



2017

Annual Report

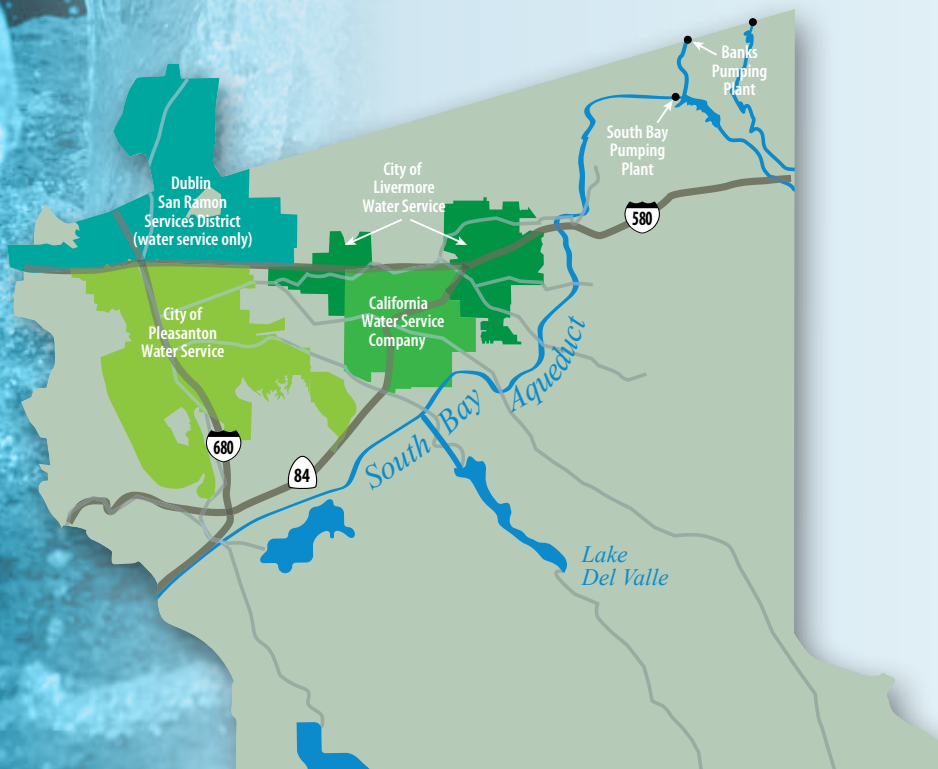


Our Mission

Zone 7 Water Agency is committed to providing a reliable supply of high-quality water and an effective flood-control system to the Livermore-Amador Valley. In fulfilling our present and future commitments to the community, we will develop and manage our water resources in a fiscally responsible, innovative, proactive and environmentally sensitive way.

Vision Statement

To be recognized as the platinum standard water and flood control district in which to live, work and do business by enhancing the quality of life, economic vitality and environmental health of the communities we serve.



Our Values

Open and Transparent

The Board's meetings and communications shall be open and public, except when the Brown Act authorizes otherwise.

Customer Service

Our commitment to the community requires prompt, respectful, and courteous relations with our customers, both internal and external, as well as pursuing community partnerships and collaboration with other area public agencies when beneficial to the public.

Integrity

We practice the highest ethical standards and maintain open, honest communications at all levels of the organization at all times.

Fiscally Responsible

We will operate in a productive, cost effective, transparent, and efficient manner to ensure sound financial stability.

Environmentally Sensitive

In carrying out our mission, we are dedicated to preserving and enhancing the environment while complying with regulations.

Innovative/Proactive

We encourage innovation, creativity and ingenuity, seeking constant improvement and keeping up with the latest economical technologies and management practices.

Safety

We are committed to public safety and maintaining a healthy work environment for employees. We work safely and provide safe products and services.

Employee Development

We foster a respect for diversity and equality, a spirit of performance-based accountability, and productivity along with personal and professional growth for all team members so as to achieve excellence through the collective energy that comes from a work environment where each employee can flourish and succeed to their highest potential.

Board of Directors

A Message from the President



John Greci

President, FY 2017-18

A lot can change in a year! On the heels of a four-year drought, 2017 brought rain. And more rain—setting the record for the wettest year in California on record!

Zone 7 prepared extensively in advance of the storms, repairing creek banks, removing debris, and inspecting flood control facilities.

Despite those preparations,

the severe storms and unprecedented water volume caused widespread damage that will take many years to repair. Localized flooding throughout the Tri-Valley caused bank erosion, damage to outfall structures and maintenance roads, and sedimentation—leading to declarations of both local and state States of Emergency. Throughout the season, Zone 7 monitored the damaged sites and coordinated with the Governor’s Office of Emergency Services and the Federal Emergency Management Agency (FEMA) to prioritize repairs and seek out sources for fund assistance.

The wet weather also meant that Zone 7 was able to deliver 100 percent of its retailers’ requested water supplies in 2017 without having to tap into banked water. Excess supplies were stored in both local and out-of-area groundwater storage banks for use at a later time; replenishing supplies that were called upon during the drought.

The lesson we should learn from the extreme shift in weather from 2015 to 2017 is that Zone 7 cannot get complacent about developing and maintaining reliable water supplies. Zone 7 imports about 70-80% of its water from the State Water Project, but pumping capacity of the existing system has diminished significantly in the last 30 years due to regulatory restrictions and increasing maintenance-related outages/breakdowns in the 50-year-old infrastructure. Supply reliability is expected to decrease further due to changes in snowpack

and frequency and intensity of precipitation related to climate change. To address these challenges, Zone 7 was at the frontlines to move the California WaterFix Project forward, which will provide infrastructure upgrades to the current through-Delta conveyance system. Zone 7 also continued to explore the feasibility of other water sources to supplement its water supply, including desalination and potable reuse. Potable reuse would take treated wastewater, purify it, and then store it in the groundwater basin or a reservoir. Having alternative supplies to tap into means that Zone 7 has more flexibility and greater supply reliability in the future.

In addition to exploring water supply options, the Agency also made significant progress towards improving its water treatment facilities during 2017. Zone 7 experienced the worst taste and odor event in its history in the summer of 2017 due to algae blooms in source water supplies during the warmer months. While completely safe to drink, the taste and odor is annoying and treating with powdered activated carbon simply isn’t effective enough at addressing the issue. In 2016, Zone 7 accelerated its plans to add ozone treatment to both of its treatment plants, which is a major capital improvement project that will address taste and odor issues as well as other emerging water quality concerns such as cyanotoxins.

