

# Quenching the Thirst, Quieting the Flood Waters

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# 50 Years of Zone 7 in the Livermore-Amador Valley



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In 1957, Elvis Presley was shaking his hips – and proper society.

There was economic prosperity, the Baby Boom, and the debut of "Leave it to Beaver."

Alameda County's population reached 841,000, quadrupling since the turn of the century.

The Cold War had made the Livermore Valley home to two national laboratories working on nuclear weapons, and a new atomic power plant opened near Pleasanton. President Dwight Eisenhower had signed legislation approving the Interstate Highway system.

And Zone 7 of the Alameda County Flood Control and Water Conservation District was approved by voters in the Livermore-Amador Valley to address flooding and water-supply issues.

#### **Overview**

Since long before the Zone 7 Water Agency was created by Livermore-Amador Valley voters in 1957, the critical issues of water supply, water quality and flood protection have shaped the region's ability to prosper either agriculturally or as a thriving Bay Area suburb.

Although the Valley was far less populated during the first half of the 20th Century than it is today, periods of drought along with a declining groundwater table – caused in part by pumping in those days from Pleasanton-area well fields for delivery to San Francisco – had local farmers, vintners and residents alike worried about their livelihoods. And there was frequent flooding, particularly in northern Pleasanton but sections of Livermore, Dublin and Sunol, as well.

Zone 7 – established in 1957 by local voters demanding local control over local water-resource planning and financing – has taken the Valley a long way to resolving many of

Valley settlers refer to a chronically flooded area where Hacienda Business Park in Pleasanton now stands as "Tulare Lake," "Willow Marsh" or simply, "The Lagoon." Livermore becomes the first Valley community to incorporate as a city, in 1876; followed by Pleasanton in 1894 and Dublin in 1982.

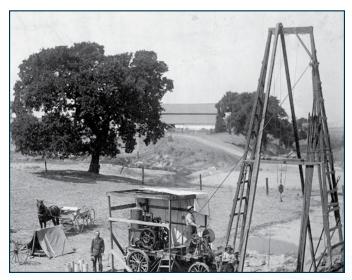
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its most pressing water-supply, water-quality and floodprotection problems. But many issues have persisted over the decades, and their implications for local land use, local control and local financing continue to surface. Indeed, they are alive and well today as Zone 7 works to improve water reliability and quality, along with flood protection, in the most economical and environmentally sound ways possible, and to accommodate new development being approved by Valley cities at no cost or harm to existing residents.

#### **THE PRE-1957 FORMATIVE YEARS**

In a fast-growing, post-World War II era, Zone 7's parent agency – the Alameda County Flood Control and Water Conservation District – had been created in 1949 by the California Legislature. The district's governing board was, and remains to this day, the Alameda County Board of Supervisors. Herbert G. Crowle was appointed to run the district from a two-story brown shingle house in downtown Oakland. The first step was to define critical needs within watersheds, or drainage basins, across the county to help set boundaries for a series of zones within the district.



Well-drilling outfit in the early 1900s near Livermore.

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Several vineyards are planted in the South Livermore Valley, irrigated by well water and natural rainfall. Wineries are built, the early ones with such names as Cresta Blanca, Wente, Concannon, Ruby Hill and Olivina.

#### ZONE 7'S PAST, PRESENT, AND FUTURE

There were ongoing efforts to create a zone encompassing Murray and Pleasanton Townships that contained the cities of Livermore and Pleasanton. This rural, largely agricultural area encompassed more than half of the land in Alameda County, but less than 4 percent of the county population. Further agricultural or municipal development potential was severely constrained by inadequate drainage and water supply. Flooding was common. Groundwater was the only water source, and more water was being pumped than was replenished annually – meaning the water table was dropping. *Something* had to be done.



Late 1930s: Holmes Street at Arroyo Mocho in Livermore.

"Zone 7 was the only zone that wanted to have water supply in addition to flood control, and was also the only one that wanted to have its own locally elected Board of Directors," recalls Crowle.

A committee of Valley leaders, chaired by local vintner Ernest Wente, worked on proposed changes in state legislation that would give the Valley greater local control of water resources. Richard W. Karn was the county Flood Control District's principal staff engineer who served as technical and administrative liaison. The meetings of the Valley leaders resulted in legislation in 1955 – the same year that a devastating flood inundated the Valley – that allowed a separately elected Board of Directors to govern any zone formed by the voters in Murray and Pleasanton townships. A tax rate of up to 15 cents per \$100 of assessed property value was established to fund the Zone.

## **RECOLLECTIONS OF MUN MAR** -Zone 7's First General Manager

In 1956, I was hired by the county's Flood Control and Water Conservation District as a civil engineer trainee (employee #42) for the summer months. I had just re-enrolled and completed a semester as an architectural student at U.C. Berkeley after a 2-year hitch in the U. S. Army. Before being drafted, I had completed three years in civil engineering at Cal. James Vivrette, the district's assistant engineer manager, encouraged



Mun Mar served as general manager from 1978-1990.

me to get back into engineering, which I did and was again hired for the summer of 1957. Thanks to my trusty slide rule, I completed my studies with a civil engineering degree and started work as a temporary employee in February of 1958.

Shortly thereafter, the district became part of the Alameda County Public Works Department. Being a temporary employee, I didn't envision that I would make a career of it. Nevertheless, I did. All the dedicated co-workers who believed in contributing to a beneficial public purpose were among the influencing factors.

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Spring Valley Water Company's groundwater pumping from Pleasanton-area well fields for delivery to San Francisco lowers the Valley's water table. Concerns prompt formation of the Pleasanton Township County Water District; pumping exports cease in 1949. In a fast-growing, post-World War II era, the Alameda County Flood Control and Water Conservation District, governed by the county Board of Supervisors, is established by the state Legislature to solve problems of flooding, water supply and water-resources management.

## ZONE 7 IS BORN

#### On June 21, 1957 The Livermore Herald-News Reported:

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"Voters Approve Zone 7 by Wide Margin --1,941-328

"Livermore and Amador Valleys voted solidly in favor of a comprehensive water program Tuesday when they approved Zone 7 of the Alameda County Flood and Control and Water Conservation District by a 1,941 to 328 vote, a 6-1 margin.

