

**Responsiveness Summary for the  
Central Valley RWQCB's Adoption of the  
CWA Section 303d List and TMDL Priorities**

On 18 November 1997, Central Valley Regional Board staff sent out a letter soliciting information for updating the Section 303d List. Enclosed with the letter was a draft list which included the recommended TMDL priority. The letter announced the consideration of the list at the January 1998 Board Meeting. Prior to the meeting, written comments were received from the East Bay Municipal Utility District, DeltaKeeper, William H. Crooks, S.D. Murrill & Co., City of Redding, Sutter County Agricultural Commissioner, G. Fred Lee & Associates, Natural Resources Defense Council, Sacramento Regional County Sanitation District, City of Stockton, and U.S. EPA.

Following are the staff responses to the comments received.

**East Bay Municipal Utility District**

*COMMENT: In a December 8 letter, the District submitted water quality data to support a request to remove dissolved oxygen (DO) and hydrogen sulfide as pollutants that impair the lower Mokelumne River. The data included over 150 measurements for each chemical, taken in the Mokelumne River at a site below Camanche Dam during the period 1993-1997. In the District's opinion, the data clearly indicate that DO and hydrogen sulfide levels do not impair the lower Mokelumne River.*

Staff has reviewed the monitoring data and agrees with the District that the lower Mokelumne River should be delisted for DO and hydrogen sulfide. Staff has recommended that DO and hydrogen sulfide be removed for the lower Mokelumne River in this year's Section 303(d) list.

**DeltaKeeper**

1. *COMMENT: Studies conducted by Central Valley Regional Water Quality Control Board (CVRWQCB) staff, the University of California Davis (UCD), Sacramento Stormwater Program, United States Geological Survey (USGS), Deltakeeper and the Sacramento River Watershed Program confirm that several urban creeks and sloughs in the Sacramento and Stockton area exhibit pesticide toxicity following all rainfall events. Toxicity tests indicate acute toxicity and TIE's have implicated both diazinon and chlorpyrifos. Both chemicals are routinely detected at levels exceeding the California Department of Fish and Game (DFG) criteria for protecting aquatic life.*

*Sites include Mosher Slough, 5-Mile Slough, Smith Canal, Calaveras River, and the Turning Basin in the Stockton area and Arcade Creek, Chicken Ranch Slough, Strong Ranch Slough, Elder Creek, Morrison Creek, Dry Creek, and Laguna Creek in the Sacramento area. CVRWQCB staff have these data and, consequently, these waterbodies should be included in the 303(d) list because of diazinon and chlorpyrifos toxicity.*

Staff has reviewed monitoring information for both the Sacramento and Stockton urban creeks. Based on the monitoring data, staff has recommended that Arcade Creek, Chicken Ranch Slough, Elder Creek, Morrison Creek and Strong Ranch Slough be placed on the list. All of the water bodies will be listed for both diazinon and chlorpyrifos except for Morrison Creek which will be listed solely for diazinon. Staff will recommend listing Mosher Slough and 5-Mile Slough for both diazinon and chlorpyrifos as a late change at the Board meeting. Staff determined that there was inadequate data to justify listing Smith Canal, Calaveras River, the Turning Basin and Dry Creek.

2. *COMMENT: A number of other waterbodies tributary to the San Joaquin River should be added to the 303(d) list because of toxicity from the pesticides diazinon and chlorpyrifos. These include Del Puerto Creek, Ingram/Hospital Creek, Newman Wasteway, Orestimba Creek, Spanish Grant Combined Drain, Salt Slough and Turlock Irrigation Drains #3, #5, #6. Data gathered by CVRWQCB staff USGS and the California Department of Pesticide Regulation and referenced in the*

*1997 technical report from Novartis Crop Protection, Inc. titled An Ecological Risk Assessment of Diazinon in the Sacramento and San Joaquin River Basins establishes impairment of these waterways.*

Staff agrees with DeltaKeeper that Orestimba Creek, Harding Drain (Turlock Irrigation District #5), and Salt Slough should be listed for diazinon and chlorpyrifos. In the past, these water bodies were listed for pesticides. During this update, staff has recommended the pesticide listing for Orestimba Creek and Harding Drain be replaced with the specific pesticides, diazinon and chlorpyrifos. Staff will recommend the same clarification for Salt Slough as a late change at the Board meeting. Staff has reviewed the pesticide monitoring data for other water bodies, and there was not enough data to warrant including them on the Section 303(d) list.

3. COMMENT: *Diazinon should be added to the list of pollutants responsible for impairment of the lower Tuolumne River and the lower Merced River. We reference the 1997 USGS report titled Transport of Diazinon in the San Joaquin River Basin, California by Charles R. Kratzer, Open-file Report 97-411.*

Staff has reviewed the monitoring data, agrees with DeltaKeeper, and has recommended that diazinon be added to the list for both the lower Tuolumne and Merced Rivers.

