



California Regional Water Quality Control Board Central Valley Region

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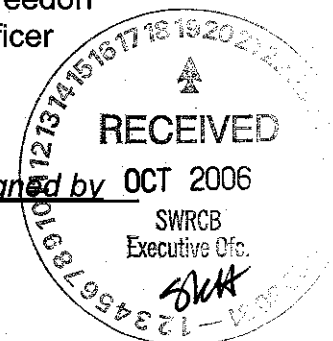
10/25/06 BdMtg Item 10
303(d) List
Deadline: 10/20/06 5pm

TO: Tam Doduc, Chair
State Water Resources Control Board

FROM: Pamela C. Creedon
Executive Officer

DATE: 19 October 2006

SIGNATURE: Original signed by OCT 2006



SUBJECT: 2006 CLEAN WATER ACT SECTION 303(D) LIST

Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff appreciates the opportunity to comment on the State Water Resources Control Board's (State Water Board) "Proposed 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments".

We have been working with your staff for more than a year and a half during preparation of the 303(d) list and provided comments on the public draft released last year. We appreciate the changes your staff has made in response to a number of our comments. However, three fundamental policy issues have not been adequately addressed – 1) listing of exotic species; 2) temperature listings; and 3) delisting waters that are not attaining standards.

With respect to these issues, we believe the Central Valley Water Board should be given deference in interpretation of its water quality objectives. State Water Board staff is proposing listing decisions based on interpretations of water quality objectives that the Central Valley Water Board has never applied. We believe the Central Valley Water Board should first be given an opportunity to consider this information as part of its own deliberations, followed by State Water Board review, if necessary.

The potential impact of the State Water Board staff's approach to interpreting our objectives extends far beyond the 303(d) list. Interpretation of our objectives is central to how we establish waste discharge requirements and conditions in waivers and to how we evaluate compliance. A new approach to interpreting our surface water quality objectives, which appears to conflict with our past practices, can have a profound effect on many of our programs.

Since the data solicitation process for the next 303(d) list update is starting within weeks, we believe there is no harm in deferring judgment on these listings decisions until the next update. Such deference will allow the Central Valley Water Board to consider approaches to addressing exotic species, temperature, and delisting that are compatible with the listing policy and the Central Valley Water Board's other programs. However, if the State Water Board does not believe such deference is possible, we believe there are sound technical and policy

reasons not to move forward with the proposed temperature and exotic species listings and to list waters that are not attaining standards.

Exotic Species

The issue of greatest immediate concern is the proposed listing of “exotic” species in the Delta, San Joaquin River, and Cosumnes River, which are based on the presence of established non-native aquatic species and decline of native species. A State Water Board determination that established non-native species are pollutants does not have a clear legal foundation and could have a number of significant, unintended policy ramifications.

Established non-native species are not being maintained or propagated due to a discharge of waste. The legal basis for the Boards to regulate or limit the populations of established species is, therefore, unclear. The State Water Board’s and Central Valley Water Board’s water quality plans do not distinguish between protection of non-native versus native aquatic species (e.g. our water quality objectives protect aquatic life, not just native aquatic life). In fact, the Central Valley Water Board’s Basin Plan explicitly defines the “WARM” migration and spawning beneficial uses by referring to two non-native fish species – striped bass and shad.

State Water Board staff has listed “exotic” or non-native species based on violation of the narrative toxicity objective. Staff’s assertion that non-native species are a “toxic substance” causing violation of our toxicity objective suggests that non-native species need not be protected from pollutant discharges. The precedent established is significant and would put both the Central Valley Water Board and State Water Board in conflict with our promulgated policies that either implicitly or explicitly protect non-native species.

Additionally, a number of unintended consequences are suggested by a listing of “exotic” species. Mosquito control districts may now be required to have WDRs or a waiver in order to plant or “discharge” mosquito fish – a non-native species that provides important biological control of mosquitoes. NPDES dischargers (treatment plants and storm water) may be required to conduct extensive monitoring programs to evaluate their “reasonable potential” for discharging exotic species. The lack of a clear definition of what constitutes an exotic species and the lack of a State policy to address exotic species will lead to a great deal of confusion and wasted resources in trying to determine how to incorporate regulation of exotic species into many of our programs. We suggest that the State Water Board defer listing exotic species until a clear basis for doing so is established in a State-wide or regional policy.

Temperature

In addition to the exotic species issue, Central Valley Water Board staff would like the State Water Board to reconsider listing temperature based on exceedance of an annual maximum temperature and comparison to fishery conditions that existed fifty to one hundred years ago (the listings are for the North Fork of the Feather River and Willow Creek in Madera County). Given our hot summers, it is not clear that the annual maximum temperature criterion used by State Water Board staff was met historically in our lower elevation waters. The scientific basis for using an annual maximum temperature criterion based on conditions in Washington state streams has not been established. Temperature criteria that are relevant for California conditions and account for natural seasonal and diurnal variations should be developed prior to listing.