"The seven-man slate of the Valley Water Committee was selected as the Board of Directors of Zone 7. Vote for the candidates was:

Karl Wente, 1,479; Leo Callaghan,1,457; Herman Koopmann, 1,427; Melvin Nielsen, 1,405; Victor Lund, 1,354; Eldred Chance, 1,339; Thornton Taylor, 1,328...

"Major argument in favor of the zone was that it will be the agency for this area that can purchase water from the proposed South Bay Aqueduct, to ensure an adequate supply of water for the two (Amador and Livermore) valleys in the future. However, this is not the only job it will do. The zone also has broad powers in flood control work..."

The first official meeting of the Zone 7 Board of Directors was convened July 9, 1957. Livermore vintner Karl L. Wente (Ernest Wente's son) was elected chairman; Pleasanton-area rancher Victor L. Lund, vice-chairman; and Livermore real estate agent Eldred E. Chance, secretary.

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With a population of around 10,000, the Valley starts the second half of the 20th Century with an overdraft of underground water supplies, along with poor drainage and flood hazards. Other Board business included asking the Board of Supervisors to allocate \$200 to cover Zone 7's startup administrative costs. Wow! Can you imagine such a modest amount to start up a public agency responsible for controlling floods and providing water supply to a 425-square-mile area? Zone 7 did not have an easy time with the financial limits that were imposed, especially in those early days. The agency's first budget, for fiscal year 1958-59, totaled just \$49,000.

### STARTING UP – A MOMENTOUS FIRST YEAR

In those initial meetings, the Board was busy shaping a vision for the agency and identifying approaches to problems associated with everything from flooding to water supply. It opted to be a wholesaler of water rather than to deliver water directly to individual residential and business customers as a retailer. Almost immediately, the Board was asserting rights to some local water resources and negotiating for imported Sierra water to be conveyed by the State Water Project via the Delta and the planned South Bay Aqueduct. Zone 7's intention to join the association planning the Aqueduct was formalized by the Board's first resolution on August 5, 1957. This landmark decision serves the agency's customers well to this day.

"We were really blessed by some wonderful directors on that first Board," recalls Karn, a Pleasanton resident. "They were really farsighted and gave this zone a foundation on which to build and obviously, it's built well on that foundation."

In fact, the original Zone 7 directors worked together for eight years before the Board started to change. Leo R. Callaghan was the last of the original seven, serving 17 years. Given all the challenges, a great deal of collaboration was necessary.

"I don't think many people who live in the Valley now know what the water situation was 50 years ago, or how poor and how hard the water was in what's now Dublin and even in

Clamoring for greater local control and raising doubts about benefits to the immediate area, Valley voters reject proposals for a zone run by the county Flood Control District that would have lumped the Valley together with the Fremont area.

Pleasanton," said Bob Becker, who served on the Board from 1968 to 1976. "Everyone had to rely on wells, and the water levels were dropping. Some people were concerned that if we raised the levels, Pleasanton would become a marsh because I guess it once was pretty much a marsh. We really had some flood problems in the Valley. We also had transportation problems with the water; we had to think about pipelines and where they'd go."



1955: The Valley's largest flood on record turns much of North Pleasanton into a lake.

On the flood-control front, the U.S. Army Corps of Engineers in October 1957 presented the Board its assessment of the Alameda Creek Watershed, along with a proposed project for submittal to Congress. That federal project never materialized, although there was federal participation in flood-control capacity in Lake Del Valle. Upon completion of Del Valle Dam in 1968, the peak flood flows along Arroyo Del Valle and Arroyo de la Laguna would be reduced, easing potential flood damage in Zone 7 territory.

Meanwhile, in attempting to assert some control of local water resources, Zone 7 protested an application by the Alameda County Water District (serving the Fremont area) for state water rights on Arroyo Del Valle. This resulted in permit terms more acceptable to Valley residents. Later, in 1971, the Pleasanton Township Water District's permit to develop Arroyo Del Valle water jointly with the Fremontarea district was transferred to Zone 7 and the township district dissolved.

By mid-1958, there was talk of using abandoned gravel pits as groundwater percolation ponds. Was this the genesis of the concept of the Chain of Lakes that became a major focus of negotiations between the sand-and-gravel producers and Zone 7 in the 1970s and '80s? Perhaps so, considering sand-and-gravel mining from Livermore-Amador Valley was a long-term enterprise that would supply over half the aggregate needs for Bay Area construction.

The first year of operations (1957-58) laid the foundation and policy framework for Zone 7's role in the Valley:

- 1. Control and conserve flood and storm waters for beneficial use,
- 2. PROTECT WATERCOURSES, WATERSHEDS, PUBLIC ROADS, LIFE AND PROPERTY FROM DAMAGE OR DESTRUCTION FROM SUCH WATERS,
- 3. Import and treat water for municipal and industrial uses,
- 4. Store and spread water to percolate into the groundwater basin,
- 5. Construct dams, channels, pipelines and other facilities required for flood control and water conservation,
- 6. Acquire lands, easements and rights of way as may be required,
- 7. Cooperate with state and federal agencies in the financing, construction, maintainance and operation of projects for flood control and water conservation,
- 8. Prevent the waste of water or the diminution of water supply and the unlawful exportation of water from Zone 7,
- 9. Prevent surface and subsurface waters useful in the zone from being contaminated or polluted, and
- 10. PROVIDE INCIDENTAL RECREATIONAL USE OF LANDS AND FACILITIES ACQUIRED OR CONSTRUCTED FOR THE PRIMARY PURPOSES OF FLOOD CONTROL OR WATER CONSERVATION.

The Valley's largest flood on record turns much of North Pleasanton into a lake. Valley residents, comprising less than 4 percent of the county's population but half of the land, get special legislation allowing for creation of a locally run zone within the county Flood Control District. Urban water demand in the Valley steadily increases.

Livermore-Amador Valley voters – by a 6-1 margin – approve formation of Zone 7 of the Alameda County Flood Control and Water Conservation District, covering 425 square miles in eastern Alameda County. It is to be supported by local property taxes and governed by a seven-member, locally elected Board of Directors, but with county Flood Control District staff continuing to provide administrative and technical services.

