



Association of California Water Agencies

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Via e-mail: commentletters@waterboards.ca.gov

Selica Potter, Acting Clerk to the Board
State Water Resources Control Board
Executive Office
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303 (d) Deadline:
1/31/06

Comments Regarding The State Water Resources Control Board (SWRCB) Proposed Revisions, Federal Clean Water Act (CWA) Section 303(d) List of Water Quality Limited Segments For California

Dear Ms. Potter:

The Association of California Water Agencies (ACWA) appreciates the opportunity to provide the following comments on the State Water Resources Control Board (SWRCB) Proposed Revisions to the CWA Section 303(d) List of Water Quality Limited Segments For California [Section 303(d) List]. ACWA represents over 450 public water agencies in California. Our members supply over 90% of the water delivered in California for domestic, agricultural and industrial uses. ACWA member agencies operate water conveyance facilities, drinking water storage reservoirs, and water treatment facilities throughout the state. These agencies are integrally involved in the management of surface water resources statewide to ensure that public water supply needs are adequately addressed, acceptable surface and groundwater quality is maintained, and that beneficial uses of water resources are optimized in a balanced manner.

ACWA strongly supports the efforts that the SWRCB and the Regional Boards have made to improve the transparency and scientific integrity of the 303(d) listing process between the 2002 listing cycle and the present 2005 list. In particular, we believe that the effort to develop and adopt the "Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List" (Listing Policy) has resulted in a generally more objective and defensible process to evaluate and list impaired water bodies in California. Additionally, the extensive staff work that has gone into preparing the "Water Body Fact Sheets" to support staff's listing and delisting recommendations provides the needed rationale for how the Listing Policy is applied in specific cases.

Although ACWA supports the general purposes of the Clean Water Act Section 303(d) listing process, to identify water quality impaired waters that should be the subject of detailed Total Maximum Daily Load (TMDLs) "pollutant budgets" that are calculated to result in restoration of water quality, we have serious concerns about how this process will be carried out in a number of situations that we will describe below. These problematic situations are generally associated with water quality in constructed water conveyances and water reservoirs, but can occur in natural water bodies as well.

Our conclusion is that the 303(d) listing process needs to be better integrated with a more robust and sophisticated regional water quality basin planning process to justify water quality objectives and effectively address beneficial use attainability. In many cases TMDLs may be the right tool for the job, but in other cases alternative "off-ramp" water quality management plans need to be prepared to ensure balanced protection of beneficial uses.

Drinking Water Reservoir Listings

ACWA is concerned that a large number of drinking water reservoirs have been proposed for new and continued listings for various impairments in various parts of the state. These reservoirs are often listed for high Total Dissolved Solids (TDS), low Dissolved Oxygen (DO), or high levels of various naturally occurring metals or salts that either do not pose a threat to public health or are treated to achieve state drinking water standards before distribution to the public. Specific examples include several reservoirs in San Diego County, including Sweetwater, El Capitan, Miramar, Murray and San Vicente Reservoirs. This problem, however, is not limited to these cases.

ACWA is concerned that widespread listing of drinking water reservoirs for constituents that are not a threat to Municipal and Domestic Supply (MUN) uses will result in preparation of many unnecessary TMDLs, and could ultimately adversely affect the management and use of these facilities.

Drinking water reservoirs are managed to store raw water or recycled water that may come from sources that may already be high in TDS or other listed constituents (such as the Colorado River). In many cases, there are no traditional point or nonpoint sources of "loadings" of the listed pollutant to the reservoir, other than the source water itself. Although these situations may create a technical "impairment" if evaluated against current water quality objectives contained in basin plans, in fact "no water was harmed in the making of the drinking water", which is the primary beneficial use for which these reservoirs exist.

It is true that some of the reservoirs in question may support ancillary "warm water fisheries" that have been identified as beneficial uses. But the CWA provides for use attainability analysis to ensure consideration and proper balancing of the various designated uses associated with a given water body. This is where a more sophisticated and robust basin planning process is needed to augment the 303(d) listing and TMDL processes. We encourage the SWRCB and the affected Regional Boards to work cooperatively with the affected water agencies and to rectify these issues by addressing the fundamental weakness in the basin plans. ACWA supports revision of the state Listing Policy to exempt drinking water reservoirs with unavoidable

impairments associated with imported drinking water quality, natural constituents in the water body, or unavoidable natural processes like seasonal stratification that cause decreased DO levels.

