10/25/06 BdMtg Item 10
303(d) List
Deadline: 10/20/06 5pm

BOARD OF SUPERVISORS

October 20, 2006

Tam Doduc, Chair
State Water Resources Control Board
1001 I St.
Sacramento, CA 95814

Subject: **Comment Letter – 2006 Federal CWA Section 303(d) List**

Dear Chair Doduc,

Plumas County (County) hereby provides its comments on the Proposed 2006 Federal Clean Water Act Section 303(d) List of Water Quality Limited Segments for California. Our comments are directed to the proposed 303(d) listing for water temperature impairment for the North Fork Feather River (NFFR) below Lake Almanor. After reviewing the eight lines of evidence and the Water Boards Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (September 2004), we conclude that the 303(d) water temperature listing for the NFFR is ill-advised at this time. Instead, we recommend that the Water Board defer listing and conduct a site-specific analysis of the NFFR to establish appropriate water temperature criteria for listing.

The County's fundamental concern is the use of the 21.0° C (70° F) maximum instantaneous criteria used for the eight lines of evidence. Volume II – Water Body Fact Sheets Supporting the Listing and Delisting Recommendations, page 46 states that "The guideline used was from Sullivan et. al. (2000)." The County has reviewed Sullivan et. al. and notes that this reference concentrates on "the summer rearing life history phase of species within the Salmonidae family that dwell in stream environments, namely juvenile coho salmon and steelhead trout" (Sullivan et. al. 2000, page 1-3). The coldwater species indicator for the NFRR is rainbow trout. The fact sheets assume that steelhead trout are surrogates for rainbow trout. In fact, steelhead trout are vastly different from rainbow trout. The Fisheries Handbook of Engineering Requirements and Biological Criteria (U.S. Army Corps of Engineers, 1990) shows that the optimum temperature range for steelhead trout varies from 45 to 58° F, whereas the optimum temperature range for rainbow trout varies from 54 to 66° F (see attachment). This is a significant difference. The Fisheries Handbook indicates that the upper lethal limit for steelhead trout is 75° F (23.9° C), whereas the upper lethal limit for rainbow trout is 85° F (29.4° C). Therefore it is clear that these are not the same species and temperature criteria developed for steelhead trout cannot be used for rainbow trout.

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Numeric Line of Evidence – Pollutant – Water
The County agrees that the temperature measurement data used in this line of evidence is of high quality. However, as stated above, the fundamental underpinning of the 21.0° C maximum instantaneous water temperature is flawed. Further, the discussion on data used does not indicate the degree by which the 21°C threshold was exceeded nor the duration. As discussed in Sullivan et. al. and in the Regional Board's letter commenting on the proposed listing (letter from Mr. Jim Pedri to Mr. Joe Karkoski, TMDL Unit, RWQCB , dated December 1, 2005), these are important factors.

Numeric Line of Evidence – Population/Community Degradation
The County would agree with the statement that "in many cases, fisheries, particularly salmonids, represent the beneficial uses most sensitive to temperature." However, we fail to see the argument being put forth. The data speak to census data collected in 1952, 1953, and 1954. The information included in this line of evidence does not show population or community degradation. A better comparison would be to examine fish populations over a much longer period of time. However, a comparison of this nature is complicated because of other environmental changes that have taken place such as habitat alteration, flow changes, hydro modification or the introduction of non-native species.

Numeric Line of Evidence – Population/Community Degradation
The County concurs that the North Fork Feather River was once considered a trophy fishery. However, multiple factors have undoubtedly affected the fishery. Access to the area was historically limited. With the end of World War II and the construction of the Rock Creek-Cresta Project, access improved and fishing pressure increased. The 31,500 angler days in 1946 and three trout caught per angler day (94,500 trout) may very well have had an effect on the fish population. This is more than twice the number of rainbow fingerlings that were stocked in 1952 and 1953.

We have no doubt that the Rock-Creek Cresta Project also affected the fish populations. That is why the County has worked with Water Board staff, PG&E and other parties during PG&E's relicensings to improve habitat conditions for fish. We suggest that the Water Board continue to work with PG&E to determine the limiting factors and focus efforts on improving the limiting factors rather than using one flawed criterion for decision-making. Temperature may very well be a factor in the ability to improve fish populations, but a more comprehensive approach is needed. Such a comprehensive approach should include identifying temperature duration limits that can affect growth and survival.

This numeric line of evidence states that daily maximum temperatures reached as high as 23.5° C, and that temperatures were even higher under extreme low flows. However, these higher temperatures are not reported. Further increased effects of infectious diseases like C. Shasta are inferred because such diseases perpetuate more rapidly with water temperatures. We agree that this should be evaluated, but no proof that higher water temperatures led to increases in infectious diseases has been put forth in the line of evidence.

