” “Non-Developed” also includes idle land; the natural, wooded portion of Fremont Central Park; Tule Pond; Old Alameda Creek; and the ‘natural’ parts of the Quarry Lake areas. Buildings, paved parking, and lawns within the Quarry Lakes Recreational Area, the Coyote Hills, and other non-city-owned and operated parks comprise the non-municipal recreation component of “Irrigated Agricultural and Non-Municipal Recreation.” City parks, except the natural wooded area of Fremont Central Park, are categorized as part of “Municipal,” which also includes residential and retail/storefront-oriented commercial areas. The “Industrial” category refers to non-retail commercial lands such as industrial plants, warehouse areas, and business parks.

The Niles Cone Groundwater Basin, as described by the State of California Department of Water Resources (DWR), exists almost exclusively within the District’s boundaries. However, certain aquifer layers of the Niles Cone appear to extend substantially beyond this boundary. The Newark Aquifer and Centerville-Fremont Aquifers, according to DWR (Plate 2), continue westward all the way to the San Francisco Bay Peninsula. In addition, there is evidence that the Deep Aquifer is hydraulically connected to the adjacent East Bay Plain Groundwater Basin to the north, albeit with some impedance.¹ The amount of groundwater production from the basin west of San Francisco Bay is quite small and is neglected for the purposes of this report. The portion of the Newark Aquifer under the bay provides the means of transporting saline water to the groundwater basin underlying the District.

¹ Luhdorff and Scalmanini Consulting Engineers. 2003. *East Bay Plain Aquifer Test Project, South East Bay Plain and Niles Cone Ground-Water Basins.*

TABLE 1

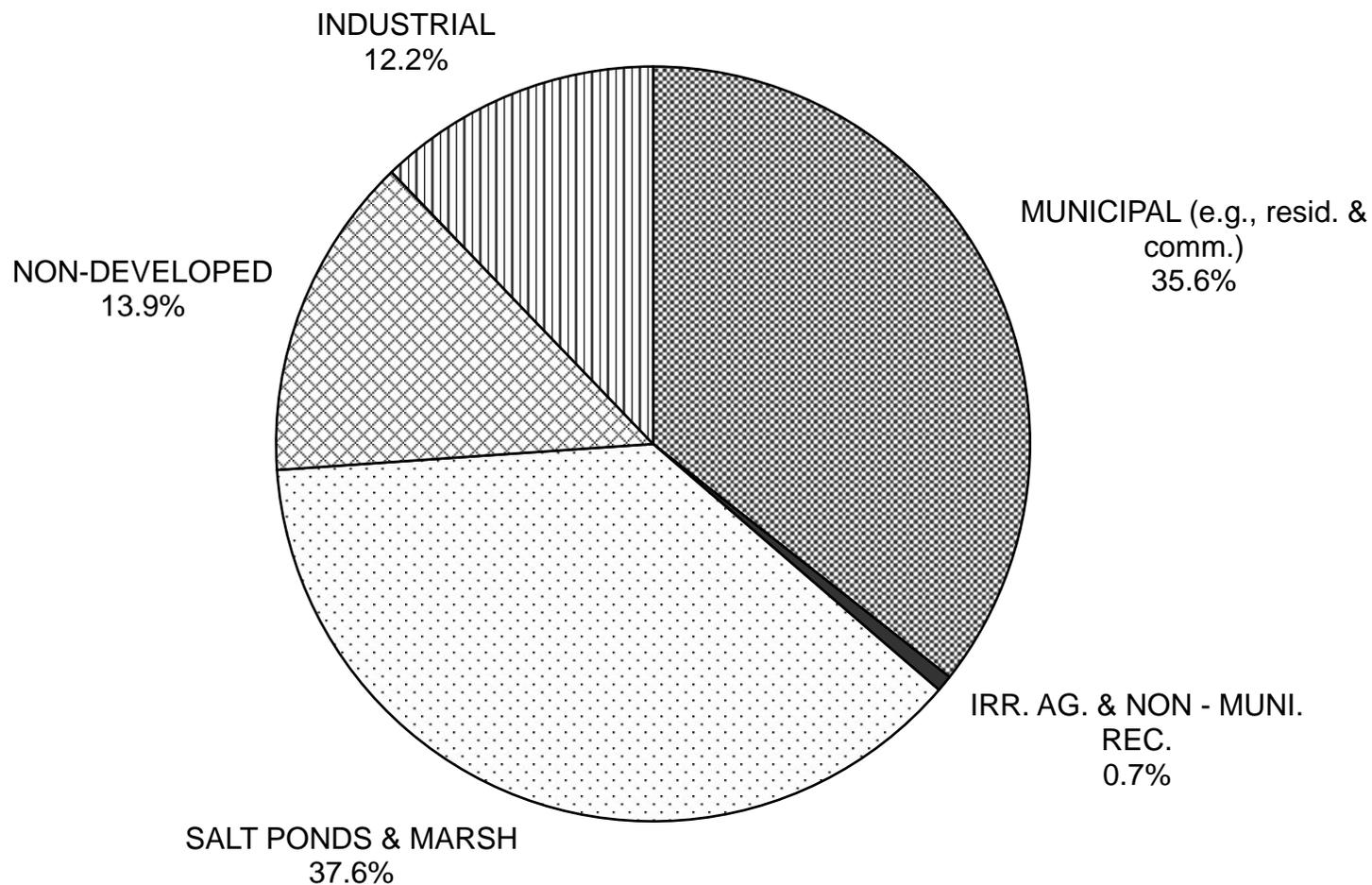
LAND USE IN ACWD GROUNDWATER STATUTORY SERVICE AREA, 2017

Land Use	Thousands of Acres
Municipal (e.g., residential and commercial)	24.4
Industrial	8.4
Irrigated Agricultural and Non-Municipal Recreation	0.5
Non-Developed	9.5
Salt Ponds and Marsh	<u>25.8</u>
TOTAL	68.6

The groundwater basin is divided on the east side of the District by the Hayward Fault. The fault is a relatively impermeable barrier that impedes the flow of water, hence dividing the overall basin into two sub-basins: the Above Hayward Fault (AHF) and Below Hayward Fault (BHF) sub-basins located east and west, respectively, of the Hayward Fault. The AHF Sub-basin is smaller than the BHF Sub-basin. In FY 2021/22, 35% of the groundwater produced from the Niles Cone was pumped from the AHF Sub-basin, whereas 65% was pumped from the BHF Sub-basin.

The BHF Sub-basin is composed of a forebay and three primary aquifers as shown on Plate 2. If the water levels in the Newark Aquifer are below sea level, saline water will flow from the bay and salt evaporation ponds into the Newark Aquifer, then easterly toward the forebay area. Then, following the flow of water caused by pumping, the saline water may move down into the lower levels of the forebay and into the Centerville-Fremont and Deep Aquifers. Saline water can also be transmitted from the upper aquifers to the lower aquifers through natural weaknesses in the aquitards that separate the aquifers, and through defective wells. The saltwater intrusion results when groundwater levels in the Newark Aquifer are below sea level due to an overdraft of the basin. The Newark Aquifer water levels are presently above sea level and are forecast to remain above sea level through June 2023. A graph of historical groundwater levels in the forebay area of the Newark Aquifer is presented on Plate 3.

FIGURE 1
LAND USE IN ACWD GROUNDWATER STATUTORY SERVICE AREA
2017



Production of Groundwater

The “production” of groundwater is defined in the Replenishment Assessment Act as the extraction of groundwater by pumping or any other method from shafts, tunnels, wells, excavations, or other sources of groundwater for domestic, irrigation, industrial, or other beneficial uses. Most pumping from the basin is classified as production.

Table 2 lists the various components of groundwater pumping for FY 2021/22 (actual), FY 2022/23 (forecast), and FY 2023/24 (forecast). Most of the FY 2021/22 groundwater production figures in the table were obtained from well meter readings. A small amount of unmetered groundwater production was estimated. Production amounts for FY 2022/23 reflect a combination of meter readings, estimates, and projections, with actual values (meter readings) through September 2022 for most non-ACWD owned wells on the Replenishment Assessment Program, and through November 2022 for active ACWD wells. The production of groundwater for the remaining months of FY 2022/23 and the entirety of FY 2023/24 was based on an analysis of historical trends, expected water demand on the ACWD distribution system, and information provided in planning documents and by well owners/operators.

Production is broken down by usage category and by sub-basin (Above Hayward Fault and Below Hayward Fault). Groundwater supplied to ACWD’s distribution system comprises the “Municipal” category of production, and includes water pumped from ACWD’s two wellfields, and water delivered to the Newark Desalination Facility from certain Aquifer Reclamation Program (ARP) wells. ARP water not diverted to the Newark Desalination Facility (i.e., ARP water discharged to flood control channels) is accounted for in Table 2 under “Aquifer Reclamation,” a category of pumping that is not production.

The purpose of ACWD's ARP is to restore water quality in certain sections of the basin in which groundwater became brackish due to intrusion of saltwater from San Francisco Bay. This saltwater intrusion occurred as a result of high-volume pumping during the 1920's through the early 1960's without adequate recharge for replenishment of the basin. The ARP involves extracting brackish groundwater, with the objective of improving the quality of groundwater in the basin as recharge water replaces the pumped brackish groundwater. ARP pumping also prevents the plume of brackish water in the Centerville-Fremont Aquifer from further migrating inland toward ACWD's Mowry Wellfield.

Prior to 2003, all pumped ARP water was discharged to San Francisco Bay. Construction of the Phase 1 Newark Desalination Facility subsequently enabled conversion of a portion of this discharge to potable use. The portion for potable use has increased since the Phase 2 expansion of the Newark Desalination Facility in 2010.

“Other Reported Pumping,” the final category listed in Table 2, is extraction of groundwater quantified and reported to ACWD, but is neither production nor “Aquifer Reclamation.” This category may include dewatering of trenches and excavations during construction of subsurface utilities.

“Total Reported Pumping” is the sum of “Total Production,” “Aquifer Reclamation,” and “Other Reported Pumping.” A certain amount of groundwater pumped from the basin is not reported to ACWD, and hence, is not included in Table 2. The District’s groundwater flow model numerically compensates for any unreported pumping through various simulated loss mechanisms in order to achieve a reasonably accurate calculation of the water balance for the groundwater basin (see “Annual Overdraft” and Plates 11, 12, and 13).

TABLE 2
PRODUCTION OF GROUNDWATER
(in thousands of acre-feet)**

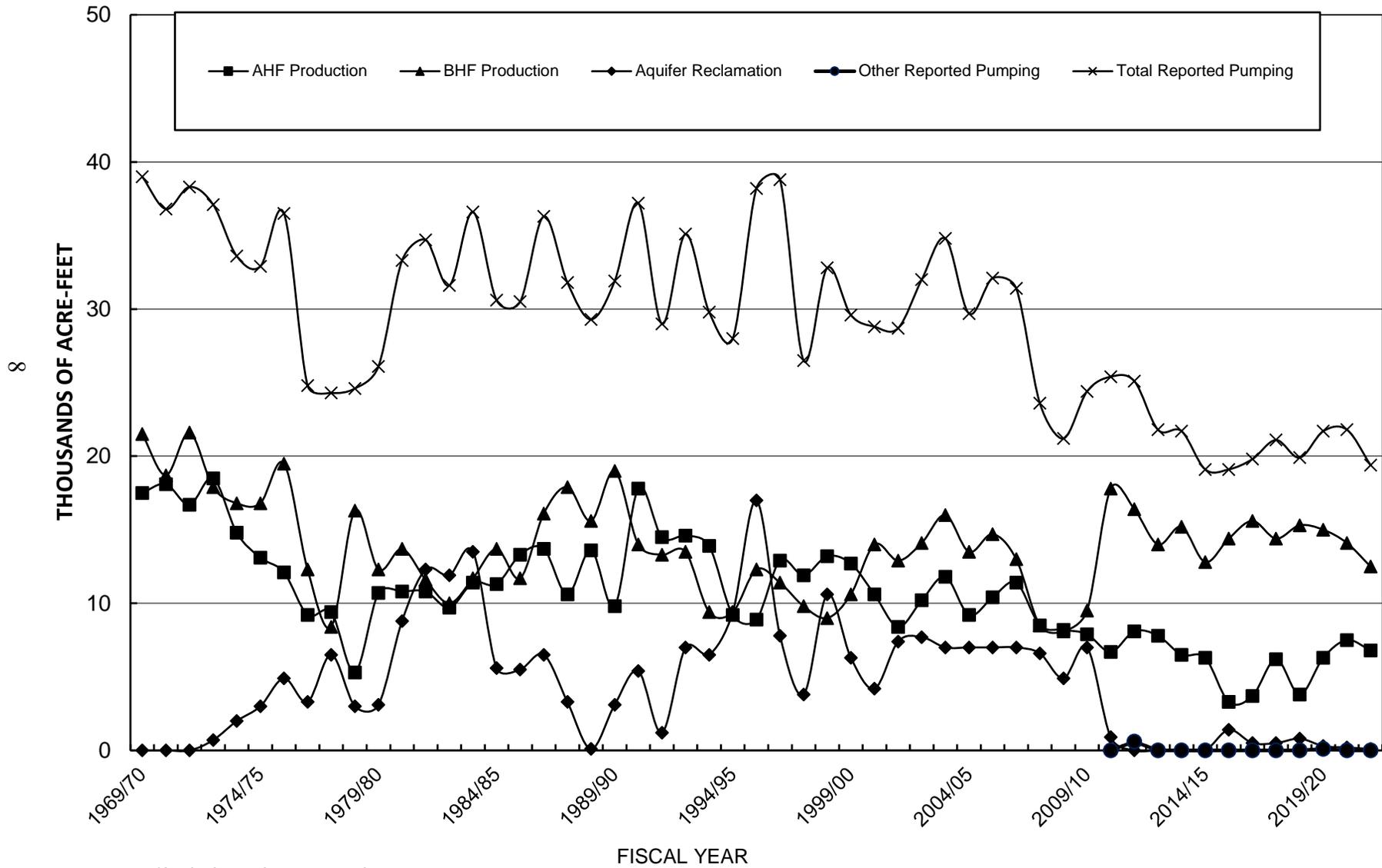
	FY 2021/22 <u>Actual</u>	FY 2022/23 <u>Forecast</u>	FY 2023/24 <u>Forecast</u>
ABOVE HAYWARD FAULT			
Municipal*	6.6	4.6	3.5
Industrial	0.1	0.1	0.1
Non-Municipal Recreation	0.0	0.0	0.0
Agricultural	0.0	0.0	0.0
Municipal Recreation	<u>0.1</u>	<u>0.2</u>	<u>0.2</u>
Subtotal	6.8	4.9	3.8
BELOW HAYWARD FAULT			
Municipal*	11.6	10.9	10.4
Industrial	0.7	0.8	0.8
Non-Municipal Recreation	0.1	0.1	0.1
Agricultural	0.0	0.1	0.0
Municipal Recreation	<u>0.1</u>	<u>0.0</u>	<u>0.1</u>
Subtotal	12.5	11.9	11.4
TOTAL PRODUCTION BY USE			
Municipal*	18.2	15.5	13.9
Industrial	0.8	0.9	0.9
Non-Municipal Recreation	0.1	0.1	0.1
Agricultural	0.0	0.1	0.0
Municipal Recreation	<u>0.2</u>	<u>0.2</u>	<u>0.3</u>
TOTAL PRODUCTION	19.3	16.8	15.2
Aquifer Reclamation*	0.1	0.1	0.0
Other Reported Pumping	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
TOTAL REPORTED PUMPING	19.4	16.9	15.2

* The discussion on Page 6 describes how the amounts for these categories have been calculated.

** Categories with quantities of “0.0” may have had measurable amounts of pumping below 50 acre-feet but are reported as 0.0 due to rounding.

Figure 2 provides graphs of historical groundwater pumping from FY 1969/70 through FY 2021/22. The terms “AHF Production” and “BHF Production” in the legend correspond to the subtotaled production of the Above Hayward Fault and Below Hayward Fault, respectively, in Table 2. Similarly, “Aquifer Reclamation,” “Other Reported Pumping,” and “Total Reported Pumping” refer to the same-named categories in Table 2. Figure 3 indicates the extent to which groundwater comprised the District’s distribution system supply in FY 2021/22, and the projected values thereof for FY 2022/23 and FY 2023/24.

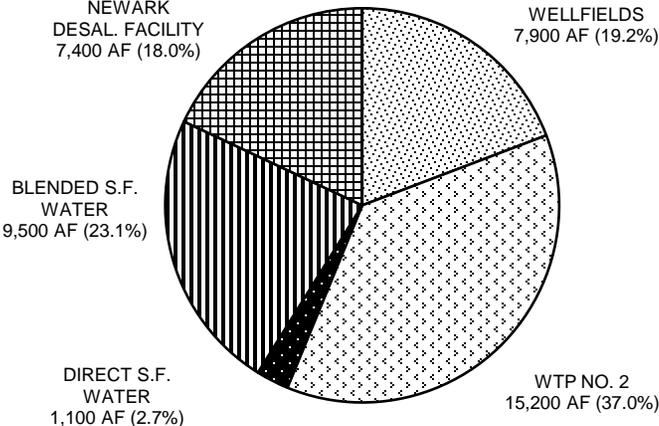
FIGURE 2
HISTORICAL GROUNDWATER PUMPING IN ACWD GROUNDWATER STATUTORY SERVICE AREA*
(ACTUAL THROUGH FY 2021/22)



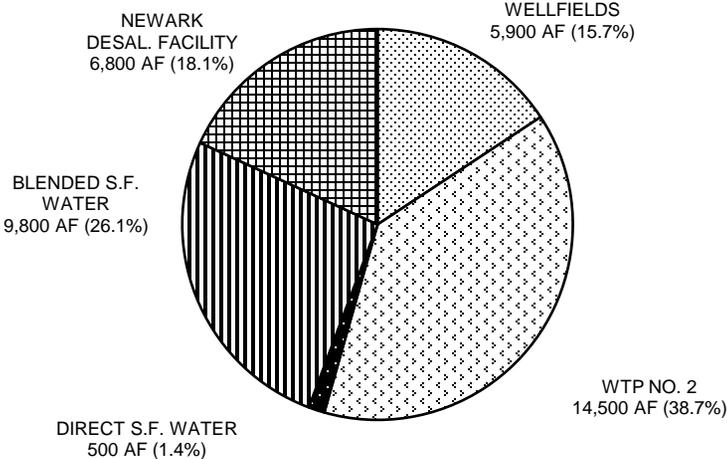
*Includes private pumping.

FIGURE 3 - ACWD DISTRIBUTION SYSTEM SOURCE OF SUPPLY

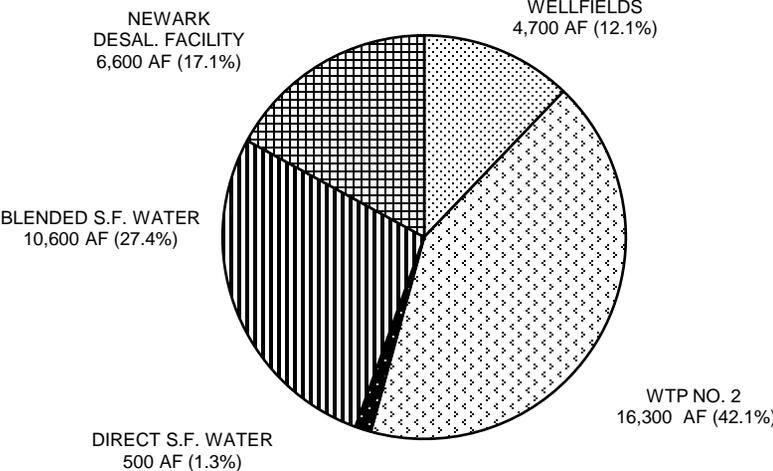
FY 2021/22 (ACTUAL)



FY 2022/23 (FORECAST)



FY 2023/24 (FORECAST)



As indicated in Figure 3, 37.2% of ACWD's distribution system supply in FY 2021/22 was supplied by groundwater, with 19.2% and 18.0% supplied by the wellfields and the Newark Desalination Facility, respectively. In FY 2022/23, the groundwater share is expected to be 33.8%, with 15.7% from the wellfields and 18.1% from the Newark Desalination Facility. In FY 2023/24, it is anticipated that the wellfields will contribute 12.1%, and the Newark Desalination Facility 17.1%, to provide an estimated groundwater share of 29.2% toward the distribution system supply.

Replenishment Assessment Meters

The establishment of the replenishment assessment required that meters be installed on all active wells in the District. This requirement can, however, be deferred by the Board on a year-to-year basis if it is justified. The Board chose to install the necessary water meters on most wells in FY 1970/71 and FY 1971/72. Additional meters have been installed as necessary for new or reactivated wells.

Of the 61 non-ACWD-owned wells with active accounts in the replenishment assessment program, all are currently equipped with meters.² All active ACWD production and ARP wells are equipped with meters, except Nursery Well, which is operated infrequently on a standby basis. The amount pumped from this unequipped well is based on estimates instead of actual meter readings. The cost of metering Nursery Well would likely not be returned during its remaining active years.³ To allow for the use of non-metered wells, Section 20 of the Replenishment Assessment Act requires that the Board adopt a resolution extending the date when all water producing facilities are required to be metered. The price of water metering devices or other circumstances can be the basis for the Board's determination. Last year, the Board extended the deadline for metering non-metered wells to March 14, 2023.

Wells with discharge lines not greater than two inches in diameter and providing groundwater for domestic use or for irrigation on less than one acre of land can be excused from the meter requirement, and charged a flat rate established by the Board. The Board would be required to pass a resolution to that effect at the time they fix the general replenishment assessment rate. The Board did not levy a flat rate assessment on these wells for FY 2022/23.

Annual Overdraft

The annual overdraft, as defined in the Replenishment Assessment Act, means the amount, as determined by the Board, by which the quantity of groundwater removed by any natural or artificial means from the groundwater supplies within the District during the water year exceeds the quantity of non-saline water replaced therein by the replenishment of such groundwater supplies in the water year by any natural or artificial means other than replenishment under provisions of the Act. Effectively, the annual overdraft is the difference between the amount of pumping of groundwater from the basin and the amount of water recharged from local water supplies for the fiscal year.

The net local water recharged to the groundwater basin is composed of the portion of watershed runoff impounded at the recharge facilities, infiltration from applied water (e.g., irrigation) and rainfall, other inflow, less saline and other outflows from the basin. Part of the local recharge from infiltration and applied water may percolate into the brackish water in the Newark Aquifer. While

² At the time this report was prepared, metering equipment for three wells in the Replenishment Assessment Program was undergoing maintenance.

³ In addition to Nursery Well, amounts pumped from ACWD's Lowry Well and Whipple Well, which are also infrequently operated, have been estimated pending a review of the accuracy of metering equipment on these wells. The estimated pumping amounts from Lowry, Nursery, and Whipple wells, combined, are 1.6 acre-feet in FY 2021/22 and 1.4 acre-feet in FY 2022/23.

part of this water is not usable directly due to degradation from mixing with saline water, it does contribute to the volume of water in the basin. The component amounts of net local recharge for FY 2021/22 (actual), FY 2022/23 (forecast), and FY 2023/24 (forecast) are listed in Table 3.

TABLE 3

ANNUAL OVERDRAFT
(In Thousands of Acre-Feet)

	FY 2021/22 <u>Actual</u>	FY 2022/23 <u>Forecast</u>	FY 2023/24 <u>Forecast</u>
TOTAL REPORTED PUMPING (Table 2)	<u>19.4</u>	<u>16.9</u>	<u>15.2</u>
LOCAL RECHARGE			
Runoff to the recharge facilities	15.0	12.3	15.8
Infiltration from direct rain and applied water, and other inflow (modeled)	7.3	6.1	8.9
(less) Saline water outflow (modeled)	-4.3	-3.1	-4.5
(less) Other outflow (modeled)	<u>-0.9</u>	<u>-0.5</u>	<u>-1.4</u>
TOTAL NET LOCAL RECHARGE	<u>17.1</u>	<u>14.8</u>	<u>18.8</u>
ANNUAL OVERDRAFT	2.3	2.1	-3.6

Values in Table 3 reflect actual conditions from July 2021 through November 2022 (except private pumping which is projected after September 2022), and then projected conditions through the remainder of FY 2022/23 and the entirety of FY 2023/24. Actual (historical) values of pumping and runoff to the recharge facilities were measured, and future values thereof have been projected based on trends and the selected hydrologic scenario described on Page 1. Amounts for the other flows in Table 3 were obtained with the assistance of ACWD’s groundwater model, which, besides predicting future piezometric head, calculates volumes of flow that cannot easily be measured or estimated by direct methods. The model requires input of measurable or easily estimated parameters, such as rainfall, pumping, recharge at the recharge facilities, and sea level. Measured values of these parameters were input for the historical portion of the simulation (ending in November 2022), and then forecasted values were appended to model input files to enable the simulation to extend into the future through CY 2024. Resulting model output of simulated flows, including ‘actual’ values for FY 2021/22, are subject to uncertainty due to model limitations and accuracy of its input parameters.

In late 2021, the District acquired a new model, named Niles East Bay Integrated Model (NEBIM), which uses the *Integrated Water Flow Model (IWFM)* platform. IWFM is the successor platform to *Integrated Groundwater Surface Water Model (IGSM)*, upon which the District’s previous model was based. The District retained a consulting firm to develop and calibrate NEBIM. Subsequently, ACWD staff appended input files and used this new model for the 2022 annual SGMA Report and, most recently, this 2023 Survey Report.

The volumes of modeled flows indicated in Table 3 and Plates 11, 12, and 13 are aggregations of more specific output from NEBIM's zone budget functionality. *Natural saline outflow* includes model-simulated subsurface flow from the Niles Cone to aquifers under San Francisco Bay⁴, and net discharge of saline groundwater to salt ponds and streams. *Infiltration from direct rain and applied water, and other inflow* includes model-simulated deep percolation, inflows from small watersheds (hillside areas), and net inflow from the neighboring East Bay Plain Basin. Unlike prior years' Survey Reports, this report does not distinguish evaporation loss from the recharge facilities because such loss is effectively accounted for through model-simulated evapotranspiration and other processes, which constrain the amount of *infiltration from direct rain and applied water, and other inflow*. *Other outflow* is model-simulated net discharge of non-saline groundwater into streams.

Change in Piezometric Heads

In this report, each piezometric head value is presented as the actual elevation of the water level in the well in which it was measured, and accordingly, is expected to equate (approximately) to the level of the free water surface in the aquifer if the well is not in a pressure aquifer.

Movement of water within an aquifer is in the direction of decreasing piezometric heads (in certain cases, precise calculations of flow direction may require consideration of not only water levels but also water density). Prior to 1972, the Newark Aquifer groundwater levels decreased in the landward direction toward the basin forebay (as shown on Plate 2). This caused landward movement of saline water toward the forebay area. The piezometric heads in the lower aquifers were lower than those of the Newark Aquifer, and the aquitards separating the aquifers are thin in the forebay. As a result, saline water in the forebay area migrated downward from the Newark Aquifer and into the lower aquifers. A combination of recharge and pumping may have caused saline water in these lower aquifers to disperse and spread to areas outside the forebay.

Quantitative elevations of well levels (piezometric heads) on Plate 4, and elsewhere in this report, are given in reference to the National Geodetic Vertical Datum of 1929 ("NGVD 1929" or "1929 vertical datum"). For example, an elevation of 10.0 means 10.0 feet above the 1929 vertical datum. In Survey Reports prepared prior to 2018, elevations were reported in terms of "mean sea level" (MSL), with zero feet MSL taken to be the 1929 vertical datum⁵. Therefore, numerical values of elevations in this report are comparable to those previous Survey Reports. In order to avoid confusion as to how high groundwater levels are relative to contemporary local mean sea level (San Francisco Bay proximal to the Niles Cone Groundwater Basin), this report refrains from use of "MSL". The local sea level datum of southeast San Francisco Bay was last determined to be 0.6 feet higher than the 1929 vertical datum per available tidal station data⁶. Accordingly, in this report, only groundwater levels higher than Elevation 0.6 feet are considered "above sea level." Consistent with global sea level trends, the difference between local mean sea level (San Francisco Bay) and Elevation 0 feet NGVD 1929 is likely to increase in future years.

During FY 2021/22, the piezometric heads of groundwater contained within the pressure level areas of the Newark Aquifer were above sea level. The water levels in the Centerville-Fremont Aquifer and Deep Aquifer indicator wells on Plate 4 were below sea level over the entire fiscal year except late November 2021 through mid to late December 2021. The changes in piezometric

⁴ The portion of *natural saline outflow* attributed to flow to aquifers under San Francisco Bay includes not just flow via the Newark Aquifer, but also the Centerville-Fremont and Deep Aquifers. Therefore, some exchange of groundwater between the Niles Cone and aquifers under the bay may not be saline.

⁵ NGVD 1929 was established as a sea level-based datum.

⁶ 1983-2001 epoch data recorded at the San Leandro Marina. Source: National Oceanic and Atmospheric Administration.

heads from the beginning to the end of the fiscal year were, approximately, no change in the Newark Aquifer, and decreases of one foot each in the Centerville-Fremont and Deep Aquifers. The level in the Newark Aquifer forebay indicator well varied between Elevation 7.1 feet and 12.9 feet during the fiscal year. Since the piezometric heads of the Newark Aquifer remained above sea level, some of the saltwater in the Newark Aquifer should have been repulsed back toward San Francisco Bay.

Under the scenario of pumping (Table 2) and recharge (Tables 3 and 4) considered for this report, the water level in the Newark Aquifer forebay indicator well (4S/1W-29A06 on Plate 4) is anticipated to be at Elevation 8 feet in June 2023 and 13 feet in June 2024. The well levels in the Centerville-Fremont and Deep Aquifers are expected to be slightly below Elevation 0 feet for most of the remainder of the current water year.

The AHF Sub-basin, situated between the Hayward Fault and the hills, accommodates higher groundwater levels than those in the BHF Sub-basin (Newark, Centerville-Fremont and Deep Aquifers). With reference to the hydrograph of well 4S/1W-27D08 on Plate 4, levels within the AHF were in the middle to upper part of their operating range in FY 2021/22, and the difference in values between the beginning and end of the fiscal year was negligible.

Extent of Salinity Intrusion

As discussed above under the heading of "Change in Piezometric Heads," the overdraft condition that had existed within the groundwater basin prior to the mid-1970s caused saltwater intrusion to occur in the BHF Sub-basin. Enhancement of ACWD's artificial recharge operation and importation of supplemental water have helped to reverse this condition.

Portions of aquifers that contain water with a chloride concentration greater than 250 parts per million (ppm) are considered to remain degraded by legacy saltwater intrusion. Plates 8 through 10, which were obtained from the District's *2022 Groundwater Monitoring Report* (Groundwater Monitoring Report), indicate the location of the 250 ppm line (isochlor) in the Newark Aquifer, Centerville-Fremont Aquifer, and Deep Aquifer in the fall of 2021. Each plate also includes the corresponding 250 ppm isochlor line for 1962—the year when supplemental water from the State Water Project was first purchased and groundwater levels began to rebound. These plates aim to illustrate the difference between the two time periods with respect to the 250-ppm contour line.

According to the Groundwater Monitoring Report, all wells monitored above the Hayward Fault had chloride concentrations below 250 ppm in the fall of 2022, and contours of chloride concentrations in the fall of 2022, mapped for the Newark, Centerville-Fremont, and Deep Aquifers, are similar (but not exactly coincidental) to those for the fall of 2021.

The Groundwater Monitoring Report includes a discussion of trends in chloride over multiple years (indicating overall improvement in water quality), which is useful for assessing success of basin management strategies.

Accumulated Overdraft

The accumulated overdraft is defined in the Replenishment Assessment Act as the amount of water necessary to be replaced in the groundwater basin to prevent the landward movement of bay water into the fresh groundwater basin. This applies only to the BHF Sub-basin. Therefore, for this report, the accumulated overdraft is assumed to be the volume of water required to raise the water levels in the Newark Aquifer to the local mean level of San Francisco Bay.

The accumulated overdraft of the basin has been eliminated since early 1972, as indicated on Plate 3. The water levels in the Newark Aquifer are expected to remain above sea level through FY

2022/23 and for the entire FY 2023/24, based on projections of pumping (Table 2) and local recharge (Table 3). Accordingly, no accumulated overdraft is expected in June 2023.

AMOUNT AND AVAILABILITY OF SUPPLEMENTAL WATER SUPPLIES

Supplemental Water Supplies Available to the District

The District obtains supplemental water for groundwater replenishment from the California State Water Project (SWP), ACWD's share of the local conservation storage in Del Valle Reservoir, ACWD's banked storage at the Semitropic Water Storage District (SWSD), and other sources. 'Withdrawal' of banked water is physically accomplished through an exchange, whereby ACWD receives SWP water that would otherwise be allocated to the SWSD, or to other State Water Contractors that, in turn, can be compensated through deliveries from the SWSD. When advantageous, ACWD replenishes its banked water supply through diversion of a portion of its state water allocation to SWSD in lieu of direct delivery to ACWD. The terms of the water banking agreements between ACWD and SWSD include a 10% evaporation and aquifer loss; hence, 90% of ACWD's transfers of SWP water to SWSD (i.e., 90% of the amounts indicated in Plates 11 to 13) is credited to ACWD's balance of banked water.

The amount of water that can be withdrawn from the SWSD in any given year, and the timing of withdrawals, is subject to limitations. To improve flexibility, some SWSD water, when available, may be withdrawn and directed to an intermediate storage facility, such as San Luis Reservoir (SLR), in exchange for water to be delivered to ACWD at a more advantageous time (see Plates 11 through 13). In addition, water may be obtained from other sources, such as in FY 2020/21 when ACWD obtained some of its imported supply from through the State Water Contractors' Dry Year Transfer Program (DYTP).

Table 4 indicates the amounts of supplemental water received at ACWD for groundwater replenishment from each of the aforementioned sources in FY 2021/22 and the amounts that are anticipated to be received in FY 2022/23 and FY 2023/24. The anticipated amounts of supplemental water will help maintain groundwater levels within acceptable ranges, according to a model-assisted forecast conducted in December 2022. Assumptions in the analysis included pumping volumes indicated in Table 2, along with a rainfall pattern yielding amounts of local recharge listed in Table 3. The District will adjust procurement of supplemental water in Calendar Year (CY) 2023 and/or CY 2024 depending on real-time conditions and updated forecasts.

TABLE 4
 SUPPLEMENTAL WATER SUPPLIES
 (In Thousands of Acre-Feet)*

<u>Source</u>	<u>FY 2021/22</u> <u>Actual</u>	<u>FY 2022/23</u> <u>Forecast</u>	<u>FY 2023/24</u> <u>Forecast</u>
State Water Project (SWP)	0.0	0.0	0.0
Del Valle Reservoir	0.0	0.0	0.0
SWSD (without intermediate storage)	0.2	0.9	3.8
SWSD via SLR	0.0	0.0	0.0
Other	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
TOTAL FOR YEAR	0.2	0.9	3.8

* Values reflect only amounts delivered, or projected to be delivered, to ACWD for groundwater recharge within the fiscal years indicated. This table does not include values for the supply to ACWD’s active surface water treatment plant (Treatment Plant No. 2) and diversions of state water to the SWSD, and from SWSD to SLR, for future ACWD use. However, values for these entities appear on Plates 11 through 13.

External Water Transfer for Future Use

As indicated on Plates 11, 12, and 13, ACWD withdrew SWSD water for both groundwater replenishment and to supply ACWD’s Treatment Plant 2 in FY 2021/22. Additional withdrawals are anticipated in FY 2022/23 and 2023/24 under assumed hydrologic conditions described on Page 1.

ACWD expects to replenish its banked water supply at SWSD after sufficient recovery from the current drought, or as State Water Project water supplies become available for resumption of such water deposits. As of mid-December 2022 (when the hydrologic analysis for this report was under preparation), ACWD was not planning deposits to SWSD for FY 2022/23 or FY2023/24. Actual water banking withdrawals or deposits through the end of FY 2023/24 will depend on realization of actual hydrologic conditions and/or updated forecasts.

Over the long-term future, ACWD anticipates that approximately 30% of water banked at SWSD (after losses) will be returned to ACWD to replenish the groundwater basin or enable such replenishment with equivalent other imports. The remaining 70% would supply the distribution system directly (e.g., Treatment Plant No. 2). The 30% component for groundwater recharge is expected to be realized as a long-term average, not necessarily in any individual year that banked water is withdrawn.

Comprehensive Water Supply/Demand Inventory

The water supply/demand inventory for ACWD in FY 2021/22, FY 2022/23, and FY 2023/24 is illustrated in flow chart format on Plates 11, 12, and 13, respectively. These plates depict not only groundwater basin inflows and outflows listed in Tables 2, 3, and 4, but also the supply to Treatment Plant No. 2, inputs of San Francisco Public Utilities Commission water to the distribution system, and external transfers. As noted under “Supplemental Water Supplies Available to the District”, external transfers include deposits of banked water (SWP to SWSD)

and withdrawals of banked water for holding at intermediate storage facilities (e.g., SWSD to SLR) pending delivery to ACWD.

Volumes of inflow and outflow are added at the lower left of Plates 11, 12, and 13 to give the calculated change in amount of groundwater stored in the basin for each of the three fiscal years. Despite the (model-simulated) decreases in storage in FY 2021/22 (Plate 11), and FY 2022/23 (Plate 12), well levels were within an acceptable range from July 2021 through November 2022 and are expected to remain so through the remainder of FY 2022/23. Levels are anticipated to rebound to the higher part of their operating range in FY 2023/24, commensurate to projected increase in storage indicated on Plate 13.

GROUNDWATER COSTS AND FUNDING

Estimated Groundwater Costs

In FY 2023/24, the District's groundwater program activities will require funds to pay for: 1) variable cost of supplemental water, either delivered directly to ACWD for groundwater replenishment or external transfers for future groundwater replenishment; 2) fixed SWP and SWSD contract costs for supplemental water; 3) capital costs of the District's groundwater recharge facilities; and 4) the District's operation, maintenance, and engineering activities associated with groundwater replenishment and basin management. The estimated cost of the District's groundwater program is shown by major function in Table 5 for FY 2023/24. The amounts on Table 5 reflect costs for only those items in the General Fund, or the portion of such items, which are expected to benefit all users of the groundwater basin. Hence, costs attributed to the distribution system, including (but not limited to) operation of wells and treatment plants to supply the distribution system, are not reflected in Table 5 and therefore not considered in the recommendation of replenishment assessment rates. Individual cost items in the General Fund are reviewed each year for their relevance to the supply and maintenance of the groundwater basin. Administration and General costs support all of the District's operations commonly. Through a detailed evaluation, it is estimated that 15% of the total District Administrative and General costs in FY 2023/24 will support the supply and maintenance of the groundwater basin.

Estimated Cost of FY 2023/24 Supplemental Water Supply

The cost of supplemental water for groundwater replenishment in FY 2023/24 is expected to be incurred through ACWD's State Water Project (SWP) contract with the Department of Water Resources, and water banking agreements with the Semitropic Water Storage District (SWSD). As detailed below, SWP and SWSD costs have fixed and variable components. For purposes of this report, fixed costs are generally recurring and independent of the amount of water transferred, whereas variable costs are calculated according to the amount of water transferred. Because variable cost payments are calculated monthly for water transferred over the prior month, transfers payable in FY 2023/24 would occur between June 2023 and May 2024 instead of precisely within the fiscal year (July 2023 through June 2024). Therefore, the volumes of supplemental water for calculation of variable costs, discussed below, may slightly differ from the amounts in Table 4 and Plate 13.

TABLE 5
ESTIMATED GROUNDWATER COSTS*
FY 2023/24

<u>Item</u>	<u>Cost \$</u>
FIXED OR CAPITAL COSTS	
State Water Project Fixed (Groundwater portion)	6,016,000
Water Banking Fixed (Groundwater portion)	352,000
Los Vaqueros Reservoir Expansion Project (Groundwater portion)	1,184,000
Kaiser Pond Diversion Improvement Project	804,000
Rubber Dam 2 - Larinier Fishway	578,000
Delta Conveyance (Groundwater portion)	458,000
Groundwater PFAs Sampling and Source Investigation	300,000
Administrative Capital	191,000
Rock Pond to Horseshoe Lake Pipeline	125,000
Program Planning & Environmental Documentation	104,000
Interfacility Electrical and Control	93,000
Groundwater SGMA Enhancement	51,000
Site A ARP Well Outfall	40,000
GW Supply Facilities Improv/Equip Replacements	32,000
Vallecitos Channel Betterments	<u>26,000</u>
Subtotal	\$ 10,354,000
EXPENSES	
State Water Project Variable (Groundwater portion)	212,000
Water Banking Variable (Groundwater portion)	910,000
Pits and Creek Maintenance and Diversion Pumping	1,401,000
Supervision, Labor and Expense	
1. Management of groundwater basin	1,028,000
2. Management of watershed and recharge facilities	1,387,000
3. Monitoring and analysis of groundwater	470,000
4. Monitoring and analysis of creek and pit water	499,000
5. Well Ordinance administration**	1,487,000
6. Water resources planning	1,243,000
7. Groundwater Protection Program	598,000
8. Local Oversight Program (LUFT/SCP sites)	553,000
Aquifer Reclamation Program **	31,000
Replenishment Assessment and Meter Maintenance	22,000
Administrative and General Expense (Groundwater portion)	<u>3,215,000</u>
Subtotal	\$ 13,056,000
Total	\$ 23,410,000

* Includes only the non-growth component of costs associated with the management and replenishment of the groundwater basin. Growth and distribution system-related costs are not included herein. Capital costs other than State Water Project and water banking fixed costs are based on cost estimates for projects in ACWD's 25-Year Capital Improvement Program.

** Reflects net cost after permit and lease revenue considered.

State Water Project

As listed in Table 5, the share of the SWP fixed cost allocated to the groundwater basin in FY 2023/24 is estimated to be \$6,016,000. The SWP variable cost allocated to the groundwater basin, \$212,000, is estimated based on the following: 1) the amounts of supplemental water to be received from various sources for groundwater replenishment, as indicated on Table 4, and conveyed via the South Bay Aqueduct (does not include Lake Del Valle), and 2) adjustments.

When water is ‘withdrawn’ from SWSD for the groundwater basin, it is physically delivered via the South Bay Aqueduct. Therefore, such withdrawal incurs the same SWP transportation charge as water accounted for as directly sourced from the SWP. The unit SWP charge to deliver water to ACWD via the South Bay Aqueduct is anticipated to be \$77.1371 per acre-foot (AF) in CY 2023 and \$77.0593/AF in CY 2024. Under the import schedule considered for this report, all supplemental water for the groundwater basin payable in FY 2023/24 (3,841 AF) would be received in CY 2023, and therefore would incur a SWP transportation charge of \$296,284 prior to accounting for external transfers and adjustments.

External transfers and adjustments are calculated differently than the above-described transportation charge assessed precisely according to the volume of water delivered to the groundwater basin. For water deposited at SWSD for future use, the groundwater basin is assessed a flat 30.1% of the SWP delivery charge. The unit SWP cost to deposit water at SWSD in FY 2023/24 is expected to be \$28.08/AF; however, no deposits at SWSD are anticipated in FY 2023/24 per the water supply scenario considered for this Survey Report.

Adjustments expected for FY 2023/24 are credits that would offset the groundwater basin’s share of SWP costs for previous deposits made at SWSD for the volumes of water returned to ACWD between June 2023 and May 2024 (returned either ‘directly’ to ACWD, or to SLR for later arrival at ACWD). Such credits are determined by applying 30.1% of overall credits, regardless of the actual percentage of water returned to the groundwater basin versus Treatment Plant No 2. Through this methodology, two credits, totaling to \$84,770, have been estimated for the groundwater basin in FY 2023/24: 1) \$78,686, calculated by applying the groundwater share (30.1%) to a unit discount of \$28.0758/AF for 9,311 AF of water to be withdrawn from SWSD to ACWD ‘directly’ (5,470 AF to Treatment Plant No. 2 and 3,841 AF to the groundwater basin); and 2) \$6,084, calculated by applying 30.1% to the withdrawal of 2,443 AF water from SWSD to SLR at a net unit credit of \$8.2736/AF (\$28.0758 credit for withdrawal from SWSD less \$19.8022 charge to deposit at SLR).

In summation, the net estimated SWP variable cost for the groundwater basin in FY 2023/24 has been calculated as \$296,284 in base cost, plus \$0 for deposits at SWSD, less \$84,770 in credits, resulting in a net amount of \$211,514 (rounded to \$212,000).

SWP fixed and variable costs to the groundwater basin are offset by SWP override tax revenue (see Table 6 on Page 20).

Water Banking (SWSD charges)

The groundwater share of SWSD’s annual O&M fee, allocated as a fixed cost, is expected to be \$352,000 in FY 2023/24 (30.1% of the total amount of \$1,170,000) (see “Water Banking Fixed (Groundwater portion)” in Table 5). The variable SWSD cost is anticipated to be \$910,000 based on planned withdrawal of 3,841 AF for the groundwater basin at a unit effective ‘take’ cost of \$236.80/AF.

Other

No other sources of supplemental water (in addition to those described above) for the groundwater basin are planned for FY 2023/24.

Groundwater Program Funding and Replenishment Assessment

In accordance with Section 7, Paragraph f, of the Replenishment Assessment Act, shown below is the rate of replenishment assessment required to be levied upon the production of groundwater to fund the estimated groundwater costs shown on Table 5 without consideration of other revenue sources.

<u>Water Use</u>	<u>Acre-Feet</u> (from Table 2)	<u>Rate</u> \$/acre-foot	<u>Funds</u> \$
Agricultural and Municipal Recreation	300	8.00 (a)	2,400
Other than Agricultural and Municipal Recreation	14,900	1,570.98 (b)	<u>23,407,600</u>
	Required Total (from Table 5)		23,410,000

(a) Maximum rate fixed by AB 2052

(b) Computed to nearest 1¢

Historically, the District has used a combination of sources to fund groundwater costs. Table 6 shows the existing and proposed replenishment assessment rates and the corresponding amounts of the other currently utilized sources of groundwater program funds required for the total cost shown on Table 5. The recommended FY 2023/24 replenishment assessment rate (for production for purposes other than agricultural and municipal recreation) has been made with consideration that sources of revenue other than replenishment assessment will be available.

A 4.9% increase in the replenishment assessment rate for production for purposes other than agricultural and municipal recreation is recommended to generate sufficient revenue to help pay necessary costs to ensure the supply and quality of groundwater in the basin. In recent years, ACWD has made substantial upgrades and repairs to aging recharge facilities to render them in compliance with the Endangered Species Act. Although grant funding has helped offset the cost of these projects, an increase in the replenishment assessment rate is necessary to help pay for remaining work, invest in long-term water storage and supply initiatives, and pay for other necessary upcoming capital costs identified in the Capital Improvement Program for the groundwater basin. The water storage and supply initiatives are critical to ensure reliability of sources of groundwater replenishment for the long-term as each of the District's sources is subject to future uncertainties related to climate change and regulatory and environmental pressures. The full list of expected capital and operational expenditures for the groundwater basin in FY 2023/24 is included in Table 5. The total annual cost to sustain the groundwater basin fluctuates significantly from year to year, mainly due to variability in timing and cost of the fixed and capital items.

As indicated in Figure 4, the replenishment assessment rates were not increased in FY 1998/99 to FY 2007/08.

TABLE 6

GROUNDWATER PROGRAM FUNDING AND REPLENISHMENT ASSESSMENT
FY 2023/24

	<u>Acre-Feet</u>	<u>Existing</u> <u>Rate</u> \$/AF	<u>Revenue</u> <u>Funds</u> \$	<u>Proposed</u> <u>Rate</u> \$/AF	<u>Revenue</u> <u>Funds</u> \$
A. Replenishment Assessment Categories					
1. Agricultural and Municipal Recreation	300	8	2,400	8	2,400
2. Municipal, Industrial and Non-Municipal Recreation	14,900	513	7,643,700	538	8,016,200
B. Ad Valorem Taxes					
1. Portion of 1% Tax			7,815,000		7,815,000
2. State Water Project			6,228,000		6,228,000
C. Grants			115,000		115,000
Total Groundwater Revenue			21,804,100		22,176,600
Total Groundwater Costs			<u>23,410,000</u>		<u>23,410,000</u>
Subtotal			(1,605,900)		(1,233,400)
Intra-Fund Transfer			<u>1,605,900</u>		<u>1,233,400</u>
Total			0		0

**FIGURE 4
REPLENISHMENT ASSESSMENT RATES**

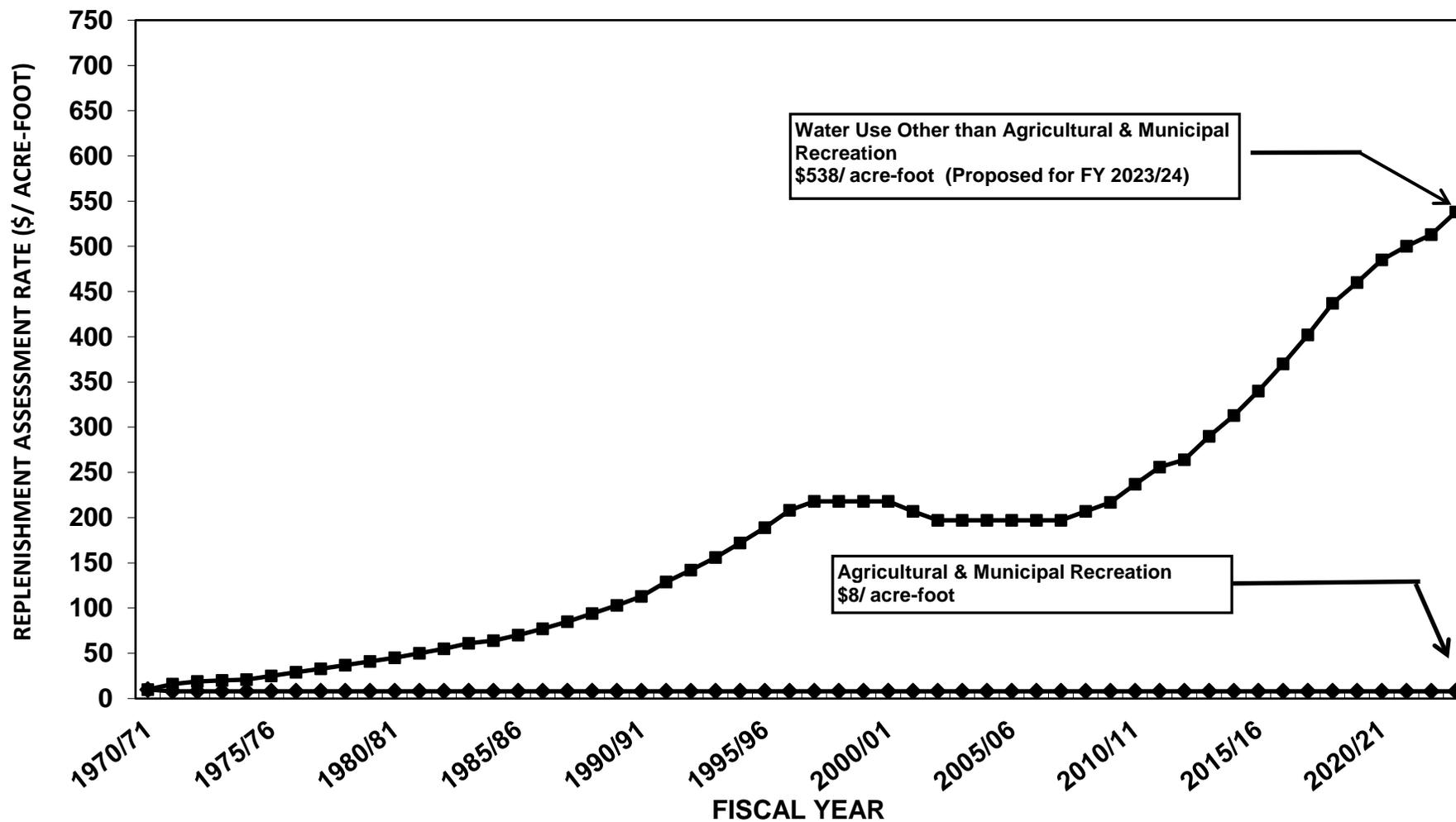
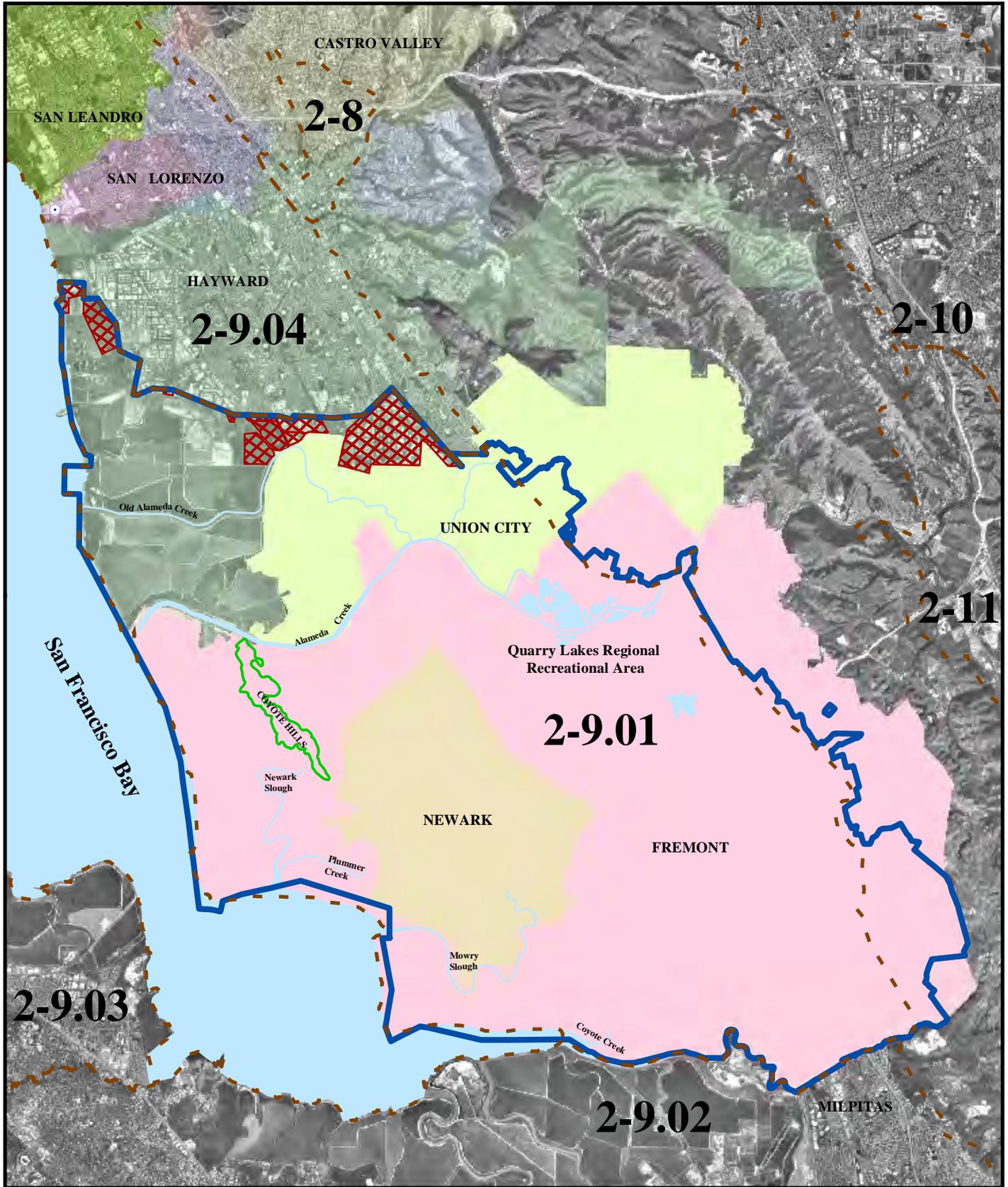
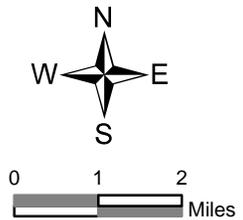


