



# **ZONE 7** Annual Report **2021**

To the Tri-Valley  
Fiscal Year 2020–2021

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# Zone 7 At a Glance

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We deliver safe, reliable, efficient and sustainable water and flood protection services.

**35,875 acre-feet** imported from the Delta

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**12,398 acre-feet** of local groundwater stored in the Main Basin

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**8,991 acre-feet** used locally from Lake Del Valle reservoir

## Our Mission



We provide excellent water and flood protection services to enhance the quality of life, economic vitality and environmental health of the communities we serve.

## Our Values

**Transparency** · We operate in an open and transparent fashion.

**Customer Service** · We are prompt, respectful and courteous in all of our interactions.

**Collaboration** · We embrace collaboration to enhance our services.

**Environmental Sustainability** · We deliver our services in an environmentally-sensitive manner.

**Fiscal Responsibility** · We operate in a productive, cost effective, and efficient manner.

**Innovation** · We encourage innovation, creativity, and ingenuity.

**Integrity** · We maintain the highest ethical standards and open, honest communications.

**Leadership** · We maintain a diverse team of highly skilled professionals devoted to honest and accountable stewardship of our resources.

**Proactivity** · We proactively address issues and embrace continuous improvement.

**Safety** · We are committed to public and employee safety.

## Our Goals

**GOAL A** · Reliable Water and Supply Infrastructure · Provide customers with reliable water supply and infrastructure.

**GOAL B** · Safe Water · Provide customers with safe water.

**GOAL C** · Groundwater Management · Manage and protect the groundwater basin as the State designated Groundwater Sustainability Agency.

**GOAL D** · Effective Flood Protection · Provide an effective system of flood protection.

**GOAL E** · Effective Operations · Provide the Agency with effective leadership, administration, and governance.

**GOAL F** · Stakeholder Engagement · Engage our stakeholders to foster understanding of their needs, the Agency, and its functions.

**GOAL G** · Fiscal Responsibility · Operate the Agency in a fiscally-responsible manner.



# President's Message

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**Welcome to our  
Fiscal Year 2020–2021  
Annual Report**

Welcome to our fiscal year 2020-2021 annual report. We have moved to an online digital format for our annual report this year as part of our effort to make information more readily available to our community. This format allows us to take advantage of screen reading technology to make our annual report ADA accessible, and aligns with our sustainability efforts by avoiding printing. We hope you enjoy our new interactive format with updates on how Zone 7 worked through another difficult year.

This report covers July 1, 2020 through June 30, 2021 - a complete year of the coronavirus pandemic, and the driest year on record for the Tri-Valley as drought



conditions became more extreme. Through these challenges, our staff have maintained service and safety levels, continuing to deliver high-quality treated water to the Tri-Valley community. In addition, our staff have maintained daily operations and continue to make progress on major infrastructure projects that improve water quality, reliability, and flood protection for our region.

Reliable water is critical to an economically and environmentally vibrant community. Providing that service is increasingly complex as Zone 7 manages numerous challenges including climate change, labor and supply shortages, and the pandemic. Despite these challenges, over the last 12 months we have continued investment in several projects for study and evaluation that may be future solutions to our water supply and storage needs. These include Los Vaqueros Reservoir expansion for local storage, Delta Conveyance for better reliability, Sites Reservoir Project for new supply, regional desalination efforts and potable reuse for a local supply option.

Finding new sources of water for more than a quarter million people is no easy feat, but the drought made the need for prioritizing water supply and storage paramount. We are working toward solutions to sustain the Tri-Valley community for generations to come.

With only a fraction of the average rainfall we normally receive, and reduced allocations from the State Water Project, careful planning kept us positioned to continue to meet the water demands of our retailers, using a combination of banked water from our sustainably managed local groundwater basin and our partner basins in Southern California and our local water supply. We were also proactive in securing water transfers in a volatile water market early in the year, to supplement reduced SWP deliveries. The last piece of the puzzle was calling on our amazing and resilient community. In partnership with our retailers and the people of the Tri-Valley, we have made significant strides in water conservation to ensure we have enough supplies to weather this historic drought.

Moving into the future, we are confident our staff will continue to deliver the excellent service our community has come to expect. As we weather the challenges of the drought and the pandemic, we appreciate the dedication of each of our staff members who are committed to serving the needs of our community. We appreciate your support and look forward to another productive year ahead.

Lastly, we can't close without saying thank you to our community for conserving 8% of their water use in 2021 and we hope you will continue to push toward meeting the goal of 15% conservation as we're not out of the drought yet. As we begin a new year, hopeful and optimistic that we'll see a return to normal

and more rain to quench our depleted reservoirs, we must continue to keep our focus on the long term and what we can do together as a community. We're committed to supporting you in these efforts to save water by providing a robust offering of rebates, water-saving resources, and outreach and education programs. Water is a precious resource and there isn't a drop to waste.

Sincerely,

Olivia Sanwong

President - Fiscal Year 2020-21





# Strategic Goals Update

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## Making Progress on The Strategic Plan

In June of 2020, the Zone 7 Board of Directors adopted the 2020-2024 Five-Year Strategic Plan. The plan establishes a framework for addressing the challenges of maintaining reliable and high-quality water and flood protection service for the Tri-Valley area. The plan outlines 24 major strategic plan initiatives to support the agency's vision, mission, goals and values. These strategic plan initiatives are the key actions planned over a five-year period to achieve the outcomes identified in the strategic plan goals. Staff have provided an update on the first year of progress on the activities within each of these initiatives.