4. COMMENT: *Twenty-eight miles of the lower Mokelumne River are listed as impaired because of Cu and Zn and one (1) mile is listed due to DO and H<sub>2</sub>S. However, data collected by East Bay Municipal Utility District from 11/89 thru 11/92 and presented at the State Water Resource Control Board's lower Mokelumne River hearing revealed that discharges from Camanche Dam also regularly exceed criteria for aluminum and cadmium. Testimony by the DFG and U.S. Fish and Wildlife Service during that hearing established that anadromous fisheries are frequently impaired due to high temperature.*

*Footnote 3 on the 303(d) list states that "EBMUD has installed a treatment system at Camanche Reservoir and has shown compliance with the DO and H<sub>2</sub>S objectives during average to wet weather years. We will need to receive dry weather information to remove them from the list." The "treatment system" employed by EBMUD improves the quality of the water piped into the fish hatchery but does little to ameliorate conditions in the river. Temperature, DO and H<sub>2</sub>S levels and resuspension events that contribute metal loading to the lower river are directly related to reservoir "minimum pool" levels which are under the exclusive control of EBMUD. We suggest that cadmium, aluminum and temperature be added to the pollutants listed as responsible for impairment of the lower Mokelumne River.*

Staff was not able to locate aluminum and cadmium data for the lower Mokelumne River; therefore, we have recommended not including it on the list.

East Bay Municipal Utility District has provided monitoring data in the Mokelumne River from 1993 to 1997. Staff believes that this monitored assessment does show that DO and H<sub>2</sub>S are no longer impairing the river and that there is enough evidence for delisting. Staff has recommended that DO and H<sub>2</sub>S be removed from the list for the lower Mokelumne River.

Staff contacted Department of Fish and Game and U.S. Fish and Wildlife staff to ascertain whether there was a beneficial use impairment due to temperature in the River. No reports, studies or monitoring data could be obtained to justify listing temperature for the lower Mokelumne River.

5. COMMENT: *Finally, discussions with Louie Pratt of the CVRWQCB, staff of the San Joaquin Mosquito Abatement District and Dr. Gary Litton of the University of the Pacific lead us to believe that Little Johns Creek, Lone Tree Creek and White Slough should be listed because of dairy waste discharges and low DO.*

Available monitoring and studies were not adequate to justify listing Little Johns Creek and White Slough. Lone Tree Creek is currently on the Section 303(d) list for salt, ammonia and BOD. Those listings were based on monitoring data from a special study conducted by the Regional Board in 1989. Staff does not have DO monitoring data for Lone Tree Creek, and therefore, is not recommending listing Lone Tree Creek for DO.

### William H. Crooks

*COMMENT: My only specific comment is regarding the source MINI, or resource extraction. I asked your staff if there was a description of the various sources. They told me there were none. I think when most people hear the term "resource extraction", they would envision an active mining operation. However, I believe all of the problem waterbodies that are impaired by pollutants from MINI, are in fact impaired by abandoned mines. I suggest that you include a new source of "abandoned mines".*

In response to Mr. Crooks' comments, staff added an explanation to abbreviations part of the list. Under Sources, "MINI" is now defined as Resource Extraction (All resource extraction sources are abandoned mines).

### S.D. Murrill & Co.

*COMMENT: You have proposed to list a 30 mile segment of the Sacramento River as impaired due to agricultural use of carbofuran.*

*We submit that, using your August 11, 1997 303(d) delisting factors as a guide, and viewing the current set of circumstances, carbofuran should be removed from the proposed 1998 303(d) list.*

Staff has reviewed the available carbofuran monitoring data for the Sacramento River from DPR and USGS. Because the monitoring data shows carbofuran concentrations in the Sacramento River to be consistently below the performance goal, staff has recommended that the pesticide be removed from the list for the Sacramento River.

### City of Redding

- COMMENT: Iron Mountain Mine (IMM) discharges copper and zinc laden acid mine drainage (AMD) to Spring creek, which enters the Sacramento River upstream of the city of Redding. To illustrate, IMM discharges approximately 40 pounds of copper per day to the Sacramento River while both City of Redding wastewater treatment plants (WWTP'S) discharge a total of approximately one pound of copper per day. A significant portion of our Clear Creek WWTP copper and zinc load comes from IMM via our municipal water treatment sludge. IMM's dam on Slickrock Creek, scheduled for completion in the fall of 1999, will reduce metal loads to the river and make old data obsolete. Even with current and proposed waste management at IMM, Sacramento River metals will remain dangerously close to the water quality criteria. We are concerned about adequate capacity reserves for our urban discharge, particularly during wet weather when IMM's runoff exceeds the capacities of their dams and treatment system.*

*There are recognized deficiencies in the TMDL process, particularly for streams that are impaired by traditionally nonpoint sources, such as IMM. To quote the Assistant Administrator of EPA's Office of Water: Wetlands, Oceans and Watersheds, Robert Perciasepe, "EPA's guidance on implementation of TMDL's is incomplete because it does not yet address implementation of TMDL's for waters impaired only by nonpoint sources or a blend of point and nonpoint sources in which nonpoint sources dominate. Implementation of load allocations for nonpoint sources in these waters is essential if we are to maintain steady progress toward clean water goals." With due consideration to these factors, the priority on this stretch of the Sacramento River should be reduced until such implementation issues are completed in the TMDL guidance. Before new guidance is available, the*

*Regional Board's Basin Plan should be revised to fully reflect clean water act section 319 requirements for nonpoint management programs.*

*Phased TMDL's (used in the New York waters of the New York/New Jersey Harbor) and watershed management per the USEPA guidance should be used with provisions for seasonal variations where AMD's are at a maximum during the winter wet weather*

TMDLs address both point and non point discharges. Staff agrees with the City that addressing the non point source component of most TMDLs will not be as straight-forward as that for the point sources. Staff will be seeking stakeholder input during the TMDL process and hope that this input will help us develop an implementation plan that is both fair and equitable for both point and nonpoint dischargers.

