

Westlands Water District's drainage cleanup time may have come

By Mark Grossi
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Fifteen years ago, a court ordered federal officials to get rid of potentially poisonous irrigation drainage trapped below vast [Westlands Water District](#) farms – “without delay.”

The drainage timeline actually started decades before the court order, but it might yet prove to be an advantage. Cleanup technology is advancing, and it might help clean up this mess in the nation's largest irrigation district, based in west Fresno and Kings counties.

In addition, the long legal war may have ended with a controversial settlement that was signed this month. The Interior Department agreed to turn the cleanup over to Westlands, along with forgiving a \$350 million debt for the district and exempting its contracts from future renewals.

Environmentalists are lining up to fight congressional legislation needed for the settlement, which they call a “backroom sweetheart deal” for a politically connected corporate bully. The legislation must pass by January 2017.

But as the political fight lingers, a west San Joaquin Valley [experiment](#) fine-tunes water filtering. Reverse osmosis, a technology that always has bogged down and failed on the west side in the past, has worked at a federal pilot project west of Firebaugh, say those who run it.

“Things are changing,” says Dennis Falaschi, Panoche Drainage District general manager, who heads up the project. “I think this can work for Westlands and the rest of the west side. And we can create a supplemental supply of water.”

That could be one piece of the cleanup puzzle for Westlands. General manager [Tom Birmingham](#) says the 600,000-acre district would be able to imitate the Panoche experiment, capturing and reusing briny drainage water on salt-tolerant plants, then treating it.

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Tom Birmingham, general manager of Westlands Water District

Retirement of 100,000 acres also is part of the plan.

The Interior Department estimated it would cost the government \$3.5 billion to clean up the drainage, which affects 285,000 acres or an area nearly the footprint of Los Angeles. The district does not believe the cost will be nearly as high.

Birmingham says there is a clear bottom line: “We are at considerable risk if we don't produce a solution at our expense. According to the settlement, if we fail, our water gets cut off.”

Dangerous dirty water



The Fresno Bee

Westlands foes long have maintained that farming should be stopped in the district. When the settlement was announced, there was widespread outrage from Northern California politicians, environmentalists and watchdog groups.

“This bad deal will allow corporate agribusinesses in Westlands to keep irrigating water-intensive almonds and pistachios on toxic land in the desert,” said Adam Scow, California director of [Food & Water Watch](#). “We will work to defeat this taxpayer giveaway in Congress.”

[Lloyd Carter](#), president of the California Save Our Streams Council, says the district’s cleanup will not work, not in an area this large.

“They will never solve the drainage problem but will reap huge profits on reselling water,” he says. “Despite their denials, they have no intention of solving the problem.”

What is the problem? Clay layers beneath the soil trap irrigation water after it passes through the root zone of crops. The salty water can’t escape down into the groundwater aquifer. Instead, the shallow salty water level rises, and it can eventually poison the soil above – a well-known phenomenon around the globe.

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It was no secret to federal leaders in the 1960s when Congress passed a bill to construct this part of the Central Valley Project. The law included a provision for the U.S. Bureau of Reclamation to provide drainage for these lands – which is why Westlands has the upper hand in legal action.

Decades ago, the federal solution was to build the [San Luis Drain](#) to the Sacramento-San Joaquin River Delta. An 82-mile section was constructed, running north into western Merced County to a place called [Kesterson Reservoir](#).

Costs and concerns about the delta’s water quality stopped the drain at Kesterson, where the drainage was sent and accumulated in ponds. Underground drain water collectors had been installed beneath 42,000 acres of Westlands crop field to connect to the San Luis Drain.

But by the early 1980s, federal wildlife biologists at Kesterson began finding dead and dying shore birds, as well as tragic deformities, such as birds born without eyes. The birds were poisoned by the drainage, which was laced with high levels of selenium.

Selenium is a naturally occurring trace element left on the Valley’s west side by an ancient sea. In small doses, it is an essential part of health among wildlife and humans. At the time, scientists were not aware of how toxic it could be at high concentrations.

In 1985, the State Water Resources Control Board shut down the drain. The Westlands irrigation feeder drains were plugged, and grower lawsuits started soon after.

“Since 1985, the government has done nothing to provide drainage,” Birmingham says.

Reusing drainage water

Just north of Westlands, the Bureau of Reclamation has paid more than \$30 million for the experimental treatment plant that is being run by Panoche Drainage District. It’s a desalination plant that removes lots of impurities, including selenium.

[The project](#) is aimed at a group of farmers who cultivate 97,000 acres in the Grasslands area, which also has problems with selenium-tainted drainage trapped below crops. But water treatment is only part of the cleanup

strategy among these farmers.

Before treatment, crop drainage water is collected and used on 6,000 acres of drought-tolerant plants such as pistachios and Jose tall wheatgrass. A much smaller amount of highly concentrated drainage is again captured and sent to the desalination plant.

The plant forces the flow of bad water through a membrane to filter contaminants. The process is called reverse osmosis, and it cleans up 200 gallons per minute.

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At the 6,000 acres west of Firebaugh, there are [two other experiments](#) to treat the drainage water. One is solar-powered distilling to condense drainage water. It is in the process of expanding, officials say.

The other experiment is desalination through a reverse osmosis membrane that is monitored down to microscopic levels to prevent filter clogging. It is run remotely by the University of California at Los Angeles.

Both projects are progressing well, officials say.

“I no longer look at this as a pilot project,” Falaschi says. “We’ve had good results so far. I think it’s a long-term solution. The technology is here now. I don’t see why it couldn’t be used in Westlands and around the west side.”

More detail, debate

If the government’s \$3.5 billion cleanup were the only option – which included about 200,000 acres of land retirement – Westlands growers still would be on the hook to pay for it. That detail was not widely reported when the story broke.

Westlands already owns 89,190 acres of the land affected by drainage buildup. The district has retired 39,000 from irrigated production.

The settlement says 100,000 acres must be removed from farming. The land could be used to manage the drainage water, establish alternative-energy projects, provide upland habitat for wildlife or for whatever else federal officials would approve.

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Lloyd Carter, president of California Save Our Streams Council

Environmentalists have criticized the settlement as too vague about deadlines. But Birmingham says the federal government looks over Westlands’ shoulder as much as any district in the country, and the district needs this cleanup.

“If Westlands is going to be sustained for the future, we need to address this,” he says.

Environmentalist Carter points to past studies that cast doubt on Westland’s cleanup campaign.

He says, “It’s ridiculous that Westlands even claims it can solve the drainage problem when federal agencies, spending hundreds of millions of dollars since Kesterson, did not find an economical and environmentally safe solution.”

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