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## Zone 7's 24 Initiatives

### KEY

COMPLETED INITIATIVES



ONGOING INITIATIVES



SCHEDULED INITIATIVES



## Goal A · Reliable Water Supply and Infrastructure

1. Establish a diversified water supply plan



2. Evaluate and develop appropriate new water supply and reliability opportunities



3. Continue to effectively implement infrastructure projects in the Water System Capital Improvement Program (CIP)



## Goal B · Safe Water

4. Implement Ozone



5. Meet or surpass all drinking water health and safety requirements



6. Assess treatment requirements and strategy for PFAS and CR6



## Goal C · Groundwater Management

7. Manage the GSA and implement the groundwater management plan



8. Study and refine knowledge of the groundwater basins

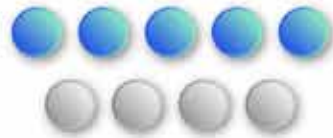


## Goal D · Effective Flood Protection

9. Continue to maintain the flood protection system



10. Update the flood protection strategy



## Goal E · Effective Operations

11. Review professional development approach to maintain workforce capability for now and into the future



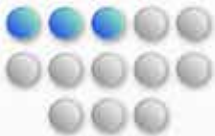
12. Review and develop strategies for water treatment operator recruitment and retention



13. Review and update Board policies



14. Evaluate current program to increase ratio of preventative to reactive maintenance



15. Optimize the procurement process



16. Develop and implement an energy strategy



17. Refresh emergency preparedness program



18. Develop and implement a climate change strategy



# Goal F · Stakeholder Engagement

19. Optimize Agency communications program



20. Redesign Agency website



21. Conduct water supply reliability outreach program



# Goal G · Fiscal Responsibility

22. Develop a long-range finance strategy



23. Track state and federal funding opportunities



24. Continue to effectively manage financial resources





# Water Quality

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## The Zone 7 Standard

Zone 7 continued to provide high quality treated drinking water to over a quarter million residents and businesses, in partnership with our retailers. Our water not only met, but often performed better than state and federal health standards to meet our own more stringent internal water quality targets.

**22,451** Water Tests in 2020

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**5** Lab Staff

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**32** Different analytical methods

In the 2020-2021 fiscal year, we met major milestones in improving our infrastructure in order to maintain our commitment of not only meeting but performing better than regulatory compliance requirements to provide an additional margin of safety and address local concerns for taste, odor, and water hardness with new state-of-the-art facilities for ozonation. Ozone treatment is the technology of choice for disinfecting water, reducing chlorine-related byproducts, and killing even more pathogens than chlorine, making our water cleaner, safer and better tasting – straight from the tap.

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## How Ozone Treatment Works

- 1. Ozone Molecules** · Adding an electric spark to Oxygen (O<sub>2</sub>) creates supercharged Ozone (O<sub>3</sub>) molecules.
  - 2. Why?** · Contaminants in water may include bacteria, viruses, and algal byproducts that impact taste and odor.
  - 3. Injection** · Ozone is injected into the water as a gas at our new ozonation site in the Del Valle Water Treatment Plant. The Ozone destroys taste & odor causing chemicals and algal toxins in the water.
  - 4. Complete!** · Ozonation leaves behind pure, high-quality water, with fewer disinfection byproducts than other disinfectants.
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## Significant Achievements in Water Quality

- Startup of ozone process facility at Del Valle Water Treatment Plant
- Construction of ozone addition and plant upgrades at Patterson Pass Water Treatment Plant



## PFAS: Proactive monitoring and regulatory compliance

Per and Polyfluoroalkyl substances (PFAS), and more specifically Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), are chemicals that are prevalent in the environment, that were once commonly used in many consumer products. These chemicals are considered “contaminants of emerging concern” as they are being detected in ground and surface water throughout the environment. However, because their use is so common, there are multiple paths to human exposure in our everyday lives, not just water. PFAS may be found in food wrappers, carpet, rain jackets, or building materials used in the construction of your home. In short, PFAS are everywhere.

Over the past several years, the science on PFAS and its impacts to the environment and public health have prompted regulatory actions. The USEPA has a 70 nanograms per liter (ng/L) combined Lifetime Health Advisory for PFOS and PFOA and is moving forward with regulatory development for these two PFAS by 2024.



The California State Water Resources Control Board has issued drinking water advisory levels for three PFAS (including PFOS and PFOA) so far and is pursuing advisory levels for six additional PFAS found throughout the state. The State Water Board is also in the process of developing Public Health Goals (PHGs) for PFOA and PFOS, which is the first step in establishing Maximum Contaminant Levels (MCLs) for these PFAS. Final PHGs are expected summer 2022 and once finalized, it will be approximately 2 to 3 years to set Maximum Contaminant Levels (MCLs).

## PFAS: Proactive monitoring and regulatory compliance

PFAS	Notification Level	Response Level
Perfluorooctanesulfonic acid (PFOS)	6.5	40
Perfluorooctanoic acid (PFOA)	5.1	10
Perfluorobutanesulfonic acid (PFBS)	500	5,000

\*When a contaminant is found at concentrations greater than its advisory level, certain notification requirements and recommendations apply.

Zone 7 has been proactive in monitoring for PFAS in water supplies well before any requirements took effect because we know PFAS tend to accumulate in groundwater and are commonly found in groundwater sources throughout the developed world. Fortunately, there have been no detections of PFAS in our imported surface water supplies, which make up the majority of the Tri-Valley region's water. In addition, two of our ten groundwater wells have not had any detections of PFAS either. However, eight groundwater wells have had some detection levels and one of the affected wells (Mocho 1) has been taken out of service and designated as a standby well for emergency use only. Water from affected operating wells are blended and/or treated at existing facilities so they fall below the applicable Response Levels before distribution, ensuring that water delivered to our customers meets our high standards.

In addition, Zone 7 completed a PFAS Treatment Feasibility Study in summer of 2020 and is in the process of planning and designing a new PFAS treatment facility at the Chain-of-Lakes (COL) wellfield to ensure compliance with MCLs for PFOA and PFOS in 2024.

Zone 7 also completed a PFAS Potential Source Investigation Study in December 2020 to assist in characterizing the extent of PFAS across Tri-Valley's groundwater basin and to identify potential sources of contamination. At this time, there is no indication of a single source for this contamination, because of the widespread prevalence of PFAS in thousands of consumer products and because there are no known local manufacturing sites.

Currently, Zone 7 is working on developing a groundwater contaminant transport model to further investigate how the PFAS plume could be moving in the groundwater basin under various operating scenarios and PFAS management tools.

The safety of our community's water supply is our number one priority, and our community can be assured that all water delivered to our customers is below Response Levels.

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## Zone In On What You Can Do

Source water protection for surface water is everyone's responsibility! You can help protect our surface water by disposing of trash properly and reporting spills, ensuring our waterways stay clean and free of pollutants.



