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October 11, 2010

Ms. Kathleen Harder
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

VIA E-mail

Dear Ms. Harder:

With this letter, the California Farm Water Coalition (CFWC) submits comments on the proposed waste discharge requirements for the Sacramento Regional County Sanitation District's Sacramento Regional Wastewater Treatment Plant in Sacramento County (Order No. R5-2010- NPDES No. Ca0077682)

The California Farm Water Coalition is a statewide organization representing a cross-section of the agricultural industry. Members include individual farmers, agricultural water districts and agencies, agri-business representatives and other agricultural organizations. They represent regions as diverse as Imperial and Mendocino counties, the Sacramento and San Joaquin valleys and the Central Coast.

Our primary comments focus on the "take" of federally listed Delta smelt and the destruction or adverse modification of the Delta smelt's critical habitat which will result from the permit's conditions. The Endangered Species Act and its implementing regulations prohibit take of Threatened and Endangered Species. The definition of 'take' includes significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding or sheltering¹. Destruction of critical habitat rises to the level of take due to the essential nature of the functions which are affected.

The proposed permit violates the Endangered Species Act in the following ways:

1. The proposed permit will result in 'take' of Delta smelt by allowing discharge of ammonia effluents that adversely modify critical habitat for the delta smelt, whose continued existence is currently in jeopardy;
2. The proposed permit will result in 'take' of Delta smelt by allowing ammonia effluent to enter critical habitat. While not permitting a mixing zone for ammonia permanently, the Board is allowing mixing to occur in critical habitat, for the next 10 years under the current proposed permit conditions. That mixing results in adverse modification to critical habitat and, as a major source of ammonia in the delta, affects

1 50 CFR Part 222

the water quality of the entire delta. This will degrade critical habitat for the delta smelt, despite the fact under both federal and state guidance such mixing zones may not adversely impact critical habitat;

3. The proposed permit will result in take of delta smelt by allowing the discharge of ammonia which results in disruption of the food chain and destruction of the smelt's copepod food supply at critical junctures in the smelt's existence. This disruption of the food supply results in reduced abundance of delta smelt populations.

The Sacramento Regional County Sanitation District may not release effluent into the Sacramento River without a permit from the Board. If the Board grants the permit as proposed or allows the continued discharge of ammonia and the continued degradation of delta smelt critical habitat in the Sacramento River, take of the Delta smelt which is prohibited under the ESA, will occur. Such take, if it is not permitted under a Section 7 Biological Opinion is unlawful and punishable by both civil and criminal penalties.

The FWS has found that the Delta smelt is a species in serious peril of extinction. In its 2008 biological opinion the FWS determined that a decrease of just 2% of the population jeopardized the continued existence of the species. The FWS has testified in federal court that for a species in such dire straits as the smelt, any additional reductions in population can be catastrophic.

DETAILED DISCUSSION

The Biological Opinion that resulted from the consultation on the Proposed Coordinated Operations of the Central Valley Project (CVP) and State Water Project (SWP) acknowledged food supply was an important factor for Delta smelt with the following statements:

*'Food supply and habitat suitability are currently believed to be important factors for delta smelt during summer (Bennett 2005; Baxter et al. 2008; Nobriga and Herbold 2008).'*²

Recent work (Feyrer *et al.* 2007) noted that earlier studies "suggest that food availability plays an important role in delta smelt abundance". Subsequent statistical analyses have demonstrated that Delta smelt population abundance is correlated with food supply³. When populations of *Eurytemora* and *Pseudodiaptomus* are low at key points in smelt development, subsequent delta smelt populations are depressed.⁴

The Board has made the following findings regarding the effects of ammonia in delta smelt critical habitat in the proposed permit:

- • Ammonia is known to cause acute and/or chronic toxicity to aquatic organisms.

2 Page 178 of the Biological Opinion

3 In an October 20, 2008 letter, SLDMWA and SWC provided two articles showing that, as Feyrer *et al.* predicted, food availability was a significant factor in delta smelt survival.

4 In 2008 Manly conducted a multi variate analysis which identified food supply as a key factor in Delta Smelt Abundance:

http://bestscience.org/index.php?option=com_content&review=article&id=12&Itemid=5

Therefore, the discharge has reasonable potential to cause or contribute to an exceedance of the Basin Plan’s narrative toxicity objective in the receiving water.⁵

- • Recent studies suggest that ammonia at ambient concentrations in the Sacramento River, Delta and Suisun Bay may be acutely toxic to native *Pseudodiaptomus forbesi*.⁶
- • Ammonia is shown to affect adult *Pseudodiaptomus forbesi* reproduction at concentrations greater than or equal to 0.79 mg/L. And nauplii and juvenile *Pseudodiaptomus forbesi* are affected at ammonia concentrations greater to or equal 0.36 mg/L. These ammonia concentrations can be found downstream of the discharge.⁷

The effect of the discharge of ammonia on the critical habitat is documented in the proposed permit documents:

- • A consensus of scientific experts concluded the SRWTP is a major source of ammonia to the Delta.⁸
- • Downstream of the discharge point, ammonia may be a cause in the shift of the aquatic community from diatoms to smaller phytoplankton species that are less desirable as food species.⁹

The permit allows this adverse modification to the Delta smelt critical habitat with its attendant ‘take’. While not explicitly identifying it as such, by allowing the continued discharge of ammonia into the Delta, the Board is effectively allowing a ‘mixing zone’ in Delta smelt critical habitat for the next 10 years, despite the prohibition of mixing zones in critical habitat¹⁰.

The discharge of ammonia into Delta smelt critical habitat has adverse effects on the delta smelt’s primary food supply. The lack of adequate food supply has been demonstrated to affect delta smelt abundance. By reducing available food supplies through the discharge of ammonia into Delta Smelt critical habitat the Board is taking smelt and adversely affecting critical habitat through that discharge. The adverse effects on the critical habitat is taking smelt to such an extent that population abundance is measureable and importantly reduced. This is take through habitat modification that results in death or significant injury to the species.

The CFWC respectfully requests that the Central Valley Water Board considers the significant impacts caused by the discharge of ammonia into the waters of the Sacramento River when imposing waste discharge requirements on Sacramento Regional County Sanitation District’s Sacramento Regional Wastewater Treatment Plant in Sacramento County.

Sincerely,



Mike Wade
Executive Director

5 Appendix F page 54
6 *ibid*
7 *ibid*
8 Appendix F page 55
9 Appendix F page 55
10 Appendix F pages 30-31