2. COMMENT: *Allow at least 2-3 years following the completion of the dam on Slickrock Creek for collecting accurate data to determine its effect on metals levels and toxicity. This Phase 1 TMDL should end in January of 2003. Assuming the actual load allocation process will minimally take 1-2 additional years, the date for phase 2 TMDL development for copper, cadmium, zinc for the Sacramento River from Shasta Dam to Red Bluff should be extended to January 2005. The latter data should be used if the phased approach is not acceptable. The probability of exceedances will remain during very wet weather which may even make this unreasonable. Therefore, every effort to compensate for this risk by allowing adequate time to develop a sound data base should be attempted.*

Staff believes that it is appropriate to adjust the TMDL completion date to be in line with the U.S. EPA remedies for IMM since IMM is such a large contributor of metals loads. We will recommend revising the end dates for the copper, cadmium, and zinc TMDLs in the Sacramento River to December 2001.

3. COMMENT: *Change the priority on this same stretch of the river for copper, cadmium, and zinc from high to low. Also change the priority on unknown toxicity from medium to low if 10 years will be required for TMDL development.*

TMDL priority is based on a number of different factors as described in Section D of the California Guidelines. They include water body significance, degree of impairment, etc. The Sacramento River is a very important water body and the metals impairment in the River is significant. The priority is not based on the timeline for TMDL development. This is addressed in the time schedule; therefore, the staff recommends that the priority not be changed for the copper, cadmium, zinc and unknown toxicity TMDLs in the upper Sacramento River.

4. COMMENT: *The use of "all readily available data" as stated in 40 CFR 130.7(b)(5) for development of total maximum daily load (TMDL) lists and determining compliance with effluent limits is not appropriate. Only accurate, defensible data with sampling done in accordance with EPA Method 1669 and analyses having detection limits (dl) at or below the water quality criteria (WQC) should be used for these purposes. Sample contamination from external sources (i.e., zinc duct work in lab air circulation systems) can produce data above the water quality criteria when actual stream values comply.*

Staff agrees with the City that it is necessary to use "accurate, defensive data" for the listing process and for development of the TMDL.

5. COMMENT: *Variances should be issued during phased TMDL development in a manner consistent with requirements set out in 40 CFR 131. Such procedures are necessary to provide flexibility to dischargers downstream of naturally occurring or human-caused pollution which cause violations of water quality standards. Variances should be allowed to dischargers who are downstream from other discharges operating with waivers or variances and cause the river to violate standards. These*

*variances should remain in effect until the collaborative watershed TMDL process has been completed and all variances and waivers in the watershed are removed.*

The issue of variances will be decided during the TMDL implementation process and is outside the scope of the Section 303(d) listing process.

6. COMMENT: *Detailed intake credits procedures are needed. California's proposed intake credits were written for industrial cooling water and, with some simple revisions to their application procedure, could make interim compliance feasible for other types of discharges. Credits for pollutants in the intake water supply should be determined using raw water values where the sludge generated in the water treatment process is discharged to the eligible POTW. The city of Redding is concerned about the methodology and costs associated with the implementation of intake credits or effluent limits while upstream acid mine dischargers operate with federal waivers to water quality standards.*

The issue of intake credits is outside the scope of the Section 303(d) listing process.

7. COMMENT: *The ongoing movement towards watershed management shows great promise in solving water pollution problems. The Sacramento River Watershed Program is working on long term solutions to very complex environmental problems in northern California. Groups like this should be organized before costly treatment or enforcement actions are taken on the chance such actions might be avoided. TMDL development should be based upon data collected by such programs to insure adequate stakeholder involvement.*

Staff strongly agrees with the City regarding the use of the watershed management approach in TMDL development and implementation. We also agree that stakeholder involvement is critical throughout this process.

8. COMMENT: *The TMDL review/revision activities should continue and should be more widely publicized. Much money has been spent on litigation that could have been more wisely spent revising the process, accurately assessing pollution with a consistent monitoring program, or simply cleaning up pollution.*

Staff appreciates the City's concern about the wise use of resources.

#### **Sutter County Agricultural Commissioner**

COMMENT: *In reviewing your proposed 1998 303(d) list as it relates to waterways in Sutter County, the Natomas Main Drain pollution source is from urban sources, not agricultural sources. Agricultural production in and surrounding this area does not rely on the use of diazinon. Would you therefore strike "AGRI" as a pollution source?*

In response to this comment, staff recommends adding a footnote for Natomas Main Drain and the urban creeks explaining that the agricultural source of diazinon in those watersheds are due to drift from other watersheds with agricultural use of diazinon.

#### **G. Fred Lee & Associates**

1. COMMENT: *With reference to your November 17, 1997 letter soliciting information for the development of the 1998 Section 303(d) list, I wish to suggest that Putah Creek in the vicinity of the University of California, Davis be added to this list based on the data obtained by the US EPA and the US Public Health Service ATSDR showing excessive concentrations of mercury and lead in fish taken from near where the University of California, Davis campus wastewater treatment plant discharges wastewater to Putah Creek. While follow-up studies are being conducted on this issue,*

*this should not preclude listing Putah Creek in this area on the 303 (d) list because of the excessive bioaccumulation of both lead and mercury.*

Staff has reviewed the ATSDR report and has expressed concern about some of the conclusions. Staff does not believe that the report clearly demonstrates that the waterbody is impaired.