Elevated temperature may contribute to declines in cold-water fish species. However, as your staff acknowledges, hydromodification, flow changes, and habitat alteration could be primary or contributing causes of the observed declines.

The challenge in evaluating temperature on a watershed scale is the lack of a clear water quality objective. Our temperature objective states “The *natural* receiving water temperature...shall not be altered unless it can be demonstrated to the satisfaction of the *Regional Water Board* that such alteration in temperature does not adversely affect beneficial uses” [emphasis added]. The objective goes on to state “...appropriate averaging periods may be applied provided that beneficial uses will be fully protected. The key issues are:

- 1) identifying the baseline that defines “natural” – pre-Basin Plan, pre-dams and hydropower;
- 2) the Central Valley Water Board’s role in determining whether beneficial uses have been adversely affected by temperature alteration; and 3) defining the appropriate averaging period.

Use of an annual maximum temperature value, in which no averaging is considered, and use of a fishery resource baseline of 50-100 years ago sets a precedent for listing hundreds of Central Valley waters. Absent clear definition by the Central Valley Water Board of the appropriate temperature criteria, averaging period, and fishery baseline, such listings are premature.

De-listing Waters not Attaining Standards

We are also concerned that the State Water Board is proposing to de-list waters that have not yet attained water quality standards. Although the binomial method in the Listing Policy suggests de-listing, the “weight of evidence” from a review of the data and the applicable criteria suggests continued exceedances in a number of our water bodies. Specifically, data that have been determined to be of high quality indicate that applicable criteria are exceeded at a frequency of greater than once every three years (the allowable frequency for toxic pollutants).

In their response to comments, State Water Board staff stated that the one in three year exceedance rate was considered as part of the Listing Policy and the binomial method provides a “fair determination of when standards are met or not.” Since the data clearly indicate the standard is not yet attained in several cases, the waters and associated pollutants should remain on the 303(d) list. The Listing Policy allows use of the binomial method or using the “weight of evidence” to evaluate data. In these cases, the binomial method provides a false conclusion regarding attainment of standards.

In addition, when diazinon and chlorpyrifos co-occur, the joint toxicity of those chemicals must be considered. However, the proposed 303(d) list does not consider additive toxicity. In previous comments, we provided staff with the analysis and data demonstrating co-occurrence of these chemicals and exceedance of our toxicity objective.

De-listing waters that are not attaining our water quality objectives would confuse the public as to what the 303(d) list represents. Based on our evaluation of the high quality data available, additive toxicity concerns, and the relevant criteria, the following water bodies should remain on the 303(d) list as not meeting standards for diazinon: Sacramento River, Feather River, and Morrison Creek for diazinon.

If the State Water Board moves forward with the exotic species and temperature listings, we request that the attached language be added to the resolution. We believe this language is necessary to clarify the basis for the listings.

I appreciate your attention to our concerns and look forward to discussing them with the Board at your upcoming hearing. I can be reached at (916) 464-4839.

Attachments – Proposed Resolution Language
Additional Comments on the 303(d) List and Response to Comments

cc: Celeste Cantu, SWRCB
Tom Howard, SWRCB
Craig Wilson, SWRCB
Song Her, SWRCB
Central Valley Water Board members

Attachment 1 - Proposed Resolution Language for the adoption of the 2006 Clean Water Act Section 303(d) List

As discussed in the main body of the comment letter, Central Valley Water Board staff recommends that the State Water Board not move forward with the proposed temperature and exotic species listings. However, should the State Water Board adopt the listings, we recommend the following findings be included in the adoption resolution.

Whereas,

1. The listing of “exotic” species in the Delta, Cosumnes River, and San Joaquin River is based on the presence “non-native” aquatic species, which are specifically identified in the record. The basis for the listings does not include any evidence that the presence of these non-native species is due to on-going discharges of waste.
2. Although non-native species can impact the diversity and abundance of native species, other factors that may be the primary or secondary cause of native species decline include habitat alteration, flow changes, or hydromodification.
3. The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) does not establish different levels of protection for native versus non-native aquatic species. Both native and non-native aquatic species are part of the freshwater habitat ecosystem beneficial use definitions. The Basin Plan does not include water quality objectives that prohibit or limit the presence of established non-native aquatic species.
4. The Central Valley Water Board may need to protect non-native species from pollutant impacts to comply with federal and State laws.
5. The State Water Board’s Listing Policy does not identify procedures for the listing of “exotic” species.
6. The listings for “temperature” as impairing the North Fork of the Feather River and Willow Creek (Madera County) are based on an evaluation of changes in cold-water fish populations over a period of approximately fifty to one hundred years. During that time, the State has developed or approved projects that have significantly altered the hydrologic characteristics of those waterways. The basis for these listings does not include any evidence that temperature increases are due to an ongoing discharge of waste.
7. The State Water Board has the authority to address elevated temperatures due to hydropower and reservoir operations.
8. Although temperature increases can impact the diversity and abundance of cold-water fish species, other factors that may be the primary or secondary cause of the decline in cold-water fish species include habitat alteration, flow changes, sedimentation, hydromodification or the introduction of non-native species.
9. The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) does not include a specific temperature objective for the waters proposed for listing nor does the Basin Plan define the baseline for identifying the natural receiving temperature (e.g., pre-European settlement, pre-Basin Plan).

