CivicSpark
a program of the Local Government Commission

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Proactive Leak Detection Program

Marin Municipal Water District

The Problem

In the U.S., **an estimated 10% of homes have leaks – which waste an average of 90 gallons of water a day** and **more than 1 trillion gallons annually**. The Marin Municipal Water District currently takes bimonthly readings of customers' meters and sends out bills every 70 days. This time period, combined with use of auto-payment, results in slow response times for detecting and correcting leaks throughout the service area.

The Project

The Proactive Leak Detection Program uses historical data and direct outreach to discover and address leaks quickly and efficiently. This helps save water and money for both the district and its customers. The program works through analyzing consumption-history data and identifying customers whose water usage has spiked by at least 300% from the previous two years.

CivicSpark fellows further investigate water use and customer data for the selected parcels, perform site visits and meter checks, and then notify customers of potential leaks.

Impacts

The program has been widely successful. From January to June 2017, Alyssa and Jack have visited **513 sites** and **discovered leaks at nearly one-half of them** (235 locations). These customers were unknowingly **losing an average of more than 750 gallons per day**. Most customers took quick action and 85% of leaks were corrected before the next billing period. This early notification and assistance has already saved an estimated **5.3 million gallons**.

In addition to these direct outcomes, the program has also helped the District **improve its operational efficiencies**. Interdepartmental communication was crucial to maintaining the program's efficiency, as the CivicSpark Fellows sometimes re-visited sites that already had been in contact with the district. By increasing communication between three departments (meter reading, customer service and conservation), the District can now avoid duplicating efforts and thus has greater capacity to address customer leaks.

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Until Advanced Metering Infrastructure becomes widespread, the proactive leak detection will remain instrumental for both water conservation and customer service. The Marin Municipal Water District plans to continue to refine data-analysis methods to increase detection accuracy, and will combine site visits and water-use surveys to reduce scheduling delays.

Bios

Alyssa Pfluger graduated from Valparaiso University in 2016 with a B.A. in communications, public relations and humanities with minors in business administration and environmental studies. She became involved with sustainability through the Chicago Zoological Society and the Field Museum, and began focusing on water conservation during an internship with the Alliance for Water Efficiency. Alyssa is passionate about the intersection of culture and conservation, and looks forward to spending the next few years exploring the resources and opportunities available in the Bay Area.

In May 2016, **Jack Edgar** completed his B.S. degree in natural resources conservation with a global perspective from the University of British Columbia. Among a swath of sustainability- and climate-related issues, he is interested in how the intersection of policy, education and technology can work to reduce the carbon and water footprints of our agricultural industry.