



# HUMBOLDT BAY MUNICIPAL WATER DISTRICT

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October 29, 2001

**GENERAL MANAGER**

CAROL RISCHÉ

North Coast Regional Water Control Board  
 Attention: Matt St. John  
 5550 Skylane Boulevard, Ste. A  
 Santa Rosa, CA 95403

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Dear Mr. St. John:

First, I would like to thank you for the time you spent with me last week discussing TMDL plans, and in particular, the 303(d) listing process. The purpose of this letter is to express our concern regarding the NCRWQCB's recommendation to add the Mad River to the 303(d) List for temperature.

Our first concern is that the temperature data analyzed by the NCRWQCB staff was very limited and is not representative of the entire Mad River. Eight of the eleven data sets were provided by NRM from locations in the lower reaches of the Mad River. We have learned that the NRM data is associated with monitoring conducted for gravel operators on the Mad River. The Army Corps of Engineers required that, as a condition of operation, the gravel operators had to implement a monitoring program to assess impacts to wildlife, including salmon.

We do not believe the temperature data analyzed to date is representative of the entire Mad River. For example, we have completed a very quick analysis of our temperature data for our Ruth Reservoir releases. We attempted to do the analysis as consistently as possible with our understanding of the MWAT protocol used by the NCRWQCB, although it is not in exact accordance.<sup>(1)</sup> MWATs were calculated first for the period from June 1 to October 1, the sampling window recommended by the draft "Stream Temperature Protocol". For June 1, 2000 through October 1, 2000, the MWAT of the Mad River at Ruth was 16.75°C (on October 1). For June 1, 2001 through September 30, 2001 (end of the dataset), the MWAT was 13.89°C (on September 30). The MWAT for the entire dataset (11/1/99-9/30/01) was 18.9°C on October 10, 2000. There were no temperature measurements above 20° C. Therefore, the resulting MWATs for the District's Ruth data are lower than the NCRWQCB's threshold of 20° C, and are considerably lower than the MWATs used to support the recommendation. We believe different MWAT results and conclusions would apply to the upper reaches of the Mad River.

Furthermore, it stands to reason that water temperature will be affected by ambient air temperature or the degree to which the water surface is shaded. When the Mad River traverses through the deep narrow gorge, it is exposed to less direct sun because the channel is narrower and the canyon walls higher. Also the height of riparian vegetation (trees, etc) in relation to channel width provides for a greater degree of water surface shading. In contrast, when the Mad River flows through the Blue Lake Valley (which is where the NRM data was collected), the water surface is totally exposed to the sun, the height of riparian vegetation in relation to channel width is negligible and provides limited shade of the water surface, and therefore, the temperatures will be higher.

We understand that the selection of sampling sites for the gravel operators was based on past sightings of summer run Steelhead, or areas where rearing juvenile salmonids (mostly steelhead) have been observed. The temperatures measured during the summer are reported to be in the lethal range for Coho but not Steelhead. Coho generally do not use the mainstem of the Mad River to spawn in or rear, rather they utilize Lindsay Creek and other tributaries. Coho primarily use the mainstem for migration. Steelhead and Chinook on the other hand do use the mainstem and have evolved to tolerate higher water temperatures associated with mainstem habitats. Associating high water temperatures that exceed Coho's tolerance would make more sense if the water temperatures were taken in Coho rearing habitat, which is generally acknowledged as being in tributaries such as Lindsay Creek. A small creek channel will often provide much more shading of the water surface and one would expect much lower water temperatures compared to the poorly shaded mainstem.

In conclusion, we do not believe that the NCRWQCB staff has sufficient information to warrant the entire Mad River being added to the 303(d) List for temperature. We believe the listing needs to be further evaluated, or at a minimum, the listing needs to be more limited in location.

We very much appreciate the opportunity to comment. If you have any questions, please call me at (707)443-5018.

Sincerely,



Carol Rische,  
General Manager

Cc: Barry Van Sickle  
Aldaron Laird  
John Winzler

<sup>(1)</sup> The District's raw data were not collected according to the draft "Stream Temperature Protocol". Most significantly, the Protocol specifies that figures for each day should be the maximum of measurements taken at least every 96 minutes throughout that day. The District's data are from readings taken once each day. Using this daily temperature data, Maximum Weekly Average Temperatures (MWATs) were calculated according the Draft NCRWQCB NCWAP Version of the "Stream Temperature Protocol", as follows: for each day in the period being examined, the mean of the temperatures for that day and the preceding 6 days was determined; the maximum of this set of 7-day means is the MWAT.