



CREATIVE SOLUTION TO A COMMON CHALLENGE:
Water Conservation with Municipal Policy



City of Monrovia, California

Monrovia Conserves: A Finance Team's Approach to Water Conservation



About the City of Monrovia



Located in Los Angeles County, the City of Monrovia is in the foothills of the San Gabriel Mountains. Situated just east of Los Angeles,

it is the fourth-oldest incorporated city in the county, with over 2,500 historic homes and a historic Old Town, which has hosted a weekly street fair for more than 30 years. Monrovia has been used as a setting for filming TV shows, movies, and commercials. As of the 2020 census, the city's population was 37,931.

With the state facing a historic drought in July 2021, California's Governor Gavin

Newsom declared a drought state of emergency for 50 counties and urged all Californians to reduce their water usage by 15% compared to 2020 levels. Municipalities across the state brought mandatory conservation measures to residents in a variety of ways, including restrictions and citations. The City of Monrovia, though, took an unconventional approach by developing a water penalty program incorporated into its utility billing process. In the two years since its introduction, the program has helped the city conserve nearly 700 million gallons of water and achieve a 17% reduction in citywide water usage. Here is how other governments facing similar constraints can utilize a similar approach to think creatively about solutions.

DRASTIC MEASURES FOR A DEVASTATING DROUGHT

Drought conditions during the summer of 2021 caused unprecedented water shortages throughout California. Municipalities across the state responded by implementing new water restrictions, such as limiting landscape irrigation to specific days of the week and times of the day and issuing citations for violations. By October, the historically high temperatures and record dry conditions had not let up. In response, Governor Newsom issued a proclamation banning wasteful water practices and expanded the drought emergency to include all 58 counties—including Los Angeles County.

Located just east of Los Angeles, Monrovia relies heavily on an underground aquifer known as the Main San Gabriel Basin, which was nearing historic lows. Neighboring communities and prior agreements offered no relief. As City Manager Dylan Feik explained,



The City of Monrovia relies heavily on the San Gabriel Reservoir, which was nearing historic lows during the summer of 2021.

“Historically, as Monrovia’s water usage crept higher, we’ve had to purchase some of our water from neighboring water agencies. This was no longer possible.”

To make matters worse, the public was not complying with the governor’s request. “We were seeing months when our water usage was actually going up,” lamented Feik. That was when city staff knew they needed to do something drastically different to curb usage. Between October and December 2021, the City drafted language for its own mandatory emergency ordinance and developed an innovative water conservation program.

CREATING A WATER CONSERVATION PLAN

Following adoption of a mandatory emergency ordinance in December of 2021, staff spent the following 60 days educating the community about the new and nonconventional water conservation strategy tied directly into its water utility billing process. The plan required a mandatory 10% reduction in water consumption by all water customers, including residences, commercial businesses, churches, and schools.

“The initial strategy was built on the idea that we’re all in this together,”

explained Feik. The penalty for failing to meet the required 10% reduction was a bill of two times the cost of each water-billing unit. The standard cost per unit (748 gallons of water) is \$2.44. Consequently, the penalty was set at \$4.88 per unit in excess. Penalties for excess water usage took effect on the March 2022 utility bills.

The biggest challenge was addressing concerns of fairness. If one resident used five units of water and their neighbor used 50, assigning a 10% reduction of water usage across the board seemed unfair. “Some residents had spent their own money removing grass lawns and installing low-flow fixtures to bring their water consumption down. Asking them to reduce more was really hard,” Feik recalled. The city made the decision, however, that everyone would be subject to the target, including the city itself. Thus, the program became a united citywide conservation effort. To address unique fairness concerns on an individual bases, the city established an appeals process for customers who sought to contest their penalties. This approach would cover special circumstances, like sprinkler or pipe breakage, or cases in which residents already used so little water that penalties for simply maintaining these levels would be unreasonable.