2. COMMENT: *Putah Creek east of the University of California, Davis campus wastewater treatment plant should be placed on the 303 (d) list with respect to pollution of groundwaters by VOCs discharged by the campus wastewater treatment plant. As part of the UCD/DOE LEHR National Superfund Site Investigations, DOE contractors found elevated concentrations of VOCs, such as chloroform, in the groundwaters near Putah Creek that clearly have not come from the LEHR site, but have been derived from the chloroform and other VOCs that are discharged by the UCD campus wastewater treatment plant. This is clearly a use impairment of the groundwaters arising from inadequate campus wastewater treatment which justifies placing Putah Creek east of Old Davis Road on the 303 (d) list*

The Clean Water Act Section 303(d) list does not apply to ground water impairments.

### Natural Resources Defense Council

1. COMMENT: *Please accept these additional comments on the 303(d) list on behalf of NRDC, the Santa Monica BayKeeper, and Terry Tamminen. We have previously written to indicate our views on the matter of section 303(d) and (e) implementation by your Regional Board and the state as a whole and we incorporate those comments contained in our November 25, 1997 letter by reference. We do not intend to restate those previous comments here but rather set forth additional comments in light of Region 5's most recent section 303(d) list, which was made available in December.*

NRDC's 25 November 1997 letter was sent to all of the Regional Boards will be answered by State Board staff for statewide consistency.

2. COMMENT: *We remain concerned that Region 5's proposed 303(d) list is not based on a comprehensive assembly and review of information and data on water quality for all water bodies in Region 5, as the Clean Water Act and its implementing regulations require. See, e.g., 40 C.F.R. Section 130.7. Indeed, wholly apart from the section 303(d) scheme, under Clean Water Act Section 305(b) and accompanying regulations, each regional board is to conduct a regional Water Quality Assessment (WQA) of all surface and ground water bodies in its region. However, the cover letter to the 303(d) list states only that adjustments to the 1996 303(d) list are "based on public input and further review of available monitoring information."*

*We believe that the essential starting point under Section 303(d) is to comprehensively survey and review the status of all of Region 5's water bodies so that the resulting list, if implemented with the establishment of TMDLs, will address continuing impairment throughout Region 5. We believe it is incumbent upon your Regional Board to undertake such a survey*

The 303(d) list and the 305(b) report have been updated many times over the years. During each update cycle, staff reviews available information and monitoring data to update the existing listings and add new water bodies, as appropriate. The list has expanded greatly since the first water quality limited segment list was adopted in 1975. That list had had eight water bodies listed on it. Now the list has more than 50 bodies of water, many with multiple parameters. The Regional Board relies heavily on information collected by other stakeholders in the watersheds. Staff actively participate in more than 10 separate groups and are aware of the activities of many others. A compendium of watershed activities and monitoring programs has been prepared for the Delta and Sacramento River Watershed. This information has been reviewed and, where applicable, information has been used to update the 303(d) list. In the San Joaquin River Basin, monitoring data and information was solicited from the primary agencies conducting monitoring studies. In addition, since 1986, the

Regional Board has implemented a comprehensive toxicity testing program that has covered the San Joaquin River, Sacramento River, the Delta and major tributaries. This program has resulted in many of the listings for the various water column pesticide problems that are included on the list. In each update of the list, staff request input from the public. This year, staff sent the November notice requesting input to more than 500 people. In summary, staff believes that a rather comprehensive review of available data has been completed for this update.

3. COMMENT: *With the exception of water bodies for which priority status changing, the Section 303(d) list and accompanying materials do not explain the basis for the "High", "Medium" and "Low" prioritization contained within the section 303(d) list. We believe that there must be an explanation of the factors that lead to prioritization and, further, that the factors enumerated by Section 303(d) itself (seventy of impairment and water body significance) must be dispositive. We believe the Board must act consistently with these requirements*

*The record suggests that this has not occurred. For example, according to the staff report, Medium priority was automatically assigned to those water body/pollutants that are scheduled to be initiated in the next five years. Staff Report, page 1. While we would expect a rational relationship between prioritization and scheduling such that High priority TMDLs would be addressed before Medium, and so on, prioritization should be a merit-based evaluation of the water body/pollutant condition. The staff report suggests (Attachment 3) that scheduling concerns drove the prioritization process, which we believe is inappropriate. Even the recent state guidance, which, among other things, is not sufficiently aggressive in requiring preparation of TMDLs, does not provide for scheduling to drive assignment of priority.*

The staff report should be corrected to clarify that resource limitations are taken into account in TMDL scheduling and not the priority setting. As indicated in the staff report and in the notice sent out in November, staff used the guidelines provided in attachment 2 in developing this list and establishing priorities. The guidelines list the factors to be considered in prioritizing TMDLs. Our current priorities are consistent with the guidelines. The water quality problems that are identified as high priority are the most significant water quality impairments that have been identified in the Region. Staff has not received any comments that suggests that these are not high priority problems. The time schedule is a reflection of available and projected resources, based on present budget and the proposed FY 98-99 budget. In the next update of the Watershed Management Initiative chapter, staff will estimate the resources it would take to complete all the listed TMDLs. The schedule can change if more resources become available.

