

South Valley irrigation districts fixing leaks in drought

By Lewis Griswold lgriswold@fresnobee.com

Drop by drop, millions of gallons of irrigation water are lost every year due to leaks from aging underground pipes in the central San Joaquin Valley.

It costs millions of dollars to replace old pipes with new plastic ones, so most irrigation districts simply fix leaks as they're found.

But every gallon counts in a drought, so some irrigation districts are contemplating partial system replacement to help reduce leaks.

Farmers in the Ivanhoe Irrigation District in Tulare County have water delivered through several miles of concrete pipes that frequently break, but a mass replacement with new modern pipes would cost about \$30 million and require landowners to assess themselves thousands of dollars per acre.

"It's like buying a new car," said consulting engineer Dennis Keller of Visalia, who advises irrigation districts. "Do I put a quarter-million miles on it and repair it along the way, or do I buy a new car?"

Lindsay-Strathmore Irrigation District in Tulare County has opted to keep putting on the miles. A three-man work crew repairs at least one leak a day, usually more.

"In the drought, the public is way more aware," said district manager Scott Edwards. "We get more calls."

Still, "the leaks generally look worse than they really are," Edwards said. The system is pressurized, so a small leak can send a dramatic stream of water into the air, he said.

The district could replace its corroding steel pipes with new plastic pipes, but the ballpark estimate is \$750,000 a mile to install new, he said. To date, the board of directors has opted not to ask landowners to vote on an assessment.

But the day could come. The irrigation district has about 115 miles of underground water pipes, of which 75 percent are steel. Some are 60 years old.

About 10 miles need replacing, and the plan is to gradually replace pipes using new revenue streams, Edwards said.

Government grants are generally not available to irrigation districts to replace old pipes, he said.

To date, only one irrigation district on the east side of the central San Joaquin Valley has done a total system replacement to address the bothersome leaks.

In the 1990s, Orange Cove Irrigation District in Fresno County was losing 14 percent of its water per year to leaks, said manager Fergus Morrissey. The landowners voted to assess themselves \$50 per acre for 25 years and replaced all 120 miles of pipes for \$20 million.

Leaks are now less than 1 percent, Morrissey said.

Terra Bella Irrigation District in Tulare County, which supplies farmers and homes with water from the federal Friant-Kern canal, also estimates its leaks at 1 percent.

"We probably have one leak a week," said manager Sean Gievet.

Instead of a mass replacement, Terra Bella identified its worst spots about 15 years ago and replaced those areas, he said. Today, few of the original steel pipes remain, he said.

In Lindsay-Strathmore, Edwards calculated that water lost to leaks, water hydrant theft, failing water meters and illegal connections has in the past three years ranged from 6.8 percent to 8.7 percent.

That's less than the 10 percent to 15 percent loss considered acceptable in a metered system, he said.

There's no central database that tracks leaks, but Lindsay-Strathmore said its unaccounted water, including leaks, over the past three years have added up to about 4,877 acre-feet, or 1.5 billion gallons.

At 3 acre-feet per acre, that's enough to farm 1,625 acres.

It sounds like a lot of water but Edwards, a water manager for nearly 30 years, takes a nuanced view.

"As far as being a total waste and lost, I don't think it's true," he said. "No water leaves the district. Every drop of water stays here."

The district supplies water to about 1,000 irrigation meters and household water to 1,200 homes.

It gets water from Millerton Lake east of Fresno via the Friant-Kern canal and water from Lake Kaweah east of Visalia that's pumped into the canal.

The federal Bureau of Reclamation requires that irrigation districts not waste water, and once the water is delivered, any leaks are the problem of the irrigation district, said Duane Stroup, department area manager in Fresno.

"It's out of our realm," he said. "It's your water and it's your responsibility to do something about it if it leaks."

Lewis Griswold: [559-441-6104](tel:559-441-6104), [@fb_LewGriswold](https://www.facebook.com/fb_LewGriswold)