As important as these improvements are, they come at a significant cost. Zone 7 does not take this expense lightly. Zone 7 staff worked closely with the Board of Directors to determine the best way to pay for the upgrades. In the end, the Board of Directors determined that Joint Powers Authority (JPA) Revenue Bonds were the best option to provide the debt financing for the addition of ozone treatment to the existing water treatment plants. Revenue bonds will also ensure that the projects can move forward without risking costly delays. Zone 7 formed the Livermore Valley Water Financing Authority and assembled a financing team to assist with the preparations and issuance of bonds. The first ozone treatment system, at the Del Valle Water Treatment Plant, is expected to be operational in early 2020 and the Patterson Pass Water Treatment Plant ozone treatment system is expected to be operational by the end of 2021.



Sandy Figuers



Jim McGrail



Sarah Palmer



Dick Quigley



Angela Ramirez Holmes



Bill Stevens

Key Accomplishments

Water Supply, Reliability, and Quality

Managing in a replenishing year: With record rainfall in 2017, Zone 7 was able to meet all its retailers' demands. Zone 7 continued to urge the community to be mindful of water use and continue to conserve water wherever possible. The community continued to curb water use but after nearly five years of drought, potable water use was up slightly from 2016. Water use for the region was still down 20% relative to 2013 levels, exceeding the state's average urban water conservation of 15%.

Long-term water supply planning: Zone 7 joined the Sites Project Reservoir Committee to actively engage in the project's development at a participation level of 20,000 acre feet. Sites Reservoir is a proposed new off-stream reservoir located 75 miles northwest of Sacramento, California. Investment, partnerships, and agreements were also put in place to potentially expand the storage capacities of Lake Del Valle and Los Vaqueros reservoirs. Locally, Zone 7 is working with its retailers to

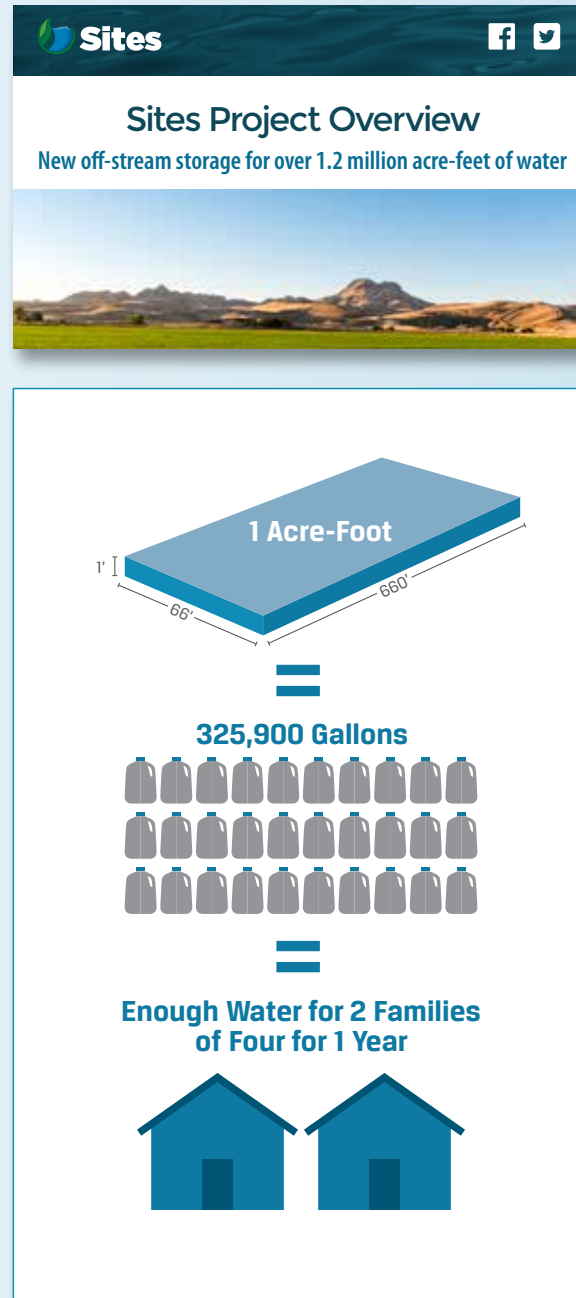
evaluate the feasibility of advanced water treatment for potable reuse. Zone 7 also remained actively engaged in the development of the California WaterFix, a project aimed at improving water supply reliability from the State Water Project (SWP), which provides between 70-80% of Zone 7's supplies. The California WaterFix Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was certified and the Notice of Determination (NOD) executed in July 2017. The Zone 7 Board of Directors adopted a resolution of support for the project in September 2017, authorizing interim funding.

Water quality: All water supplied during 2017 met the regulatory standards set by the state and federal governments and, in almost all cases, the quality was significantly better than minimum standards. To ensure continued high-quality, safe drinking water, Zone 7 took significant steps towards construction of ozonation projects at both the Del Valle and Patterson Pass water treatment plants. Zone 7 also added new analytical capabilities for metal analysis, replaced one older system, and completed a study to evaluate and improve water corrosiveness to insure optimal compliance with the lead and copper rule.



Capital projects: Zone 7 updated its Asset Management Plan (AMP) in 2017. The purpose of the AMP is to proactively plan for, fund, and implement the renewal and rehabilitation of existing water system infrastructure so that Zone 7 can continue to provide high-quality, reliable water deliveries to retailers and customers in the Livermore-Amador Valley. The AMP is typically updated every five years and looks at a forty-year planning horizon. The AMP was incorporated into Zone 7's Ten-Year Water System Capital Improvement Plan (CIP), which was adopted by the Board in October 2017. The CIP outlines the plans for capital projects and programs needed to carry out the mission of Zone 7. Zone 7 also completed significant projects to maintain critical water supply and water quality infrastructure, including renewal/replacement of the sodium hypochlorite system at Hopyard Well No. 6, pump replacement and repair of Mocho Well 1, utility relocations at Chain of Lakes Well 1 to protect against ground movement/settlement, and repair and replacement of a section of Hopyard Pipeline. Zone 7 also initiated design of several multi-year large projects, including the Patterson Pass Water Treatment Plant Upgrades and Ozonation Project, the Del Valle Water Treatment Plant Ozonation Project, and design of electric facilities to reduce energy costs in anticipation of new ozone energy demand.

Sustainable Groundwater Management: The Sustainable Groundwater Management Act (SGMA) is historic legislation which requires local agencies to adopt groundwater management plans, and monitor and manage groundwater resources in a sustainable way. In June 2017, Zone 7 notified the State of California that it accepts the role of Exclusive Groundwater Sustainability Agency for the entire Livermore Basin. During 2017, Zone 7 worked with other local agencies in this role by formally accepting responsibility for the groundwater basin under San Ramon and delegating the portion of the Tracy groundwater basin that lies within Zone 7's service area to Byron Bethany Irrigation District. Zone 7 also adopted a new Sustainable Groundwater Management Ordinance that prohibits unsustainable extractions and exportation of groundwater.