PLATE 1: LOCAL AGENCY BOUNDARIES

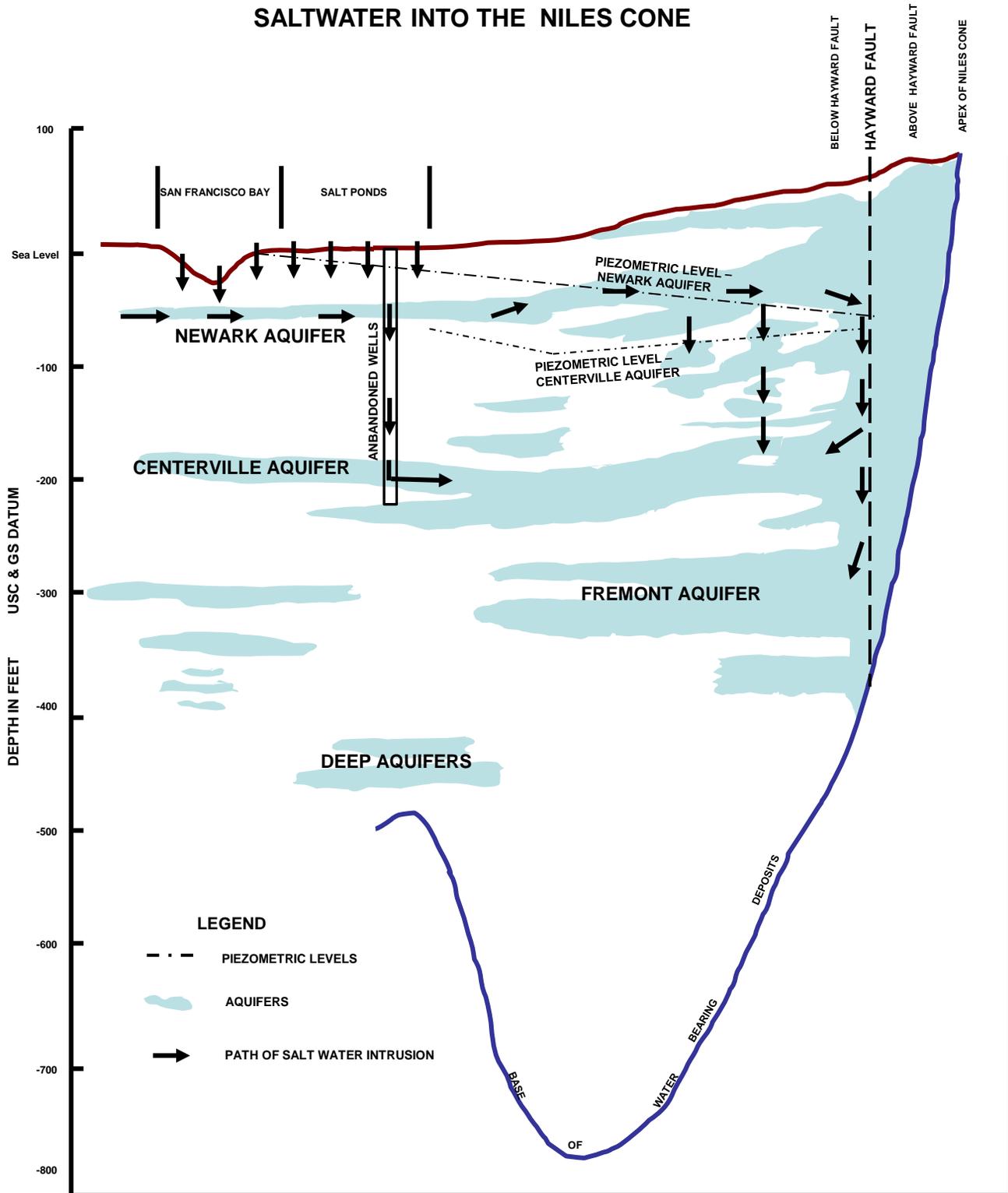


 **ACWD GROUNDWATER STATUTORY SERVICE AREA BOUNDARY**
 **2016 APPROVED DWR BULLETIN-118 GROUNDWATER BASIN BOUNDARY**

 **Hayward Detachment**
 **EBMUD Bayside Groundwater Project Location**

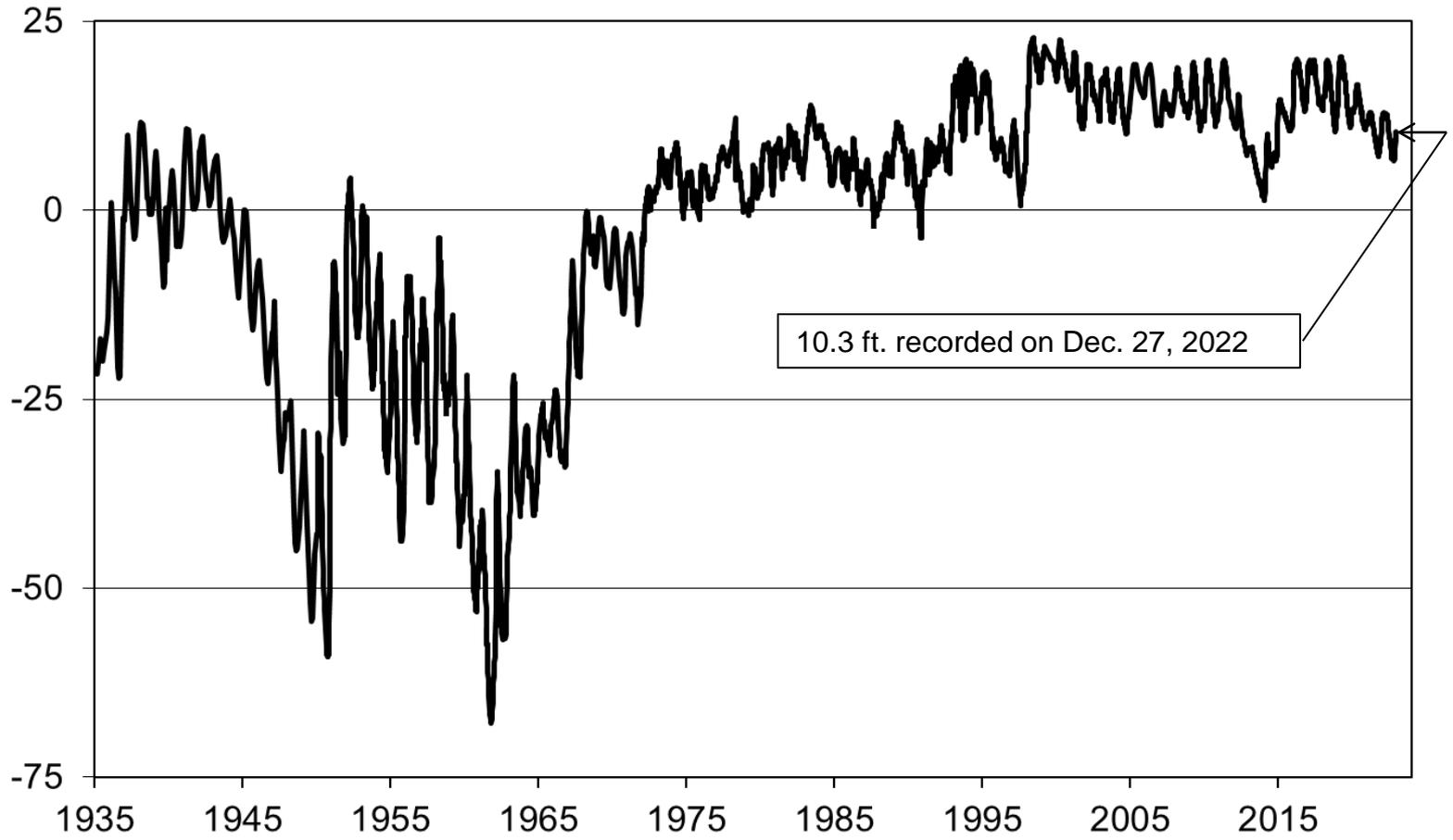


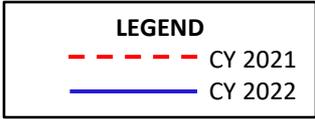
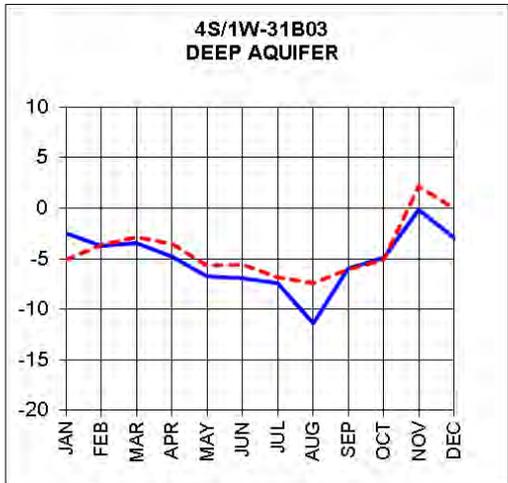
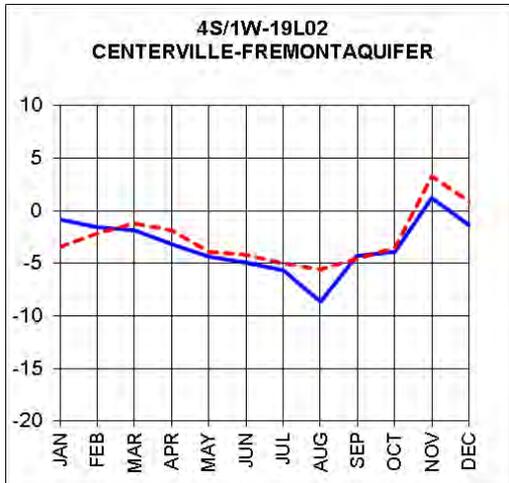
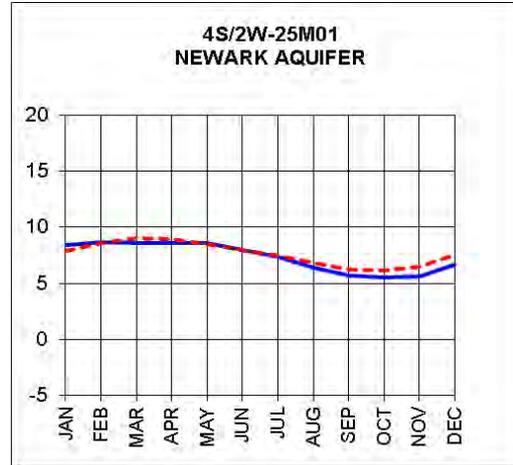
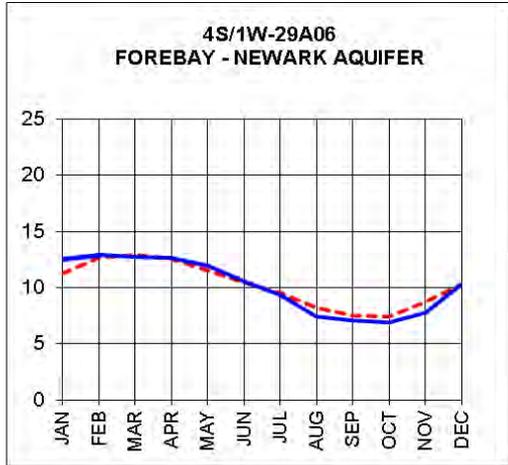
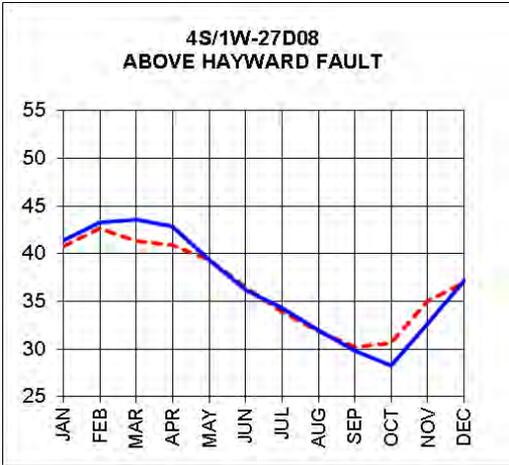
CONCEPTUAL DIAGRAM OF HISTORICAL INTRUSION OF SALTWATER INTO THE NILES CONE



Adapted from State of California Dept. of Water Resources. 1968. *Evaluation of Groundwater Resources, South Bay, Volume 1: Fremont Study Area. Bulletin No. 118-1.*

HISTORICAL WATER LEVELS IN THE NEWARK AQUIFER (FOREBAY AREA)



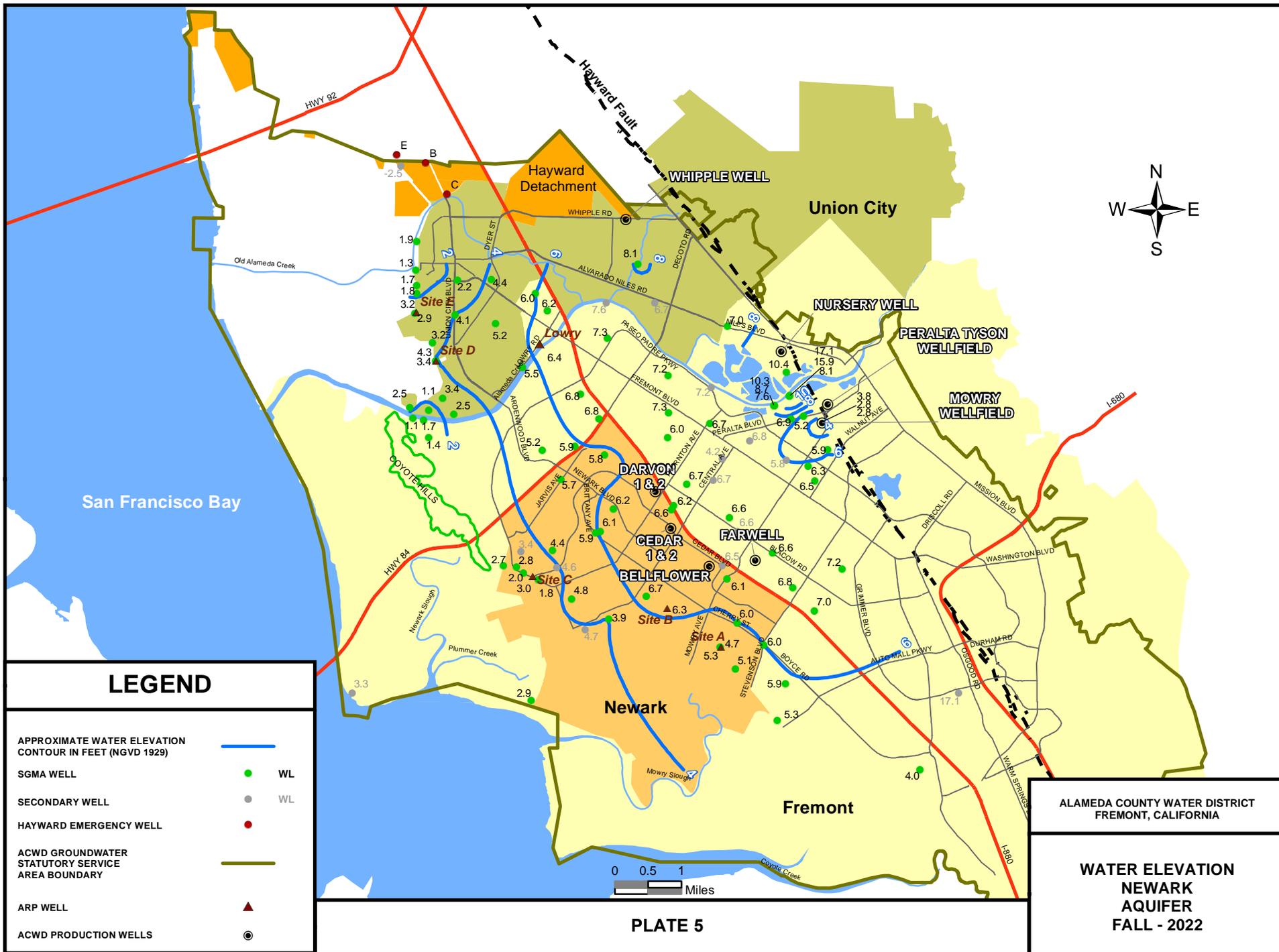


ALAMEDA COUNTY WATER DISTRICT

GROUNDWATER BASIN MONTHLY WELL LEVEL ELEVATIONS (feet, NGVD 1929)

TYPICAL INTERVALS OF OCCURRENCE OF BHF AQUIFERS BELOW GROUND SURFACE

NEWARK (UPPER) AQUIFER : 40' to 140'
 CENTERVILLE-FREMONT AQUIFERS: 180' to 390'
 DEEP AQUIFERS: 400' and deeper



LEGEND

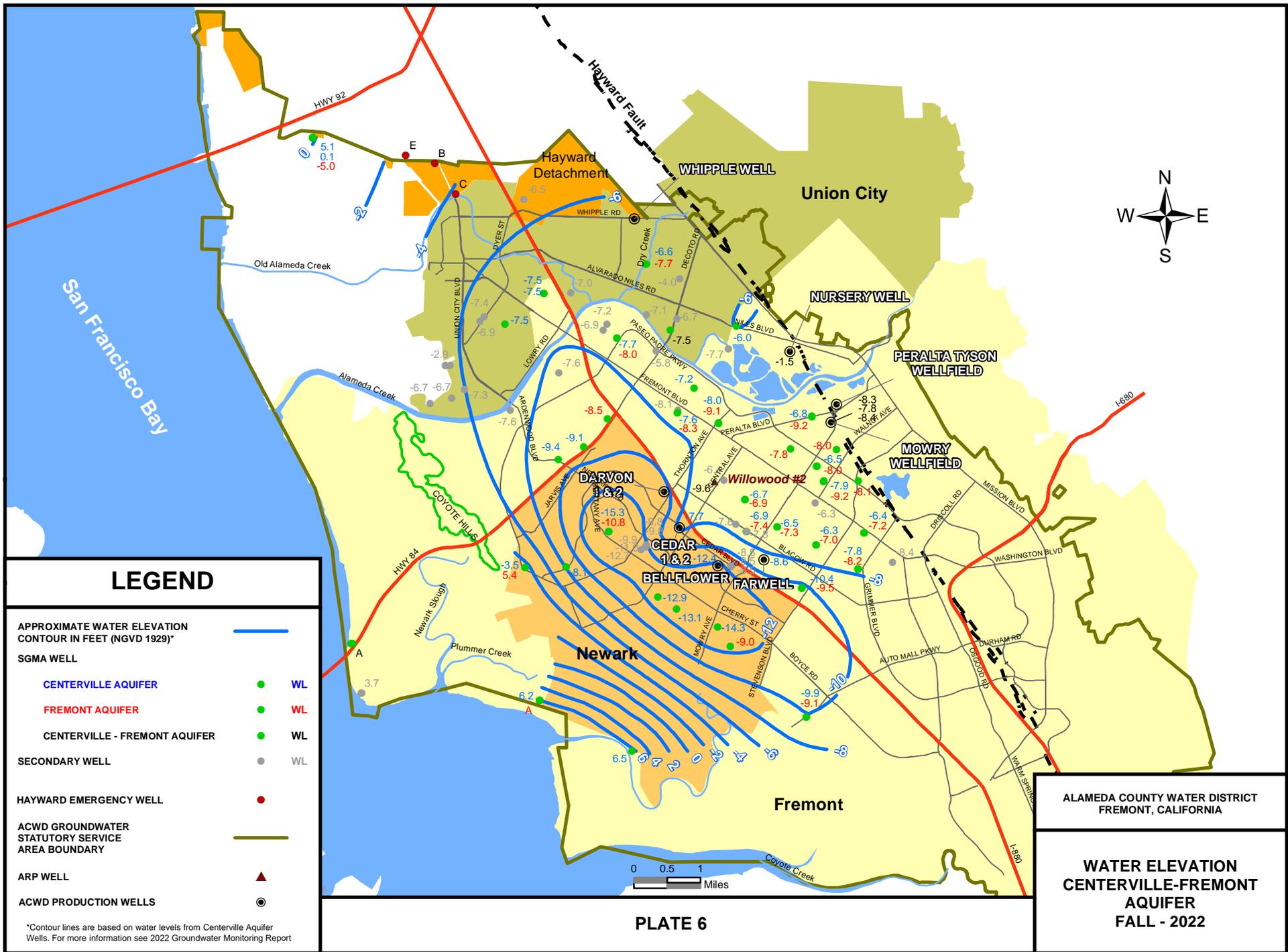
- APPROXIMATE WATER ELEVATION CONTOUR IN FEET (NGVD 1929) —
- SGMA WELL ● WL
- SECONDARY WELL ● WL
- HAYWARD EMERGENCY WELL ●
- ACWD GROUNDWATER STATUTORY SERVICE AREA BOUNDARY —
- ARP WELL ▲
- ACWD PRODUCTION WELLS ●



PLATE 5

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

**WATER ELEVATION
NEWARK
AQUIFER
FALL - 2022**



LEGEND

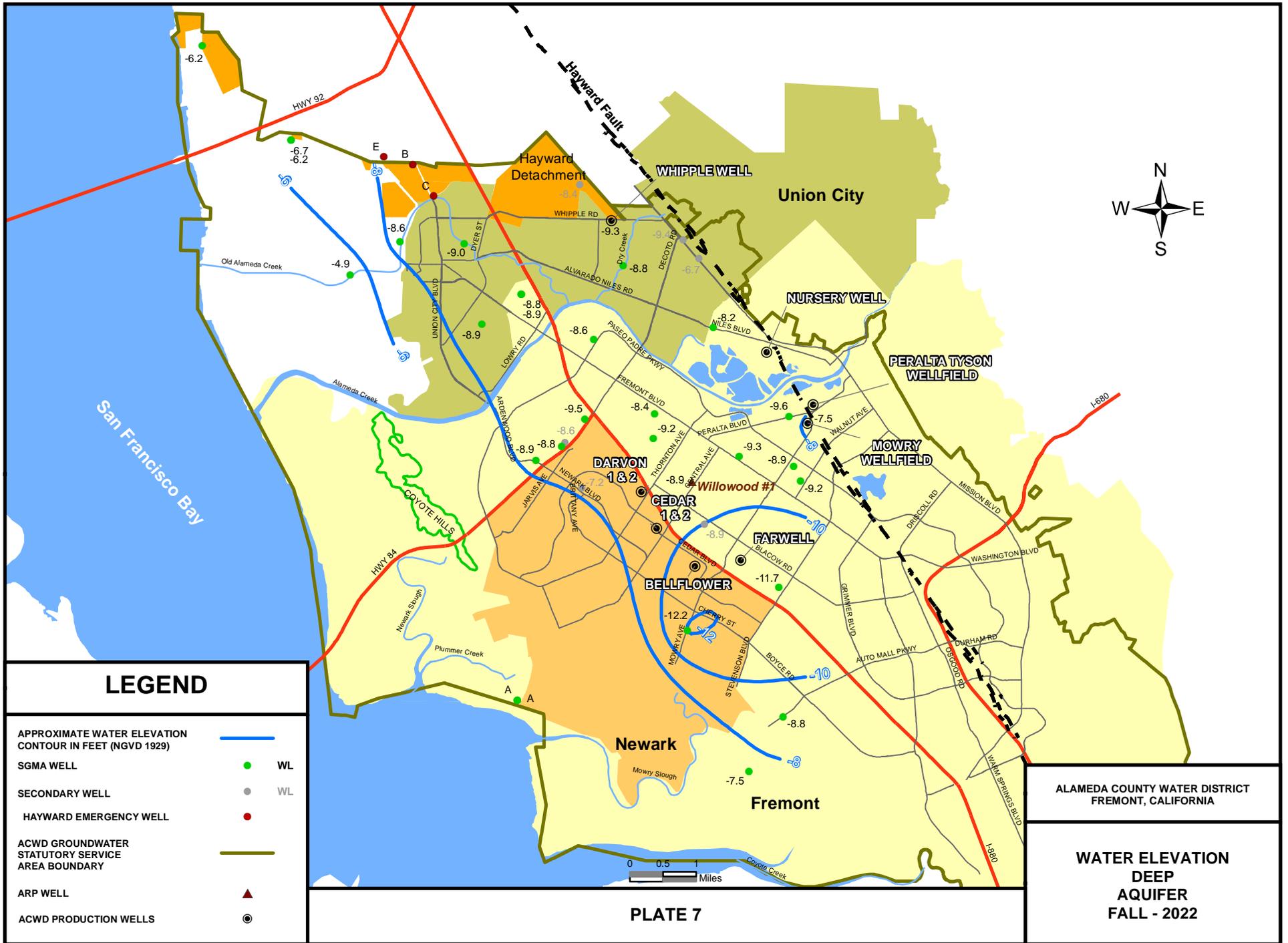
- APPROXIMATE WATER ELEVATION CONTOUR IN FEET (NGVD 1929)*
- SGMA WELL
 - CENTERVILLE AQUIFER ● WL
 - FREMONT AQUIFER ● WL
 - CENTERVILLE - FREMONT AQUIFER ● WL
 - SECONDARY WELL ● WL
 - HAYWARD EMERGENCY WELL ●
 - ACWD GROUNDWATER STATUTORY SERVICE AREA BOUNDARY —
 - ARP WELL ▲
 - ACWD PRODUCTION WELLS ●

*Contour lines are based on water levels from Centerville Aquifer Wells. For more information see 2022 Groundwater Monitoring Report

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

**WATER ELEVATION
CENTERVILLE-FREMONT
AQUIFER
FALL - 2022**

PLATE 6



San Francisco Bay

Hayward Fault

Hayward Detachment

Union City

DARVON 1&2

CEDAR 1&2

BELLFLOWER

Newark

Fremont

WHIPPLE WELL

NURSERY WELL

PERALTA TYSON WELLFIELD

MOWRY WELLFIELD

Willowood #1

FARWELL



-6.2

-6.7

-6.2

-8.6

-9.0

-8.9

-8.8

-8.9

-8.6

-9.5

-8.4

-8.6

-8.9

-8.8

-12.2

-8.9

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-7.5

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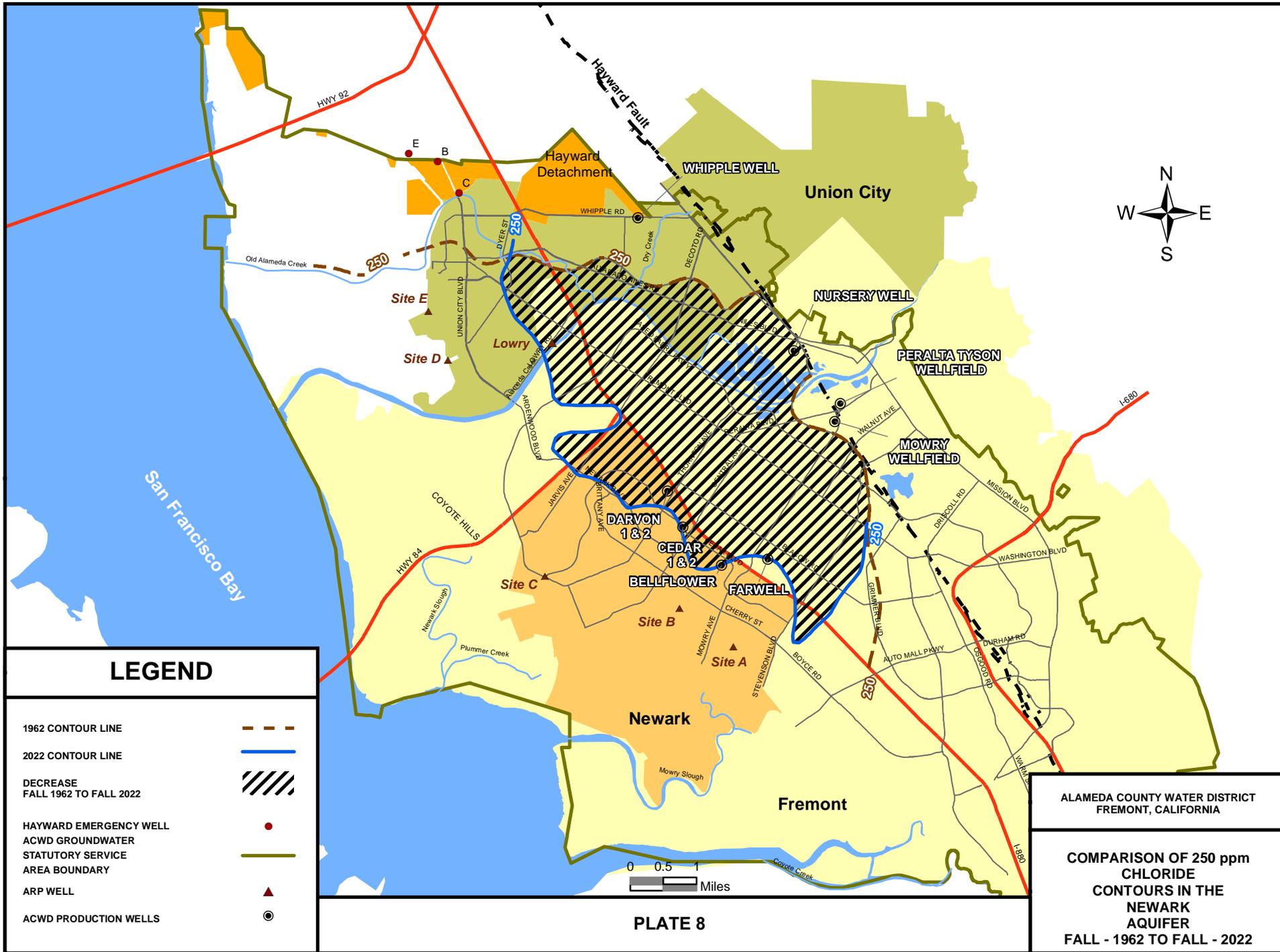
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LEGEND

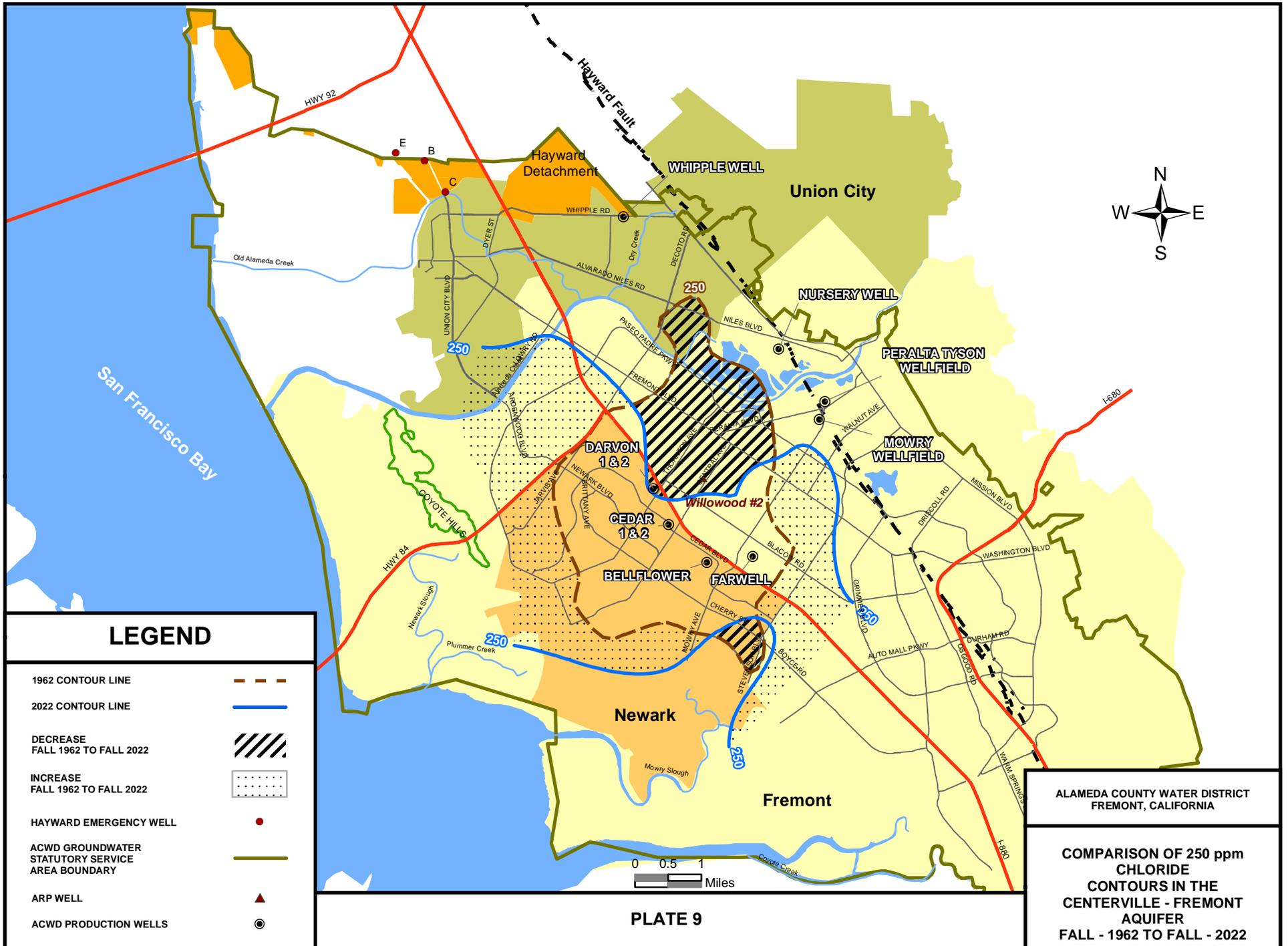
- 1962 CONTOUR LINE ---
- 2022 CONTOUR LINE —
- DECREASE
FALL 1962 TO FALL 2022 ▨
- HAYWARD EMERGENCY WELL ●
- ACWD GROUNDWATER
STATUTORY SERVICE
AREA BOUNDARY —
- ARP WELL ▲
- ACWD PRODUCTION WELLS ◎

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

**COMPARISON OF 250 ppm
CHLORIDE
CONTOURS IN THE
NEWARK
AQUIFER
FALL - 1962 TO FALL - 2022**

PLATE 8

0 0.5 1 Miles



LEGEND

- 1962 CONTOUR LINE ---
- 2022 CONTOUR LINE —
- DECREASE
FALL 1962 TO FALL 2022 ▨
- INCREASE
FALL 1962 TO FALL 2022 ⋯
- HAYWARD EMERGENCY WELL ●
- ACWD GROUNDWATER
STATUTORY SERVICE
AREA BOUNDARY —
- ARP WELL ▲
- ACWD PRODUCTION WELLS ◎

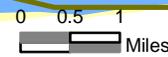
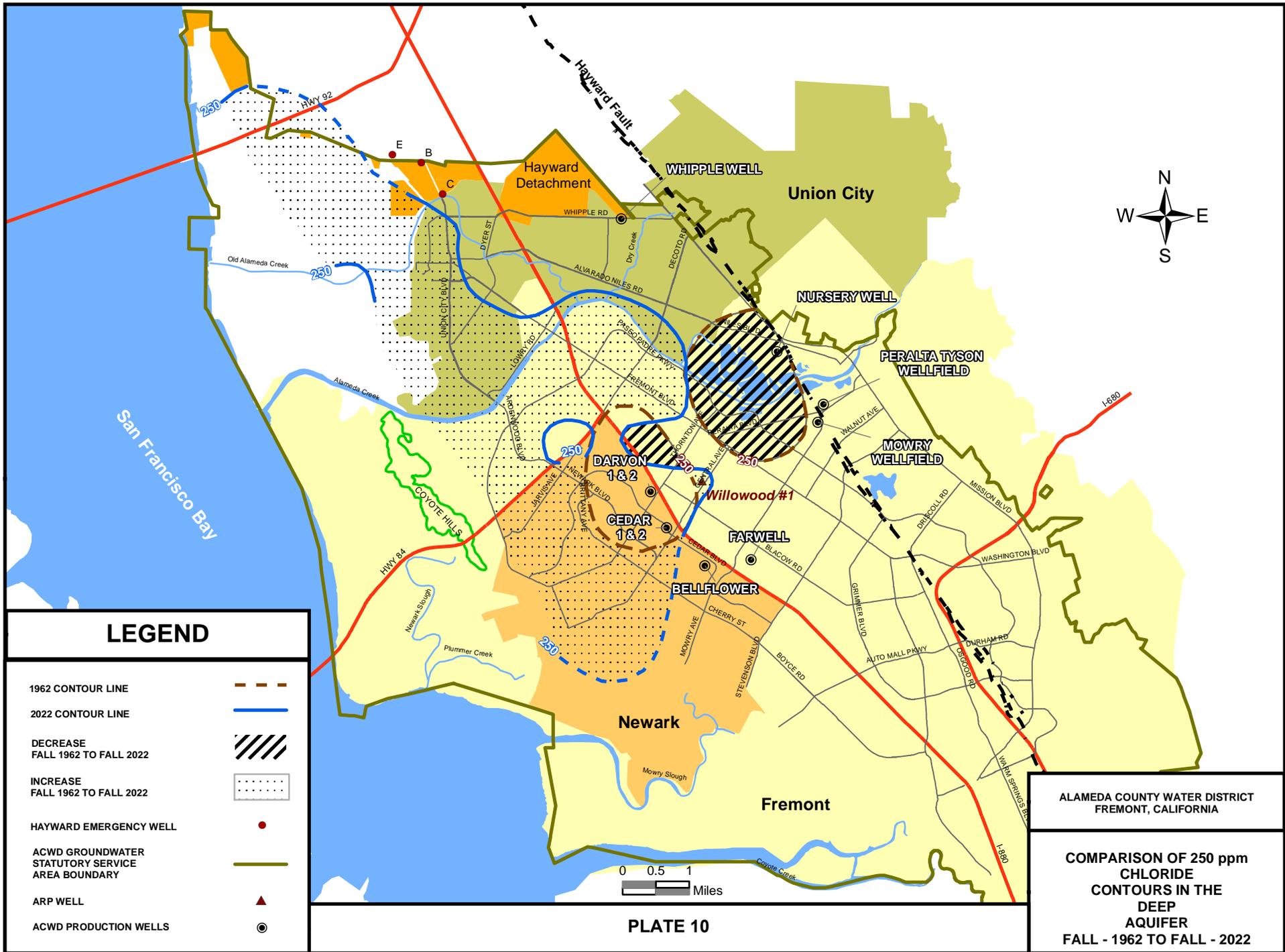


PLATE 9

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

**COMPARISON OF 250 ppm
CHLORIDE
CONTOURS IN THE
CENTERVILLE - FREMONT
AQUIFER
FALL - 1962 TO FALL - 2022**



LEGEND

- 1962 CONTOUR LINE - - - - -
- 2022 CONTOUR LINE —————
- DECREASE
FALL 1962 TO FALL 2022 ▨▨▨▨▨
- INCREASE
FALL 1962 TO FALL 2022 ⋯⋯⋯⋯
- HAYWARD EMERGENCY WELL ●
- ACWD GROUNDWATER
STATUTORY SERVICE
AREA BOUNDARY —————
- ARP WELL ▲
- ACWD PRODUCTION WELLS ◎

ALAMEDA COUNTY WATER DISTRICT
FREMONT, CALIFORNIA

COMPARISON OF 250 ppm
CHLORIDE
CONTOURS IN THE
DEEP
AQUIFER
FALL - 1962 TO FALL - 2022

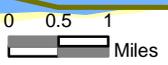


PLATE 10

**ALAMEDA COUNTY WATER DISTRICT
WATER SUPPLY/DEMAND INVENTORY FY 2021/22 (ACTUAL *)
(1000's OF ACRE-FEET)**

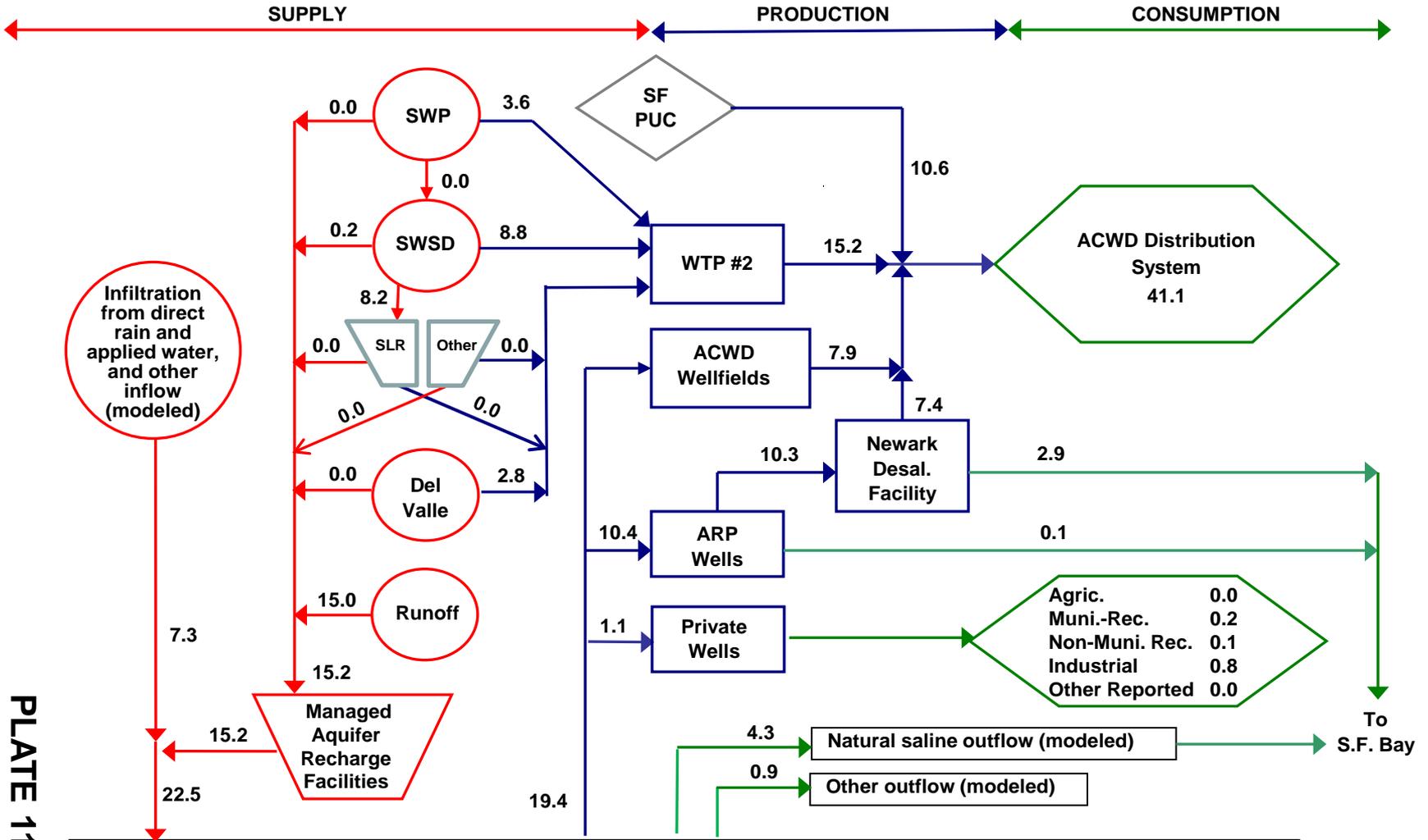


PLATE 11

Total recharge	22.5	NILES CONE GROUNDWATER BASIN (1000's of Acre-Feet) Newark Aquifer Forebay level at end of FY= 10.4 ft. (NGVD 1929)
Less pumping	-19.4	
Less saline outflow	- 4.3	
Less other outflow	-0.9	
Basin balance	-2.1	

* Based on actual historical conditions, but quantities herein may deviate from true values due to limitations in accuracy of the numeric model and/or measurements.

**ALAMEDA COUNTY WATER DISTRICT
WATER SUPPLY/DEMAND INVENTORY FY 2022/23 (FORECAST)
(1000's OF ACRE-FEET)**

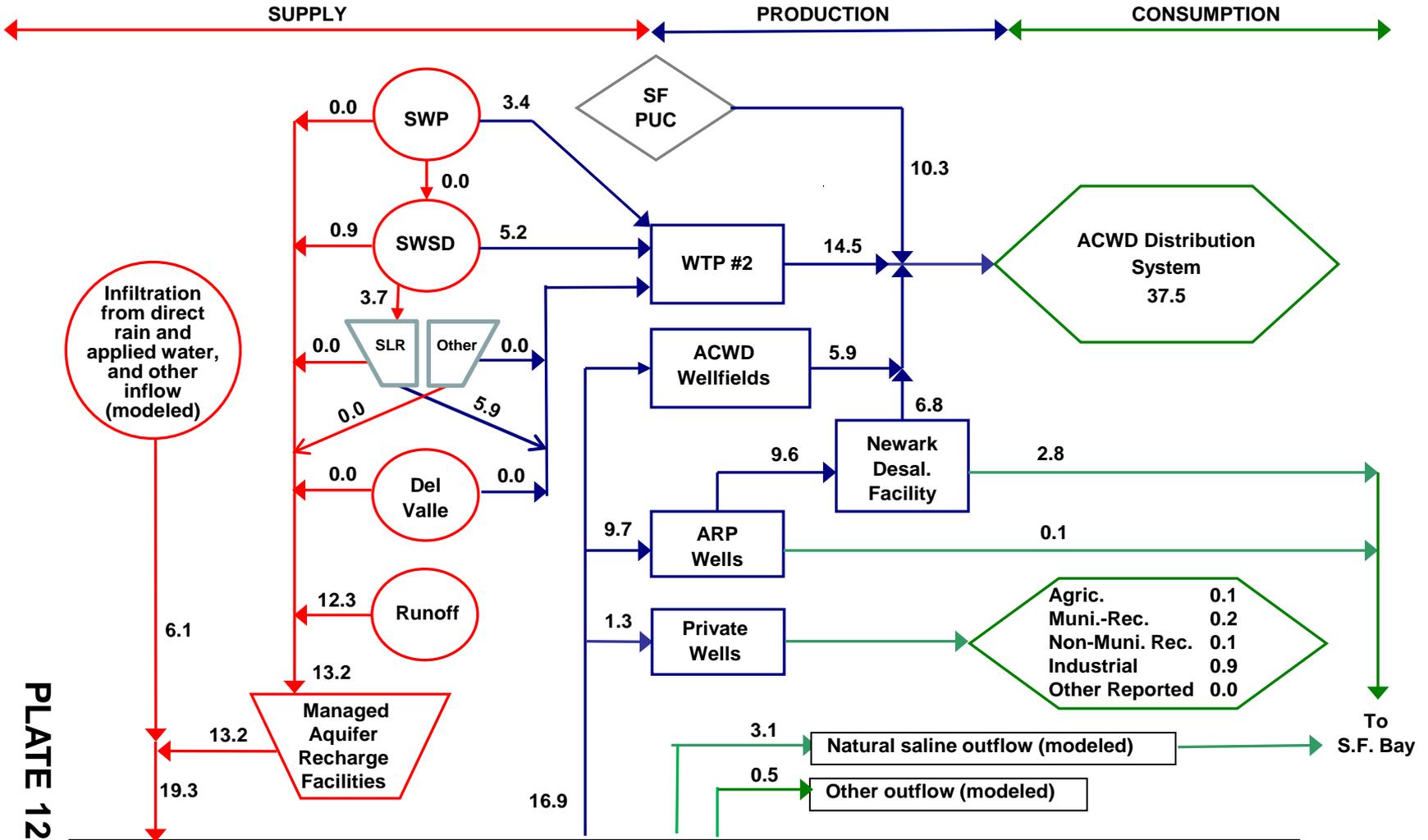


PLATE 12

Total recharge	19.3	NILES CONE GROUNDWATER BASIN (1000's of Acre-Feet) Newark Aquifer Forebay level at end of FY= 8 ft. (NGVD 1929)
Less pumping	-16.9	
Less natural saline outflow	- 3.1	
Less other outflow	-0.5	
Basin balance	-1.2	

**ALAMEDA COUNTY WATER DISTRICT
 WATER SUPPLY/DEMAND INVENTORY FY 2023/24 (FORECAST)
 (1000's OF ACRE-FEET)**

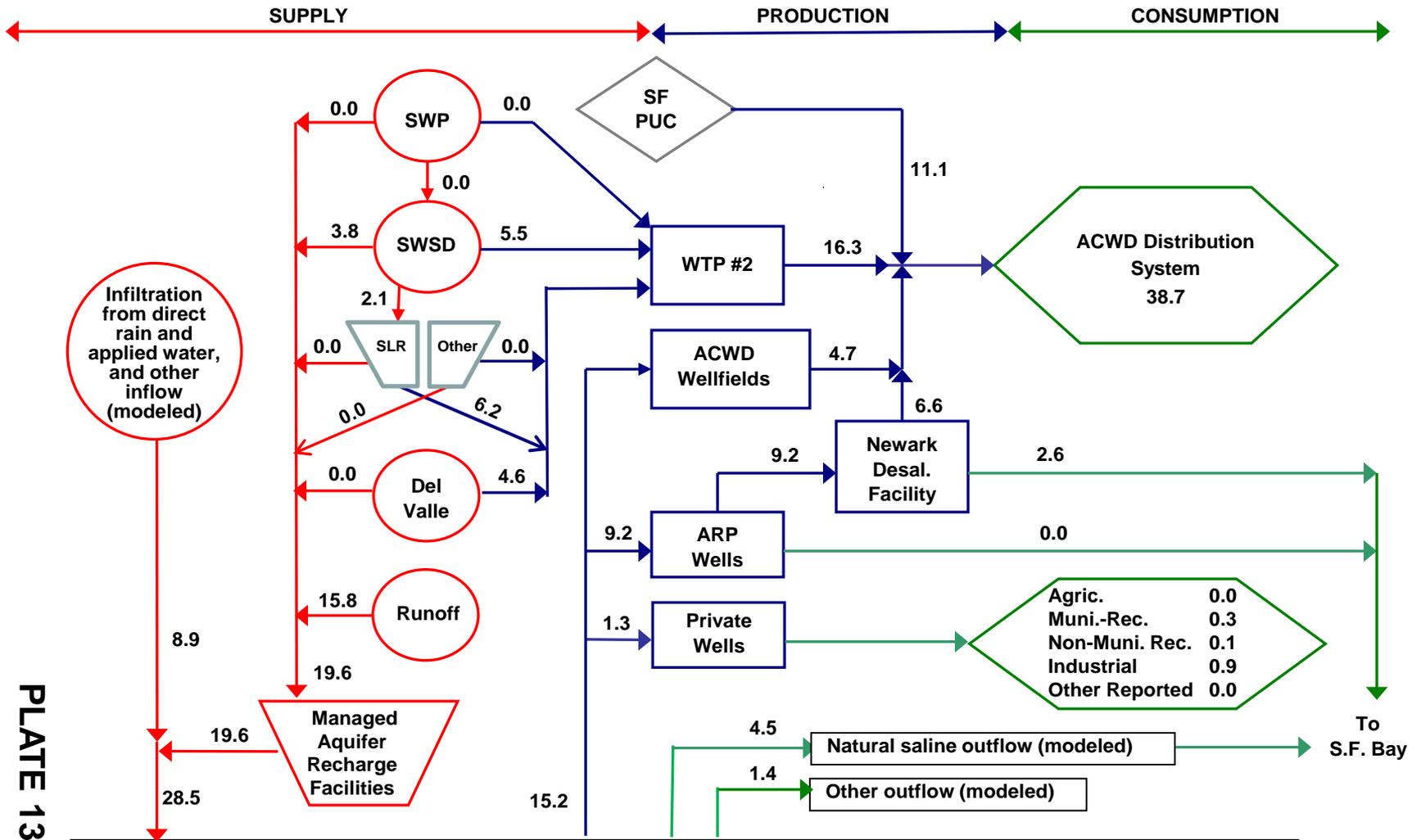


PLATE 13

Total recharge	28.5	NILES CONE GROUNDWATER BASIN (1000's of Acre-Feet) Newark Aquifer Forebay level at end of FY= 13 ft. (NGVD 1929)
Less pumping	-15.2	
Less natural saline outflow	- 4.5	
Less other outflow	- 1.4	
Basin balance	+7.4	

RESOLUTION NO. _____

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
DECLARING THAT FUNDS SHALL BE RAISED TO REPLENISH THE
GROUNDWATER SUPPLIES WITHIN THE DISTRICT AND CALLING A
PUBLIC HEARING

WHEREAS, the Alameda County Water District (District) is a county water district duly organized and existing under the County Water District Law (Division 12 of the Water Code of the State of California);

WHEREAS, Chapter 1942, Statutes of 1961 of the Regular Session of the 1961 Legislature of the State of California (Replenishment Assessment Act) establishes the powers and duties of the District relating to replenishment of groundwater;

WHEREAS, on November 10, 2022, the Board of Directors ordered an engineering survey and report to be prepared regarding the groundwater supplies of the District, and the extent of saltwater intrusion in the groundwater basin; and

WHEREAS, the Board of Directors finds and determines that the engineering survey and report has been prepared as required by law, and has been submitted to the Board.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Alameda County Water District as follows:

1. That funds shall be raised for the purchase of water and replenishment of the groundwater supplies within the District and that the estimated costs during FY 2023/24 contained in the engineering survey and report are as follows:

	Water Purchase	Other Costs	TOTAL
Fixed Water Costs and District Capital Costs:	\$ 6,368,000	\$3,986,000	\$10,354,000
District Expenses and Variable Water Costs:	<u>1,122,000</u>	<u>11,934,000</u>	<u>13,056,000</u>
TOTAL	\$ 7,490,000	\$ 15,920,000	\$ 23,410,000

2. That a portion of such funds shall be raised by a replenishment assessment.

3. The funds so to be raised will benefit, directly or indirectly, all the persons or real property and improvements within the District.

4. On Tuesday, April 11, 2023, at 6:00 P.M., the Board of Directors will hold a public hearing for the purpose of determining whether, and to what extent, the cost of purchasing water for replenishment and replenishing the groundwater supplies shall be paid for by a replenishment assessment. Members of the public may participate in this meeting in person at the District office located at 43885 South Grimmer Boulevard, Fremont, or via webinar or teleconference. The District will include the remote access information for the public hearing in the notices it will distribute as set forth below. The hearing may be adjourned from time to time; provided that the hearing is completed by May 2, 2023. At the hearing, all interested parties may appear and be heard in support of, or opposition to, the proposed assessment, the engineering survey and report, or the Board's determinations.

5. The District Secretary is directed to publish a notice of the public hearing in full compliance with the Replenishment Assessment Act, at least ten (10) days before the public hearing in The East Bay Times (managed by the Bay Area News Group), a newspaper of general circulation within the District. The District Secretary is also directed to mail a notice of the public

hearing, and of the proposed 4.9% increase in the replenishment assessment rate for groundwater pumped or extracted for purposes other than agriculture and municipal recreation, to all owners and operators of wells that would be subject to the assessment at least 45 days before the opening of the hearing on April 11, 2023.

PASSED AND ADOPTED THIS 9th day of February 2023, by the following vote:

AYES:

NOES:

ABSENT:

Paul S. Sethy, President
Board of Directors
Alameda County Water District

ATTEST:

APPROVED AS TO FORM:

Gina Markou, District Secretary
Alameda County Water District
(Seal)

Patrick T. Miyaki, General Counsel
Alameda County Water District

RESOLUTION NO. _____

OF BOARD OF DIRECTORS OF ALAMEDA COUNTY WATER DISTRICT
EXTENDING DEADLINE FOR INSTALLATION OF MEASURING DEVICES
ON WELLS

WHEREAS, the Alameda County Water District (District) operates a groundwater replenishment program pursuant to the Replenishment Assessment Act, which is Chapter 1942 of the Statutes of 1961, and subsequent amendments thereto (Act);

WHEREAS, on February 10, 2022, the Board adopted Resolution No. 22-013 declaring that funds are to be raised for the purchase of water for replenishment;

WHEREAS, Section 20 of the Act declares it to be unlawful to produce groundwater within the District from and after one year following adoption of Resolution No. 22-013 without a water measuring device;

WHEREAS, this Board on February 10, 2022, adopted Resolution No. 22-014 which extended to March 14, 2023, the deadline for installation of measuring devices for wells whose annual water production would not result in revenues justifying the costs to install such water measuring devices; and

WHEREAS, Section 20 of the Act also provides this Board may extend such time on a year-to-year basis.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Alameda County Water District finds that the costs to install water measuring devices on wells that produce small volumes of water annually are not justified at this time because the installation costs will not be returned by the replenishment assessment revenues from the water so produced in a reasonable period of time; and

BE IT FURTHER RESOLVED that the deadline for installation of such water measuring

devices is hereby extended to March 12, 2024; and

BE IT FURTHER RESOLVED that notice of the extension of the date to install water measuring devices shall be published in full compliance with the Replenishment Assessment Act.

PASSED AND ADOPTED THIS 9th day of February 2023, by the following vote:

AYES:

NOES:

ABSENT:

Paul S. Sethy, President
Board of Directors
Alameda County Water District

ATTEST:

APPROVED AS TO FORM:

Gina Markou, District Secretary
Alameda County Water District
(Seal)

Patrick T. Miyaki, General Counsel
Alameda County Water District

**ENGINEERING AND INFORMATION TECHNOLOGY
COMMITTEE MEETING SUMMARY MINUTES
Wednesday, January 4, 2023
4:15 p.m.**

ATTENDANCE 

Directors: Jim Gunther (chair), Aziz Akbari

Staff: Ed Stevenson, Girum Awoke, Jonathan Wunderlich, Rekha Ippagunta, Katrina Bates,
Manveen Bharaj, Benjamin Egger

Public: None

Due to COVID-19 and in accordance with Assembly Bill 361, which modifies Government Code Section 54953, this meeting was conducted in person at the District's Headquarters and virtually by Zoom Webinar and Teleconference, and members of the public were invited to participate. Materials presented to the Committee were posted in advance of the meeting at www.acwd.org and copies of materials as presented are attached to these minutes.

DISCUSSION TOPICS

1. AMI Project Update – My Smart Water Connect Demonstration: Benjamin Egger, Project Engineering Supervisor, and Manveen Bharaj, Customer Service Business Analyst, provided an update and demonstration of the water-focused Customer Portal that has been developed in support of the Advanced Metering Infrastructure (AMI) Project (Project). The District is implementing a full deployment of AMI technology throughout the District's service area. The AMI platform allows for enhanced customers' experience, while also increasing District's ability to improve operational efficiencies. A major component of the AMI Project is the implementation of the "My Smart Water Connect" customer portal. The customer portal will allow customers to access their account information, view and pay bills online, sign up for District programs and view their water use information and associated analytics. By leveraging AMI technology, My Smart Water Connect will allow customers to reduce surprise water bills, detect potential water leaks early, and view up-to-date water consumption usage. Smart Energy Water (SEW) is the District's selected customer portal provider. SEW portal provides a flexible and powerful platform that has a user-friendly customer experience.

Mr. Egger reported that My Smart Water Connect portal went live on December 7, 2023, and is available at portal.acwd.org, and via the iOS and Android App Stores. Migration of existing Electronic Bill Payment and Presentment customer accounts, approximately 72,000 customers, was completed successfully. Customers with migrated accounts simply need to complete a password reset upon their initial access for security purposes. My Smart Water Connect is available for both customers with and without AMI meters. Customers who have received their AMI meter upgrade will have access to their AMI water usage data, down to 15-minute intervals, and associated water usage analytics. For customers who have not received their AMI meter upgrade, the water usage information and analytics will be limited to bimonthly meter readings, however the portal provides an interactive map feature for these customers to stay apprised of the AMI Deployment Project schedule for their location.

Mr. Egger and Ms. Bharaj provided a live demonstration of the pre-login, Billing & Payment, Notifications & Alerts, Connect Me, Live Chat, Ways-To-Save, Account Management, AMI Meter Installation Map and Usage modules of the portal for the Committee.

Staff responded to questions from Directors Akbari and Gunther.

2. Public Comments: There were no members of the public in attendance.

RECOMMENDATIONS

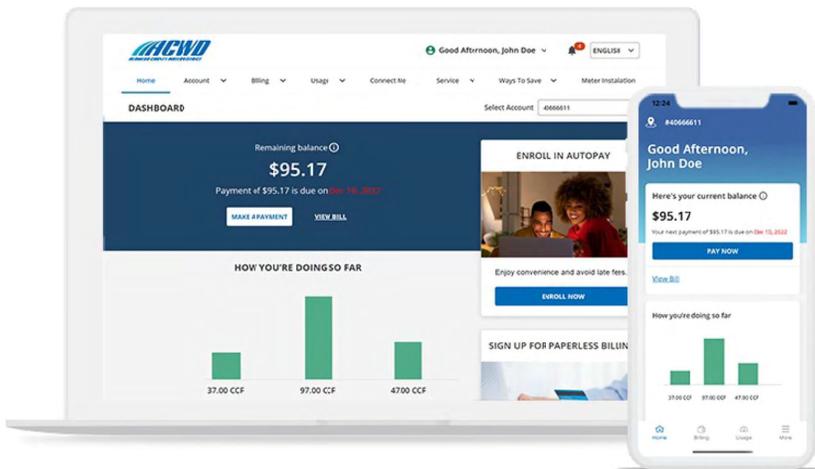
Topics discussed by the Committee were informational only, and no recommendations are being made.

My Smart Water Connect Demonstration

AMI Project Update | EIT Committee: January 4, 2023



Introducing *My Smart Water Connect*



My Smart Water Connect is live!!!

- Web access at: portal.acwd.org

- iOS App (coming soon):



- Google Play App:



All +72,000 active customers (84% of District customers) have been migrated from the *EBPP portal to *My Smart Water Connect*.

*EBPP – Electronic Bill Presentation and Payments

My Smart Water Connect Highlights

With *My Smart Water Connect* Customers have access to:

 Intuitive Dashboard Manage multiple water accounts and find important information in a single place	 Monitor Usage Compare & analyze your usage overview
 Secure Billing and Payments Manage, track history and make bill payments on the go with flexible options	 Ways to Save Water conservation programs, rebates and tips

SEW Portal Features

Customer Portal and Mobile App

- ✓ Integrated Web and native Mobile App
- ✓ Configurable Modules
- ✓ Multichannel Customer Communication
- ✓ In-built user journeys
- ✓ End to end Customer Engagement

Utility Portal

- ✓ Reporting and Customer Analytics Dashboard
- ✓ End to End in-built use case
- ✓ Customer Behavioral patterns
- ✓ Utility-defined KPIs



3

My Smart Water Connect Demonstration

Customer-facing Features:

- Billing and Payment
- Notifications and Alerts
- Customer Help via Connect Me & Live Chat
- Ways-To-Save
- Account Management
- AMI Meter Installation Tracking
- Consumption History and Comparison

Questions



Benjamin Egger – Project Engineering Supervisor

Manveen Bharaj – Business Analysis, Customer Service

Rekha Ippagunta – Project Engineering Manager

Katrina Bates – Customer Service & Systems Manager



**LEGAL, INTERGOVERNMENTAL & COMMUNITY AFFAIRS
COMMITTEE MEETING
SUMMARY MINUTES
Tuesday, January 10, 2023
4:15 P.M.**

ATTENDANCE

Directors: Aziz Akbari (Chair), Judy Huang 
Staff: Ed Stevenson, Jocelyn Binn, Sharene Gonzales
Legislative Consultants: Jonathan Clay, Erin Gilbert

Due to COVID-19 and in accordance with Assembly Bill 361, which modifies Government Code Section 54953, this meeting was conducted in person at the District's Headquarters and virtually by Zoom Webinar and Teleconference, and members of the public were invited to participate. Materials presented to the Committee were posted in advance of the meeting at www.acwd.org and copies of materials as presented are attached to these minutes.

DISCUSSION TOPICS

1. Update on State Legislation: Jonathan Clay and Erin Gilbert of JGC Government Relations reviewed the attached monthly legislative report, discussing the first work session for newly sworn legislators and the logistics challenges storms caused for all legislators traveling to the Capitol. Mr. Clay and Ms. Gilbert discussed the Assembly and Senate's committee chairs, noting some committee memberships remain unknown. In addition, there was discussion on the State's budget, with an anticipated budget deficit of \$25 billion in addition to \$4.3 billion of lower-than-anticipated personal income taxes from December's projections. Lastly, bill introductions continue until February 17, the last day to introduce bills in the session. Once bills are introduced, there will be a more complete picture of proposed legislation related to ACWD.

Mr. Clay and Ms. Gilbert responded to questions from the Committee.

2. Public Outreach Update: Sharene Gonzales, Public Affairs Supervisor, provided the attached communications and outreach report covering December 14, 2022, through January 10, 2023. Ms. Gonzales' overview included a summary of District communication and outreach efforts, website articles, social and traditional media updates, storm event communication, and mass mailers for the reporting period. During this reporting period, the District conducted extensive customer outreach to promote the new customer portal, My Smart Water Connect. The outreach included direct emails, an article in the City of Fremont's e-newsletter and an ad in the Tri-City Voice. The New Year's Eve storm caused high water levels in Alameda Creek, prompting the District to coordinate messaging with partner agencies to share resource information on social media. During this same reporting period, a proposition 218 notice was mailed to customers and property owners in the service area announcing a proposed increase in water rates and charges. The mailing of ~18,000 postcards was scheduled announcing the annual Water Main Cleaning Program. Water Use Efficiency staff continued to offer virtual office hours and mailed a letter to 1,377 Help on Tap participants to promote the Water Savings

Assistance Partnership Program. The District continues to provide water education, provided a tour of Water Treatment Plant #2 to students from Mission San Jose High School, and launched the 4th annual WaterClips Student Video Contest. A total of 11,540 school supplies have been distributed during the 2022/23 school year.