## VOTERS OK BONDS FOR FIRST WATER, FLOOD CONTROL PROJECTS

On Sept. 27, 1960, 82 percent of voters within Zone 7 approved \$5.67 million in general obligation bonds to begin to address insufficient water supply, poor drainage and flood hazards. The financing plan was evenly split between water supply and flood control. Part was tied to the state's planned South Bay Aqueduct water-supply project, which was to serve portions of the East Bay and the South Bay with drinking water. Among other things, it included funding for Zone 7's Patterson Pass Water Treatment Plant, along with transmission pipelines, wells and groundwater-recharge facilities.



Early Zone 7 Board tours South Bay Aqueduct construction.

The bond offering highlighted intense development pressures facing what was historically an agricultural and vineyard region:

"In 1952, the University of California opened the Lawrence Radiation Laboratory near Livermore," it notes. "Then in 1957, the General Electric Company constructed the Vallecitos Atomic Power Plant near Pleasanton. Thus, the Valley is placed in the paradoxical position of having its roots firmly planted in the vast agricultural resources of the past while developing in the present and reaching toward the future in the rapidly advancing nucleonics field."

Dr. John Shirley, a well-respected Livermore veterinarian who was to later serve as the city's mayor, headed the bond campaign. "This is the most important issue facing our people," Shirley was quoted as saying in an August 12, 1960 article in the Livermore Herald. "There is no question, as Zone 7 directors have proved by their three-year study, that we must take advantage of this golden opportunity to contract for and to distribute imported water in amounts that will permit our two valleys to continue their remarkable growth."

Almost simultaneously, the California Water Resources Development Bond Act was approved by state voters on November 8, 1960. The Zone 7 water contract and related negotiations continued with the state as well as with local water retailers: California Water Service Company in Livermore; the City of Livermore when it decided to provide water service to new areas north of Interstate 580 (Springtown); the Lawrence Radiation Laboratory (later renamed as the Lawrence Livermore National Laboratory) to back up its water supply; the Veterans Hospital on Arroyo Road south of Livermore; the Valley Community Services District (now the Dublin San Ramon Services District); and the City of Pleasanton.



1961: In signing ceremonies with then-Governor Edmund G. Brown, Zone 7 enters a historic contract with the State for yearly entitlement to 40,000 acre-feet of water from the South Bay Aqueduct. This is increased to 46,000 acre-feet in 1963.

The significance of Zone 7 negotiations for State Water Project water from the South Bay Aqueduct is underscored when one Southern California official is quoted in the Livermore Herald as saying, "I don't know where Zone 7 is located, but I'm sure going to find out."

Valley's population swells to 34,000. As statewide voters approve bonds for the State Water Project, voters within Zone 7's service area give thumbs up to a \$5.76 million local bond measure to finance initial flood-control, water-supply and water-conservation improvements.

#### ZONE 7'S PAST, PRESENT, AND FUTURE

In November 1961, Zone 7 became one of the State Water Project's very first contractors when it entered a pact for a yearly maximum entitlement of 40,000 acre-feet of water from the South Bay Aqueduct (increased to 46,000 acre-feet two years later). Actual demand and delivery in those early days was far less. Initially, before the Patterson Pass Water Treatment Plant opened in 1962, Zone 7 used all of its delivered water for groundwater recharge at a facility near El Charro Road. Recharge continued even after the treatment plant opened.

The Board in March 1962 hired its first water plant supervisor – Harry L'Hommedieu. As a retired Navy chief and a water plant operator with the East Bay Municipal Utility District, Harry was well suited to superintend Zone 7's water system and author most of its early operations and maintenance procedures.

#### **PROTECTING GROUNDWATER LEVELS**

A 30-year water contract with the California Water Service Company in Livermore was approved on July 9, 1962. A key provision required Cal Water to buy all water from Zone 7 in excess of a base quantity. In essence, this capped Cal Water's extractions from the groundwater basin with the aim of slowing and/or reducing the amount of overdraft. This strategy was used in all subsequent contracts as a groundwater-management tool.

Around that time, and after extensive negotiations, the Board approved a 10-year lease with the U. S. Army for Zone 7's use of the then-dormant Camp Parks Well Field and Pipeline on Hopyard Road in Pleasanton. Zone 7 later acquired these facilities after they were declared surplus federal property.

In March 1963, a contract for water was signed with the City of Livermore, which formed its own water department to serve the Springtown area on the north side of town. That September, a water contract was signed for the Dublin portion of Valley Community Services District (later to become the Dublin San Ramon Services District). And after extensive negotiations, a water contract with Pleasanton was signed in January 1968.

# Mun Mar's 1962 Survey – On Foot

I had drafted a key agreement with the Alameda County Water District after making a field survey of the arroyos served by the South Bay Aqueduct. Water released from the Altamont Turnout needed to flow unobstructed to the Niles area of Fremont to recharge the groundwater basin.

To begin the survey, I drove east on Highway 50 (now Interstate 580) to Laughlin Road in Livermore, where I parked the non-air-conditioned county pool car. From there, I hiked upstream to the turnout location and then downstream along Altamont Creek and Arroyo las Positas, making notes where creek crossings were located and where other terrain features affected drainage. I continued along that route until I reached Highway 50 at around 3 p.m. I did not encounter a soul in that entire 5-mile stretch of vacant land north of Highway 50 (later developed as the Springtown area of Livermore). I did encounter many unattended sheep. I headed back to the car, walking in the unpaved middle section of Highway 50, hoping to catch a ride. Fortunately, after about a mile, I saw one of our survey crews traveling west toward Hayward. John Singleton, the crew chief, recognized me and that saved the day.

At every creek crossing, a culvert was proposed to contain the expected volume of water released from the Aqueduct. Easements were subsequently granted by property owners in return for some compensation and the benefit of water flowing through their property in dry months (the sheep were happy!).

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In signing ceremonies with then-Governor Edmund G. "Pat" Brown, Zone 7 enters a historic contract with the state for yearly entitlement of 40,000 acre-feet of water from the South Bay Aqueduct. This was increased to 46,000 acre-feet in 1963. Initial South Bay Aqueduct water deliveries are used for groundwater recharge. Patterson Pass Water Treatment Plant east of Livermore is built with treatment capacity of 6 million gallons a day (later expanded). The Veterans Administration Hospital in Livermore becomes Zone 7's first customer for SBA water, and Zone 7 begins water deliveries to the California Water Service Company in Livermore.