Flood Protection/Stream Management Master Plan

Flood protection work: Repairs to creek banks, debris removal, vegetation management and facility inspections were part of an extensive effort during the summer months to prepare for the 2017-18 rainy season. After the severe damage caused by the 2017-18 storms, Agency staff worked to ensure the flood-control channels were in good working condition to convey stormwater.

Stream Management Master Plan Update (SMMP):

The SMMP addresses the challenges of balancing flood protection with water supply, water quality, habitat and environment, and recreation objectives for the Livermore-Amador Valley. Zone 7 created a regional model and continues to update the SMMP using the new modeling to help identify priority regional flood-protection projects which reduce the risk for flood-prone areas in the short term while still implementing key ideas of the original SMMP.

Multi-Benefit Projects/Environmental/Community Partnerships

Living Arroyos Program: The Living Arroyos partnership with the City of Livermore, the City of Pleasanton, and Livermore Area Recreation and Park District continued to grow. Living Arroyos staff and volunteers planted over 500 willow stakes, removed over 13,000 gallons of invasive plants and performed other maintenance activities along Stanley Reach of the Arroyo Mocho this year.

Creek cleanups: Zone 7 collaborated extensively with other agencies to help promote community creek cleanups and served as site captain during debris removal events.

EPA Grant “Preparing for the Storm”: Zone 7 and partners applied for funding from the EPA and the proposal “Preparing for the Storm” was selected for funding in the amount of \$1.131 million. Funds will be used for several technical and strategic studies, planning efforts, and implementation projects.

Financial Accountability & Cost Efficiency

Water rates: Zone 7’s Board voted to end a temporary drought surcharge which was imposed to help the Agency recover from deep financial losses from the drought. 2017 was the second of the three-year rate schedule designed to provide greater financial predictability and stability for Zone 7 and its customers. The Agency also revised its rate structure to implement a 35% fixed-charge component and a 65% volume-based rate for calendar years 2017 and 2018. The revised rate structure provided greater stability in the Agency’s financial performance.

Connection Fee Update: In February 2017, the Board of Directors approved a resolution to amend the basic connection fees for new development within the Zone 7 service area and Dougherty Valley. Connection fees are updated every five years to evaluate the need to adjust connection fees based on projected expansion projects costs and anticipated new water connections. By periodically updating the analysis for calculating connection fees, Zone 7 assures that development pays its own way without burdening existing customers.

Asset Management Plan Update: In October 2017, the Board of Directors approved the Asset Management Plan Update for the water system. The Asset Management Plan Update sets an annual funding level for the asset management plan based on updated project costs and schedules over a forty-year horizon.

Mid-cycle budget: Zone 7 staff conducted a mid-cycle review of projected revenues and expenditures and found that more than \$500,000 could be removed from the 2017-18 budget. Significantly, \$1.1 million will be saved in personnel costs due to retirements and succession planning. Zone 7 purchased its administrative office, which will ultimately save the agency over \$1 million per year in lease payments and over \$3 million in purchase cost by purchasing the building now instead of waiting until the end of the lease agreement in 2020.

Livermore Valley Water Financing Authority water revenue bonds, 2018 Series A: With its AA+ from Standard & Poor’s and AA from Fitch credit ratings, the Agency sold all of its \$64,010,000 Livermore Valley Water Financing Authority

water revenue bonds in March 2018. These bonds were 2018 Series A and will generate \$71,398,058.70 of proceeds with a true interest rate of 3.54%. The \$71.4 million bond proceeds will be used for ozone projects at both water treatment plants, \$57 million (See Investing Infrastructure Section), refunding of the Cawelo Water District capital payment for \$14.1 million for a net present value savings of approximately \$1.88 million and \$0.3 million for costs of issuance on the bonds. The Agency was paying an average interest rate of 4.50% on the Cawelo capital payment and the rate on the refunding portion is now 2.90%, saving the Agency over \$200,000 per year.

Improving financial administration: In May 2017, Zone 7's Board approved two interrelated resolutions to facilitate acceptance and management of endowment funds and other revenues that Zone 7 receives. Together these resolutions authorize and direct the Zone 7 treasurer to manage and properly invest all funds received by Zone 7. The resolutions direct the Agency to deposit funds to MUFG Union Bank, N.A. and High Mark Capital Management, where they can be managed according to the newly-adopted investment policy. Zone 7 is confident these changes will result in better service as well as significant cost savings over time.

Comprehensive Annual Financial Report (CAFR): For the second year in a row, Zone 7 was awarded the Certificate of Achievement for Excellence in Financial Reporting for its 2016-2017 Comprehensive Annual Financial Report (CAFR) by the Government Finance Officers Association of the U.S. and Canada (GFOA). The independent audit of Zone 7's accounting practices found that the agency has once again received an unmodified "clean" opinion. This is the highest level of assurance an audit can provide and demonstrates that Zone 7's practices continue to accurately and fairly represent the financial health of the agency, align with nationally accepted accounting principles, and comply with applicable laws and government regulations.

Transparency: In August 2017, the Agency was awarded a District Transparency Certificate of Excellence by the Special District Leadership Foundation. The Board of Directors will continue televising monthly board meetings on community

television and posting archived video links to the Agency's website. The demonstration project started in late 2015 and has received enough positive feedback to indicate a significant benefit to the community.

Managing Resources

When it Rains, It Pours

2017 was the wettest year on record in California. While not without its challenges, the wet weather was a welcome relief to Zone 7. The rain captured in local facilities, along with the heavy snow pack, meant that Zone 7 delivered 100% of the requested water supplies in 2017 without calling on banked water in Kern County. Excess supplies were stored in local and off-site groundwater storage facilities for use at a later time. Using conservative estimates of future demand, Zone 7 projects that even if 2018 is a critically dry year, supplies will be sufficient to meet demands over 2018-2021, assuming average conditions past 2018.

Actual 2017 water demand on Zone 7 was 37,000 acre-feet. Valley-wide conservation—including Zone 7 supplies and retailers' groundwater pumping—was at about 20% compared to 2013 demands, exceeding the state average urban water conservation of 16%. Zone 7 strives to maximize the amount of water placed into storage both locally and outside its service area. In addition to minimizing groundwater pumping, Zone 7 maximized recharge in 2017 by recharging the main groundwater basin and sending surplus water to Kern County groundwater banks. Zone 7 can recover water from these offsite groundwater banks in dry years, just as it did in 2014 and 2015 to augment imported supplies.

Abundant Surface Water Resources

Surface water imports from the State Water Project were up significantly in 2017 compared to 2016. This was made possible because of the State Water Project allocation of 85% to Zone 7 in 2017, up from 60% in 2016 and 20% in 2015.

