

DEPARTMENT OF WATER RESOURCES

DIVISION OF FLOOD MANAGEMENT
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November 24, 2015

Janis Cooke, Ph. D.
Environmental Scientist
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, California 95670

Department of Water Resources: Mercury Control Studies for the
Cache Creek Settling Basin - Report of Findings

Dear Ms. Cooke:

In fulfillment of the requirements of the Delta Mercury Control Program, which identified the Cache Creek Settling Basin (CCSB) as a source of mercury and methylmercury to the Yolo Bypass, the Department of Water Resources (DWR) is submitting this *Report of Findings* on Mercury Control Studies conducted in accordance with your November 10, 2011, letter requiring studies for the CCSB. This Report of Findings includes:

- A description of the long-term environmental benefits and costs of sustaining the CCSB mercury trapping abilities indefinitely,
- An evaluation of the trapping efficiency of the CCSB, and
- An evaluation of potential feasible alternatives for mercury reduction from the Basin (up to and including a 50% reduction from existing loads).

The studies summarized in the *Report of Findings* are the result of cumulative efforts by DWR, the United States Geological Survey (USGS), and the University of California Davis (UCD) since 2009. The USGS and UCD have provided contracted support to DWR for collecting and analyzing flow, sediment, surface-water and soil samples, and developing and performing numeric and physical models associated with the CCSB. These models and data provide the basis for considering benefits and consequences in evaluating potential feasible alternatives for extending the trapping capabilities of the Cache Creek Settling Basin.

The data collected for these studies and the results of the evaluations highlight the complexities associated with mercury methylation and bioaccumulation in an environment with diverse habitat and complex water interactions. The study results demonstrate that habitat, more than any other biogeochemical factor, is the primary driver for these processes. The *Report of Findings* also documents further complexities with regard to multiple stakeholder interest, and the importance of developing multi-benefit solutions that support all of the interests in this area, including providing increased levels of flood protection for the City of Woodland and nearby rural

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communities, meeting the flood risk reduction needs and requirements of the United States Army Corps of Engineers and the Central Valley Flood Protection Board by increasing the life-span of the Basin, and complying with Delta Mercury Control Program water quality requirements established for the CCSB.

Consistent with the submittal of this document, DWR is committed to complying with the Delta Mercury Control Program total maximum daily load (TMDL) requirements established for the CCSB within the resource and funding limitations that exist. The studies described in the *Report of Findings* will continue through the remainder of the existing contracts. However, DWR has no current source of long-term funding to implement the large-scale remedies likely required to comply with the Delta Mercury Control Program requirements. Any solution to these long standing, natural and anthropogenic conditions should not be the responsibility of a single resource agency to fund and implement. As evident by the multiple interactions and complexities in this area, any solution must consider far more than simply mercury and methylmercury conditions. Multiple funding sources, provided by appropriate beneficiaries of any proposed solution, will be required to successfully resolve the complex issues of the Cache Creek watershed. The established TMDL for the CCSB cannot be met without an aggressive approach to reduce total mercury loads entering the Cache Creek Settling Basin from the upstream watershed, and significant land-use changes within the Basin, which have significant flood risk reduction implications.

Thank you for considering the data and conclusions presented in the attached *Report of Findings* on the Mercury Control Studies for the Cache Creek Settling Basin. If you have any questions or comments regarding the report, please contact Mr. Kevin Brown at (916) 572.2739 or kevin.brown@water.ca.gov.

Sincerely,



Mark R. List, CEG, CHG
Supervising Engineering Geologist
Acting Flood Maintenance Office Chief
Division of Flood Management

cc: Colonel Michael Farrell, USACE
Mr. William Edgar, CVFPB