**From:** Ben King <bking@pacgoldag.com>
**Sent:** Friday, April 10, 2026 9:27 AM
**To:** Jensen, Laura@DWR <Laura.Jensen@water.ca.gov>; Steiner, Fern@CWC <Fern.Steiner@cwc.ca.gov>
**Cc:** Ben King <bking@pacgoldag.com>
**Subject:** Background For Public Comment at April 15, 2025 Meeting Requesting that CWC Staff Review Environmental Impact of Proposed Dunnigan Pipeline Under WSIP Regulations

Dear Chair Steiner and Executive Director Jensen,

We appreciate the efforts of the Water Commission in sending the Letter to State Water Resources Control Board urging a decision regarding the Sites JPA Water Right. We also appreciate the work of the Water Board in approving the water rights from the Sacramento River for this important storage project for the State of California.

Additionally, we appreciate the decision not to grant water rights for Stone Corral and Funks Creek flows in Colusa County since we are downstream water right holders for these flows and rely on winter flows to flood our 265 acres of wetlands on the Colusa Basin Drain north of College City in Colusa County. As you may remember we were Protestants and we agree that the Funks Creek and Stone Corral flows should continue to flow down the historic Colusa Trough and hopefully be used to mitigate the Impaired Water Body USEPA 303 (d) status due to low dissolved oxygen, mercury and TDS impairments.

As you know the CWC Staff approved the Sites WSIP Application in 2017 when the conveyance for the Sites Reservoir was the Sacramento River and the full length of the Colusa Basin Drain from Stone Corral Creek southward. In 2020 the Dunnigan Pipeline was approved and never analyzed by CWC Staff.

We believe the Dunnigan Pipeline will cause material environmental problems and will outweigh the necessary benefits required for approval for WSIP Funding. It is literally a

short cut to a prudent environmentally responsible conveyance facility. We have attached a 2017 USGS article discussing the ubiquitous presence of mercury in the Cache Creek watershed on how the Cache Creek Settling Basin was constructed to try to mitigate methylmercury contamination from the Cache Creek Watershed. The Dunnigan Pipeline has no proposed settling basin but dumps the Sites Water with mercury contamination directly in the Colusa Basin Drain approximately 12/13 miles of the Knights Landing Outfall Gates on the Sacramento River and the Knights Landing Ridge Cut for the Yolo Bypass. This is the worse possible conveyance structure for mitigating methylmercury contamination since the Colusa Basin Drain is essentially flat for approximately 25 miles ( 13 miles north to Balsdon Dam and 12/13 miles south to the Knights Landing Outfall Gates). The watershed for flood waters entering the Sites Reservoir touch the same mercury mines and sediments that contaminate Cache Creek. Bear Creek in Colusa County is a tributary to Cache Creek and is located directly on the western side of the proposed Sites Reservoir. The salt mine that will be inundated by the Sites Reservoir has measured mercury in its effluent and so does a salt spring that contributes to Sulfur Creek in Colusa County which a tributary to Bear Creek in Colusa County.

We are urging the CWC Staff to review the methylmercury contamination problems associated with the proposed Dunnigan Pipeline. We believe that the Dunnigan Pipeline can be used for most storage partner conveyance, but that Environmental Water funded by WSIP should be flow the full length of the historical Colusa Trough via Stone Corral Creek to the Colusa Basin Drain before entering the Sacramento River at Knights Landing. Continuous flows down the historical Colusa Trough is the best mitigation method for managing methylmercury contamination if the Dunnigan Pipeline does not have a settling basin implemented such as the Cache Creek Settling Basin.

How can it be that the USGS determined long ago that there should be a Settling Basin for Cache Creek flows and that there will be no Settling Basin for Sites Reservoir flows?

Thank you for your time and consideration

Best Regards,

Ben King
Manager
T&M King Farms, LLC

USGS
science for a changing world

# Mercury's Lasting Legacy: Measuring Contamination in Cache Creek

By California Water Science Center

June 12, 2017

USGS scientists collect samples to test for a range of water-quality constituents, especially mercury levels, in the Cache Creek Settling Basin.

On a cold, rainy morning in late January, a group of scientists from the U.S. Geological Survey's California Water Science Center gather on a foggy levee road just east of the City of Woodland. Shivering as the wind howls around them, the crew pulls on thick yellow raincoats, rubber waders, and life vests. They're preparing to collect water-quality and sediment samples from the murky, brown water below – an area known as the Cache Creek Settling Basin. The scientists will test the samples for a range of water-quality constituents, but their focus is set on something specific to this site: mercury.

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Kevin Brown, an engineer with the California Department of Water Resources, stands on a levee road that divides the Cache Creek

Used primarily for agriculture and rangelands today, the Cache Creek Watershed was once a hotbed for mining activity. Mercury deposits discovered in the mid-1800s were mined through the 1950s. Mercury production peaked during 1860s through the 1880s when one of its main uses was mercury amalgamation to recover gold from hard-rock gold ores and unconsolidated sediment known as placer deposits. Liquid elemental mercury – sometimes referred to as quicksilver – can still be found i Was this page helpful? n gold-

Settling Basin (left) and the Yolo Bypass floodplain that leads to the Sacramento River. Photo: Bonnie Dickson, USGS (Public domain.)

mining areas where mercury was used. At least 40 abandoned mine sites have been identified in the Watershed. As trusted experts on the environmental impacts of historical mining, the USGS was enlisted by the California Department of Water Resources (DWR) to study the lingering presence of mercury contamination in the area's water and sediments.