2017 Supply & Demand for Zone 7 Water Supplies

(in acre-feet, where one acre-foot equals 325,851 gallons)

Supply	2016	2017
State Water Project deliveries (into valley)		
From Table A (contract) deliveries	39,050	58,460
From carryover (stored) reserves	13,400	2,940
Pumping from local groundwater storage	1,810	4,610
Local surface water (Del Valle Reservoir)	100	9,520
Supplemental water purchases BBID/Yuba	800	710
Kern Groundwater Basin (offsite banking)	320	0
Total Supply	55,480	76,240

Demand	2016	2017
Municipal water	28,460	32,630
Untreated irrigation water	4,660	4,560
Released for local groundwater recharge	10,360	9,050
Released for Kern groundwater banks	12,000	30,000
Total Demand*	55,480	76,240

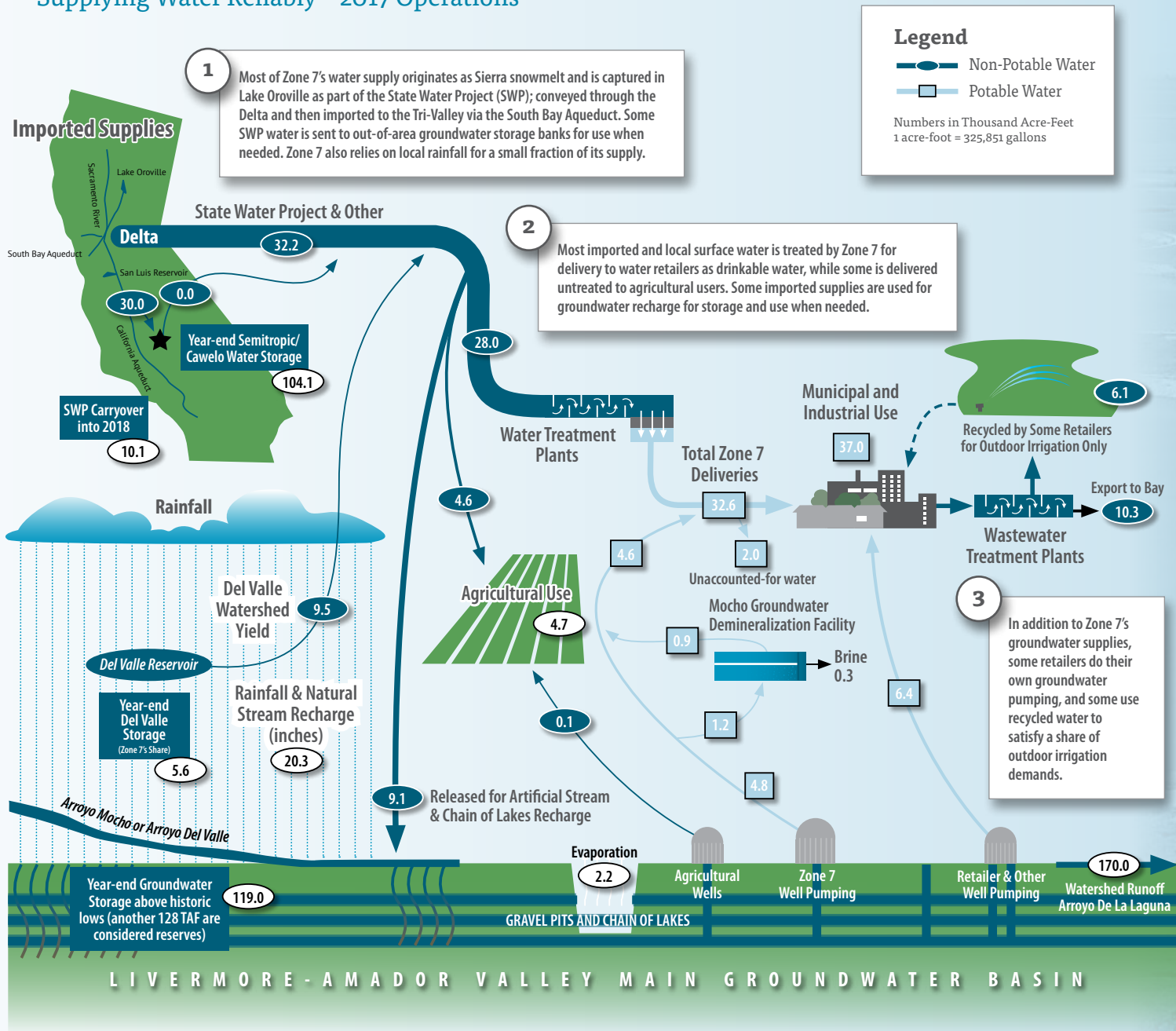
Available Year-End Storage	2016	2017
Local groundwater basin (above historic lows)**	103,000	119,000
Offsite banking programs	82,100	104,100
Del Valle Reservoir storage	8,900	5,600
State Water Project carryover	9,400	10,100
Total Year-End Storage	203,400	238,800

* Demand totals include a small amount of unaccounted-for water typical for water systems of this size.

** An additional 128,000 acre-feet (AF) of groundwater emergency storage was available.

Livermore-Amador Valley Water Supply & Use

Supplying Water Reliably – 2017 Operations



Thinking Ahead

Long-Term Supply Reliability

To enhance water storage flexibility and improve long-term water supply reliability for the Livermore-Amador Valley, Zone 7 prepared a Water Supply Evaluation Update in 2016. The report concluded that new alternative supplies, including desalination and potable reuse, could improve reliability especially during droughts. The report also concluded that neither one can solve Zone 7's long-term challenges without the California WaterFix, which addresses the Delta's outdated water conveyance infrastructure. Zone 7 continued to evaluate other alternative supply and storage options in 2017, including Sites Reservoir, Los Vaqueros Reservoir Expansion, and Lake Del Valle Storage Expansion. Zone 7 also continued to actively engage with other Bay Area agencies to plan for future droughts.

California WaterFix

The California WaterFix would provide water supply reliability, water quality improvement, and help protect the Tri-Valley's largest source of supply from disruptions due to failure of Delta levees. The project includes two 30-mile long tunnels linking new water diversion facilities upstream of the Delta on the Sacramento River to existing pump facilities in the south Delta. The project will also

modernize the 50-year-old State Water Project delivery system to help maintain long-term reliable water supplies to Zone 7's service area and beyond.

In June 2017, the National Marine Fisheries Service and U.S. Fish and Wildlife Service each issued a Biological Opinion stating the California WaterFix likely will not endanger over a dozen federally protected species in the Delta. In July 2017, the California WaterFix cleared a major regulatory hurdle with the certification of the Environmental Impact Report. In addition, on July 28, 2017, the California Department of Fish and Wildlife issued an incidental take permit for the construction and operation of the California WaterFix in compliance with Section 2081(b) of the California Endangered Species Act.

Zone 7 believes the California WaterFix is the best path forward for providing clean, reliable water at a reasonable cost to our service area while protecting the Delta ecosystem. In September 2017, the Zone 7 Board of Directors adopted a resolution to support the California WaterFix and authorized staff to contribute up to \$250,000 to planning costs beginning on January 1, 2018.