Therefore be it resolved,

1. The State Water Board does not expect the Central Valley Water Board to develop control programs to address the presence of established non-native species.
2. The State Water Board expects the Central Valley Water Board to continue to protect non-native aquatic species to the extent required by State and federal law.

Attachment 1 - Proposed Resolution Language for the adoption of the 2006 Clean Water Act Section 303(d) List

3. The State Water Board directs staff to propose changes to the Listing Policy to identify the beneficial uses, water quality objectives, and evaluation procedures that should be used to list and de-list waters impaired by “exotic” species. The proposed changes should be presented for State Water Board consideration prior to the 2010 update of the Clean Water Act 303(d) list.
4. The State Water Board does not expect the Central Valley Water Board to develop control programs to address temperature listings in the North Fork of the Feather River and Willow Creek (Madera County).
5. The State Water Board directs staff to work with Central Valley Water Board staff to develop a work plan and identify the resources needed to review and potentially revise the temperature provisions of the Central Valley Water Board’s Water Quality Control Plans.

Attachment 2 - Additional Comments on the 303(d) List and Response to Comments

Central Valley Water Board staff have reviewed the State Water Board Response to Comments (SWRCB, 2006a) (Response) and the Proposed 2006 CWA Section 303(d) List of Water Quality Limited Segments (SWRCB, 2006b) (Proposed 303(d) List). We have noted several instances in which the stated change in the State Water Board's response is not reflected in the Proposed 303(d) List. The Comments and State Water Board's Responses are presented in the same table format that the State Water Board used for their Responses to Comments. The Central Valley Water Board staff's review and recommendations follow each Comment/Response pair in plain text format.

Comment Nos. 14.114.3, 14.2,26.1, 26.3, 26.5,26.6, 26.2, 37.1,37.2, 78.1,222.1, 222.5 (Page 107)

Central Valley Water Board staff appreciates the response indicating that the stressor and source information would be changed. The recommendations for the Fall River listings included removing "agricultural grazing" and "Highway/Road/Bridge construction" from the "Potential Sources" in the Proposed 303(d) List. These two Potential Sources are still included in the Proposed 303(d) List and should be removed. In addition, the "Potential Sources" description should replace ",and natural catastrophic events" with "(i.e., logging, grazing, channelization, roads, and railroads) and natural catastrophic events (i.e., fire)." (see attachment letter in Landau, 2006, from J.C. Pedri to J. Karkoski dated 23 November 2005). This reference also recommends that the "Pollutant/Stressor" be changed from "Sedimentation/Siltation" to "Sedimentation (i.e., accumulated sand size sediment in upper Fall River)."

Comment Nos. 131.29, 131.46, 131.47, 131.55 (Pages 118, 120, 121)

Central Valley Water Board staff appreciates the response indicating that the specific pyrethroids would be identified on the 303(d) list. However, the State Water Board did not add a notation to the Proposed 303(d) List listing bifenthrin, lambda cyhalothrin, esfenvalerate/fenvalerate, and permethrin as "Pollutants of Concern". We request that this oversight be corrected prior to submittal of the list to the U.S. EPA.

Comment Number 131.59 (Page 122)

The State Water Board did not respond to what is identified as the second part of the comment. The Central Valley Water Board made the following comment: "Note that we are not suggesting that non-native species should not be addressed. Rather than a 303(d) listing, we suggest that the State Water Board embark on a more deliberative process to identify: 1) the potential scope of the problem; 2) the regulatory authorities and agencies that are or could be involved in the regulation of non-native species populations; 3) the water quality policies that would need to be developed for the Water Boards to regulate non-native species; 4) the potential consequences, impacts, and benefits of regulating the populations of established non-native species."

We ask that the State Water Board consider the recommendation to evaluate the non-native species issue outside of the 303(d) listing process.

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Comment Nos. 131.12, 216.3, 216.4; 131.7 (Pages 116, 123)

The State Water Board states in their response “None of the exotic species listings are based on the species mentioned in the comment letter.” This statement is not accurate. The fact sheet names “American shad” as a planted fish species and “striped bass” as an introduced fish species under one “Line of Evidence” in the “Data Used to Assess Water Quality” sections of its eight Fact Sheets (for eight portions of the Delta Waterways) that propose listing these waterbodies for “exotic species”. These two fish species are also named in the comment letter as being non-native fish that are specifically associated in the Regional Water Board’s Basin Plan with the definition of the WARM migration and spawning beneficial uses.