# Water Reliability

Focusing on the long-term needs for the Tri-Valley



# How does water get to Zone 7?

Zone 7's Total Water Supply is made of three major sources:

## **Imported surface water:**

The majority of our water, approximately 70% is imported into the Tri-Valley through the State Water Project. Our water begins its journey in the Sierra Nevada where melted snow makes its way into Lake Oroville, one of the largest reservoirs in the state. After being released through the Lake Oroville Dam, water flows along Feather River, into the Sacramento River and to the California Delta. From there water is pumped into the South Bay Aqueduct where it travels another 40 miles into the Tri-Valley. Most of this imported surface water is used as needed and a small amount is sent to storage.

## **Local water:**

Our local water supply is made up of groundwater, rainfall into our local reservoir at Lake Del Valle, and other sources such as recycled water. Our groundwater basin provides approximately 10% of our water in an average year. This is our water “savings account” used to supplement our imported water supplies as needed. Rainfall goes directly into the Del Valle Reservoir or through drainage basins to recharge the Livermore Valley Groundwater Basin. We also use some of our imported water to recharge the basin, when it is available.

## **Stored water:**

Stored or “banked” water is an exchange system we have with our neighbors. Zone 7 has “storage space” in San Luis Reservoir through the State Water Project and in Kern County's Semitropic and Cawelo water banking systems. When we need to “cash-out” our banked water, we take the additional water from our imported State Water Project sources, reducing the amount in our downstream bank accounts.

# Water Reliability Project Updates

## Los Vaqueros Reservoir Expansion

up to **20,000**  
**acre-feet** of  
water storage



Zone 7 continued to invest in the Los Vaqueros Reservoir Expansion Project. The project seeks to expand the existing reservoir to a capacity of up to 275,000 acre-feet. This project is located in Contra Costa County and will serve as a local storage facility that will increase water supply reliability in the Bay Area. This year, the project made advancements in environmental planning, design and engineering, and securing funding. If this project were online during a critically dry year like this year, Zone 7 would have more operational flexibility and more water available from storage to supplement low supplies.



## Sites Reservoir



**10,000 acre-feet** of  
new water supply and  
storage per year for Zone 7

Zone 7 continued to invest in the Sites Reservoir Project. The project seeks to construct an off-stream reservoir in Glenn and Colusa Counties, providing up to 1.5 million acre-feet of storage. The Sites Reservoir will capture excess flood flows from the Sacramento River without damming a river or stream. The project would provide new water supply, new storage capability, and ecosystem benefits - all of which are important factors for protection against climate change. This year, the project made advancements in environmental planning, evaluating the “right-sized” project, and refining cost estimates. If this project were online during a critically dry year like this year, nearly one million acre-feet of additional water would be available to project participants.

# Significant Achievements in Water Reliability

## 2020 Urban Water Management Plan



Every 5 years, Zone 7 completes an Urban Water Management Plan (UWMP). The UWMP describes the availability and reliability of Zone 7's water supplies and current and projected water use. The UWMP lays out supply and demand projections for the next 20 years under normal and drought conditions, and thus serves as an important long-term planning tool for Zone 7 and a means of communicating to the public.

## 2020 Tri-Valley Municipal and Industrial Water Demand Study

Zone 7 completed the 2020 Tri-Valley Municipal and Industrial Water Demand Study (Demand Study) to better plan for long-term reliability for the Tri-Valley region. The Demand Study was a regional effort and included close collaboration with Zone 7's retailers. A land-use based tool for projecting municipal and industrial water demands at buildout was developed to support the Demand Study. Zone 7 will use this tool to continue updating the region's water demand projections as we move closer to buildout, which will inform investments in water supplies and infrastructure.



# Flood Protection

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At Work Maintaining Your Flood Protection

**17,220 feet** of access road  
and drainage inspected and  
repaired

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**5,700 feet** of concrete-lined  
channel cleared of  
vegetation and debris

**210,720 feet** of open channel mowed to reduce fire and public safety hazards

## 2017 Flood Recovery Continues

Zone 7 continues to repair flood protection sites damaged during the record-breaking 2017 storm season which brought significant rainfall and localized flooding throughout the Tri-Valley. Our flood protection system saw damage to channel banks, concrete structures, and maintenance roads, threatening utility lines and infrastructure.

Our team made significant progress in 2021 repairing fourteen bank slide sites.

Since February 2017, 98 of the 208 originally identified bank slide sites have been successfully repaired in Zone 7's Rehabilitation of Flood Control Channels, Phases 1, 2 and 3 and by the U.S. Army Corps of Engineers. With the 9 left to-be-repaired sites in Phase 3, this will bring the total repaired sites to 107. There are 101 sites that were removed from the field-documented 208 potential issues, as these were incorporated into Zone 7's routine maintenance program.

# Goat in the Zone



After a successful pilot program, Zone 7 began conducting goat grazing activities at a limited number of sites to supplement our flood and fire preparedness efforts. The goats eat overgrown vegetation that gets dry in summer months and is at risk for fire, and blocks the flow of water in flood channels during the rainy season. These helpful goats are a great addition to our preparedness efforts and a helpful addition to our Maintenance Program. The goats “work” along select access roads and channels to control the growth of herbaceous vegetation and invasive weeds, reduce fire fuel loads, and maintain grassland habitat for special-status species. In total, seven different sites were grazed this year, totaling approximately 117 acres.

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## Significant Achievements In Flood Protection Program

### Continued Routine Maintenance Program

As a part of the Routine Maintenance Program (RMP) for flood protection facilities, staff continued pursuing programmatic permits from California Department of Fish and Wildlife, Regional Water Quality Control Board, and the United States Army Corps of Engineers.

### Bank repair planning

Staff prioritized district wide bank repairs according to level of risk presented by each site and continued to plan for an additional 4 repairs in 2022. Flood



protection staff regularly monitor the sites pending repair for any changes in condition. Permits are already secured.

## **Arroyo Mocho Stanley Reach Bank Stabilization Project progress**

The Arroyo Mocho Stanley Reach Bank Stabilization Project was authorized for construction in April 2021 and began in May 2021. At the end of June, approximately 50% of the channel restoration had been completed. Work is ahead of schedule to be completed in 2021, instead of 2022.