#### A MID-1960s FOCUS ON DRAINAGE

Zone 7's first significant drainage project upgraded the channel that now lies east of and parallel to Interstate 680. This involved realigning, deepening and widening reaches of Arroyo de la Laguna and Alamo Canal to contain what was then considered a "100-year flood." The project required participation of the big Volk-McLain development in Dublin and San Ramon to mitigate its impacts on stormwater runoff; as well as the State Division of Highways, which was building I-680.

Zone 7 had counted on federal participation in many needed flood-control channel improvements, but it didn't materialize. The agency's 1960 voter-approved bonds provided enough money for a local share, but without a federal contribution, Zone 7 had to resort to additional means of financing. What emerged in 1966, after extensive studies and many hearings, was a requirement that all new developments pay drainage fees to finance half of a \$20.8 million flood-control plan. The other half was to come from potential future bonds, future federal and/or state assistance and any other revenue sources that could be found. Today, 37 miles of flood-protection channels and drainage facilities are owned and maintained by Zone 7.

## FUNDING CONSTRAINTS PROMPT TAX OVERRIDE

In the 1960s, the most significant change to Zone 7's enabling legislation dealt with the maximum general tax rate of 15 cents per \$100 assessed property valuation. The agency's general fund, supported by water sales and general taxes, wasn't enough to cover normal operating expenses and State Water Project charges. The state Legislature authorized Zone 7 to pay the state charges through an additional property-tax override.

### **AQUEDUCT'S LOCATION HELPS VINEYARDS**

On February 23, 1965, the Board approved three fiveyear contracts for untreated water service for agricultural irrigation, covering the vineyards of Wente Brothers Winery and Concannon Vineyards. Had the South Bay Aqueduct not been nearby, it would have been too costly to get water delivered. But the five-year contract terms were designed to reflect the temporary nature of the supply when compared to 30-year treated-water contracts. In other words, it was assumed that, over time, agricultural uses would be slowly squeezed out as urban development – which was far outpacing anyone's expectations – required the water.



South Livermore Valley Vineyard

But later, the thinking changed. Contract sales of untreated water for agricultural purposes was revisited in the 1970s and '80s due to increased public interest in adding more vineyards and keeping agricultural lands as an open-space greenbelt, which would require more water. Some limited accommodation was made to new agricultural users on a first-come, first-served basis with contract terms extended from five to 15 years. Rather than decrease, the demand for untreated water was increasing and in 1997 Zone 7 initiated a connection fee to cover the costs of providing new untreated water. Today, agricultural water comprises less than 10 percent of total demand for water supplied by Zone 7, but it's key to the region's diverse economy and lifestyle.

Zone 7 begins water deliveries to the city of Livermore, which formed its own water department to serve the Springtown area north of what was then Highway 50, and starts groundwater deliveries to Valley Community Services District in Dublin. A few years after that, Pleasanton begins receiving Zone 7 water. 1966

To offset a reduction in federal flood-control assistance, county Flood Control District supervisors follow Zone 7 Board recommendation by requiring all new Valley developments to pay a drainage fee for flood-control improvements. Cost of the 30-year flood protection program is estimated at \$20.8 million. Development fees are expected to finance half of that, with the rest coming from potential bonds and/or future grants. "People came to realize that a balanced environment of urban, residential, industrial, open space and agriculture provided a better lifestyle mix than sprawling cities," said vintner Phil Wente, a former Zone 7 board member. "To have included all the stakeholders in the original planning process for the South Bay Aqueduct and the formation of Zone 7 Water Agency, and planning for a portion of that imported water to be used for agriculture, was at the time – I think – quite visionary."

## WATER-QUALITY ISSUES PERSIST

In the late 1960s, Zone 7 updated its water facilities master plan. Groundwater was highly mineralized and "hard;" imported water was less so. The water-quality issues were among the most acute in the Dublin area, which was getting exclusively groundwater. The Better Water Committee of the Dublin Jaycees submitted a petition with 3,232 signatures to Zone 7 in November 1968 asking that Zone 7's Board "take immediate action to supply the Dublin area with a quality of water equivalent to that of the Livermore plant output."

Even without that request, Zone 7 was working to bring State Water Project water conveyed through the Delta to the west side of the Valley in Pleasanton and Dublin. It was developing plans to build a second water treatment plant (Del Valle Water Treatment Plant) to back up the Patterson Pass Plant built in 1962, provide Delta-conveyed water to the Valley's west side, and back up the Mocho and Hopyard wells. Or, conversely, the wells could be used during summer peak demands. A major pipeline (the Cross-Valley Pipeline) was needed to make it all work.

Meanwhile, the Board grappled with how to best handle sewage disposal. Zone 7 had the authority to collect, treat, reclaim and dispose of wastewater and storm water. And sewage treatment was becoming an increasing water-quality problem because treatment plants in both Livermore and Pleasanton discharged treated wastewater into the arroyos. The Regional Water Quality Control Board saw that even upgrading treatment standards would not mitigate the waterquality impacts on the local surface and ground waters, Alameda Creek, the groundwater basin in the Fremont area and the southern San Francisco Bay where Alameda Creek emptied.



As part of the South Bay Aqueduct and State Water Project, the State Department of Water Resources in 1968 built Lake Del Valle for water storage, flood control, recreation and fish-and-wildlife enhancement.

Zone 7 was asked several times by the regional water board and local jurisdictions to address this problem on a valleywide basis. It hired a consulting firm to study alternative wastewater-management plans for consideration by the four agencies involved: Pleasanton, Livermore, Valley Community Services District and Zone 7. The report recommended placing the responsibility for disposing treated wastewater into Zone 7's hands. The thinking was that because Zone 7 imported and treated water for the Valley, it should treat and dispose of the used water. Additionally, if the wastewater could be reclaimed for beneficial use, then Zone 7 would be the right agency to handle it.

1968

As part of the South Bay Aqueduct Project, Lake Del Valle dam is built by the Department of Water Resources for water storage, flood control, recreation and fish-and-wildlife enhancement. Zone 7 finishes constructing the first two of its Mocho wells in Pleasanton for additional groundwater. Valley population tops 70,000 and, with the philosophy that development should pay for water-system expansion, Zone 7 Board adopts a connection fee for new homes. The agency also acquires some water rights to Arroyo Del Valle from the Pleasanton Township County Water District, which dissolves.