Reservoir Expansion Studies

Zone 7 is supporting Contra Costa Water District in its planning process to increase Los Vaqueros Reservoir's current capacity, including a regional intertie, improved pump stations, and pipelines. The project submitted an application for Proposition 1 funding in August, 2017. Proposition 1 stipulates that, in order to be eligible for funding, storage projects must provide a public benefit. The Los Vaqueros Expansion Project would provide up to 120,000 AF of water per year to wildlife refuges, thus meeting this eligibility criteria. A Public Draft Federal Feasibility Report is expected to be released in early 2018.

Zone 7 has also been exploring the feasibility of modifying operations at Lake Del Valle in order to store more water in the lake and increase the available water supply.



However, after weighing the potential costs, benefits, and risks, Zone 7 staff and the Board of Directors decided not to move forward with seeking grant funding at this time. This project could be pursued at a later date should there be interest from DWR and EBRPD or other funding opportunities become available.

Zone 7's cost share for both reservoir expansion studies is provided through Zone 7's Fund 310, Water Supply and Reliability Fund, which funds future water storage and Delta-related projects.

Sites Reservoir

Sites Reservoir is a proposed off-stream reservoir located 75 miles northwest of Sacramento and was identified as a possible new water source for Zone 7. Zone 7 successfully executed an agreement with the Sites Project Authority to participate in the project and was assigned 20,000 acre feet of water. Zone 7's cost share of the project would make up about 5% of the total Phase 1 cost of approximately \$17 million. The environmental review began in 2016, with the scoping process completed in early 2017. The Draft EIR/EIS was released in August 2017. An application for Proposition 1 funding was also submitted in August 2017.

Bay Area Drought Contingency Planning

In 2017, Zone 7 worked with other Bay Area water agencies—and representatives from environmental organizations, other community groups, and other public agencies—to develop the “Bay Area Regional Reliability Drought Contingency Plan”. Funded in part by a U.S. Bureau of Reclamation grant, the plan employs a regional approach for enhancing water supply reliability, leveraging existing infrastructure investments, facilitating water transfers during critical shortages, and improving climate change resiliency to better meet the needs of the Bay Area communities and environment.

Investing in Infrastructure

In 2017, Zone 7 continued to invest in numerous important capital investment projects to ensure high-quality, reliable water delivery.

Del Valle Water Treatment Plant Three Million-Gallon Clearwell Roof Replacement

Zone 7 completed the Del Valle Water Treatment Plant Clearwell Roof Replacement project in 2017. The project scope included replacing the clearwell's sheet metal roof, joists, and purlins, as well as replacement of the clearwell's inlet and outlet valves. It also included spot repairs to the interior hypalon liner. The new roof will improve treated water system reliability and lessen the threat of structural damage or more costly repairs to the clearwell.

Del Valle Water Treatment Plant Ozonation Project

In October 2017, the Zone 7 Board adopted the environmental review documents for the Del Valle Water Treatment Plant Ozonation Project and took steps toward final design and construction of the facilities. The addition of ozonation will improve the quality of the local drinking water and will address the taste and odor issue that has become common in the warm summer months due to algal blooms in source water supplies. Ozone is significantly more effective than other treatment technologies, such as powdered activated carbon, chlorine, and chloramines, at treating algal byproducts. It is also effective for treatment of other constituents of emerging concern, including endocrine disruptors, pharmaceuticals, and personal care products. The construction of the ozonation facilities is anticipated to be completed in early 2020.

Patterson Pass Water Treatment Plant Upgrades and Ozonation

Zone 7 continued its progress on the Patterson Pass Water Treatment Plant (PPWTP) Upgrades Project. The project consists of planning, design, and construction of a new 24-million-gallon-per-day conventional media filtration system, a five-million-gallon operational capacity treated water storage reservoir, ozonation facilities, and associated ancillary facilities at the PPWTP. Construction is anticipated to be completed by 2021.



Routine Capital Improvement Projects

Each year, Zone 7 undertakes many routine capital improvement projects to keep its water treatment and delivery systems running optimally. In 2017, Zone 7 completed projects including the Del Valle Water Treatment Plant Filter Valve Replacement project, the Hopyard Well 6 Sodium Hypochlorite System Replacement project, the Mocho Well 1 Repair Project, the Hopyard Pipeline Repair at Arroyo Mocho, and the MGDPC Concentrate and Flush Line Investigation.

Conservation

A Way of Life for our Communities

Conservation continues to be a high priority for Zone 7 residents and businesses. Though water supplies have returned to healthy levels, Zone 7 continues to offer rebate programs aimed to keep future conservation levels high.

Zone 7 received 17 applications for lawn conversion rebates. The program resulted in 87,593 square feet of turf being removed, of which 23,617 square feet received rebates. One commercial account removed 70,000 square feet of turf alone in 2017. Outreach, customer engagement, and increased public awareness stand to reduce outdoor water use by more than 2.2 million gallons (6.7 acre-feet) annually. Participation in the lawn conversion rebate program decreased approximately 50%, possibly due to easing drought conditions. Also, one of the retailers is now running their own rebate program separate from Zone 7 which accounted for approximately 30% of the overall rebate programs. The Weather-Based Irrigation Controller rebates program resulted in 148 new controllers installed, which reduced outdoor water use by more than 1.8 million gallons (5.6 acre-feet) annually. Participation in the controller program has increased significantly due to availability, increased public awareness, and improved technology.

Despite the focus on outdoor water conservation, indoor rebate programs continue. In 2017, Zone 7 experienced declines in the number of clothes washer rebates (304 rebates were processed, a 35% decrease from 2016), as the program starts to sunset due to market saturation. The high-efficiency toilet rebates ended on December 31, 2016 due to market saturation. Grant funding from the California Department of Water Resources covered 45% of rebate program costs.

Water Quality

Zone 7 is dedicated to delivering high-quality water to its customers. The water that Zone 7 delivered to its customers again met the drinking water standards set by state and federal governments. In almost all cases, the water was significantly better than required.

Both the Del Valle and Patterson Pass water treatment plants maintained their Partnership for Safe Water status for the 2017 reporting period. The Partnership is a program developed by the American Water Works Association, the U.S. Environmental Protection Agency, and associated partner organizations.

Ozone Treatment and Improved Drinking Water

In 2017, Zone 7 continued its efforts toward the planning and design for the addition of ozone treatment at its two water treatment plants, the Del Valle Water Treatment Plant and Patterson Pass Water Treatment Plant. The project will take at least three years to complete for the DVWTP and five years to complete for the PPWTP. Once online, ozonation will significantly improve the quality of the local drinking water. Ozone is much more effective than other treatment technologies at treating algal byproducts and other constituents of emerging concern, including endocrine disruptors, pharmaceuticals, and personal care products.