Charlie Alpers, a research chemist with the USGS, has been studying the environmental legacy of mining in California for nearly 30 years. He is the project chief here at the Cache Creek Settling Basin and leads several other mercury studies around the state.

"Our studies have identified several mine sites around the state that are considered mercury 'hot spots' that either have been remediated or are in need of remediation to protect public health and the environment," Charlie said. "The environmental legacy of mining is an aspect of California history that potentially affects the health of California's human residents as well as its biological resources."

Charlie walks over to a nearby truck where his crew prepares equipment for sampling. Physical science technician Shanna Rose is prepping water-quality testing equipment. Shanna is in charge of calibrating the equipment on-site at the beginning of each sampling trip, a responsibility that fits naturally with her focused and deliberate disposition. She carefully pours a sequence of liquids from different bottles into a large plastic cup. The cup connects to a cylinder with several protruding electrodes and sensors. The whole device looks something like a Jedi lightsaber.

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An engineered spillway, operated by the California Department of Water Resources, controls the flow of water and sediment from the Cache Creek Settling Basin into the Yolo Bypass. Photo: Bonnie Dickson, USGS. (Public domain.)

"That's a multi-parameter water quality sonde," exclaimed Charlie, his eyes wide with excitement.

Shanna briefly breaks her focus and smiles as Charlie continues to explain the nuances of water-quality equipment and the resulting technical data produced from each sample.

"Charlie is crazy about data," she said. "He always wants more. More data, more pieces of the puzzle to put together."

Kevin Brown, an engineer with DWR, nods in agreement. He has worked with Charlie for almost a decade.

"The USGS does the science, and we do the building and remediation," he said of the symbiotic USGS-DWR partnership. "Charlie is one of those people that, when you're around him, you hope some of what he knows rubs off on you – he's just so smart."

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USGS research chemist, Charlie Alpers, explains the nuances of water quality equipment to physical science technician, Shanna Rose. Photo: Bonnie Dickson, USGS. (Public domain.)

Mercury studies in California's water are essential to ensuring the health of the state's human, wildlife, and ecological populations. When exposed to bacteria in water, soil, and plants, mercury is converted into methylmercury by bacteria that thrive in areas with low oxygen conditions. Methylmercury is a dangerous neurotoxin that impairs the human nervous system and disrupts reproduction in birds and other wildlife. It also happens to be the form of mercury most readily incorporated into the tissues of fish and other animals – a process known as bioaccumulation. Methylmercury is highly toxic to humans, especially fetuses and young children.

The USGS and DWR have been monitoring water quality at this site since 2010, after it was discovered that Cache Creek is a significant contributor of mercury and methylmercury to the Sacramento-San Joaquin Delta through the Yolo Bypass. The California Regional Water Quality Control Board has estimated that the Cache Creek supplies 10-30 percent of the mercury loads into the Sacramento River system, though it only represents only about two percent of the water flow.

The risk of mercury-loaded sediment moving into the Yolo Bypass from the Basin is highest during and after storms that flood the Bypass and increase flows in the Delta. Sampling during these times is crucial for data-collection purposes.

"There are a lot of moving parts in California's water system," Charlie explained. "It's impossible to collect samples 24/7, but we try to collec igh

flows to capture the dynamics of the system."

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Kevin Brown, of CA DWR, left, and Charlie Alpers, right, oversee crews during storm sampling of the Cache Creek Settling Basin. Photo: Bonnie Dickson, USGS. (Public domain.)

The first months of 2017 have brought back-to-back storms and high flows aplenty, which means USGS scientists are busy chasing critical high-flow measurements in dynamic systems like Cache Creek. At the end of a long day on site, crews will carefully pack up water samples that will be processed at the USGS laboratory on the Sacramento State University campus. The processing includes filtration and additional laboratory measurements, resulting in dozens of sample splits that will be shipped to water-quality laboratories at other USGS locations that will turn the samples into data. Tomorrow – and for the next 10 days – CAWSC crews will repeat their sampling routine at different sites throughout the Basin. The long hours, hard work, and wet weather don't deter them because they know the value their work contributes not only to science, but to the improved health and wellness of California's environment and population.

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USGS crews wrap another day of field work in the Cache Creek Settling Basin. Photo: Bonnie Dickson, USGS. (Public domain.)

## Contacts


### Laurel Lynn Rogers (Former Employee)

**Supervisor, Science Communications**

California Water Science Center

### Charles N Alpers

**Research Chemist**

California Water Science Center
Email: cnalpers@usgs.gov
Phone: 916-278-3134

**Shanna Lynn-Rose Miller**
Hydrologic Technician
California Water Science Center
Email: slrmiller@usgs.gov
Phone: 916-278-3036

**Gabriel Lopez**
Public Information Coordinator / Administrative Assistant
California Water Science Center
Email: glopez@usgs.gov
Phone: 916-278-3026