But there were thorny political considerations and the three dischargers of treated wastewater – Livermore, Pleasanton and Valley Community Services District – ultimately decided to form a joint powers agency, Livermore-Amador Valley Water Management Agency, to export treated sewage from the Valley. LAVWMA was created in 1974, two years after the federal Clean Water Act was adopted.

Later, in the early 1980s, Zone 7's Board adopted policies for the unincorporated area surrounding the cities aimed at curtailing the proliferation of on-site sewage disposal systems such as septic tanks to serve new development.



Zone 7 has long recharged the Valley's groundwater basin with the unused portion of State Water Project water from the South Bay Aqueduct.

#### A SECOND WATER-SYSTEM EXPANSION

A proposed critical second-phase expansion of Zone 7's water system faced big roadblocks in 1969. The Valley's three communities had unique issues and differed in their view of the benefits, and some people feared that more water would increase development and worsen air quality. Ultimately, a general obligation bond measure failed to win the needed two-thirds voter approval.

Going back to the drawing board, the Zone 7 Board in 1971 imposed a water-connection fee on new development to



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Dedication ceremony for the new treatment plant was held in May 1976.

raise non-tax funds to help finance water projects. This fee required growth to pay its own way, similar to the drainage fee on development.

With this financial commitment from development, a revenue bond measure went on the November 1972 ballot and won with a nearly 77 percent vote. A total of \$6.5 million in revenue bonds were sold to finance the Del Valle Water Treatment Plant and the Cross Valley Pipeline, both completed by 1975. These facilities allowed Zone 7 to begin delivering better-quality imported and treated water to Dublin and Pleasanton. The contractor finished remarkably ahead of schedule – and on budget!

# Mun's Recollections

If anyone were to ask me to name the most satisfactory decision in 23 years of involvement with Zone 7 affairs, I would likely say selecting the Del Valle Water Treatment Plant site – both from an engineering and cost standpoint. The view of the Valley was a bonus.

Zone <sup>4</sup> voters approve an \$8.2 million "Project 2" revenue bond for the Del Valle Water Treatment Plant and a Cross-Valley Pipeline to interconnect the Zone's east-and west-Valley water systems. These projects ensure a higher-quality, more reliable water system for the whole Valley and bring imported water for the first time to Pleasanton and Dublin, which had previously relied exclusively on groundwater. The significance of water in Valley battles over growth is underscored in a Zone 7 Board election in which six of the eight candidates are experienced politicians, including four former mayors. Three of them, Archer Futch and Gib Marguth of Livermore, and Ed Kinney of Pleasanton, win seats.

#### CHAIN OF LAKES IS BORN

In the 1970s, Kaiser Sand and Gravel had proposed a garbage landfill as the firm's quarry reclamation plan for its mined-out sand-and-gravel pits. Zone 7 objected, arguing that the propriety of placing all that garbage in the center of the Valley's valuable groundwater resource was dubious at best.



Abandoned gravel quarries between Pleasanton and Livermore hold a key to groundwater recharge and floodwater detention.

Zone 7's opposition failed to sway the San Francisco Bay Regional Water Quality Control Board, which said concerns could be mitigated. Zone 7 appealed, citing potential irreparable harm to an irreplaceable water resource. The State Water Resources Control Board sided with Zone 7. Kaiser filed suit. But by the time the court decided in Kaiser's favor, the three quarry operators had already embarked on a more suitable plan – a proposed Chain of Lakes through the mining area. The Chain of Lakes was advanced as a potential resource to store water and to mitigate the adverse effects of mining. The quarry reclamation plan was the key to Zone 7's future with respect to water management, including groundwater recharge and floodwater detention. It took years of negotiations with the three sand-and-gravel producers to develop contract terms.

The last lakes will not be available to Zone 7 until around the year 2030 or when the last truck loaded with the last grains of sand and gravel leaves the Valley. At that point, Zone 7 will have a total of 10 lakes to use for water management such as groundwater recharge, water conveyance, and floodwater detention.

## THE THIRD DECADE: THE POLITICS OF WATER, THE REALITY OF DROUGHT & PROP. 13

Throughout the 1970s, debate raged over whether Zone 7 should deliberately try to constrain residential growth by limiting water supply or simply function as a utility supplying water to what a local land-use agency requested to accommodate growth. Indeed, in 1976, the role of water in Valley battles over development was underscored when three new directors were elected: Edward J. Kinney, Gilbert R. Marguth, Jr., and Archer H. Futch – all former mayors. Ed was from Pleasanton. Gib and Archer were from Livermore. During the late 1970s, five of the seven directors were former mayors. Bob Pearson, who was elected in 1974, had been a Pleasanton mayor as had Robert C. Philcox, who was elected in 1978.

Rain and snowfall in the winter of 1976-77 were well below average, leading to drought conditions. Residents of Zone 7's service area did their part with voluntary conservation, reducing demand for Zone 7 supplies by more than 20 percent! Nevertheless, Zone 7 's long-term planning paid off with a managed groundwater basin to draw from when imported water from the State Water Project was reduced. The contrast was Marin County where conditions were so severe that emergency measures – involving a temporary pipeline using a lane of the Richmond-San Rafael Bridge – were necessary.

Drought underscores the importance of the Valley's groundwater resources when severe water rationing measures are not needed as compared with other Bay Area and California communities. Nevertheless, Valley residents do their part with voluntary conservation, reducing demand for Zone 7 water by 20 percent!

The County Flood Control District agrees to give Zone 7's Board more local control and autonomy. Zone 7 relocates the District's Water Resources Branch staff to leased office space in Livermore. Branch Chief Mun Mar, who had been a Flood Control District employee since the 1950s, is named Zone 7's first General Manager. Around this time, the county Flood Control and Water Conservation District Board of Supervisors agreed to give Zone 7's Board more autonomy. The agency relocated the Flood Control District's Water Resources Branch staff to leased office space in Livermore. Branch Chief Mun Mar, who had been a Flood Control District employee since the 1950s, was appointed General Manager on June 8, 1978.