4. COMMENT: *Further, according to the staff report, the diazinon TMDL for Natomas East Main Drain was assigned Medium priority instead of High priority "due to lack of staff and other resources to tackle all of the waterways impacted by diazinon at once." Staff report, paragraph 1(j). The same rationalization is offered regarding TMDLs for the Keswick Reservoir. Staff report, paragraph 1(n). The Act does not indicate that lack of resources is an appropriate basis to diminish the priority status of impaired water bodies; quite to the contrary, the act focuses on the severity of impairment and uses to be made of the water body as the basis of prioritization. Indeed, there is not any evidence that resource needs have even been comprehensively assessed or requested. priority ranking should portray the urgency of TMDL action with regard to each water body/pollutant within the framework that congress intended TMDLs to be completed many years ago. By adjusting the urgency of a TMDL project so as to alleviate the pressure on staff resources, the staff is turning the prioritization process against itself such that the lack of resources purports to justify inadequate TMDL development.*

Statements linking staff resources to priorities were misleading. The water bodies in question were given medium priority because of their significance. Water body significance is one of the primary factors used to determine TMDL priority in accordance with the guidelines. Resource limitations and future resource projections have been factored into TMDL schedules. With enough resources, all the TMDLs could be initiated immediately. The Regional Board has limited resources to address

TMDLs. We have tried to make the case for more resources. In putting together the list and schedule, staff was trying to be realistic, recognizing from past budget experience, that enough resources to initiate TMDLs in all water bodies will probably not be available. In the next update of Watershed Management Initiative chapter, staff will estimate the resources it would take to complete all the listed TMDLs. We will support efforts to obtain additional resources.

5. COMMENT: *We are further concerned that staff has not assigned appropriate rankings to water bodies identified as a pollutant source feeding into water bodies that are listed as High priority. For example, in regard to the EC TMDL for Grasslands Marshes, staff recommends a Medium priority instead of high even though "[t]he Grasslands waterways and marshes are a major component of discharge to the San Joaquin River and the completion of an EC TMDL for the San Joaquin River and compliance with the Bay/Delta Water Quality Control Plan are high priority work programs." Staff further states that salt discharged from Grassland watershed and the Grasslands marshes are a significant component of the salt in the San Joaquin River and "[c]ontrolling these loads will have a significant impact on water quality in the San Joaquin River." Staff report, paragraph 1(d). Based on the significance of the Grasslands marshes discharge and impact on the high priority San Joaquin River, high priority ranking of the Grasslands marshes appears warranted. In addition, this comment applies to ranking of the lower American River, lower Feather River, Harley Gulch, Sacramento Slough, Davis Creek Reservoir and Marsh Creek Reservoir - all of which supply mercury to high priority water bodies.*

These water bodies were assigned medium TMDL development priority because of their significance and the degree of impairment. The Grasslands Marshes and Salt and Mud Slough are less significant than the San Joaquin River. The mercury problem in the lower American and Feather Rivers are not as severe as that in the Sacramento River or Delta. Harley Gulch, Sacramento Slough, Davis Creek Reservoir and Marsh Creek Reservoir are not as significant as the Sacramento River or the Delta. Loads from these water bodies will be evaluated as the TMDLs are developed for the downstream high priority water bodies.

6. COMMENT: *By law, TMDLs should have been completed by the late 1970s. Section 303(d)(2). accordingly, TMDLs should be prepared immediately for all listed water bodies. We strongly believe that it is the board's obligation to manage its resources and conduct its business to ensure that TMDLs are developed now. Given that TMDLs were due approximately twenty years ago, this obligation is manifest and overdue.*

See response to Comment 7.

7. COMMENT: *We dispute, with respect to a number of points, the adequacy of the schedule not only because of our view of the relevant legal requirements but also because the schedule does not comport with state guidance (that is itself far too lenient) and other federal regulations. The TMDL schedule fails to make the necessary commitment to TMDL development because it extends for more than a decade (hardly immediate implementation) and is, further, too extensively qualified. The Staff Report qualifies the entire TMDL schedule as follows: "these dates were provided with the assumption that resources will be available and that continued evaluation will prove the feasibility and usefulness of TMDL development and implementation." Staff Report, page 1. Footnote 2 of the 303(d) list states "[t]he schedule is dependent on resource availability and further evaluation of TMDL applicability and feasibility." We believe that these caveats effectively render the schedule meaningless. Indeed, the fact that resources for Level 1 TMDLs are not yet fully allocated raises serious doubts about the board's commitment to the proposed TMDL schedule and to TMDL development generally.*

Further, according to state Section 303(d) listing guidelines, caveats such as the one above are appropriate only for Level 3 TMDLs. Additionally according to guidance, scheduling of Level 1 TMDLs is to be based on the expectation that "substantial work on TMDL development" will be performed "during the next two years." Yet, footnote 2 of the 303(d) list staff that only "[s]taff

*resources have been allocated for work on Level 1 water bodies. Resource needs to complete Level 1 TMDLs and initiate Level 2 and 3 TMDLs will be identified in the watershed management initiative chapter updates." Similarly, scheduling of Level 2 TMDLs is based on "those TMDL activities for which RWQCBs are actively seeking funding support and should include TMDLs for which funding is reasonably likely to become available." Guidelines, page 4. Thus, the Staff's general qualification of the entire TMDL schedule renders the Board's commitment to Level 1 and Level 2 TMDLs much less reliable than required by the guidelines. It is important to note that we do not think that any scheduling caveats are warranted or appropriate. Nevertheless, it is relevant that the scheduling at issue is inconsistent with guidance issued by the state, even though this guidance is far too lenient as noted above, the duty at issue is to immediately establish all TMDLs, not do so over more than a decade.*

It is appropriate to consider resources when developing the schedule for TMDLs. The schedule staff has proposed is based on optimistic budget projections based on our current budget and the proposed budget for FY 98-99. In the next update of the Watershed Management Initiative chapter, staff will identify resource needs to complete all the listed TMDLs. The Regional Board will make efforts to secure resources to work on the TMDLs. The time schedules can be adjusted if resources are obtained. The Regional Board does not have budgeting authority of its own. Most of our budget comes with specific work assignments that restrict use of the resources. The Regional Board cannot commit to schedules that are dependent on resource decisions and allocations that entirely outside the control of the Board. This is why the list includes caveats like you described in your letter.

