Impaired Bodies of Water Identified in Madera and Mariposa Counties

March 16 Deadline for Comments on Draft 2008 303(d)/305(b) Integrated Report

A component of AB 885 (see my *Sierra Star* article, January 15), regarding septic and well requirements, involves Section 303(d) of the Clean Water Act, which requires states to develop a list of impaired bodies of water and a priority ranking for addressing the impairments. The 303(d)/305(b) Integrated Report serves a dual purpose because AB 885 regulations require an existing septic within 600 feet of an impaired body of water to have a qualified professional determine whether the septic system is contributing to the impairment. If it does, the owner must retrofit the septic system with supplemental treatment. The approximate cost for a retrofit is $45,000, according to a letter from the Coarsegold Resource Conservation District to the Central Valley Regional Water Quality Control Board. The deadline for comments regarding the bodies of water included in the Draft 2008 303(d)/305(b) Integrated Report is March 16, 2009.

Madera County District 5 Supervisor, Tom Wheeler, would like to ensure that Madera County water bodies are not included in this report. Wheeler said, "If the state is going to require individuals to undergo expensive studies and even more expensive retrofits, it should be held to a high standard of proof that the systems are a likely cause of the water impairment."

The bodies of water in Madera County currently listed for inclusion are Ash Slough, Berenda Creek Slough, Cottonwood Creek, and Dry Creek. Others listed for inclusion that I will briefly review are Fresno River, Hensley Lake, Lewis Fork, and Willow Creek. To see the complete list and supplemental information, visit: http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/impaired_waters_list/303d/index.shtml.

Fresno River:
Samples were taken from the Fresno River in Ahwahnee, at Spangle Gold Creek, and in Oakhurst both upstream and downstream of the wastewater treatment facility. The reason Fresno River was included, according to the report, is low dissolved oxygen. The report states that applicable water quality standards are exceeded and a *pollutant* contributes to or causes the problem. Classifying oxygen as a pollutant appears questionable; especially as low dissolved oxygen cannot be remediated like a metal or toxin. Testing took place from August 2001 to June 2002. The samples that I noted in the report that showed evidence of low dissolved oxygen though were only in August and October of 2001.

According to Professor Steve Blumenshine, CSU Fresno, dissolved oxygen concentrations (mg/L) are affected not only by biological activity, but also by elevation, temperature, and water movement. Thus, the timing of the sampling could be very important. He said, "A good deal of oxygen will have been generated by primary production at the end of a warm and sunny day. Likewise, dissolved oxygen would be rather low just prior to dawn because all of these primary producers will have been respiring (using) oxygen overnight."

Blumenshine studied Fresno River in 2003 and 2004. The data shows a direct correlation between discharge and dissolved oxygen. This suggests that the findings of low dissolved oxygen were due to low discharge and stagnant water at the sampling sites. Both the CSUF study (2003 and 2004) and the results in the report (2001 and 2002) used SWAMP (Surface Water Ambient Monitoring Program) protocols.

Hensley Lake:
Samples were taken from Hensley Lake at Andy's Cove, north end of Andy's Cove, the inflow and outflow areas of Hensley Lake, and near Restroom #7 to the east. Hensley Lake was included in the report due to low dissolved oxygen and pH. The samples that I noted in the report that showed evidence of low dissolved oxygen were in August and October of 2001 (as was Fresno River). Seven of the 13 samples taken exceeded the evaluation objective pH of 8.3. The exceeded results were found in August and October of 2001 as well as June 2002 and ranged between 8.5 and 9.38.

Lewis Fork:
Results in Sugar Pine and Cedar Valley along Lewis Creek exceeded ammonia levels according to the report. The report concludes that the water body-pollutant combination should be included because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. The results here were unclear to me as in one area it shows 2 of the 4 samples exceeded the guidelines and in another area it shows that 0 of 4 samples exceeded guidelines. Samples were collected August 2001 to October 2001.

Willow Creek:
Willow Creek monitoring occurred from 1986 to 1996. At the North Fork Willow Creek sampling location, below Bass Lake, 2 out of 11 annual maximum temperature values (years 1990 and 1995) exceeded the temperature criteria for steelhead. For the South Fork Willow Creek sampling location, below a Forest Service Road, 8 out of 11 annual maximum temperature values exceeded the criteria for steelhead (PG&E, 2001). The risk assessment approach used by Sullivan et al. (2000) suggests that an upper threshold for the annual maximum of 21.0Â°C for steelhead will reduce average growth 10% from optimum. The report also included information regarding a Willow Creek study showing reduced surface flow. It also found that water heats up due to solar radiation above the confluence with Whisky Creek. During the study, the measured temperature in this area was 29°C at mid-day. Whisky Creek has a coldwater input and has a healthy trout population (Price, 2002). Including temperature as a *pollutant* is problematic, especially as temperature cannot be remediated like a metal or toxin.

Other Bodies of Water:
Many other bodies of water are listed and I was unable to locate a reference by county. Thus, I was unable to compile a complete list for our other neighboring counties including Mariposa and Fresno. However, some bodies of water outside of Madera County that I noted include **McClure Reservoir in Mariposa County** and **Millerton Lake in Fresno County**. The pollutant listed for both of those bodies of water is mercury. Fish tissue samples were tested and some exceeded the US EPA (Environmental Protection Agency) fish tissue criterion for human health. According to the draft report, fish samples collected were from fish with total lengths greater than 150 mm, which represent fish most commonly caught and consumed by sport fishers and their families. At McClure Reservoir, 3 of 3 samples collected exceeded the criterion. At Millerton Lake, 7 out of 21 samples collected exceeded the criterion. Environmental conditions noted in the report that may account for the findings included mining activity during the Gold Rush era. In these cases, I would not argue about the inclusion of these bodies of water as it is important to address the mercury impairment. However, requiring those with wastewater treatment systems to hire a qualified professional to determine if their system is contributing to the impairment (AB 885 regulation) is unreasonable.

Deadline for Comments Monday
Please view the documents and send comments about the Draft 2008 303(d)/305(b) Report by 5 p.m., March 16, 2009, to Danny McClure, Regional Water Quality Board, Central Valley Region, 11020 Sun Center Drive #200, Rancho Cordova, CA 95670. For questions or additional information, McClure can be contacted at 916-464-4751 or by email at dmcclure@waterboards.ca.gov.

Beverly Scott, President
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