

INVESTIGATION: Billions of gallons of water go missing in Shasta County each year

BY: [Clay Duda \(mailto:clay.duda@redding.com\)](mailto:clay.duda@redding.com)

POSTED: 5:30 PM, Aug 30, 2014

UPDATED: 5:09 AM, Sep 2, 2014

TAG: [news \(/topic/news\)](/topic/news) | [local news \(/topic/local+news\)](/topic/local+news)

SHASTA COUNTY, California - While residents of Shasta County suffer water cutbacks and potential fines due to historic drought conditions, billions of gallons flowing through local water systems have gone unaccounted for in recent years, a Record Searchlight investigation found.

More than 3.2 billion gallons of drinking water pumped into major water utilities around the county in 2013 alone never made it to customers' spigots, averaging nearly a 25 percent loss, according to an analysis of public records obtained by the newspaper. That's enough to supply 13,362 average Redding households with drinking water for a year.

The city of Redding has already started to make some adjustments in response to the inquiries. It lost about 1.5 billion gallons last year, records show.

"The (water loss) numbers we gave were kind of a wake-up call for me," said John Wendele, water utility manager for the city. "I know there is some theft going on, but it would be a stretch to say theft caused that big of an increase. We probably have some undetected leaks in our system as well, and we're going to start looking first at pipeline segments that are adjacent to creeks," where leaks can be harder to detect.

Exact loss figures vary widely depending on the water system and location in the county. For example, the Palo Cedro Community Service Area, administered by Shasta County, accounted for all but 2 percent of its water last year, while the city of Anderson lost track of nearly 59 percent of the water sent into its pipes.

Officials say everything from leaks and water theft to fire suppression and the needed flushing of water lines accounted for the bulk of the missing water. But with no mandatory reporting standards and little state or federal oversight, the true extent of the issue remains largely unknown. The method used to track water also varies widely by utility, and some have done little to address leaks or even track water loss across the years.

In Clear Creek, the local water district recorded losing no water for more than five years before implementing a new reporting system in 2013. It showed losses of 9 percent that year.

“We were simply trying to account for all of the water going through the system (before then),” said Kurt “Skip” Born, general manager of the Clear Creek Water District.

The city of Anderson was only able to produce data on water loss for one year, 2013, which Public Works Deputy Director David Durette said was the first year the state’s Department of Public Health asked it to compile those figures.

Durette said much of the water unaccounted for was not actually lost but rather used to irrigate the city’s two large parks, Anderson River Park and Volonte Park.

“They are probably the largest consumers here in town,” he said. “The biggest is probably Anderson River Park. There’s a 6-inch (water) main going into that thing and we don’t have a meter on it (to track usage).”

Of the six major water providers investigated by the Record Searchlight, both the highest and lowest rates of loss stemmed from community service areas, or CSAs, run by the county.

The Sugarloaf CSA near Lake Shasta lost more than 65 percent of its water last year, up from about 33 percent the year before, while Palo Cedro performed the best out of all the water systems, averaging just over a 2 percent loss since 2010.

“In Sugarloaf we’ve had some losses that are abnormally high, and we’ve been working diligently patching those leaks,” said Shasta County Public Works Director Pat Minturn.

“The water lines have gotten to a point where they can no longer be maintained in those conditions,” he said. “We replaced a section of line a few weeks ago and the numbers have come way down — but line replacements are also very expensive.”

In many cases, the costs to maintain or repair aging water lines and other infrastructure are passed on to the consumers. Customers in Sugarloaf can expect a rate increase in the coming months to pay for the ongoing infrastructure work, Minturn said.

Other rural CSAs averaged losses between 21 percent and 29 percent last year. Nearly 29 percent of water never made it to customers in Castella, 27 percent is gone in Jones Valley, 27 percent in French Gulch, 23 percent in Crag View and 21 percent in Keswick. Loss rates in Alpine Meadows, the county's smallest CSA, could not be calculated because water production there was not tracked.

Minturn said most of those figures are in line with losses from other small, rural systems, which averaged in the 20 percent range. Major challenges in reducing losses in those areas include some rough terrain, a large amount of plumbing needed to reach some communities and the small number of customers being served. Theft is also an issue, Minturn said.

While the county saw the highest percentage, the city of Redding lost the most total water with nearly 1.5 billion gallons escaping its system last year, about 15 percent. By comparison, Shasta County lost 49 million gallons among all of the CSAs that could be tracked.

The city of Shasta Lake lost track of about 6 percent of its water in 2013, and Bella Vista Water District saw 8 percent loss.

Experts say it's important for a utility to accurately track water loss to understand the condition of its water system, especially when facing cutbacks or other constraints in a drought year.

"There are all sorts of costs that go into treating and managing water, so you want to be sure you're managing it effectively," said Greg Kail, a spokesman for the American Water Works Association, or AWWA. "If you don't, you have less money to reinvest in the system and that may result in a system that is poorly maintained and exacerbate those leakage problems."

The AWWA has been instrumental in pushing for standardized water reporting methods, offering free software to utilities that has emerged as an industry standard. About 50,000 community water systems around the country use the program, including at least one in Shasta County: Bella Vista Water District.

Reporting water loss could soon become mandatory in California as lawmakers align to support Senate Bill 1420, legislation introduced by Democratic Sen. Lois Wolk seeking tougher reporting standards.

It's a simple fact, experts say, that all water systems leak. But trying to pinpoint acceptable water loss rates can be tricky without accounting for specific circumstances and constraints of a given system, Kail said.

A November 2010 report from the Environmental Protection Agency noted that 10 percent to 15 percent were generally the accepted maximums for water loss in many states, though standards varied.

The industry may be slowly moving away from using loss percentages as an indicator, said Ed Osann, a water policy analyst with the New York-based Natural Resources Defense Council, an organization focused on water conservation.

“We want water suppliers to reduce water losses to a level that is cost-effective to reduce. Whether that leaves them with a loss level of 12, 8 or 3 percent is less important than them clearly identifying water loss from their system and implementing that cost-effective approach,” he said.

Developing a systematic program to replace aging pipes is also important, Osann said, because large chunks of the state's water infrastructure would be reaching the end of its useful life in the coming years.

“The public is largely unaware,” he said. “For a long time California utilities didn't pay attention to water loss, but now as we get into more systematic ways I think we're seeing ways to save water, and that it's an important issue.”

[Mobile and app users, click here to view the database \(http://www.redding.com/databases/water-audit\)](http://www.redding.com/databases/water-audit)