Staff responded to questions from the Committee.

3. One Saves Water Campaign and Drought Outreach Update: Sharene Gonzales, Public Affairs Supervisor, provided the attached report giving an update on drought outreach.

Staff responded to questions from the Committee.

4. Public Comments: There were no public comments.

RECOMMENDATIONS

Topics discussed by the Committee were informational only, and no recommendations are being made.



TO: Ed Stevenson, Alameda County Water District

FROM: JGC Government Relations, Inc.

DATE: January 6, 2023

SUBJECT: January Legislative Report

The newly sworn in legislators blew into Sacramento to begin the true work of session with hurricane force winds and torrential downpours and flooding. We aren't sure how much the new legislators enjoyed their first true week of Southwest flights travel, walking between hotels, the Capitol, and their offices in the swing space, learning new names and faces and literally getting their feet wet in the rain and wind in Sacramento.

The Assembly released their new committee chairs and vice-chairs over the break and the Senate just released theirs last night. Assemblymember Holden remains Chair of Appropriations, Assemblymember Luz Rivas remains Chair of Natural Resources, and Assemblymember Bauer-Kahan remains Chair of Water, Parks, and Wildlife. Full committee memberships are still unknown for the Assembly. As a reminder, Speaker-elect Robert Rivas will transition on July 1, and it is unclear if he will make changes to the Committee Chairs and memberships at that time. Senator Portantino remains Chair of Appropriations and Senator Dave Min from Irvine is now Chair of Natural Resources and Water

The Governor will have his official swearing-in ceremony on Friday, January 6th and then will release his January budget by January 10th. With the anticipated \$25 billion deficit we expect to see claw backs of previous funding. To add insult to injury, the December receipts were worse than anticipated with the personal income taxes \$4.3 billion under the projection for December. It is rumored that the Departments and Agencies are asking for no new programs, as they have been inundated the last few years and are facing staffing challenges like everyone else.

Bill introductions continue to trickle in with February 17th the last day to introduce bills in the session. At that time, we will have a more complete picture of what we will be working with for the session to share with ACWD staff and Board.

Alameda County Water District Legislative Report 1/6/2023

[AB 30](#)

(Ward D) Atmospheric Rivers: Research, Mitigation, and Climate Forecasting Program.

Current Text: Introduced: 12/5/2022 [html](#) [pdf](#)

Introduced: 12/5/2022

Status: 12/6/2022-From printer. May be heard in committee January 5.

Is Urgency: N

Is Fiscal: Y

Location: 12/5/2022-A. PRINT

Desk	Policy	Fiscal	Floor	Desk	Policy	Fiscal	Floor	Conf. Conc.	Enrolled	Vetoed	Chaptered
1st House				2nd House							

Summary: Current law establishes the Atmospheric Rivers: Research, Mitigation, and Climate Forecasting Program in the Department of Water Resources. Current law requires the department, upon an appropriation for purposes of the program, to research climate forecasting and the causes and impacts that climate change has on atmospheric rivers, to operate reservoirs in a manner that improves flood protection, and to reoperate flood control and water storage facilities to capture water generated by atmospheric rivers. This bill would rename that program the Atmospheric Rivers Research and Forecast Improvement Program: Enabling Climate Adaptation Through Forecast-Informed Reservoir Operations and Hazard Resiliency (AR/FIRO) Program. The bill would require the department to research, develop, and implement new observations, prediction models, novel forecasting methods, and tailored decision support systems to improve predictions of atmospheric rivers and their impacts on water supply, flooding, post-wildfire debris flows, and environmental conditions.

Position

Subject

[AB 58](#)

(Kaira D) Labor statistics: annual report.

Current Text: Introduced: 12/6/2022 [html](#) [pdf](#)

Introduced: 12/6/2022

Status: 1/4/2023-Read first time.

Is Urgency: N

Is Fiscal: Y

Location: 12/6/2022-A. PRINT

Desk	Policy	Fiscal	Floor	Desk	Policy	Fiscal	Floor	Conf. Conc.	Enrolled	Vetoed	Chaptered
1st House				2nd House							

Summary: Current law requires the Department of Industrial Relations to complete and publish an annual report containing statistics on state work injuries and occupational diseases and fatalities by industry classifications by December 31 of the following calendar year. This bill would require the report to include within industry classifications subcategories separated by the ethnicity, race, and gender of affected individuals.

Position

Subject

[AB 62](#)

(Mathis R) Statewide water storage: expansion.

Current Text: Introduced: 12/6/2022 [html](#) [pdf](#)

Introduced: 12/6/2022

Status: 1/4/2023-Read first time.

Is Urgency: N

Is Fiscal: Y

Location: 12/6/2022-A. PRINT

Desk	Policy	Fiscal	Floor	Desk	Policy	Fiscal	Floor	Conf. Conc.	Enrolled	Vetoed	Chaptered
1st House				2nd House							

Summary: Would establish a statewide goal to increase above- and below-ground water storage capacity by a total of 3,700,000 acre-feet by the year 2030 and a total of 4,000,000 acre-feet by the year 2040. The bill would require the State Water Resources Control Board, in consultation with the Department of Water Resources, to design and implement measures to increase statewide water storage to achieve the statewide goal. The bill would require the state board, beginning July 1, 2027, and on or before July 1 every 2 years thereafter until January 1, 2043, in consultation with the department, to prepare and submit a report to the Legislature on the progress made in designing and

implementing measures to achieve the statewide goal.

Position

Subject

AB 66

(Mathis R) Natural Resources Agency: water storage projects: permit approval.

Current Text: Introduced: 12/6/2022 [html](#) [pdf](#)

Introduced: 12/6/2022

Status: 1/4/2023-Read first time.

Is Urgency: N

Is Fiscal: Y

Location: 12/6/2022-A. PRINT

Desk	Policy	Fiscal	Floor	Desk	Policy	Fiscal	Floor	Conf. Conc.	Enrolled	Vetoed	Chaptered
1st House				2nd House							

Summary: Current law establishes the Natural Resources Agency, composed of departments, boards, conservancies, and commissions responsible for the restoration, protection, and management of the state's natural and cultural resources. Current law establishes in the agency the Department of Water Resources, which manages and undertakes planning with regard to water resources in the state. This bill would require the agency, and each department, board, conservancy, and commission within the agency, to approve the necessary permits for specified projects within 180 days from receiving a permit application, and would deem those permits approved if approval does not occur within this time period.

Position

Subject

ACA 1

(Aguiar-Curry D) Local government financing: affordable housing and public infrastructure: voter approval.

Current Text: Introduced: 12/5/2022 [html](#) [pdf](#)

Introduced: 12/5/2022

Status: 12/6/2022-From printer. May be heard in committee January 5.

Is Urgency:

Is Fiscal: N

Location: 12/5/2022-A. PRINT

Desk	Policy	Fiscal	Floor	Desk	Policy	Fiscal	Floor	Conf. Conc.	Enrolled	Vetoed	Chaptered
1st House				2nd House							

Summary: The California Constitution prohibits the ad valorem tax rate on real property from exceeding 1% of the full cash value of the property, subject to certain exceptions. This measure would create an additional exception to the 1% limit that would authorize a city, county, city and county, or special district to levy an ad valorem tax to service bonded indebtedness incurred to fund the construction, reconstruction, rehabilitation, or replacement of public infrastructure, affordable housing, or permanent supportive housing, or the acquisition or lease of real property for those purposes, if the proposition proposing that tax is approved by 55% of the voters of the city, county, or city and county, as applicable, and the proposition includes specified accountability requirements. The measure would specify that these provisions apply to any city, county, city and county, or special district measure imposing an ad valorem tax to pay the interest and redemption charges on bonded indebtedness for these purposes that is submitted at the same election as this measure.

Position

Subject

ACA 2

(Alanis R) Public resources: Water and Wildfire Resiliency Act of 2023.

Current Text: Introduced: 12/5/2022 [html](#) [pdf](#)

Introduced: 12/5/2022

Status: 12/6/2022-From printer. May be heard in committee January 5.

Is Urgency:

Is Fiscal: Y

Location: 12/5/2022-A. PRINT

Desk	Policy	Fiscal	Floor	Desk	Policy	Fiscal	Floor	Conf. Conc.	Enrolled	Vetoed	Chaptered
1st House				2nd House							

Summary: Would establish the Water and Wildfire Resiliency Fund within the State Treasury, and would require the Treasurer to annually transfer an amount equal to 3% of all state revenues that may be appropriated as described from the General Fund to the Water and Wildfire Resiliency Fund. The measure would require the moneys in the fund to be appropriated by the Legislature and would require that 50% of the moneys in the fund be used for water projects, as specified, and that the other 50% of the moneys in the fund be used for forest maintenance and health projects, as specified.

Position

Subject

SB 3

(Dodd D) Discontinuation of residential water service: community water system.

Current Text: Introduced: 12/5/2022 [html](#) [pdf](#)

Introduced: 12/5/2022

Status: 12/6/2022-From printer. May be acted upon on or after January 5.

Is Urgency: N

Is Fiscal: Y

Location: 12/5/2022-S. RLS.

Desk	Policy	Fiscal	Floor	Desk	Policy	Fiscal	Floor	Conf. Conc.	Enrolled	Vetoed	Chaptered
1st House				2nd House							

Summary: The Water Shutoff Protection Act prohibits an urban and community water system, defined as a public water system that supplies water to more than 200 service connections, from discontinuing residential service for nonpayment, as specified, and requires specified procedures before it can discontinue residential service for nonpayment. Current law defines a community water system as a public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system. This bill would expand the scope of the Water Shutoff Protection Act by requiring that it instead apply to a community water system, defined to have the same meaning as existing law. The bill would require a community water system that supplies water to 200 service connections or fewer to comply with the act's provisions on and after August 1, 2024.

Position

Subject

SB 23

(Caballero D) Water supply and flood risk reduction projects: expedited permitting.

Current Text: Introduced: 12/5/2022 [html](#) [pdf](#)

Introduced: 12/5/2022

Status: 12/6/2022-From printer. May be acted upon on or after January 5.

Is Urgency: N

Is Fiscal: N

Location: 12/5/2022-S. RLS.

Desk	Policy	Fiscal	Floor	Desk	Policy	Fiscal	Floor	Conf. Conc.	Enrolled	Vetoed	Chaptered
1st House				2nd House							

Summary: The California Safe Drinking Water Act provides for the operation of public water systems and imposes on the State Water Resources Control Board various duties and responsibilities for the regulation and control of drinking water in the state, including, among other things, overseeing the issuance and enforcement of public water system permits, as provided. Current law authorizes specified works of improvement for the control, conservation, and utilization of destructive flood waters and the reclamation and protection of lands that are susceptible to overflow by flood waters. This bill would express the intent of the Legislature to enact subsequent legislation to expedite the regulatory permitting process for water supply and flood risk reduction projects, as provided.

Position

Subject

SB 49

(Becker D) Tax incentives: solar canopies.

Current Text: Introduced: 12/5/2022 [html](#) [pdf](#)

Introduced: 12/5/2022

Status: 12/6/2022-From printer. May be acted upon on or after January 5.

Is Urgency: N

Is Fiscal: N

Location: 12/5/2022-S. RLS.

Desk	Policy	Fiscal	Floor	Desk	Policy	Fiscal	Floor	Conf. Conc.	Enrolled	Vetoed	Chaptered
1st House				2nd House							

Summary: Would state the intent of the Legislature to enact legislation to provide tax incentives for the construction of solar canopies over large parking lots to boost the local generation of clean electricity in urban and suburban areas, as specified.

Position

Subject

SB 66

(Hurtado D) Water: predictive models and data collection.

Current Text: Introduced: 1/5/2023 [html](#) [pdf](#)

Introduced: 1/5/2023

Status: 1/5/2023-Introduced. Read first time. To Com. on RLS. for assignment. To print.

Is Urgency: N

Is Fiscal: N

Location: 1/5/2023-S. RLS.

Desk	Policy	Fiscal	Floor	Desk	Policy	Fiscal	Floor	Conf.	Enrolled	Vetoed	Chaptered
1st House				2nd House				Conc.			

Summary: Current law requires the Department of Water Resources, as part of updating The California Water Plan every five years, to conduct a study to determine the amount of water needed to meet the state's future needs and to recommend programs, policies, and facilities to meet those needs. This bill would state the intent of the Legislature to ensure that reliable predictive models and data collection systems are used to properly forecast and allocate surface water.

Position

Subject

Total Measures: 10

Total Tracking Forms: 10

LEGAL, INTERGOVERNMENTAL & COMMUNITY AFFAIRS COMMITTEE



TUESDAY, JANUARY 10, 2023

ROUTINE DISTRICT COMMUNICATION

BILL MESSAGE

December 9 - Present - Water restrictions in effect! 1 day per week of irrigation allowed in October; 1 day every other week in November - February; runoff is prohibited. Learn more at acwd.org/drought. Rebates available! Visit acwd.org/rebates.

The State of California adopted emergency regulations that prohibit irrigation of non-functional turf at commercial, industrial, and institutional sites. This includes Homeowners Association common areas. Exemptions apply. Learn more at bit.ly/conservationreg.

Available now! My Smart Water Connect is a new & convenient way to access your account. View and compare usage, securely pay bills, sign up for alerts, learn ways to save water and more. Register or login now at portal.acwd.org.

Lobby hours are Monday - Friday, 9am-4pm.



WEBSITE ARTICLES & UPDATES

NOTICE OF PROPOSED INCREASE IN WATER RATES & DROUGHT SURCHARGES

Following a review of its finances at a series of public workshops in 2022, the District proposes a 4 percent rate increase effective March 1, 2023, with a second 4 percent increase effective March 1, 2024.

[Read on...](#)

News Flash - Notice of Proposed Increase in Water Rates & Drought Surcharges

ATTENTION AUTOMATIC BILL PAY CUSTOMERS

Please confirm or update your default payment method to ensure payments are processed with your preferred payment method. We apologize for any inconvenience. Updates can be made at portal.acwd.org or call 510.668.4200.

Connect to the online portal to update...

News Flash - Attention Automatic Bill Pay Customers

SOCIAL MEDIA

TWITTER

Top tweets

 **@AlamedaCountyWD**
Jan 01, 18:21

@MohanAtreya Dams must be deflated w/ current flows & taking highly turbid water into Quarry Lakes decreases the percolation of the recharge ponds. Even w/recent

23.08% engagement ...

 **@AlamedaCountyWD**
Dec 15, 16:01

Recent rain has been welcomed, but the possibility of a fourth dry

7.69% engagement rate

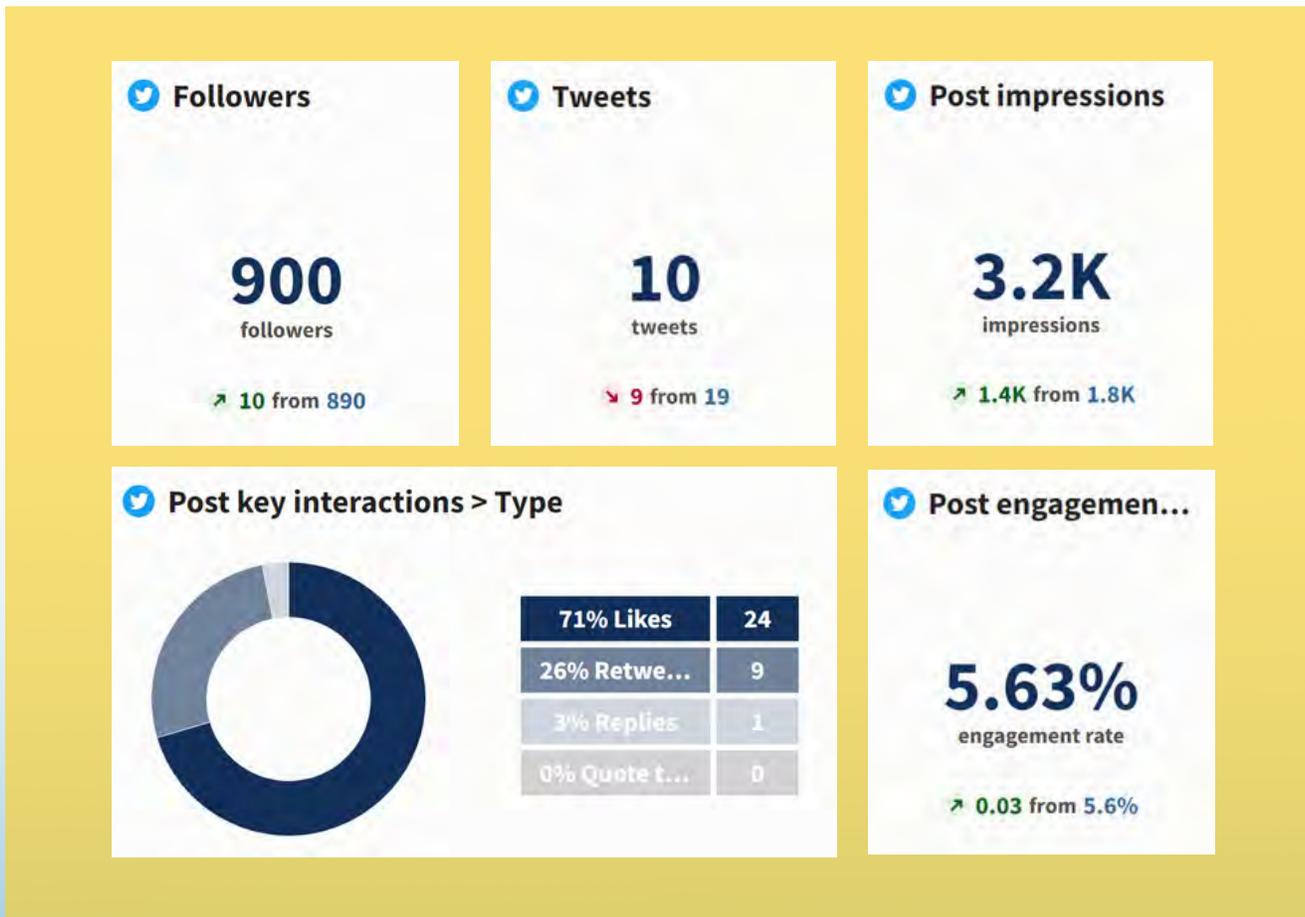
Alameda County Water District
WEB PORTAL
MY SMART WATER CONNECT

 **@AlamedaCountyWD**
Dec 22, 17:31

Announcing My Smart Water Connect - a new & convenient web

6.29% engagement rate

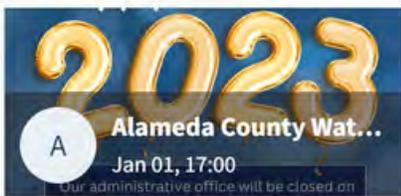
TWITTER ANALYTICS



SOCIAL MEDIA

FACEBOOK

Top posts



Cheers to the new year! We wish you all the best for a safe, happy

5 reactions



This holiday season, give the gift of water savings. Here are our top

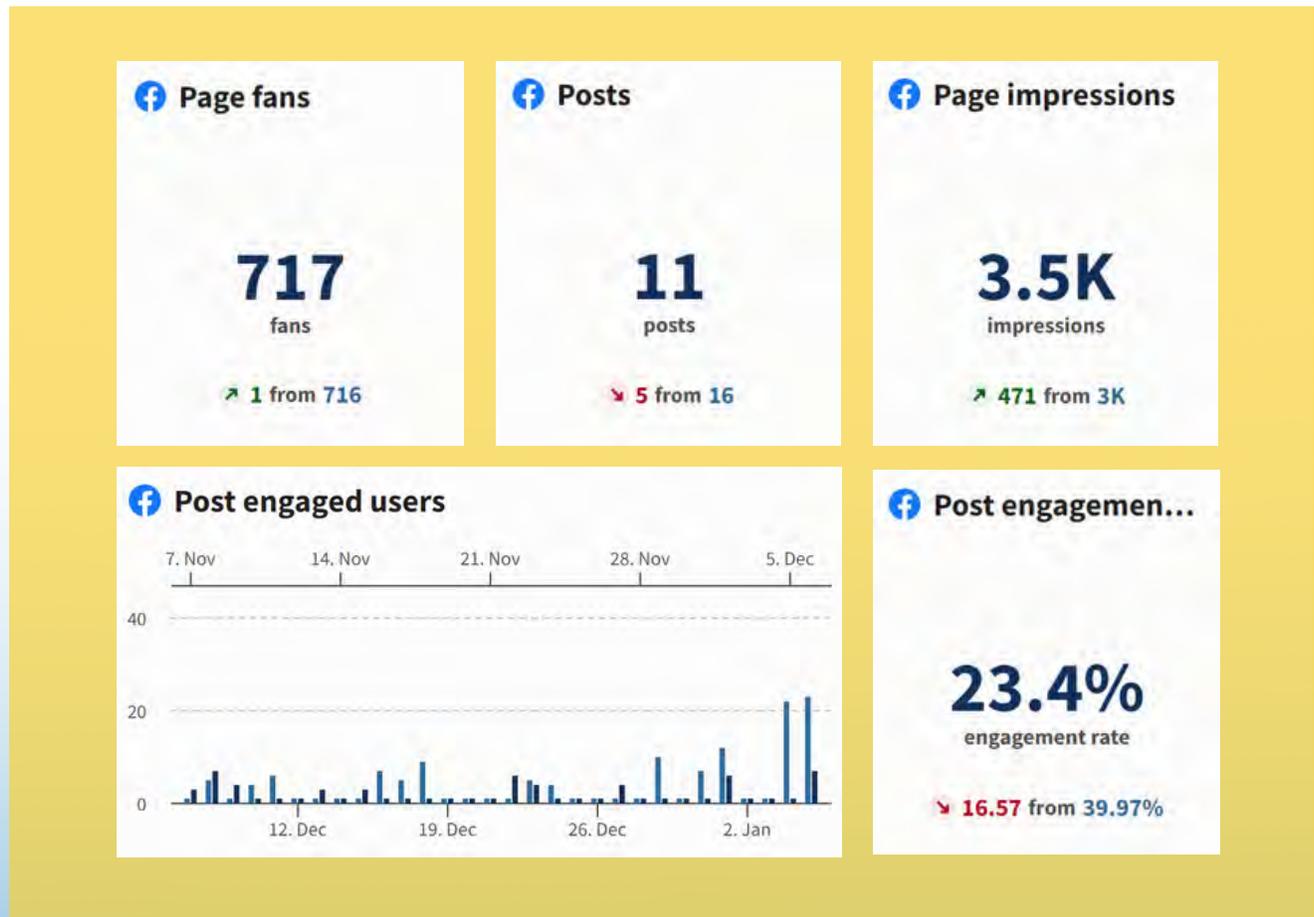
5 reactions



ACWD would like to thank our customers for cutting back on water

5 reactions

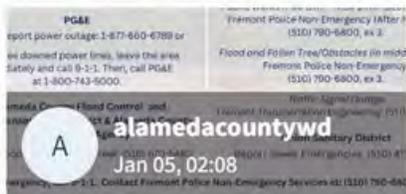
FACEBOOK ANALYTICS



SOCIAL MEDIA

INSTAGRAM

Top posts



Please stay safe during the storm. If you are in the Fremont service area,

17 likes



Recent rain has been welcomed, but the possibility of a fourth dry

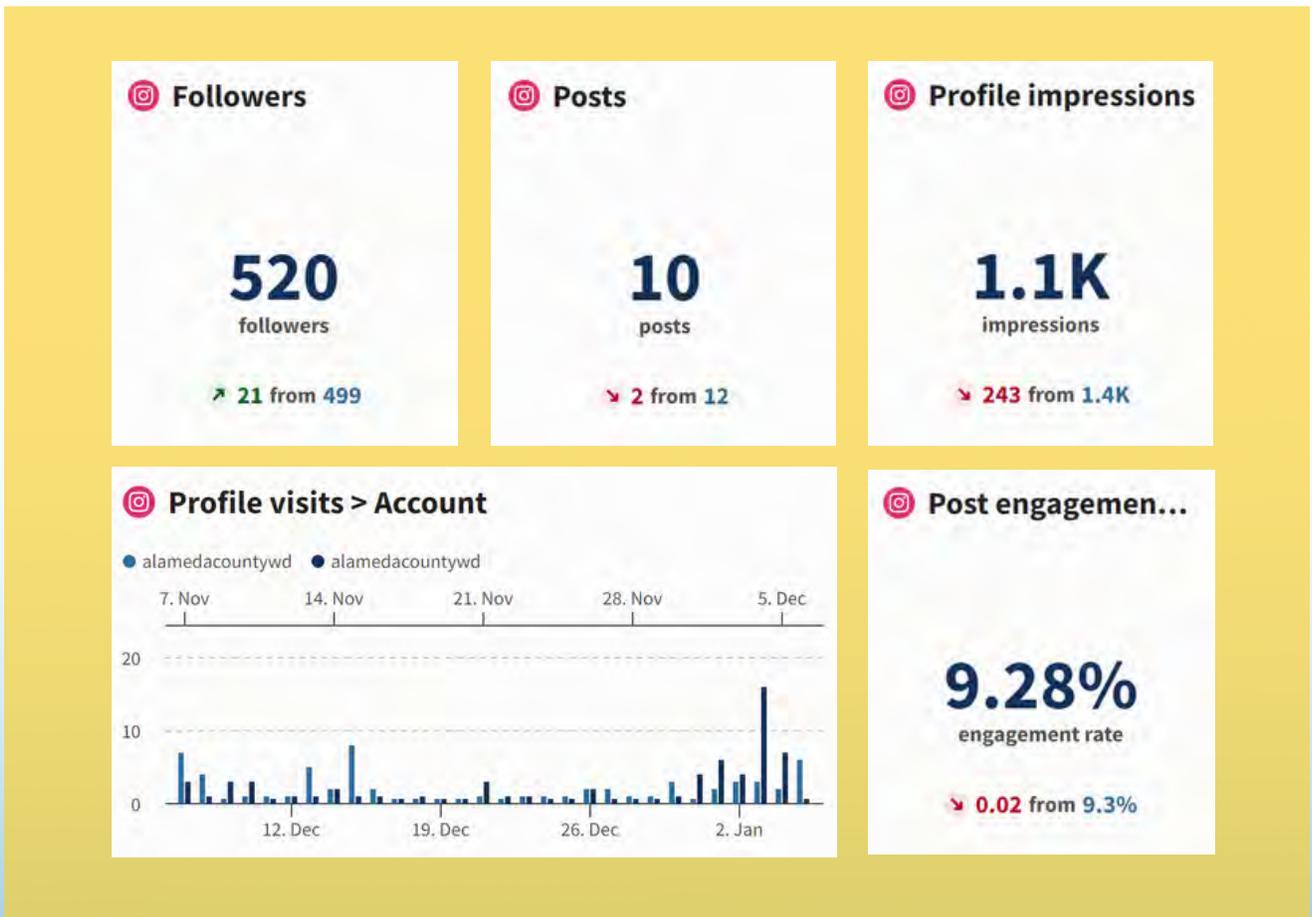
11 likes



ACWD would like to thank our customers for cutting back on water

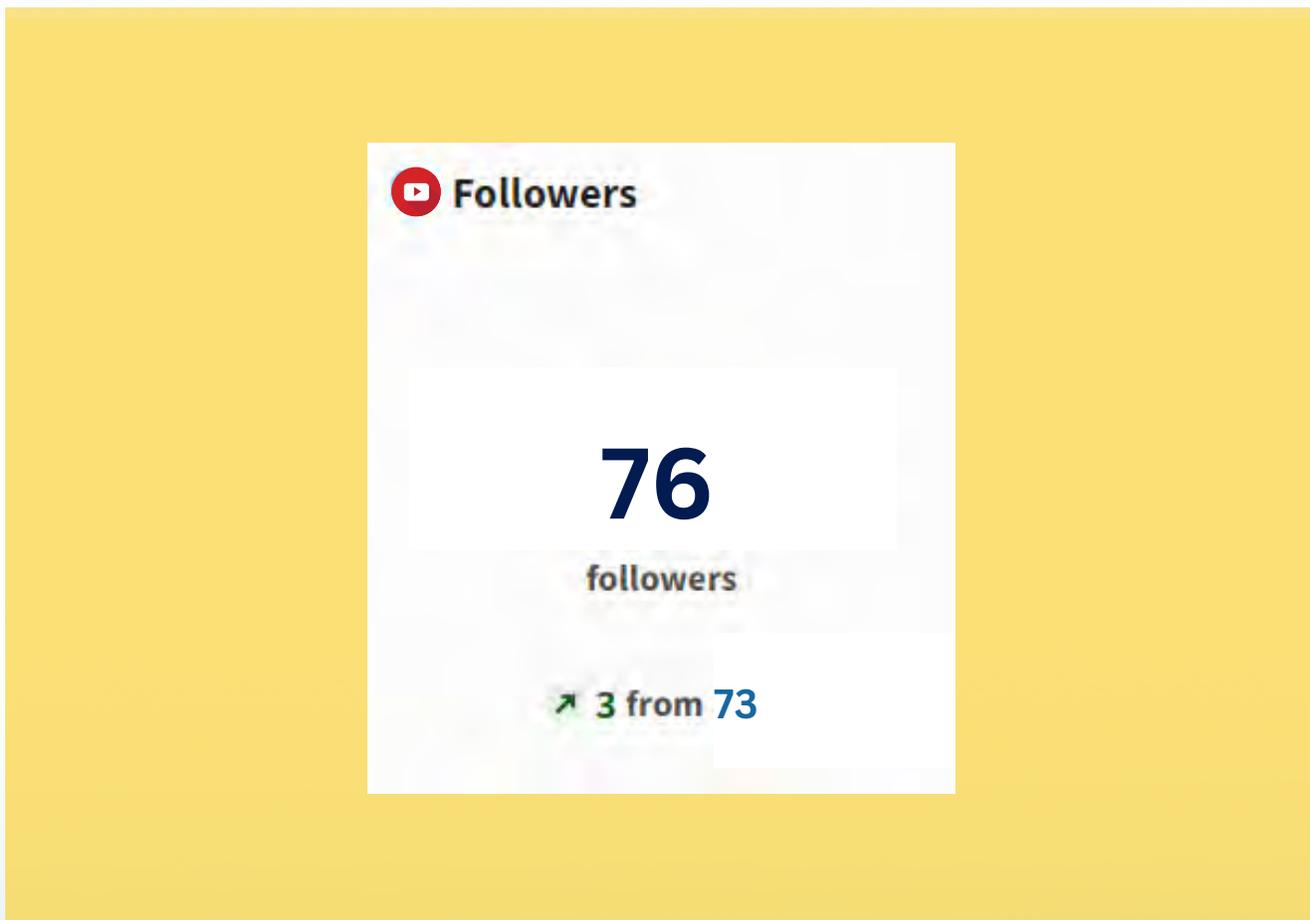
9 likes

INSTAGRAM ANALYTICS



SOCIAL MEDIA

YOUTUBE ANALYTICS



MEDIA COVERAGE

Alameda County Water District proposes rate increases

If approved, the 4% rate increases would go into effect on March 1, 2023

Dec 15, 2022 - Mercury News: Proposed Rate Increase Public Hearing



Dec 16 - The Fremont Connection: My Smart Water Connect



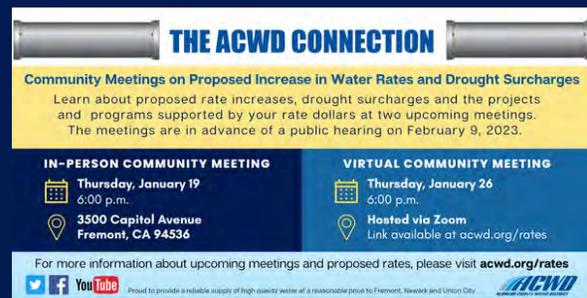
Dec 20 - ACWD Launches New Web Portal



Dec 20 - New Year's Water Saving Resolutions



Jan 3, 2023 - WaterClips Student Video



Jan 10 - Community Meetings on Rates

OTHER COMMUNICATION & OUTREACH

Office of the General Manager -

- Dec 2022 - Public Affairs send email announcing My Smart Water Connect
 - 17,992 - 12/13/22
 - 17,243 - 12/15/22
 - 18,223 - 12/20/22
- Dec. 22 - Sharene Gonzales and Renee Gonzales met with Brown & Caldwell to review design and provide guidance for layout of ACWD Climate Action Public Summary.
- Jan 4, 2023 - PA staff posted Tri City Storm Contacts on Nextdoor with approximately 376 impressions
- Jan 5, 2023 - Sharene Gonzales chaired the ACWA Drought Communications Subcommittee
- Jan 9, 2023 - PA staff posted Community Meetings on Proposed Increase in Water Rates & Drought Surcharges on Nextdoor

Finance -

- Dec 23, 2022 -Notice of Proposed Increase in Water Rates and Drought Surcharges sent to 139,498 addresses including all property owners, customers of record and all other mailing addresses in the service area

Operations -

- Dec 29, 2022 -Mailed approximately 18,000 Water Main Cleaning Program postcards

Engineering & Tech Services -

- Jan 4, 2023 - New 2023 Proposed Rates and Fees Memo and Schedule mailed to current District customers, developers, contractors, and engineers

Groundwater Resources -

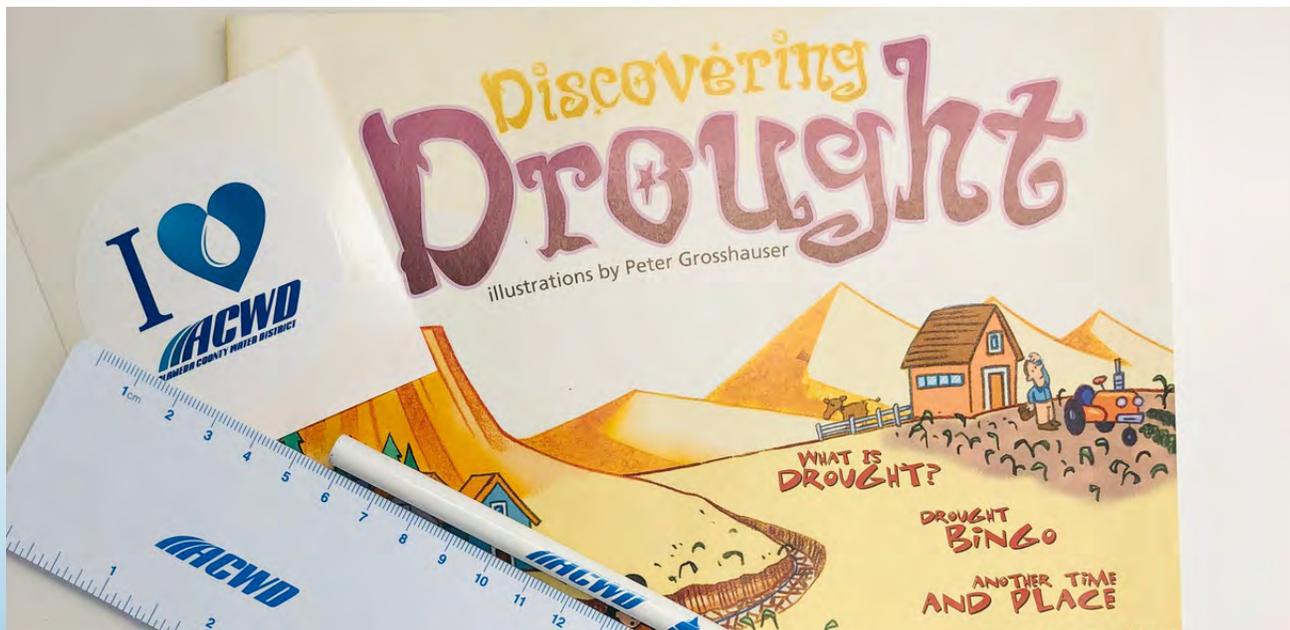
- 12/15/2022 - Replenishment Assessment Self-Read Letters Q4 2022

Water Resources -

- Dec 13, 2022 - Jan,3, 2023 a total of 3 people attended the Virtual Office Hours with a Water Use Efficiency Specialist.
- Dec 14, 2022 - WUE Staff added additional resources to the Rain Barrel Rebates section of ACWD's rebates webpage.
- Dec 14, 2022 - WUE Staff added information about the CII Water-Efficient Technology (WET) rebate to the ACWD rebates webpage.
- Dec 22, 2022 - WUE mailed letters to 1,337 Help on Tap participants to promote the Water Savings Assistance Partnership Program

SCHOOL EDUCATION PROGRAM

- Dec 14 - ZunZun has performed 2 school assemblies at 1 school for the 2022/23 school year.
- Dec. 22 - Facilitated a tour of TP2 for students from Mission San Jose High School.
- Jan. 2 - Launched the 4th annual WaterClips Student Video Contest.
- 11,540 school supplies have been distributed to date for the 2022/23 school year. *This number is the same as last month's because we have not received additional orders.



UPCOMING EVENTS

- Thursday, January 19, 6 p.m. - Community Meeting on Proposed Increase in Water Rates and Drought Surcharges, Downtown Event Center | 3500 Capitol Avenue, Fremont, CA 94536
- Monday, January 26, 6 p.m. - Community Meeting on Proposed Increase in Water Rates and Drought Surcharges, hosted via Zoom



Photo from previous community outreach event.

THE ACWD CONNECTION

Community Meetings on Proposed Increase in Water Rates and Drought Surcharges

Learn about proposed rate increases, drought surcharges and the projects and programs supported by your rate dollars at two upcoming meetings. The meetings are in advance of a public hearing on February 9, 2023.

IN-PERSON COMMUNITY MEETING



Thursday, January 19

6:00 p.m.



**3500 Capitol Avenue
Fremont, CA 94536**

VIRTUAL COMMUNITY MEETING



Thursday, January 26

6:00 p.m.



Hosted via Zoom

Link available at acwd.org/rates

For more information about upcoming meetings and proposed rates, please visit acwd.org/rates



You Tube

Proud to provide a reliable supply of high quality water at a reasonable price to Fremont, Newark and Union City





THE ACWD CONNECTION



NEW YEAR'S WATER SAVING RESOLUTIONS

Ring in the new year with these water conservation tips and practice water savings throughout the year!

- Reduce shower times.
- Wash only full loads of laundry and dishes.
- Scrape food scraps off plates before rinsing.
- Convert lawn to water-efficient landscape.
- Turn sprinklers off when rain is in the forecast.
- Install a rain barrel and harvest rainwater from downspouts.
- Inspect your landscape and home regularly for leaks and make repairs if needed.

Have a happy and healthy new year!

For more water saving ideas and rebate information, visit [acwd.org/conserve](https://www.acwd.org/conserve).



Proud to provide a reliable supply of high quality water at a reasonable price to Fremont, Newark and Union City



THE ACWD CONNECTION

Alameda County Water District



- WIN \$500 -
Student Video Contest!

CONTEST THEME:

**THE BENEFITS OF A
WATER-EFFICIENT GARDEN**

Students in grades 6-12 from
Fremont, Newark & Union City

Submit a 30 second video

Contest deadline: Friday, March 31, 2023

4th Annual Student Video Contest

For contest information, visit acwd.org/waterclips



YouTube

Proud to provide a reliable supply of high quality water at a reasonable price to Fremont, Newark and Union City



THE ACWD CONNECTION

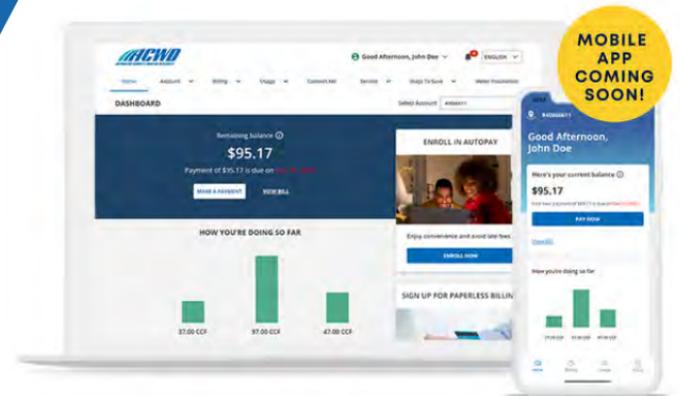
ACWD Launches New Web Portal

My Smart Water Connect is a New & Convenient Way to Access Your Water Account

With **My Smart Water Connect**, you can:

- Pay bills
- View water usage
- Detect potential leaks early*
- Reduce surprise water bills with access to up-to-date water usage at any time throughout the billing cycle*

Get started now at acwd.org



*Features are available to customers who have been upgraded to AMI meters.

To see when your meter will be upgraded, visit acwd.org

Proud to provide a reliable supply of high quality water at a reasonable price to Fremont, Newark and Union City



December 19, 2022

XXX

XXXXX

NEWARK, CA 94560-1747

Dear ACWD Property Owner/Water Customer,

Subject: Alameda County Water District Notice of Public Hearing for Proposed Increase in Water Rates and Drought Surcharges

The Alameda County Water District's core mission is to provide a reliable supply of high-quality water at a reasonable price to the communities of Fremont, Newark, Union City, and a portion of south Hayward. As a public agency, ACWD cannot take in funds beyond the costs of providing its service.

The District regularly conducts an analysis to ensure water rates accurately reflect the cost of water service. The District has held four public workshops on budget, and rates and charges throughout the year. The most recent analysis was presented at a public Board meeting on December 8, 2022 and concluded that an increase to water rates is necessary because costs to operate the District's water system and to pay for necessary capital improvement projects, to make required bond payments, and to maintain adequate reserves have increased.

The ACWD staff has proposed increases to both the bimonthly service charge and per-unit water consumption charge of 4 percent in 2023 and 4 percent in 2024. In addition, ACWD staff has proposed updates to the drought surcharges and private fire service rates. This notice explains the proposed rate changes in more detail.

PUBLIC HEARING

A public hearing on the proposed increases to the District's water rates and charges will be held at **6 P.M. on Thursday, February 9, 2023**. This will be a hybrid meeting and members of the public can attend via webinar or in person in the Board Room at ACWD Headquarters, 43885 South Grimmer Boulevard, Fremont. Webinar information is available at acwd.org/rates. At the public hearing, the ACWD Board of Directors will consider a rate increase of 4% to the service and commodity charges. The Board will also consider updates to the drought surcharge and private fire service rates. If approved, adjustments to service charge, commodity, private fire service rates, and drought surcharges will be effective March 1, 2023 and March 1, 2024. Drought surcharges are currently in effect and if approved the adjustments will be effective March 1, 2023.

UNDERSTANDING YOUR WATER BILL

ACWD bills its customers every other month, or six times per year. On these bimonthly bills, a customer is billed both a fixed “service charge” and a “consumption charge” based on the quantity of water used during the billing period.

Service Charge

Water customers are billed for a fixed service charge based on the size of each meter at the customer’s property. For residential customers – who typically have a 5/8- or 3/4-inch meter -- the service charge is proposed to increase by \$2.36 per bill, beginning March 1, 2023 and \$2.45 beginning March 1, 2024.

The table below illustrates the current bimonthly service charges and proposed increases for each size of water meter.

Meter Size	Current	Proposed Effective March 1, 2023	Proposed Effective March 1, 2024
5/8 & 3/4 inch meter	\$58.94	\$61.30	\$63.75
1 inch meter	\$94.18	\$97.95	\$101.87
1-1/2 inch meter	\$182.25	\$189.54	\$197.12
2 inch meter	\$287.95	\$299.47	\$311.45
3 inch meter	\$622.64	\$647.55	\$673.45
4 inch meter	\$1,115.87	\$1,160.50	\$1,206.92
6 inch meter	\$2,824.56	\$2,937.54	\$3,055.04
8 inch meter	\$4,938.41	\$5,135.95	\$5,341.38
10 inch meter	\$7,404.57	\$7,700.75	\$8,008.78

Consumption Charge

The water consumption charge is based on the number of “units” used by each customer. One unit is equivalent to 100 cubic feet, or 748 gallons, of water. The water consumption charge is proposed to increase \$0.207 per unit beginning March 1, 2023 and \$0.22 per unit beginning March 1, 2024 for customers outside ACWD’s normal service boundaries such as you.

The table below shows the current and proposed water consumption charges for water customers outside District customers.

Current	Proposed Effective March 1, 2019	Proposed Effective March 1, 2020
\$5.253/unit	\$5.46/unit	\$5.68/unit

ACWD will send written notification to all customers at least 30 days prior to the effective date of the proposed 2023 water rate increase.

Please refer to the tables under Service Charge and Consumption Charge to estimate bill impacts based on your individual meter size and water usage.

Private Fire Service Rates

ACWD’s water system supports both public fire protection for firefighting, which is generally visible as hydrants on the street, and private fire systems that provide water flow to building and other structure fire sprinkler systems for fire suppression within private improvements. Single family homes with a fire sprinkler system typically have that system served by their regular water service connection rather than having a separate private fire service connection

Private Fire Connection Size	Current Effective March 1, 2022 Private Fire Service Rates	Proposed Effective March 1, 2023 Private Fire Service Rates	Proposed Effective March 1, 2024 Private Fire Service Rates
3/4 “	\$7.93	\$8.25	\$8.58
1	\$8.12	\$8.44	\$8.78
2	\$9.97	\$10.37	\$10.78
4	\$21.46	\$22.32	\$23.21
6	\$47.57	\$49.47	\$51.45
8	\$92.59	\$96.29	\$100.15
10	\$160.32	\$166.73	\$173.40
12	\$254.19	\$264.36	\$274.93

Drought Surcharges

The drought surcharges, currently called ‘stage rates’ on your bill, ensure sufficient revenues to cover the cost of providing water service when consumption decreases due to a water shortage emergency, such as a drought. Drought surcharges are assessed per unit of water consumption, so customers who use less will pay less and customers who use more will pay more. Drought surcharges are also set up incrementally to reflect the different levels of water shortage emergency defined in ACWD’s Urban Water Management Plan, specifically the Water Shortage Contingency Plan. The schedule of drought surcharges is shown in the table below:

Water Shortage Contingency Plan Stage	Reduction in Water Demand	Projected Water Sales (Acre-feet)	Current Drought Surcharge (\$/unit)	Proposed Effective March 1, 2023 Unit Drought Surcharge (\$/unit)	Proposed Effective March 1, 2024 Unit Drought Surcharge (\$/unit)	Proposed Effective March 1, 2023 Total Consumption Charge by Stage	Proposed Effective March 1, 2024 Total Consumption Charge by Stage
0	0%	39,226	\$0.000/unit	\$0.00/unit	\$0.00/unit	\$5.46/unit	\$5.68/unit
1	10%	35,303	\$0.496/unit	\$0.52/unit	\$0.54/unit	\$5.98/unit	\$6.22/unit
2a	15%	33,342	\$0.787/unit	\$0.82/unit	\$0.85/unit	\$6.28/unit	\$6.53/unit
2b	20%	31,381	\$1.115/unit	\$1.16/unit	\$1.21/unit	\$6.62/unit	\$6.89/unit
3a	25%	29,419	\$1.486/unit	\$1.55/unit	\$1.61/unit	\$7.01/unit	\$7.29/unit
3b	30%	27,458	\$1.920/unit	\$2.00/unit	\$2.08/unit	\$7.46/unit	\$7.76/unit
4	40%	23,536	\$3.000/unit	\$3.12/unit	\$3.25/unit	\$8.58/unit	\$8.92/unit
5	50%	19,613	\$4.443/unit	\$4.62/unit	\$4.81/unit	\$10.08/unit	\$10.49/unit
6	60%	15,690	\$5.852/unit	\$6.90/unit	\$7.18/unit	\$12.36/unit	\$12.86/unit

In the current water shortage situation, the ACWD Board has declared a stage 2a water shortage emergency with a systemwide 15% conservation mandate, imposed specific water use restrictions, and taken other necessary actions to address the water shortage emergency. This took place at a properly noticed public hearing on December 9, 2021, with an opportunity for public input. The Stage 2a drought surcharge has been in effect since March 1, 2022 and because the District continues to be in a drought emergency, the Stage 2a drought surcharge is proposed to continue to stay in effect at the newly proposed rate effective March 1, 2023. Should the drought worsen and the ACWD Board declare a higher-level water shortage emergency, 30-day advance notification is required before implementing the higher drought surcharge. However, drought surcharges will be rescinded immediately upon a determination by the Board that ACWD is no longer in a water shortage emergency.

FINANCIAL SUSTAINABILITY

Why are rate changes necessary?

Financial planning and appropriate rate-setting based on cost of service is ACWD's responsibility to ensure we deliver the service you deserve and the water quality and reliability you expect. The rate proposal will be used to:

- Attract and maintain a specialized workforce with competitive salaries and benefits
- Construct and modernize capital infrastructure to meet increasing environmental and water quality regulations and standards, including a new water treatment facility to remove PFAS from water
- Fund significant water supply and water quality initiatives, including Los Vaqueros Reservoir Expansion and Delta Conveyance, and ensuring the preservation and protection of the southern Alameda Creek watershed, a critical source of the District's water supply
- Meet debt covenants
- Maintain sufficient emergency reserves and ACWD's excellent AAA bond rating which lowers borrowing costs

- Address current and anticipated cost increases from wholesale water provider San Francisco Public Utilities Commission (15.9% in 2022)
- Ensure ACWD can withstand financial pressures that could result from increased regulation of water supply sources and mitigation of contaminants of emerging concern

What is ACWD doing to control costs?

ACWD is taking several steps to reduce costs, improve efficiencies and identify alternative revenue sources to minimize the need for rate increases, including:

- Securing grants and reimbursements, primarily for mandated projects in Alameda Creek, that totaled \$23.9 million over the past three years and are estimated to provide an additional \$9.6 million in the current and next two fiscal years
- Using ACWD’s diverse water supplies to maximize use of lowest-cost water and maximizing returns from the District’s water storage banking program during the current drought
- Installing Advanced Metering Infrastructure to provide customers better tools to track and make informed decisions regarding their water use, improve metering accuracy, and to provide long-term cost reductions and operational savings
- Increasing energy efficiency to reduce power costs and lowering operating costs by installing over 5 megawatts of solar panels at ACWD facilities
- Refinancing existing debt to lower debt service costs
- Lowering costs related to our vehicle fleet by transitioning to a leasing program and reducing the number of vehicles in our fleet
- Upgrading pump stations with more energy-efficient equipment and reducing maintenance costs
- Partnering with other agencies to execute joint projects to reduce costs and community impacts
- Teaming with other agencies to secure lower prices on necessary chemicals

Rising water rates are not unique to ACWD as aging infrastructure and other issues are causing water utilities statewide to increase rates in order to maintain water quality and reliability.

EFFECTIVE DATE AND PRORATION

If adopted by the Board of Directors, the proposed water rates including drought surcharges and private fire service rates, would become effective March 1, 2023 and March 1, 2024. For bills that overlap these effective dates, the bills will be prorated to reflect the changes in the bimonthly service charge, commodity charge, private fire service rate, and drought surcharge.

HOW TO SUBMIT COMMENTS ON OR PROTEST THE WATER RATE PROPOSAL

If you would like more information or wish to comment on or protest the proposed rate increases, please visit the District online at www.acwd.org/rates. Online comments/protests must be received by **5 p.m. on February 9, 2023**. Protests can also be submitted in person at the public hearing.

Alternatively, you may submit written comments/protests to:

ACWD
P.O. Box 5110
Fremont, CA 94537-5110
Attn: Proposed Water Rates

Please be sure to include your name and the address of the property you own that receives water service from the District or your ACWD account number. One written protest per parcel will be counted toward calculating a majority protest. Written protests must be received by the District before the end of the **February 9, 2023** public hearing to count toward calculating a majority protest.

Additional information regarding the rate proposal can be found at www.acwd.org/rates.



BOARD MEMBERS

43885 SOUTH GRIMMER BOULEVARD • FREMONT, CALIFORNIA 94538
(510) 668-4200 • www.acwd.org

MANAGEMENT

AZIZ AKBARI
JAMES G. GUNTHER
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PAUL SETHY
JOHN H. WEED

ED STEVENSON
General Manager
KURT ARENDS
Operations and Maintenance
GIRUM AWOKE
Engineering and Technology
LAURA J. HIDAS
Water Resources
JONATHAN WUNDERLICH
Finance and Administration

December 15, 2022

[Redacted]

Subject: Request for Meter Reading at [Redacted], for
Quarter Ending December 31, 2022 – [Redacted]

The Alameda County Water District (ACWD) levies a replenishment assessment on the production of groundwater from the Niles Cone Groundwater Basin. Groundwater production is monitored by the use of a metering device and billed to groundwater producers on a quarterly basis.

ACWD has determined that your groundwater production facility located at [Redacted], is inaccessible to ACWD's meter readers. In order to produce quarterly billing for groundwater production at your facility, it is necessary that you provide ACWD with a meter reading. The reading should be taken during December. Please provide this information to ACWD no later than Friday, January 6, 2023.

Please provide your meter reading in the space below along with the meter units, type of reading and date of reading.

_____ Meter Reading

_____ Units (gallons, 100's gallons, cubic feet, etc.)

_____ Reading Type (C = continuous/cumulative, Q = total consumption
for current quarter only)

_____ Date of Reading

This form should be returned to:
Customer Accounting - Replenishment Assessment
Alameda County Water District
43885 S. Grimmer Boulevard
Fremont, California 94538

If you have any questions regarding this matter, please contact ACWD's Customer Service at (510) 668-4200, or via e-mail at: customerservice@acwd.com.

NEWS > CALIFORNIA NEWS • News

Alameda County Water District proposes rate increases

If approved, the 4% rate increases would go into effect on March 1, 2023

By **MARTHA BRENNAN** | mbrennan@bayareanewsgroup.com | Bay Area News Group

PUBLISHED: December 15, 2022 at 5:55 a.m. | UPDATED: December 16, 2022 at 10:02 a.m.

FREMONT — It seems like everything is going up in price these days, especially bills, and for residents in Fremont, Newark and Union City, water is no exception. Households in these areas could start paying 4% more for the commodity beginning next March, and another 4% on top of that in March 2024.

The increases are being proposed by the Alameda County Water District, which will hold a public hearing on the rate hikes in February.

The Alameda County Water District serves 345,000 residents in the 104 square mile area covered by the cities of Fremont, Newark and Union City, and produces more than 36.6 million gallons of water a day.

The district has a budget of \$176 million for the next fiscal year, but rising costs



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“But the cost of treating water and maintaining our facilities, whether customers use water or not, remains.”

Earlier this year, the district implemented a drought surcharge of 79 cents per unit of water to help make up for the revenue that has been lost by asking customers to use 15% less water.

Gonzales said that the surcharges have helped, but more funding is needed to pay for rising labor, operational and water purchase costs. About 20% of the district’s water is bought from the San Francisco Public Utilities Commission, while 40% comes from the California State Water Project. The final 40% comes from local sources.

“Operation and maintenance costs have increased; equipment and chemical costs have increased, as has the cost of the water we purchase. We’re experiencing supply chain issues, too,” Gonzales said.

Analysts for the district held four workshops over the past year to discuss the district’s finances. During the final one, held in September, the analysts concluded that a 4% rate increase for each of the next two years was necessary for the district to continue to provide safe drinking water.

If approved by the district’s board, the increase would raise the current bimonthly bill for an average house from \$132.48 to \$137.78 next year, and to \$143.27 beginning in 2024. The average household uses about 16 units of water in a two-month billing cycle, or about 200 gallons per day.

The district said that the average residential bill would still be the ninth lowest of 30 Bay Area agencies.

Customers will receive a detailed notice of the proposal at the end of December, with a public hearing scheduled for Feb. 9. Under Prop. 218 in the California Constitution, residents can formally protest a water or sewer rate increase. If more than 50% of bill payers submit written protests at the hearing, the rates cannot go forward.

The district’s board will vote on whether to increase the fees on the night of the public hearing.

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Tags: [California Drought](#), [Regional](#), [Water](#), [Water Rates](#)

 Author **Monika Drennon** | **Freemont Union**



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AVAILABLE NOW!

Introducing the New and Convenient
Alameda County Water District
WEB PORTAL



**MOBILE
APP
COMING
SOON!**

MY SMART WATER CONNECT



Alameda County Water District Launches New Online Portal

Alameda County Water District has launched its My Smart Water Connect, a new and convenient web portal. Now customers can easily pay bills, view and compare usage, receive email or text notifications, and explore ways to save water with conservation programs.



43885 SOUTH GRIMMER BOULEVARD • FREMONT, CALIFORNIA 94538
(510) 668-4200 • FAX (510) 770-1793 • www.acwd.org

December 14, 2022

Dear Valued Customer:

Subject: Free Water and Energy Saving Program

The Alameda County Water District (ACWD) is pleased to let you know about a partnership program designed to help our customers save water and energy! ACWD is offering installation of additional water saving measures, AT NO COST, to customers that qualify for PG&E's Energy Savings Assistance (ESA) Program. ACWD is excited to offer income-qualified customers this additional support to help conserve water during drought.

As a current ACWD Help on Tap customer assistance program participant, you are most likely eligible for the ACWD and PG&E partnership program. Please note, customers are eligible for services (excluding toilet retrofit) every 3 years. If you have received services within this timeframe, you will not be eligible for a follow-up until the 3-year timeframe has passed.

- **About the program** – Local contractors will provide water and energy conservation assessments and install energy and water saving devices for income qualified customers. Potential services include the installation of new toilets, faucet aerators, and low-flow showerheads. The leak detection and repair services include indoor and outdoor leak assessments and if needed, installation of new kitchen and bathroom faucets, toilet flappers, sprinkler heads, and outdoor hose bibs. Qualified participants will receive these services for FREE. That's right, there is no cost to you to participate. PG&E and ACWD will fully fund all energy and water conservation measures that your household qualifies for.
- **How to qualify** – If you qualify for PG&E's ESA Program, you are also eligible for this partnership program. Bottom Line Utilities Solutions (BLUS) and Quality Control Solutions (QCS) are both authorized program contractors and will assist you in determining if you qualify for the program (ACWD will not share any customer information). Documentation of participation in a qualifying Public Assistance Program, such as Medi-Cal or CalFresh, or proof of income is required. **To participate, please contact BLUS at (800) 597-2835 or contact QCS at (925) 326-7314.** Contractors will never ask for any type of payment or financial compensation.

To protect your health and safety, contractors will discuss all COVID-19 and safety protocols with you over the phone before entering your home. The safety of each participants health is of utmost importance.

If you have questions, please contact ACWD's Water Use Efficiency team at (510) 668-4218 or water.cons@acwd.com. Thank you in advance for helping to conserve water and energy. Let the savings begin!

Sincerely,

Gisselle Delgadillo
Water Use Efficiency Specialist





Water Main Cleaning to Improve Water Quality

Program Modified Due to Drought Conditions

The Alameda County Water District is scheduled to clean all dead-end mains in the Tri-Cities to improve water quality and remove sediment buildup in pipes that may cause discolored water. This is part of the vital service provided by ACWD to ensure that all customers receive high quality water. Due to drought conditions, the 2023 program has been modified to reduce water use by approximately 50% compared to the typical Water Main Cleaning Program.

Cleaning will occur at various locations throughout the service area from **January through April 2023; Monday through Friday, from 7 a.m. to 4 p.m.** (excluding holidays).

To find out if and when the water main on your street will be cleaned, and for program updates and future notifications, visit acwd.org/maincleaning or call **510.668.6500**.



We are using
50% less water
in 2023!





43885 S. Grimmer Boulevard
Fremont, CA 94538

Upcoming Main Cleaning
January - April 2023
Using 50% less water!

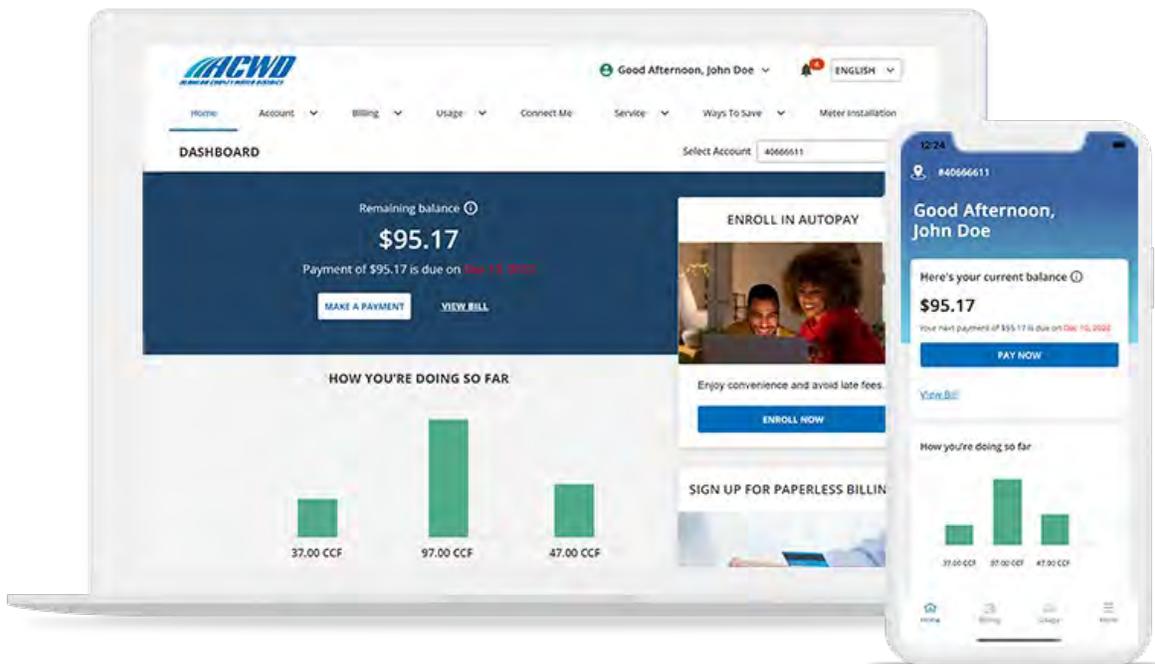
acwd.org/maincleaning



Introducing the New and Convenient Alameda County Water District

Web Portal

My Smart Water Connect



Mobile App Coming Soon!