Temperature Listings

ACWA is also concerned about what we deem to be insufficient lines of evidence to support a proposed listing for temperature impairment on the North Feather River. Enclosed is a letter from James Pedri of the Central Valley Regional Water Quality Control Board Redding Branch office dated December 1, 2005 to Joe Karkoski of the CVRWQCB that questions the rationale for this proposed listing. This listing proposal is based on documented exceedances of an instantaneous daily maximum temperature objective intended to protect Cold Freshwater Habitat (COLD). Yet as the letter points out, daily, annual and weekly water temperature fluctuations are common in this river, and temperature also varies by elevation and river 'micro-habitat'. Additionally, the cold-water fish species that are the focus of this objective also vary in their tolerance for high temperatures by season and life stage. This appears to be a case where the water quality objective may not be suitable for determining an actual threat to the beneficial use. ACWA supports the conclusion of this letter that 303(d) temperature listings are merited only when there is additional evidence of actual beneficial use impairment due to high temperature and the impairment is the result of controllable activities. Providing additional lines of evidence to support temperature listings seems to be prudent given the complexity of the science.

This situation on the North Feather River also raises the question of where else instantaneous daily maximum temperature exceedances are being used as the sole basis to support proposed impairments for temperature. We did not review all of the "Water Body Fact Sheets" for all proposed temperature listings statewide, but wherever there are similar circumstances such a listing may not be warranted. We are also concerned with the potential for additional future listings for temperature impairment based on this type of simplistic rationale, as additional else instantaneous daily maximum temperature data become available of other waters that support COLD uses.

This is another example of where comprehensive attention to how water quality objectives are justified and supported in the basin plan is fundamental to improving the rigor and integrity of the 303(d) listing and TMDL processes. Again, we ask the SWRCB and the affected Regional Boards to focus significant attention to this matter in coming years.

Conclusion

ACWA supports the state's efforts to improve the integrity of the 303(d) listing process. We believe that the concerns we have expressed in this comment letter (and likely many other concerns expressed by many others) demonstrate that the 303(d) listing process needs to be better integrated with a more robust and sophisticated regional water quality basin planning process that effectively addresses beneficial use attainability. The changes we are requesting will be a challenge to implement, but we believe that attention to our comments will further strengthen water quality planning and management in California. Ultimately these changes will

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help better integrate water quality concerns into the wider context of state water policy in a way that can be supported broadly by water agencies, other water resource managers, and the public as a whole.

Thank you for your consideration. If you have any questions regarding these comments, please contact David Bolland at (916) 441-4545.

Sincerely,



Krista Clark
Director of Regulatory Affairs

Copy:

Craig J. Wilson, Division of Water Quality

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Dennis Bostad & Rick Alexander, Sweetwater Authority
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California Regional Water Quality Control Board

Central Valley Region



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Arnold Schwarzenegger
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1 December 2005

Mr. Joe Karkoski, TMDL Unit
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PROPOSED 303(D) LISTING FOR NORTH FORK FEATHER RIVER

This letter is in response to the SWRCB two-page summary proposing a 303(d) listing for temperature impairment in the North Fork Feather River (NF Feather). Though our staff has had limited involvement with the ongoing FERC re-license process for the NF Feather (and the temperature issues which we know have been a part of that process), we have had extensive experience in recent years working with local watershed management programs throughout the northern part of the Sacramento River watershed area. The activities of those programs have included preparation of watershed assessments, watershed management plans, and the conduct of ambient water quality monitoring (including temperature monitoring). Our comments below are a reflection of our experience in working with these individual watershed programs and the water quality monitoring activities undertaken by our Redding office staff.

1. The summary document cites numerous temperatures in excess of 21C as the basis for listing the NF Feather for temperature impairment. While our listing policy may allow for a listing based on only one line of evidence, it seems in this instance additional evidence should be presented to substantiate impairment. To the best of our knowledge, if there is temperature impairment in NF Feather, the only 'controllable factor' causing this impairment would be the ongoing hydroelectric operations in the river. It has been our experience that hydroelectric operations can alter temperature regimes in rivers and streams, but that alteration can be towards a warmer or a colder temperature regime, depending on site specific conditions. It would seem in this instance that an additional line of evidence to support listing should include one or more of the following:
 - a. that the overall temperature regime of the NF Feather was colder (not exceeding 21C) prior to the construction and operation of the hydro facilities
 - b. that populations of cold water species (i.e. trout) were more robust prior to the hydro operations and that the change appears to be temperature related
 - c. that current populations of cold water species are suppressed and that situation appears to be temperature related (as opposed to changes in habitat quality or some other factor)
 - d. that the 'natural or background' temperature regime in NF Feather (without hydro operations) would not exceed 21C

California Environmental Protection Agency

It is not clear to us what information exists with regard to a. through d. above, and this should have a major bearing on the decision to place NF Feather on the 303(d) list for temperature impairment.