Several upgrades to the Patterson Pass Water Treatment Plant have been made over the years.

June 1978 was monumental in California history. Proposition 13 was passed on June 6 and slashed property taxes, creating a financial tsunami affecting all public agencies – including Zone 7 – that relied on property taxes to operate. Zone 7's General Fund was sharply reduced, primarily impacting the flood-control maintenance program. The annual tax allotments to Zone 7 were sharply diminished when other more critical needs of fire districts, schools, libraries, emergency services, etc. – entities that had no other source of revenue – were allocated a larger share of the limited tax revenue. Fortunately, Zone 7 was able to continue the override tax to pay its state water charges because, as previously incurred debt, those charges were considered exempt from Proposition 13.

### **REGIONAL COOPERATION PAYS OFF**

On another front, in cooperation with the City of Pleasanton and the U.S. General Services Agency, Zone 7 relocated from Livermore to Pleasanton in February 1986 after obtaining a building site at the Hopyard Well Field and Pleasanton Sports Park – at no direct cost!

Another cooperative effort involved Zone 7's agreement with Dublin San Ramon Services District (formerly Valley Community Services District) for construction of the 4-million-gallon Dougherty Reservoir.

### MORE DELTA ISSUES SURFACE

After the drought in the late 1970s, deficiencies of the State Water Project became more evident, especially in light of increasing water demand. Part of the original State Water Project included a Peripheral Canal around the Delta to move water to the state's Delta Pumping Station more efficiently. Water released from Lake Oroville would be diverted into the canal to preserve its quality and reliability. Some water would be released into the Delta to provide a flow from east to west to stabilize overall water quality and quantity. But



The Sacramento-San Joaquin Delta, which conveys State Water Project water, has long faced significant ecological challenges.

1981

Continued growth boosts the Valley's population to over 100,000. Alameda County approves a plan to ultimately turn the Valley's abandoned sand-and-gravel quarries between Pleasanton and Livermore into a "Chain of Lakes" for Zone 7 groundwater recharge and flood control.

1982

Zone 7, steward of the Valley's groundwater basin, adopts a wastewater management plan for the unincorporated area of the Alameda Creek watershed above Niles. This curtails the proliferation of new septic tanks and on-site sewage-disposal systems to serve new development. the canal was highly controversial and state voters rejected it in 1982. The Zone 7 Board had taken a 4-3 position against the project, although there was consensus that the Valley would have better-quality water with the canal. Notably, a version of the canal resurfaced in 2007 and is now being reconsidered possibly as the best way to improve not only the water quality and reliability of existing supplies, but also environmental habitat in the Delta. Stay tuned...

### **MANAGING THE ARROYOS**

1982 and 1983 were wet years. There was some street flooding in Pleasanton when the enlarged Arroyo de la Laguna and Alamo Creek along I-680 began to fill with natural runoff and flood-control releases from Lake Del Valle. The bottleneck was the lower reach of Arroyo de la Laguna between Bernal Avenue and I-680, which was subsequently improved by the Hacienda Business Park developers and Ponderosa Homes.



Local creeks provide recreational benefits.

Also in the 1980s, a valleywide Arroyo Management Plan showed a potential parallel network of trails that the public could enjoy. Public use was permitted along sections of the arroyos where there was an operating agreement with the local park district or city park department.

Allowing for multipurpose use of its flood-control right-ofway, Zone 7 adopts an Arroyo Management Plan allowing recreational potential of projects to be developed in cooperation with local agencies having parks-and-recreation responsibilities.

## The 1990s – Financially Prudent Planning

As the 1990s dawned, the population of Livermore, Pleasanton and Dublin topped 130,000.

Drought conditions in the early part of the decade prompted Zone 7 to establish a Rate Stabilization Reserve to help avoid sharp rate fluctuations during times of drought or emergency supply outages.



Zone 7 regularly tests water quality.

Meanwhile, the agency had the responsibility and duty to ensure a safe and plentiful supply not only to meet the needs of the existing residents but future residents as well. With connection fees on new development being charged to pay for expansion, and with a portion of water rates set aside to improve and replace existing facilities to keep them reliable, Zone 7 was prepared. It began implementing several projects identified in 1986 as needed – including upgrading the Del Valle Water Treatment Plant and its lab, building the Vineyard and Mocho pipelines and drilling additional wells.

Zone 7 builds its own administrative office building in Pleasanton and staff moves there from Livermore, while still maintaining close coordination, cooperation and exchange of services with the county Flood Control District. Zone 7 made big strides during the 1990s to satisfy anticipated water demands through planned Valley buildout in 2035 and, at the same time, to improve water reliability throughout the Zone. This was achieved largely through a program, financed by Dougherty Valley and other developers, to acquire additional State Water Project rights along with groundwater-storage capacity in Kern County. This began a new era of developer-funded acquisition that, by 2004, entitled Zone 7 to a total 80,619 feet of State Water Project water annually – twice the original 1961 entitlement.



The El Charro Ranch area experienced major floods in 1998.

In 1998, heavy flooding along Arroyo Mocho closed a stretch of Stanley Boulevard for several days during El Nino's fury, playing havoc with commuter traffic. Storms damaged several Valley flood-control channels and raging waters in Arroyo de la Laguna tore out about 20 feet from the back yard of a Sunol home and some property behind Sunol Glen School before emergency repairs were made. On another front, and in a major initiative that recognized shifts in water policy in California, the Zone worked with local wastewater agencies to develop a water-recycling plan that received a permit from the Regional Water Quality Control Board. The purple pipes that are frequently installed in median landscaping and at golf courses and other irrigated areas resulted from that landmark agreement. The use of recycled water by some local jurisdictions for such purposes is now routine and augments the Valley's water supplies.

In cooperation with retailers, the Zone 7 Board in 1999 adopted a Salt Management Plan that aims to control and reduce salt loading of the groundwater basin – both to improve long-term water quality and to facilitate the use of recycled water. This has become a cornerstone of Zone 7's Groundwater Management Plan.

## **Recollections of John Marchand** -Director 1990-2005

"Zone 7 was the first water agency to make a statement about MTBE contaminating our groundwater. We developed a water quality policy to ensure water was safe for everyone to drink. Zone 7 has done a phenomenal amount in the last 50 years and I think that's why the governor's (Schwarzenegger's) office has recognized Zone 7, which really is a much larger agency and has a greater amount of influence than our size would lead one to believe. Despite our size, we've been able to accomplish many great things."