Algae Blooms in the Delta

Zone 7 experienced the worst taste and odor event in its history in summer 2017. The taste and odor event was caused by algae blooms in Zone 7's source water supplies caused by unseasonably warm weather in the Delta. While this earthy taste and musty odor is unwelcome, it does not pose a health risk and the water is completely safe to drink. Zone 7's water treatment process ensures the water meets all state and federal drinking water quality standards. In addition to the regular water treatment processes, Zone 7 adds activated carbon to improve taste and reduce odor during these events and has accelerated the process of adding ozone treatment to the water treatment plants. Zone 7 also works with the California Department of Water Resources to minimize algal blooms in the source water itself.



Flood Control & Stream Management

Storms after Drought

The record-breaking 2017 storm season brought intense rain to Zone 7's service area and across the state. Localized flooding occurred throughout the Tri-Valley and caused significant damage to Zone 7's flood control facilities. Damage was identified at 208 sites in Zone 7's service area, including bank failures, slides, erosion damage to outfall structures, damage to maintenance roads, and sedimentation. The majority of the damage to Zone 7 flood facilities occurred in the western portion of the service area where soils are more prone to failure. Some less severe damage was found in the eastern portion of Zone 7's service area.

Governor Brown declared a State of Emergency for many counties in early 2017, including Alameda County. At the March 2017 board meeting, the Board declared a local state of flood emergency within the Zone 7 service area. The declaration of a local state of flood emergency on top of the previously-declared state and federal emergency allowed Zone 7 to seek funding assistance from outside sources such as the Federal Emergency Management Agency (FEMA), the US Army Corps of Engineers (USACE), and the California Office of Emergency Services (Cal OES). The Board adopted two additional resolutions in June 2017 that will also help Zone 7 move forward with both routine maintenance and emergency repairs.

Repairs are estimated to cost \$44 million (about 40 times the typical annual costs for channel repair) and will require regulatory permitting. The repairs are needed regardless of outside funding. However, some of these expenses may be reimbursable through FEMA and CalOES funding. If reimbursements are received, Zone 7's limited funds can be used to complete more projects in a shorter period of time.

Throughout the rainy season, Zone 7 sent out e-newsletters with educational information and

resources regarding how to prepare for potential flooding. The e-newsletters included information on where to obtain free sandbags, tips for winterizing homes, links to statewide flood preparedness resources, and links to Zone 7's Storm Central website for real-time flow monitoring.

Supporting Private Flood Control and Erosion Repair Projects

Because the 2017 winter storms also damaged flood protection-related assets on private property, Zone 7's Board of Directors adopted a resolution in August 2017 to create a program that will provide support to private landowners with flood protection-related projects on private property. This program allowed Zone 7 to provide expertise and staff support to pursue grants and partnership opportunities for which private landowners may not have the means or eligibility to apply. Private projects to address stream stabilization, erosion prevention, and habitat enhancement could have regional benefits such as reducing downstream sediment loading and reducing risks of flow blockage from collapsing banks. An example of the success of the program was the completion of a bank stabilization and erosion prevention project at the Foothill Road property that was severely damaged during the 2017 winter storms.



Flood Protection Program

With a much longer to-do list than usual, Zone 7 staff worked tirelessly through the spring and summer of 2017 to complete repair and maintenance projects to ensure that the flood-control channels were in good working condition in advance of the rainy season. Flood protection repair work included:

- Completed nine emergency bank repairs totaling 1,580 linear feet; 4,380 feet of access road repair; re-installation of five drainage inlets; 1,000 feet of new curb and cutter drainage; one drainage pan; one concrete outfall repair; 2 desilting projects; and one log crib wall biotechnical repair.
- As a part of the Stream Maintenance Program, staff began pursuing programmatic permits from the California Department of Fish and Wildlife, Regional Water Quality Control Board, and United States Army Corps of Engineers.

- Contracting with the United States Geological Survey (USGS) to continue the sediment study and adding a fourth gauge that helps trace where sediment originates in the northern part of the watershed through Alamo Canal and South San Ramon Creek. This gauge augments data collected from the Arroyo Mocho and Arroyo las Positas watersheds and adds to the online information available to the public at <https://stormcentral.waterlog.com/public/Zone7>.

Stream Management Master Plan Update (SMMP)

Zone 7 substantially completed an update of the SMMP in fall 2017. The update addresses the challenges of balancing flood protection with water supply, water quality, habitat and environment, and recreation objectives for the Livermore-Amador Valley. The update includes new modeling to help identify priority regional flood protection projects to reduce risk for flood-prone areas in the short term while still implementing key ideas of the original SMMP. The SMMP is a multi-benefit program developed to fulfill Zone 7's stream management goals and objectives. The plan provides opportunities for other local and regional agencies and stakeholders to identify compatible General and/or Master Plan features of their respective groups to be considered in future SMMP projects.

Local Hazard Mitigation Plan (LHMP)

Zone 7 completed the Local Hazard Mitigation Plan (LHMP) in 2017. The federal Disaster Mitigation Act of 2000 requires cities, counties, and special districts to have a LHMP to minimize damage, quicken recovery from disasters such as earthquakes and floods, and to be eligible for federal hazard mitigation funds. The update included a survey to get public input on the highest priority issues and areas of greatest concern. It also reviewed impacts from natural and manmade disasters to determine where infrastructure and services could be improved in order to reduce potential impacts and costs after disasters.



Sustainable Groundwater Management

As the exclusive Groundwater Sustainability Agency under the Sustainable Groundwater Management Act (SGMA), Zone 7 is continuing its long tradition of stewardship of the Livermore Valley Groundwater Basin. Through coordination with other local agencies in the region, Zone 7 will continue groundwater management for the entire portion of the Livermore Valley groundwater basin that is within the Agency's service area as well as a small portion that lies within Contra Costa County.

Zone 7 made strides in this role when it adopted a new Sustainable Groundwater Management Ordinance in June 2017. The ordinance was created to enhance existing sustainable management programs for the local groundwater basin. The ordinance recognizes groundwater as an essential resource for municipal, industrial, agricultural production, and domestic uses. The ordinance sets provisions for groundwater protection within Eastern Alameda County. Not protecting the basins from unsustainable extraction of groundwater could have adverse economic effects including loss of arable land, a decline in property values, increased pumping costs due to the lowering of groundwater levels, and need for increased water treatment. Nothing in the ordinance determines or alters water rights, groundwater rights, or existing County ordinances.

As part of its Groundwater Management Program, Zone 7 also recently completed an update to its groundwater model. With a major contribution from the State's Local Groundwater Assistance Program, the model is now able to better represent actual conditions and predict how different scenarios will impact groundwater management.