Accessing Your ACWD Online Water Account Just Got Easier!

We are pleased to offer you a new, simple and convenient way to manage your online account with - **My Smart Water Connect**. Now you can easily pay bills, view and compare usage, receive email or text notifications, and explore ways to save water with conservation programs.



Intuitive Dashboard

Manage multiple water accounts and find important information in a single place



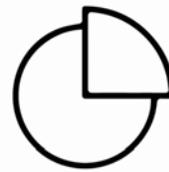
Secure Billing and Payments

Manage, track history and make bill payments on the go with flexible options



Monitor Usage

Compare & analyze your usage overview



Ways to Save

Water conservation programs, rebates and tips

Already have online access to your account?

Simply access My Smart Water Connect and:

- Enter username & password
- Follow prompts to reset your password
- Return to login screen and re-enter username and new password

Need to register for an online account?

Simply access My Smart Water Connect and:

- You will need your ACWD account details
- Click "Register" and follow the steps to create an online account
- Click on the activation email to activate your online account
- Return to login screen and enter username and password

[Get Started Now](#)

Get started and do more with your **My Smart Water Connect account.**

[Visit our website](#)



Address:
43885 S Grimmer Boulevard
Fremont, CA 94538
Phone: (510) 668 4200

Connect With Us





ALAMEDA COUNTY WATER DISTRICT

Notice of Proposed Increase in Water Rates and Drought Surcharges

Public Hearing

Thursday, February 9, 2023 at 6 p.m.



Notice of Proposed Increase in Water Rates and Drought Surcharges

The past few years have been challenging and unprecedented, requiring changes of us all. We thank our customers for your flexibility while we made adjustments to ensure seamless service to continue our 24/7 operation of water treatment, supply, delivery, and emergency repairs. Our essential work continues to provide a reliable supply of high-quality water at a reasonable price to the communities of Fremont, Newark, and Union City.

To deliver on our mission, ACWD regularly conducts analysis to ensure water rates accurately reflect the cost of water service. Your water rates pay for staffing; the purchase, treatment, testing and delivery of water; infrastructure improvements; and debt coverage. As a public agency, ACWD cannot take in funds beyond the cost of providing service. To inform customers and receive input from the public, ACWD held four financial public workshops in 2022 - one focused on budget and three focused on rates and charges. The most recent analysis was presented at a public Board meeting on December 8, 2022 and concluded that an increase to water rates is necessary. Meeting materials and recordings are available at acwd.org/agendacenter.

The ACWD staff, working with an independent financial consultant, completed the District's Water Rates Update and Financial Plan. The rate increase presented in this notice reflects the findings of that update, which is based upon the 2021 Cost of Service Study. The full 2021 Cost of Service Study and the Water Rates Update and Financial Plan are available at acwd.org/rates. This notice explains the proposed rate changes in more detail and provides examples of how they are likely to affect a customer's water bill.

EFFECTIVE DATE & PRORATION

If adopted by the Board of Directors, the proposed water rates, including drought surcharges and private fire service rates, would become effective March 1, 2023 and March 1, 2024. For bills that overlap these effective dates, the bills will be prorated to reflect the changes in the bimonthly service charge, commodity charge and drought surcharge.



HOW TO SUBMIT COMMENTS ON OR PROTEST THE WATER RATE PROPOSAL

Please visit us at acwd.org/rates if you would like more information or wish to comment on or protest the proposed rate increases. Online comments/protests must be received by the end of the public hearing, which starts at **6 p.m. on February 9, 2023**. Protests can also be submitted in person at the public hearing.



Alternatively, you may submit written comments/protests to:

ACWD
P.O. Box 5110
Fremont, CA 94537-5110
Attn: Proposed Water Rates

Please be sure to include your name and the address of the property you own that receives water service from ACWD or your account number. One written protest per parcel will be counted toward calculating a majority protest. Written protests must be received before the end of the **February 9, 2023** public hearing to count toward calculating a majority protest.

Under State law, there is a 120 day statute of limitations for challenging any new, increased, or extended fee or charge.

Public Hearing

A public hearing on the proposed increases to ACWD's water rates and charges will be held at **6 p.m. on Thursday, February 9, 2023**. This will be a hybrid meeting and members of the public can attend via webinar or in person.

Members of the public may participate in this meeting via webinar <https://us02web.zoom.us/j/83359856504?pwd=ZkxPUGVHwVNTi8raFc2UIJGY3kzZz09> (passcode: 438204), or by calling any of the following phone numbers: 1-669-900-9128 or 1-346-248-7799 or 1-301-715-8592 followed by 833 5985 6504. Members of the public may also attend this meeting in person. This meeting will be conducted in person at ACWD Headquarters at 43885 S. Grimmer Blvd. in Fremont, CA or by webinar or teleconference. At the public hearing, the ACWD Board of Directors will consider a rate increase of 4% to the service and commodity charges. The Board will also consider updates to the drought surcharge

and private fire service rates. If approved, adjustments to service, commodity, private fire service rates, and drought surcharge will be effective March 1, 2023 and March 1, 2024. Drought surcharges are currently in effect and if approved the adjustments will be effective March 1, 2023.

Community Meetings

Learn more about proposed rate increases, drought surcharges, and the projects and programs supported by your rate dollars. Two meetings will be held providing a brief presentation followed by a question and answer session. The content of the two presentations will be the same.

1. **January 19, 2023 at 6 p.m.:** This meeting will be conducted in person at Downtown Event Center, located at 3500 Capitol Avenue, Fremont, CA 94536.
2. **January 26, 2023 at 6 p.m.:** This meeting will be conducted on Zoom. The meeting link is available at acwd.org/rates.

Financial Sustainability



WHY ARE RATE CHANGES NECESSARY?

Financial planning and appropriate rate-setting based on cost of service is ACWD's responsibility to ensure we deliver the service you deserve and the water quality and reliability you expect. The rate proposal will be used to:

- Attract and maintain a specialized workforce with competitive salaries and benefits
- Construct and modernize capital infrastructure to meet increasing environmental and water quality regulations and standards, including a new water treatment facility to remove PFAS from water
- Fund significant water supply and water quality initiatives, including Los Vaqueros Reservoir Expansion and Delta Conveyance, and ensuring the preservation and protection of the southern Alameda Creek watershed, a critical source of the District's water supply
- Meet debt covenants
- Maintain sufficient emergency reserves and ACWD's excellent AAA bond rating which lowers borrowing costs
- Address current and anticipated cost increases from wholesale water provider San Francisco Public Utilities Commission (15.9% in 2022)
- Ensure ACWD can withstand financial pressures that could result from increased regulation of water supply sources and mitigation of contaminants of emerging concern



WHAT IS ACWD DOING TO CONTROL COSTS?

ACWD is taking several steps to reduce costs, improve efficiencies and identify alternative revenue sources to minimize the need for rate increases, including:

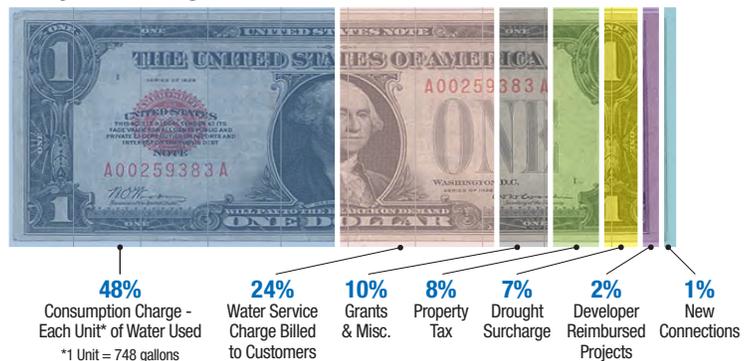
- Securing grants and reimbursements, primarily for mandated projects in Alameda Creek, that totaled \$23.9 million over the past three years and are estimated to provide an additional \$9.6 million in the current and next two fiscal years
- Using ACWD's diverse water supplies to maximize use of lowest-cost water and maximizing returns from the District's water storage banking program during the current drought
- Installing Advanced Metering Infrastructure to provide customers better tools to track and make informed decisions regarding their water use, improve metering accuracy, and to provide long-term cost reductions and operational savings
- Increasing energy efficiency to reduce power costs and lowering operating costs by installing over 5 megawatts of solar panels at ACWD facilities
- Refinancing existing debt to lower debt service costs
- Lowering costs related to our vehicle fleet by transitioning to a leasing program and reducing the number of vehicles in our fleet
- Upgrading pump stations with more energy-efficient equipment and reducing maintenance costs
- Partnering with other agencies to execute joint projects to reduce costs and community impacts
- Teaming with other agencies to secure lower prices on necessary chemicals



WHERE DOES ACWD GET ITS MONEY?

ACWD receives revenue from not only water bills but also from a variety of sources including property taxes, grants & reimbursements, and developer-related charges. If revenue components were spread evenly across every dollar received, the breakdown would be as shown to the right.

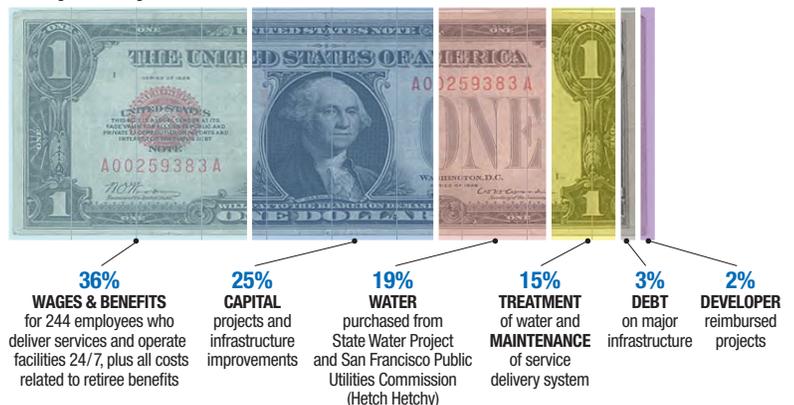
Every \$1 Flowing in Comes From:



WHERE DOES MY RATE DOLLAR GO?

Likewise, ACWD's costs are not just for the supply of water but for many other costs including such items as debt service, capital expenditures, labor and benefits, and water treatment. If cost components were spread evenly across every dollar spent, the breakdown would be as shown to the right.

Every \$1 Pays For:



Effect on Single-Family Residential Customers

The average single-family residential customer currently uses about 16 units of water in a two-month billing cycle, or about 200 gallons per day. The chart below shows the estimated impact of the rate increase on a typical residential customer who uses 16 units of water.

Charge	Current	March 1, 2023 <i>Proposed Effective Date</i>	March 1, 2024 <i>Proposed Effective Date</i>
Service Charge	\$58.94	\$61.30	\$63.75
Consumption Charge	<u>+\$73.54</u>	<u>+\$76.48</u>	<u>+\$79.52</u>
Total	\$132.48	\$137.78	\$143.27
Increase to each bimonthly bill		\$5.30	\$5.49
Amount of increase per month		\$2.65	\$2.74

Please refer to the tables under Service Charge and Consumption Charge to estimate bill impacts based on your individual meter size and water usage. This comparison does not include the drought surcharge that is currently in effect.

Understanding Your Water Bill

ACWD bills its customers **every other month**, or six times per year. On these bimonthly bills, a customer is billed both a fixed “service charge” and a “consumption charge” based on the quantity of water used during the billing period. A drought surcharge (currently called a stage rate on your bill) is also in effect during the current drought emergency and is also on your bimonthly bill. This charge is based on the quantity of water used.



SERVICE CHARGE

Water customers are billed for a fixed service charge based on the size of each meter at the customer’s property. For residential customers – who typically have a 5/8 or 3/4-inch meter – the service charge is proposed to increase by \$2.36 per bill, beginning March 1, 2023, and by \$2.45 per bill, beginning March 1, 2024.

Meter Size	Current	March 1, 2023 <i>Proposed Effective Date</i>	March 1, 2024 <i>Proposed Effective Date</i>
5/8 & 3/4 inch meter	\$58.94	\$61.30	\$63.75
1 inch meter	\$94.18	\$97.95	\$101.87
1-1/2 inch meter	\$182.25	\$189.54	\$197.12
2 inch meter	\$287.95	\$299.47	\$311.45
3 inch meter	\$622.64	\$647.55	\$673.45
4 inch meter	\$1,115.87	\$1,160.50	\$1,206.92
6 inch meter	\$2,824.56	\$2,937.54	\$3,055.04
8 inch meter	\$4,938.41	\$5,135.95	\$5,341.38
10 inch meter	\$7,404.57	\$7,700.75	\$8,008.78

The above table illustrates the current **bimonthly** service charges and proposed increase for each size of water meter.



CONSUMPTION CHARGE

The water consumption charge is based on the number of “units” used by each customer. One unit is equivalent to 100 cubic feet, or 748 gallons, of water.

Current	March 1, 2023 <i>Proposed Effective Date</i>	March 1, 2024 <i>Proposed Effective Date</i>
\$4.596/unit	\$4.78/unit	\$4.97/unit

Drought Surcharges

The drought surcharges, currently called ‘stage rates’ on your bill, ensure sufficient revenues to cover the cost of providing water service when consumption decreases due to a water shortage emergency, such as a drought. Drought surcharges are assessed per unit of water consumption, so customers who use less will pay less and customers who use more will pay more. Drought surcharges are also set up incrementally to reflect the different levels of water shortage emergency defined in ACWD’s Urban Water Management Plan, specifically the Water Shortage Contingency Plan. The schedule of drought surcharges is shown in the table below:

Water Shortage Contingency Plan Stage	Reduction in Water Demand	Projected Water Sales (Acre-feet)	<i>Current</i> Unit Drought Surcharge	<i>Proposed Effective Date: March 1, 2023</i> Unit Drought Surcharge (\$/unit)	<i>Proposed Effective Date: March 1, 2024</i> Unit Drought Surcharge (\$/unit)	<i>Proposed Effective Date: March 1, 2023</i> Total Consumption Charge By Stage	<i>Proposed Effective Date: March 1, 2024</i> Total Consumption Charge By Stage
0	0%	39,226	\$0.000/unit	\$0.000/unit	\$0.000/unit	\$4.78/unit	\$4.97/unit
1	10%	35,303	\$0.496/unit	\$0.52/unit	\$0.54/unit	\$5.30/unit	\$5.51/unit
2a	15%	33,342	\$0.787/unit	\$0.82/unit	\$0.85/unit	\$5.60/unit	\$5.82/unit
2b	20%	31,381	\$1.115/unit	\$1.16/unit	\$1.21/unit	\$5.94/unit	\$6.18/unit
3a	25%	29,419	\$1.486/unit	\$1.55/unit	\$1.61/unit	\$6.33/unit	\$6.58/unit
3b	30%	27,458	\$1.920/unit	\$2.00/unit	\$2.08/unit	\$6.78/unit	\$7.05/unit
4	40%	23,536	\$3.000/unit	\$3.12/unit	\$3.25/unit	\$7.90/unit	\$8.22/unit
5	50%	19,613	\$4.443/unit	\$4.62/unit	\$4.81/unit	\$9.40/unit	\$9.78/unit
6	60%	15,690	\$5.852/unit	\$6.90/unit	\$7.18/unit	\$11.68/unit	\$12.15/unit

In the current water shortage situation, the ACWD Board has declared a stage 2a water shortage emergency with a systemwide 15% conservation mandate, imposed specific water use restrictions, and taken other necessary actions to address the water shortage emergency. This took place at a properly noticed public hearing on December 9, 2021, with an opportunity for public input. The Stage 2a drought surcharge has been in effect since March 1, 2022 and because the District continues to be in a drought emergency, the Stage 2a drought surcharge is proposed to continue to stay in effect at the newly proposed rate effective March 1, 2023. Should the drought worsen and the ACWD Board declare a higher-level water shortage emergency, 30-day advance notification is required before implementing the higher drought surcharge. However, drought surcharges will be rescinded immediately upon a determination by the Board that ACWD is no longer in a water shortage emergency.

Private Fire Service Rates

ACWD’s water system supports both public fire protection for firefighting, which is generally visible as hydrants on the street, and private fire systems that provide water flow to building and other structure fire sprinkler systems for fire suppression within private improvements. Single family homes with a fire sprinkler system typically have that system served by their regular water service connection rather than having a separate private fire service connection.

Fire Service Diameter	<i>Current</i> Private Fire Service Rates	<i>March 1, 2023 Proposed Effective Date</i> Private Fire Service Rates	<i>March 1, 2024 Proposed Effective Date</i> Private Fire Service Rates
3/4 inch	\$7.93	\$8.25	\$8.58
1 inch	\$8.12	\$8.44	\$8.78
2 inch	\$9.97	\$10.37	\$10.78
4 inch	\$21.46	\$22.32	\$23.21
6 inch	\$47.57	\$49.47	\$51.45
8 inch	\$92.59	\$96.29	\$100.15
10 inch	\$160.32	\$166.73	\$173.40
12 inch	\$254.19	\$264.36	\$274.93



Help on Tap Customer Assistance Program



ACWD recognizes that some customers struggle to pay their water bill. The Help on Tap program provides assistance to income-qualified residential customers with a credit of \$40 toward the bi-monthly service charge. Eligibility guidelines are shown in the table to the right. For more program information and to download an application, please visit acwd.org/hot.

Household Size	Income Limit
1-2	\$57,150 or less
3	\$64,300 or less
4	\$71,400 or less
5	\$81,175 or less
6	\$92,975 or less
Each additional person, add	\$11,800



www.acwd.org/hot • 510.668.4200



43885 South Grimmer Blvd.
Fremont, CA 94538

One Saves Water Campaign & Drought Outreach Update

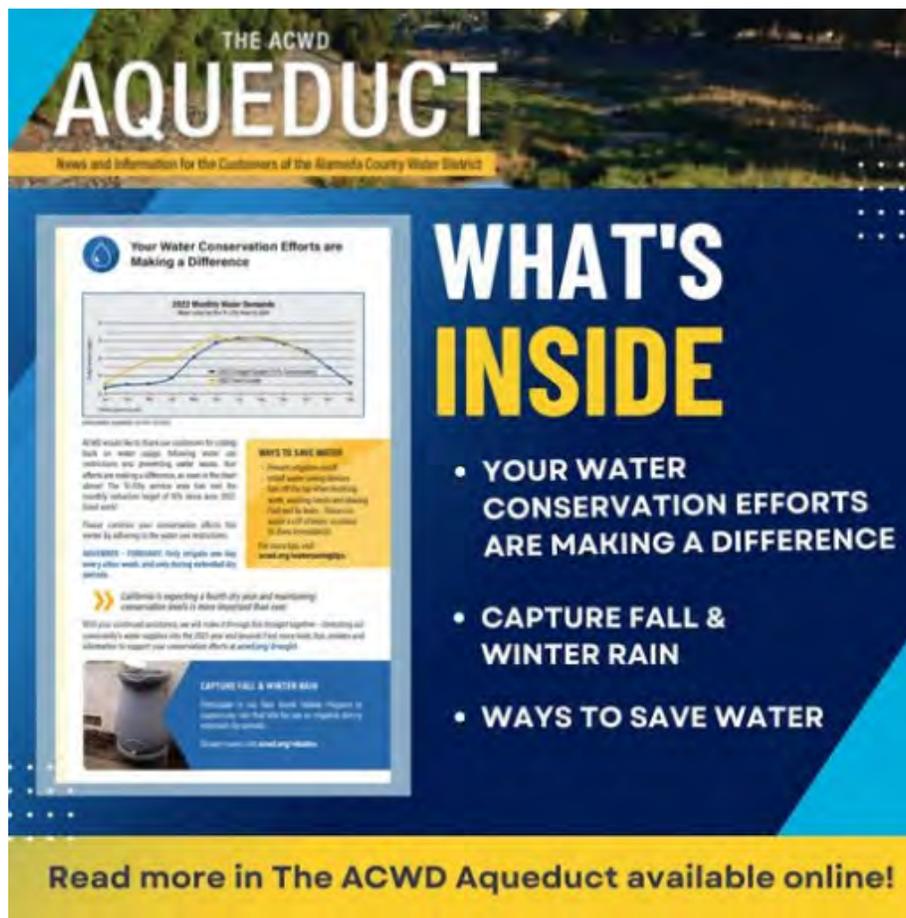


One Saves Water Campaign & Drought Outreach Update

The ACWD Aqueduct Newsletter

Posted to social media with link to full newsletter

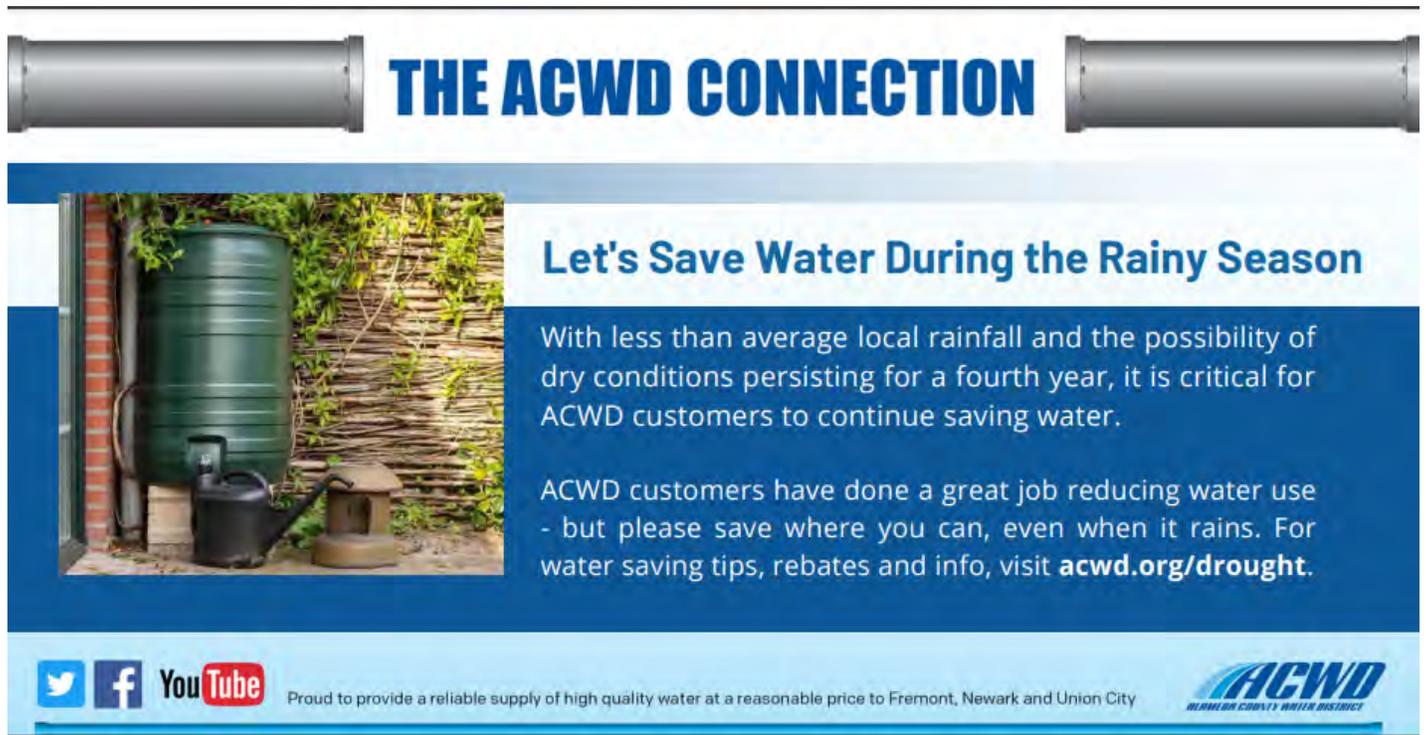
Includes demand chart, message of thanks to customers for reducing water use, rebate info



LEGAL, INTERGOVERNMENTAL & COMMUNITY AFFAIRS COMMITTEE
JANUARY 10, 2023

One Saves Water Campaign & Drought Outreach Update

Tri-City Voice ad
Dec 13



THE ACWD CONNECTION

Let's Save Water During the Rainy Season

With less than average local rainfall and the possibility of dry conditions persisting for a fourth year, it is critical for ACWD customers to continue saving water.

ACWD customers have done a great job reducing water use - but please save where you can, even when it rains. For water saving tips, rebates and info, visit acwd.org/drought.

   Proud to provide a reliable supply of high quality water at a reasonable price to Fremont, Newark and Union City

 **ACWD**
ALAMEDA COUNTY WATER DISTRICT

LEGAL, INTERGOVERNMENTAL &
COMMUNITY AFFAIRS COMMITTEE
JANUARY 10, 2023

One Saves Water Campaign & Drought Outreach Update

Tri-City Voice ad
Dec 27

THE ACWD CONNECTION

2023

NEW YEAR'S WATER SAVING RESOLUTIONS

Ring in the new year with these water conservation tips and practice water savings throughout the year!

- Reduce shower times.
- Wash only full loads of laundry and dishes.
- Scrape food scraps off plates before rinsing.
- Convert lawn to water-efficient landscape.
- Turn sprinklers off when rain is in the forecast.
- Install a rain barrel and harvest rainwater from downspouts.
- Inspect your landscape and home regularly for leaks and make repairs if needed.

Have a happy and healthy new year!
For more water saving ideas and rebate information, visit acwd.org/conserve.

Proud to provide a reliable supply of high quality water at a reasonable price to Fremont, Newark and Union City

ALAMEDA COUNTY WATER DISTRICT

LEGAL, INTERGOVERNMENTAL &
COMMUNITY AFFAIRS COMMITTEE
JANUARY 10, 2023



One Saves Water Campaign & Drought Outreach Update

Virtual Office Hours with a Water Use Efficiency Specialist

Tuesdays & Thursdays via Zoom

3 attendees from Dec - Jan

Virtual Office Hours with a Water Use Efficiency Specialist



Tuesday, January 10, 2023

Drop-in to speak with an ACWD Water Use Efficiency Specialist and discuss any questions related to the Lawn Be Gone! Rebate Program or other water conservation related topics. Open office hours are available for customers two times a week, excluding holidays. You may join via Zoom by selecting one of the links below and have your questions answered by an ACWD water conservation professional.

Lawn Be Gone! Rebate participants are required to attend a session for a pre-approval Q&A. During the sessions, a Water Use Efficiency Specialist will go over the various resources we offer, common challenges participants encounter, and provide recommendations for a successful lawn transformation. It is also an opportunity for participants to ask about anything they may need assistance with.

- Tuesdays @ 4:30 PM - 5:30 PM - Join [HERE](#)
- Thursdays @ 12 PM - 1 PM - Join [HERE](#)

Date: January 10, 2023

Time: 4:30 PM - 5:30 PM

Location: Held via Zoom

Contact: 510-668-4218

Link: [Email](#)



LEGAL, INTERGOVERNMENTAL &
COMMUNITY AFFAIRS COMMITTEE
JANUARY 10, 2023



One Saves Water Campaign & Drought Outreach Update

Ohlone College

KOHL 89.3 FM

:30 Public Service Announcement

As of October 1

“Rain or not, the California drought continues, and the Alameda County Water District asks customers to keep up the good work and save water. You can do this year-round by turning simple changes into habits: - take shorter showers, skip a flush, turn sprinklers off when it rains, and reimagine your yard with water-wise plants in your garden. ACWD offers rebates and more ways to save, visit [www dot a-c-w-d dot org](http://www.a-c-w-d.org) slash drought.”

One Saves Water Campaign & Drought Outreach Update

Social Media

Facebook, Twitter, Instagram - Original Content

- 2 posts, December 2022 - January 2023
- #OneSavesWater



One Saves Water Campaign & Drought Outreach Update

Next Steps

Ongoing

- Social media posts
- Tri-City Voice ads
- Expanded outreach for Virtual Office Hours

Planned

- Evaluate messaging based on 2023 water supply outlook
- Fremont Unified School District Garden Network Partnership

One Saves Water Campaign & Drought Outreach Update

Questions?



OPERATIONS & WATER QUALITY COMMITTEE
SUMMARY MINUTES
January 11, 2023
4:15 p.m.

ATTENDANCE 

Directors: Jim Gunther

Staff: Ed Stevenson, Kurt Arends, Mike Wickham, Cris Pena, Ranga Sampath, Jake Reed,
Caroline Abellar

Public Kelly Abreu

Due to COVID-19 and in accordance with Assembly Bill 361, which modifies Government Code Section 54953, this meeting was conducted in person at the District's Headquarters and virtually by Zoom Webinar and Teleconference, and members of the public were invited to participate. Materials presented to the Committee were posted in advance of the meeting at www.acwd.org and copies of materials as presented are attached to these minutes.

DISCUSSION TOPIC

1. Update on the Fifth Unregulated Contaminant Monitoring Rule (UCMR 5): Ranga Sampath, Environmental Engineer, provided an update on the Fifth Unregulated Contaminant Monitoring Rule, also known as UCMR 5. The UCMR 5 is the next phase of the Unregulated Contaminant Monitoring Rule (UCMR) Program, which the federal government established to provide the basis for future regulatory actions for the protection of public health. Mr. Sampath explained that the Environmental Protection Agency (EPA) uses the UCMR Program to collect occurrence data for contaminants suspected to be present in drinking water, but which presently do not have health-based standards. Mr. Sampath reviewed with the committee: 1) the origin of the UCMR program and regulation; 2) the collection, reporting, and use of the occurrence data on contaminants; 3) the two analyte monitoring lists included in UCMR 5; 4) the outcomes of prior UCMR phases; and 5) the District's efforts to comply with UCMR 5.

The District will be collecting samples and monitoring for contaminants listed in the UCMR 5 in 2024. Staff explained that the information collected from the UCMR 5 monitoring will be included in the 2024 Consumer Confidence Report (CCR).

Staff received comments and responded to questions from Director Gunther, and a member of the public.

2. Dam Emergency Action Plans: Jacob Reed, Emergency and Security Services Supervisor, provided a presentation on the effort to develop Dam Emergency Action Plans (EAPs) for the Governor's Office of Emergency Services (CalOES) Dam Safety Planning Division. The purpose is to gain compliance with Senate Bill 92 added Sections 6160 and 6161 to the Water Code.

Mr. Reed began the discussion by detailing the background event of the Oroville Dam failure that led to the creation of Senate Bill 92 which added Sections 6160 and 6161 to the Water

Code that became effective on June 17, 2017. This requires owners of State regulated dams, classified as extremely high hazard, high hazard, and significant hazard, to prepare EAPs containing inundation maps for emergency preparedness. Mr. Reed explained that EAPs required review by stakeholder agencies, public notification, final review and approval by CalOES, annual training, and updates every ten (10) years.

The Department of Water Resources Division of Safety of Dams (DSOD) classifies six District structures as being or having a dam, including three reservoirs (Decoto Reservoir – extremely high, Middlefield Reservoir – high, Patterson Reservoir – significant), two dikes (Quarry Pits Dam – high, Shinn Pit Dam – significant) and one traditional dam (Rubber Dam 3 – significant). Mr. Reed explained that the District is currently compliant with all six inundation maps. The District is compliant with one of the six EAPs, and another EAP is currently under review by CalOES. To complete the four remaining EAPs, staff will be bringing a contract for professional services to the Board at its January Board meeting. Mr. Reed shared a few examples and photos of inundation maps created for District dams and an example Table of Contents of the approved Decoto Reservoir EAP.

Mr. Reed explained the recommendation to leverage contract support to expedite the creation and approval of the final remaining EAPs.

Staff received comments and responded to questions from Director Gunther, and a member of the public.

3. Public Comments: No public comments were received.

RECOMMENDATIONS

Topics discussed by the Committee were informational only, and no recommendations were made.

Alameda County Water District

The Fifth Unregulated Contaminant Monitoring Rule (UCMR 5)

Ranga Sampath, Environmental Engineer



Operations and Water Quality Committee Meeting

January 11, 2023

1 www.acwd.org
[@AlamedaCountyWD](https://twitter.com/AlamedaCountyWD) [f](https://www.facebook.com/AlamedaCountyWD)

Presentation Overview

- What is UCMR?
- UCMR Program Timeline and Outcomes
- UCMR 5 Analytes
- How are UCMR 5 results used?
- ACWD UCMR 5 Timeline



2 www.acwd.org
[@AlamedaCountyWD](https://twitter.com/AlamedaCountyWD) [f](https://www.facebook.com/AlamedaCountyWD)

What is UCMR?

- USEPA implements this monitoring program as part of its responsibilities under the Safe Drinking Water Act
- Every five years, EPA issues a list of priority unregulated contaminants that may be present in drinking water but not yet subject to drinking water standards
- EPA specifies:
 - which systems are required to monitor
 - Identifies the sampling locations
 - Contaminants of concern
 - Defines the analytical methods to be used
- UCMR 5-cycle spans 2022-2026
 - Preparations in 2022
 - Sample collection from 2023-2025
 - Completion of data reporting in 2026



UCMR Program Timeline and Outcomes

To date, there have been four previous monitoring efforts under the Federal UCMR

- UCMR 1: 2001-2005 (26 Contaminants)
- UCMR 2: 2007-2011 (25 contaminants)
- UCMR 3: 2012-2016 (30 contaminants)
- UCMR 4: 2017-2021 (30 contaminants)



UCMR 5 Sampling – Analytes

- UCMR 5: 2022-2026 (30 contaminants)
 - 29 PFAS Compounds and One Metal: Lithium

EPA Method 533 (PFAS monitored under UCMR 3 are in bold)			
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	Perfluorohexanoic acid (PFHxA)
1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2 FTS)	Perfluorobutanoic acid (PFBA)	Hexafluoropropylene oxide dimer acid (HFPO-DA) ("GenX chemical")	Perfluorohexanesulfonic acid (PFHxS)
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluorobutanesulfonic acid (PFBS)	Perfluorononanoic acid (PFNA)
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorodecanoic acid (PFDA)	Perfluorooctanesulfonic acid (PFOS)
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	Perfluoropentanoic acid (PFPeA)	Perfluorododecanoic acid (PFDoA)	Perfluorooctanoic acid (PFOA)
Perfluoro-3-methoxypropanoic acid (PFMPA)	11-chloroicosafafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	Perfluoroheptanoic acid (PFHpA)	Perfluoroundecanoic acid (PFUnA)
Perfluoro-4-methoxybutanoic acid (PFMBA)			
PFAS Analytes Unique to EPA Method 537.1			
N-ethyl perfluorooctanesulfonamidoacetic acid (NETFOSAA)	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)
EPA Method 200.7 or Alternate SM 3120 B or ASTM D1976-20			
Lithium			



UCMR 5 Sampling – where and how frequent?

- Required to collect samples at entry points to the distribution system
 - Blending Facility and WTP-2: 4 times during a consecutive 12-month period
 - Newark Desalination Facility: 2 times during a consecutive 12-month period



How are UCMR 5 results used?

- If a Public Water System detects an unregulated contaminant in its drinking water, it must provide the information to its customers in its Consumer Confidence Report (CCR)
- EPA uses this data in the consideration of future water quality regulations



ACWD UCMR 5 Timeline

- December 2021: EPA published UCMR 5 final rule
- November 2022: EPA finalized Contaminant Candidate List
- December 2022: ACWD finalized monitoring plan
- Calendar Year 2024: ACWD monitors
- Reporting:
 - 2024 and 2025: Electronic reporting to EPA
 - July 1, 2025: Publish detections in 2024 CCR



Questions?



Dam Emergency Action Plans



Jake Reed, Emergency and Security Services Supervisor
January 11, 2023



Dam Emergency Action Plans

- Agenda
 - Background
 - Discussion
 - Recommendation



Background

- 2/2017 – Oroville Dam suffered major damages due to multiple Atmospheric River Storms in January – February.
- CA water codes 6160 & 6161 created and require:
 - Inundation maps
 - Classifications by hazard
 - Emergency action plans



Discussion

- Emergency action plans require:
 - Review by all related agencies
 - Example Decoto:
 - Union City: PD
 - City of Fremont: PD, fire
 - Alameda County: SO, Fire
 - National Weather Service



Discussion

- Emergency action plans require:
 - Public Notification
 - Final review and approval – CalOES
 - Example Decoto:
 - » Reviewed by CalOES tech, Supervisor, and Lead.
 - » 5 rounds of review by all 3 - changed and added new requirements each time.
 - Annual training on plans
 - Updates every 10 years

Discussion

DSOD names of facilities	Hazard classification	Compliance dates	DSOD / map compliant?	CalOES / plan compliant?
Decoto Dam	Extremely high hazard	1/1/2018	Yes	yes
Middlefield Dam	High hazard	1/1/2019	Yes	No - submitted
Quarry Pits Dam	High Hazard	1/1/2019	Yes	No – recommended contract
Shinn Dam	Significant hazard	1/1/2021	Yes	No – recommended contract
Patterson Dam	Significant hazard	1/1/2021	Yes	No – recommended contract
Rubber Dam 3	Significant hazard	1/1/2021	Yes	No – recommended contract

Discussion

- Patterson Reservoir – Overhead view



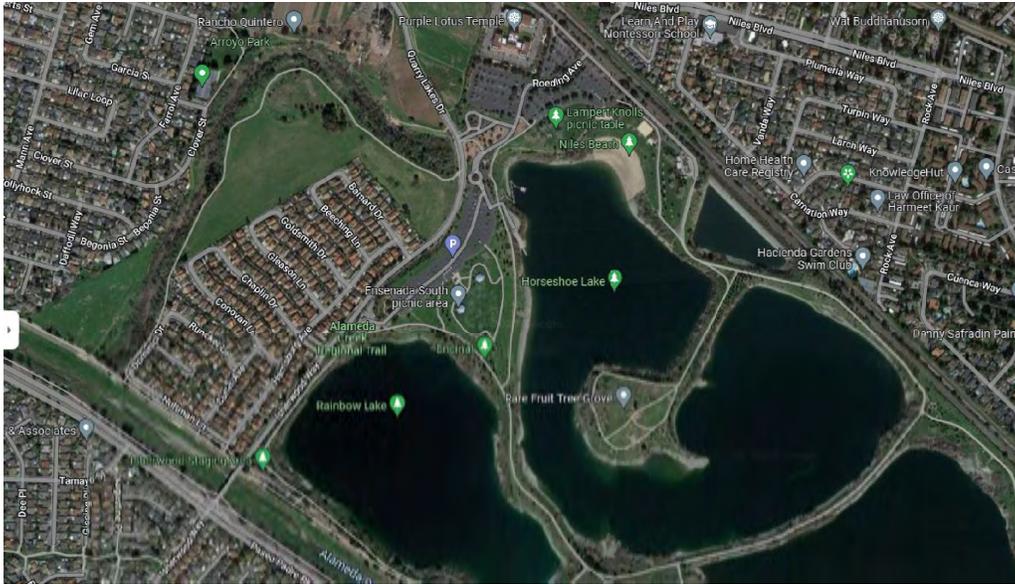
Discussion

- Patterson Reservoir - inundation map



Discussion

- Horseshoe Pond – overhead view



Discussion

- Horseshoe Pond – inundation map



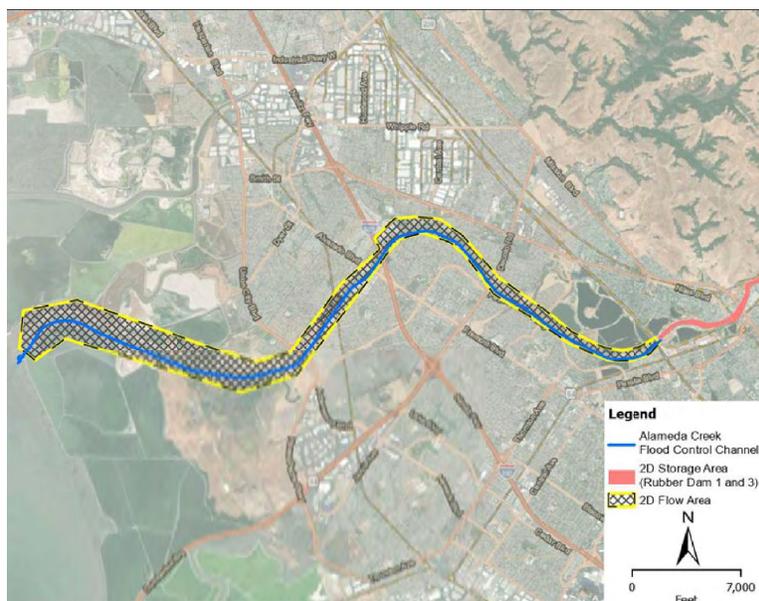
Discussion

- Rubber Dam 3 – overhead view



Discussion

- Rubber Dam 3 – inundation map



Discussion

- Example EAP – Approved Decoto EAP
 - Part 1
 - Summary of EAP Responsibilities
 - Notification Flowcharts
 - Project Description
 - EAP Response Process
 - General Responsibilities
 - Preparedness
 - Plan Maintenance

Discussion

- Part 2
 - Inundation map
- Part 3 – Appendices
 - A. Record of Plan Holders
 - B. Record of EAP Revisions
 - C. EAP Status Report
 - D. Notification Flowcharts
 - E. Contact Log
 - F. Notificaiton Message Template
 - G – N

Recommendation

- Leverage contract support to expedite creation and gaining approval of final EAPs
 - Water Resource Engineers
 - Ranked highest by Technical Evaluation Team
 - Created and gained approval for multiple water agencies to include DWR, SFPUC.
 - 4 staff members to support District Project Manager Caroline Abellar
 - » 2 Engineers to draft EAPs
 - » 2 Engineers and a Geologist to review EAPs

Recommendation

- Quarry Pits Dam EAP – Submit to CalOES 2/16/23
- Patterson Dam EAP – Submit to CalOES 3/16/23
- Shinn Dam EAP – Submit to CalOES 3/16/23
- Rubber Dam EAP – Submit to CalOES 4/13/23
- Anticipate 2 rounds of review and final approval by 12/23
- Total = \$188,820
 - * Costs savings can be found if less than anticipated reviews.

- Staff report to be presented in January's Board Meeting

Thank you

Jake Reed, Supervisor OESS
Jacob.reed@acwd.com
(510)668-6531



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Alameda County Water District
43885 S. Grimmer Blvd.
Fremont, CA 94538
510.668.4200



18 www.acwd.org
@AlamedaCountyWD

Questions?



FINANCE COMMITTEE MEETING
SUMMARY MINUTES
January 17, 2023
3:00 P.M.

ATTENDANCE 

Directors: John Weed (Chair), Paul Sethy

Staff: Ed Stevenson, Jonathan Wunderlich, Mariana Grajeda, David Serrano, Martin Koran

Due to COVID-19 and in accordance with Assembly Bill 361, which modifies Government Code Section 54953, this meeting was conducted in person at the District's Headquarters and virtually by Zoom Webinar and Teleconference, and members of the public were invited to participate. Materials presented to the Committee were posted in advance of the meeting at www.acwd.org.

DISCUSSION TOPICS

1. COVID Status Report: David Serrano, Human Resources and Risk Management Manager, provided an update on COVID status as part of the monthly update to the Finance Committee. The District has seen a total of 158 COVID cases since the start of the pandemic in March 2020. The District has seen 15 new cases, but with no isolation or operation impacts at the end of the reporting period – December 2022 to January 2023. The employee vaccination rate remains at 84.6%. There has been a 3% decrease in the Alameda County case rates for the reporting period. Mr. Serrano answered questions from the Committee.
2. Conservation Program Budget Overview: Martin Koran, Senior Financial Analyst, reviewed the FY 2022/23 Water Conservation Budget. The District budgeted \$44.5 million for Source of Supply (purchased water and supply system operations). In contrast, the District spends approximately \$1.6 million on its water conservation program, which is about 3% of the cost of Source of Supply. These costs include staffing costs for 3 positions, customer rebate programs, professional services, as well as program administration by third parties. Water consumption and population data show that the District's residential consumption are at 72.7 gallons per capita per day (GPCD), which is well below the current target of 83.4 GPCD. The upcoming State targets are 74.9 GPCD effective 2025 and 63.5 GPCD effective 2030, will require the District's conservation programming to play an important role in achieving compliance. Since 1995 residential customers have conserved on average almost 48 gallons per person per day, which equates to about 16.5 million gallons saved per day across the District service area. This amounts to an annual savings in operating costs of approximately \$16 million. Savings are not exclusively due to District conservation efforts: emergency drought conservation and plumbing code changes are also significant. If the District was required to purchase 16.5 million gallons per day of water from San Francisco Public Utilities Commission (SFPUC), the District's most expensive source of supply, it would cost \$38.2 million annually (at the current SFPUC rate of \$4.75 per hundred cubic feet). Mr. Koran responded to questions from the Committee.
3. Facilities Improvement Fund and Facilities Renewal Fund (FRF) Overview: Jonathan Wunderlich, Director of Finance and Administration, reviewed the Facilities Improvement

Fund (FIF) and Facilities Renewal Fund overview and cash balances. FIF is designated to track revenues and expenditures of growth-related facilities to ensure the District can meet future needs for increased water demand. FIF revenue is generated from the incremental cost component of the facilities connection charges (FCC). FRF is designated to track revenues and expenditures for capital projects that refurbish or replace existing facilities to ensure new developments fund their proportional share of existing infrastructure that benefits them upon connecting to the water system. FRF revenue is generated from the equity buy-in component of the FCC. FIF and FRF funds are used exclusively for capital projects. Guidance for determining the FIF percentage allocation to certain capital projects is provided by AWWA Manual M1 and California statute (the Mitigation Fee Act). FRF funds core infrastructure to serve existing needs such as main renewals, production facilities, and reservoirs. The current cash balance for the FIF is \$73 million, and the balance is projected to be spent down over the next several years to \$43 million in FY 2027/28. FRF revenues are allocated to capital project costs as they are received. Mr. Wunderlich responded to questions from the Committee.

4. Recent Performance of the California Asset Management Program and the Local Agency Investment Fund: Mariana Grajeda, Accounting and Treasury Manager, reviewed the recent performance of the California Asset Management Program (CAMP) and the Local Agency Investment Fund (LAIF). Staff regularly monitors the CAMP and LAIF rates closely to determine which of these funds provides better returns. Back in January 2020, LAIF was outperforming CAMP and continued during the pandemic even when the rates were very low. In early 2022 there was an increase in CAMP rates, and in March 2022 staff moved District funds from LAIF to CAMP to get the better rates. Since then, the rates in CAMP have continued to outperform LAIF. Significant decreases in LAIF and/or CAMP balances around June/July each year are due to withdrawals to fund the other post-employment benefit (OPEB) and pension payments the District makes annually. District practice has been to build up the LAIF or CAMP balances during the second half of each fiscal year in preparation for significant bond payments in June and the OPEB and pension payments in July. Ms. Grajeda responded to questions from the Committee.
5. Income Statement: Ms. Grajeda reviewed the FY 2022/23 income statement through December 2022. Water sales increased by \$4,186,000 compared to the prior fiscal year. Facilities connection charges increased by \$2,700,000 due to an increase in construction activity and large payments from developers compared to the prior year. Water purchases were higher by \$922,000, which is largely due to the 15.9% increase in San Francisco water rates effective July 1, 2022. Overall, the District's net position increased by \$17,070,000 for the fiscal year through December 2022. Ms. Grajeda responded to questions from the Committee.
6. Budget Report: Mr. Koran reviewed the FY 2022/23 monthly budget report and reserve funds for the first half of the fiscal year through December 2022. The budget report reflected that the District collected 52.9% of budgeted revenue and spent 49.0% of budgeted expenses through December 2022. Water revenues total \$67,352,000 or 53.8% of budget. Facilities connection charge revenues, totaling \$5,911,000 or 360% of budget, are tracking significantly higher than budget due to the timing of active development projects being ready to install water meters. The District's reserves continue to comply with the established targets and are clearly

identified for specific purposes per Board policy and direction. Mr. Koran responded to questions from the Committee.

7. Public Comments: There were no public comments.

RECOMMENDATIONS

Topics discussed by the Committee were informational only, and no recommendations are being made.

**WATER RESOURCES & CONSERVATION
COMMITTEE MEETING SUMMARY MINUTES
Wednesday, January 25, 2022
4:15 p.m.**

ATTENDANCE 

Directors: Judy Huang (Chair), John Weed

Staff: Ed Stevenson, Laura Hidas, Thomas Niesar, Leonard Ash, Michelle Walden

Public: Kelly Abreu, Phi Chanda

Due to COVID-19 and in accordance with Assembly Bill 361, which modifies Government Code Section 54953, this meeting was conducted in person at the District's Headquarters and virtually by Zoom Webinar and Teleconference, and members of the public were invited to participate. Materials presented to the Committee were posted in advance of the meeting at www.acwd.org and copies of materials as presented are attached to these minutes.

DISCUSSION TOPICS

1. Drought and Recent Weather Updates: Leonard Ash, Water Supply Supervisor, provided updates on the ongoing drought and the effect of recent weather events. Total cumulative precipitation during Water Year 2022-23 is 20.8 inches, reflecting 10.7 inches of rain received so far in January. The most current U.S. Drought Monitor classifies 49% of the state in moderate drought, almost 43% of the state in severe drought, and no portions of the state in extreme or exceptional drought classifications anymore. Current statewide reservoir conditions show the collective water supply benefits due to the series of atmospheric river events, with Lake Oroville 62% full, Lake Shasta 55% full, and San Luis Reservoir 54% full. The San Francisco Public Utilities Commission reported on January 23rd that the Hetch Hetchy Reservoir is 81.4% full, Water Bank is 100% full, and total Regional Water System storage at 91%. Nonetheless, the constraints on the District's water supply portfolio remain unchanged.

District customers are maintaining demand reduction actions to achieve the collective 15% reduction in demands to help stretch limited water supplies, with recent rains helping keep customer demands low. Weather forecasts indicate an increased probability for above-normal precipitation may be possible for the weeks ahead, while the three-month outlook for February through April indicates equal chances for either above or below normal precipitation.

Mr. Ash also explained the multiagency coordination between United States Army Corps of Engineers, California Nevada River Forecast Center, California Department of Water Resources (DWR), Alameda County Water District, Zone 7 Water Agency, San Francisco Public Utilities Commission, Alameda County, East Bay Regional Park District, and many other watershed stakeholders during the recent storm events. As one example, daily check-in meetings hosted by DWR provided regular updates on releases from Lake Del Valle and feedback from affected parties. That timely exchange of information was useful to evaluate conditions and make minor adjustments to operational planning, and agencies will be coordinating in the weeks and months ahead to improve our future communications and planning efforts based on these recent experiences.

Director Weed and Mr. Abreu provided comments on operations of the various reservoirs in the watershed, and staff responded to questions from Director Weed regarding Lake Del Valle releases.

2. Update on Alameda County Flood Control's Lower Alameda Creek Fish Passage Restoration Project: Thomas Niesar, Water Supply & Planning Manager, provided background on the Alameda County Flood Control and Water Conservation District's (ACFCD) plans to modify the Alameda Creek flood control channel from a flatbottomed trapezoidal design to a two-stage channel. ACFCD is responsible to maintain the flood control channel to the U.S. Army Corps of Engineers' (USACE) original design. The proposed two-stage channel will modify the existing design by constructing a low flow channel that concentrates lower flows into a primary channel while the second stage provides for high flows and maintains flood capacity. ACFCD's Lower Alameda Creek Fish Passage Restoration, includes a Low-Flow Channel Modification that will facilitate sediment transport downstream and offer enhanced passage of fish under low flow conditions. The project is within the cities of Fremont and Union City and extends approximately 5.6 miles within the USACE Flood Control Channel between the BART Weir fish ladder upstream to 600 feet below the Union Pacific Railroad crossing in Union City, near Lowry Road.

Michelle Walden, Groundwater Resources Manager, provided a summary of discussion between ACFCD and District staff regarding potential upwelling due to the Low-Flow Channel Modification specific to the excavation beyond the original USACE bottom of channel. District staff determined that a more refined and detailed analysis is needed to understand the extent to which the Low-Flow Channel Modification may induce upwelling and potentially affect the water supply under various hydrologic conditions.

Since Woodard & Curran recently upgraded the District's Groundwater Model through the District's Sustainable Groundwater Management efforts, they have unique knowledge, expertise, and experience in helping the District with this work in order to meet the necessary timeline. As such, the General Manager authorized a Professional Services Agreement (PSA) with Woodard & Curran for groundwater modeling of ACFCD's Alameda Creek Low-Flow Channel Modification to determine potential impacts of the channel modification to the District's groundwater water supply.

The initial Scope of Work is the assessment of potential impacts of the Low-Flow Channel Modification using the Niles East Bay Integrated Model (NEBIM); however, based on the results using NEBIM, the development of a refined spatial and vertical resolution model or "child model" is likely necessary. The NEBIM is a basin-scale regional groundwater model, and child models are sometimes needed to carve out a specific area of a model domain, such as near creeks whose interaction with groundwater is highly dynamic and variable. Additional services will be needed and staff is requesting an added Scope of Work for the PSA that will be presented during the February regular Board of Directors meeting to include on-call services based on time and materials in support of the modeling efforts due to the proposed Low-Flow Channel Modification. For example, tasks that will be required include development of a child model, evaluating the projects potential impact to groundwater quality as a result of the

anticipated tidal influence moving further inland, preparation of text and/or figures, and attending meetings. Staff responded to questions from the Directors.

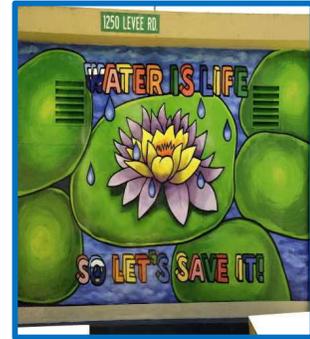
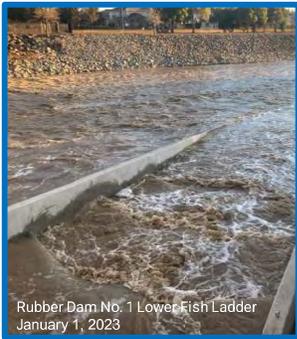
3. Public Comments: Mr. Abreu shared that an isotopic study on water dating conducted by Lawrence Livermore National Lab was featured in a recent article in The Atlantic magazine.

RECOMMENDATIONS

Topics discussed by the Committee were informational only, and no recommendations are being made.