## **Awarded US Geological Survey grant**

In the Fall of 2020, Zone 7 applied to the US Geological Survey (USGS) 3D Elevation Program for a grant to acquire high-definition elevation data and gather important topography information of our flood channels. Zone 7 was awarded a grant in early 2021 and will work in collaboration with the USGS to share data, LiDAR acquisition and processing costs.

## **The Bank Stabilization, Arroyo Del Valle Project**

The team continued work on the the bank stabilization of Arroyo Del Valle and restored 220 linear feet of levee and added 150 ft of geogrid support.

**6** horizontal drains installed

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**1** headwall repaired

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**5** biotechnical repairs



# Maintenance Updates

## Debris clean-up

Our maintenance staff coordinated with the City of Livermore and Caltrans for several creek cleanups along the Arroyo Las Positas in Livermore within portions of the channel that have become homeless encampments. We collaborated with local service providers including Block by Block, CityServe, Monthly Miracles, and Open Heart Kitchen to provide services to the unsheltered individuals living within the Creek. Approximately 46 tons of waste and debris was removed from the creek and disposed of in a safe and respectful manner.

## Outfall and drain pipe assessment

Staff began an asset inventory and condition assessment of all outfall structures and drain pipes within Zone 7 owned channels using ESRI Survey123 application. The location and condition of each outfall pipe and structure was documented and given an overall condition assessment. To date, 582 outfall structures have been documented within Livermore, Pleasanton, and Dublin. Staff is now collaborating with the cities to coordinate maintenance activities.

## In-channel structure maintenance

The team performed routine maintenance including minor concrete repair, crack sealing, and outfall repair on in-channel structures along Pleasanton Canal, Old South San Ramon Creek, Tassajara Creek, and Alamo Canal.

## Vegetation management

Routine vegetation management work included trimming, pruning, and removal of vegetation and woody debris along access roads, fence lines and in-channel throughout the service area.

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## Zone In On What You Can Do

Waiting for a flood? We can hope for rain and be prepared. Get year round tips for staying flood ready at [zone7water.com/floodready](https://zone7water.com/floodready).



# Drought and Conservation

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## Saving water in a historic drought

Northern California is experiencing an unprecedented drought. While Zone 7 strategically plans for dry years, storing excess reserves in wet years in our local groundwater basin and in Kern County storage, we cannot make it through drought periods without the help of our community. Conservation is an important component to weathering droughts that are now a way of life for Californians.

Through new and improved water conservation and rebate campaigns, we're working to ensure our community has the resources and information it needs to ensure that no drop of water is wasted.

**40%** of average rainfall received as of June 2021

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**2,177** visitors to new conservation and rebates section of website

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**24,888** Water Wise Wendy video views

## Water Wise Wendy

In March, we launched Water Wise Wendy, a campaign focused on leak messaging aligned with Fix-a-Leak Week to encourage our community to save water by finding and fixing leaks. The effort shifted to outdoor conservation opportunities in spring and summer months when outdoor use is highest.



# Water Wise Infographics

To help engage the public in understanding the severity of the drought, we created easy-to-read infographics on the status of our rainfall and water storage. The infographics were updated monthly and shared on social media to encourage the Tri-Valley community to focus on being water-wise during this historic drought.



## Rebates

Zone 7 continued to offer three separate rebates to incentivize water-wise lifestyles. During the 2020-2021 fiscal year, we were able to provide the following water-saving rebates to the Tri-Valley community:

**148** High-efficiency Clothes Washer rebates



## 4 Water-Efficient Lawn Conversion rebates

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140 Weather-Based Irrigation Controller rebates

# Tri-Valley Water-Wise Gardening



**up to 60%** water savings over grass lawns

Did you know the biggest water-waster in most homes is a thirsty grass lawn? That greedy grass can use up to 60% of a household's water! By replacing grass with native, drought resistant landscaping, you can cut your water-use in half and enjoy a beautiful, colorful water-wise yard. Our custom website has plenty of ideas for you to get started! Visit [www.trivalleywaterwise.com](http://www.trivalleywaterwise.com)



# Groundwater

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## Sustainably managing our basin

Our groundwater basin is a valuable resource for the Tri-Valley. As the designated Groundwater Sustainability Agency (GSA), recognized in the Sustainable Groundwater Management Act (SGMA), Zone 7 proactively manages the groundwater basin to ensure it remains a sustainable source of water for future generations. It is a requirement of the state that we prepare and implement a Groundwater Sustainability Plan (GSP). Because the groundwater basin has been monitored since the early 1960s and sustainably managed for over 45 years - since 1974, Zone 7 was allowed by the Department of Water Resources (DWR) to submit an Alternative GSP in 2016. This was one of only nine Alternative GSPs that were accepted by DWR across the state, a big win for the Tri-Valley and a testament to proactive and sustainable groundwater management that is central to the Zone 7's mission and history.

Our focus in 2020-2021 fiscal year has been implementation of the half million-dollar grant received in March 2020 to fund the 2021 update to the 2016 Alternative GSP, specifically, expanding our knowledge of the fringe and upland basins - the unincorporated areas, hills, and recharge areas on the outlying areas of the basin and how they relate to the main basin. This includes updated cross-sections of the groundwater basin that extend out into the fringe and upland that have been generated during the grant project. Another aspect of the Alternative GSP update was a study that was conducted to identify groundwater dependent ecosystems. This new data increases our understanding of the basin



and promotes better management for the future. This updated Alternative GSP was submitted to DWR for review.

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## Significant Achievements in Groundwater

**\$500,000** in grant funding used to complete the Alternative GSP Update and associated studies

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**240,000 acre-feet** of total groundwater storage maintained

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**14,344 acre-feet** of water pumped from our groundwater wells

## Salt and Nutrient Management Plan

Our groundwater resources team continues to manage basin water quality, including salts and nutrients, to protect the long-term water quality of the Main Basin. With the enactment of Sustainable Groundwater Management Act in 2014, we continue managing groundwater quality as one of the six sustainable management criteria by implementing the Alternative GSP.

## Proactive PFAS management

In our ongoing effort to keep our water safe, Zone 7 implemented proactive PFAS management strategies including conducting a PFAS Potential Source Investigation (Jacobs Engineering, Inc. 2020) and a PFAS and Hexavalent Chromium Treatment Feasibility Study (Carollo, 2020).