Zone 7 will be working with the various public agencies that overlay the Livermore Valley Groundwater Basin to continue facilitating an effective and sustainable groundwater basin management under SGMA. Annual groundwater management reports will continue to be prepared and posted on the Zone 7 website, and copies will be submitted to the Department of Water Resources and the Regional Water Quality Control Board.

Watershed Stewardship

Living Arroyos

Initiated in 2013, Living Arroyos is a multi-agency partnership between Zone 7, the City of Livermore, the City of Pleasanton, and the Livermore Area Recreation and Park District. Living Arroyos strives to be a means to increase opportunities for local residents to engage in hands-on watershed stewardship and to establish relationships with streams near their homes. The program includes activities such as planting, weeding, watering, monitoring, debris removal, pruning, invasive plant management, intern training, and volunteer participation. Over 250 volunteers participated at one of 11 volunteer days (average 27 volunteers per event), contributing over 1,000 hours to the program. 81% of program volunteers came from within the Tri-Valley area.



The focus for 2017 was on maintaining the Stanley Reach project, coordinating Livermore's Adopt-a-Creek Spot program, as well as a host of small mitigation, restoration, and stream clean-up projects around the Valley. The Stanley Reach project was conceived in 2012 as an alternative flood control and reforestation project, and was the first project of the Living Arroyos program. Highlights in 2017 include installing over 500 willow stakes, removing over 13,000 gallons of invasive plants, and removing 634 gallons of trash.

EPA Grant “Preparing for the Storm”

Zone 7 has an interest in pursuing grant opportunities to be a fiscally-responsible agency, and to participate in projects and partnerships that Zone 7 might not otherwise undertake in the regular course of work, but that are beneficial to Zone 7. In April 2017, the Board authorized the General Manager to prepare, execute and submit necessary grant application documents and assurances, in collaboration with appropriate grant partners, to the EPA WQIF. The grant proposal “Preparing for the Storm: Riparian Restoration, Sediment Reuse, and Urban Greening to Enhance Stream and Watershed Resilience” was submitted on May 10, 2017, requesting \$1.667 million to complete the proposed scope of work. “Preparing for the Storm” implements the recommendations of many local and regional plans, including implementing projects that were identified as priorities in the Zone 7 Stream Management Master Plan (SMMP). The grant application was selected for funding in the amount of \$1.131 million out of the \$1.667 million requested. Zone 7 is the main awardee and will administer the overall grant. Subawardees include SFEI, H.T. Harvey, and the San Francisco Bay Joint Venture. Other partners are participating in the grant efforts but will not directly receive grant funds, including local cities, Castlewood Country Club, Concannon Vineyard, and Livermore Area Recreation and Park District.

Outreach & Education

Transparency Award

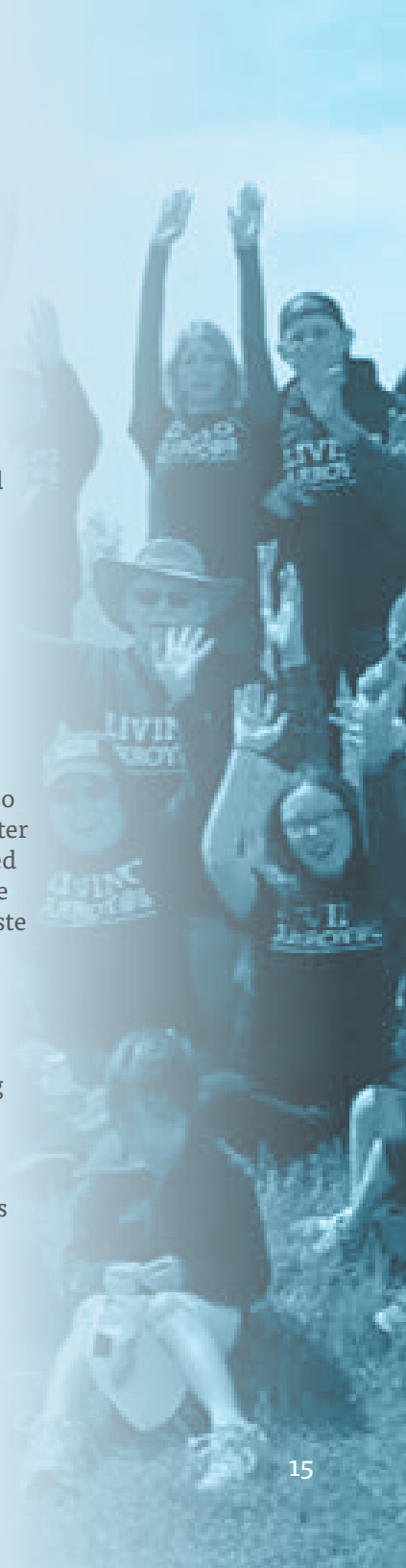
The Special Districts Leadership Foundation (SDLF) recognized Zone 7 for excellence in communications and transparency for a government agency with an award on August 7, 2017. The Transparency Certificate of Excellence is awarded to those special districts that demonstrate a commitment to engaging the public and creating greater awareness of activities. To earn the award, special districts such as Zone 7 are required to demonstrate that they meet basic transparency requirements, website requirements, and public outreach requirements.

Public Survey Results

The effective use of Zone 7's outreach and communications efforts was further demonstrated by the results of a survey conducted in early 2017. The survey showed that voters are generally familiar with Zone 7 and the services it offers. The survey results also showed that residents strongly approve of Zone 7's water distribution services, that 85% of residents are satisfied with the reliability of their water supplies, and that the majority of voters are satisfied with the quality and taste of their drinking water.

Flood Awareness Week

Zone 7 participated in the sixth annual California Flood Preparedness Week, October 21-28, 2017. During California Flood Preparedness Week, local, state, and federal agencies across California worked together to inform the public about flood threats, how to prepare for floods, and what to do in times of flooding. Zone 7's Board of Directors adopted a proclamation citing the “significant public safety threat flooding poses to the population, assets, and economy of our community”.



Schools Program

Zone 7's popular Valley-wide water education program continued in 2017, reaching nearly 14,000 students from kindergarten to twelfth grade. Zone 7's Schools Program is a unique and highly-effective outreach and education program that has been offered for the past 17 years. The Schools Program provides Tri-Valley teachers with a wide variety of free classroom programs to make learning about water fun while still meeting curriculum standards.

Zone 7 also participated in the Alameda County Science & Engineering Fair, several individual school science fairs, STEM events, career fairs, and other relevant high school and elementary school events.

Spring and Fall Home and Garden Shows

Once again, Zone 7 occupied a booth at the Home and Garden Shows at the Alameda County Fairgrounds to provide informative handouts and engage visitors in discussions on various water-related topics such as conservation, flood preparedness, and drought-tolerant gardening.

Alameda County Fair

Zone 7 hosted a booth during the fair's Ag and Environment week where residents of all three cities were given an opportunity to see and hear about some of the many things that Zone 7 does.