8. *COMMENT: A review of the Board's TMDL scheduling over the last two years prompts even greater concern over the reliability of the present TMDL schedule and the Board's overall commitment to TMDL development. Having consulted the Board's 1996 303(d) List and the 1997 WMI, we find that many previous schedules for TMDL development have slipped. For example:*

*The Selenium TMDL for Mud Slough was listed as High priority in the 1996 303(d) List and was scheduled for completion in 1996. The TMDL was not scheduled in the 1997 WMI. However, this TMDL has reappeared on the 1998 303(d) List as a Level 2 TMDL with a new completion date of December, 2000.*

Significant progress has been made on the selenium problem in the San Joaquin River. Selenium laden water has been diverted around the Grasslands and Salt Slough. As a result, conditions in Salt Slough and the Grasslands have been greatly improved. Staff is in the process of preparing information to delist these two water bodies for selenium. The Basin Plan amendment adopted by the Regional Board in May 1996 (which received final approval 10 January 1997) contains a prohibition of discharge of agricultural subsurface drainage to Mud Slough (north) effective 1 October 2010. We expect that this prohibition will bring selenium levels into compliance in Mud Slough. The diverted drainage water is now routed to Mud Slough.

*TMDLs for Copper, Cadmium and Zinc for the Sacramento River (Shasta to Red Bluff) were listed as High priority in the 1996 303(d) List with completion dates of January, 1998. Yet the 1997 WMI extended the deadline for all three TMDLs to 1998-1999. Now the proposed 1998 303(d) List shows the deadlines once again postponed, with completion slated for the January, 2000.*

Achieving water quality objectives in the Sacramento River in the vicinity of Redding is dependent on control of heavy metal loads to the River from Iron Mountain Mine. Substantial progress has been made in recent years. More control measures are needed and planned. The time schedule has been pushed back to be in accordance with the U.S. EPA remediation schedule at Iron Mountain Mine.

*TMDLs for Salt Slough were listed as High priority in the 1996 303(d) List and scheduled for completion in March, 1996. The 1997 WMI did not list any TMDLs scheduled for Salt Slough.*

*However, the proposed 303(d) List now lists several TMDLs for development for this water body with completion dates ranging from December, 1998 to December, 2011.*

The selenium problem in Salt Slough and the Grasslands has been essentially resolved because selenium laden drainage water is now prevented from entering the Grasslands and thence Salt Slough. Staff believe that a few years of monitoring would be appropriate before removing these water bodies from the list for selenium. Staff is in the process of preparing information to delist this water body for selenium. The pesticide listing and schedule for Salt Slough is consistent with other agricultural dominated water bodies.

*According to the 1996 303(d) List, a selenium TMDL for the San Joaquin River was listed as High priority and scheduled for completion in March, 1996 in the 1996 303(d) List. The 1997 WMI listed this TMDL as completed. Yet, this TMDL has resurfaced on the proposed 1998 303(d) List with a completion date of December, 2000.*

Staff is working with the U.S. EPA staff in an effort to comply with the TMDL requirements in conjunction with the preparation of WDRs for the Grassland Bypass Channel. If this is successful, the TMDL will be in place this year. If not, an alternative approach must be developed and the background documents prepared for Board consideration. The extended deadline will allow completion of the background material.

*The 1996 303(d) List showed High priority TMDLs for Grassland Marshes. These TMDLs were scheduled for completion in March, 1996. Yet, the 1997 WMI pushed completion of these TMDLs back to 1997-1998. Now the proposed 303(d) List shows two TMDLs still awaiting completion: a Selenium TMDL to be completed by December, 1998 and all Electrical Conductivity TMDL to be completed by December 2011.*

As previously discussed, the selenium problem in the Grasslands has essentially been resolved. Staff is in the process of preparing information to delist this water body for selenium. Most selenium-laden agricultural subsurface drainage water is routed around the Grasslands in the Grassland Bypass Channel. The Basin Plan prohibits the discharge of agricultural drainage to Grassland channels unless the water quality objective is being met. If necessary, Waste Discharge Requirements will be issued to control the discharges. The electrical conductivity TMDL for the Grasslands is consistent with the schedule for other similar agricultural dominated water bodies.

*This record of apparently inconstant efforts and faltering commitment draws into question the reliability of the 303(d) List.*

The high priority TMDLs identified by staff are very complex problems. They will not be solved quickly, regardless of the amount of resources available. However, as pointed out previously, significant strides have been made to address several important water quality problems. In addition to those mentioned above, the actions of rice farmers in the Sacramento Valley over the past ten years has reduced levels of pesticides in the Sacramento River so that the rice pesticides no longer pose a risk in the River. Staff has recommended removing the rice pesticides from the list. No formal TMDL was completed, but a water quality problem was solved. Measuring the number of TMDLs that are completed is not necessarily the most significant measure of progress toward addressing water quality problems.