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# Groundwater Protection Highlights

**Zone 7** keeps your water clean, safe, and high quality



## Staying abreast of contaminants of emerging concern

PFAS (Per- and Polyfluoroalkyl Substances) are an emerging group of contaminants of concern and regulations are changing. A few PFAS compounds have been detected in several of the municipal supply wells in the Livermore Valley Groundwater Basin. In addition to required quarterly

sampling of supply wells, Zone 7 has been analyzing monitoring well and surface water samples for PFAS compounds. Staff is working closely with the Regional Water Board to help identify potential sources for cleanup to ensure all water is safe to drink before delivery.

## **Issuing and inspecting well permits**

Zone 7 issues permits for any drilling or excavation deeper than 10 feet below ground surface and destruction of existing wells in our service area. Inspections of the drilling sites are also performed after issuing permits. This permitting and inspection allow staff to ensure that wells and boreholes are properly constructed, and abandoned boreholes are properly backfilled. This also allows for the protection of the groundwater basin water quality by preventing migration of contaminants through improperly constructed or abandoned wells acting as conduits for groundwater contamination.

## **Vigilant monitoring through toxic site surveillance**

This program coordinates with other County and State agencies to monitor information on ongoing and historic contamination sites such as manufacturing sites, petroleum storage, and solvents to ensure groundwater contamination is cleaned up by the responsible parties. We tracked more than 50 contamination cases in our service area during 2020-2021 including case closures that have been cleaned up to state standards.

## **Supporting the community through well owner voluntary monitoring program**

Zone 7 supports our network of well owners across the basin by providing staff assistance to sample and analyze for general minerals and metals. The lab results and interpretations are shared with well owners.



# The Tri-Valley Watershed

## Regional collaboration for a joint ecosystem

Zone 7 helps protect our watershed with the help of many partners throughout Tri-Valley given our watershed is a regional resource. The agency is active in many groups that collaborate on watershed enhancement, share information, and coordinate actions for a healthier watershed.

## Living Arroyos

aligning the **community vision** of the watershed in an award-winning volunteer program



Living Arroyos is a unique volunteer opportunity that gives participants hands-on experience restoring creek banks with native vegetation while learning about local ecology. The program employs college students and young professionals as well, providing field learning for stream management techniques.

Zone 7 partnered with the City of Livermore, the City of Pleasanton and the Livermore Area Recreation and Park District again this year to continue these important watershed stewardship activities and adjust to socially distanced activities in the wake of new public health guidelines. This strategic partnership provides many community benefits including cost sharing, leveraging unique resources, aligning the community vision of the watershed, and achieving long-term management goals. Though volunteer events were put on hold due to the pandemic, the team continued their valuable work tending to projects on the ground and are looking forward to welcoming volunteers again next year.

Living Arroyos was recognized by CASQA for the 2020 CASQA Outstanding Sustainable Stormwater Project/Program Award. The City of Livermore nominated Living Arroyos/Adopt a Creek Spot Program for consideration and the CASQA Awards committee selected Living Arroyos as a winning program.

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## Alameda Creek Fisheries Restoration Workgroup



**habitat restoration,**  
population recovery,  
and monitoring for the  
steelhead trout


Zone 7 is one of the core funding partners of the Alameda Creek Fisheries Restoration Workgroup, a collaborative effort among many parties focused



on water flows and habitat restoration to help steelhead trout thrive in the Alameda Creek. The group's "Alameda Creek Population Recovery Strategies and In-Stream Flow Assessment for Steelhead Trout" work included an assessment of hydrologic and habitat conditions, identification of strategies for population recovery, and monitoring. Zone 7 staff currently chairs this workgroup, which has shifted recently to establishing monitoring goals as well as considering jump-starting a steelhead population in the watershed in light of a major fish passage project by Alameda County Water District at their facilities on Alameda Creek which will facilitate movement of anadromous species like steelhead as soon as 2022.

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## Alameda Creek Watershed Forum



supports a **healthy  
and sustainable**  
Alameda Creek  
watershed

Zone 7 serves on the planning committee of the Alameda Creek Watershed Forum, a voluntary, non-regulatory stakeholder group that supports the community's interest in protecting and achieving a healthy and sustainable Alameda Creek watershed. Stakeholders include watershed organization members, watershed landowners and land managers, residents, and others. The Forum typically hosts an annual "State of the Watershed" conference and a technical symposium. The group also puts out the "Watershed Lookout" up to four times per year which features 2-3 articles about the latest restoration, research, or stewardship activities in the watershed, and



a spotlight on a watershed stakeholder who has a recent accomplishment that demonstrates inspired efforts towards improving watershed health. The Forum shifted to a series of “State of the Alameda Creek Watershed” webinars during the pandemic featuring topics such as Horizontal Levees, Unraveling the Mystery of Sycamores, and Fish Passage Projects in 2021.

## Arroyo de la Laguna Agency Collaborative



seeks to understand  
**scientific data and goals**  
that benefit residents &  
stakeholders

The Arroyo de la Laguna Agency Collaborative includes agencies and municipalities with facilities that drain into the arroyo and the greater Alameda Creek Watershed including the Alameda County Flood Control and Water Conservation District, Alameda County Water District, Contra Costa County Flood Control and Water Conservation District, San Francisco Public Utilities Commission, Zone 7, the Cities of Dublin, Livermore, Pleasanton, and San Ramon, and the Alameda County Resource Conservation District (RCD) and Natural Resources Conservation Service (NRCS), as much of their work is in or around our waterways. The Collaborative seeks to better understand the scientific and engineering data that is available along with what goals for the arroyo will benefit the stakeholders and local residents. Zone 7 serves as unofficial facilitator of the Collaborative, and hosts quarterly meetings/calls.



# Infrastructure

## Investing in a strong and sustainable system

Zone 7 keeps water flowing to the Tri-Valley through an extensive distribution network that relies on both long-term capital investment projects and routine maintenance, upkeep, and prevention to keep it running smoothly. To deliver high-quality water, we have made major investments in ozone treatment at both of our surface water treatment plants a priority for the Zone 7 Capital Improvement Program because ozone is the best alternative to chlorine.