Alameda County Water District

Drought and Recent Weather Updates

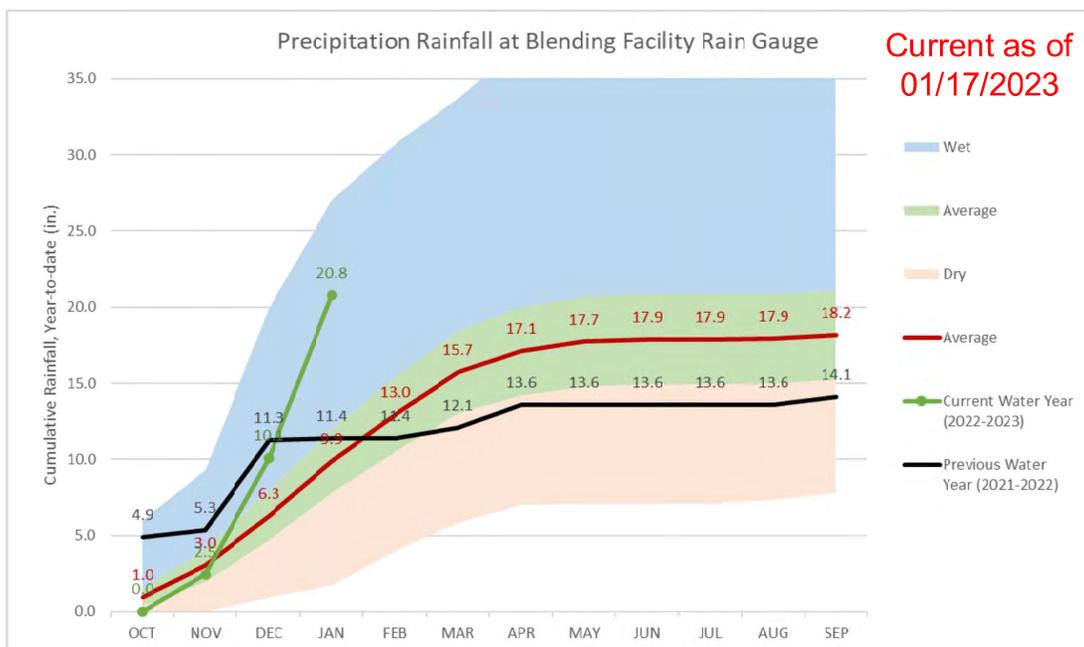


Presenter: Leonard Ash, Water Supply Supervisor
Water Resources & Conservation Committee
January 25, 2023
Agenda Item 1



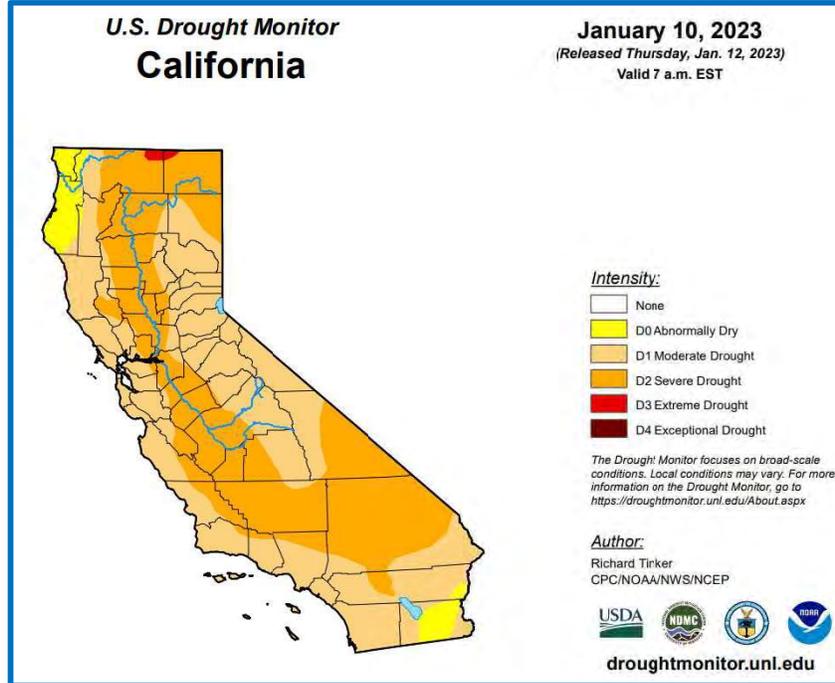
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Local Precipitation



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Statewide Drought Conditions



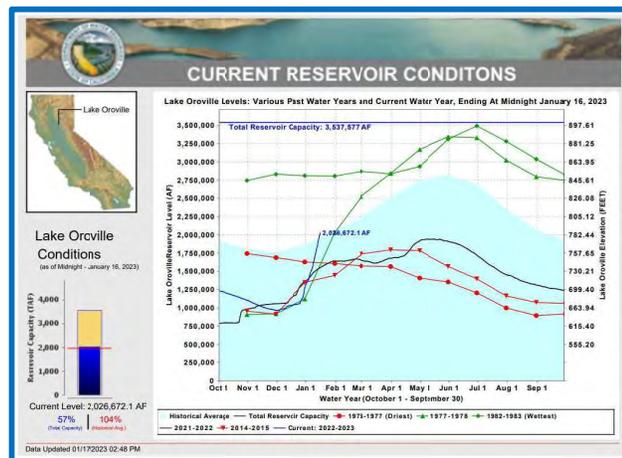
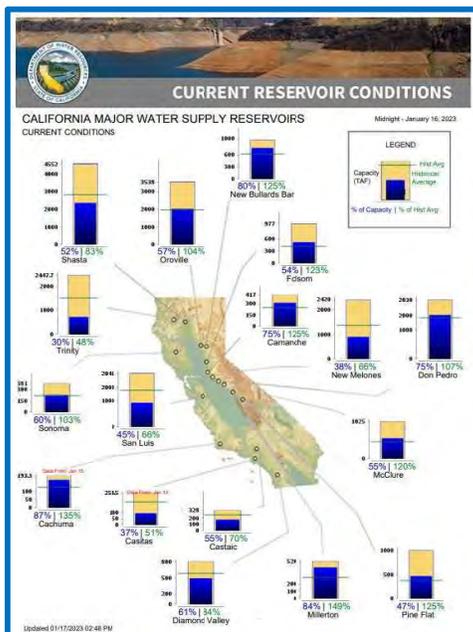
Current as of
01/17/2023



Slide 3

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Statewide Reservoir Conditions



Current as of
01/17/2023



Slide 4

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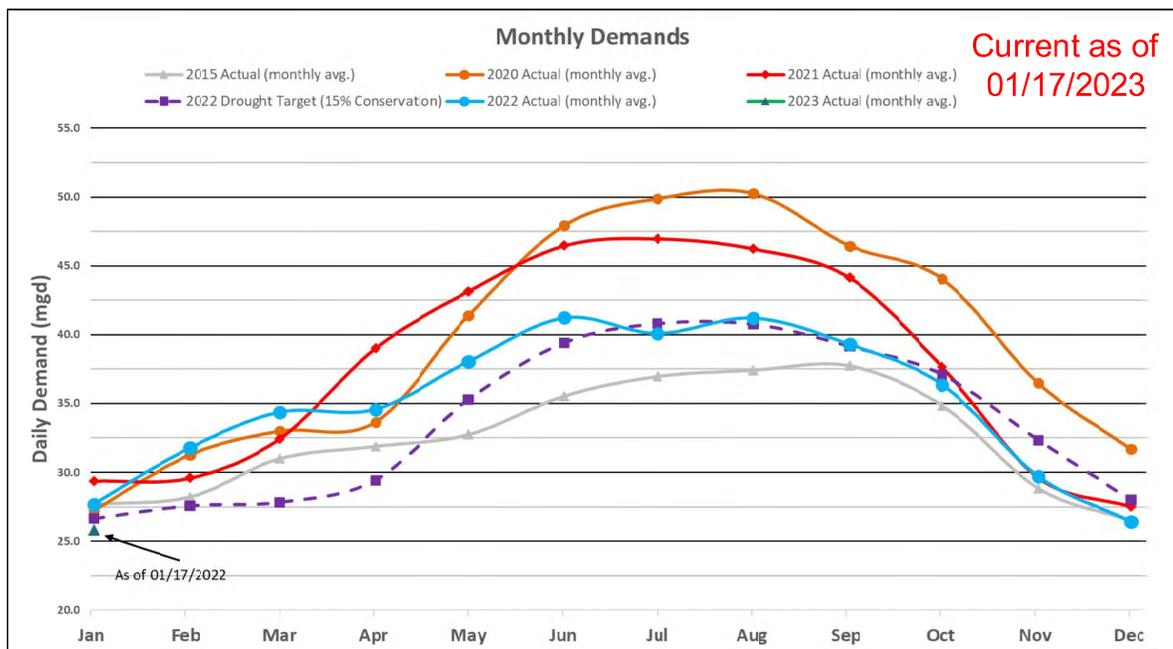
Water Supply Conditions

- San Francisco Public Utilities Commission (SFPUC) – Level 2 water shortage with systemwide water use reduction target of 11%
- Department of Water Resources (DWR) State Water Project (SWP) – initial 5% allocation for 2023 announced on December 1, 2022
- Actively managing local water supplies



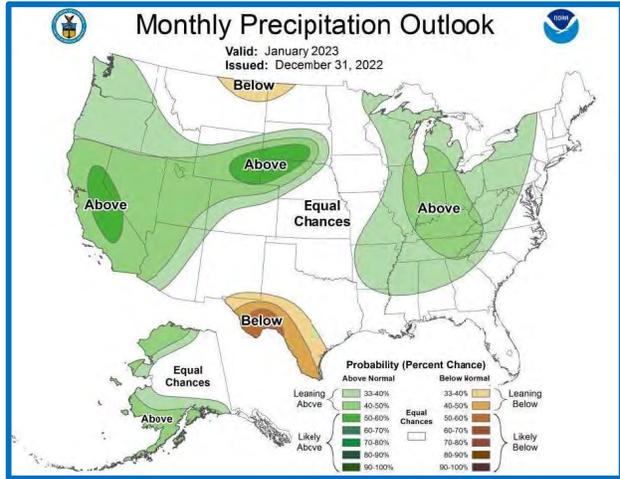
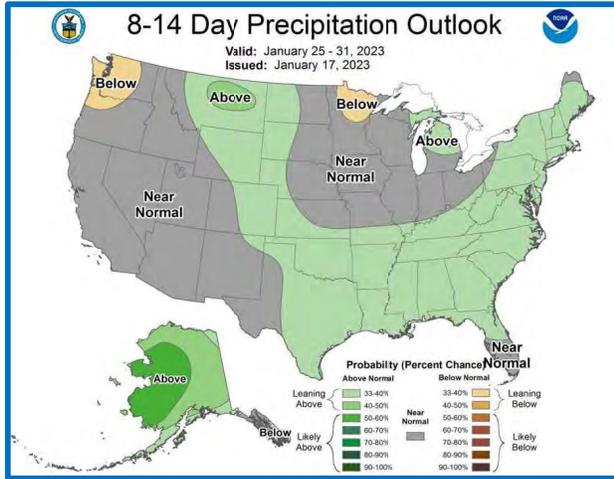
Slide 5

2023 Demand Tracking



Slide 6

Near-term Precipitation Outlook



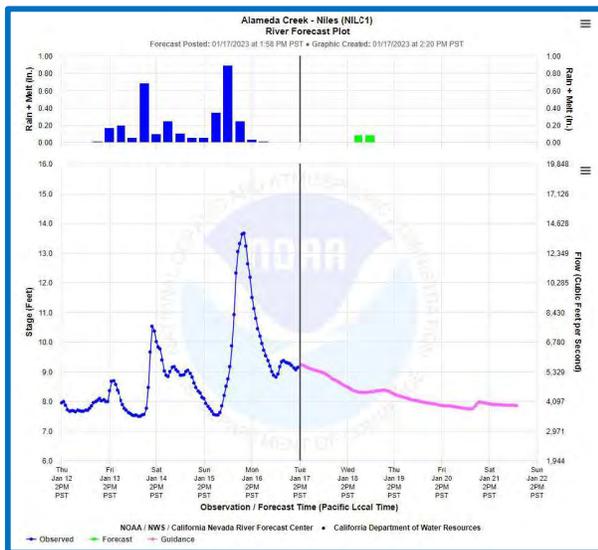
Current as of
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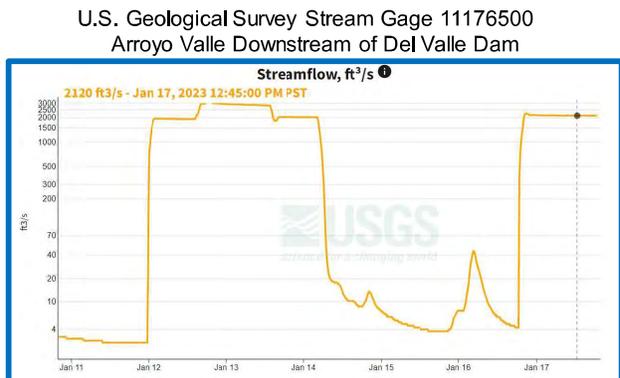
Slide 7

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Weather Updates



Graph Source: <https://www.cnrfc.noaa.gov/graphicalRVF.php?id=NILC1>



Graph Source: <https://waterdata.usgs.gov/monitoring-location/11176500>

Current as of
01/17/2023



Slide 8

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Watershed Coordination



Current as of
01/17/2023



Slide 9

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Questions?

Visit

ACWD.org/drought

for more information

Drought & Conservation Resource Center

Mandatory Water Use Restrictions in Effect

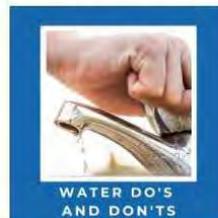
The drought is worsening, as California is in its driest 3-year period on record, and water conservation is urgently needed. Mandatory water use restrictions and drought emergency stage rates are in effect. Let's work together to reduce water use by 15%. Please save water now. Learn how:



Top 5 Ways to Save Water

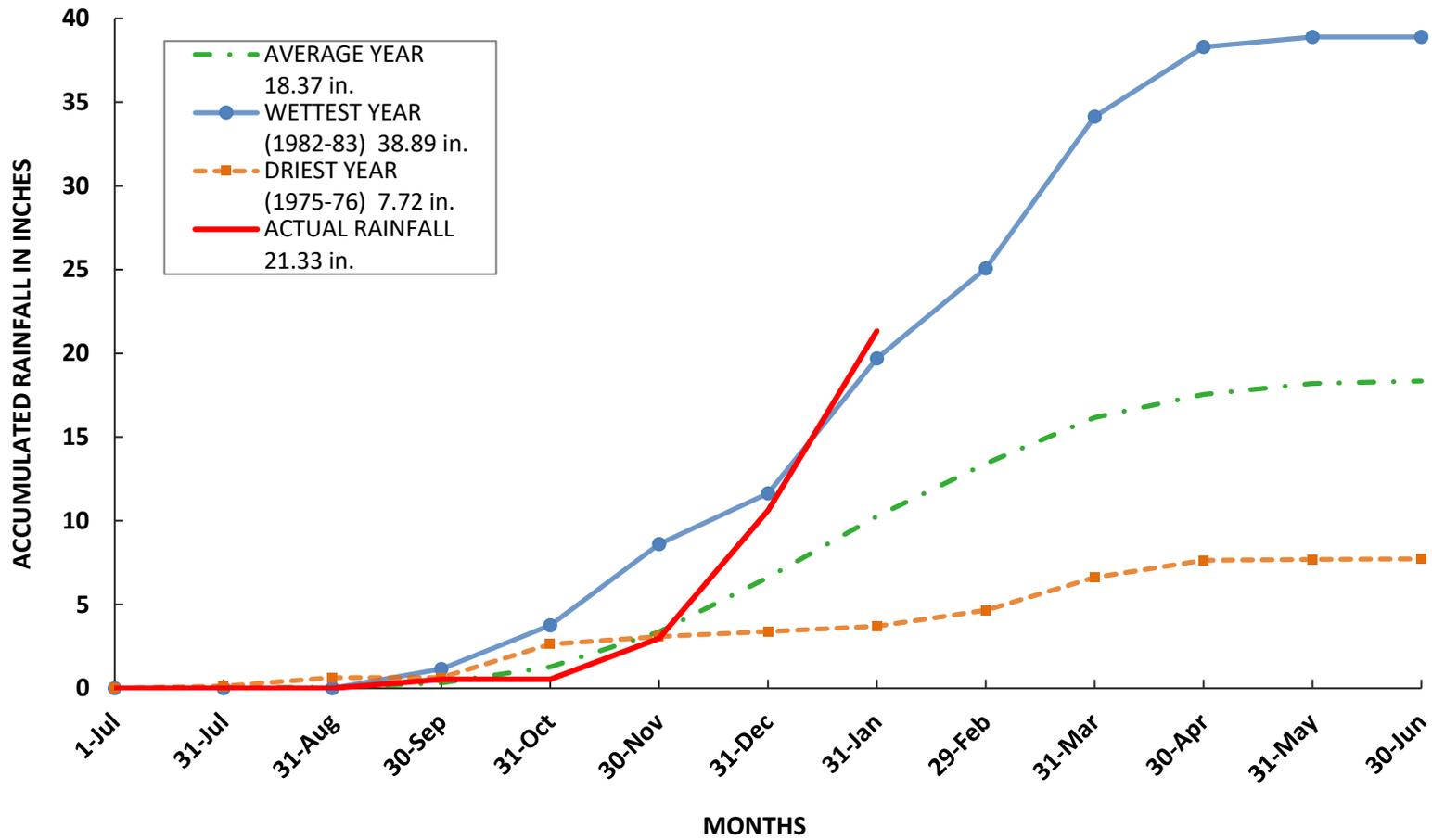


Report Water Waste

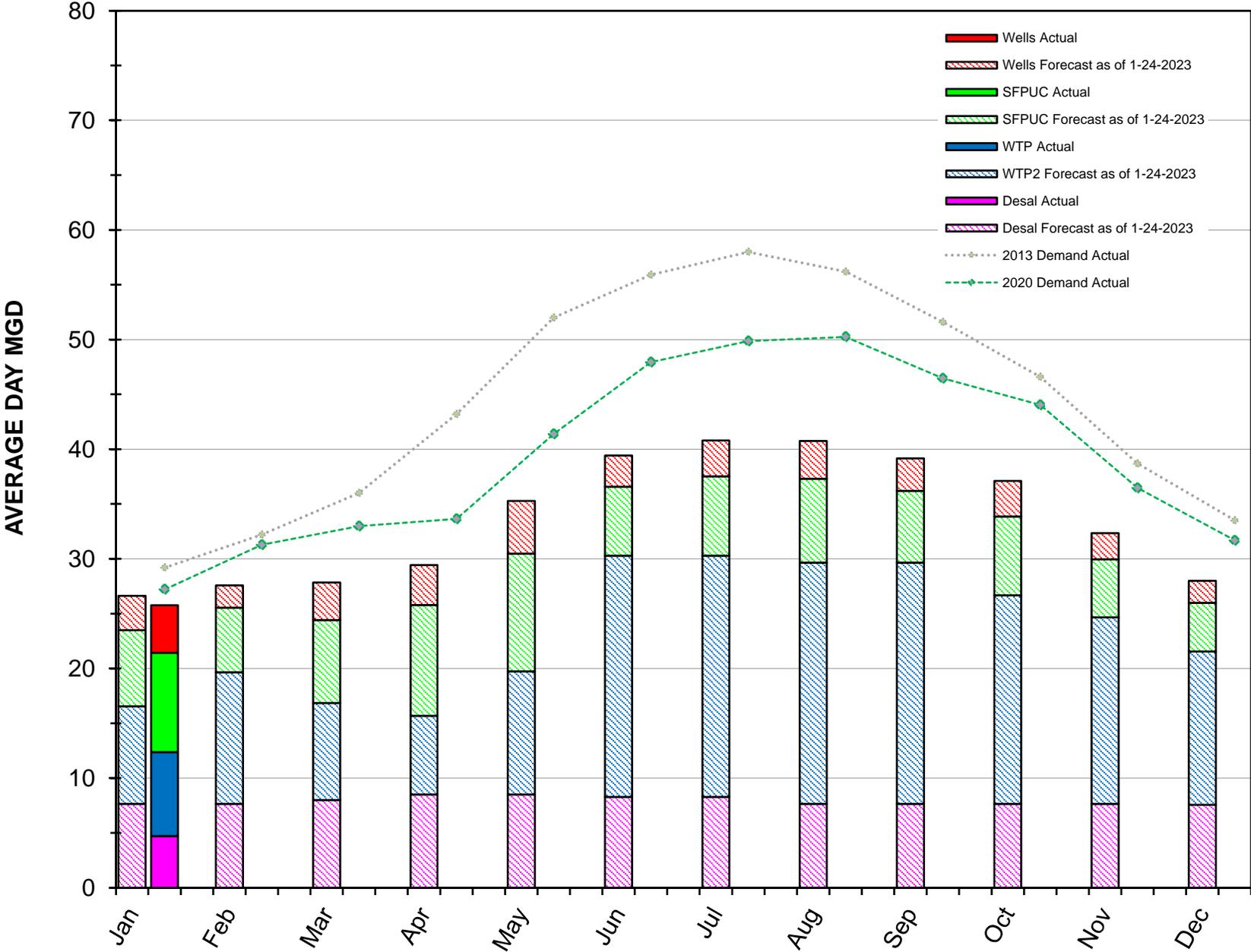


Slide 10

ALAMEDA COUNTY WATER DISTRICT
RAINFALL REPORT
FISCAL YEAR 2022-2023



ALAMEDA COUNTY WATER DISTRICT 2023 AVERAGE DAY WATER PRODUCTION



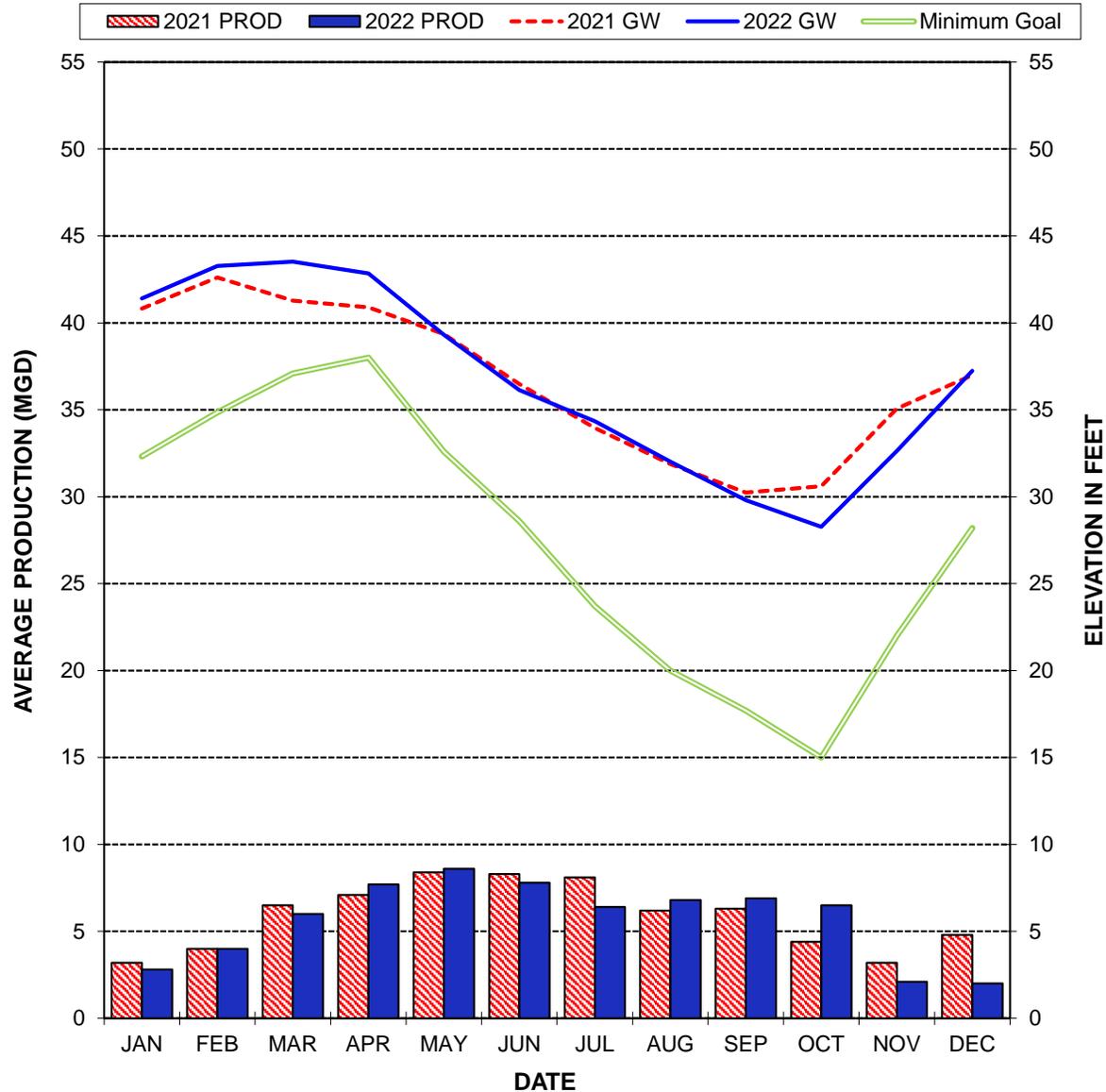
ALAMEDA COUNTY WATER DISTRICT
Well Level Summary
12/27/2022

<u>Well Number</u>	<u>Aquifer</u>	<u>Date</u>	<u>Water Elevation (a)</u>			<u>Change Since Last Year</u>
			<u>1962</u>	<u>2021</u>	<u>2022</u>	
4S/1W-27D08	Above Fault (b)	12/27/2022	36.00	37.00	37.24	0.24
4S/1W-29A06	Forebay (c)	12/27/2022	-44.12	10.32	10.31	-0.01
4S/2W-25M01	Newark	12/27/2022	-31.65	7.51	6.71	-0.80
4S/1W-19L02	Centerville-Fremont	12/27/2022	-58.00	0.89	-1.35	-2.24
4S/1W-31B03	Deep	12/27/2022	-60.70	-0.06	-2.98	-2.92

Notes:

- (a) Plus values are above sea level.
 Minus values are below sea level.
- (b) Data from 4S/1W-21R02 prior to 1990.
- (c) Data from 4S/1W-28D02 prior to 1992.

AHF GROUNDWATER LEVEL REPORT - 4S/1W-27D08

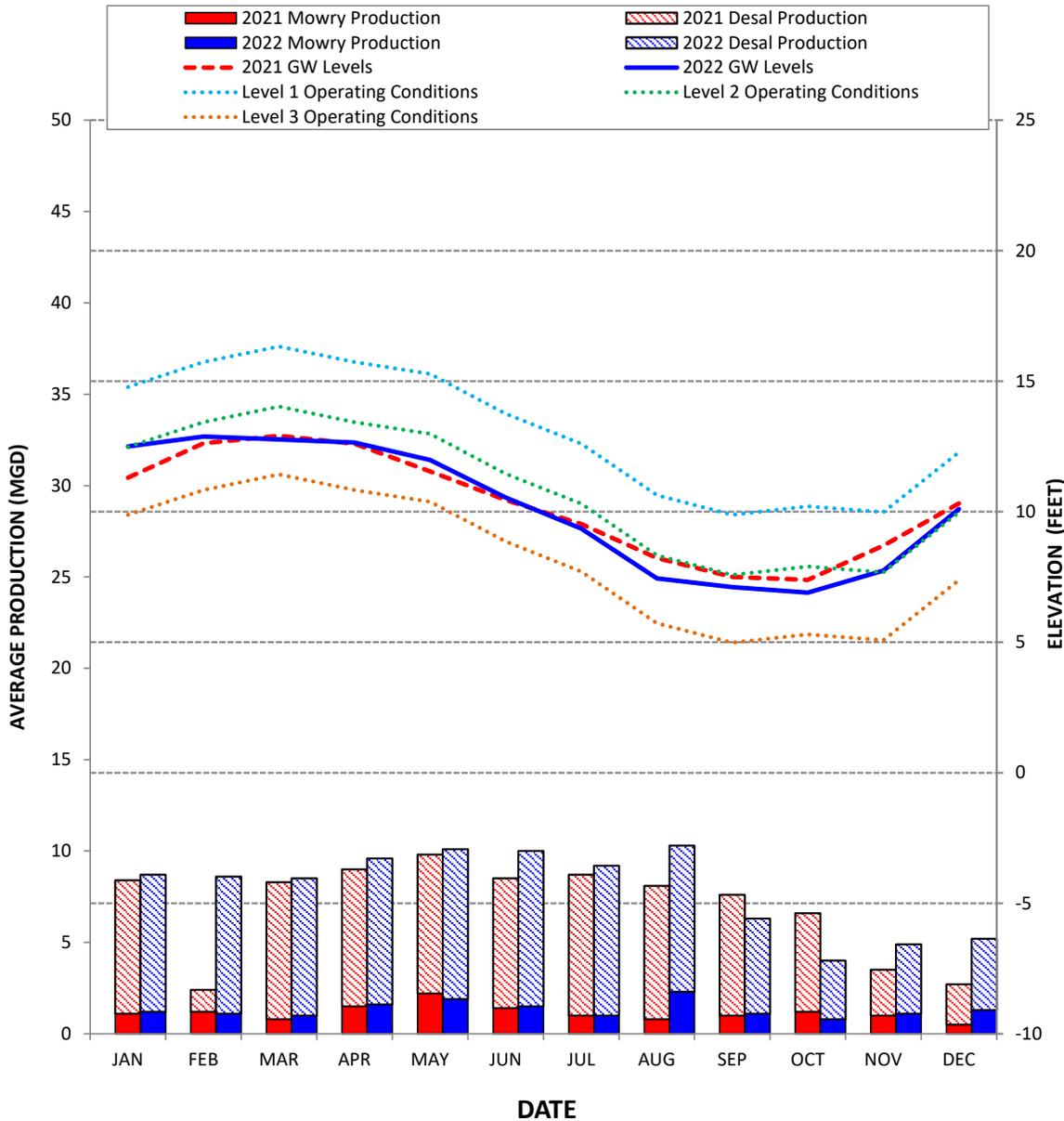


WATER LEVEL ELEV. (FT)	
1962	36.00
2021	37.00
2022	37.24
CHANGE SINCE LAST YEAR	0.24

GW PRODUCTION (MGD) AHF		
	<u>2021</u>	<u>2022</u>
JAN	3.2	2.8
FEB	4.0	4.3
MAR	6.5	6.0
APR	7.1	7.7
MAY	8.4	8.6
JUN	8.3	8.3
JUL	8.1	6.4
AUG	6.2	6.8
SEP	6.3	6.9
OCT	4.4	6.5
NOV	3.2	2.1
DEC	4.8	2.0

Minimum Goal: Operation below this line requires sustained import of water for recharge.

BHF GROUNDWATER LEVEL REPORT - 4S/1W-29A06



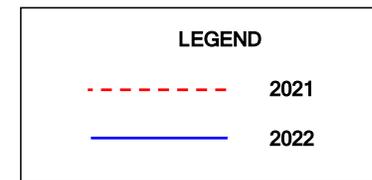
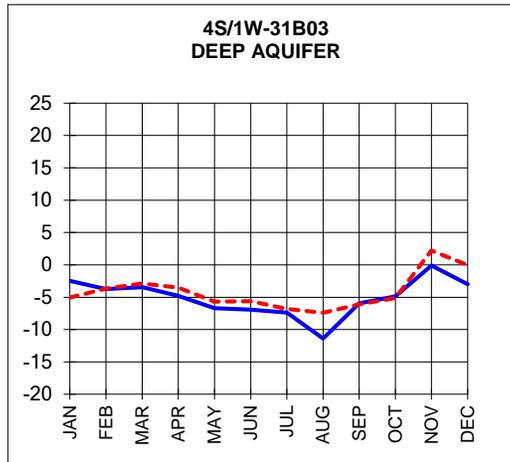
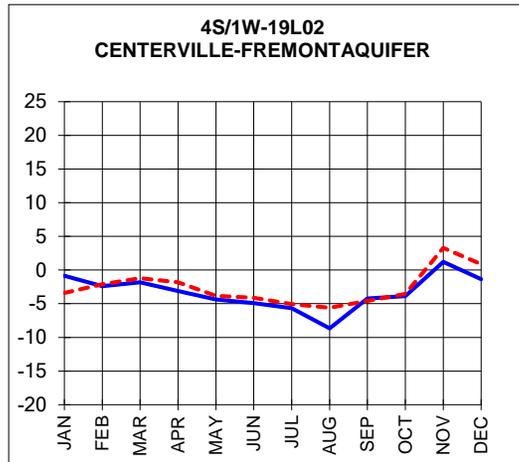
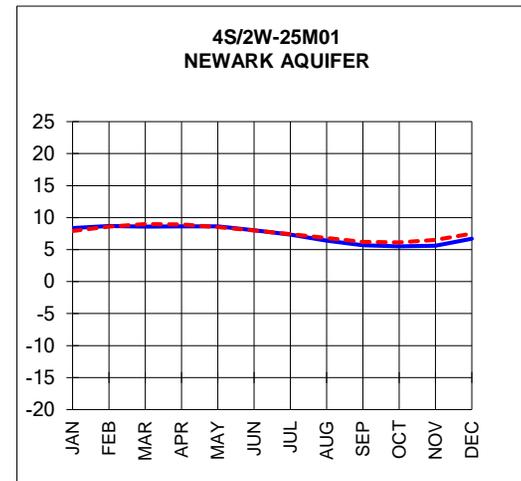
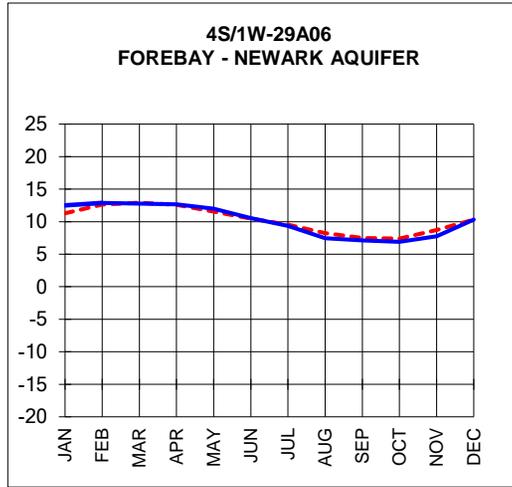
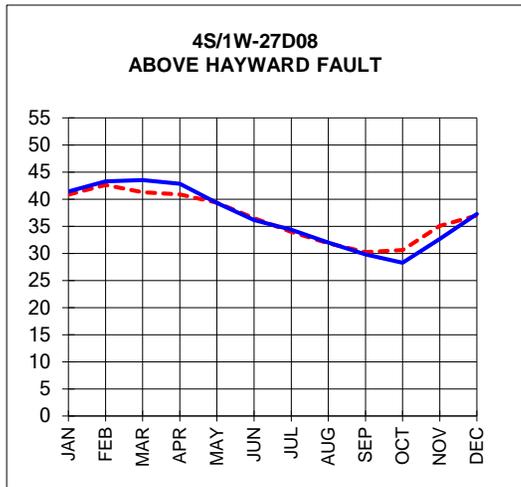
WATER LEVEL ELEV. (FT)

1962	-44.12
2021	10.32
2022	10.31
CHANGE SINCE LAST YEAR	-0.01

GW PRODUCTION (MGD) BHF

	<u>2021</u> Mowry	<u>2021</u> Desal	<u>2022</u> Mowry	<u>2022</u> Desal
JAN	1.1	7.3	1.2	7.5
FEB	1.2	7.3	1.1	7.5
MAR	0.8	7.5	1.0	7.5
APR	1.5	7.5	1.6	8.0
MAY	2.2	7.6	1.9	8.2
JUN	1.4	7.1	1.5	8.5
JUL	1.0	7.7	1.0	8.2
AUG	0.8	7.3	2.3	8.0
SEP	1.0	6.6	1.1	5.2
OCT	1.2	5.4	0.8	3.2
NOV	1.0	2.5	1.1	3.8
DEC	0.5	2.2	1.3	3.9

Level 1 Operating Conditions represent lower extent of normal conditions.
 Level 2 Operating Conditions represent below normal year conditions.
 Level 3 Operating Conditions represent dry year operating conditions.



ALAMEDA COUNTY WATER DISTRICT

GROUNDWATER BASIN MONTHLY ELEVATIONS

NEWARK (UPPER) AQUIFER	0' TO 140'
CENTERVILLE-FREMONT AQUIFERS	180' TO 390'
DEEP AQUIFERS	400' and DEEPER

ACWD CAPITAL IMPROVEMENT PROGRAM (CIP) PROJECTS REVIEW
2Q FY 2022/23
December 31, 2022

List of Projects

Rubber Dam Nos. 1 & 3 Fish Ladders and Shinn Pond Fish Screens (<i>Water Supply Reliability</i>)	2
Vallecitos Channel Evaluation and Restoration Project (<i>Water Supply Reliability</i>)	7
Distribution PLC Upgrade Program – Phase 3 (<i>Infrastructure Improvements</i>)	10
Avalon Tank Hillside Slope Erosion Protection Project (<i>Infrastructure Replacement</i>)	12
Alvarado-Niles Pipeline Seismic Improvement Project (<i>Seismic Reliability</i>)	14
Kaiser Pond Diversion Pipe Improvement Project (<i>Water Supply Reliability</i>)	17
Advanced Metering Infrastructure Project (<i>Infrastructure Improvements</i>)	18
Main Renewal - Central Newark Thornton Avenue Project (<i>Infrastructure Improvements</i>)	26
Small Diameter Main Renewal Program (<i>Infrastructure Improvements</i>)	27
CIP Engineering Report (<i>Other</i>)	28
Curtner Road Booster Station Project (<i>Infrastructure Improvements</i>)	29
SCADA Replacements and Upgrades (<i>Infrastructure Improvements</i>)	31
Clean Energy Plan Review and Clean Energy Plan Implementation (<i>Other</i>)	34
Cathodic Protection Improvements and Additions (<i>Infrastructure Improvements</i>)	36
New Cedar ARP Well (<i>Infrastructure Improvements</i>)	36
Patterson Reservoir Remediation Project (<i>Infrastructure Improvements</i>)	37
Alameda Reservoir Roof Replacement (<i>Infrastructure Improvements</i>)	38
Decoto Reservoir Improvements (<i>Infrastructure Improvements</i>)	39
B16 WTP2 Zone 3 Booster Discharge Pipeline Replacement (<i>Infrastructure Improvements</i>)	39
Washington Booster Station Flowmeter (<i>Infrastructure Improvements</i>)	41
Blending Facility Low Flow Control Modifications (<i>Infrastructure Improvements</i>)	42
PFAS Treatment at ACWD’s Groundwater Facilities (<i>Infrastructure Improvements</i>)	43

Rubber Dam Nos. 1 & 3 Fish Ladders and Shinn Pond Fish Screens (*Water Supply Reliability*)

Rubber Dam No. 1 (RD1)/Alameda County Drop Structure Fishway (DS Fishway) and Rubber Dam No. 3 (RD3) Fish Ladders and the Shinn Pond Diversions and Fish Screens are the District's remaining three major Fish Passage projects.

Design & Agreements

On August 12, 2007, the Board authorized an agreement with the Alameda County Flood Control and Water Conservation District (County) to jointly complete the preliminary design for a single fish passage facility that would provide for fish passage past both the County-owned drop structure (also known as the "BART Weir") and RD1 facilities. On July 12, 2012, the Board authorized the District to amend the existing agreement with the County to jointly complete the final design of the fish passage facility.

In March 2014, a decision was made to separate the RD1/DS Fishway and RD3 ladders into two separate construction projects, and the Board approved a third amendment to the design contract with GHD Consulting Engineers, Inc. (GHD) so that design work on the RD3 Fish Ladder could continue independent of the RD1/DS Fishway ladder design. In December 2014, staff received the 95% design submittal for the RD3 Fish Ladder. The 95% design documents were submitted to regulatory and permitting agencies in the spring of 2015. In May 2017, the Board approved a fifth amendment to the agreement with GHD to address additional design services required for the RD3 Fish Ladder, including incorporation of the replacement of the rubber dam fabric as part of the project. The procurement contract to purchase the replacement fabric for RD3 was advertised in spring 2017, and in June 2017, it was awarded to HTE Engineering, a joint venture of HydroTech Engineering LLC (HydroTech) and HTE Engineering, LLC. Draft and final technical memoranda for the design of the RD3 replacement fabric were received from HTE Engineering in August and October 2017, respectively. The 100% RD3 Fish Ladder design submittal was received in September 2017.

In July 2016, the Board approved a fourth amendment to the design contract with GHD and an associated Amendment No. 2 to the cost sharing agreement with the County, to address needed changes to the lower RD1/DS Fishway to accommodate changes to the adjacent and associated downstream County project. The 30% plans for the revised RD1/DS Fishway were received in July 2017. In November 2017, Amendment No. 3 to the agreement between the County and the District was authorized by both agencies' governing boards to address completing the design of the RD1/DS Fishway Fish Ladder. Also in November, the District's Board authorized a sixth amendment to GHD for final design services for the RD1/DS Fishway Fish Ladder and Shinn Pond Fish Screens. In December 2017, the Board authorized Contract Change Order No. 3, and on August 9, 2018, authorized Contract Change Order No. 4 to HydroTech for design-related scope for the Rubber Dam No. 1 fill/drain system. In February 2018, HydroTech submitted preliminary design documents for the fill/drain system followed by interim design submittals. GHD provided 90% construction documents submittal on May 4, 2018, and a 100% construction documents submittal on June 29, 2018. Both GHD and HydroTech submitted preliminary bid-ready

documents for review on August 31, 2018, and final bid-ready documents on September 28, 2018. The District and the County worked jointly to develop Amendment No. 4 (executed in October 2018) to the existing agreement addressing long-term ownership, operations, and maintenance roles and responsibilities thus enabling the project to be advertised for construction. The procedure for documenting and determining the cost share amount for future maintenance work will be the subject of a future Agreement.



Figure 1: Rubber Dam No. 3 Construction

Environmental Review

The Initial Study/Mitigated Negative Declaration and Environmental Assessment in accordance with the California Environmental Quality Act (CEQA) and Finding of No Significant Impact in accordance with the National Environmental Policy Act (NEPA) (IS/MND – EA/FONSI) for the RD1 and RD3 Fish Ladders and the Shinn Pond Fish Screens was adopted by the boards of the District and the County on December 6, 2016. The California Environmental Quality Act (CEQA) Notice of Determination was posted in December 2016.

Permitting

As part of the 404 Permit process, the U.S. Army Corps of Engineers (USACE) consulted with the National Marine Fisheries Service (NMFS) which issued a Biological Opinion in October 2017 based upon the Biological Assessment developed by the District. The Section 404 Permit was then received from the USACE, together with the Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB) in November 2017. Following approval of the District's Risk Assessment for the projects, the USACE Section 408 permission was received from USACE in October 2017. As the permitting was being finalized over the summer and fall of 2017, California Department of Fish and Wildlife (CDFW) informed the District that a 1600 operating permit would also be required for the fish passage project. This is a new requirement, and this permit has not been issued by CDFW in the past. In December 2017, staff worked with CDFW to develop a strategy to obtain this permit that will be required for the long-term operation of the facility. During 2018 and 2019, staff held internal discussions and discussions with CDFW regarding the terms of the CDFW operating permit. Finalizing the operating permit is subject to further discussions with CDFW. In October 2019, an amended streambed alteration agreement was received from CDFW, and a new 404 permit was received from USACE that allow for construction on the Shinn Pond Fish Screens to continue through the 2019-2020 winter months. Work was required to modify the Shinn fish screen curbs and other ancillary items after completion of majority of construction, and a new streambed alteration agreement was received from CDFW in September 2022 to perform the work.

Construction – RD3 Fishway

In November 2017, the RD3 Fishway Construction and Fabric Replacement (RD3 Fishway) Project was advertised for construction in February 2018, and 10 bids were received; the Board awarded construction to Syblon Reid, of Folsom, CA. Also, in February 2018, the Board authorized an amendment to the professional services agreement (PSA) with LSA Associates for biological monitoring of the RD3 Fishway project. In March 2018, the Board authorized a PSA with AnchorCM for construction management services for the RD3 Fishway project. A groundbreaking for the RD3 Fishway construction, attended by stakeholders, members of the public, and elected officials, was held on April 23, 2018. Site mobilization occurred in May 2018, and construction continued through April 2019, when the project was substantially complete. The Board accepted the Rubber Dam No. 3 Fishway and Fabric Replacement project at the May 15, 2019, Board Workshop. Discussions with the rubber dam supplier, HTE Engineering joint venture, continued through June 2019 regarding completion of the procurement contract for the rubber dam bladder and associated hardware. While the bladder and hardware were furnished and the required field work has been completed, additional negotiation has been required related to certain costs and District back-charges, and some deliverables remained outstanding. These issues were ultimately resolved, and the Board accepted completion of this procurement contract at the January 9, 2020, Board Meeting.



Figure 2: Rubber Dam No. 3 Fishway Completed

Flow test data was collected in May 2020 to validate the hydraulic calculations made during the design phase. In early 2021, the site PLC program was modified using this data to accurately measure fishway flow and automate gate operation.

Construction – RD1 Fishway and Related Projects



Figure 3: Rubber Dam No. 1 Dam and Fishway Construction, Spring 2022

The construction of the RD1 Fishway, RD1 Control Building Modifications, and Shinn Pond Diversions and Fish Screens was advertised in October 2018, three bids were received, and the Board awarded the contract to Flatiron West, Inc. of Benicia, CA on January 10, 2019. Also at the January Board Meeting, following a competitive procurement process, the Board authorized an agreement for construction management services with AnchorCM. At the February 7, 2019, Board Meeting, the Board authorized an agreement amendment for construction phase services for

GHD, Inc. and authorized an agreement with LSA, Inc. for environmental services to support this and other projects. The estimated three-year construction period for the RD1 and Shinn projects

commenced in April 2019. At the end of the second quarter of FY 2019/20, the contractor had removed and stored the RD1 bladder and had constructed portions of the guidewall, lower fishway, transition channel, plunge pool, and concrete sill downstream of the drop structure. Temporary diversion and access measures in the creek were removed. Also, as a new USACE 404 permit and CDFW 1600 amendment had been received, the contractor continued work on the Shinn Pond Fish Screens through the winter and



Figure 4: Shinn Pond Fish Screens, Apr. 2022

into the spring of 2020. At the end of the fourth quarter of FY 2019/20, the contractor completed the Shinn Pond diversion outlet structure and portions of the diversion pipes; completed selective demolition of the RD1 Control Building; installed temporary creek construction site access ramps and water management measures; began site work and excavation for the middle and upper sections of the RD1 Fishway; and began work to continue the guidewall, lower fishway, transition channel, plunge pool, and concrete sill downstream of the drop structure. By the end of the first quarter of FY 2020/21 the contractor had installed the majority of the concrete for the fishway exterior walls and guide wall, and installed the sluice pipe and the majority of the auxiliary water piping. Installation of the Shinn Pond flow meter vault and diversion piping were also completed. At the end of the second quarter of FY 2020/21, the contractor had completed the lower fishway, transition channel, guidewall, sill, scour pool, middle and upper fishway exterior walls; installed the concrete for the fishway interior walls, drop structure, and energy dissipation blocks (dentates); removed temporary diversion and access measures from the creek; and began installation of mechanical, electrical, and instrumentation equipment. Installation of mechanical, electrical, and instrumentation equipment continued during the third quarter of FY 2020/21. By the end of the third quarter, installation of the flow control gates in the RD1 Fishway was complete. Installation of miscellaneous metals in the RD1 Fishway, Control Building and Shinn Flow Meter Vault was initiated; and the contractor received delivery of additional equipment (including the trash rake, flat plate fish screen cleaner, PIT tag reader, and flow meters) for installation in the following quarters. During the fourth quarter of FY 2020/21, the contractor had re-entered the flood control channel, placed the fishway vertical slot walls, constructed part of the plunge pool downstream of the dam, and placed the concrete foundations for the Shinn Pond fish screen mechanical equipment. By the end of the first quarter of FY 2021/22 the contractor had completed the dam concrete modifications, re-installed the rubber dam, and installed the trash rake and PIT tag antennas at the RD1 Fishway, and constructed the concrete track supports and installed the fish screen rails at the Shinn Fish Screens. In the second quarter of FY 2021/2022, the contractor removed the temporary diversion and temporary access ramps from the channel, and continued work on electrical and instrumentation and controls components of the Fishway, Shinn diversion, and RD1 Control Building. Additionally, during the second quarter of FY 2021/22, the contractor installed fish monitoring equipment, trash rake, electrical wiring, site lighting and security cameras, and completed the majority of final grading of the levee. During the third quarter of FY 2021/22, the contractor continued work on electrical and instrumentation components and punchlist items. The testing and commissioning phase initiated. The construction manager for

AnchorCM, the consultant providing construction management and inspection, left the company and started his own construction management consulting firm, AlphaCM. To maintain project management team continuity, an agreement with AlphaCM was executed so that the District could continue to receive construction management support from this individual. Amendments with AlphaCM (now providing construction management and oversight of ancillary construction support), AnchorCM (now providing inspection, scheduling, and document control) and GHD, Inc., the designer, were authorized by the Board in April 2022 for additional construction-related support. Controls testing was completed for all fish passage related projects in the fourth quarter of FY 2021/22. Punchlist items continue to be addressed and completed. The District held a ribbon-cutting ceremony for all of the fish passage projects at the site of RD1 Fishway and Shinn Pond Fish Screens in April 2022 to acknowledge the work of many staff, non-governmental agencies, and public agencies who have supported the fish passage program over many years, and to celebrate completion of the last of the District's fish passage capital projects. Minor "punch-list" items and change order work for corrections have extended the work, now estimated to be completed in winter 2023.

Grants and Grant Administration

The District has been awarded \$4,575,000 via three grants for construction of the RD3 Fishway. An additional grant of \$5,358,075 was awarded for construction of the RD1 Fishway. In September 2018, an additional grant of \$5,000,000 was awarded for construction of the RD1 Fishway and Shinn Pond Diversions and Fish Screens. In June 2020, an additional grant of \$3,346,992 was awarded for construction of the RD1 Fishway and Shinn Pond Diversions and Fish Screens. Staff worked with the grant agencies to ensure the construction contracts and construction related activities meet the requirements for all of the grants. Additionally, staff is tracking and reporting to grantors as required. In 2022 the District executed a grant agreement with the Association of Bay Area Governments in the amount of \$3,346,992 in support of the RD1 Fishway.

Board Updates

An update on the status of the fish passage projects was presented to the Engineering and Information Technology Committee (E&IT Committee) on February 20, 2016, and to the full Board on July 14, 2016. Staff provided a project briefing to the E&IT Committee on February 16, 2017. The existing cooperative agreement with the County, together with past and proposed future amendments, was reviewed with the E&IT Committee on September 21, 2017. Project updates were provided to the Committee and to the full Board in November 2017. During the February 2018 Board Meeting, an update of the status of the fish passage projects was presented by staff and by representatives of the design consultant (GHD) and subconsultant (Michael Love and Associates, Inc.). Updates to the E&IT Committee regarding the status of the agreement with the County were provided on June 13 and September 12, 2018. An update regarding



Figure 5: E&IT Committee Tour, September 2019

design was provided to the Committee on August 9, 2018. The Water Resources and Conservation Committee attended a Rubber Dam No. 3 Fishway site tour in October 2018, and the same committee received an update on other fish passage projects in December 2018. The E&IT Committee received an update on the status of the RD3 Fishway construction in December 2018. In January 2019, the E&IT Committee was provided an update on the services required during construction of the RD1 Fishway, RD1 Control Building Modifications, and Shinn Pond Diversions and Fish Screens Project. In February and March 2019, the E&IT Committee received updates on the status of construction of the RD3 Fishway. As previously mentioned, the Board accepted the Rubber Dam No. 3 Fishway and Fabric Replacement Project at the May 15, 2019, Board Workshop. An update on the status of the rubber dam bladder procurement contract was provided to the E&IT Committee in July 2019, and the project was accepted by the Board on January 9, 2020. In September 2019, the E&IT Committee Meeting was held at the RD1 Fishway construction site and an overview of ongoing construction activities was provided. The August 2020 WR&C Committee Meeting and September 2020 E&IT Committee Meeting were held at the RD1 Fishway construction site and an overview of ongoing construction activities was provided. The E&IT Committee received a project status update on June 16, 2021.

The District held a ribbon cutting ceremony for the project in late April 2022. The event was attended by several elected officials, representatives from the regulatory agencies, and residents. The District also received the prestigious ACWA Clair Hill Award in May 2022 on behalf of this program that was implemented over a span of 20 years.

Vallecitos Channel Evaluation and Restoration Project (*Water Supply Reliability*)

The unlined Vallecitos Channel was constructed in 1965 and is located in unincorporated Alameda County, east of Sunol. The District uses the channel to convey water from the California Department of Water Resources (DWR) South Bay Aqueduct (SBA) to Alameda Creek where it is diverted for groundwater recharge. Approximately 900 linear feet of the Vallecitos Channel bank and the adjacent access road have been eroded due to high velocity discharges and rapid flow recession associated with SBA flow releases, internal erosion or piping through subsurface voids, and tules growing in the channel bottom resulting in flow diversion and scour along the channel bank. A construction contract was awarded to ETIC Engineering on August 14, 2014, for repair of this area, "Project A." Due to delays in the issuance of environmental permits, construction has not commenced at this site. However, to help control further damage, a temporary willow wall repair was placed at this location.



Figure 6: Vallecitos Channel Condition

The channel has a design capacity of 120 cfs, although its current capacity is significantly reduced. The cumulative impacts of storm events, South Bay Aqueduct operations, and vegetation growth in the channel have resulted in erosion of the channel banks, damage to the adjacent access road,

sediment deposition, and reduction of the channel's capacity to less than 30 cfs. To ensure the most cost-effective use of the District's water sources, the channel would need to be restored to reliably transport a minimum of 40 cfs in the near term.

On June 11, 2015, the Board awarded a contract to the Horizon Water and Environment (Horizon) consultant team to evaluate the channel to determine near term repair and maintenance needs to return the channel to its minimum required flow capacity, assist with the CEQA process and environmental permitting for those activities, and for development and evaluation of long-term alternatives to the channel. For overall project efficiencies, "Project A" will be rolled up into Horizon's scope of work. ETIC's contract for additional site repair was effectively cancelled at the October 2015 Board Meeting when the Board accepted completion of the project; ETIC's work at Vallecitos Channel was therefore limited to the successful installation of the temporary willow wall.

The Horizon consultant team performed topographic survey and field assessments of the channel in winter 2015-2016. From January through March 2016, the team identified 10 sites where repair to restore the bank and stabilize the road was warranted. The team also completed tasks including hydraulic modeling of the existing channel, conducting biological assessments of the channel to determine presence of special status species of plants and animals, a cultural resources survey of the channel, and preparation of a draft preliminary delineation of wetlands report and a draft biological assessment report. From April through June 2016, the consultant team provided a hydraulic modeling memorandum, a draft cultural resources report, and a concept-level design memo that recommended various repair methods for different types of channel damage. Also, in June 2016, District staff met with DWR Delta Field Division staff to introduce the Vallecitos Channel Project and begin a dialogue regarding the need for channel restoration and the potential for cost sharing. From July through September 2016, the consultant team prepared a draft repair cost memorandum and a channel alternatives memorandum that delineated costs associated with repairing the damaged areas of the channel or constructing alternates to the channel, such as a pipeline along the channel alignment, or a pipeline from a new turnout along a new alignment. Staff met with the E&IT Committee on October 20, 2016, to provide an update and review the alternatives.

The consultant team updated their Channel Alternatives and Interim Maintenance Cost Estimate memoranda in the fall and winter of 2016, and staff recommended extensive revisions to both documents. Through the development and analyses of alternatives, it was determined that the short-term repair and long-term channel alternatives could be analyzed together in order to determine the most appropriate approach to meeting capacity needs at the lowest lifecycle cost. In November 2017, the consultant team delivered a memorandum that addressed both the short-term repair and long-term channel alternatives in an integrated manner. Staff and the consultant team visited the site in June, October, and December 2018 to characterize current channel conditions as a precursor to prioritizing channel repairs and to developing environmental and construction documents.

In March 2019, Horizon provided a 30% design for channel repairs. Due to additional erosion during winter 2016-2017, the design is no longer based on the repair of 10 sites but rather six types of repairs applied in multiple areas along the length of the channel. Design of channel repairs continued while staff evaluated the long-term channel alternatives. In early 2019, District General Counsel evaluated various property-related issues associated with various repair scenarios that could inform selection of a repair alternative. Staff reported to the E&IT Committee in July 2019 that the District would engage a right-of-way consultant to assist with evaluating options related to the District's easements and real property rights along Vallecitos Channel as alternate means of receiving SBA water are investigated.

The services of right-of-way consultant Overland, Pacific and Cutler (OPC) were acquired, and OPC promptly contacted the owners of the properties, through which the Vallecitos Channel passes, to discover owners' interests should the District consider other options for water conveyance and abandon the use of the open flow channel. Horizon's alternatives analysis indicated that channel repair and an off-site pipeline had similar lifecycle costs. However, in March 2020, OPC reported that the majority of property owners would consider accepting a quitclaim only if the District restored the channel to its original condition first, which would greatly increase the cost of the off-site pipeline alternative that entails abandoning the channel. Further, the District has an immediate need to increase the currently limited capacity of the channel in order to convey adequate groundwater recharge required during a dry year.

In order to implement temporary measures to restore minimum flow capacity, the Board authorized the first amendment to the Horizon agreement at the May 2020 Board meeting for Horizon to provide 1) environmental permitting assistance; 2) biological surveys, including for special status species; 3) development of contracting documents; and 4) environmental compliance training and monitoring during the work that includes placement of an earthen berm and vegetation removal activities. The first interim measure, installation of a low earthen berm, was completed on June 3, 2020. The berm reduced the chance of flooding at 15 cfs channel flow. A second interim measure, vegetation management with no permanent environmental impact on the channel, was designed and bid in September 2020. The General Manager awarded the contract work to Westside Landscaping & Concrete (Westside), in the amount of \$59,305.50, on September 24, 2020. A CDFW 1600 Streambed Alteration Agreement was applied for and received to support the vegetation management work. Additionally, a right of entry agreement was executed with an adjacent local landowner to support the vegetation management work. Westside commenced the vegetation management work in October 2020. The work was successfully completed, and the General Manager accepted completion of the project on November 9, 2020.

The Board authorized a second amendment to the Horizon agreement at the June 2020 Board meeting for Horizon to complete the design and assist the District with permitting and construction of the channel repair project to restore the channel to full capacity, in addition to the Fall 2020 temporary measures. The Board adopted the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program at the May 2021 Board Meeting. The construction contract was advertised in June and awarded to Teichert Construction at the July 2021 Board Meeting in the amount of \$1,462,277. Right of Entry agreements with three private property owners along

Vallecitos Channel were also executed in June 2020. The 401 Certification was received from the Regional Water Quality Control Board on June 3, 2021, and Nationwide Permits 13 and 33 were authorized by the United States Army Corps of Engineers on June 30, 2021. The CDFW Streambed Alteration Agreement and Incidental Take Permit were received on July 29 and July 14, 2021, respectively. Following receipt of the required permits to construct, staff issued the Notice To Proceed to Teichert Construction on August 2, 2021. Construction work to restore the channel was completed in November 2021 and the channel was returned to service. Completion of the Project was accepted by the Board at the January 2022 Board Meeting.

Offsite mitigation to offset the land disturbance necessary to restore the channel was required as a condition of the permit issuance. An agreement with Ohlone West Conservation Bank was executed on July 7, 2021, in the amount of \$138,950 which was authorized at the April 2021 Board Meeting, to purchase mitigation credits for impacts to California tiger salamander, Alameda whipsnake, and California red-legged frog.

In order to optimize the groundwater recharge capacity during the current drought situation, the design and construction of the Vallecitos channel restoration project was accelerated from scheduled FY 2022/23 to FY 2021/22. Additionally, as requested by the Board during the June 2020 Board Meeting, a project to replace the channel with an offsite pipeline was programmed into the draft CIP for construction in a later year.

While importing water in winter/spring 2022, the District discovered water overflowing the channel in the vicinity of one of the on-site mitigation areas. In addition, the environmental permits for the 2021 project require 10 years of monitoring and reporting, as well as actions to remedy issues discovered. For these reasons, staff is drafting a maintenance contract to advertise for bidding and an amendment to the PSA with Horizon for continued monitoring and reporting. The PSA amendment for environmental permit compliance and the maintenance contract will be presented to the Board in FY22/23.

FY 2022/23 Budget: \$33,000

FY 2023/24 Budget: \$33,000

Distribution PLC Upgrade Program – Phase 3 (*Infrastructure Improvements*)

Facilities that support the District's water supply, storage, and distribution systems, including water production wells, water storage facilities, booster and pressure-regulating stations, groundwater recharge facilities, and interconnections to other water utilities, are controlled and automated via the use of Programmable Logic Controllers (PLCs). The Distribution Programmable Logic Controller Upgrade program will replace more than 50 PLCs that support the District's water supply, storage, and distribution systems. The design and construction work to replace and program the PLC hardware will be programmatically implemented over multiple fiscal years in several phases.

Under the program, facilities requiring PLC replacement are being grouped together such that multiple PLCs at several facility sites are included in each individual project or phase. The design, construction, and programming work are selectively contracted out or performed in-house, depending on the unique circumstances at each of the facility sites. Contracts for PLC panel fabrication, construction, and programming are coordinated by staff.

The first distribution system PLC replacement project (Phase I), which included the replacement of the PLC equipment for the Vineyard Heights Booster Station, Canyon Heights Booster Station, Fremont Takeoff, and Central and Cherry Takeoff, was successfully completed in FY 2017/18.



Figure 7: Typical Distribution PLC

The second phase was completed in FY 2018/19. The project scope included upgrade of the PLC equipment and programming for seven facilities, including the Whitfield Booster Stations (Zone 1A, Zone 1B, and Zone 2), Durham Takeoff, Warren Takeoff, Decoto Reservoir, and Vineyard Heights Tank. One change order, in the total amount of \$16,865.27, was authorized by the General Manager for additional PLC panel equipment, field wiring, and conduit installations. The total construction cost, including Contract Change Order No.1, was \$360,614.27. The Board accepted completion of the construction project on August 8, 2019.

The Design for the third phase has been completed. The third phase of the program includes the replacement of the PLC equipment at eight facilities for the Mayhew Reservoir, Rancho Higuera Booster Station, Scott Creek Booster Station, Washington Booster Station, Avalon Tank, FR-1 Regulator Station, FR-2/PR-2 Regulator Station, and PR-3 Regulator Station. Field investigation to as-built the existing PLC systems was completed in Q2 FY 2020/21, and preliminary design of the eight sites to receive PLC upgrades commenced. An RFP to provide PLC programming was released on June 7, 2021, however, no proposals were received by the proposal due date, June 29, 2021, due to availability and interest, at this time, of the local PLC Programming firms. The scope of this work will now be included in the construction contract, and staff have commenced developing the associated drawings and specifications. The design effort for the eight sites is complete and construction bids are expected on February 1, 2023. Phase 3 is expected to award contract in early March 2023.

Project updates have been provided to the E&IT Committee, including on June 22, 2017; October 10, 2018; June 19, 2019; and September 15, 2021.

FY 2021/22 Budget: \$150,000

FY 2022/23 Budget: \$579,000

FY 2023/24 Budget: \$329,000

Avalon Tank Hillside Slope Erosion Protection Project (*Infrastructure Replacement*)

Avalon Tank is a key water storage facility and the only water tank serving the Avalon neighborhoods in Fremont. Periods of heavy rainfall frequently cause the cut-slope embankment behind the tank to erode and slough, resulting in clogging and damage to the on-site concrete drainage and irrigation systems and further weakening of the embankment.

The Avalon Tank Site Slope Stability Improvement Project identified and evaluated alternatives for site slope stabilization and will ultimately include the design and implementation of repairs and slope stability measures at this key water storage facility. A PSA with Kleinfelder, Inc. (Kleinfelder) was authorized on October 8, 2015. Kleinfelder evaluated the existing geologic conditions, developed slope repair and stabilization options, and prepared a basis of design for a permanent slope repair. Kleinfelder completed their field testing of the soil nails in December 2015 and provided a final soil nail technical memorandum in March 2016. A project update was provided to the E&IT Committee on April 21, 2016. A final version of the Evaluation of Hillside Stability Improvement Measures technical memorandum that summarized alternative means of stabilizing the hillside was received in June 2016. Based on the anticipated cost of the permanent slope repair, the option of a long-term repair of the hillside was deferred in the District's capital improvement program until FY 2020/21. Kleinfelder was asked to prepare engineered details for interim slope repairs. A draft summary report was provided in July 2016, and the final summary report was received in October 2016, which completed the scope of Kleinfelder's work.

Staff determined that an interim maintenance activity of installing geotextile fabric over sloughed areas to protect against additional erosion was the preferred alternative. Staff advertised the construction project to install fabric in June 2017, awarded in August 2017, and issued a Notice to Proceed in September 2017. The work was substantially complete by the end of September 2017. The project was accepted by the Board in December 2017. Maintenance of the installation occurred throughout the winter of FY 2017/18. The contractor continued to maintain the installation through the winter of FY 2018/19.

The geotextile fabric installed in 2017 reached the end of its useful life following the winter of FY 2018/19. Subsequently, staff prepared contract documents to replace and improve the temporary stability improvements in FY 2019/20. This project scope included 1) removal, off-hauling, and legal disposal of eroded soil, existing geotextile fabric, and the anchorage system; 2) installation of a new protective geotextile fabric and anchorage system; and 3) provision of a warranty of the geotextile fabric and anchorage system for the next two winter seasons so that the hillside is protected until the permanent erosion control system can be designed and constructed. Staff advertised the project in July 2019, awarded August 2019, and issued a Notice to Proceed in September 2019. The work was completed at the end of September 2019. Warranty of the erosion control measures extended through the winter of FY 2020/21.