9. COMMENT: *Section 303(d) and (e) implementing regulations provide that each aspect of the Section 303(d) and (e) process be "clearly described" in continuing planning documents. We cannot find any such document that meets this description maintained by your office or the state. Indeed, as discussed immediately above regarding the preparation of TMDLs and the TMDL schedule, the 303(d) list and Staff Report leave the process for achieving the goals of 303(d) and (e) ambiguous at best. The omission of a clear plan for implementing Sections 303(d) and (e) is significant for many*

*reasons. Absent such information, there is no tool to facilitate full Section 303(d) program implementation in the field.*

This is an issue that will be addressed in the State Board's response to NRDC. (See response to comment #1)

10. COMMENT: *It is unclear why salt is to be removed from the San Joaquin River listing. Paragraph 1(d) of the staff report refers to a significant salt problem in the San Joaquin River.*

In this update, the salt listing for San Joaquin river was replaced by EC (electrical conductivity), because water quality objectives have been established for electrical conductivity, an easily measurable parameter of salt. (please read Staff Report #3)

11. COMMENT: *Further clarification is needed regarding why chlorpyrifos has been removed for Feather River, Natomas East Main Drain, Sacramento River (Red Bluff to Delta) and Sacramento Slough. The only explanation given is "[a] review of the available monitoring data does not provide suitable scientific information for the listing." Staff Report, Paragraph 6. It is unclear whether Staff found this data to be erroneous or if some qualitative judgment is being made that differed from a previous judgment. While discovery that the data or information that provides the entire factual basis for listing is false would be relevant to delisting questions, it is unclear why the data supporting the 1996 listing of chlorpyrifos has been deemed not "suitable."*

As stated in the Staff Report, the original listing of chlorpyrifos was based on best professional judgment and not monitoring data. During this update, staff reviewed available pesticide monitoring data from USGS, Department of Pesticide Regulation and the Regional Board. Chlorpyrifos was monitored on numerous occasions and was either non-detectable or at concentrations significantly below levels that would be expected to impair beneficial uses.

12. COMMENT: *It is unclear why the arsenic and copper listings on Kings River have been eliminated. Staff Report at 7. Elevated levels of pollutant such as arsenic is an appropriate basis for listing a water body as impaired. Certainly, staff do not contend that elevated levels of pollutants as invidious as arsenic improve or do not affect beneficial uses.*

As stated in the Staff Report, arsenic and copper concentrations in the Kings River do not exceed any water quality objective or criteria. There is also no evidence of beneficial use impairment. Previous listings were the result of comparing the total metals analysis to U.S. EPA criteria. This was the suggested protocol several years ago.

13. COMMENT: *With regard to removal of hydromodification as a contaminant source for Pit River, the Staff explains that such an impact has not been documented in the reach of pit river listed as impaired. Staff Report, paragraph 12. Staff does not state what source of information it consulted in determining that the impact has not been documented. Because lack of documentation arises where monitoring and assessment has been incomplete or inadequate, it is important to note the source of the staff's conclusion. Certainly, lack of monitoring data cannot form the basis of de-listing and, indeed, this is not a basis for de-listing even under state guidance. This is especially true when a region has not adequately surveyed all of its water bodies, thereby depriving staff of information relevant to listing decisions.*

Hydromodification was listed as a source of impairment for the Pit River based on the best professional judgment of our staff and delisted based on further evaluation and the same best professional judgment. There are no guidelines with respect to the listing of sources of impairment.

14. COMMENT: *Staff proposes delisting the herbicide eptam from the San Joaquin River listing because there are "no objectives associated with the herbicide eptam, and no documentation of impairment from its use." Staff Report, paragraph 16. As with the case of arsenic and copper discussed above,*

*herbicides are unquestionably not positive additions to a water body. Further, the comment immediately above regarding the inappropriateness of using lack of monitoring data to justify delisting and the question regarding the source of staff's conclusion applies here as well.*

U.S. Geological Survey monitored pesticides, including eptam, in the San Joaquin River on a nearly daily basis from January 1993 through April 1994. Eptam has been detected in samples collected from the San Joaquin River. The levels detected are not known to be toxic. Eptam has not been linked to toxicity in bioassays that have been conducted in the San Joaquin River. Staff has found no evidence that eptam is impacting beneficial uses in the River.

15. COMMENT: *The 1996 303(d) list showed high priority rankings for carbofuran, malathion and methyl parathion in the Sacramento River (Red Bluff to Delta) with a completion deadline of June, 1996. Yet, according to the Staff Report, all three TMDLs are now recommended for delisting due to what staff calls the "documented success" of other regulatory programs. This is not a permissible basis for delisting and, in any event, no information is provided to support the assertion (such as what the successful other program is, what numeric limits it imposes, the date by which compliance will be achieved, etc.).*

The recommendation for removal of carbofuran, malathion, and methyl parathion is based on Department of Pesticide Regulation and U.S. Geological Survey monitoring data. The data, collected from 1994 to 1997, show that these pesticides complied with our Basin Plan performance goals in the Sacramento River during that period. Additional information regarding the Rice Pesticide Management Program and the monitoring data is available at our office for review.

16. COMMENT: *We appreciate the opportunity to comment on Region 5's 303(d) list before the Board considers and adopts it. However, the limited disclosure provided by Region 5 undermines the potential benefit of this brief comment period. Because the WQA is the foundation for the 303(d) list, we believe that a copy of the WQA should have been included in the materials accompanying the 303(d) list. Also, where parties have commented upon the draft 303(d) list and attached materials, copies of these comments and the staff's responses should accompany the list. Given the ultimate goal of remedying all of Region 5's impaired water bodies through accurate and effective TMDLs, staff should strive to inform all interested parties as fully as possible in order to maximize the quality and productivity of the comment period.*

Comment noted. Staff has complied with CWA and California guidelines. This year is the first time we have had so much input from the public. Staff will definitely bear this in mind for the 2000 update.