We completed the Del Valle Water Treatment Plant (DVWTP) Ozonation Project in the fall of 2020, and the ozone system has been operational for the majority of the 2020-2021 fiscal year.

Zone 7 continued construction of ozonation treatment facilities to improve quality, taste and odor at the aging Patterson Pass Water Treatment Plant (PPWTP) this year. The project will also increase and stabilize the treatment plant's production capacity from 12 to 24 million gallons per day, as well as add clearwell storage, new filters, renewal, replacement and rehabilitation of aging components of the plant. Decades in the planning, this project highlights the agency's efforts in long-term planning, fiscal responsibility, and commitment to water quality and public health. The new facilities are expected to be complete and operational in 2022.

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## Significant Capital Improvement Projects

Each year, Zone 7 invests in a variety of capital improvement projects to keep our water treatment and delivery systems running optimally. Here are some of the key projects completed this year that will keep our infrastructure operating smoothly for years to come.

### DVWTP Roadway/Parking Lot and Post-Ozonation Project



**repairing** chemical delivery access roads

Currently in construction, this project will repair the parking lot and repair the access road for more efficient chemical deliveries. This project is needed to improve operational flexibility and reliability of the treatment plant and also includes modifications needed for filter backwash pumps, improvements to protect against system overflows, chemical tank repair, and a new polymer system.

## Mocho Groundwater Demineralization Plant Concentrate Conditioning System

**reduce the frequency**  
of costly upkeep  
procedures



This project provides a sulfuric acid storage and feed system to help condition the demineralized concentrate removed from the groundwater. This helps to minimize scaling inside the discharge pipeline and reduce the frequency of costly scale removal and cleaning activities. The project is currently in design and construction is expected to begin in time for the system to be complete and operational in 2023.

## North Canyons HVAC System Replacement Project



**sustaining** Zone 7's communications network, business operations, and public meetings

This project is to replace the outdated, inefficient, and high maintenance HVAC system at Zone 7's North Canyons office. This office is integral for Zone 7 business operations and public meetings. The office is also one of the facilities that serves as part of Zone 7's communications network. The project is currently in construction and is expected to be complete and operational by the spring of 2022.

## Chain of Lakes PFAS Treatment Project

preparing to **keep your water safe** for generations to come





Currently in planning and design, this project is to construct a PFAS treatment facility at Zone 7's Chain of Lakes Well No. 1 site so that all of the Chain of Lakes wells can meet regulatory requirements for operation. The treatment is to remove PFAS primarily through media adsorption so that groundwater from the Chain of Lakes wells is safely below the future PFAS maximum contaminant levels being established by the State of California.

## **Valley Pump Station Project**

This project is being accelerated as a drought emergency project to be completed by the fall of 2022. The pump station is to increase Zone 7 water system reliability during times of drought and emergencies. When groundwater from the production wells located in the western area of the water system is needed in the eastern area, water can be pumped more easily while taking stress off the production well facilities.





# Financial Update

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## Fiscal Year 2021 wrap-up

Zone 7's overall financial outlook remains positive with net increases in assets due to major investments in infrastructure. Additionally, our financial team continues to win awards for outstanding work in transparency and reporting, maintaining the highest commitment to responsible fiscal management

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## Significant Achievements in Responsible Fiscal Management

### **Excellence in Financial Reporting**

Zone 7 earned a Government Finance Officers Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting for its FY 2019-20 Annual Comprehensive Financial Report.

## **Planning for future pension needs**

On February 17, 2021, the Board authorized the establishment of an IRS Section 115 Trust to help prefund future pension liabilities. The IRS Section 115 Trust will address long-term pension liabilities by prefunding future pension payments.

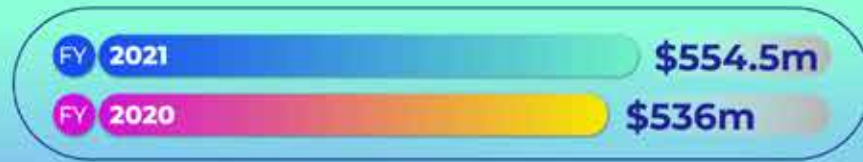
## **Continued AA+ Bond Rating**

On June 24, 2021, Fitch Rating affirmed the Livermore Valley Water Financing Authority, Water Revenue Bonds, 2018 Series A rating of 'AA+'.

## **Clean external audit**

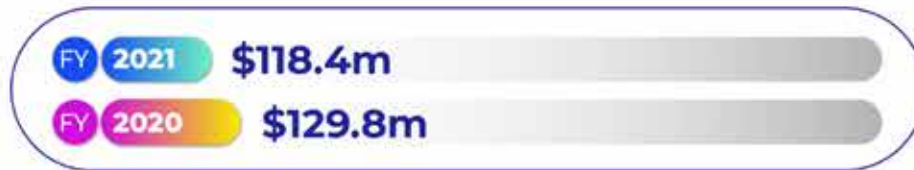
For FY 2021, the Agency's external auditors expressed an unmodified "clean" opinion that the Agency's financial statements are fairly stated in conformity with accounting principles generally accepted in the United States.

## Net Position **\$554.5m** +\$18.5 million (+3.5%) ↑

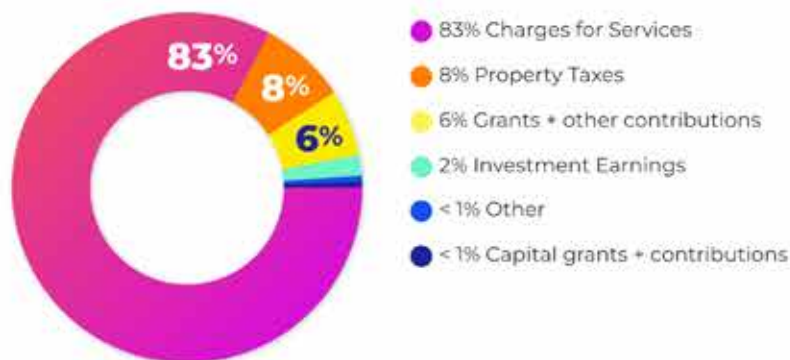


Net position increased by \$18.5 million or 3.5% from \$536 million to \$554.5 million.