Livermore Valley Joint Unified School District Science Odyssey

Over 700 students displayed research or engineering projects for the event. Zone 7 exhibited a floodplain model that simulates the effects of light and heavy rainfall on permeable versus non-permeable surfaces, and relationships with downstream channel flows and floodplains.

Water Awareness Month

As part of Water Awareness Month, Zone 7 co-sponsored the 2017 Bringing Back the Natives. This event was a free, self-guided tour of 40 private gardens in Alameda and Contra Costa counties giving residents ideas on how to use California native plants to make their gardens water efficient, drought tolerant, and more beautiful.

Student Water Projects

Three students who attend schools within Zone 7's service area received special recognition from Zone 7 for water-related projects displayed during the Alameda County Science & Engineering Fair. The winners presented their projects at the May 2017 Board meeting as part of Water Awareness Month.

- Abigail Huang (Sunol Glen School), project entitled, "Solar Water Purifier."
- Cassandra Leo (Quarry Lane Middle School), study entitled, "Is the Hardness of Water Different in Certain Locations?"
- Akshit Mehta (Dublin High School), system for domestic irrigation that irrigates only when the soil probe measures low soil moisture.

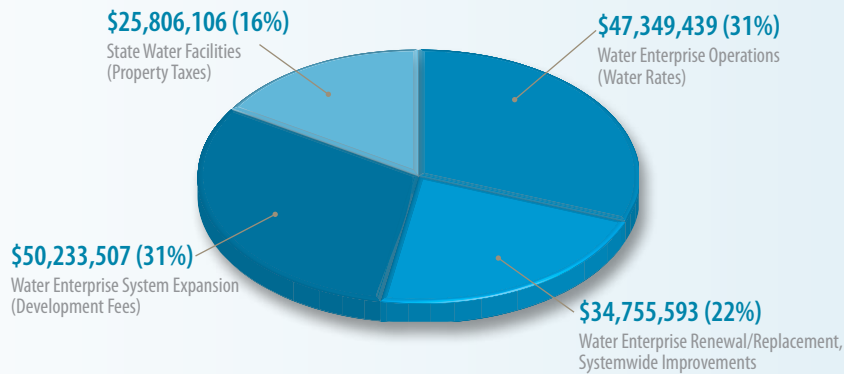
E-newsletter Distribution

The Agency continued to increase its e-newsletter subscriptions and published on topics ranging from water conservation, to flood preparedness, to water rates. To subscribe, see the home page of Zone 7's website at www.zone7water.com.

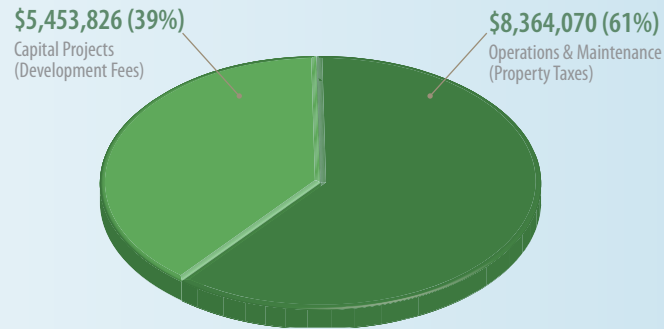
Financial Information

Fiscal Year 2016-2017 Revenue & Expenses

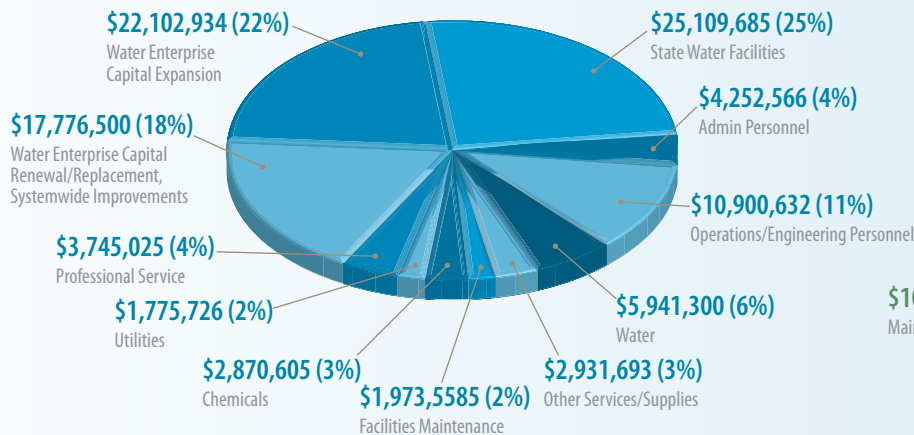
Water Supply, Reliability, and Quality Revenue: \$160,142,645



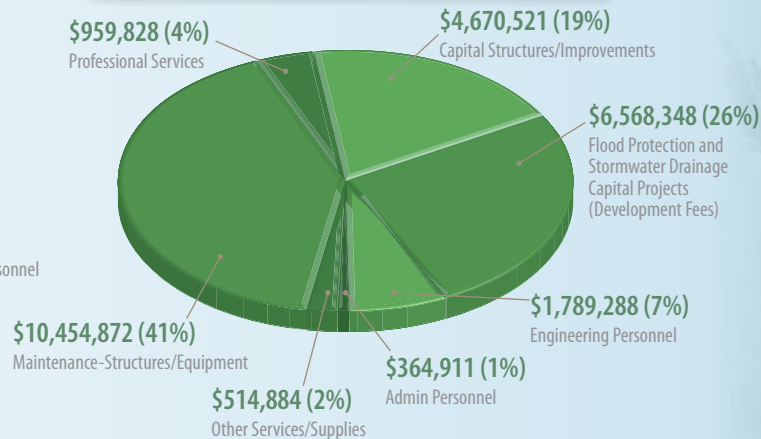
Flood Protection Revenue: \$13,347,367



Water Supply, Reliability, and Quality Operating and Capital Expenses: \$99,380,250



Flood Protection Operating and Capital Expenses: \$25,322,652



Zone 7 Water Agency supplies treated drinking water to retailers serving approximately 240,000 people and businesses in Pleasanton, Livermore, Dublin and, through special agreement with the Dublin San Ramon Services District, the Dougherty Valley area of San Ramon. Zone 7 also supplies untreated irrigation water (mostly to vineyards) and provides flood-protection services to eastern Alameda County.

Executive Staff

Valerie Pryor *General Manger*

Osborn Solitei *Treasurer/Assistant General Manager, Finance*

Jarnail Chahal *Manager, Engineering*

Carol Mahoney *Manager, Integrated Water Resources*

Colter Andersen *Manager, Production*

Zone 7 commemorates Board of Director Vice-President Jim McGrail, who passed away in April 2018. We are so thankful Jim's concern for a reliable, high-quality water supply brought him into our organization and his contributions will not be forgotten.