The project to install long-term repairs of the hillside kicked off in the third quarter of FY 2019/20. The long-term repair solution is based on the preferred alternative developed during the 2016 Kleinfelder assessment prescribing a soil nail wall with concrete facing on the eastern hillside. Staff issued a Request for Proposals (RFP) for engineering services to support the design of the long-term repairs on February 21, 2020. One proposal was received on March 24, 2020, from Cal Engineering & Geology, Inc. of Walnut Creek, CA (Cal Engineering). An interdepartmental District team evaluated the proposal based upon established criteria including project understanding, project approach and proposed scope of work, company and personnel qualifications, project schedule, and level of effort through all project phases. Based upon a comprehensive evaluation of the proposal, Staff determined that Cal Engineering has the qualifications, staff, experience, and approach that meets the District's needs to provide design services for this specialized geotechnical and structural engineering project. Subsequently, the Board authorized the execution of a PSA to Cal Engineering at the May 2020 Board meeting. The PSA scope of services consists of the following items: 1) preliminary and final design, which includes complex geotechnical and structural design work, 2) CEQA compliance and permitting support, and 3) engineering services during bidding and construction.

The design work commenced in the fourth quarter of FY 2019/20. The project Basis of Design Report was developed by Cal Engineering, reviewed by staff, and completed in August 2020. After the review of the preliminary design, the interdepartmental District design team decided to include additional scope items proposed by both the District team and Cal Engineering. Additional erosion protection and maintenance features were added to the scope items, such as the inclusion of bulkhead walls above the concrete ditches in hillside areas left uncovered for additional protection and the inclusion of concrete stairs on the hillside to safely access the drainage ditches for future maintenance and fencing to enclose the hillside for goat weed abatement during the summers. A PSA amendment was executed by staff for the above additional design work, and evaluation of ground stability at the Vineyard Heights Tank site in October 2020, in the amount of \$27,553. 65% design was completed in October 2020, and 90% design was completed in December 2020. Final design was received on July 22, 2021, including both the drawing and specification package.

The CEQA determination memorandum was developed by Cal Engineering's subcontractor, Environmental Science Associates (ESA), and reviewed by staff. ESA conservatively prepared an Initial Study and Mitigated Negative Declaration (IS/MND) evaluation in accordance with CEQA requirements. The IS/MND was adopted by the Board at the March 11, 2021, Board Meeting. No additional permits are required for this project.

A project overview was provided to the E&IT Committee on November 20, 2019, and a review of proposed design and construction support services was provided to the Committee on April 15, 2020. An update on the project status, and site tour of the Avalon Tank facility, was provided during the May 24, 2021, E&IT Committee Meeting.

The construction contract was bid in February 2022. On April 14, 2022 the Board awarded a construction contract to Disney Construction Inc. in the amount of \$2,133,333. Following

construction contract award, the Board authorized an amendment on June 9, 2022 to Cal Engineering's agreement to add engineering services during construction as part of their scope of work. On May 13, 2022, the Notice to Proceed was issued to the Contractor. Construction work commenced in July 2022. The work was successfully completed on November 18, 2022. Change Order No. 1 in the amount of \$95,366.18, intended to perform scaling on the hillside to expose additional length on the existing soil nail bar which allows retrofits for the new shotcrete facing, was previously authorized by the General Manager. Completion of the work required an additional 30 calendar days. A construction overview was provided to the E&IT Committee on December 7, 2022. Project Acceptance and Authorization of Change Order Number 2 by the Board of the Directions is planned for the January 12, 2023 Board meeting.

FY 2021/22 Budget: \$200,000
FY 2022/23 Budget: \$2,261,000

Alvarado-Niles Pipeline Seismic Improvement Project (*Seismic Reliability*)

The District completed a distribution system seismic vulnerability assessment (SVA) in November 2008 to assess the District's ability to supply water during and following a seismic event. Because critical, large-diameter "backbone" pipelines crossing liquefaction zones are potentially susceptible to failure during or following a major seismic event, the SVA recommended that such pipelines be seismically hardened to withstand the potential effects of liquefaction-induced ground deformation.

The Alvarado-Niles Road transmission main is one of the primary means by which the District conveys water supply to Union City and the northern regions of the District's service area. Composed of 24-, 16-, and 12-inch diameter steel and asbestos cement pipeline segments, the Alvarado-Niles Road transmission main is a critical component of the District's water distribution system and its post-earthquake response strategy. A liquefaction susceptibility map developed as part of the SVA shows that various segments of the existing Alvarado-Niles Road transmission main traverse or are within close proximity to liquefaction-susceptible zones and may be at risk of failure during or following a major seismic event.

The objective of the Alvarado-Niles Pipeline Seismic Improvement Project is to improve the District's water distribution system seismic reliability by upgrading the Alvarado-Niles Pipeline to withstand liquefaction-induced ground deformations and other identified potential seismic hazards and to ensure that the District can provide critical post-earthquake response to Union City and the northern portions of its service area during



Figure 8: Alvarado-Niles Pipeline Phase I Construction

and following a major seismic event. As “an essential pipeline required for post-earthquake response and recovery and intended to remain functional and operational during and a following a design earthquake,” the upgraded Alvarado-Niles Pipeline (sometimes referred to as the “Spine Main”) will be designed as a Functional Class IV pipeline, as defined by the American Lifelines Alliance, Seismic Guidelines for Water Pipes 2005 (ALA). The upgrade will extend over approximately 3.5 miles, beginning from the intersection of Alvarado-Niles Road and Decoto Road to the western extents of Union City at the intersection of Union City Boulevard and Smith Street.

The District has retained the services of consultants and contractors to perform survey work, environmental compliance, geotechnical explorations and testing, specialized seismic pipeline design services, and underground utility location and measurement.

On January 12, 2017, the Board authorized a PSA amendment with SANDIS for project-related surveying services, and on February 9, 2017, authorized a PSA with GEI Consultants to assess the liquefiable zones and other geohazards along the proposed alignment and develop geotechnical design parameters. On February 9, 2017, the Board also authorized a PSA amendment with LSA Associates for environmental services associated with the project; the Final Initial Study/Mitigated Negative Declaration was adopted by the Board on September 13, 2018. On April 11, 2017, the Board awarded a contract to Clean Harbors Environmental Services for underground utility locating and authorized a PSA with G&E Engineering Systems, Inc. for specialized seismic pipeline design services.

The project is being designed and constructed in two phases. The first phase includes the installation of new pipeline along Smith Street and Alvarado-Niles Road, between Union City Boulevard and Central Avenue, excluding the portion within the Caltrans right-of-way at the Interstate 880 interchange. The second phase includes the segment along Alvarado-Niles Road, between Central Avenue and Decoto Road, and the portion within the Caltrans right-of-way.

On September 13, 2018, the Board authorized a PSA with BKF Engineers to provide design support services for Phase II of the project. On December 13, 2018, the Board authorized a PSA with 4LEAF, Inc. for construction inspection services for Phase I. Lastly, an amendment to BKF’s agreement was executed in June 2019 to provide design peer review and to design cathodic protection for Phase I. With Phase I design complete, BKF initiated Phase II design services in January 2020. BKF continued Phase II design through the end of FY 2019/20. In support of Phase II design, on May 14, 2020, the Board authorized a fifth amendment for GEI Consultants to perform additional geotechnical analysis in support of the design. In July 2020, the 65% Phase II design was completed and circulated for stakeholder review.

The project schedule has been impacted by several factors including staff turnover, the complex seismic considerations required at creek crossings and major utility crossings, and additional agency coordination with Caltrans and the City of Union City. Design revisions were required to avoid sensitive environments and to address permit conditions.

A project overview was provided to the E&IT Committee on January 19, 2017. Subsequent project updates were also provided to the E&IT Committee on January 10, 2018; August 8, 2018; November 14, 2018; May 14, 2019; January 15, 2020; November 18, 2020; and June 16, 2021. At the October 23, 2018, Union City Council meeting, District staff provided an informational presentation which included a recommendation for modified working hours associated with the project. In March 2019, the 60% design was circulated for review. Follow-up with the City of Union City indicated that proposed project working hours were accepted by staff. The project was expedited to complete 90% and 100% design reviews by November 2019. The project was advertised for construction in December 2019. Three bids were received, and at the February 11, 2020, Board meeting, the Board awarded the project to Garney Pacific for \$11,316,775, which excludes contingent items of work that may be added by change order. The Notice to Proceed was issued to the contractor on March 27, 2020. In May 2020, the contractor began potholing for utilities along the project alignment. Staff turnover created a need for additional assistance managing the project construction. The Board authorized an amendment to 4LEAF, Inc., to provide construction management services, at the June 11, 2020, Board Meeting. On June 25, 2020, the District hosted a virtual public informational outreach webinar event that explained the project. On June 29, 2020, the contractor initiated the main pipeline construction. On October 8, 2020, the Board authorized Contract Change Order No. 3 for scope changes that mainly addressed conditions discovered in the field. In June 2021, the Board authorized Contract Change Order Nos. 5 and 6 to address changes and authorizations associated with a request from the City of Union City to have the District's contractor to perform additional paving in the work area on the behalf of the City, and to address unforeseen conditions related to restoration paving. In April 2021, the Board authorized professional service agreement amendments for 4LEAF, Inc. for ongoing construction support and for LSA Associates for Phase 2 permitting support. As of the end of the fourth quarter of FY 2020/21 the new pipeline and appurtenances were in service. By the end of July 2021, restoration work was completed. The District and contractor continue discussions regarding final compensation for certain components of the restoration work and delays in project completion. Phase II design activities continue and include preparation of the Phase I record drawings, drafting for the Phase II 90% design. Additional surveying services have been completed for the required creek crossing and staff have continued coordination efforts for the crossing of Dry Creek with the City of Union City and consultant. The consultant also continued their investigation and design effort associated with the UPRR crossing.

In May 2022, LSA Associates completed a field study of the Dry Creek aerial crossing. As of the end of June 2022, the District has completed the drafting for the Phase II 90% drawings and the project designer, BKF Engineers received the updated drawings and continued their work towards advancing the design of the UPRR and Dry Creek crossings. In September 2022, the project geotechnical engineer, GEI Consultants, completed four additional geotechnical explorations at the UPRR and Dry Creek crossings. These explorations included installation of a new piezometer at the proposed UPRR crossing location to monitor groundwater levels required to advance the design of the trenchless railroad crossing. Additionally, BKF Engineers completed their review of the Phase II 90% Design drawings in the second quarter of FY22/23. Work on the 100% design has commenced.

FY 2022/23 Budget: \$138,000

Kaiser Pond Diversion Pipe Improvement Project (*Water Supply Reliability*)

An embankment proximate to the Hayward Fault segregates the Kaiser Pond into two groundwater recharge ponds, one of which recharges the Above Hayward Fault (AHF) aquifer, the other which recharges the Below Hayward Fault (BHF) aquifer. A 30-inch corrugated metal pipe, constructed in 1971, connected the two ponds. A portion of the pipeline on the BHF embankment face of the levee has corroded and failed, resulting in erosion of the bank and lack of an adequate interconnection between the two ponds. The Kaiser Pond Diversion Pipe Improvement Project will restore the hydraulic connectivity of the ponds via a replacement diversion structure in the levee.

Staff met with the E&IT Committee on October 20, 2016, to brief the Committee on the project. On November 10, 2016, the Board authorized a Professional Services Agreement (PSA) amendment with Kleinfelder, and a PSA with LSA Associates, for this project. In December 2016, Kleinfelder delivered a draft alternatives memorandum that provided an engineering evaluation of rehabilitation alternatives. Based upon a comprehensive analysis of alternatives, staff selected a buried concrete box culvert as the tentatively preferred alternative and presented the analysis and tentative alternative at an interagency meeting attended by US Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and the Regional Water Quality Control Board (RWQCB), after which the agencies asked for additional information. Staff forwarded additional information via a memorandum, hosted a conference call with the agency representatives to review the additional information, and obtained agency concurrence with the proposed approach. The tentative alternative was presented to the E&IT Committee in May 2017 and to the full Board in June 2017. Based upon input provided by the Board, staff and consultants moved forward with the design of the preferred alternative. Staff provided a design update to the E&IT Committee on November 16, 2017.

In early 2018, LSA Associates developed permit applications for the CDFW 1600 Lake and Streambed Alteration Agreement, the USACE 404 permit, and the RWQCB 401 permit. The mitigation plan was developed and forwarded to the regulatory agencies for review. A draft CEQA Initial Study/Mitigated Negative Declaration document was developed, reviewed, circulated in June and July 2018, and adopted by the Board on September 13, 2018. A project update was provided to the E&IT Committee on September 12, 2018. Permit applications were submitted to the regulatory agencies in November 2018, and the CDFW 1600 permit was received in March 2019. The Army Corps 404 was received in August 2019. Due to the timing of the 404 permit and the remaining need for the 401 permit, project construction was deferred. Feedback from the RWQCB during the fourth quarter of FY 2018/19 was incorporated into the design documents and permit applications, and applications for the RWQCB 401 permit and the CDFW 1600 permit were resubmitted. Staff continues to work with Union Pacific Railroad (UPRR) for construction traffic access through UPRR railroad property.

In Spring 2020, because the 401 permit and permission to access the project site through UPRR property was not received in a timely manner, it was decided as part of CIP reprioritization to defer

project construction to 2024. In Summer 2020, the District submitted a drought resiliency grant proposal to the Bureau of Reclamation which was not accepted. As future grant opportunities arise, they will be evaluated for fit with this project.

During the FY22/23 mid-cycle CIP update, the project was again reprioritized with a goal toward construction in 2023. As the Army Corps 404 permit had expired, staff reapplied for and received a new 404 permit. The District reapplied for and received the RWQCB 401 certification that had been put on hold. The District continues to work with UPRR to obtain the right-of-entry agreement necessary to perform the work.

The planned construction window of Summer of 2023 is contingent upon receipt and execution of the license agreement, and completion of a necessary track crossing upgrade work by UPRR.

FY 2022/23 Budget: \$238,000

Advanced Metering Infrastructure Project (*Infrastructure Improvements*)

The objective of the Advanced Metering Infrastructure (AMI) Project is to implement and integrate a comprehensive AMI solution throughout the District's service area, including addressing the District's business needs through the integration of the new infrastructure and technology with existing and/or improved business processes. The scope of work is expected to include the following: 1) replacement and/or upgrade of approximately 84,000 water meters for compatibility with AMI; 2) implementation of a communications network (cellular and/or fixed network) for the transmittal of data between AMI-compatible water meters and the District's information technology infrastructure; 3) upgraded information technology systems, including a Meter Data Management System (MDMS) for the collection, storage, management, and utilization of AMI data; 4) integration of the AMI system with the District's existing customer information system (Cayenta), and; 5) development of additional business enhancements that can be leveraged through AMI.



The project is designed to be implemented in three phases. Phase 1, which commenced during FY 2017/18, consisted of identifying the District's business needs and drivers, developing AMI system alternatives for evaluation, and commencing a preliminary design for the system. Phase 2, which commenced in the second half of FY 2018/19, consisted of a competitive procurement process and a "Proof of Concept" (PoC) demonstration of the selected AMI technology. The PoC will include the installation of the selected AMI system across a subset of the District's service area (approximately 3,500 meters). The intent of the PoC is to confirm the viability of the selected AMI system and assist the District in identifying and troubleshooting operational issues prior to full deployment. Lastly, Phase 3 will deploy the selected AMI system throughout the remainder of the District's service area. Phase 3 is expected to be implemented over a period of three fiscal years,

starting in FY 2021/22 due to extended procurement negotiations. Full deployment of AMI throughout the District's service area is currently anticipated to be completed during FY 2023/24. On January 11, 2018, the Board authorized the award of an agreement with EMA, Inc. (EMA) for AMI consulting services in support of the project. On April 11, 2017, the Board also authorized a PSA amendment with EMA for a meter field survey to better characterize the District's water meter inventory. During Phase 1 of the project, EMA assisted the District in assessing its current and future business practices and developing specific criteria and functional requirements for the District's AMI system. On January 10, 2019, the project entered Phase 2A when the Board authorized a PSA amendment to EMA for procurement support services. Phase 2A was completed by the award of the AMI Deployment contract, AMI SaaS/NaaS contract, CIS modifications contract, and Customer Portal SaaS contract. On May 21, 2020, the project entered Phase 2B when the Board authorized a PSA amendment to EMA for PoC and Full Deployment support services.

A project overview was provided to the E&IT Committee on July 20, 2017. Subsequent project updates were also provided to the Board on May 22, 2018 (Board Workshop); October 11, 2018 (Board Meeting); December 6, 2018 (Board Workshop); April 9, 2019 (Board Meeting); May 30, 2019 (Board Workshop); July 11, 2019 (Board Meeting); May 21, 2020 (Board Workshop); June 8, 2020 (Special Board Meeting); June 10, 2020 (Board Meeting); June 24, 2021 (Board Workshop); the E&IT Committee on November 16, 2017; January 10, 2018; March 14, 2018; April 11, 2018; July 11, 2018; August 8, 2018; September 12, 2018; October 10, 2018; March 20, 2019; May 14, 2019; September 18, 2019; October 16, 2019; November 20, 2019; January 15, 2020; March 18, 2020; May 20, 2020; September 16, 2020; June 16, 2021; July 21, 2021; December 15, 2021; July 6, 2022; and November 2, 2022;; the Legal, Intergovernmental, and Community Affairs Committee on June 21, 2018; September 20, 2018; and January 12, 2021; and the Water Resources and Conservation Committee on August 22, 2018.

The Project consultant, EMA, under the direction of the District project team, completed development of the preliminary draft RFP for the AMI Deployment which was provided to the full Board for review on July 11, 2019. Following the review, the Board authorized the General Manager to release the RFP at the regular July Board Meeting. The AMI Deployment RFP was advertised on July 31, 2019, and a Pre-Proposal conference was held on August 15, 2019. Four proposals were received on September 30, 2019. Following a comprehensive evaluation of responsive proposals, using the process and methods detailed in the AMI Deployment RFP, the District's evaluation team determined that Badger Meter, Inc. (Badger) of Milwaukee, Wisconsin, submitted the best-value proposal. The scope of Badger's work includes, but is not limited to, 1) design and provision of an encrypted AMI network; 2) provision of AMI equipment; 3) provision of metering products; 4) construction work to upgrade all District customer meters to AMI; 5) integration of AMI software with existing and District-furnished software platforms and applications; 6) public outreach support services; 7) testing and commissioning services; and 8) provision of ongoing support services for AMI software and the AMI network. Staff performed a Best and Final Offer (BAFO) negotiation of the proposed scope of work and level of effort with Badger for both the AMI deployment contract and ongoing Software as a Service (SaaS) and Network as a Service (NaaS) services contract. The Board awarded the AMI Deployment Contract and 20-year SaaS/NaaS services contract at the May 21, 2020, Special Board Meeting. The AMI

Deployment start-up, deployment planning, and software integrations were completed during Q1, Q2, and Q3 of FY 2020/21. A Virtual Informational Community Meeting was provided for District customers on March 11, 2021 and focused on the PoC deployments. The PoC meter deployments commenced in late March 2021 and Staff provided a report on the PoC deployment performance at the June 24, 2021, Board Workshop.

The Full Deployment phase of the project commenced on November 17, 2021, starting with 6 billing cycles in the Irvington & Newark areas. A second Virtual Informational Community Meeting was held for District customers on November 16, 2021. At the end of December 2022, a total of approximately 23,700 AMI installations (including those from the POC phase) have been completed. Weekly production is planned by the contractor to increase from the current rate of 615 to a maximum of 1,450 during the project in order to complete full deployment within the contract-specified time. This maximum rate needs coordination with Customer Service to ensure internal staffing resources are adequate to support the level of production. The maximum rate is higher than what was planned at the start of full deployment due to below-forecast installations since March 2022, a result of inventory and supply chain issues, as well as an interruption to work for 68 days to comply with USBR grant requirements.. Parallel to installations, Badger continues work to remedy the last outstanding PoC improvements, namely network coverage gaps in the Avalon Heights area. Badger plans to resolve the network gaps with gateways installed on existing light poles and use of a fixed-network compatible endpoint.

Contract Change Orders (CCO) No. 1 to the Badger AMI deployment contract to incorporate ultrasonic meters into the project was authorized by the Board on July 9, 2020, in the amount of \$3,031,208.29. Two additional no-cost CCOs have been executed with Badger. CCO No. 2 clarifies bonding requirements and alternatives during the extended warranty period and the transition from a Performance Bond to a Warranty Maintenance Bond. CCO No. 3 provides for the negotiated substitution of the installation subcontractor who will be installing AMI meters, endpoints, and related appurtenances in the field. PMI, Inc. (PMI) will be substituted for Concord Utility Services who requested to be released from the contract for this work. PMI was the proposed subcontractor for other AMI system providers and was evaluated highly by the District's review team. This CCO requires PMI to assume all of the associated scope and obligations, and Badger remains responsible to ensure the work is conducted in accordance with the contract. CCO No. 4 adds scope to the deployment contract requiring the meter installers to survey and collect customer service line material information, while performing their upgrades at each meter location, per United States Environmental Protection Agency's (USEPA's) proposed revisions to the Lead and Copper Rule. CCO No. 4 was awarded at the June 2021 Board Meeting in the amount of \$494,500. CCO No. 5 was approved by the Board on 11/17/21 in the amount of \$277,119.20 and incorporated the Alameda County sales tax increase that came into effect July 1, 2021, into the contract, as well as Work Modification Orders 4, 5, and 6, regarding additional lids sizes, metal lids, and fixed encroachment permit pricing, respectively into the contract. Work Modification Orders 7, 8, 9, 10, and 12 addressing updated line-item quantities, new installation types, and the impact of the work stoppage in compliance with United States Department of the Interior, Bureau of Reclamation (USBR) grant requirements have been approved by staff and are planned to be

incorporated into the contract when the next CCO is reviewed by the Board, provisionally scheduled for February 2023;

EMA, under the direction of the District project team, additionally completed development of an AMI Customer Portal Software RFP, which will provide the customer-facing interface for consumption data, beneficial customer analytics related to water usage and efficiency, and customer self-help services. The RFP was advertised on October 7, 2019, and a Pre-Proposal conference was held on October 16, 2019. Six proposals were received on October 31, 2019, and were evaluated by staff. Each proposal meeting the mandatory requirements was evaluated by the project evaluation team to determine the best value proposal using technical and financial criteria established in the Customer Portal RFP. Based on a comprehensive evaluation of the proposals and proposer demonstrations, Smart Energy Systems Inc., dba Smart Energy Water (SEW), was determined to have the best value solution, qualifications, staff, and proposed approach to best meet the District's needs. SEW's scope of work includes provision of their Smart Customer Mobile (SCM) web and mobile platforms, which include various account management, billing, communication and notifications, customer service, usage and conservation modules, and Smart IQ (SiQ) consumption data analytics package which will be provided by SEW via cloud-hosted SaaS subscription. Additionally, SEW's scope of work includes provision of professional services to configure the new customer portal software platform, and design, develop, and test the necessary data security functions and data integrations. Staff performed a Best and Final Offer (BAFO) negotiation of the proposed scope of work and level of effort with SEW for the Customer Portal Software as a Service (SaaS) services agreement. The Board awarded the Customer Portal SaaS Agreement to SEW at the June 8, 2020, special Board Meeting to provide the District's "My Smart Water Connect" portal. Project start-up, planning, and platform configuration design commenced in Q1 of FY 2020/21. SEW completed the draft platform Document of Understanding (DoU) in September 2020. The final outstanding DoU items included confirmation of integration needs with Badger, Cayenta & InvoiceCloud. Confirmation with Cayenta and Badger was achieved, and integration design commenced; however, the integration needs with InvoiceCloud required additional review to coordinate and resolve contractual issues in the District's existing contract with InvoiceCloud. This contractual issue was resolved in Q1 FY 2021/22 and integration development has commenced. Staff requested Cayenta to prioritize integrations with Badger's BEACON system and the installation of contractor's Work Order Management System. The integration between SEW, Badger BEACON, InvoiceCloud, and Cayenta remains on the critical path for the customer portal go-live. Staff commenced User Acceptance Testing (UAT) of the first customer portal module in December 2021 and the parallel development and testing of the various customer portal modules is anticipated to be completed in Q4 FY 2021/22. The customer portal platform went live in December 2022.

To successfully implement the project integrations between the District's existing Cayenta Customer Information System (CIS) and the District's new AMI system, software is required as well as modifications to the CIS to support the deployment of the AMI system. Integrations and modifications to the CIS system will be completed in several phases. The initial phase was awarded to Cayenta on December 12, 2019, to perform initial design, documentation, planning, and scheduling work. This initial work has been completed, and an amendment to perform the second

phase of work was approved at the October 2020 Board Meeting. The development and testing of the integrations and CIS configuration changes to support the AMI Deployment work were completed prior to the commencement of the AMI PoC deployment in March of 2021. Cayenta's initial interface development work was completed in December 2021 and will be needed to continue supporting SEW's Customer Portal development work and integrations throughout to the Portal go-live release.

An application in the amount of \$19.5M for the Drinking Water and Clean Water State Revolving Fund (SRF) program was submitted to the State Water Resources Control Board for review. The Board adopted four resolutions related to the application for financial assistance and reimbursement from the program at the May 21, 2020, special Board Meeting. The DWSRF application was accepted for consideration in the 2021 funding year. Staff continued to coordinate the funding requirements and requests for documentation from the DWSRF program, most recently reviewing Federal prevailing wage compliance requirements. The District proposed using California Department of Industrial Relations-accepted wage categories since no specific Federal "Water Meter Installation Technician" existed. However, the Department of Labor (DOL) rejected the proposal on October 28, 2021, and on November 19, 2021, the District appealed. On March 18, the District received final direction from the Wage and Hour Division of DOL providing specific direction on the federal wage category requirements to be implemented for DWSRF eligibility. On April 12, 2022, the District sent a memo requesting Badger provide a change cost estimate to incorporate the DOL's wage decision, and on May 6, 2022, Badger responded. Badger's estimate was in excess of \$18M, significantly more than anticipated. While initial review of Badger's estimate identified changes that could be challenged, because of the close deadline to finalize the SRF agreement before new Build America, Buy America provisions were included, the project team concluded it was unlikely negotiations to reduce Badger's cost change to make the loan economical could be completed in time.

An application to the US Bureau of Reclamation (USBR) for the Water and Energy Efficiency Grant program for the AMI Full Deployment phase was submitted on September 17, 2020 for consideration. The application amount was for \$2M and was approved. On February 22, 2022, USBR provided the funding agreement, and notice to proceed with the funded work, in the form of a 6% project cost match up to \$2M. As part of the USBR's environmental requirements, installers have been trained to identify species listed and protected under the Endangered Species Act and that may be present at project site locations. On August 9, 2022, ACWD reported a California Tiger Salamander observation at a project meter box site, and following verbal notification on August 10, 2022, from USBR to stop work at all meter boxes where work is being partly funded by the grant, formal notice was received on August 17, 2022. ACWD worked with USBR to review the grant's environmental requirements and obtain concurrence with the US Fish and Wildlife Service (that has responsibilities under the Endangered Species Act). A notice to proceed was received from USBR on September 29, 2022, allowing AMI deployment work to restart in the field. Badger provided a change order request covering the cost and time impacts of the unanticipated event, which staff reviewed, and will be presented to the Board for approval, tentatively scheduled for February 2023.

As of December 2022, more than 23,000 meters were upgraded achieving approximately 27% implementation. Below is a map summarizing the completed, open and upcoming meter deployment areas by Billing Cycle. Per comments received at the November E&IT committee, some color and presentation updates have been made, and the map from October 2022 is also included for comparison, as requested.

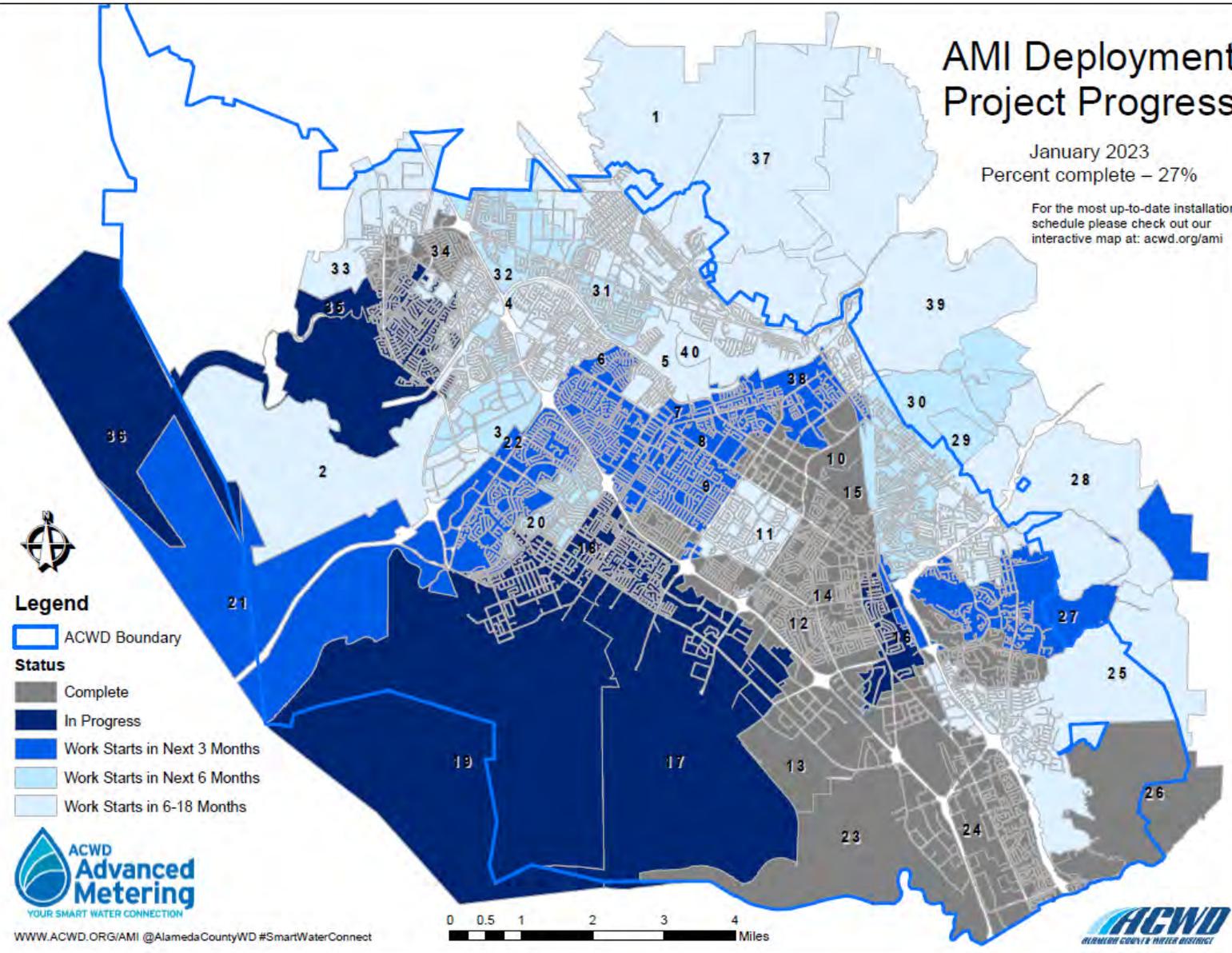
FY 2021/22 Budget: \$5,175,000

FY 2022/23 Budget: \$13,779,000

AMI Deployment Project Progress

January 2023
Percent complete – 27%

For the most up-to-date installation schedule please check out our interactive map at: acwd.org/ami



Driscoll Road Main Renewal Project (*Infrastructure Improvements*)

The Driscoll Road Main Renewal Project is part of the Water Main Renewal Program and will replace the existing 12-inch diameter water main on Driscoll Road and a portion of the main on Paseo Padre Parkway. In September 2017, the Board authorized a PSA amendment to BKF Engineers for a topographic survey that was performed in winter 2017/2018. In January 2018, the Board authorized a PSA with LSA Associates for preparation of a CEQA document. Staff continued design of this replacement project through June 2019. A project update was provided to the E&IT Committee on May 14, 2019, and July 17, 2019.

A draft 30% basis of design memorandum and 30% design drawings were completed by staff in June 2019. The project team identified several design complexities and permitting challenges associated with this project. Due to resource limitations and special expertise requirements, staff proposed to lead the external agency coordination, permitting, and CEQA effort while using consultant support for the final design and drafting effort. A request for proposal was circulated, and in September 2019, the Board authorized execution of a PSA with West Yost Associates for design services. Design continued through March 2020. In support of the Driscoll project, a construction contract for utility locating in support of the design of this and other pipeline projects was advertised in the fall of 2019. Following receipt of bids that were much higher than anticipated, the utility locating project was revised to reduce the number of utilities locating excavations, or “potholes,” and the project was expanded to include support for the Main Renewal – Central Newark Thornton Avenue Project in addition to Driscoll. The Board awarded the potholing contract to Devaney Engineering, Inc. at the January 9, 2020, Board meeting. The potholing work for the Driscoll Road Project was completed in the Spring of 2020.

The 65% design documents were completed and reviewed by the District project Team in June 2020. A draft CEQA IS/MND was circulated for public review on June 19, 2020. One comment letter was received during the 30-day public comment period from the Community Development Department at the City of Fremont. The project design was placed on hold in August 2020 due to the City of Fremont’s request to remove the existing asbestos cement pipe. Following feedback from the City of Fremont that allowed the existing asbestos cement pipe to be removed from service in place, staff re-initiated design and recirculated the draft CEQA IS/MND in December 2020 that incorporated minor project changes including night work. The Board adopted the CEQA IS/MND on March 11, 2021. Further design work was placed on hold as the City of Fremont requested that the District remove existing pipelines from the ground once they are removed from service. After several discussions with the City, the District agreed to removing selected sections of asbestos cement pipe as a part of this project, and the District is finalizing the design plans based on the latest agreement with the City. The 100% design documents were completed in June and are being reviewed by staff and jurisdictional entities. Portion of the construction for this project will be performed along Mission Boulevard, a State Highway (SR 238). The Caltrans permit was received in September 2022. Staff also provided a final set of plans and specifications to Kinder Morgan (a petroleum pipeline company that provides jet fuel to San Jose Airport) for their review and approval as some of the construction work will impact their pipeline. The issued for bid set was prepared in December. Staff is finalizing the contract documents.

FY 2022/23 Budget: \$3,878,000

Main Renewal - Central Newark Thornton Avenue Project (*Infrastructure Improvements*)

The Central Newark Thornton Avenue Project is part of the Main Renewal Program and will replace up to 5,200 feet of 6-inch to 12-inch diameter asbestos cement pipeline on Thornton Avenue between Cedar Boulevard and Cherry Street. The project was originally scoped to include main replacement on Cedar Boulevard, Timber Street, Central Avenue, Cherry Street, Birch Street, Newark Boulevard, and Civic Terrace Avenue; however, these segments were deferred in order to coordinate the work with City of Newark's City Hall and tract street improvements. These pipelines are now part of the Main Renewal – Newark Central Avenue Project which will commence after completion of this project.

The Board previously authorized PSA amendments in March 2018 and September 2018 to BKF Engineers for topographic surveys needed to complete the design of the original project. In August 2018, the Board also authorized a PSA amendment with LSA Associates for the preparation of CEQA documentation for the original project. However, with the redefined scope and project area, the project qualified for CEQA Categorical Exemption. The Board adopted a resolution finding the project categorically exempt on October 10, 2019.

The 30% design documents, which include a Basis of Design Memorandum and preliminary alignment drawings, were completed and distributed for review by the project Team in December 2019. The 65% design documents were completed in May 2020 and reviewed by the District project Team. The 65% documents were submitted to the City of Newark and the Alameda County Fire Marshall for review, and comments were received in first and second quarter of FY 2020/21, respectively.

A potholing contract to provide precise location information of existing utilities along the project alignment and support the development of the project designs and other Main Renewal Program projects was awarded at the January 2020 Board Meeting. The potholing work for the Central Newark Thornton Project was scheduled to commence in May 2020; however, it was delayed two months due to restrictions implemented in Alameda County Order 20-10. The potholing work was subsequently completed in late Q1 FY 2020/21. The potholing contract was accepted for completion at the November 2020 Board Meeting. Work on the 90% design is delayed and target completion is now Q3 FY 2022/23.

A project overview was provided to the E&IT Committee on February 14, 2018. A subsequent project update was also provided to the E&IT Committee on August 8, 2018, May 14, 2019, and September 18, 2019.

FY 2021/22 Budget: \$40,000
FY 2022/23 Budget: \$200,000

Small Diameter Main Renewal Program (*Infrastructure Improvements*)

The Small Diameter Main Renewal Program is part of the Water Main Renewal Program. The program consists of the design and construction of the renewal of small diameter (typically 8-inch diameter and less) mains. This program targets older asbestos cement pipes that have experienced leaks and avoids design complications or conflicts such as arterial streets, railroads, creek crossings, faults, and liquefaction zones. These small-diameter renewals are intended to supplement the large diameter main renewals that tend to be more complex to design and construct; it will also help meet the District's overall goals for main renewal by reducing the District's inventory of aging asbestos cement pipelines.

The program will be implemented in phases, with construction projects being let for specific areas of the water distribution system. On July 6, 2018, an RFP was issued for engineering services for the design of the initial project areas which include approximately 34 water mains in nine different geographic areas of the water distribution system. At the September 13, 2018, Board Meeting, the Board authorized the General Manager to execute an agreement with AECOM to complete the design work. A program kickoff meeting was held at the end of September 2018. Staff and the consultant met with stakeholders (the Cities of Fremont, Newark, and Union City) regarding requirements for the project.

Aspects of the program were reviewed with the E&IT Committee as part of an update on the Main Renewal Program on August 8, 2018, and a subsequent update was provided to the Committee on May 14, 2019.

Two areas within the City of Newark were included in the Main Renewal – Souza Avenue and Concord Street Project. This project was approved and found to be exempt from CEQA by the Board in August 2019. In September 2019, the 90% design for the Main Renewal – Souza Avenue and Concord Street Project was completed, and in December 2019, the project was advertised for construction. At the February 2020 Board Meeting, the Board rejected all bids due to irregularities. The project was re-advertised in March 2020 and was awarded to Teichert Construction in the amount of \$3,213,124 at the May 14, 2020, Board Meeting. The Notice to Proceed for the Main Renewal – Souza Avenue and Concord Street was issued on June 24, 2020. At the end of September 2020, the contractor mobilized to commence field activities. An update on the construction progress was provided at the February 17, 2021, EIT Committee Meeting. On September 9, 2020, the Board authorized Contract Change Order No. 1 to perform emergency repair work on an 18-inch water main at the intersection of Mowry and Peralta Avenue. On January 14, 2021, the Board authorized Contract Change Order No. 2 to performed to address multiple utility conflicts. Staff awarded Contract Change Order No. 3 in the amount of \$96,441.25 to address a backfill material change request and additional unanticipated existing utility conflicts. On May 13, 2021, the Board authorized Contract Change Order No. 4 in the amount of \$233,566.92 to perform trench dewatering work required to install the new alignment in an area of unanticipated shallow ground water. In Q3 FY 2021/22, the Contractor completed installation, and passed testing, for all water main pipeline, tie-ins to the existing distribution system and water service cut-overs. Final surface restoration, which was seasonally sensitive paving areas, was

completed in Q4 FY 2021/22. In Q4 FY 2021/22 and Q1 FY 2022/23 staff coordinated final details of outstanding work modification orders with the contractor, and the Board authorized Contract Change Order No. 5 and approved the project on October 13, 2022.

Design of the remaining Small Diameter Main Renewal Program sites in Fremont was placed on hold as the City of Fremont is reviewing enforcing City ordinances related to removing retired asbestos cement pipes from the ground. Design of the Union City sites and one site in Newark has been on hold since May 2020 while scope and design changes were contemplated. Professional Services Agreement Amendment No. 2 was prepared to address the need to add design drawings to construction bid sets and complete design of the sites in Union City and one site in Newark. During this time, the District and the City of Newark prepared a Cooperative Agreement to coordinate design and construction of water main infrastructure within the limits of the City of Newark Lindsay Tract Improvements Project. Four sites originally included in AECOM's Small Diameter Pipeline Project were removed from AECOM's scope of work and added to Lindsay Tract Project. Professional Services Agreement Amendment No. 2 was executed in February 2021 and design of the sites in Union City and Newark resumed. AECOM prepared and delivered the 90% design for Union City and Newark. ACWD staff prepared modifications to the 90% design of the Newark and Union City sites to incorporate modified bypass system design and developed the associated technical and front-end specifications; the design package is referred to as the Dairy Avenue and H Street Project. This project was approved and found to be exempt from CEQA by the Board at the December 8, 2022 board meeting.

FY 2022/23 Budget: \$100,000

CIP Engineering Report (*Other*)

The Capital Improvement Program (CIP) Engineering Report (Report) identifies capital projects based on the recommendations in the current Integrated Resources Planning (IRP) Study, supply and demand forecasts, and the District's planning criteria for water production, pump stations, storage facilities, transmission mains, and groundwater recharge facilities. The Report is typically updated on an approximately ten-year basis.

The Report provides medium-term planning for the CIP and is an important tool used to establish project priorities, capacities and functionality, and scope, which become the basis of projects programmed into the CIP. It is reliant on engineering analyses that utilize the District's hydraulic model, a computer software program that mathematically models the operation of the District's water production, distribution, and storage systems. The hydraulic model last used for the Report, sometimes referred to as the "skeletonized model" because it models only larger distribution pipes, is being supplanted by a newer "all-pipes" model that will more accurately represent District operations and infrastructure. Prior to use in support of the Report, the "all-pipes" model required calibration. On July 7, 2018, an RFP was issued for consultant assistance in calibrating the model, and on September 13, 2018, the Board authorized the General Manager to execute a PSA with West Yost Associates for engineering services associated with model calibration. A description of

the hydraulic model calibration process was provided to the E&IT Committee on September 12, 2018.

In May 2019, the consultant delivered the updated model, followed by the steady-state calibrated model in June 2019. Also in June 2019, the consultant performed field measurements in support of the “extended-period calibration” model. Shortly thereafter, the hydraulic modeling analysis work required to support the CIP Engineering Report commenced. A series of interdepartmental workshops were conducted to review the regulatory criteria, and the District’s Level of Service (LOS) criteria for planning and operation of the District’s production, storage, and distribution facilities. The final hydraulic modeling development report and the Modeler’s notebook were delivered, and the modeling training was completed in March 2021.

As part of the effort to develop the Engineering Report and advance the Main Renewal Program, Project Engineering updated the main replacement prioritization model and evaluation and initiated a series of workshops in the first and second quarters of FY 2021/22 with stakeholders from across the District to identify future pipeline replacement projects and prepare packages for piloting alternative project delivery approaches such as design-build project delivery and master contracting. This work will continue through FY 2022/23.

In April 2022, the project charter was created to commence development of “Lite” Engineering Report until IRP 2025 is completed and available. The project charter listed updated project team members and stakeholders throughout the District. The charter was reviewed and executed by Executive staff members. The project team will meet regularly during a series of and progress meetings to define District’s criteria, production scenarios, and operational scenarios. The Lite version of Engineering Report will be updated to address supply and demand deficit analysis, distribution redundancy planning, and evaluate recommissioning of Mission San Jose water treatment plant.

A series of kickoff meetings was completed in FY 2022/23 first quarter. Multiple separate meetings were conducted with various stakeholders to discuss production capacities, deficiencies, and hydraulic modeling. The project team will continue meeting to review and update various chapters in existing Engineering Report.

Recommended CIP projects were identified from Engineering Report discussions. These projects will be added to proposed CIP updates during biennial budget review. In FY 2022/23 quarter 3, project engineering team will define a few scenarios to perform hydraulic modeling analysis for system optimization. Based on the analysis, the associated chapters will be updated in the report.

FY 2022/23 Budget: \$50,000

Curtner Road Booster Station Project (*Infrastructure Improvements*)

The Curtner Road Booster Station was constructed in the mid-1980’s in two phases within the existing Alameda Reservoir valve vault structure and is a key source of pumping from Zone 1 into

Zone 3. The primary booster station equipment is near the end of its useful life and its maintainability is limited. An engineering study to develop options and feasibility for booster station upgrade was initiated in July 2018. The results of the study were used to program necessary improvements into the CIP. An internal team reviewed the alternatives developed, and during the CIP budgeting process and via internal team meetings, the scope of the project was further defined to include replacement and upgrade of the existing equipment within the existing structure envelope unless deemed infeasible during detailed design. Analysis associated with the next cycle of the Engineering Report will help to confirm boosting requirements to Zone 3 and evaluate options for achieving any needed additional capacity via subsequent projects.

In September 2019, an RFP for design services for Curtner Road Booster Station and the Canyon Heights Booster Station projects was circulated, and the Board authorized execution of a PSA with Schaaf & Wheeler Consulting Civil Engineers for these services. Design of the Curtner station upgrade was started in conjunction with that of the Canyon Heights Booster Station. A kickoff meeting with the consultant for both projects was held in December 2019. A draft scoping memorandum was developed, and a draft Basis of Design Memorandum was provided on May 22, 2020. Stakeholder feedback resulted in a change to the scope to expand the upper level of the Curtner station shell to allow for future maintenance of the pumping equipment. This change was reflected in the final Basis of Design Memorandum which was completed on November 9, 2020. The Curtner design schedule was extended as a result, with the 75% set submitted on January 1, 2021, and the 90% set submitted on April 16, 2021. An update to the E&IT committee was provided on June 16, 2021. The Curtner project's 100% design plans were submitted by the consultant to the District for review in December 2021. The schedule for implementation of this project is being coordinated with other related projects such as the Alameda reservoir roof replacement project.

The Draft IS/MND was circulated in June 2021 and the District received comments from the Regional Water Quality Control Board (RWQCB) and City of Fremont. The California Department of Fish and Wildlife (CDFW), in its review of the Lake and Streambed Alteration Agreement (LSAA) permit application, concurred with the RWQCB. The project team prepared a Waste Discharge application for the RWQCB and 1600 lake and streambed alteration agreement application for CDFW. The Board adopted the final IS/MND and approved the project on October 14, 2021. In March 2022, the final design was completed. Two bids for construction and three proposals for construction management services were received in Spring 2022 as part of the Request for Proposal and construction advertisement process, and at the May 18, 2022 special Board meeting, the Board awarded the construction contract to Disney Construction Inc. (Disney) and authorized a construction management services agreement with Kennedy Jenks. The construction contract with Disney was executed in July 2022 and construction activities commenced in early August 2022. Work on the structural and site improvements including the Level 2 extension and new electrical equipment pad occurred in the first quarter of FY22/23. The booster station was removed from service in October 2022 and demolition of the existing electrical and mechanical equipment by the contractor proceeded through December 2022. Concurrently, Alameda Reservoir was drained in support of the demolition.

FY 2022/23 Budget: \$4,276,000

SCADA Replacements and Upgrades (*Infrastructure Improvements*)

The District maintains and operates five “major” SCADA environments – Distribution, WTP1, WTP2, Blending Facility, and Newark Desalination Facility – and five “kiosk-style” SCADA environments – Mission Fish Screen, Bunting Fish Screen, Rubber Dam No. 3 Fish Ladder, Rubber Dam No. 1 Fish Ladder, and Kaiser Fish Screen. All existing SCADA environments utilize Automation OnSpec SCADA software (OnSpec). OnSpec, which has been utilized by the District for over twenty years, is nearing the end of its technological life. SCADA technologies have significantly evolved over the last 20 years, and though the current OnSpec SCADA system is still functional, other SCADA technologies are expected to provide the District additional functionality, security enhancements, and efficiencies.

The SCADA Replacements and Upgrades Project consists of a two-phase project approach. Phase 1 includes an engineering study to develop and identify the project scope, criteria for the selection of a new SCADA system, deployment schedules, preliminary design work, and the execution of any pre-requisite work necessary to adopt the new SCADA technology. Phase 2 includes the procurement of the SCADA hardware and software and the development, testing, installation, and commissioning of the multiple replacement SCADA systems. Phase 1 design and planning work is scheduled to commence in the first quarter of FY 2020/21. Deployment of the first SCADA system is scheduled to commence in the fourth quarter of FY 2021/22.

The project charter was reviewed and approved by internal project stakeholders in the third quarter of FY 2019/20. Additionally, an RFP for Professional Services to support Phase 1 of the project was developed and reviewed by project stakeholders in the third quarter of FY 2019/20. The RFP was advertised on the District’s website on March 5, 2020. On March 9, 2020, Addendum No. 1 was issued to provide the option of attending the project briefing session via videoconferencing using WebEx, in addition to the onsite meeting. The District’s project team conducted a non-mandatory project briefing meeting on March 12, 2020, for potential proposers to attend and ask questions related to the project and draft scope of services included in the RFP. Addendum No. 2 on March 27, 2020, which included clarifications to various sections of the draft scope of work, extended the proposal due date from April 2, 2020, to April 15, 2020, and included electronic submission of proposals using the Bonfire procurement platform. Four proposals were received on April 15, 2020. Each proposal meeting the mandatory requirements was evaluated by the project evaluation team to determine the best value proposal using technical and financial criteria established in the RFP.

Based on a comprehensive evaluation of the proposals and proposer demonstrations, TJC and Associates, Inc. (TJC) was determined to have the best value solution, qualifications, staff, and proposed approach to best meet the District’s needs. The Board authorized execution of a PSA to TJC at the July 2020 Board Meeting. TJC’s scope of services includes 1) documentation of the current SCADA architecture and existing SCADA system; 2) needs assessment, SCADA Human Machine Interface (HMI) standards development, HMI software evaluation and selection, and

developing a cybersecurity plan, data integration plan, alarm management plan, enterprise historian implementation plan, and SCADA server reconfiguration plan; 3) development of a SCADA system operation and management plan and staffing analysis; and 4) project management and administrative services. Future tasks that have been evaluated and are planned to be added by amendments after completion of these prerequisite tasks include pilot SCADA system design, pilot SCADA system Request for Proposals, pilot system implementation support, evaluation of pilot SCADA system deployment, and full deployment implementation support for remaining facilities.

The project kickoff meeting was conducted on July 22, 2020, with TJC and the District's internal team members. TJC began capturing as-built conditions (as-builting) of the existing SCADA system including field visits to all major facilities in August 2020. A total of six needs assessment workshops were conducted between TJC's project team and various District staff from September 2020 to December 2020. HMI standard workshops were completed along with a draft HMI standards technical document in November 2020. TJC began developing HMI software evaluation and selection criteria in December 2020 and reached out to various HMI software vendors.

The HMI software selection recommendation was completed in February 2021. HMI standards are developed in draft and are anticipated to be finalized in Q4 FY 2020/21. The SCADA Cybersecurity plan and governance plan has been developed in draft and reviewed and finalized by the Project Team. The SCADA Governance Plan details the delegation of roles and responsibilities of the various SCADA system owner, maintainer, and user divisions within the District to ensure efficient and effective operation of this critical real-time system that enables our water supply, treatment, and distribution operations. The SCADA Cybersecurity Plan details the areas of continued investment within the SCADA system and management frameworks for ongoing mitigation updates. Additionally, the SCADA staffing analysis plan has been developed and is in final review. All the work identified under the prerequisite tasks has been completed in Q4 FY 2020/21 as originally planned.

The project team provided updates to Executive sponsors on August 26, 2021, on the final Cybersecurity Plan, SCADA Governance plan, and Staffing Analysis. The Executive staff team later signed off on the final version of the Cybersecurity Plan and SCADA Governance plan on November 15, 2021. The plans were shared with project stakeholders afterwards.

On May 24, 2021, project status was provided to E&IT committee. On June 2021, Amendment No. 1 was executed by the General Manger to add pilot deployment RFP development, pilot implementation support, and evaluation of pilot deployment at Blending facility. This amendment was previously authorized by the Board at the July 2020 Board Meeting. TJC and the subconsultant commenced developing RFP to procure a professional system integrator to upgrade SCADA software at Blending facility.

The RFP to replace SCADA system at the Blending facility was advertised on the District's website and on the Bonfire procurement platform on October 28, 2021. The project briefing meeting was conducted via videoconferencing using Zoom on November 10, 2021. On December 8, 2021, Addendum No. 1 was issued to extend the proposal due date from December 16, 2021, to

January 13, 2022. Subsequently, Addendum No. 2 was issued on January 11, 2022, to remove proposal security requirement from the RFP. Three proposals were received on January 13, 2022. Following a comprehensive evaluation of proposals received, the District's evaluation team determined that Vertech of Irvine, California, submitted the best-value proposal. The Board awarded the Blending Facility SCADA Replacement Pilot Project to Vertech at the March 10, 2022, Board Meeting. The project work is planned to commence in Q4 FY 2021/22, and commissioning of the new SCADA system in Q2 FY2022/23. Staff anticipate procurement of related SCADA equipment and software licensing specific to the Blending Facility SCADA implementation in Q4 FY 2021/22 and Q1 FY 2022/23.

In parallel with the Blending Facility SCADA Replacement Pilot Project, District Staff are continuing work on the SCADA Cybersecurity Plan recommendations. The District's project team, including stakeholders from IT and Operations, together with SCADA Consultant TJC, and subconsultant JEGO worked together to review and support the Operations team implementation of SCADA Cybersecurity recommendations. On December 16, 2021, a kickoff meeting was held to initiate ongoing network improvements that will be implemented by the District's internal team with support from the project consultants. Staff anticipate procurement of related networking equipment and software licensing in Q4 FY 2021/22 and Q1 FY 2022/23.

On March 28, 2022, a kickoff meeting was held with Vertech team, SCADA Consultants, and the District to initiate Blending Facility SCADA Replacement project. A series of workshops were conducted by Vertech to discuss development of new HMI graphics and templates. The development work will progress through the first quarter of FY 2022/23.

During first quarter of FY 2022/23, required software licenses were procured including Ignition HMI software by Inductive Automation, Canary Labs for Enterprise Historian, Kepware, Axiom, Windows Server 2022 OS, and VMware Enterprise Plus. In addition to purchasing software licenses, necessary hardware equipment were procured for Blender SCADA system including Stratus FT server to host primary and backup Ignition Gateway, Dell server for local backup mode, test PLC modules, multiple computers, monitors, and other miscellaneous devices.

All licenses have been installed in District's virtual machine for Vertech to develop Blender HMI screens, communicate to existing servers and databases, connect to the test PLC, and configure active directory credentials. Blender Operator workstations were reconfigured to add additional monitors and computer. Stratus server and several monitors and computers have been installed at Blending Facility to prepare for site acceptance testing and field commissioning in second quarter of FY 2022/23. Various monitors have also been installed at other facilities to control and monitor Blender remotely. Board authorized a professional services agreement amendment for TJC and Associates to provide additional support to District's cybersecurity and network architecture improvements.

SCADA server to host new Ignition software platform was installed at Blending facility on October 6, 2022. The jumpstart training on the server was later provided to District's internal staff. The new Ignition software platform was tested at District's HQ facility in October and November

with Vertech, TJC, Project Engineer, and various stakeholders for two weeks. Subsequently, Ignition software and other ancillary software were installed at Blending facility, and the project team commenced functional testing with actual field equipment in November 2022. Upon successful completion of functional testing, a series of training sessions were provided to Operators, Instrument Technicians, Administrators, and other data users. A list of punchlist items were identified from functional testing and training. Vertech team had addressed the issues included in the punchlist prior to performing 90-day acceptance testing. The acceptance testing of the new Ignition system is scheduled to begin on January 10, 2023, where both Onpsec and Ignition software platforms will run in parallel to operate Blending Facility.

FY 2022/23 Budget: \$920,000

FY 2023/24 Budget: \$923,316

Clean Energy Plan Review and Clean Energy Plan Implementation (*Other*)

The District's Clean Energy Program will implement solar photovoltaic systems at several District facilities and properties. The program will be implemented over several fiscal years under Power Purchase Agreements (PPAs) with a solar developer in order to maximize value to the District while enhancing the environmental sustainability of the District's operations. If fully implemented, the Clean Energy Program could save the District several million dollars in energy costs over the next 20 years and could reduce carbon emissions by over 1,000 tons annually.



Figure 9: Solar PV Concept - Whitfield Reservoir

The District completed the Clean Energy Plan Review effort in 2019. After careful evaluation of the clean energy market alternatives, with consulting support from energy consultant Michael D. Brown Consulting Engineers, staff determined that solar photovoltaic (solar PV) was the preferred and best option for the District. Ten District-owned sites were selected for solar PV installation and the District received a recommendation from Michael D. Brown Consulting Engineers to include all of the sites under a single PPA RFP procurement.

The District selected Sage Energy Consulting (formerly Sage Renewables, and now an NV5 company) (Sage) in 2019 to assist staff with the Clean Energy Plan Implementation, to help develop the PPA RFP documents and the site plan bridging documents, and to support the District with construction at the various contracted sites. A structural evaluation of existing District facilities and buildings for supplemental solar PV dead-loads was completed. The results showed that the District's HQ building roof is not structurally suited for a solar panel installation. Sage also mapped the generating and benefitting sites for the proposed PG&E bill tariff, known as Renewable Energy Self-Generation Bill Credit Transfer program (RES-BCT), with models for

both net kilo-watt hours and bill credit dollars. PG&E Interconnection study applications were submitted and PG&E has been actively processing these requests and identifying any required updates to District facilities that are necessary to implement solar generation.

The District amended an existing contract with LSA for ongoing CEQA and other environmental professional support services. Staff reviewed a draft exemption memo for the Clean Energy Plan Implementation of rooftop and carport canopy-mounted solar sites. CEQA documents for the Whitfield Reservoir and Pits T1/T2 were prepared. Staff and District legal counsel conducted a thorough review of these documents and LSA incorporated these comments into the documents. District staff in cooperation with LSA conducted a formal AB52 consultation with the local Ohlone Indian tribe representative. The consultation was completed in May 2020 but the formal consultation closure letter from the Ohlone tribe representative remains outstanding. This is not required prior to submitting the documents for public review.

The RFP was released on July 8, 2020, with a pre-proposal conference conducted on July 15, 2020. There was significant interest shown in the project. Three addenda were issued prior to the proposal period closing on September 15, 2020. A District panel selected the top proposal from the three responsive proposals received from solar developers. Power Purchase Agreement negotiations for each site were finalized in the first quarter of FY 2021/2022. The Engineering and Information Technology committee was provided a status update at the September meeting, and authorization to execute the Power Purchase Agreements (PPAs) was granted by the Board at the October 2021 meeting. At the same meeting, the Board authorized a PSA Amendment with Sage for services during implementation of the program. In October, following the Board meeting, the PPAs were executed.

The IS/MND CEQA document for the Whitfield Reservoir site was adopted by the Board in December 2020. Categorical Exemptions for all other Phase 1 and 2 sites were brought before the Board for adoption in Q3 of FY 2021/2022.

In Fall 2021, representatives of DG West 1, LLC, the solar vendor and an indirect wholly owned subsidiary of NextEra Energy Resources, LLC (NEER), visited the Phase 1 sites in advance of initiating the design. The notice to proceed was issued in December 2021. The District received 30% design documents in January 2022. In March 2022, NEER informed the District that an investigation by the US Department of Commerce into imported solar panels could affect the underlying cost assumptions that formed the basis for the cost and schedule terms of the power purchase agreements (PPAs) that the District had executed last year. In June 2022, the Federal Government imposed a 24-month moratorium on solar panel tariffs, reducing but not eliminating the gap between NEER's and the District's desired outcomes. An update was provided to the E&IT Committee on June 1, 2022. NEER provided updated pricing based on market conditions several times between May and October 2022. Proposed pricing peaked at 41% above the contracted rate during the summer; following the passage of the Inflation Reduction Act, NEER's final proposed pricing is 22% higher than the contracted rate. Amendments to the Power Purchase Agreements with the revised pricing for the Phase 1 sites were presented to the E&IT Committee on October 5, 2022 and to the Board on October 13, 2022, where the Board authorized execution of the

amendments. The Phase 1 amendments were executed and NEER is expected to request Notice to Proceed for 60% design in January 2023.

FY2022/23 Budget: \$207,000

Cathodic Protection Improvements and Additions (*Infrastructure Improvements*)

Cathodic protection systems are used to mitigate the corrosion of the District's steel infrastructure, including buried steel pipelines and above ground water storage tanks. Originally installed between 1972 and 1995, many of the District's impressed current cathodic protection systems are reaching the end of their useful lives and are in need of rehabilitation or replacement. The Cathodic Protection Improvements and Additions Project will hire a consultant to evaluate 35 impressed current cathodic protection systems, which collectively protect over 70 miles of buried steel pipeline and six water storage tanks.

In addition, the District will be using the consultant to evaluate current cathodic protection standards and specifications used for capital projects and developer-installed infrastructure, as well as develop a Corrosion Monitoring Program. The intent is for the District to modernize its design standards, codify standard operating procedures for the continued operation and maintenance of the existing cathodic protection systems, as well as develop and implement a programmatic approach to rehabilitating and replacing cathodic protection systems that reach their end of useful life.

Staff is finalizing an RFP package and expects to issue a solicitation in Q3 of FY 22/23.