## Total Revenue **\$118.4m** -\$11.4 million (-8.8%) ↓



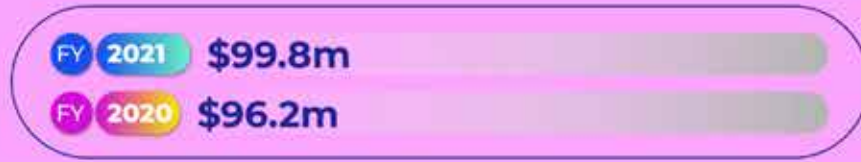
### \$118.4M Agency-wide Audited Actual Revenue FY 2021



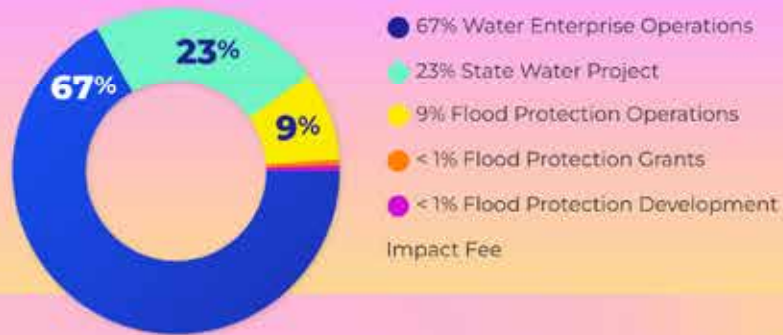
Total revenues decreased by \$11.4 million or 8.8% from \$129.8 million to \$118.4 million mainly due to a decrease in charges for services of \$6.5 million from the previous year. Construction and development activities in the service area have slowed due to the COVID-19 pandemic. However, the decrease in charges for services was offset by an increase in water sales and an increase in property tax revenue.

## Total Expenses \$99.8m

+\$3.6 million (+3.7%) ↑



### \$99.8M Agency-wide Audited Actual Expenses FY 2021



Total expenses increased by \$3.6 million or 3.7% from \$96.2 million to \$99.8 million mainly due to an increase of \$5.4 million for the Water Enterprise projects during the fiscal year. The increase was offset by a \$1.2 million decrease in the State Water Project pass-through payments to the California State Department of Water Resources (DWR) and a \$0.6 million decrease in Flood Protection projects during the fiscal year.

## Capital Assets \$330.1m

+\$30.1 million (+10%) ↑



Capital assets increased by \$30.1 million or 10% from \$300 million to \$330.1 million mainly due to the construction of the Del Valle Water Treatment Ozone Plant and construction in progress of the Patterson Pass Water Treatment Plant ozone and upgrade projects.



# Essential Workers

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Delivering quality, reliability and safety

The dedication and commitment of our public servants at Zone 7 has never been clearer. Despite navigating uncharted territory during the global pandemic for the past two years, their steadfastness in delivering on our commitment to provide clean, safe, and reliable drinking water has not wavered. Our water treatment plants continue to produce efficiently, important maintenance is completed as scheduled, finances are managed prudently, water supply planning, which is so critical during this historic drought, is modeled and continually refined, and engineering and construction projects continue





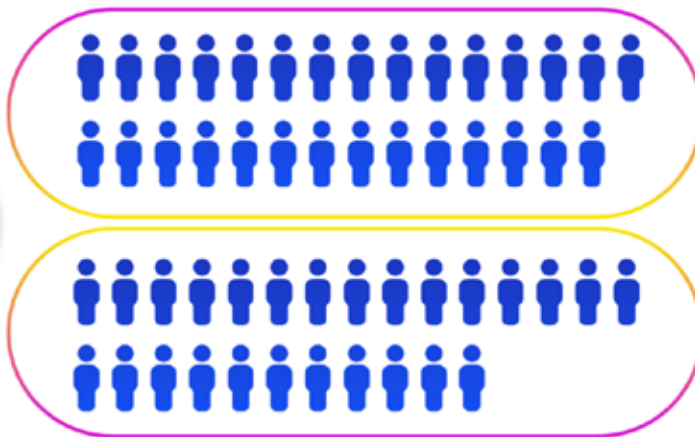
## Board of Directors & Office of the General Manager • 15



Zone 7 administration guides our long-term strategy and helps lead our organization with the help of legal counsel, public outreach and administrative support.

## Water Production • 55

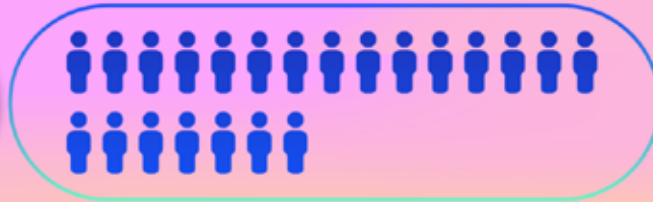
Operators • 29 | Maintenance • 26



Water operators work in shifts to ensure 24 hour coverage at our two water treatment plants. Maintenance workers range from mechanics to electricians to safety techs who keep all equipment running smoothly and the flood protection system safely maintained.

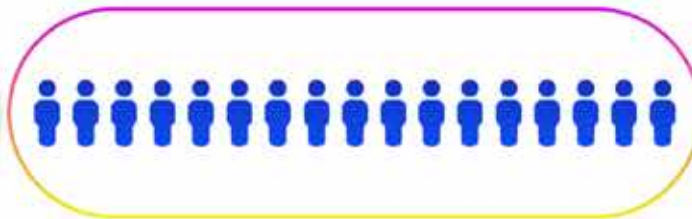


## Engineering • 22



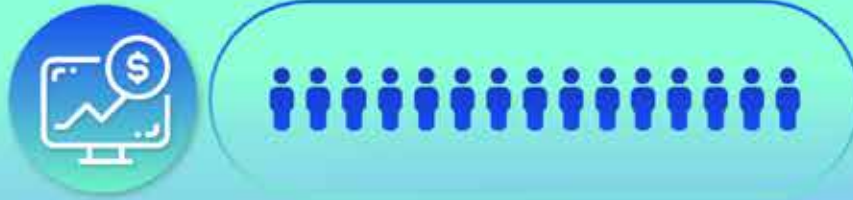
A team of flood control, water supply and water quality engineers ensure our infrastructure now and in the future is top-notch.