Similarly, “mosquitofish” were named (with at least seven other fish species) as “non-native” species under one “Line of Evidence” in the “Data Used to Assess Water Quality” section of the Fact Sheets for the “San Joaquin River (Friant Dam to Mendota Pool)” that propose listing this waterbody for “exotic species”. Mosquitofish are also named in the comment letter as being non-native fish that are specifically associated in the Regional Water Board’s Basin Plan with the definition of the WARM migration and spawning beneficial uses.

Central Valley Water Board staff request that the inaccurate statement be deleted from the response to comments.

Additional Recommended Changes/Corrections to the 303(d) List

Exotic Species Listings – Should the State Water Board move forward with the recommended listing, we request that the species causing the impairment be identified in the remarks associated with the listing. We also request that “Sources Unknown” be changed to “Established non-native species – no known ‘discharge’.”

North Fork Feather River, Temperature – Should the State Water Board move forward with the recommended listing, we request that “Sources Unknown” be changed under Potential Sources be changed to “Hydromodification/Flow Changes”. We believe this change would accurately represent the understanding of the State Water Board’s Division of Water Rights with respect to the cause of elevated temperatures.

Orestimba Creek, Azinphos Methyl – We recommend that the word “Guthion” be removed from the azinphos methyl listing. “Guthion” is the brand name of a specific pesticide product containing azinphos methyl. There may be other pesticide products with different brand names containing azinphos methyl.

Main Drainage Canal, Wadsworth Canal, Diazinon – We recommend that the potential source be changed from “Sources Unknown” to “Agriculture”. The Main Drainage Canal and Wadsworth canal is surrounded by agriculture and diazinon is currently only being sold for agricultural uses.

Water Quality Limited Segments being addressed by USEPA approved TMDLs

There are a number of water bodies identified as being addressed by USEPA approved TMDLs that have not yet been approved by USEPA. Most of the waters have TMDLs that have been at least approved by the Central Valley Water Board and two of the listings have no TMDLs yet.

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TMDLs in the approval process – Cache Creek, mercury (includes Bear Creek, Cache Creek, and Harley Gulch); Delta Waterways, diazinon/chlorpyrifos (includes all Delta waterways segments plus lower Calaveras River, Five Mile Slough, Mosher Slough, Smith Canal); San Joaquin River, diazinon/chlorpyrifos.

No TMDL yet adopted by the Central Valley Water Board – San Joaquin River (Mud Slough to Merced River), selenium; Sulphur Creek, mercury.

Corrections to Fact Sheets

Sacramento River/Feather River, Diazinon – the diazinon evaluation criteria used by the State Water Board staff were the corrected Department of Fish and Game criteria (0.160 ug/L as a one-hour average and 0.100 ug/L as a 4-day average). The Central Valley Water Board has adopted and the U.S. EPA has approved diazinon water quality objectives for the Sacramento and Feather Rivers. Those objectives are 0.080 ug/L as a one-hour average and 0.050 ug/L as a 4-day average and should be used to evaluate attainment of standards.

References

Landau, K.D. 2006. *Comments On The Proposed Revision To Federal Clean Water Act Section 303(D) List Of Water Quality Limited Segments For California (303(D) List)*. Letter to Selica Potter, Acting Clerk of the [State Water] Board from Ken Landau, Acting Executive Officer of the Regional Water Board. 24 January 2006. Sacramento, CA.

SWRCB (State Water Resources Control Board, Division of Water Quality). 2006a. *Revision of the Clean Water Act Section 303(d) List of Water Quality Limited Segments, Responses to Comments*. Staff Report Volume IV, Table 2 (Staff Report, Volume III, Central Valley Region Fact Sheets). September 2006. Sacramento, CA.

SWRCB (State Water Resources Control Board). 2006b. *Proposed 2006 CWA Section 303(d) List Of Water Quality Limited Segments, Central Valley Regional Board*. SWRCB Draft 303(d) List release date: September 15, 2006.

SWRCB (State Water Resources Control Board). 2006c. *Proposed 2006 CWA Section 303(d) List Of Water Quality Limited Segments*. SWRCB Draft 303(d) List release date: September 15, 2006. Sacramento, CA.

SWRCB (State Water Resources Control Board, Division of Water Quality). 2006d. *Revision of the Clean Water Act Section 303(d) List of Water Quality Limited Segments, Water Body Fact Sheets Supporting the Listing and Delisting Recommendations*. Staff Report Volume III, New or Revised Fact Sheets. September 2006. Sacramento, CA.