Thanks to groundwater storage, the Valley survives prolonged drought conditions (1987-1992) without mandated water rationing. This was the worst six-year drought since the late 1920s.

The combined populations of Livermore, Pleasanton and Dublin surpass 130,000. Mun Mar retires as General Manager and is replaced by Jim Dixon.

## THE NEW MILLENNIUM – LOOKING FORWARD

The first years of the new millennium have focused on improved water reliability, enhanced water quality and more effective and environmentally friendly flood protection, along with expanded public outreach and improved Water Science in the Schools programs.



2006: Day on the Glen Festival in Dublin

The agency in 2004 adopted policy goals aimed at maintaining a highly reliable water-supply system under varying hydrologic conditions, and to reduce impacts of potential service disruptions at the South Bay Aqueduct, surface-water treatment plants, wells or distribution infrastructure. Zone 7 has been planning the new Altamont Water Treatment Plant and Pipeline project, which will accommodate planned Valley growth and improve overall water-system reliability with an ultimate capacity of 42 million gallons a day (24 mgd initially) of additional surfacewater treatment. The project's first phase, set for completion as early as 2010, will cost an estimated \$195 million and is funded by connection fees on new development. In 2005, the agency adopted a Well Master Plan for additional reliability and has since begun implementation by digging exploratory wells.

On the water-quality front, Zone 7 – in cooperation with its retailers, the agricultural community, local businesses, environmental groups and others – in 2003 established a Water Quality Management Program. It helps the Board shape policies to address water-quality issues, form operational decisions, establish capital facilities needs and address design guidelines. It also sets water-quality goals that are significantly more stringent than existing state and federal regulations.

Zone 7's Del Valle Water Treatment Plant was among just 83 plants recognized in 2006 for having maintained the Director's Award for five years from the American Water Works Association's Partnership for Safe Water, a national volunteer initiative developed by the EPA and other organizations. Meanwhile, the agency plans to complete taste-and-odor improvements at both the Del Valle and Patterson Pass water treatment plants.

To help reduce hardness of groundwater supplies, the agency in 2007 broke ground on its Mocho demineralization plant in Pleasanton, which will use reverse-osmosis membrane technology to treat up to 7.7 million gallons of groundwater a day pumped from a series of nearby Zone 7 wells.



Zone 7's participation in efforts to restore steelhead trout to portions of the Alameda Creek Watershed led to installation of fish ladders along Arroyo las Positas and Arroyo Mocho in the Valley.

Zone 7 participates in the new National Pollutant Discharge Elimination System municipal stormwater permit for the Alameda Countywide Clean Water Program.

Dale Myers, with Zone 7 since 1980, is named General Manager upon Jim Dixon's retirement. And in a more environmentally friendly approach to flood protection, the Zone 7 Board in 2006 adopted a Stream Management Master Plan. Previous plans focused on moving flood waters out of the Valley as quickly as possible by using hardscape, like rocks and concrete, in channels. The new approach relies on stream management that incorporates stream restoration and enhances local wildlife habitat and recreational opportunities when possible. It provides for increased flood protection by detaining flood water in former quarries (future Chain of Lakes) and releasing it slowly once storms pass. In 2007, Zone 7 began the process of implementing the new StreamWISE program.

## DELTA CHALLENGES COME TO HEAD

Zone 7 leaders continue to be involved in statewide negotiations aimed at protecting the Delta's ecosystem and determining its future as the hub of water-supply conveyance in the state. Negotiations gained more urgency in mid-2007 when the Department of Water Resources shut down the State Water Project pumps for 10 days to avoid harming endangered fish swimming near the pumps. During the shutdown, water agencies across the state relied on supplies they normally reserve for use during droughts.

The Delta transports drinking water to a total 25 million Californians, and irrigates 7 million acres of agricultural land in the state, including 3,500 acres of vineyards in the Livermore-Amador Valley. An August 31, 2007 federal court ruling reduced up to 30 percent of water deliveries for at least a year while state and federal agencies complete a long-term plan to protect Delta smelt and other endangered species that live or migrate through the Delta. Under consideration is a "dual-conveyance" system that could send existing water supplies, which originate in the northern Sierras, both through the Delta and through a new pipeline or canal around the Delta. In concept, such as "dualconveyance" system would offer the operational flexibility to accommodate the habitat needs of fish in the Delta as well as the water-supply needs of the state. In addition to reducing the environmental regulatory uncertainty of imported water supplies, a new conveyance system could also reduce the risk of seawater intrusion from unstable levees in the Delta and rising sea levels predicted from global climate change.

Until a long-term Delta fix is in place, Zone 7's service area will rely to a greater degree on imported water supplies stored in local and off-site groundwater basins, along with sustainable management of water supplies from local runoff, conservation and use of recycled water to meet water demands. However, with water imported from the Sierras (and currently conveyed through the Delta) currently providing about 80 percent of Zone 7's water supply, the Delta will always be a lynchpin in the Valley's water-supply portfolio.

### AGENCY GAINS GREATER AUTONOMY

In yet another step giving Zone 7 greater local autonomy and independence from county government, Alameda County Supervisor Scott Haggerty in 2003 helped the Zone with state legislation granting it more authority over issues and projects of specific interest only to the Zone 7 area.

Before that, "Pretty much everything (including contracts) had to be run through the county," Haggerty recently told agency officials. "You have your own elected board. You have your constituents and you certainly don't need the people up in Oakland to tell you what to do, so I was very supportive of that legislation and we worked with (Assemblyman) Houston to get that through. It was a great thing that did happen.

"I think the people here in the Valley are very innovative. They are not afraid to take risks; they're willing to try something. In 1957 people said, 'We need a special district out here,' and it worked out for everybody. Zone 7 has done a wonderful job."

Financed by Dougherty Valley developers, Zone 7 acquires 7,000 acre-feet per year of State Water Project contractual water rights from the Berenda Mesa Water District in Kern County. This begins a new era of developer-funded acquisition that, by 2004, boosts Zone 7's total entitlement by 75 percent to 80,619 acre-feet annually. The agency also increases offsite groundwater storage capacity for overall reliability. Zone 7 adopts the Salt Management Implementation Plan to reduce buildup of minerals in the groundwater basin. In efforts to restore steelhead trout to portions of the Alameda Creek watershed, it also joins the Alameda Creek Fisheries Restoration Workgroup.