FY 2022/23 Budget: \$465,000

New Cedar ARP Well (*Infrastructure Improvements*)

The existing Aquifer Reclamation Program wells (Bellflower, Cedar 1, Cedar 2, Darvon 2, and Farwell), which were converted to Newark Desalination Facility source-water wells, were installed in 1974, with the exception of Cedar 2, which was installed in 1982. All of the wells have exceeded the typical life span (approximately 20-30 years) of a production well. With the exception of Cedar 2, the wells are now starting to show signs of decline because of their materials of construction and their age. The existing Cedar 1 well will be destroyed and replaced with a new well to maintain the long-term viability of the wellfield and the integrity of the groundwater subbasin as a viable water source. A new Newark Aquifer well for blend around water will also be installed at the Cedar site for providing reliability and redundancy. This project includes one well destruction, construction of two new wells, and associated pumping equipment.

A project kickoff meeting was held in February 2020. The project is in the preliminary design phase.

FY 2022/23 Budget: \$100,000

Patterson Reservoir Remediation Project (*Infrastructure Improvements*)



Figure 10: Patterson Reservoir

In 2004, the Division of Safety of Dams (DSOD) analyzed the west embankment of Patterson Reservoir as part of their High Slip-Rate Seismic Reevaluation Program and notified the District that the reservoir could not be operated above Elevation 196.00 feet. The reservoir was designed for use to Elevation 199.83 feet. Following changes to water distribution patterns during the recent drought, the District sought to remediate the reservoir and engaged GEI Consultants in 2017 to perform a geotechnical study. DSOD used the resulting report to re-assess the embankment and confirmed the Elevation 196.00 limit on July 31, 2019, requiring a physical freeboard of 4'-0."

Staff amended GEI's contract on November 15, 2019, to include scope and fees for an alternatives analysis. Among other alternatives, GEI proposed the construction of a berm surrounding the reservoir, lowering the existing spillway, or a combination of both. In July 2020, DSOD verbally approved the alternatives without altering the requirement for 4'-0" of freeboard. An update to the E&IT Committee was provided on September 19, 2020. GEI developed conceptual designs and provided a draft Alternatives Analysis Memorandum. Based on the draft memo, project stakeholders selected to pursue the berm alternative as the preferred alternative to develop. GEI and District staff evaluated site access requirements prior to completion of the alternatives analysis. The Alternatives Analysis phase was completed in June 2022 following review and approval of the final alternatives memorandum. The design phase will follow under a separate professional services agreement. The berm alternative remains the most likely alternative and will be pursued further in final design.

FY 2022/23 Budget: \$89,000

Alameda Reservoir Roof Replacement (*Infrastructure Improvements*)



Figure 11: Patterson Reservoir Interior Columns

The existing reservoir was built in 1972 with a corrugated metal roof over wood framing, cast-in-place concrete walls, and precast concrete columns. The roof and underlying framing are reaching the end of their useful life and will be replaced, seismically retrofitted, and upgraded to support future solar panels. A joint RFP for the Alameda Reservoir Roof Replacement and Decoto Reservoir Improvements projects was circulated in October 2020, and the Board authorized execution of a PSA with TJC and Associates, Inc. (TJC) for these services on December 10, 2020. The PSA was executed

on March 23, 2021.

In addition to a new roof and underlying structural upgrades, the work at Alameda Reservoir will include new ventilation and lighting and a new drain valve. Design has commenced and the Draft Basis of Design Memorandum was received on June 23, 2021. The 65% design was completed in mid-October 2021. The 90% design was completed in December 2021. A CEQA IS/MND was circulated in December 2021. A project update was provided to the E&IT Committee at the February 2, 2022, committee meeting, and the Board adopted the Initial Study/Mitigated Negative Declaration and approved the project at the February 10, 2022, Board meeting. The 100% design was received in January 2022.

In April 2022, CalOES informed the District that the District's \$8 million grant application was entering the final stage of review and was expected to be a potential candidate for final selection. Preliminary operational evaluation indicated no major constraints to operations due to the anticipated four to six-month delay related to the grant decision. However, because no definitive response was received from CalOES after six months, and to avoid further delay and impact to implementation of other interdependent capital projects, the Alameda Reservoir construction project was advertised in November 2022. No bids were received by the late-December advertisement closing date, and the project will be re-advertised in January 2023 with the contract award anticipated at the March 9, 2023 Board Meeting. Construction will be scheduled through the end of June 2024.

FY 2022/23 Budget: \$4,514,000

Decoto Reservoir Improvements (*Infrastructure Improvements*)



Figure 12: Decoto Reservoir Interior

The existing reservoir was built in 1964 with a corrugated metal roof over wood framing and cast-in-place concrete walls and columns. The roof and underlying framing are reaching the end of their useful life and will be replaced, seismically retrofitted, and upgraded to support future solar panels. New lighting and ventilation will be provided in the course of that work. The liner, drain valve, inlet/outlet valve, and altitude valve will be replaced as well.

A joint RFP for the Alameda Reservoir Roof Replacement and Decoto Reservoir Improvements projects was issued in October 2020, and the Board authorized execution of a PSA with TJC and Associates, Inc. (TJC) for these services on December 10, 2020. The PSA was executed on March 29, 2021.

Design commenced in March 2022. The 15% Design/Draft Basis of Design Memorandum was received in June 2022. The 30% Design set and the Final Basis of Design Memorandum were received in October 2022, and the 65% Design set in November 2022. The 90% drawings were received in late December 2022 and are under review.

The District provided the 30% Design set to the Division of Safety of Dams (DSOD), who has jurisdictional authority over the reservoir and who determined that a DSOD engineering review is required. The project team is working with DSOD to facilitate their review. Construction will be delayed until completion of the Alameda Reservoir Roof Replacement Project in fall 2024 to avoid significantly impacting Zone 1 storage.

FY 2022/23 Budget: \$359,000

B16 WTP2 Zone 3 Booster Discharge Pipeline Replacement (*Infrastructure Improvements*)

The permanent B16 booster station installation was completed in late 2015. A new below grade pipeline from the booster station to the Zone 3 connection on the TP2 site was to have been installed by DMD, however new development workload prevented DMD from completing the work. The existing pipeline, which dates to the 2004 temporary booster installation, is unlined bare steel (12-inch diameter by ~100-ft length) and lies on the ground. The existing pipeline needs to be replaced before it experiences severe corrosion and leaks. At the April 13, 2021, Board Meeting, Resolution No. 21-012 finding the project categorically exempt from CEQA was approved.

The design reached 90% completion in Q4 2021/22 and proposes an above-ground solution due to tight site constraints.

The construction scope of work was planned either to be incorporated with a concurrent main renewal project, with the Driscoll Road project identified as a suitable candidate for contract management efficiency, or performed by District forces if resources are available. Operations indicated the annual Treatment Plant 2 shutdown in 2023 might be shorter than typical, with the schedule not confirmed by September 2022 – since B16 impacts supply into Zone 3 of the distribution system, and with the Curtner Road Booster Station (which supplies Zone 3) undergoing refurbishment between summer 2022 and summer 2023 a key consideration was to align work at B16 with the TP2 shutdown. Due to the level of uncertainty, the work was not incorporated into the Driscoll Road project, and work by District forces and other delivery means are being reviewed.



Figure 13: B16 Booster Discharge Piping

FY 2021/22 Budget: \$55,571
FY 2022/23 Budget: \$21,317

Lindsay Tract Main Renewal (*Infrastructure Improvements*)



Figure 14: Example Green Infrastructure Improvement

The City of Newark has undertaken a neighborhood revitalization project in the Lindsay Tract area of the City which includes street scape and drainage improvements. The Lindsay Tract Main Renewal project was developed out of the ACWD's Small Diameter Main Renewal Program. Aging water mains that had been identified for replacement under the Main Renewal Program was found to overlap with a City of Newark sidewalk, drainage, and green infrastructure improvements project. ACWD explored opportunities for a cooperative agreement that would realize efficiencies from contract management, paving, sidewalk, and permitting costs, and as a result, a cooperative agreement was drafted.

At the February 11, 2021, Board Meeting, the General Manager was authorized to execute a Cooperative Agreement with the City of Newark.

The City of Newark and ACWD jointly prepared a Request for Proposals for the design portion of the work, and 6 responses were received and evaluated. The City of Newark had responsibility for

awarding the contract, and ACWD had the option to consent to include the water main design portion or elect not to participate. Both the City and ACWD agreed BKF scored highest out of the proposals received, and that BKF had demonstrated the qualifications, experience, and desired approach to carry out all aspects of the work. Design for the joint project continues.

Staff and the City of Newark provided joint public outreach events with residents in the project areas on August 3 and 11, 2021, and received favorable input for the main renewal work from the attendees. At the September 2021 meeting, the Board adopted a CEQA Categorical Exemption resolution for the Lindsay Tract main renewal work. On September 23, 2021, District and City staff, provided a presentation of the conceptual street improvement plans and main renewal work for the Lindsay Tract project area to the City of Newark Council.

A project overview was provided to the E&IT Committee on July 21, 2021.

In the last quarter of FY 2021/2022, staff worked closely with City of Newark staff to develop and participate in a community presentation. The community presentation was intended to provide an update on the project and to educate property owners about the financing mechanism for this neighborhood revitalization project.

The City of Newark currently plans to approve a resolution to form its Assessment District its January 26, 2023, Council Meeting, and hold the public hearing in March 2023. Depending on the outcome of the vote, advertising of the project would be scheduled for Spring / early summer 2023.

FY 2021/22 Budget: \$110,000

FY 2022/23 Budget: \$430,000

Washington Booster Station Flowmeter (*Infrastructure Improvements*)

The Washington Booster Station serves the District by pumping water to Pressure Zone 3 received from multiple sources including Whitfield Reservoir, Pressure Zone 2, and a takeoff from the San Francisco Public Utilities Commission system. The booster station does not presently have flow measuring equipment to monitor water leaving the station and flowing into Pressure Zone 3. The project will install a new vault to house the flowmeter on District property between the existing booster station fence and Washington Boulevard. The flowmeter will be connected to the existing booster station electrical panel for communication with the District's Supervisory Control and Data Acquisition (SCADA) system.

The design of the project is being performed concurrent with and by the same consultant team performing the Curtner Booster Station Upgrade project design. The 75 percent design was received in January 2021, and the 90 percent design was received in April 2021. The project's 90 percent design plans were received in December 2021. The 100 percent design was received in March 2022. This project was included in the contract documents for the Curtner Booster Station Project and will be performed by the same contractor.

The construction contract for the Curtner Booster station and Washington Booster Station Flowmeter projects was awarded in June 2022. Construction of the flow meter at Washington Booster Station is scheduled to occur in late Summer 2023, concurrently with the completion of the Curtner Booster Station Upgrade Project.

FY 2022/23 Budget: \$281,000

Blending Facility Low Flow Control Modifications (*Infrastructure Improvements*)

The Peralta-Tyson Blending Facility (H01) is located on Mowry Avenue in Fremont and mixes groundwater from the Mowry and Peralta-Tyson wellfields with imported water from the San Francisco Public Utilities Commission (SFPUC). Flow from the SFPUC pipeline is regulated at the blending facility to achieve the target hardness by combining the soft SFPUC surface water with hard local groundwater. The blending facility has three identical units named A, B, and C that each can blend between 3 and 28 million gallons per day (mgd), with a total facility maximum output of about 48 mgd.

The blending facility was not originally designed to accommodate flows below 5 mgd. Subsequent reductions in demand, as well as the ability to run the Newark Desalination Facility and Water Treatment Plant No. 2 at higher production rates, have reduced the production requirements at the blending facility during certain low demand periods.

There is one automated butterfly control valve on each of the SFPUC lines into the blending units, as well as 2 manual valves upstream and 1 manual valve downstream of the control valve. During periods of low demand, using the automated control valve to reduce flows from the SFPUC line into the blender creates pipe vibrations and a loud noise that disturbs residents of the surrounding houses. Therefore, operators must use one or more of the three manual valves in combination with the automated control valve to control flows. This approach mitigates the noise issue, but therefore prevents remote operation of the blending facility. Additionally, while this operational approach meets the low flow (3MGD) production requirement, the manual valves were designed as isolation valves and are not engineered for flow regulation service.

The Blending Facility Low Flow Control Modifications Project involves replacing the automated butterfly control valve on the SFPUC line at each of the three blending units with a Cla-Val and associated modifications to accommodate the larger valve. Construction began in the summer of 2022 and was largely completed in the second quarter of FY 2022/23. The new Cla-Val's have achieved the project goal of allowing remote operation of the blending facility while remaining below the decibel limit of the City of Fremont's noise ordinance. Replacement of the two isolation valves upstream of the new Cla-Val on each unit was rescheduled for January 2023, because it requires a full shutdown of the Blending Facility.

FY 2022/23 Budget: \$443,000

PFAS Treatment at ACWD's Groundwater Facilities (*Infrastructure Improvements*)

Per- and Polyfluoroalkyl Substances (PFAS) have been detected in the District's ground water supply, including Perfluorooctane Sulfonic Acid (PFOS) and Perfluorohexane sulfonate (PFHxS) at levels above California State Water Resources Control Board, Division of Drinking Water (SWRCB-DDW) Notification Level (NL), but below the Response Level (RL). The District began voluntary groundwater monitoring for PFAS in June 2020 and found PFAS compounds above their Notification Limit (NL) at the PT and Mowry groundwater wells that supply the Blending Facility. The PFAS Treatment Project will restore production capacity at the Blending Facility while still delivering water with PFAS concentrations below currently established NLs by implementing an interim 6 million gallon per day (6 MGD) PFAS Ion Exchange (IX) treatment facility. In order to deliver water to customers with PFAS concentrations below their NLs, the District has adjusted blending ratios, resulting in increased use of water imported from SFPUC and decreased production at the Blending Facility. The Board authorized a PSA with Trussell Technologies (Trussell) in January 2022 for up to \$1,363,127 to review alternatives, provide treatment recommendations, and proceed with implementation as needed.

In August 2022, DWR announced a potential new NL for PFHxS, which could necessitate up to 15 MGD of PFAS treatment if the District were to restore Blending Facility capacity while keeping PFAS compounds below their NLs. As the proposed PFHxS NL and MCL are not yet established, staff proposed adjusting the project scope to design a 15 MGD facility that can be constructed in phases, beginning with the construction of a 6 MGD facility. An amendment to the Trussell PSA is required to accommodate this design scope change. The Project was reviewed with the full Board during the August 18, 2022 workshop.

At the October 10, 2022 Board Meeting, the Board authorized an amendment to the PSA with Trussell in an amount not to exceed \$1,293,588 for the revised project scope to design a 15 MGD facility with initial construction of a 6 MGD facility. On October 31, 2022, DDW established the NL and RL for PFHxS; the NL was set at 3 ng/L, which is higher than the previously suggested NL of 2 ng/L for PFHxS.

In the second quarter of FY 2022/23, the design team accomplished the following: finalized the Basis of Design Report for the new project scope, drafted specifications for equipment to be pre-purchased, drafted the IS/MND and mailed out AB-52 letters, and initiated the 30% design phase.

In the third quarter of FY 2022/23, the team will continue design and expects to complete through 65% design and initiate 90% design. The project team also anticipates advertising the contracts for the pre-purchase items and bringing CEQA adoption to the Board in the third quarter of FY 2022/23.

FY 2022/23 Budget: \$4,789,000

FY 2023/24 Budget: \$4,989,000

QUARTERLY DIRECTORS' EXPENSE REPORT
For Period Covering 10/01/2022 - 12/31/2022
4th Quarter 2022

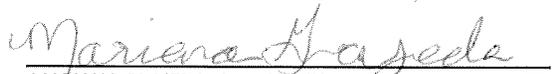
Expense Date	Description	Akbari	Gunther	Huang	Sethy	Weed
10/24/2022	2022 ACWA CLE VIRTUAL Workshop #2 - September 21, 2022				X	X
	Registration				\$ 85.00	\$ 85.00
	Sub-Total	\$ -	\$ -	\$ -	\$ 85.00	\$ 85.00
10/7/2022	ACWA Regions 5 Program and Tour in Monterey, CA, October 6-7, 2022				X	X
	Lodging				\$ 361.65	\$ 191.48
	Parking				\$ 24.00	\$ 21.00
	Mileage				\$ 102.63	\$ 103.25
	Meals				\$ 62.45	\$ 55.50
	Sub-Total	\$ -	\$ -	\$ -	\$ 550.73	\$ 371.23
10/25/2022	AWWA CA-NV Annual Fall Conference 2022 in Sacramento, CA, October 24-26, 2022					X
	Registration					\$ 549.00
	Lodging					\$ 505.44
	Parking					\$ 75.00
	Sub-Total	\$ -	\$ -	\$ -	\$ -	\$ 1,129.44
10/6/2022	CSDA Workshop: "Problem Solving for the Modern Leader" in Seaside, CA - November 7, 2022				X	
	Registration				\$ 225.00	
	Sub-Total	\$ -	\$ -	\$ -	\$ 225.00	\$ -
11/8/2022	WEF - San Joaquin River Program and Tour - November 2-3, 2022				X	X
	Lodging				\$ 280.92	\$ 280.92
	Meals				\$ 76.61	\$ 47.07
	Sub-Total	\$ -	\$ -	\$ -	\$ 357.53	\$ 327.99
12/1/2022	ACWA 2022 Fall Conference and Exhibition in Indian Wells, CA - November 29 - December 1, 2022	X	X	X	X	X
	Airfare	\$ 197.20	\$ 257.20			\$ 98.60
	Lodging	\$ 482.96	\$ 483.56	\$ 483.56	\$ 724.44	\$ 965.92
	Meals	\$ 51.75	\$ 42.82	\$ 27.64	\$ 141.44	\$ 59.10
	Car Rental-Parking-Taxi	\$ 100.82	\$ 26.99	\$ 97.62		\$ 79.44
	Service Misc (Car)				\$ 171.99	
	Mileage					\$ 19.81
	Sub-Total	\$ 832.73	\$ 810.57	\$ 608.82	\$ 1,037.87	\$ 1,222.87
	TOTAL QUARTERLY EXPENSES	\$ 832.73	\$ 810.57	\$ 608.82	\$ 2,256.13	\$ 3,136.53
	GRAND TOTAL	\$ 7,644.78				

ALAMEDA COUNTY WATER DISTRICT
Consolidated Portfolio Management Summary Report
December 31, 2022

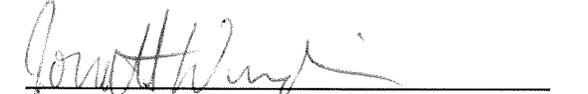
Investment Type	Par Value	Market Value	Book Value	% of Portfolio	Days to Maturity	YTM
Unrestricted Funds:						
ACWD Portfolio						
LAIF/CAMP	\$ 15,513,303.88	\$ 15,511,102.96	\$ 15,513,303.88	7.36	1	4.284
Passbook/Checking	6,599,072.49	6,599,072.49	6,599,072.49	3.13	1	0.000
Subtotal	<u>22,112,376.37</u>	<u>22,110,175.45</u>	<u>22,112,376.37</u>			
Chandler Managed Account Summary						
Asset Backed Securities	22,612,451.77	21,932,071.94	22,587,623.52	10.71	416	1.940
Federal Agency Bond / Note	34,770,000.00	32,813,600.28	34,950,056.60	16.58	664	1.100
Federal Agency Collateralized Mortgage Obligation	6,985,000.01	6,535,112.45	6,821,647.67	3.24	1734	3.280
Corporate Note	49,451,000.00	46,543,683.64	49,940,992.90	23.69	967	2.280
Municipal Bond / Note	5,290,000.00	4,868,583.50	5,120,495.35	2.43	1577	3.250
Supranational	13,285,000.00	12,071,485.20	13,258,686.75	6.29	927	0.670
U.S. Treasury Bond / Note	56,620,000.00	53,154,556.69	56,033,968.22	26.58	1278	2.370
Subtotal	<u>189,013,451.78</u>	<u>177,919,093.70</u>	<u>188,713,471.01</u>			
Total Unrestricted Funds	<u>211,125,828.15</u>	<u>200,029,269.15</u>	<u>210,825,847.38</u>			
Restricted Funds:						
Passbook/Checking	1,414.57	1,414.57	1,414.57	0.00	1	0.000
Total Restricted Funds	<u>1,414.57</u>	<u>1,414.57</u>	<u>1,414.57</u>			
Total Portfolio	<u><u>\$ 211,127,242.72</u></u>	<u><u>\$ 200,030,683.72</u></u>	<u><u>\$ 210,827,261.95</u></u>	<u>100.00</u>	<u>876</u>	<u>2.103</u>

"THE ABOVE INVESTMENTS ARE CONSISTENT WITH THOSE PERMITTED BY CALIFORNIA GOVERNMENT CODE SECTION 53651, AND ARE IN CONFORMANCE WITH THE STATED INVESTMENT POLICY OF THE ALAMEDA COUNTY WATER DISTRICT TREASURER/AUDITOR AS SUBMITTED TO SAID DISTRICT'S BOARD OF DIRECTORS. THERE ARE SUFFICIENT FUNDS AVAILABLE IN THE LOCAL AGENCY INVESTMENT FUND AND/OR MATURING WITHIN THE NEXT SIX MONTHS TO SATISFY ALL DISTRICT BOARD APPROVED EXPENDITURES."

NOTE 1: THE SOURCES OF MARKET VALUATION FOR THE SECURITIES ARE CHANDLER ASSET MANAGEMENT AND US BANK.


 MARIANA GRAJEDA, ACCOUNTING & TREASURY MANAGER

1/21/23


 JONATHAN WUNDERLICH, DIRECTOR OF FINANCE/TREASURER

1/24/23

ALAMEDA COUNTY WATER DISTRICT
Portfolio Management
Portfolio Details - Investments
December 31, 2022

CUSIP	Investment #	Issuer	Average Balance	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Term	Days to Maturity	YTM	Maturity Date
LAIF/CAMP												
528-00	528-00	G/F-CAMP			11,703,281.75	11,703,281.75	11,703,281.75	4.300	1	1	4.300	
90-01-001-A	90-01-001-A	G/F-LAIF			114,398.79	112,197.87	114,398.79	2.069	1	1	2.069	
528-02	528-02	INSTALLERS REIMB. FD - CAMP			3,695,623.34	3,695,623.34	3,695,623.34	4.300	1	1	4.300	
Subtotal and Average			15,878,834.04		15,513,303.88	15,511,102.96	15,513,303.88		1	1	4.284	
Passbook/Checking												
237260721	237260721	G/F-JP MORGAN CUSTOMER		07/01/2022	-44,998.51	-44,998.51	-44,998.51		1	1	0.000	
237260598	237260598	G/F-JP MORGAN LOCKBOX		07/01/2022	8,124.86	8,124.86	8,124.86		1	1	0.000	
237270282	237270282	G/F-JP MORGAN CHECKING			7,305,886.78	7,305,886.78	7,305,886.78		1	1	0.000	
237270563	237270563	G/F-JP MORGAN PAYROLL		07/01/2022	-11,792.99	-11,792.99	-11,792.99		1	1	0.000	
237270381	237270381	G/F-JP MORGAN WARRANTS		07/01/2022	-956,003.49	-956,003.49	-956,003.49		1	1	0.000	
291144623	291144623	G/F-US BANK TREASURY			297,855.84	297,855.84	297,855.84		1	1	0.000	
3638259557	3638259557	INSTALLERS REIMB. FD-JPM SAV		07/01/2022	0.00	0.00	0.00		1	1	0.000	
Subtotal and Average			4,560,662.20		6,599,072.49	6,599,072.49	6,599,072.49		1	1	0.000	
Total and Average			20,439,496.23		22,112,376.37	22,110,175.45	22,112,376.37		1	1	3.005	



Alameda County Water District Consolidated - Account #10955

MONTHLY ACCOUNT STATEMENT

DECEMBER 1, 2022 THROUGH DECEMBER 31, 2022

Chandler Team:

For questions about your account, please call (800) 317-4747,
or contact operations@chandlerasset.com

Custodian

US Bank
Alexander Bazan
(503) 402-5305

CHANDLER ASSET MANAGEMENT
chandlerasset.com

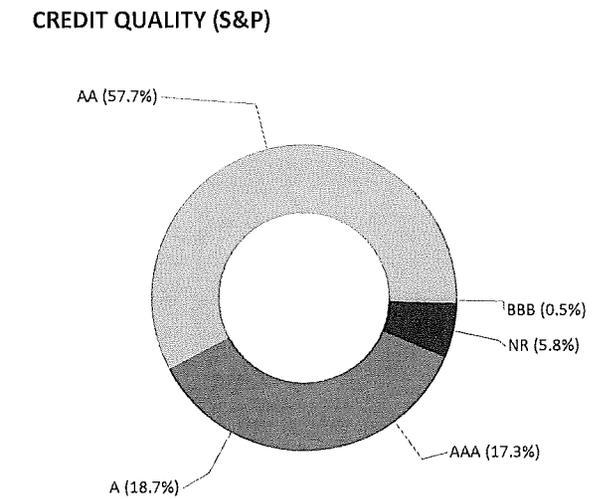
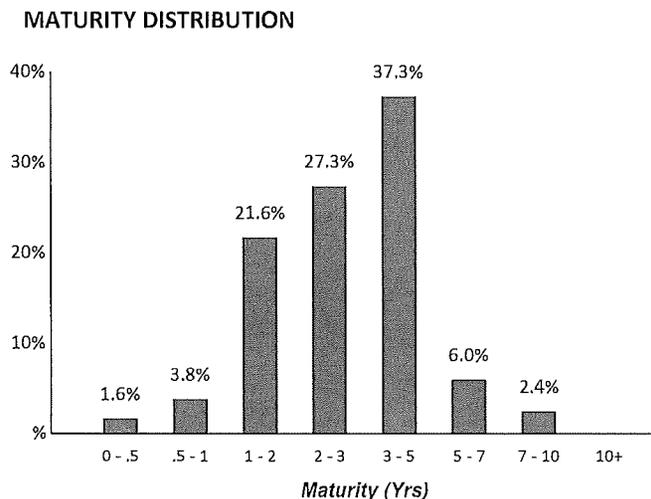
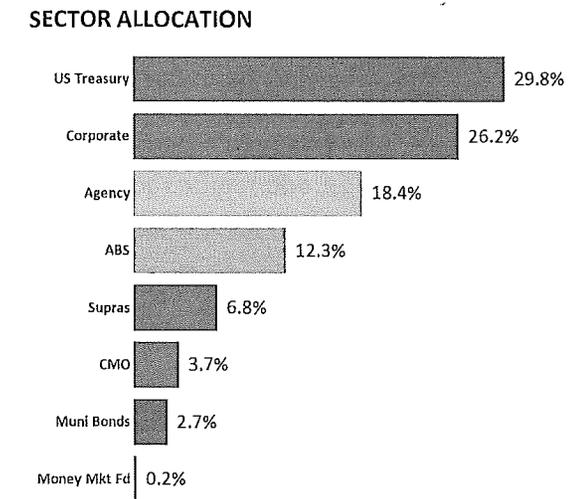
Information contained herein is confidential. We urge you to compare this statement to the one you receive from your qualified custodian. Please see Important Disclosures.



PORTFOLIO CHARACTERISTICS	
Average Modified Duration	2.68
Average Coupon	1.97%
Average Purchase YTM	2.00%
Average Market YTM	4.59%
Average S&P/Moody Rating	AA/Aa1
Average Final Maturity	3.13 yrs
Average Life	2.88 yrs

ACCOUNT SUMMARY		
	Beg. Values as of 11/30/22	End Values as of 12/31/22
Market Value	178,263,217	178,279,762
Accrued Interest	677,093	818,816
Total Market Value	178,940,310	179,098,578
Income Earned	290,889	310,352
Cont/WD		-856
Par	189,289,504	189,374,120
Book Value	188,936,762	189,074,139
Cost Value	188,936,762	189,074,139

TOP ISSUERS	
Government of United States	29.8%
Federal Home Loan Mortgage Corp	10.1%
Federal National Mortgage Assoc	8.4%
Inter-American Dev Bank	3.8%
Federal Home Loan Bank	3.5%
Intl Bank Recon and Development	2.9%
John Deere ABS	1.8%
Hyundai Auto Receivables	1.7%
Total	62.1%



PERFORMANCE REVIEW

TOTAL RATE OF RETURN	1M	3M	YTD	1YR	Annualized					6/30/2022
					2YRS	3YRS	5YRS	10YRS		
Alameda County Water District Consolidated	0.09%	1.10%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Holdings Report

As of December 31, 2022



Collateral	Security Description	Notional Value/Units	Par Date/Rate Book Value	Book Value Book Value	Market Price Yield	Market Value Accruals	Yield Basis Gain/Loss	Rating/BBB	Quality Duration
ABS									
43813RAC1	Honda Auto Receivables 2020-1 A3 1.61% Due 4/22/2024	208,107.77	02/19/2020 1.62%	208,066.99 208,066.99	99.08 5.38%	206,186.48 93.07	0.12% (1,880.51)	Aaa / NR AAA	1.31 0.24
43813RAC1	Honda Auto Receivables 2020-1 A3 1.61% Due 4/22/2024	75,958.39	02/19/2020 1.62%	75,943.50 75,943.50	99.08 5.38%	75,257.13 33.97	0.04% (686.37)	Aaa / NR AAA	1.31 0.24
44891VAC5	Hyundai Auto Lease Trust 2021-B A3 0.33% Due 6/17/2024	310,000.00	06/08/2021 0.34%	309,953.50 309,953.50	98.47 5.00%	305,270.42 45.47	0.17% (4,683.08)	Aaa / AAA NR	1.46 0.32
44891VAC5	Hyundai Auto Lease Trust 2021-B A3 0.33% Due 6/17/2024	725,000.00	06/08/2021 0.34%	724,891.25 724,891.25	98.47 5.00%	713,938.89 106.33	0.40% (10,952.36)	Aaa / AAA NR	1.46 0.32
47789KAC7	John Deere Owner Trust 2020-A A3 1.1% Due 8/15/2024	129,879.31	03/04/2020 1.11%	129,871.37 129,871.37	99.13 4.89%	128,744.61 63.50	0.07% (1,126.76)	Aaa / NR AAA	1.62 0.23
47789KAC7	John Deere Owner Trust 2020-A A3 1.1% Due 8/15/2024	53,507.77	03/04/2020 1.11%	53,504.50 53,504.50	99.13 4.89%	53,040.30 26.16	0.03% (464.20)	Aaa / NR AAA	1.62 0.23
89237VAB5	Toyota Auto Receivables Trust 2020-C A3 0.44% Due 10/15/2024	88,606.28	07/21/2020 0.44%	88,599.46 88,599.46	98.40 5.33%	87,187.99 17.33	0.05% (1,411.47)	Aaa / AAA NR	1.79 0.32
89237VAB5	Toyota Auto Receivables Trust 2020-C A3 0.44% Due 10/15/2024	210,375.06	07/21/2020 0.44%	210,358.87 210,358.87	98.40 5.33%	207,007.66 41.14	0.12% (3,351.21)	Aaa / AAA NR	1.79 0.32
43813KAC6	Honda Auto Receivables Trust 2020-3 A3 0.37% Due 10/18/2024	309,126.65	09/22/2020 0.38%	309,081.25 309,081.25	97.82 5.31%	302,372.42 41.30	0.17% (6,708.83)	NR / AAA AAA	1.80 0.44
43813KAC6	Honda Auto Receivables Trust 2020-3 A3 0.37% Due 10/18/2024	139,786.94	09/22/2020 0.38%	139,766.40 139,766.40	97.82 5.31%	136,732.68 18.68	0.08% (3,033.72)	NR / AAA AAA	1.80 0.44
89239CAC3	Toyota Lease Owner Trust 2021-B A3 0.42% Due 10/21/2024	235,000.00	07/27/2021 0.42%	234,996.83 234,996.83	97.21 5.12%	228,450.27 30.16	0.13% (6,546.56)	Aaa / NR AAA	1.81 0.59
89239CAC3	Toyota Lease Owner Trust 2021-B A3 0.42% Due 10/21/2024	555,000.00	07/27/2021 0.42%	554,992.51 554,992.51	97.21 5.12%	539,531.48 71.23	0.30% (15,461.03)	Aaa / NR AAA	1.81 0.59
47787NAC3	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	108,073.52	07/14/2020 0.52%	108,057.04 108,057.04	98.46 5.34%	106,413.26 24.50	0.06% (1,643.78)	Aaa / NR AAA	1.88 0.32
47787NAC3	John Deere Owner Trust 2020-B A3 0.51% Due 11/15/2024	45,682.89	07/14/2020 0.52%	45,675.92 45,675.92	98.46 5.34%	44,981.10 10.35	0.03% (694.82)	Aaa / NR AAA	1.88 0.32

Holdings Report

As of December 31, 2022



CLMP	Security Description	REMAINDER	Maturity Date Box Years	Cost Value Box Value	Yield W 3 YTD	Market Value Market Bid	Yield Callless	Moody/BBB Rating	Security Duration
ABS									
58769KAD6	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	250,000.00	06/22/2021 0.40%	249,981.12 249,981.12	97.12 5.30%	242,794.33 44.44	0.14% (7,186.79)	NR / AAA AAA	1.88 0.59
58769KAD6	Mercedes-Benz Auto Lease Trust 2021-B A3 0.4% Due 11/15/2024	575,000.00	06/22/2021 0.40%	574,956.59 574,956.59	97.12 5.30%	558,426.95 102.22	0.31% (16,529.64)	NR / AAA AAA	1.88 0.59
09690AAC7	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	155,938.53	09/08/2021 0.34%	155,922.44 155,922.44	97.72 5.25%	152,375.71 8.58	0.09% (3,546.73)	Aaa / NR AAA	1.99 0.46
09690AAC7	BMW Vehicle Lease Trust 2021-2 A3 0.33% Due 12/26/2024	350,861.68	09/08/2021 0.34%	350,825.47 350,825.47	97.72 5.25%	342,845.33 19.30	0.19% (7,980.14)	Aaa / NR AAA	1.99 0.46
44891WAC3	Hyundai Auto Lease Trust 2022-A A3 1.16% Due 1/15/2025	460,000.00	01/11/2022 1.16%	459,989.83 459,989.83	96.51 5.20%	443,929.67 237.16	0.25% (16,060.16)	Aaa / AAA NR	2.04 0.87
44891WAC3	Hyundai Auto Lease Trust 2022-A A3 1.16% Due 1/15/2025	200,000.00	01/11/2022 1.16%	199,995.58 199,995.58	96.51 5.20%	193,012.90 103.11	0.11% (6,982.68)	Aaa / AAA NR	2.04 0.87
89238LAC4	Toyota Lease Owner Trust 2022-A A3 1.96% Due 2/20/2025	420,000.00	02/23/2022 1.98%	419,933.89 419,933.89	96.45 5.25%	405,084.54 251.53	0.23% (14,849.35)	NR / AAA AAA	2.14 1.09
89238LAC4	Toyota Lease Owner Trust 2022-A A3 1.96% Due 2/20/2025	980,000.00	02/23/2022 1.98%	979,845.75 979,845.75	96.45 5.25%	945,197.26 586.91	0.53% (34,648.49)	NR / AAA AAA	2.14 1.09
36265MAC9	GM Financial Auto Lease Trust 2022-1 A3 1.9% Due 3/20/2025	800,000.00	02/15/2022 1.91%	799,993.12 799,993.12	96.62 5.32%	772,994.40 464.44	0.43% (26,998.72)	Aaa / NR AAA	2.22 1.00
36265MAC9	GM Financial Auto Lease Trust 2022-1 A3 1.9% Due 3/20/2025	345,000.00	02/15/2022 1.91%	344,997.03 344,997.03	96.62 5.32%	333,353.84 200.29	0.19% (11,643.19)	Aaa / NR AAA	2.22 1.00
05601XAC3	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	390,000.00	01/11/2022 1.11%	389,941.70 389,941.70	96.74 5.29%	377,301.48 71.50	0.21% (12,640.22)	NR / AAA AAA	2.23 0.78
05601XAC3	BMW Vehicle Lease Trust 2022-1 A3 1.1% Due 3/25/2025	160,000.00	01/11/2022 1.11%	159,976.08 159,976.08	96.74 5.29%	154,790.35 29.33	0.09% (5,185.73)	NR / AAA AAA	2.23 0.78
43813GAC5	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	210,372.73	02/17/2021 0.27%	210,368.88 210,368.88	96.73 6.22%	203,494.70 15.78	0.11% (6,874.18)	Aaa / NR AAA	2.31 0.55
43813GAC5	Honda Auto Receivables Trust 2021-1 A3 0.27% Due 4/21/2025	91,161.52	02/17/2021 0.27%	91,159.85 91,159.85	96.73 6.22%	88,181.04 6.84	0.05% (2,978.81)	Aaa / NR AAA	2.31 0.55

Holdings Report
As of December 31, 2022



CBKID	Security Description	Par Value/Units	Purchase Date Book Yield	Accr Value Book Value	Yield Price Yield YTM	Market Value Accrual Int	Wtd Avg Gross Basis	Moody/S&P Rating	Annual Duration
ABS									
36266FAC3	GM Financial Auto Lease Trust 2022-2 A3 3.42% Due 6/20/2025	210,000.00	05/03/2022 3.45%	209,978.10 209,978.10	97.83 5.23%	205,443.29 219.45	0.11% (4,534.81)	NR / AAA AAA	2.47 1.22
36266FAC3	GM Financial Auto Lease Trust 2022-2 A3 3.42% Due 6/20/2025	495,000.00	05/03/2022 3.45%	494,948.37 494,948.37	97.83 5.23%	484,259.19 517.28	0.27% (10,689.18)	NR / AAA AAA	2.47 1.22
47788UAC6	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	379,407.97	03/02/2021 0.37%	379,335.06 379,335.06	96.55 5.21%	366,333.57 60.71	0.20% (13,001.49)	Aaa / NR AAA	2.71 0.71
47788UAC6	John Deere Owner Trust 2021-A A3 0.36% Due 9/15/2025	161,357.41	03/02/2021 0.37%	161,326.40 161,326.40	96.55 5.21%	155,797.03 25.82	0.09% (5,529.37)	Aaa / NR AAA	2.71 0.71
44933LAC7	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	149,503.81	04/20/2021 0.38%	149,488.09 149,488.09	96.71 5.51%	144,584.24 25.25	0.08% (4,903.85)	NR / AAA AAA	2.71 0.64
44933LAC7	Hyundai Auto Receivables Trust 2021-A A3 0.38% Due 9/15/2025	359,743.54	04/20/2021 0.38%	359,705.69 359,705.69	96.71 5.51%	347,905.82 60.76	0.19% (11,799.87)	NR / AAA AAA	2.71 0.64
44934KAC8	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	1,050,000.00	07/20/2021 0.39%	1,049,768.26 1,049,768.26	95.49 5.78%	1,002,619.28 177.33	0.56% (47,148.98)	NR / AAA AAA	3.04 0.84
44934KAC8	Hyundai Auto Receivables Trust 2021-B A3 0.38% Due 1/15/2026	450,000.00	07/20/2021 0.39%	449,900.69 449,900.69	95.49 5.78%	429,693.98 76.00	0.24% (20,206.71)	NR / AAA AAA	3.04 0.84
43815GAC3	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	170,000.00	11/16/2021 0.89%	169,964.16 169,964.16	94.91 5.11%	161,339.79 41.56	0.09% (8,624.37)	Aaa / NR AAA	3.06 1.22
43815GAC3	Honda Auto Receivables Trust 2021-4 A3 0.88% Due 1/21/2026	390,000.00	11/16/2021 0.89%	389,917.79 389,917.79	94.91 5.11%	370,132.46 95.33	0.21% (19,785.33)	Aaa / NR AAA	3.06 1.22
47789QAC4	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	495,000.00	07/13/2021 0.52%	494,955.84 494,955.84	94.91 5.29%	469,793.46 114.40	0.26% (25,162.38)	Aaa / NR AAA	3.21 1.08
47789QAC4	John Deere Owner Trust 2021-B A3 0.52% Due 3/16/2026	210,000.00	07/13/2021 0.52%	209,981.27 209,981.27	94.91 5.29%	199,306.32 48.53	0.11% (10,674.95)	Aaa / NR AAA	3.21 1.08
44935FAD6	Hyundai Auto Receivables Trust 2021-C A3 0.74% Due 5/15/2026	120,000.00	11/09/2021 0.75%	119,973.22 119,973.22	94.47 5.54%	113,358.73 39.47	0.06% (6,614.49)	NR / AAA AAA	3.37 1.17

Holdings Report

As of December 31, 2022



CUSIP	Security Description	Face Value/Par	Maturity Date Book Yield	Current Value Book Value	Yield (%) (1/1/22)	Unrealized Gain/Loss Accrual	Yield (%) Gain/Loss	Moody's/AAA Rating	Quality Duration
ABS									
44935FAD6	Hyundai Auto Receivables Trust 2021-C A3 0.74% Due 5/15/2026	280,000.00	11/09/2021 0.75%	279,937.50 279,937.50	94.47 5.54%	264,503.71 92.09	0.15% (15,433.79)	NR / AAA AAA	3.37 1.17
43815BAC4	Honda Auto Receivables Trust 2022-1 A3 1.88% Due 5/15/2026	630,000.00	02/15/2022 1.89%	629,905.25 629,905.25	95.03 5.03%	598,688.63 526.40	0.33% (31,216.62)	Aaa / AAA NR	3.37 1.60
43815BAC4	Honda Auto Receivables Trust 2022-1 A3 1.88% Due 5/15/2026	270,000.00	02/15/2022 1.89%	269,959.39 269,959.39	95.03 5.03%	256,580.84 225.60	0.14% (13,378.55)	Aaa / AAA NR	3.37 1.60
05602RAD3	BMW Vehicle Owner Trust 2022-A A3 3.21% Due 8/25/2026	595,000.00	05/10/2022 3.23%	594,969.06 594,969.06	97.40 4.96%	579,553.26 318.33	0.32% (15,415.80)	Aaa / AAA NR	3.65 1.51
362554AC1	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	295,000.00	10/13/2021 0.68%	294,992.48 294,992.48	94.48 5.54%	278,719.66 83.58	0.16% (16,272.82)	Aaa / AAA NR	3.71 1.15
362554AC1	GM Financial Securitized Term 2021-4 A3 0.68% Due 9/16/2026	130,000.00	10/13/2021 0.68%	129,996.68 129,996.68	94.48 5.54%	122,825.61 36.83	0.07% (7,171.07)	Aaa / AAA NR	3.71 1.15
47787JAC2	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	165,000.00	03/10/2022 2.34%	164,963.50 164,963.50	95.91 5.12%	158,257.39 170.13	0.09% (6,706.11)	Aaa / NR AAA	3.71 1.48
47787JAC2	John Deere Owner Trust 2022-A A3 2.32% Due 9/16/2026	385,000.00	03/10/2022 2.34%	384,914.84 384,914.84	95.91 5.12%	369,267.24 396.98	0.21% (15,647.60)	Aaa / NR AAA	3.71 1.48
448977AD0	Hyundai Auto Receivables Trust 2022-A A3 2.22% Due 10/15/2026	515,000.00	03/09/2022 2.23%	514,980.17 514,980.17	95.56 5.13%	492,157.69 508.13	0.28% (22,822.48)	NR / AAA AAA	3.79 1.55
448977AD0	Hyundai Auto Receivables Trust 2022-A A3 2.22% Due 10/15/2026	220,000.00	03/09/2022 2.23%	219,991.53 219,991.53	95.56 5.13%	210,242.12 217.07	0.12% (9,749.41)	NR / AAA AAA	3.79 1.55
380146AC4	GM Financial Auto Receivables 2022-1 A3 1.26% Due 11/16/2026	110,000.00	01/11/2022 1.27%	109,990.44 109,990.44	94.55 5.35%	104,003.11 57.75	0.06% (5,987.33)	NR / AAA AAA	3.88 1.35
380146AC4	GM Financial Auto Receivables 2022-1 A3 1.26% Due 11/16/2026	255,000.00	01/11/2022 1.27%	254,977.84 254,977.84	94.55 5.35%	241,098.11 133.88	0.13% (13,879.73)	NR / AAA AAA	3.88 1.35
362585AC5	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	375,000.00	04/05/2022 3.13%	374,921.63 374,921.63	96.88 5.05%	363,302.77 484.38	0.20% (11,618.86)	Aaa / AAA NR	4.13 1.63

Holdings Report

As of December 31, 2022



Symbol	Security Description	Par Value/Units	Purchase Date Book Yield	Current Price Book Value	Market Price Yield (%)	Market Value Accrued Int.	Yield Gain/Loss	Agency/BBB Rating	Maturity Duration
ABS									
362585AC5	GM Financial Securitized ART 2022-2 A3 3.1% Due 2/16/2027	160,000.00	04/05/2022 3.13%	159,966.56 159,966.56	96.88 5.05%	155,009.18 206.67	0.09% (4,957.38)	Aaa / AAA NR	4.13 1.63
47800AAC4	John Deere Owner Trust 2022-B A3 3.74% Due 2/16/2027	525,000.00	07/12/2022 3.77%	524,949.86 524,949.86	97.70 4.93%	512,929.10 872.67	0.29% (12,020.76)	Aaa / NR AAA	4.13 1.99
02582JIT8	American Express Credit Trust 2022-2 A 3.39% Due 5/17/2027	1,540,000.00	05/17/2022 3.42%	1,539,659.35 1,539,659.35	97.14 4.72%	1,495,925.66 2,320.27	0.84% (43,733.69)	NR / AAA AAA	4.38 2.22
02582JIT8	American Express Credit Trust 2022-2 A 3.39% Due 5/17/2027	600,000.00	11/17/2022 5.02%	577,968.75 577,968.75	97.14 4.72%	582,828.18 904.00	0.33% 4,859.43	NR / AAA AAA	4.38 2.22
47800BAC2	John Deere Owner Trust 2022-C A3 5.09% Due 6/15/2027	675,000.00	10/12/2022 5.15%	674,947.62 674,947.62	100.38 4.97%	677,543.34 1,527.00	0.38% 2,595.72	Aaa / NR AAA	4.46 2.15
92348KAV5	Verizon Master Trust 2022-5 A1A 3.72% Due 7/20/2027	460,000.00	08/02/2022 3.75%	459,979.76 459,979.76	98.48 5.00%	453,023.58 522.87	0.25% (6,956.18)	NR / AAA AAA	4.55 1.54
58768PAC8	Mercedes-Benz Auto Receivables 2022-1 A3 5.21% Due 8/16/2027	1,205,000.00	11/15/2022 5.28%	1,204,761.65 1,204,761.65	100.93 4.28%	1,216,148.41 2,790.24	0.68% 11,386.76	Aaa / AAA NR	4.63 0.94
Total ABS		22,612,451.77	1.94%	22,587,623.52	5.15%	21,932,071.94 16,661.38	12.26% (655,551.58)	Aaa / AAA AAA	3.03 1.14
AGENCY									
3137EAE54	FHLMC Note 0.25% Due 6/26/2023	1,595,000.00	06/24/2020 0.35%	1,590,342.60 1,590,342.60	97.94 4.59%	1,562,071.26 55.38	0.87% (28,271.34)	Aaa / AA+ AAA	0.48 0.48
3135G05G4	FNMA Note 0.25% Due 7/10/2023	1,300,000.00	07/08/2020 0.32%	1,297,205.00 1,297,205.00	97.65 4.83%	1,269,514.45 1,543.75	0.71% (27,690.55)	Aaa / AA+ AAA	0.52 0.51
3137EAEV7	FHLMC Note 0.25% Due 8/24/2023	2,195,000.00	08/19/2020 0.28%	2,192,761.10 2,192,761.10	97.09 4.87%	2,131,089.81 1,935.87	1.19% (61,671.29)	Aaa / AA+ AAA	0.65 0.63
3137EAEY1	FHLMC Note 0.125% Due 10/16/2023	1,910,000.00	10/14/2020 0.25%	1,902,875.70 1,902,875.70	96.45 4.75%	1,842,171.18 497.40	1.03% (60,704.52)	Aaa / AA+ AAA	0.79 0.77
3135G0V34	FNMA Note 2.5% Due 2/5/2024	2,225,000.00	Various 2.59%	2,215,251.50 2,215,251.50	97.63 4.75%	2,172,270.04 22,559.03	1.23% (42,981.46)	Aaa / AA+ AAA	1.10 1.05
3130AFW94	FHLB Note 2.5% Due 2/13/2024	1,590,000.00	02/14/2019 2.58%	1,584,371.40 1,584,371.40	97.57 4.76%	1,551,400.08 15,237.50	0.87% (32,971.32)	Aaa / AA+ AAA	1.12 1.07
3130A2UW4	FHLB Note 2.875% Due 9/13/2024	1,400,000.00	10/24/2019 1.69%	1,477,602.00 1,477,602.00	97.12 4.65%	1,359,698.02 12,075.00	0.77% (117,903.98)	Aaa / AA+ AAA	1.70 1.62

Holdings Report

As of December 31, 2022



CUSIP	Security Description	Original Amount	Interest Rate Book Value	Cost Value Book Value	Yield Price (Yield/Price)	Market Value Acquisition	Yield Rate Cash/Price	Moody/S&P Rating	Maturity Duration
AGENCY									
3130A2UW4	FHLB Note 2.875% Due 9/13/2024	600,000.00	10/24/2019 1.69%	633,258.00 633,258.00	97.12 4.65%	582,727.72 5,175.00	0.33% (50,530.28)	Aaa / AA+ AAA	1.70 1.62
3135G0W66	FNMA Note 1.625% Due 10/15/2024	600,000.00	11/08/2019 1.80%	595,020.00 595,020.00	95.05 4.54%	570,281.26 2,058.33	0.32% (24,738.74)	Aaa / AA+ AAA	1.79 1.72
3135G0W66	FNMA Note 1.625% Due 10/15/2024	1,400,000.00	11/08/2019 1.80%	1,388,380.00 1,388,380.00	95.05 4.54%	1,330,656.28 4,802.78	0.75% (57,723.72)	Aaa / AA+ AAA	1.79 1.72
3130A3GE8	FHLB Note 2.75% Due 12/13/2024	1,400,000.00	02/06/2020 1.54%	1,478,764.00 1,478,764.00	96.86 4.45%	1,356,026.73 1,925.00	0.76% (122,737.27)	Aaa / AA+ NR	1.95 1.87
3130A3GE8	FHLB Note 2.75% Due 12/13/2024	600,000.00	02/06/2020 1.54%	633,756.00 633,756.00	96.86 4.45%	581,154.31 825.00	0.32% (52,601.69)	Aaa / AA+ NR	1.95 1.87
3135G0X24	FNMA Note 1.625% Due 1/7/2025	600,000.00	01/08/2020 1.69%	598,086.00 598,086.00	94.54 4.48%	567,263.90 4,712.50	0.32% (30,822.10)	Aaa / AA+ AAA	2.02 1.93
3135G0X24	FNMA Note 1.625% Due 1/7/2025	1,415,000.00	01/08/2020 1.69%	1,410,486.15 1,410,486.15	94.54 4.48%	1,337,797.36 11,113.65	0.75% (72,688.79)	Aaa / AA+ AAA	2.02 1.93
3137EAEPO	FHLMC Note 1.5% Due 2/12/2025	900,000.00	02/13/2020 1.52%	899,307.00 899,307.00	94.29 4.35%	848,644.41 5,212.50	0.48% (50,662.59)	Aaa / AA+ AAA	2.12 2.03
3137EAEPO	FHLMC Note 1.5% Due 2/12/2025	2,100,000.00	Various 1.15%	2,134,857.30 2,134,857.30	94.29 4.35%	1,980,170.28 12,162.51	1.11% (154,687.02)	Aaa / AA+ AAA	2.12 2.03
3135G03U5	FNMA Note 0.625% Due 4/22/2025	1,010,000.00	04/22/2020 0.67%	1,007,919.40 1,007,919.40	91.94 4.33%	928,643.86 1,209.90	0.52% (79,275.54)	Aaa / AA+ AAA	2.31 2.24
3135G03U5	FNMA Note 0.625% Due 4/22/2025	430,000.00	04/22/2020 0.67%	429,114.20 429,114.20	91.94 4.33%	395,363.23 515.10	0.22% (33,750.97)	Aaa / AA+ AAA	2.31 2.24
3135G04Z3	FNMA Note 0.5% Due 6/17/2025	800,000.00	06/17/2020 0.54%	798,344.00 798,344.00	91.07 4.37%	728,521.08 155.56	0.41% (69,822.92)	Aaa / AA+ AAA	2.46 2.40
3135G04Z3	FNMA Note 0.5% Due 6/17/2025	1,850,000.00	06/17/2020 0.54%	1,846,170.50 1,846,170.50	91.07 4.37%	1,684,705.00 359.72	0.94% (161,465.50)	Aaa / AA+ AAA	2.46 2.40
3137EAEU9	FHLMC Note 0.375% Due 7/21/2025	965,000.00	07/21/2020 0.48%	960,194.30 960,194.30	90.57 4.31%	874,020.66 1,608.33	0.49% (86,173.64)	Aaa / AA+ AAA	2.56 2.49
3137EAEU9	FHLMC Note 0.375% Due 7/21/2025	415,000.00	07/21/2020 0.48%	412,933.30 412,933.30	90.57 4.31%	375,874.17 691.67	0.21% (37,059.13)	Aaa / AA+ AAA	2.56 2.49
3135G05X7	FNMA Note 0.375% Due 8/25/2025	1,530,000.00	08/25/2020 0.47%	1,522,839.60 1,522,839.60	90.27 4.30%	1,381,103.70 2,008.13	0.77% (141,735.90)	Aaa / AA+ AAA	2.65 2.58



CUA#	Security Description	Par Value/Unit	Maturity Date Basic Yield	Book Value Book Value	WY/YTD WY/YTD	Market Value Amortized	% of Par Gain/Loss	Moody/S&P Ratg	Quality Duration
AGENCY									
3135G05X7	FNMA Note 0.375% Due 8/25/2025	650,000.00	08/25/2020 0.47%	646,958.00 646,958.00	90.27 4.30%	586,743.40 853.13	0.33% (60,214.60)	Aaa / AA+ AAA	2.65 2.58
3137EAEX3	FHLMC Note 0.375% Due 9/23/2025	1,490,000.00	09/23/2020 0.44%	1,485,515.10 1,485,515.10	90.07 4.27%	1,342,042.60 1,521.04	0.75% (143,472.50)	Aaa / AA+ AAA	2.73 2.66
3137EAEX3	FHLMC Note 0.375% Due 9/23/2025	635,000.00	09/23/2020 0.44%	633,088.65 633,088.65	90.07 4.27%	571,944.33 648.23	0.32% (61,144.32)	Aaa / AA+ AAA	2.73 2.66
3135G06G3	FNMA Note 0.5% Due 11/7/2025	1,615,000.00	11/09/2020 0.57%	1,609,218.30 1,609,218.30	90.01 4.26%	1,453,672.84 1,211.25	0.81% (155,545.46)	Aaa / AA+ AAA	2.85 2.77
3135G06G3	FNMA Note 0.5% Due 11/7/2025	700,000.00	11/09/2020 0.57%	697,494.00 697,494.00	90.01 4.26%	630,074.91 525.00	0.35% (67,419.09)	Aaa / AA+ AAA	2.85 2.77
3130AFFX0	FHLB Note 3.25% Due 11/16/2028	850,000.00	08/10/2022 2.88%	867,943.50 867,943.50	96.23 3.98%	817,953.41 3,453.13	0.46% (49,990.09)	Aaa / AA+ AAA	5.88 5.26
Total Agency		34,770,000.00	1.10%	34,950,056.60	4.50%	32,813,600.28 116,651.39	18.39% (2,136,456.32)	Aaa / AA+ AAA	1.89 1.82
CMO									
3137FKK39	FHLMC KPO5 A 3.203% Due 7/25/2023	0.01	12/07/2018 3.13%	0.01 0.01	100.00 10.04%	0.01 0.00	0.00% 0.00	NR / NR NR	0.56 0.30
3137BFE98	FHLMC K041 A2 3.171% Due 10/25/2024	1,050,000.00	07/01/2021 0.72%	1,129,488.28 1,129,488.28	96.89 4.99%	1,017,357.92 2,774.63	0.57% (112,130.36)	Aaa / AAA AAA	1.82 1.63
3137BFE98	FHLMC K041 A2 3.171% Due 10/25/2024	450,000.00	07/01/2021 0.72%	484,066.41 484,066.41	96.89 4.99%	436,010.54 1,189.13	0.24% (48,055.87)	Aaa / AAA AAA	1.82 1.63
3137FBU79	FHLMC K069 A2 3.187% Due 9/25/2027	500,000.00	09/16/2022 4.28%	481,875.00 481,875.00	94.81 4.43%	474,067.76 1,327.92	0.27% (7,807.24)	NR / AAA NR	4.74 4.18
3137FCJK1	FHLMC K070 A2 3.303% Due 11/25/2027	600,000.00	10/13/2022 4.71%	563,320.31 563,320.31	95.22 4.40%	571,323.42 1,651.50	0.32% 8,003.11	Aaa / NR NR	4.90 4.32
3137FKZZ2	FHLMC K088 A2 3.69% Due 1/25/2029	500,000.00	07/08/2022 3.57%	502,871.09 502,871.09	96.32 4.38%	481,596.20 1,537.50	0.27% (21,274.89)	Aaa / NR NR	6.07 5.25
3137FLMV3	FHLMC K090 A2 3.422% Due 2/25/2029	1,000,000.00	10/21/2022 4.92%	919,531.25 919,531.25	94.46 4.46%	944,569.80 2,851.67	0.53% 25,038.55	NR / AAA NR	6.16 5.36
3137FLN91	FHLMC K091 A2 3.505% Due 3/25/2029	500,000.00	06/03/2022 3.28%	503,046.88 503,046.88	94.88 4.46%	474,389.45 292.08	0.27% (28,657.43)	NR / NR NR	6.24 5.37

Holdings Report

As of December 31, 2022



CUSIP	Security Description	Par Value/Units	Maturity Date: Yield (%)	Carrying Balance	IMR (%) Yield (%)	Market Value Adjusted	Yield (%) Gain/Loss	Moody/S&P Rating	Monthly Dividend
CMO									
3137FLYV0	FHLMC K092 A2 3.298% Due 4/25/2029	500,000.00	05/24/2022 3.12%	504,824.22 504,824.22	93.64 4.47%	468,196.20 1,374.17	0.26% (36,628.02)	NR / NR AAA	6.32 5.50
3137FQ3A9	FHLMC K100 A2 2.673% Due 9/25/2029	500,000.00	05/23/2022 3.64%	482,460.94 482,460.94	89.69 4.47%	448,456.20 222.75	0.25% (34,004.74)	NR / NR AAA	6.74 5.96
3137H9D71	FHLMC K750 A2 3% Due 9/25/2029	385,000.00	10/26/2022 4.84%	345,671.09 345,671.09	91.58 4.54%	352,601.10 962.50	0.20% 6,930.01	NR / NR AAA	6.74 5.62
3137H73P6	FHLMC K142 A2 2.4% Due 3/25/2032	500,000.00	05/25/2022 3.27%	464,140.63 464,140.63	84.54 4.49%	422,675.25 1,000.00	0.24% (41,465.38)	Aaa / NR NR	9.24 7.92
3137H8BK6	FHLMC K147 A2 3% Due 6/25/2032	500,000.00	11/15/2022 4.57%	440,351.56 440,351.56	88.77 4.48%	443,868.60 1,250.00	0.25% 3,517.04	NR / NR AAA	9.49 7.95
Total CMO		6,985,000.01	3.28%	6,821,647.67 6,821,647.67	4.57%	6,535,112.45 16,433.85	3.66% (286,535.22)	Aaa / AAA AAA	5.49 4.75
CORPORATE									
023135AW6	Amazon.com Inc Callable Note Cont 1/22/2023 2.4% Due 2/22/2023	993,000.00	05/23/2019 2.69%	982,851.54 982,851.54	99.67 4.67%	989,770.89 8,539.80	0.56% 6,919.35	A1 / AA AA-	0.15 0.14
06051GFB0	Bank of America Corp Note 4.125% Due 1/22/2024	420,000.00	07/17/2019 2.60%	447,153.00 447,153.00	99.13 4.97%	416,352.74 7,651.88	0.24% (30,800.26)	A2 / A- AA-	1.06 1.00
06051GHF9	Bank of America Corp Callable Note 1X 3/5/2023 3.55% Due 3/5/2024	700,000.00	11/25/2019 3.06%	727,433.00 727,433.00	99.64 5.47%	697,505.99 8,007.22	0.39% (29,927.01)	A2 / A- AA-	1.18 0.18
58933YAU9	Merck & Co Callable Note Cont 2/7/2024 2.9% Due 3/7/2024	470,000.00	03/07/2019 2.90%	470,108.10 470,108.10	97.86 4.78%	459,934.59 4,316.17	0.26% (10,173.51)	A1 / A+ NR	1.18 1.13
717081ES8	Pfizer Inc. Callable Note Cont 2/15/2024 2.95% Due 3/15/2024	535,000.00	03/19/2019 2.84%	537,798.05 537,798.05	97.79 4.85%	523,184.21 4,647.07	0.29% (14,613.84)	A1 / A+ A	1.21 1.16
808513BN4	Charles Schwab Corp Callable Note Cont 2/18/2024 0.75% Due 3/18/2024	525,000.00	03/16/2021 0.77%	524,737.50 524,737.50	95.07 4.99%	499,107.01 1,126.56	0.28% (25,630.49)	A2 / A A	1.21 1.18
808513BN4	Charles Schwab Corp Callable Note Cont 2/18/2024 0.75% Due 3/18/2024	220,000.00	03/16/2021 0.77%	219,890.00 219,890.00	95.07 4.99%	209,149.60 472.08	0.12% (10,740.40)	A2 / A A	1.21 1.18