LEANING ON TEAMWORK

Creating and implementing a brand-new water conservation plan was a team effort in a state of emergency. Conventional water restrictions are all the same—don’t water on certain days of the week—and this was not going to be the best solution for Monrovia. “We like to say ‘let’s do what’s best for Monrovia,’” Feik explained. “Creating a completely different approach, as stressful as it was, allowed each team member to combine their individual strengths with one another to form a plan and build a solution.”

Just as residents were required to step up their water conservation efforts, city employees also rose to the challenge of implementing the new conservation plan. Accounting Assistants April Olson and Logan Del Grosso fielded complaints from residents and respectfully explained—over the phone and at the public payment counter—the drought crisis and the purpose of the water conservation plan. Payroll Technician Milka Munoz and Principal Accountant Michie Hernandez coordinated the utility billing; they calculated the penalty fees and credits and incorporated account-specific details into over 11,000 monthly utility bills. The staff’s detailed work helped ensure residents could monitor their conservation efforts through

their monthly utility bill. “The idea was to give everybody a graph they can look at to understand their usage, their target, and how they’re doing in relation to that target on their bill,” Feik explained.

Senior Information Systems Analyst Lou Valdez designed a custom software application that helped bring together data from three different enterprise systems to better track the appeal applications. As a designated Water Appeals Team, staff reviewed the excess usage penalty appeals in addition to regular day-to-day work. “We have a team of very capable staff to review these items and come up with some standard approaches to how we address these issues of fairness and equity. And we were able to start making some little tweaks and adjustments,” explained Feik. Lastly, leadership regularly shared insights, reports, and presentations with the City Council as the city demonstrated progress toward the conservation mandate.

TRACKING THE RESULTS

By spring 2023, citywide water consumption was down 20%—exceeding the state’s 15% water reduction goal. “We’ve collected about \$1.3 million in penalty revenue,” Feik reported. And 100% of the fees are going towards further conservation efforts, including reimbursing residents for grass lawn removal, installing low-flow water fixtures and appliances, and planting native and drought-resistant landscaping. “We’re using it for one-time costs that will reduce our dependence on water,” Feik explained. Every time a resident removed their grass lawn, they received a rebate from the City for \$4 per square foot of lawn removed. “Our rebate is the highest in the area. And every time we do a turf rebate, we see almost 60% water reduction.”

Moving forward, Monrovia is looking to invest money to reduce water consumption from heavy water users such as parks, schools, the local cemetery, and historic homes. The city is also now providing a water audit program for residents so they can better understand their individual water usage and determine how they can conserve even more. In addition, its website also



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DYLAN FEIK, MONROVIA CITY MANAGER

provides resources to educate residents on water-saving strategies.

The true innovation was in the approach to focus on results. The City assumed residents could water however and whenever they needed so long as they also understood the goal of reducing water usage and how that was being measured. The city found that residents better and more easily governed themselves than under an alternative approach in which inspectors monitored compliance with irrigation schedules, for example.

The community has embraced this program. “I remember talking to an 84-year-old resident,” Feik recalled. “He called while he was on his hands and knees removing sod in his front yard. He said, ‘Hey, I just wanted you to know I’m removing my sod today. Have a good day.’ And I thought, that’s it! People did buy into this.”

LESSONS FOR OTHER COMMUNITIES

Amid rising temperatures, extreme drought conditions and population growth, communities across the western United

States are struggling with unprecedented water shortages. Cities facing water scarcity can learn from Monrovia’s innovative approach to conservation, which Feik explained they call “the Monrovia Way.”

“In our approach, we adopt a standard, educate people, and then let them govern themselves,” said Feik. Other organizations can easily study Monrovia’s non-conventional approach by referencing all of the city’s materials, documents and even copies of utility bills online.

Change, of course, takes time. “Changing behavior takes generations,” Feik emphasized, even while explaining Monrovia’s success. “I’m a big believer that governments can help solve a lot of problems,” he added, reflecting on the change staff has seen in the community.

EXPLORE MONROVIA CONSERVES

See updates, resources, and details on Monrovia’s water conservation measures online at cityofmonrovia.org/your-government/public-works/water/water-conservation.