#### **COMMENTS FROM BOARD MEMBERS**

# Board member Jim Concannon, who has served on the board since 1984 and whose brother, Joe, served from 1970-78:

"I'm really happy our family has been able to help a little bit over the years with Zone 7 and we will continue to do that for public service if nothing more. But without the staff, we have zero and we've been very fortunate to have employees who have done a wonderful job."

#### **Board member Jim Kohnen:**

"Whenever you turn on your tap, we (Zone 7 and its four retailers) are there. We provide you with wholesome and safe water to use and it's a joint effort of all these agencies that provides the services you've become accustomed to."

#### **Board member Sarah Palmer:**

"Zone 7 really has done such an extraordinary amount of things with education ... about issues in water – about groundwater, about the watershed, about water quality. I've seen this in action with students and the public, and it's quite impressive."

#### **Board President Bill Stevens:**

"Zone 7 has always been flying under the radar. We just do our job, and we've done it well, to provide good quality water and flood protection at a reasonable cost. We are highly respected by other California water agencies as a leader."

#### **Board member John Greci:**

"This is a celebration of 50 years of effort, and it started with a lot of volunteers and visionary people."

#### **Board member Dick Quigley:**

On prospects for using alternative energy in water operations, "Staff is doing a remarkable job in looking at and following up on those opportunities. It's something in which I have high hopes we'll be doing something meaningful for the community in the not-too-distant future."

#### **Board member Stephen Kalthoff:**

"The agency has been well-managed for the past 50 years and our finances are in very good shape. We've been very astute in the way we manage funds."

#### More from Mun Mar:

"I think Zone 7 has quenched the thirst of this whole eastern Alameda County over the last 50 years and I am proud to have been part of that."

200

The new ultrafiltration facility at the Patterson Pass Water Treatment Plant is completed, providing additional treatment capacity of 8 million gallons a day. In consultation with retailers, the Zone 7 Board adopts a Water Quality Management Plan, which sets more stringent targets than any state and federal water-quality standards. State legislation grants Zone 7 Board more autonomy from County Flood Control District.



The Zone 7 Board adopts a Well Master Plan for additional reliability and begins implementation by drilling exploratory wells. Agency moves headquarters to North Canyons Parkway in Livermore.

#### ZONE 7'S PAST, PRESENT, AND FUTURE

## **ZONE 7 DIRECTORS**

1. Leo R. Callaghan – Livermore	1957-74
2. Eldred Chance – Livermore	1957-67
3. Herman F. Koopmann - Pleasanton	1957-68
4. Victor L. Lund – Pleasanton	1957-66
5. Melvin Nielsen – Pleasanton	1957-70
6. <b>Thornton Taylor</b> – Livermore	1957-65
7. Karl L. Wente – Livermore	1957-70
8. Roy N. Jensen – Livermore	1965-67
9. Leroy J. Amaral – Pleasanton	1968-72
10. John B. Long – Pleasanton	1970-74
11. George C. Lydiksen – Dublin	1966-78
12. Harlan H. Zodtner – Pleasanton	1967-76
13. Robert C. Becker – Livermore	1968-76
14. Joseph Concannon – Livermore	1970-78
15. David W. Harris – Pleasanton	1972-76
16. Robert M. Pearson – Pleasanton	1974-78
17. Richard W. Ryon – Livermore	1974-78
18. Edward J. Kinney – Pleasanton	1976-80
19. Gilbert R. Marguth, Jr. – Livermore	1976-80
20. Archer H. Futch – Livermore	1976-80
21. Lloyd E. Hagemann – Pleasanton	1978-82
22. Robert C. Philcox – Pleasanton	1978-82
23. Margaret J. Tracy – Livermore	1978-94
24. Philip R. Wente – Livermore	1978-94
25. Hugh A. Walker – Livermore	1980-88

26. Gerald S. Dzakowic – Livermore	1980-84
27. Jacqueline R. Williams – Livermore	1980-84
28. Henry J. Schneider – Sunol	1982-85
29. Randolph Stone – Livermore	1982-84
30. Robert N. Schock – Pleasanton	1984-86
31. Robert W. Buddemeier – Livermore	1984-88
32. James J. Concannon – Livermore	1984-
33. Stephen G. McGrath – Livermore	1986-90
34. Dean L. Schenone – Pleasanton	1986-90
35. Sands H. Figuers – Livermore	1988-2000
36. August M. Hagemann, Jr. – Pleasanton	1988-92
37. John P. Marchand – Livermore	1990-2005
38. Eric Shulenberger – Sunol	1990-93
39. David W. Layton – Livermore	1992-2004
40. August M. Hagemann, Jr. – Pleasanton	1993-94
41. Stephen A. Kalthoff – Livermore	1994-
42. John J. Greci, Jr. – Livermore	1994-
43. Lynn Spence – Pleasanton	1994-98
44. William Stevens – Livermore	1998-
45. Susan M. Johnston – Livermore	2000-2004
46. James Kohnen – Dublin	2004-
47. Richard L. Quigley – Pleasanton	2004-
48. Christopher M. Moore – Pleasanton	2006-2006
49 Sarah Palmer – Livermore	2006-

## 2006

State construction of South Bay Aqueduct enlargement begins to bring more water to the Valley. Zone 7 steps up participation in statewide negotiations aimed at sustaining the ecologically fragile Delta as a water supply. The agency Board adopts the Stream Management Master Plan, a more environmentally friendly approach to flood protection through planned Valley buildout in 2034.

## 2007

Negotiations over how to sustain the Delta as a water supply gain more urgency with a court-ordered reduction in State Water Project deliveries for 2008 while state and federal agencies complete a long-term plan to protect endangered Delta smelt. Dale Myers retires as General Manager and is replaced by Jill Duerig. Mocho Groundwater Demineralization Plant gets under construction.



Zone 7 is committed to providing a reliable supply of high-quality drinking 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 the water resources in a fiscally responsible, innovative, proactive, and environmentally responsible way.



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CREDITS