Holdings Report
As of December 31, 2022



CLASH	Security Description	Par Value/Units	Purchase Date Book Yield	Cost Value Book Value	MARKET YIELD	Market Value Accrued Int.	% of Port. Gain/Loss	Moody/S&P Rating	Maturity Duration
CORPORATE									
57636QAB0	MasterCard Inc Note 3.375% Due 4/1/2024	455,000.00	04/02/2019 2.70%	469,296.10 469,296.10	98.20 4.88%	446,793.47 3,839.06	0.25% (22,502.63)	Aa3 / A+ NR	1.25 1.20
037833CU2	Apple Inc Callable Note Cont 3/11/2024 2.85% Due 5/11/2024	700,000.00	03/24/2021 0.69%	746,627.00 746,627.00	97.39 4.85%	681,754.60 2,770.83	0.38% (64,872.40)	Aaa / AA+ NR	1.36 1.31
023135BW5	Amazon.com Inc Note 0.45% Due 5/12/2024	955,000.00	05/10/2021 0.50%	953,605.70 953,605.70	94.22 4.88%	899,846.79 584.94	0.50% (53,758.91)	A1 / AA AA-	1.36 1.33
023135BW5	Amazon.com Inc Note 0.45% Due 5/12/2024	400,000.00	05/10/2021 0.50%	399,416.00 399,416.00	94.22 4.88%	376,899.18 245.00	0.21% (22,516.82)	A1 / AA AA-	1.36 1.33
46625HJX9	JP Morgan Chase Note 3.625% Due 5/13/2024	630,000.00	07/08/2019 2.51%	661,764.60 661,764.60	98.31 4.92%	619,349.88 3,045.00	0.35% (42,414.72)	A1 / A- AA-	1.37 1.31
79466LAG9	Salesforce.com Inc Callable Note Cont 7/15/2022 0.625% Due 7/15/2024	240,000.00	06/29/2021 0.64%	239,877.60 239,877.60	93.84 4.83%	225,218.15 691.67	0.13% (14,659.45)	A2 / A+ NR	1.54 1.49
79466LAG9	Salesforce.com Inc Callable Note Cont 7/15/2022 0.625% Due 7/15/2024	100,000.00	06/29/2021 0.64%	99,949.00 99,949.00	93.84 4.83%	93,840.90 288.19	0.05% (6,108.10)	A2 / A+ NR	1.54 1.49
78013XZU5	Royal Bank of Canada Note 2.55% Due 7/16/2024	600,000.00	10/24/2019 2.24%	608,322.00 608,322.00	96.41 4.99%	578,488.47 7,012.50	0.33% (29,833.53)	A1 / A AA-	1.54 1.47
78013XZU5	Royal Bank of Canada Note 2.55% Due 7/16/2024	400,000.00	10/24/2019 2.24%	405,548.00 405,548.00	96.41 4.99%	385,658.98 4,675.00	0.22% (19,889.02)	A1 / A AA-	1.54 1.47
91159HHX1	US Bancorp Callable Note Cont 6/28/2024 2.4% Due 7/30/2024	480,000.00	07/30/2019 2.42%	479,616.00 479,616.00	96.17 4.94%	461,639.65 4,832.00	0.26% (17,976.35)	A2 / A+ A+	1.58 1.51
91159HHX1	US Bancorp Callable Note Cont 6/28/2024 2.4% Due 7/30/2024	205,000.00	07/30/2019 2.42%	204,836.00 204,836.00	96.17 4.94%	197,158.60 2,063.67	0.11% (7,677.40)	A2 / A+ A+	1.58 1.51
02665WEA5	American Honda Finance Note 1.5% Due 1/13/2025	310,000.00	01/11/2022 1.53%	309,755.10 309,755.10	93.57 4.86%	290,072.45 2,170.00	0.16% (19,682.65)	A3 / A- A	2.04 1.95
02665WEA5	American Honda Finance Note 1.5% Due 1/13/2025	730,000.00	01/11/2022 1.53%	729,423.30 729,423.30	93.57 4.86%	683,073.83 5,110.00	0.38% (46,349.47)	A3 / A- A	2.04 1.95
90331HPL1	US Bank NA Callable Note Cont 12/21/2024 2.05% Due 1/21/2025	1,415,000.00	01/16/2020 2.10%	1,411,986.05 1,411,986.05	94.76 4.75%	1,340,867.10 12,892.22	0.76% (71,118.95)	A1 / AA- AA-	2.06 1.96

Holdings Report

As of December 31, 2022



CUSIP	Security Description	Face Value/Price	Maturity Date Yield	Book Value Bid/Ask	IMR Price Yield	Market Value Accruals	Gain/Loss	Moody/SEP Rating	Monthly Duration
CORPORATE									
90331HPL1	US Bank NA Callable Note Cont 12/21/2024 2.05% Due 1/21/2025	605,000.00	01/16/2020 2.10%	603,711.35 603,711.35	94.76 4.75%	573,303.60 5,512.22	0.32% (30,407.75)	A1 / AA- AA-	2.06 1.96
46647PAH9	JP Morgan Chase & Co Callable Note 2X 3/1/2024 3.22% Due 3/1/2025	375,000.00	09/21/2020 1.94%	404,925.00 404,925.00	97.18 5.73%	364,441.21 4,025.00	0.21% (40,483.79)	A1 / A- AA-	2.17 1.11
46647PAH9	JP Morgan Chase & Co Callable Note 2X 3/1/2024 3.22% Due 3/1/2025	875,000.00	09/21/2020 1.94%	944,825.00 944,825.00	97.18 5.73%	850,362.83 9,391.67	0.48% (94,462.17)	A1 / A- AA-	2.17 1.11
00440EAS6	Chubb INA Holdings Inc Note 3.15% Due 3/15/2025	600,000.00	05/28/2020 1.21%	654,024.00 654,024.00	96.63 4.78%	579,776.84 5,565.00	0.33% (74,247.16)	A3 / A A	2.21 2.08
00440EAS6	Chubb INA Holdings Inc Note 3.15% Due 3/15/2025	1,400,000.00	Various 0.99%	1,534,277.85 1,534,277.85	96.63 4.78%	1,352,812.62 12,985.01	0.76% (181,465.23)	A3 / A A	2.21 2.08
14913R2V8	Caterpillar Financial Service Note 3.4% Due 5/13/2025	570,000.00	05/10/2022 3.44%	569,276.10 569,276.10	97.29 4.62%	554,540.66 2,584.00	0.31% (14,735.44)	A2 / A A	2.37 2.23
14913R2V8	Caterpillar Financial Service Note 3.4% Due 5/13/2025	240,000.00	05/10/2022 3.44%	239,695.20 239,695.20	97.29 4.62%	233,490.80 1,088.00	0.13% (6,204.40)	A2 / A A	2.37 2.23
747525AF0	Qualcomm Inc Callable Note Cont 2/20/2025 3.45% Due 5/20/2025	1,400,000.00	09/21/2020 0.80%	1,569,498.00 1,569,498.00	97.42 4.60%	1,363,819.34 5,500.83	0.76% (205,678.66)	A2 / A NR	2.39 2.25
747525AF0	Qualcomm Inc Callable Note Cont 2/20/2025 3.45% Due 5/20/2025	600,000.00	09/21/2020 0.80%	672,642.00 672,642.00	97.42 4.60%	584,494.00 2,357.50	0.33% (88,148.00)	A2 / A NR	2.39 2.25
61747YEA9	Morgan Stanley Callable Note Cont 5/30/2024 0.79% Due 5/30/2025	665,000.00	05/26/2021 1.79%	665,000.00 665,000.00	93.18 5.28%	619,625.89 452.38	0.35% (45,374.11)	A1 / A- A+	2.41 2.32
61747YEA9	Morgan Stanley Callable Note Cont 5/30/2024 0.79% Due 5/30/2025	1,555,000.00	05/26/2021 1.77%	1,556,180.40 1,556,180.40	93.18 5.28%	1,448,899.65 1,057.82	0.81% (107,280.75)	A1 / A- A+	2.41 2.32
438516CB0	Honeywell Intl Callable Note Cont 5/1/2025 1.35% Due 6/1/2025	1,400,000.00	06/23/2020 0.86%	1,433,320.00 1,433,320.00	92.53 4.65%	1,295,373.63 1,575.00	0.72% (137,946.37)	A2 / A A	2.42 2.33
438516CB0	Honeywell Intl Callable Note Cont 5/1/2025 1.35% Due 6/1/2025	600,000.00	06/23/2020 0.86%	614,280.00 614,280.00	92.53 4.65%	555,160.13 675.00	0.31% (59,119.87)	A2 / A A	2.42 2.33

Holdings Report

As of December 31, 2022



CUSIP	Security Description	Par Value/Units	Par Date Entry Date	Cost Value Book Value	Yield % (YR-TD)	Market Value Market Price	Yield % (SA-Plus)	Moody/BBB+	High	Duration
CORPORATE										
78015K7H1	Royal Bank of Canada Note 1.15% Due 6/10/2025	300,000.00	02/22/2021 0.86%	303,672.00 303,672.00	91.61 4.84%	274,820.78 201.25	0.15% (28,851.22)	A1 / A AA-		2.44 2.35
78015K7H1	Royal Bank of Canada Note 1.15% Due 6/10/2025	700,000.00	02/22/2021 0.86%	708,568.00 708,568.00	91.61 4.84%	641,248.48 469.58	0.36% (67,319.52)	A1 / A AA-		2.44 2.35
66815L2J7	Northwestern Mutual Gbl Note 4% Due 7/1/2025	1,220,000.00	06/27/2022 4.01%	1,219,585.20 1,219,585.20	98.11 4.81%	1,196,951.38 24,400.00	0.68% (22,633.82)	Aaa / AA+ AAA		2.50 2.30
02665WDL2	American Honda Finance Note 1.2% Due 7/8/2025	150,000.00	08/10/2021 1.00%	151,146.00 151,146.00	91.51 4.82%	137,271.90 865.00	0.08% (13,874.10)	A3 / A- A		2.52 2.41
02665WDL2	American Honda Finance Note 1.2% Due 7/8/2025	350,000.00	08/10/2021 1.00%	352,674.00 352,674.00	91.51 4.82%	320,301.11 2,018.33	0.18% (32,372.89)	A3 / A- A		2.52 2.41
89114QCK2	Toronto Dominion Bank Note 0.75% Due 9/11/2025	1,505,000.00	09/15/2020 0.80%	1,501,041.85 1,501,041.85	89.34 5.03%	1,344,568.57 3,448.96	0.75% (156,473.28)	A1 / A AA-		2.70 2.60
89114QCK2	Toronto Dominion Bank Note 0.75% Due 9/11/2025	645,000.00	09/15/2020 0.80%	643,303.65 643,303.65	89.34 5.03%	576,243.67 1,478.13	0.32% (67,059.98)	A1 / A AA-		2.70 2.60
46647PCZ7	JP Morgan Chase & Co Callable Note Cont 4/26/2025 4.08% Due 4/26/2026	400,000.00	10/14/2022 5.95%	382,012.00 382,012.00	97.28 5.31%	389,102.81 2,946.67	0.22% 7,090.81	A1 / A- AA-		3.32 2.96
91324PEC2	United Health Group Inc Callable Note Cont 4/15/2026 1.15% Due 5/15/2026	130,000.00	06/14/2021 1.08%	130,432.90 130,432.90	89.43 4.57%	116,263.15 191.03	0.07% (14,169.75)	A3 / A+ A		3.37 3.23
91324PEC2	United Health Group Inc Callable Note Cont 4/15/2026 1.15% Due 5/15/2026	310,000.00	Various 1.08%	310,990.30 310,990.30	89.43 4.57%	277,242.90 455.53	0.16% (33,747.40)	A3 / A+ A		3.37 3.23
89236TJK2	Toyota Motor Credit Corp Note 1.125% Due 6/18/2026	1,270,000.00	06/15/2021 1.13%	1,269,441.20 1,269,441.20	88.46 4.78%	1,123,499.77 515.94	0.63% (145,941.43)	A1 / A+ A+		3.47 3.32
89236TJK2	Toyota Motor Credit Corp Note 1.125% Due 6/18/2026	540,000.00	06/15/2021 1.13%	539,762.40 539,762.40	88.46 4.78%	477,708.56 219.38	0.27% (62,053.84)	A1 / A+ A+		3.47 3.32
61747YET8	Morgan Stanley Callable Note Cont 7/17/2025 4.679% Due 7/17/2026	300,000.00	11/16/2022 5.58%	294,693.00 294,693.00	98.37 5.37%	295,095.10 6,277.66	0.17% 402.10	A1 / A- A+		3.55 2.32
06051GLA5	Bank of America Corp Callable Note Cont 7/22/2025 4.827% Due 7/22/2026	300,000.00	11/16/2022 5.59%	295,854.00 295,854.00	98.81 5.32%	296,434.48 6,395.78	0.17% 580.48	A2 / A- AA-		3.56 2.33

Holdings Report

As of December 31, 2022



CUSIP	Security Description	Par Value / Maturity	Par Date / Due Date	Current Yield / Book Yield	Current Value / Book Value	Yield to Maturity (YTM) / Effective Yield	Market Value / Adjusted Value	Weighted Avg. Coupon	Moody's / S&P Rating	Duration
CORPORATE										
58989V2D5	Met Tower Global Funding Note 1.25% Due 9/14/2026	655,000.00	09/07/2021 1.27%	654,397.40 654,397.40	87.00 5.15%	569,856.55 2,433.51	0.32% (84,540.85)	Aa3 / AA- AA-	3.71 3.52	
58989V2D5	Met Tower Global Funding Note 1.25% Due 9/14/2026	280,000.00	09/07/2021 1.27%	279,742.40 279,742.40	87.00 5.15%	243,602.80 1,040.28	0.14% (36,139.60)	Aa3 / AA- AA-	3.71 3.52	
06368FAC3	Bank of Montreal Note 1.25% Due 9/15/2026	600,000.00	09/10/2021 1.29%	598,752.00 598,752.00	87.49 4.99%	524,948.97 2,208.33	0.29% (73,803.03)	A2 / A- AA-	3.71 3.52	
06368FAC3	Bank of Montreal Note 1.25% Due 9/15/2026	1,400,000.00	Various 1.28%	1,397,675.25 1,397,675.25	87.49 4.99%	1,224,880.93 5,152.78	0.69% (172,794.32)	A2 / A- AA-	3.71 3.52	
931142ERO	Wal-Mart Stores Callable Note Cont 08/17/2026 1.05% Due 9/17/2026	300,000.00	09/08/2021 1.09%	299,433.00 299,433.00	88.67 4.39%	265,996.67 910.00	0.15% (33,436.33)	Aa2 / AA AA	3.72 3.55	
931142ERO	Wal-Mart Stores Callable Note Cont 08/17/2026 1.05% Due 9/17/2026	125,000.00	09/08/2021 1.09%	124,763.75 124,763.75	88.67 4.39%	110,831.95 379.17	0.06% (13,931.80)	Aa2 / AA AA	3.72 3.55	
74340XBK6	Prologis LP Callable Note Cont 7/1/2026 3.25% Due 10/1/2026	600,000.00	11/15/2022 4.73%	568,914.00 568,914.00	94.00 5.02%	564,017.29 4,875.00	0.32% (4,896.71)	A3 / A NR	3.75 3.44	
06051GJK6	Bank of America Corp Callable Note Cont 10/24/2025 1.197% Due 10/24/2026	300,000.00	12/15/2021 2.52%	293,229.00 293,229.00	88.94 5.34%	266,832.95 668.33	0.15% (26,396.05)	A2 / A- AA-	3.82 3.62	
06051GJK6	Bank of America Corp Callable Note Cont 10/24/2025 1.197% Due 10/24/2026	700,000.00	12/15/2021 2.52%	684,201.00 684,201.00	88.94 5.34%	622,610.22 1,559.43	0.35% (61,590.78)	A2 / A- AA-	3.82 3.62	
59217GER6	Metlife Note 1.875% Due 1/11/2027	950,000.00	01/03/2022 1.90%	948,917.00 948,917.00	88.58 5.04%	841,522.71 8,411.46	0.47% (107,394.29)	Aa3 / AA- AA-	4.03 3.76	
59217GER6	Metlife Note 1.875% Due 1/11/2027	400,000.00	01/03/2022 1.90%	399,544.00 399,544.00	88.58 5.04%	354,325.35 3,541.67	0.20% (45,218.65)	Aa3 / AA- AA-	4.03 3.76	
26444HAC5	Duke Energy Florida LLC Callable Note Cont 10/15/2026 3.2% Due 1/15/2027	598,000.00	Various 4.36%	570,806.76 570,806.76	94.62 4.68%	565,805.04 8,823.83	0.32% (5,001.72)	A1 / A NR	4.04 3.67	
46647PBA3	JP Morgan Chase & Co Callable Note 1/29/2026 3.96% Due 1/29/2027	270,000.00	07/20/2022 4.96%	263,979.00 263,979.00	95.43 5.59%	257,648.87 4,514.40	0.15% (6,330.13)	A1 / A- AA-	4.08 2.80	
808513BY0	Charles Schwab Corp Callable Note Cont 2/3/2027 2.45% Due 3/3/2027	160,000.00	03/01/2022 2.47%	159,827.20 159,827.20	91.31 4.77%	146,102.94 1,284.89	0.08% (13,724.26)	A2 / A A	4.17 3.86	

Holdings Report

As of December 31, 2022



CUSIP	Security Description	Par Value/Units	Purchase Date Book Yield	Current Value Book Value	Market Price Market Yield	Market Value Accrued Int.	% of Port Gain/Loss	Rating/BBB Risk	Maturity Duration
CORPORATE									
808513BY0	Charles Schwab Corp Callable Note Cont 2/3/2027 2.45% Due 3/3/2027	370,000.00	03/01/2022 2.47%	369,600.40 369,600.40	91.31 4.77%	337,863.06 2,971.31	0.19% (31,737.34)	A2 / A A	4.17 3.86
084664CZ2	Berkshire Hathaway Callable Note Cont 2/15/2027 2.3% Due 3/15/2027	470,000.00	03/07/2022 2.30%	469,910.70 469,910.70	92.41 4.29%	434,316.65 3,182.94	0.24% (35,594.05)	Aa2 / AA A+	4.21 3.91
084664CZ2	Berkshire Hathaway Callable Note Cont 2/15/2027 2.3% Due 3/15/2027	1,100,000.00	03/07/2022 2.30%	1,099,791.00 1,099,791.00	92.41 4.29%	1,016,485.78 7,449.44	0.57% (83,305.22)	Aa2 / AA A+	4.21 3.91
40139LBF9	Guardian Life Glob Fun Note 3.246% Due 3/29/2027	155,000.00	03/24/2022 3.25%	155,000.00 155,000.00	93.71 4.91%	145,244.91 1,285.78	0.08% (9,755.09)	Aa1 / AA+ NR	4.24 3.86
40139LBF9	Guardian Life Glob Fun Note 3.246% Due 3/29/2027	870,000.00	Various 3.70%	852,750.00 852,750.00	93.71 4.91%	815,245.62 7,216.94	0.46% (37,504.38)	Aa1 / AA+ NR	4.24 3.86
64952WEQ2	New York Life Global Note 3.25% Due 4/7/2027	350,000.00	05/25/2022 3.50%	346,062.50 346,062.50	94.17 4.77%	329,605.23 2,654.17	0.19% (16,457.27)	Aaa / AA+ AAA	4.27 3.89
06051GHT9	Bank of America Corp Callable Note 1X 4/23/2026 3.559% Due 4/23/2027	575,000.00	Various 4.83%	555,370.95 555,370.95	93.80 5.63%	539,362.57 3,865.47	0.30% (16,008.38)	A2 / A- AA-	4.31 3.04
927804GH1	Virginia Electric Power Corp Callable Note Cont. 4/15/2027 3.75% Due 5/15/2027	1,000,000.00	Various 3.72%	1,001,475.40 1,001,475.40	95.48 4.91%	954,777.35 4,791.67	0.54% (46,698.05)	A2 / BBB+ A	4.37 3.95
91324PEG3	United Health Group Inc Callable Note Cont 4/15/2027 3.7% Due 5/15/2027	350,000.00	05/25/2022 3.47%	353,696.00 353,696.00	96.84 4.50%	338,927.24 1,654.72	0.19% (14,768.76)	A3 / A+ A	4.37 3.96
91324PEG3	United Health Group Inc Callable Note Cont 4/15/2027 3.7% Due 5/15/2027	1,000,000.00	08/17/2022 3.58%	1,005,340.00 1,005,340.00	96.84 4.50%	968,363.53 4,727.78	0.54% (36,976.47)	A3 / A+ A	4.37 3.96
22160KAM7	Costco Wholesale Corp Callable Note Cont 2/18/2027 3% Due 5/18/2027	475,000.00	07/26/2022 3.28%	469,219.25 469,219.25	94.18 4.48%	447,347.58 1,702.08	0.25% (21,871.67)	Aa3 / A+ NR	4.38 4.02
89115A2C5	Toronto-Dominion Bank Note 4.108% Due 6/8/2027	300,000.00	06/01/2022 4.09%	300,297.00 300,297.00	96.62 4.97%	289,845.44 787.37	0.16% (10,451.56)	A1 / A NR	4.44 3.98
61747YEC5	Morgan Stanley Callable Note Cont 7/20/2026 1.512% Due 7/20/2027	250,000.00	08/15/2022 4.41%	225,837.50 225,837.50	86.89 5.45%	217,218.96 1,690.50	0.12% (8,618.54)	A1 / A- A+	4.55 4.25

Holdings Report

As of December 31, 2022



CUSIP	Security Description	Par Value (Face)	Purchase Date (Book Yield)	Cost Value (Book Value)	Yield Price (MR. YTM)	Market Value (Market)	Total Pct. Gain/Loss	Moody/S&P Rating	Monthly Dividend
CORPORATE									
14913R3A3	Caterpillar Financial Service Note 3.6% Due 8/12/2027	500,000.00	08/19/2022 3.73%	496,980.00 496,980.00	95.57 4.68%	477,836.24 6,950.00	0.27% (19,143.76)	A2 / A A	4.62 4.13
14913R3A3	Caterpillar Financial Service Note 3.6% Due 8/12/2027	810,000.00	Various 3.85%	800,828.10 800,828.10	95.57 4.68%	774,094.71 11,259.00	0.44% (26,733.39)	A2 / A A	4.62 4.13
756109BG8	Realty Income Corp Callable Note Cont 5/15/2027 3.95% Due 8/15/2027	500,000.00	10/05/2022 5.24%	472,715.00 472,715.00	95.48 5.06%	477,412.57 7,461.11	0.27% 4,697.57	A3 / A- NR	4.62 4.09
931142EX7	Wal-Mart Stores Callable Note Cont 09/09/2027 3.95% Due 9/9/2027	750,000.00	Various 3.98%	749,146.30 749,146.30	98.61 4.28%	739,591.65 9,216.67	0.42% (9,554.65)	Aa2 / AA AA	4.69 4.18
24422EWK1	John Deere Capital Corp Note 4.15% Due 9/15/2027	400,000.00	09/16/2022 4.38%	395,876.00 395,876.00	98.04 4.62%	392,169.79 5,210.56	0.22% (3,706.21)	A2 / A A	4.71 4.17
66815L2K4	Northwestern Mutual Glbl Note 4.35% Due 9/15/2027	400,000.00	09/16/2022 4.59%	395,780.00 395,780.00	97.51 4.95%	390,046.10 5,123.33	0.22% (5,733.90)	Aaa / AA+ AAA	4.71 4.14
24422EWK1	John Deere Capital Corp Note 4.15% Due 9/15/2027	1,000,000.00	09/20/2022 4.46%	986,310.00 986,310.00	98.04 4.62%	980,424.48 13,026.39	0.55% (5,885.52)	A2 / A A	4.71 4.17
Total Corporate		49,451,000.00	2.28%	49,940,992.90 49,940,992.90	4.88%	46,543,683.64 335,663.84	26.18% (3,397,309.26)	A1 / A+ A+	2.91 2.65
MONEY MARKET FUND									
31846V567	First American Govt Obligation MMKT Class-Z	222,942.48	Various 4.06%	222,942.48 222,942.48	1.00 4.06%	222,942.48 0.00	0.12% 0.00	Aaa / AAA AAA	0.00 0.00
31846V567	First American Govt Obligation MMKT Class-Z	137,725.86	Various 4.06%	137,725.86 137,725.86	1.00 4.06%	137,725.86 0.00	0.08% 0.00	Aaa / AAA AAA	0.00 0.00
Total Money Market Fund		360,668.34	4.06%	360,668.34 360,668.34	4.06%	360,668.34 0.00	0.20% 0.00	Aaa / AAA AAA	0.00 0.00
MUNICIPAL BONDS									
797272QN4	San Diego Cmnty College Dist TE-GO 1.996% Due 8/1/2023	265,000.00	09/18/2019 2.00%	265,000.00 265,000.00	98.62 4.41%	261,353.60 2,203.92	0.15% (3,646.40)	Aaa / AAA NR	0.58 0.57
798135H51	San Jose Calif Libr & Prks Prj TE-GO 2.3% Due 9/1/2023	1,245,000.00	07/09/2019 2.13%	1,253,254.35 1,253,254.35	98.39 4.77%	1,225,005.30 9,545.00	0.69% (28,249.05)	Aa1 / AA+ AAA	0.67 0.65

Holdings Report

As of December 31, 2022



CUSIP	Security Description	Par/Original Amt	Purchase Date Book Yield	Cost Value Book Value	WAC Price Yield (%)	Market Value Accrued Int	% of Par Gain/Loss	Moody/S&P Rating	Duration
MUNICIPAL BONDS									
797272QP9	San Diego Cmnty College Dist TE-GO 2.046% Due 8/1/2024	130,000.00	09/18/2019 2.05%	130,000.00 130,000.00	96.03 4.67%	124,841.60 1,108.25	0.07% (5,158.40)	Aaa / AAA NR	1.59 1.52
13063DL22	California State TE-GO 1.75% Due 10/1/2028	500,000.00	05/26/2022 3.52%	450,135.00 450,135.00	84.59 4.85%	422,960.00 2,187.50	0.24% (27,175.00)	Aa2 / AA- AA	5.76 5.31
13063DMB1	California State STE-GO 3.05% Due 4/1/2029	500,000.00	05/25/2022 3.69%	480,725.00 480,725.00	90.21 4.89%	451,045.00 3,812.50	0.25% (29,680.00)	Aa2 / AA- AA	6.25 5.52
93974EYF7	State of Washington FTE-GO 3.5% Due 8/1/2029	850,000.00	07/20/2022 3.60%	844,985.00 844,985.00	93.88 4.59%	797,963.00 12,230.56	0.45% (47,022.00)	Aaa / AA+ AA+	6.59 5.69
649791RF9	New York St STE-GO 1.84% Due 3/15/2030	300,000.00	06/01/2022 3.89%	258,996.00 258,996.00	81.51 4.92%	244,530.00 1,625.33	0.14% (14,466.00)	Aa1 / AA+ AA+	7.21 6.52
544351QV4	Los Angeles Calif TE-REV 5% Due 9/1/2030	500,000.00	09/16/2022 4.24%	524,990.00 524,990.00	100.07 4.98%	500,355.00 6,458.33	0.28% (24,635.00)	Aa2 / AA AAA	7.67 6.24
649791PX2	New York St STE-GO 2.8% Due 2/15/2032	1,000,000.00	06/07/2022 3.89%	912,410.00 912,410.00	84.05 5.00%	840,530.00 10,577.78	0.48% (71,880.00)	Aa1 / AA+ AA+	9.13 7.01
Total Municipal Bonds		5,290,000.00	3.25%	5,120,495.35	4.80%	4,868,583.50 49,749.17	2.75% (251,911.85)	Aa1 / AA+ AAA	5.13 4.32
SUPRANATIONAL									
4581X0DZ8	Inter-American Dev Bank Note 0.5% Due 9/23/2024	1,280,000.00	09/15/2021 0.52%	1,279,052.80 1,279,052.80	93.20 4.64%	1,192,967.99 1,742.22	0.67% (86,084.81)	Aaa / AAA NR	1.73 1.68
4581X0DZ8	Inter-American Dev Bank Note 0.5% Due 9/23/2024	1,400,000.00	09/15/2021 0.52%	1,398,964.00 1,398,964.00	93.20 4.64%	1,304,808.74 1,905.56	0.73% (94,155.26)	Aaa / AAA NR	1.73 1.68
459058JB0	Intl. Bank Recon & Development Note 0.625% Due 4/22/2025	1,230,000.00	04/15/2020 0.70%	1,225,239.90 1,225,239.90	91.81 4.40%	1,129,206.99 1,473.44	0.63% (96,032.91)	Aaa / AAA NR	2.31 2.24
459058JB0	Intl. Bank Recon & Development Note 0.625% Due 4/22/2025	550,000.00	04/15/2020 0.70%	547,871.50 547,871.50	91.81 4.40%	504,929.95 658.85	0.28% (42,941.55)	Aaa / AAA NR	2.31 2.24
4581X0DN5	Inter-American Dev Bank Note 0.625% Due 7/15/2025	425,000.00	01/13/2021 0.53%	426,848.75 426,848.75	91.11 4.36%	387,216.89 1,224.83	0.22% (39,631.86)	Aaa / AAA NR	2.54 2.46
4581X0DN5	Inter-American Dev Bank Note 0.625% Due 7/15/2025	920,000.00	01/13/2021 0.53%	924,002.00 924,002.00	91.11 4.36%	838,210.68 2,651.39	0.47% (85,791.32)	Aaa / AAA NR	2.54 2.46
459058JL8	Intl. Bank Recon & Development Note 0.5% Due 10/28/2025	1,200,000.00	10/21/2020 0.52%	1,198,644.00 1,198,644.00	89.92 4.33%	1,079,069.75 1,050.00	0.60% (119,574.25)	Aaa / AAA AAA	2.83 2.75

Holdings Report

As of December 31, 2022



CUSIP	Security Description	Par Value/Date	Maturity Date/ Book Yield	Cost Value/ Book Value	IMR Price/ Yield	Market Value/ Accruals	% of Total Gain/Loss	Rating/ESG Firm	Quality Points
SUPRANATIONAL									
459058JL8	Intl. Bank Recon & Development Note 0.5% Due 10/28/2025	2,800,000.00	Various 0.55%	2,794,002.20 2,794,002.20	89.92 4.33%	2,517,829.41 2,450.00	1.41% (276,172.79)	Aaa / AAA AAA	2.83 2.75
4581X0DV7	Inter-American Dev Bank Note 0.875% Due 4/20/2026	2,430,000.00	04/13/2021 0.97%	2,418,870.60 2,418,870.60	89.58 4.29%	2,176,696.80 4,193.44	1.22% (242,173.80)	Aaa / AAA AAA	3.30 3.19
4581X0DV7	Inter-American Dev Bank Note 0.875% Due 4/20/2026	1,050,000.00	04/13/2021 0.97%	1,045,191.00 1,045,191.00	89.58 4.29%	940,548.00 1,811.98	0.53% (104,643.00)	Aaa / AAA AAA	3.30 3.19
Total Supranational		13,285,000.00	0.67%	13,258,686.75	4.40%	12,071,485.20 19,161.71	6.75% (1,187,201.55)	Aaa / AAA AAA	2.62 2.54
US TREASURY									
9128286G0	US Treasury Note 2.375% Due 2/29/2024	1,800,000.00	Various 2.56%	1,784,714.07 1,784,714.07	97.43 4.67%	1,753,664.40 14,525.55	0.99% (31,049.67)	Aaa / AA+ AAA	1.16 1.12
912828WJ5	US Treasury Note 2.5% Due 5/15/2024	1,065,000.00	06/03/2019 1.90%	1,095,036.33 1,095,036.33	97.10 4.71%	1,034,090.51 3,456.84	0.58% (60,945.82)	Aaa / AA+ AAA	1.37 1.32
912828YH7	US Treasury Note 1.5% Due 9/30/2024	1,500,000.00	12/06/2019 1.68%	1,487,402.35 1,487,402.35	95.01 4.50%	1,425,117.00 5,748.63	0.80% (62,285.35)	Aaa / AA+ AAA	1.75 1.69
912828YH7	US Treasury Note 1.5% Due 9/30/2024	3,500,000.00	Various 1.74%	3,461,933.59 3,461,933.59	95.01 4.50%	3,325,273.00 13,413.46	1.86% (136,660.59)	Aaa / AA+ AAA	1.75 1.69
9128283J7	US Treasury Note 2.125% Due 11/30/2024	1,650,000.00	12/12/2019 1.76%	1,678,423.83 1,678,423.83	95.78 4.45%	1,580,325.45 3,082.42	0.88% (98,098.38)	Aaa / AA+ AAA	1.92 1.84
9128283J7	US Treasury Note 2.125% Due 11/30/2024	3,850,000.00	Various 1.76%	3,916,205.08 3,916,205.08	95.78 4.45%	3,687,426.05 7,192.31	2.06% (228,779.03)	Aaa / AA+ AAA	1.92 1.84
912828ZL7	US Treasury Note 0.375% Due 4/30/2025	875,000.00	06/04/2020 0.41%	873,496.09 873,496.09	91.34 4.32%	799,189.13 561.98	0.45% (74,306.96)	Aaa / AA+ AAA	2.33 2.27
912828ZL7	US Treasury Note 0.375% Due 4/30/2025	375,000.00	06/04/2020 0.41%	374,355.47 374,355.47	91.34 4.32%	342,509.63 240.85	0.19% (31,845.84)	Aaa / AA+ AAA	2.33 2.27
91282CFE6	US Treasury Note 3.125% Due 8/15/2025	1,000,000.00	09/27/2022 4.42%	965,234.38 965,234.38	97.16 4.28%	971,641.00 11,803.67	0.55% 6,406.62	Aaa / AA+ AAA	2.62 2.46
91282CFP1	US Treasury Note 4.25% Due 10/15/2025	1,700,000.00	Various 4.24%	1,700,232.43 1,700,232.43	100.01 4.24%	1,700,132.60 15,482.14	0.96% (99.83)	Aaa / AA+ AAA	2.79 2.58
91282CBC4	US Treasury Note 0.375% Due 12/31/2025	700,000.00	12/29/2020 0.38%	699,945.32 699,945.32	89.46 4.15%	626,226.30 7.25	0.35% (73,719.02)	Aaa / AA+ AAA	3.00 2.92

Holdings Report

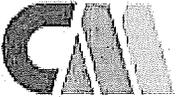
As of December 31, 2022



CUSIP	Security Description	Par Value/Units	Maturity Date Book Yield	Est. Value Book Value	Yield YTM	Market Value Accrual Int.	Yield Gain/Loss	Moody/S&P Rating	Quality Duration
US TREASURY									
91282CBC4	US Treasury Note 0.375% Due 12/31/2025	300,000.00	12/29/2020 0.38%	299,976.56 299,976.56	89.46 4.15%	268,382.70 3.11	0.15% (31,593.86)	Aaa / AA+ AAA	3.00 2.92
91282CBH3	US Treasury Note 0.375% Due 1/31/2026	600,000.00	02/23/2021 0.58%	594,093.75 594,093.75	89.06 4.19%	534,351.60 941.58	0.30% (59,742.15)	Aaa / AA+ AAA	3.09 3.00
91282CBH3	US Treasury Note 0.375% Due 1/31/2026	1,400,000.00	02/23/2021 0.58%	1,386,218.75 1,386,218.75	89.06 4.19%	1,246,820.40 2,197.01	0.70% (139,398.35)	Aaa / AA+ AAA	3.09 3.00
91282CCF6	US Treasury Note 0.75% Due 5/31/2026	1,400,000.00	06/18/2021 0.91%	1,389,500.00 1,389,500.00	89.29 4.14%	1,250,102.00 923.08	0.70% (139,398.00)	Aaa / AA+ AAA	3.42 3.30
91282CCF6	US Treasury Note 0.75% Due 5/31/2026	600,000.00	06/18/2021 0.91%	595,500.00 595,500.00	89.29 4.14%	535,758.00 395.60	0.30% (59,742.00)	Aaa / AA+ AAA	3.42 3.30
91282CCW9	US Treasury Note 0.75% Due 8/31/2026	1,050,000.00	08/30/2021 0.77%	1,049,220.71 1,049,220.71	88.66 4.12%	930,973.05 2,675.76	0.52% (118,247.66)	Aaa / AA+ AAA	3.67 3.53
91282CCW9	US Treasury Note 0.75% Due 8/31/2026	2,450,000.00	Various 0.99%	2,422,224.61 2,422,224.61	88.66 4.12%	2,172,270.45 6,243.44	1.22% (249,954.16)	Aaa / AA+ AAA	3.67 3.53
91282CDG3	US Treasury Note 1.125% Due 10/31/2026	1,275,000.00	Various 1.26%	1,266,842.77 1,266,842.77	89.56 4.10%	1,141,921.88 2,456.67	0.64% (124,920.89)	Aaa / AA+ AAA	3.84 3.67
91282CDG3	US Treasury Note 1.125% Due 10/31/2026	2,975,000.00	Various 1.24%	2,958,723.64 2,958,723.64	89.56 4.10%	2,664,484.38 5,732.21	1.49% (294,239.26)	Aaa / AA+ AAA	3.84 3.67
912828U24	US Treasury Note 2% Due 11/15/2026	650,000.00	11/17/2022 4.09%	600,437.50 600,437.50	92.58 4.09%	601,783.00 1,687.85	0.34% 1,345.50	Aaa / AA+ AAA	3.88 3.66
912828Z78	US Treasury Note 1.5% Due 1/31/2027	1,500,000.00	03/15/2022 2.08%	1,460,097.66 1,460,097.66	90.41 4.07%	1,356,153.00 9,415.76	0.76% (103,944.66)	Aaa / AA+ AAA	4.09 3.86
912828Z78	US Treasury Note 1.5% Due 1/31/2027	3,500,000.00	Various 2.60%	3,327,324.23 3,327,324.23	90.41 4.07%	3,164,357.00 21,970.11	1.78% (162,967.23)	Aaa / AA+ AAA	4.09 3.86
91282CEN7	US Treasury Note 2.75% Due 4/30/2027	3,250,000.00	Various 3.32%	3,169,765.63 3,169,765.63	94.91 4.04%	3,084,451.50 15,307.32	1.73% (85,314.13)	Aaa / AA+ AAA	4.33 4.01
91282CEW7	US Treasury Note 3.25% Due 6/30/2027	3,750,000.00	Various 3.12%	3,771,718.75 3,771,718.75	96.84 4.02%	3,631,492.50 336.67	2.03% (140,226.25)	Aaa / AA+ AAA	4.50 4.13
91282CFB2	US Treasury Note 2.75% Due 7/31/2027	1,100,000.00	09/19/2022 3.70%	1,054,023.44 1,054,023.44	94.76 4.01%	1,042,378.70 12,658.97	0.59% (11,644.74)	Aaa / AA+ AAA	4.58 4.19
91282CFH9	US Treasury Note 3.125% Due 8/31/2027	1,325,000.00	Various 3.35%	1,311,405.27 1,311,405.27	96.34 3.99%	1,276,450.68 14,068.98	0.72% (34,954.59)	Aaa / AA+ AAA	4.67 4.24

Holdings Report

As of December 31, 2022



CUSIP	Security Description	Par Value/Date	Maturity Date Real Yield	Cost Value Book Value	DM Price (Market)	Market Value Accrued	Yield Current	Yield/CP Rate	Quantity Number
US TREASURY									
91282CFM8	US Treasury Note 4.125% Due 9/30/2027	1,300,000.00	Various 4.12%	1,300,132.81 1,300,132.81	100.54 4.00%	1,306,957.60 13,700.89	0.74% 6,824.79	Aaa / AA+ AAA	4.75 4.23
91282CFM8	US Treasury Note 4.125% Due 9/30/2027	2,900,000.00	Various 3.97%	2,919,195.31 2,919,195.31	100.54 4.00%	2,915,520.80 30,563.54	1.64% (3,674.51)	Aaa / AA+ AAA	4.75 4.23
9128284V9	US Treasury Note 2.875% Due 8/15/2028	700,000.00	06/01/2022 3.01%	694,750.00 694,750.00	94.36 4.01%	660,488.50 7,601.56	0.37% (34,261.50)	Aaa / AA+ AAA	5.63 5.06
9128285M8	US Treasury Note 3.125% Due 11/15/2028	1,350,000.00	Various 3.62%	1,312,939.45 1,312,939.45	95.58 3.98%	1,290,304.35 5,477.38	0.72% (22,635.10)	Aaa / AA+ AAA	5.88 5.27
91282CEM9	US Treasury Note 2.875% Due 4/30/2029	1,000,000.00	Various 2.84%	1,002,431.64 1,002,431.64	93.87 3.98%	938,672.00 4,924.03	0.53% (63,759.64)	Aaa / AA+ AAA	6.33 5.67
91282CFC0	US Treasury Note 2.625% Due 7/31/2029	600,000.00	08/02/2022 2.75%	595,101.56 595,101.56	92.30 3.97%	553,781.40 6,591.03	0.31% (41,320.16)	Aaa / AA+ AAA	6.59 5.88
91282CFL0	US Treasury Note 3.875% Due 9/30/2029	1,500,000.00	12/05/2022 3.75%	1,511,484.38 1,511,484.38	99.53 3.95%	1,492,909.50 14,850.62	0.84% (18,574.88)	Aaa / AA+ AAA	6.75 5.83
91282CCB5	US Treasury Note 1.625% Due 5/15/2031	650,000.00	08/02/2022 2.73%	594,166.02 594,166.02	84.37 3.82%	548,412.15 1,371.37	0.31% (45,753.87)	Aaa / AA+ AAA	8.38 7.64
91282CDJ7	US Treasury Note 1.375% Due 11/15/2031	600,000.00	08/11/2022 2.83%	529,195.31 529,195.31	81.68 3.83%	490,078.20 1,071.13	0.27% (39,117.11)	Aaa / AA+ AAA	8.88 8.14
91282CEP2	US Treasury Note 2.875% Due 5/15/2032	500,000.00	05/25/2022 2.76%	504,824.22 504,824.22	92.48 3.84%	462,422.00 1,866.37	0.26% (42,402.22)	Aaa / AA+ AAA	9.38 8.04
91282CFF3	US Treasury Note 2.75% Due 8/15/2032	380,000.00	08/17/2022 2.88%	375,695.31 375,695.31	91.39 3.83%	347,284.28 3,947.15	0.20% (28,411.03)	Aaa / AA+ AAA	9.63 8.21
Total US Treasury		56,620,000.00	2.37%	56,033,968.22	4.18%	53,154,556.69	29.83%	Aaa / AA+ AAA	3.78 3.50
TOTAL PORTFOLIO		189,374,120.12	2.00%	189,074,139.35	4.59%	178,279,762.04	100.00%	Aa1 / AA AAA	3.13 2.68
TOTAL MARKET VALUE PLUS ACCRUED						179,098,577.67			

ACWD RESTRICTED FUND
Portfolio Management
Portfolio Details - Investments
December 31, 2022

CUSIP	Investment #	Issuer	Purchase Date	Par Value	Market Value	Book Value	Stated Rate	Term	Days to Maturity	YTM	Maturity Date
Passbook/Checking											
15REV-MMFD	15REV-MMFD	15 REVENUE BONDS FUND		398.82	398.82	398.82		1	1	0.000	
22REV-MMFD	22REV-MMFD	22 REVENUE BONDS FUND	07/01/2022	1,015.75	1,015.75	1,015.75		1	1	0.000	
Subtotal and Average				1,414.57	1,414.57	1,414.57		1	1	0.000	
Total and Average				1,414.57	1,414.57	1,414.57		1	1	0.000	

ALAMEDA COUNTY WATER DISTRICT

BUDGET REPORT

Month Ending December 31, 2022

Year to Date Percentage 50%

	FY 2022-23			FY 2021-22		
	Year to Date Total	Amended Budget	Percent of Budget	Prior Year to Date Total	Amended Budget	Percent of Budget
BEGINNING CASH BALANCE	\$ 208,870,136	\$ 202,375,000		\$ 195,300,933	\$ 195,301,000	
REVENUE						
Water Revenue				64,412,792	113,125,000	56.9%
Service Charges	20,135,218	39,193,629	51.4%			
Commodity Charges	40,288,519	74,634,371	54.0%			
Stage Rate Water Revenue	6,928,274	11,281,000	61.4%	-	2,820,000	0.0%
Ground Water Revenue	354,373	577,000	61.4%	244,200	539,000	45.3%
1% Tax Allocation	4,020,592	7,613,000	52.8%	3,674,291	7,363,000	49.9%
State Water Contract Tax	3,266,375	5,924,000	55.1%	3,233,255	6,090,000	53.1%
Interest Revenue	1,400,651	3,720,000	37.7%	1,832,777	3,808,000	48.1%
Facilities Connection Charges - FIF	3,800,523	1,050,000	362.0%	2,102,803	4,163,000	50.5%
Facilities Connection Charges - FRF	2,110,119	590,000	357.6%	1,093,751	2,165,000	50.5%
Customer Jobs Revenue	1,442,269	5,090,000	28.3%	1,479,723	2,480,000	59.7%
Grants, Reimbursements	50,000	8,744,000	0.6%	3,788,188	6,521,000	58.1%
Other Revenue	708,705	1,205,000	58.8%	537,827	1,022,000	52.6%
TOTAL REVENUE	84,505,618	159,622,000	52.9%	82,399,607	150,096,000	54.9%
EXPENSES						
Source of Supply						
Water Purchases	18,865,687	33,581,000	56.2%	17,627,615	34,144,000	51.6%
Operation of Supply System	4,517,767	10,906,000	41.4%	4,074,916	8,720,000	46.7%
Pumping	1,171,259	2,626,000	44.6%	836,586	2,157,000	38.8%
Water Treatment	7,784,206	19,294,000	40.3%	7,464,065	16,888,000	44.2%
Transmission & Distribution	8,219,172	17,881,000	46.0%	7,635,262	14,733,000	51.8%
Customer Accounts	2,441,477	5,948,000	41.0%	2,309,483	4,842,000	47.7%
Administrative & General*	21,164,720	22,933,000	92.3%	22,821,392	22,299,000	102.3%
Expense Projects	1,936,598	5,878,000	32.9%	2,103,544	5,439,000	38.7%
TOTAL EXPENSES	66,100,886	119,047,000	55.5%	64,872,863	109,222,000	59.4%
CAPITAL EXPENDITURES	16,312,285	46,324,000	35.2%	20,087,170	34,184,000	58.8%
CUSTOMER JOBS	1,912,409	4,459,000	42.9%	1,054,565	4,136,000	25.5%
DEBT SERVICE	1,746,368	5,965,000	29.3%	1,234,266	5,479,000	22.5%
TOTAL EXPENSES & CAPITAL EXPENDITURES	86,071,948	175,795,000	49.0%	87,248,864	153,021,000	57.0%
NET OF REVENUE & EXPENSES	(1,566,330)	(16,173,000)		(4,849,257)	(2,925,000)	
Debt Proceeds					10,000,000	
Reconciling Time Difference	(391,837)			(1,657,864)		
ENDING CASH BALANCE						
General Fund	130,214,712	120,347,000		118,230,935	131,875,000	
Facilities Improvement Fund (FIF)	75,691,039	65,855,000		70,562,877	70,500,000	
Facilities Renewal Fund (FRF)	1,006,219	-		-	-	
	\$ 206,911,970	\$ 186,202,000		\$ 188,793,811	\$ 202,375,000	

* Administrative & General includes full CalPERS UAL prepayment (\$5.6m), OPEB UAAL (\$3.1m), pension advanced funding (\$5.6m), and OPEB Normal Cost (\$1.5m)

ALAMEDA COUNTY WATER DISTRICT

MEMORANDUM

DATE: February 6, 2023
TO: Board of Directors
FROM: Ed Stevenson, General Manager 
SUBJECT: Personnel Report 2nd Quarter (10/01/22 to 12/31/22)

Listed below are Sick & Appointment Leave, Overtime, Temporary Services and Personnel Activity Summaries for the second quarter of FY 2022/23, compared to the same period of FY 2020/21.

Sick & Appointment Leave

Total sick leave hours used through the second quarter of FY 2022/23 was 3,641 (approximately 455 days) compared to 4,235 hours (approximately 529 days) used during the same period in FY 2021/22. This represents a decrease of 14.02% of total sick leave hour usage.

A total of 163 employees used sick leave in FY 2022/23, compared to 130 employees in FY 2021/22.

Total Sick Leave Hours – 2nd Q FY 2022/23 compared to 2nd Q FY 2021/22

Year	Days	Hours	Average Hr. per Employee	% Change
2022/23	455	3,641	22.33	-14.02%
2021/22	529	4,235	32.57	

Total appointment leave hours used through the second quarter of FY 2022/23 was 508 hours (approximately 64 days) compared to 539 hours (67 days) used in the same period of FY 2021/22. This represents a decrease of 5.75% in appointment leave hour usage.

A total of 91 employees used appointment leave hours in FY 2022/23, compared to 91 employees in FY 2021/22.

Total Appointment Leave Hours – 2nd Q FY 2022/23 compared to 2nd Q FY 2021/22

Year	Days	Hours	Average Hr. per Employee	% Change
2022/23	64	508	5.58	-5.75%
2021/22	67	539	5.92	

Overtime

Total overtime hours incurred the second quarter of FY 2022/23 was 3,112 compared to 3,578 in FY 2021/22, representing a decrease of 13.02%. The highest usage was in Operations &

Maintenance by Utility Workers (1,147 hours) and Water Treatment Plant Operators and Treatment Facilities Operators (1,251 hours).

Total Overtime Hours – 2nd Q FY 2022/23 compared to 2nd Q FY 2021/22

Year	Overtime Hours	% Change
2022/23	3,112	-13.02%
2021/22	3,578	

Temporary Agency Staffing Services Agreement Costs

Temporary Staffing Agency services costs incurred this quarter was \$104,008, compared to \$180,218 in FY 2021/22.

Temporary Services – 2nd Q FY 2022/23 compared to 2nd Q FY 2021/22

Year	Costs	Hours	% Change
2022/23	\$104,008	2,490	-42.28
2021/22	\$180,218	2,947	

Temporary Staff Status Report

(Period of October 1, 2022 through December 31, 2022)					
Position	Department	Start date	Total Hours Worked Since Start	Anticipated End date	Comments
Customer Service Rep.	Finance	6/20/2022	983	12/20/2022	Backfilling due to vacant position
Customer Service Rep.	Finance	10/4/2022	415	4/4/2023	Backfilling due to vacant position
Engineer	Groundwater Resources	6/21/2022	450	6/21/2023	Backfilling due to vacant position; Part-time
HR Technician	HR	4/25/2022	874	10/21/2022	Backfilling due to vacant position
Meter Reader	Finance	10/24/2022	126	12/2/2022	Backfilling due to vacant position
Meter Reader	Finance	9/19/2022	421	3/19/2023	Backfilling due to vacant position
Office Assistant	Water Resources	8/1/2022	830	2/1/2023	Assist with increased drought workload
Temporary Agency Employees					Total: 7
Engineering Intern	Water Production	7/5/2022	582	1/5/2023	6 month assignment not to exceed 30 hours/week
Engineering Intern	Engineering/IT	1/18/2022	949	1/13/2023	1 year assignment not to exceed 20 hours/week
Interns					Total: 2
Engineer 3	Project Engineering	7/13/2022	511	7/13/2023	Retiree Rehire
Retiree Rehires					Total: 1
					Grand Total: 10

Vacancy and Recruitment Status

Department & Position	Number of Vacancies	Status	Reason
OFFICE OF THE GENERAL MANAGER			
Special Assistant to the General Manager	1	Recruitment on hold	FY 21/22 Budget Addition
Public Affairs Specialist DT (underfill OA)	1	Recruitment underway	FY 22/23 Budget Reallocation
OGM TOTAL	2		
ENGINEERING & TECHNOLOGY SVCS			
Construction Inspector (Defined Term)	1	Recruitment pending	Promotion to Perm Position
Senior Engineer	1	Recruitment underway	Retirement
Information Security Officer	1	Recruitment underway	FY 22/23 Budget Addition
Information Technology Technician	1	Position under study	Reclassification
E&T TOTAL	4		
FINANCE & ADMINISTRATION			
Customer Account Rep I/II	1	Recruitment underway	Retirement
Meter Reader (Defined Term)	2	Recruitment pending	Transfer & Termination
FIN & ADMIN TOTAL	3		
OPERATIONS & MAINTENANCE			
Chemist I/II	1	Recruitment pending	Retirement
Senior Engineer (Underfill Associate Eng)	1	Recruitment underway	Resignation
Gardener I/II	1	Recruitment on hold	Retirement
Laboratory Technician I/II	1	Recruitment on hold	Promotion
Instrument & Controls Tech I/II	1	Recruitment underway	Retirement
QA/QC Officer	1	Recruitment on hold	Promotion
Utility Mechanic I/II	1	Recruitment underway	Resignation
Utility Worker I/II	2	Recruitment underway	Resignation
Engineering Technician I/II	1	Recruitment underway	Resignation
O&M TOTAL	10		
WATER RESOURCES			
Engineer I/II	1	Recruitment underway	Promotion
Engineer I/II/Associate (fill as Hydrogeologist)	1	Recruitment underway	Promotion
WR TOTAL	1		

Personnel Activity

From July 1, 2022, to the end of the 2nd quarter FY 2022/23, there were ten (10) new hires, four (4) promotions, six (6) resignations, four (4) retirements, and two (2) terminations.

Department	Total	Position	Date	Action
Office of the General Manager	0			
Engineering & Tech Services	3			
	1	Engineer I	07/11/2022	New Hire
	1	Development Services Manager	09/17/2022	New Hire
	1	Development Services Manager	12/30/2022	Retirement
Finance & Administration	4			
	1	Customer Account Rep I (DT)	08/01/2022	New Hire
	1	Human Resources Technician I	10/06/2022	New Hire
	1	Customer Account Rep 2	12/20/2022	Retirement
	1	Meter Reader	12/27/2022	Termination
Operations and Maintenance	16			
	1	Engineering Technician II (DT)	07/01/2022	Resignation
	1	Utility Mechanic II (DT)	07/08/2022	Resignation
	1	Treatment & Distribution Sup	07/11/2022	New Hire
	1	Engineer I	08/01/2022	Resignation
	1	Engineering Technician II	09/07/2022	Resignation
	1	Utility Worker I	09/19/2022	New Hire
	1	Utility Worker I	10/03/2022	New Hire
	1	Utility Worker I	10/10/2022	New Hire
	1	Vehicle & Equipment Mechanic II	10/17/2022	New Hire
	1	Water Production Intern	11/4/2022	Resignation
	2	Utility Worker II	11/13/2022	Promotion
	1	Utility Worker I	11/20/2022	Termination
	1	Utility Worker I	12/22/2022	Resignation
	1	Facilities Maintenance Worker	12/30/2022	Retirement
	1	Instrument & Controls Tech II	12/30/2022	Retirement
Water Resources	3			
	1	Hydrogeologist II	08/07/2022	Promotion
	1	Water Operations Analyst I	10/02/2022	Promotion
	1	Water Use Efficiency Specialist I	11/14/2022	New Hire

Personnel Budget

DEPARTMENT	FY 2022/23 Adopted Positions
OFFICE OF THE GENERAL MANAGER	7
ENGINEERING & TECHNOLOGY SERVICES	43
FINANCE & ADMINISTRATION	47
OPERATIONS & MAINTENANCE	119
WATER RESOURCES	28
TOTALS	244

ACWD Distribution System Hardness

January 2023

Water Production Facilities
Average Daily Flows and Hardness
for this period

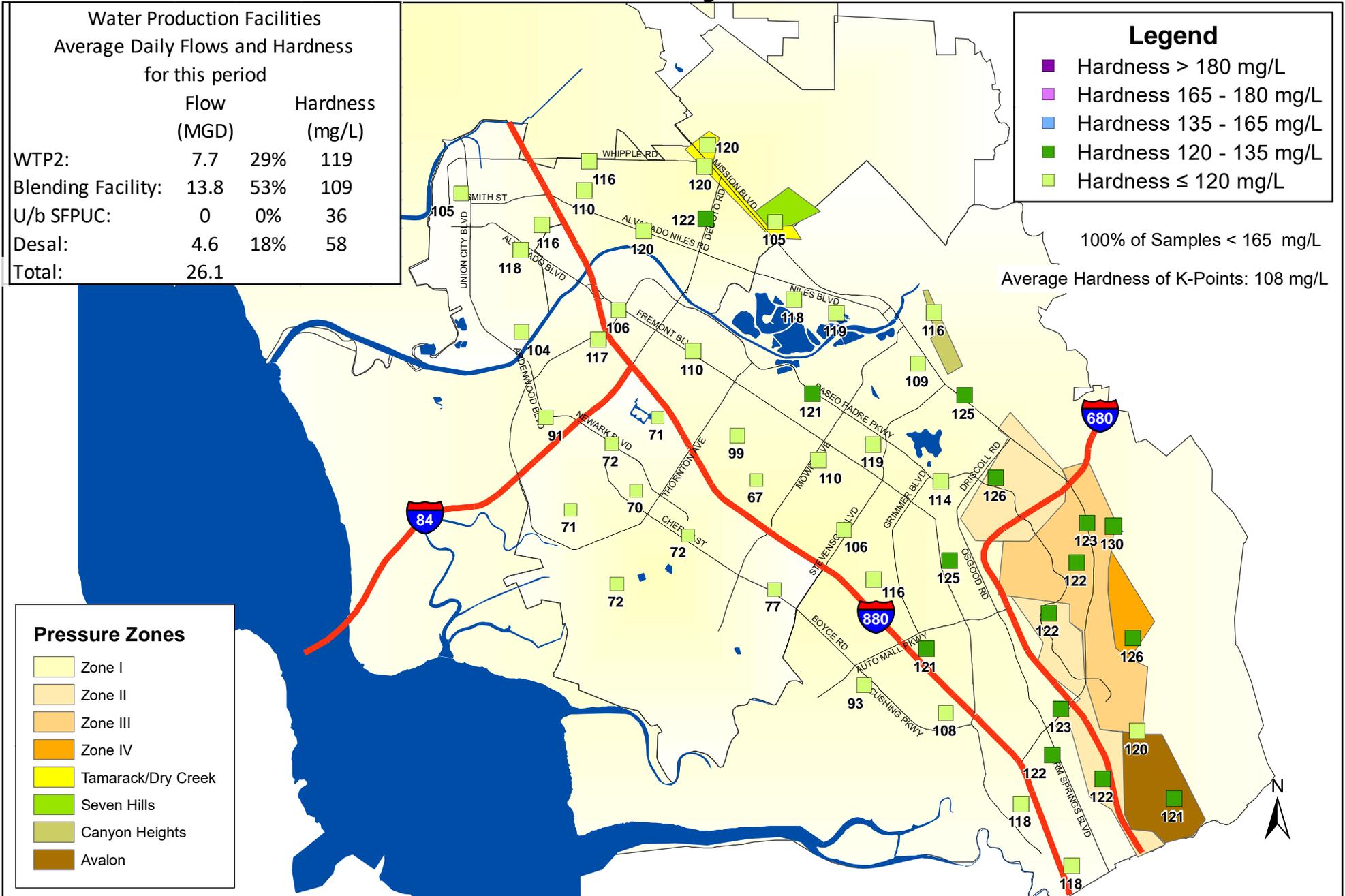
	Flow (MGD)		Hardness (mg/L)
WTP2:	7.7	29%	119
Blending Facility:	13.8	53%	109
U/b SFPUC:	0	0%	36
Desal:	4.6	18%	58
Total:	26.1		

Legend

- Hardness > 180 mg/L
- Hardness 165 - 180 mg/L
- Hardness 135 - 165 mg/L
- Hardness 120 - 135 mg/L
- Hardness ≤ 120 mg/L

100% of Samples < 165 mg/L

Average Hardness of K-Points: 108 mg/L



Pressure Zones

- Zone I
- Zone II
- Zone III
- Zone IV
- Tamarack/Dry Creek
- Seven Hills
- Canyon Heights
- Avalon