2. Exceedence of an instantaneous daily maximum as basis for listing seems to grossly oversimplify temperature and cold water species relationships in our rivers and streams. Most rivers and streams in the Sacramento River watershed (above the valley floor) are Beneficial Use designated as Cold Freshwater Habitat (COLD). Annual temperature regimes in these waters vary seasonally and spatially (generally cold in the headwaters and progressively warm towards lower elevations). Some streams and some stream reaches are suitable COLD habitat only seasonally for both resident and anadromous species. Some are suitable COLD habitat only in their upper reaches. Some have 'micro-habitat' where cold-water species can seek refuge during critical times of year even though generally recorded stream temperatures substantially exceed reported tolerance levels of these species. There are also issues of life stage, some waters being temperature suitable for adult survival but not for earlier life stages. Some waters have modified temperature regimes (modified from "natural or background levels") from human activities, which are 'controllable'. Other COLD waters have modified temperature regimes that are due entirely to natural, climatic conditions or are due to human activities that are not 'controllable' or reversible. Our point here is that understanding temperature/cold water species relationships and determining 'impairment' in the real world of modified rivers and streams is a very complex process. Bottom line is that we believe a 303(d) temperature listing is merited only under the following circumstances:
 - a. there is clear evidence that the water quality objective is exceeded or there is documented BU impairment,
 - b. temperature can be identified as the cause of the objective exceedances or the BU impairment,
 - c. the exceedances or impairment is the result of controllable activities.
3. With the advent of continuous recording temperature devices that are technically efficient and inexpensive, we are now seeing a substantial increase in available information to better identify annual temperature regimes. Examples where this kind of information has recently come available include:
 - Upper Sacramento River (above Shasta Lake)
 - Pit River and numerous tributary streams
 - Lower Sacramento River (below Shasta Lake)
 - Upper Feather River (NF and MF above Oroville) and numerous tributary streams
 - Cow Creek watershed
 - Deer Creek watershed

All of these waters are COLD listed. A cursory review of the existing temperature data shows that, using the same criteria proposed for the NF Feather listing, most (not all) of the above waters would be 303(d) listed for temperature impairment. In some instances, a listing may be appropriate. However, for reasons discussed in #2 above, a temperature listing in many of these waters would not be appropriate. Given the reality that 303(d) listing and subsequent TMDL

activity is a principal driving force for so much of our agency work and priorities, it is important that initial listings are well founded in order to make the most efficient use of our limited time and \$.

4. We were surprised to see exceedance of an instantaneous daily maximum used as the basis for determining temperature impairment. Literature references and water quality criteria discuss several different metrics for assessing the implications of temperature to aquatic species. These include
 - number of successive days exceeding a specified daily max
 - number of total days exceeding a specified daily max
 - maximum weekly average temperature (MWAT)
 - maximum weekly maximum temperature
 - diurnal temperature variation

It is our understanding that temperature impacts to cold-water species are most commonly judged by use of the MWAT and determination if it exceeds a specified temperature deemed necessary for protection of that life stage of the species.

5. In recognition of the complexity of determining 'temperature impairment' in any individual watercourse or watershed, we suggest that some of our available 303(d)/TMDL funding be used for case studies on selected waters where we now have (or soon will have) an extensive data set on annual temperature regime. Scope of the study could include detailed analysis of that data, together with the watershed conditions that influence that temperature regime, with the desired outcome being a recommendation to the Regional Board as to the validity of temperature listing in that watercourse. We believe this would bring some needed additional science to the listing process and could provide a protocol template for consideration of temperature listings in other waters. We would be interested in working closely with and managing a contract study of this type.

In conclusion, we do not support 303(d) temperature listing for the NF Feather River based on information we have (including information referenced in the two page listing summary). We request that you include this letter with your comments to SWRCB on the current proposed listings. If you have questions or comments, please contact Dennis R. Heiman of my staff at (530) 224-4851, or at the letterhead address noted above.

James C. Pedri, P.E.
Assistant Executive Officer

DRH: sae

cc: Sharon Stohrer, SWRCB, Div. Of Water Rights, Sacramento