17. COMMENT: *While the Board is not being asked to approve TMDLs, when and if TMDLs are prepared, it is essential that they comply with the requirements set forth in the Clean Water Act and its implementing regulations. TMDLs must have a set of constituent parts. We believe that any TMDLs prepared must, among other things, provide for enforceable numeric limitations for nonpoint and point source pollution. By that very definition, TMDLs include load allocations attributable to both point and nonpoint sources. Nothing in the Clean Water Act allows stormwater or nonpoint contributions to impaired water bodies to be ignored or regulated less strictly than point sources.*

Comment noted.

### **Sacramento Regional County Sanitation District**

COMMENT: *The recent, high quality data presented in this report has shown that levels of Class A pesticides and mercury in the Beach Lake water column and fish tissue are less than previously suspected and are in fact at levels conducive to a healthy ecosystem. Both mercury and Class A pesticide level in Beach Lake fish tissue are in compliance with National Academy of Sciences guidelines and action levels for toxic chemicals in fish.*

*The SRCSD requests that Beach Lake be delisted from the 1998 update of the Clean Water Act Section 303(d) list and TMDL priority for the Central Valley Regional Water Quality Control Board. The SRCSD requests that Beach Lake no longer be identified as a potential toxic hot spot and removed from any such listing.*

*If Beach Lake is removed from the Section 303(d) list, the SRCSD agrees to conduct follow-up monitoring of fish tissue and water quality in accordance with existing protocol over the period of 1998-1999.*

Staff has reviewed the report, agrees with the District regarding the delisting of Beach Lake for mercury and Group A pesticides, and will recommend that as a late change at the Board meeting. The District's request to have Beach Lake removed as a potential toxic hot spot will be reviewed by staff but is outside the purview of the 303(d) list update.

### City of Stockton

*COMMENT: The City strongly supports the proposal to elevate the priority of TMDL development for dissolved oxygen (D.O.) in Delta Waterways, particularly the San Joaquin River/Stockton Ship Channel. We appreciate the responsiveness of the staff and the Board to comments furnished by the City.*

*We would, further, submit that a "high priority" ranking is appropriate. First, the San Joaquin River is among the most significant waterbodies in the State. The river is also a mitigation corridor for riparian and anadromous species that utilize the tributaries of the San Joaquin. Depressed D.O. levels have been a concern for these species since the diversion of the river flow by Friant Dam.*

*Second, there is now a tremendous opportunity for the development of TMDL. Thus, your criterion "conformity with related activities in the watershed" should be triggered. There are several activities in progress right now that can and will affect D.O. concentrations and the ability of the river to achieve D.O. objectives. These include the CALFED process, the State Board's Bay-Delta hearings, the implementation of the Central Valley Project Improvement Act, and the proposed Interim South Delta Plan. Some of these activities have D.O. improvement as one of their specific purposes.*

*There are additional activities concerning monitoring and management of upstream San Joaquin basin water quality that can readily be integrated with a TMDL for D.O. In short, now is the time to give comprehensive consideration to the attainment of D.O. It would, we believe, be a mistake to miss the opportunity.*

*Third, as you know, the City of Stockton has devoted a great deal of time and money to the development of information that can assist in these types of efforts. Indeed, next month, the City will provide a comprehensive report on this very subject. This will be used in the State Board's Bay-Delta proceedings, but will have much broader application and relevance. We will advance proposals to lead to real improvements.*

*The development of a TMDL will require the effort and participation of several agencies. The City is prepared to play a major role in that effort and we believe the time is right.*

*In summary, the City strongly supports the recommendation to elevate the priority of TMDL development for D.O. In light of the circumstances, we believe, further that the issue merits a ranking of "High".*

Staff appreciates the City's support to elevate the priority of the DO TMDL in the Delta and will recommend elevating the priority of DO in the Delta to high as a late change at the Board meeting.

## U.S. EPA

*COMMENT: Our one concern regarding the proposed listings and schedules concerns the schedule for completion of the selenium TMDL for the San Joaquin River in December, 2000. Our understanding was that this TMDL would be established no later than the fall of 1998, at the time when the Regional Board issues waste discharge requirements for drainage water discharges. This understanding informed EPA's support for the San Luis Drain reuse agreement. A draft TMDL for selenium was submitted by the Regional Board staff for EPA review more than a year ago. EPA found the draft TMDL consistent with statutory and regulatory requirements. The draft TMDL called for a phased approach to TMDL development and implementation which would provide for phased implementation over a long time period and the performance of monitoring and evaluation to provide a basis for TMDL revision if needed. This phased approach is warranted given the difficulty of further reducing selenium discharges in the drainage area. EPA urges the Regional Board to establish a completion schedule of no later than fall, 1998 for the San Joaquin River TMDL because the (1) this action fits well with the issuance of waste discharge requirements, (2) TMDL development is essentially complete, and (3) a flexible process for TMDL implementation, review, and potential revision is provided.*

Staff is working to comply with the TMDL requirements in conjunction with the preparation of WDRs for the Grassland Bypass Channel. If this is successful, the TMDL will be in place this year. If not, an alternative approach must be developed and the background documents prepared for Board consideration. The extended deadline will allow completion of the background material. Staff does not believe that it is appropriate to change the recommended TMDL end date for selenium in the San Joaquin River.