The Water Board may wish to consider water temperature criteria established at other projects prior to making a decision on the 303(d) listing. One project worth consideration is the Deep Creek Hydropower Project in western Maryland. It was initially determined by the resource agencies that an instantaneous water temperature of 18 to 22° C would provide optimum conditions. Since the project was completed in the late 1920s, minimum river flows downstream of the project had been as low as about 7 cubic feet per second and instantaneous water temperatures were as high as 30° C. These temperatures were lethal to fish. The fish population was able to sustain itself because some rainbow trout were able to find refuge in tributary mouths where colder water was available. The project owner, resource agencies, and other parties agreed to increase the minimum flow during the state permitting process in the early 1990s. However, even with the higher minimum flow, it was shown that water temperatures could still approach the lethal limit under certain conditions. When it was determined through study that the project (Deep Creek Lake) could not provide enough cold water to maintain the desired water temperatures, the parties agreed that the project owner would need to install and maintain a continuous water temperature monitor at the downstream end of the critical reach and operate the project to maintain an instantaneous maximum of 25° C or less. This protocol has been ongoing since 1994. Simultaneously the Maryland Department of Natural Resources designated this reach of river as "catch and release." This reach of river has now become an outstanding trout fishery. For the most part, the water temperatures are in the preferred range, but during hot dry conditions, the project does operate for water temperature control.

Numeric Line of Evidence – Population/Community Degradation

The County is unclear about the fourth line of evidence. Waters withdrawn from Lake Almanor are taken at depth from either the Prattville intake or the Canyon dam intake. They are not taken from the surface. Coldwater fish species in Lake Almanor do not live at the surface. They live at depths that provide a suitable combination of water temperature and dissolved oxygen. This is precisely the reason that Plumas County is concerned about the coldwater pool in Lake Almanor. Lake Almanor cannot afford to lose its cold water pool merely to meet an ill-advised water temperature criterion. It is important to protect not only the cold water fishery of the NFFR, but also of Lake Almanor. Therefore the County reiterates its request for the Water Board to establish appropriate maximum water temperatures and associated durations that are protective of the beneficial uses of the NFFR, and not merely adopt an instantaneous maximum developed for steelhead trout in Washington State.

Numeric Line of Evidence – Population/Community Degradation
This line of evidence suggests that the water temperatures in the Poe Reach are not supportive of rainbow trout since only one was caught. PG&E is currently relicensing the Poe Project. It is not clear what the limiting factors are for rainbow trout, although temperature could be. PG&E will likely be required to significantly increase minimum flows. This may have a beneficial impact on water temperatures. Plumas County recommends that the Water Board work with PG&E and other parties to develop numeric water temperature criteria that are protective of rainbow trout.

Numeric Line of Evidence – Population/Community Degradation
We have not reviewed Gerstung (1973) due to the limited amount of time to prepare our response (i.e., 30 days). We do not doubt its validity. However, the culprit for reduced standing crop of trout may be more the result of reduced flows and increased fishing pressures. The settlement agreement for the Upper North Fork Feather River was signed in April 2004. It has provisions for increasing the minimum flows and improving habitat. Regrettably until the Water Board completes the Environmental Impact Report and issues a 401 Water Quality Certification, the Federal Energy Regulatory Commission cannot issue a license. Without a new license there is no requirement for PG&E to increase minimum flows or improve habitat. Until such time, there is no way to determine the effectiveness of the increased flows and habitat on trout populations.

Numeric Line of Evidence – Population/Community Degradation
The County appreciates the 1915 photo of the Maidu Indian woman with her catch of fish. However, it does not provide evidence of water temperatures degrading the trout population.

Numeric Line of Evidence – Population/Community Degradation
Similar to the photo of the Maidu Indian woman, the two 1911 photos of anglers does not provide evidence of water temperatures degrading the trout population. The County acknowledges that the NFFR was historically a trophy rainbow trout fishery. However, we believe that past and even current over-fishing of the NFFR, as well as lack of access for fish to tributary streams could be as important to the demise of the fisheries as the water temperature. It is for those reasons that 2105 LG recommended that obstacles, such as culverts installed by the railroad and CalTrans be investigated and replaced where necessary. In addition, it was recommended that a Game Warden be hired to patrol the NFFR.

The County strongly supports the need to protect the environment and proposes to work with the Water Board to do so. However, a temperature impairment listing on the North Fork could cost millions of dollars annually. It is imperative that before a listing decision is made full consideration be given to all the facts. Based on the overly conservative approach used in the lines of evidence, the County supports the approach espoused by the Regional Water Quality Control Board in their letter of December 1, 2005. The County also supports a risk-based approach as developed in the Sullivan report, but using NFFR rainbow trout temperature requirements. Over the past 10 years, PG&E has collected sufficient information during the relicensings of the Rock Creek/Cresta Projects, Upper North Fork Feather River Project, and Poe Project to develop appropriate coldwater criteria for species protection in the NFFR. Given the importance of the Water Boards decision, the County proposes that the Water Board direct Water Board staff to establish temperature criteria for the NFFR based on existing information and perhaps supplemented with additional information that might be needed. We recommend that the Water Board staff also be directed to work with Regional Board staff and the parties to the Rock Creek Cresta Settlement agreement and the 2105 Committee for the NFFR who have knowledge of the NFFR to develop suitable criteria.

In closing, Plumas County wishes to thank Mr. Craig Wilson and Ms. Dorena Goding for the time they took to explain the 303(d) listing process to the County on October 11, 2006. Their explanation of the process was enlightening. We appreciate the enormity of the task undertaken by Water Board staff to conduct the listing assessment. Staff should be commended for their hard work. However, in the instance of the temperature listing for the NFFR, more work needs to be done. The County looks forward to working with Water Board staff on this complex issue.

Sincerely,

Bill Dennison

Bill Dennison,
Plumas County Supervisor, District 3