## Integrated Water Resources • 17



A team of engineers, geologists and planners strategically and sustainably manage our water supply system.

## Finance • 15



This department responsibly manages our financial and human resources to ensure a strong future for Zone 7.

Working together, our team has not only ensured that the important work at Zone 7 continues through the pandemic, but they have found ways to remain strong and resilient despite the challenges of working remotely as our office staff have done or with strict safety precautions for those that must be out in the field each and every day.

We give special thanks to  
our essential workers.



# Connecting with the Tri-Valley Community

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## Proactive Communications and Outreach

Zone 7 has made tremendous strides in improving community engagement and outreach efforts, in alignment with the agency's Strategic Plan goals and the updated strategic communications plan put into place last year. As outlined in the plan, the agency has been proactively addressing outreach needs by making information easier to understand, more readily accessible, and by actively delivering important information into the community. Key examples of those efforts include the newly designed website, the launch of an educational water quality campaign, a flood preparedness educational series and a new water conservation effort, each outlined below.

**210%** Facebook Page like increase from 2020

**27,729** Total website visitors

**39** Newsletters sent

## Significant Achievements in Community Engagement

### Redesigned Website

Zone 7 debuted a newly redesigned website at zone7water.com in June of 2021 featuring a vibrant new design with upgraded cybersecurity protocols, entirely new site navigation structure and refreshed copy, photography and other content to make it easy for the public to find information.





## Wondrous World of Water

The agency launched The Wondrous World of Water, a new water quality educational campaign with the release of the July 2020 annual water quality report, followed by the release of infographics, videos, animated GIFs and other materials that helped make the complex world of water quality much easier to understand.



## Flood Ready Freddy



To increase community-wide flood preparedness, Zone 7 kicked-off California's Flood Preparedness Week by introducing emergency preparedness guru Flood Ready Freddy with a video series of flood preparedness tips!

## Water Wise Wendy

The agency's new water conservation series features Water Wise Wendy, little sister to the familiar face of Flood Ready Freddy, with a little more flair and lots more costumes 😊, she is always nearby with a water-saving tip to save the day—or at least some water!





# Kid Zone

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## Teaching the next generation about our most precious resource

The dedication and commitment of our public servants at Zone 7 has never been clearer. Despite navigating uncharted territory during the global pandemic for the past two years, their steadfastness in delivering on our commitment to provide clean, safe, and reliable drinking water has not wavered. Our water treatment plants continue to produce efficiently, important maintenance is completed as scheduled, finances are managed prudently, water supply planning, which is so critical during this historic drought, is modeled and continually refined, and engineering and construction projects continue as planned.



**253** virtual presentations  
used

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**6,380** estimated student  
participants

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**8** virtual standards-based  
lessons offered

Lessons in the program are aligned with the Next Generation Science Standards for K-12 content, created, and taught by certified educators. Funded by Zone 7 Water Agency and supported by its Board of Directors, the program invests in youth water system education and appreciation.

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## Significant Achievements in Educational Efforts

### **Hosted digital scavenger hunt for families**

During the summer, the Kid Zone team hosted a fun opportunity for residents and families to step away from their screens and visit water-wise landmarks in the cities of Livermore, Dublin and Pleasanton.

Water-wise landmarks included parks and fountains that used recycled water and water-wise gardens!

## Encouraged water-wise education

In honor of Earth Day, the Kid Zone team shared a water-wise online puzzle that encouraged students to think about our most precious resource, water! The first 50 people who completed the puzzle won a Zone 7 reusable water bottle.

## Distributed water themed prizes

The Kid Zone team has curated a variety of water-themed prizes that help deliver important water conservation messages to the Tri-Valley community. These items are distributed at events and were used as prizes for the winners of various school and community events including:

- Hart Middle School Poetry Contest
- City of Livermore Poster contest
- Livermore Science Odyssey

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# 2021 Water Awareness Poster Contest Winners



Stella Marcel, Sunset Elementary • 1st Place, 3rd Grade



Utsha Dey, Altamont Creek Elementary • 2nd Place, 3rd Grade



Prabveer Singh Sarang, Emma C. Smith Elementary • 3rd Place, 3rd Grade



Fiona Haberman, Sunset Elementary  
· Honorable Mention, 3rd Grade



Abigail Bodero, Joe Michell K - 8  
· Honorable Mention, 3rd Grade



Yul Kim, Rancho Las Positas  
Elementary · 1st Place, 4th Grade



Jacob Ryan, Croce Elementary · 3rd  
Place, 4th Grade



Selina Sharma, Emma C. Smith  
Elementary · 2nd Place, 4th Grade



Stacy Haupt, Croce Elementary ·  
Honorable Mention, 4th Grade



Angelina Whiting, Marylin Avenue  
Elementary · Honorable Mention, 4th  
Grade



James Storm, Croce Elementary ·  
Honorable Mention, 4th Grade



Kayla Dippo, Sunset Elementary · 1st  
Place, 5th Grade



Avery Lockhart, Croce Elementary ·  
3rd Place, 5th Grade



Madilynn Sarasua, Our Savior  
Lutheran · Honorable Mention, 5th  
Grade



Angeline Roy, Altamont Creek · 2nd  
Place, 5th Grade

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## Zone In On What You Can Do

Interested in educational resources and fun activities that help build a new generation of water champions? Visit [www.zone7water.com/kid-zone](http://www.zone7water.com/kid-zone) for plenty of options categorized by grade level.





Zone 7 Water Agency delivers water quality, reliability and flood protection to our own, higher standards of excellence because we believe the Tri-Valley community deserves nothing less. We deliver high-quality drinking water that not only meets, but often performs better than, regulatory standards and invest in diversifying our water supply so our community can rely on us to provide the water they need.

As the Tri Valley region's water wholesaler, we work collaboratively with our water retailers in the City of Livermore, City of Pleasanton, the Dublin-San Ramon Services District, and California Water Supply to ensure the people of Eastern Alameda County have exceptional water and flood protection services.

**Zone 7 Water Agency**

100 North Canyons Parkway  
Livermore, CA 94551

(925) 454-5000 • [www.zone7water.com](http://www.zone7water.com) • @Zone7Water