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Sent: Monday, April 07, 2014 1:57 PM
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Subject: Mercury and draft 2012 Integrated Report

Hello colleagues,

This e-mail is to let you know that those of us working on the statewide mercury control program for reservoirs plan to recommend that R1 & R6 include several more reservoirs in our program than are proposed for the 2012 303(d) list. We think that you might want to share this information at the integrated report roundtable tomorrow, because it applies to nearly all of the other regions, too.

Importantly, placement on the 303(d) list for any reason does not automatically trigger any regulatory action, according to OCC. (It may trigger need for a TMDL, but then the TMDL carries out the regulatory action—the 303(d) is not itself a regulatory action.)

Accordingly, placement of a reservoir on the list for elevated fish methylmercury levels does not automatically trigger inclusion in the statewide mercury control program for reservoirs. We plan for it to be a separate action to be undertaken by each Regional Water Board.

Initially, 74 reservoirs already listed on the 2010 303(d) list are included in the statewide Reservoir Mercury Control Program. In the future, after State Water Board adoption of this program, when Water Board reviews result in reservoirs being identified as having fish with elevated methylmercury, these additional reservoirs will be included in this Reservoir Mercury Control Program.

We understand that for the 2012 list, the following regions recommend the following additional mercury listings for reservoirs:

- R1 recommends listing of Copco Lake (Copco 1), Iron Gate Reservoir, Tule Lake, and Ruth Lake (from Table 6)
- R6 recommends listing of Little Rock Reservoir (from Appendix A, new listings for mercury)
- R7 none – 2012 list already adopted (from Attachment Four)

Here is an example of the reservoirs in R1 & R6 that we expect to recommend in the future be added to the statewide mercury control program for reservoirs. This example is based on average fish mercury > 0.2 mg/kg, our current definition of a reservoir, and a weight of evidence approach. (Note that there are lots of ongoing discussions about the statewide fish tissue objective and the listing policy, so this is only an example.)

- R1: Copco Lake, Iron Gate Reservoir, Ruth Lake, Spring Lake, and Dead Lake
- R6: Little Rock Reservoir, Lake Gregory, Lake Arrowhead, Silverwood Lake, Upper Twin Lake

- R7: none

That was the quick list. Here's the details on R1 and R6:

R1: Copco Lake, Iron Gate Reservoir, Ruth Lake, Spring Lake, and Dead Lake

- Tule Lake is not a reservoir and so would not be included in the reservoir mercury control program.
- Dead Lake is a former lumber mill pond in the Tolowa Dunes State Park. We recommend that it be considered for inclusion in the program because it is a manmade feature that we think exceeds 20 acre-feet in capacity, and, even though the SWAMP Lake Study data set has only one sampling location, 13 of 16 fish samples exceed 0.2 mg/kg. Per aerial photo, the lake is ~27 acres. Assuming it has a depth of at least 1 foot, it exceeds the current reservoir definition of minimum 20 acre-feet capacity.
- Spring Lake (aka Santa Rosa Creek Reservoir) is formed by a dam and has a capacity of 3550 acre-feet. We recommend that it be included in the program because it is a reservoir with capacity greater than 20 acre-feet and, even though the SWAMP Lake Study data set has only one sampling location, 8 of 11 fish samples exceed 0.2 mg/kg.

R6: Little Rock Reservoir, Lake Gregory, Lake Arrowhead, Silverwood Lake, Upper Twin Lake

- The SWAMP Lake Study data set has only one sampling location for Gregory, Arrowhead, Silverwood, and Upper Twin.
- However:
 - 5 of 13 samples in Lake Gregory exceed 0.2 mg/kg.
 - 12 of 16 samples in Lake Arrowhead exceed 0.2 mg/kg.
 - 15 of 16 samples in Silverwood Lake exceed 0.2 mg/kg.
 - 2 of 3 samples in Upper Twin Lake exceed 0.2 mg/kg.
- All five of these are formed by dams with capacities between 2,000 and 78,000 acre-feet, and therefore meet our definition of a reservoir.

Here's definition of reservoir from staff report we're currently circulating for internal review (Section 1.6.1)

For this program, reservoirs are defined as natural or artificial impoundments of at least 20 acre-feet water storage capacity that contain fish and have constructed control structures such as dams, levees, or berms to contain or otherwise manage water, and/or were excavated. Names are often misleading; many reservoirs are called lakes on local and U.S. Geological Survey topographic maps even though they are created by structures and excavations.

Artificial impoundments are places where water ponds behind engineered structures (e.g., dams, levees, berms) and anthropogenic landscape alterations. Some of these constructed changes were made purposefully to create artificial lakes, while others were made for other reasons like dredging or quarrying but subsequently created artificial lakes. Many artificial lakes were formed by flood control and stormwater facilities. Barriers which impound 15 acre-feet or less of water are not dams according to the Porter-Cologne Water Quality Control Act (California Water Code, Division 3, section 6003). Only a few California dams provide less than 20 acre-feet water storage capacity (DWR 2010a and 2010b).

Don't hesitate to contact me with any questions. If you would like to discuss this further, we can set up a teleconference to include Stephen Louie and Michelle Wood in R5 who are much, much more knowledgeable about the reservoir fish data than I am. Carrie