



California Regional Water Quality Control Board

Colorado River Basin Region



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CRWQCB-CRBR EXHIBIT No. 2

TO: Phil Gruenberg, Executive Officer

FROM: Jose L Angel, P.E.
Watershed Protection Division Chief

DATE: March 22, 2002

SUBJECT: REGULATORY CONCERNS REGARDING PROPOSED IID/SDCWA WATER TRANSFER

SIGNATURE: _____ s/ 3/22/02 _____

I am concerned that the proposed IID transfer of conserved water and resultant conservation measures as currently envisioned in the document entitled Imperial Irrigation District Water Conservation and Transfer Project, Draft Habitat Conservation Plan, Draft Environmental Impact Report /Environmental Impact Statement; January 2002 (hereafter referred to as "draft EIS/EIR") would trigger the creation or in itself create conditions that run counter to existing State and Federal laws, regulations, and policies; and against the State's Strategic Plan. Specifically, and as discussed in detail in the following paragraphs, I am concerned that the conditions would (1) exacerbate violations of the selenium water quality objective (WQO) that the State's Water Quality Control Plan for the Colorado River Basin prescribes for the surface waters in Imperial County and the Sea, and the WQO that the State's Policy for implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California prescribes for inland surface waters; (2) potentially violate State Board Resolution No. 68-16 (a.k.a. the "Antidegradation Policy"); (3) make compliance difficult with the Total Maximum Daily Load requirements contained in the Federal Water Pollution Control Act (a.k.a. the Clean Water Act; U.S.C. 1251 et seq.); and (4) explicitly run against the State's Strategic Goal No. 2, as it applies to our Region. Although largely based on the documentation and analyses presented in the draft EIS/EIR, the purpose of this memorandum is not to provide you with detailed comments on the draft EIS/EIR¹. Its purpose is to bring to your attention relevant and significant regulatory matters that should be factored in during the upcoming State Board hearings on the transfer. CRWQCB-CRBR Exhibit Nos. 3 and 4 (attached) support this memorandum.

Discussion

The State Board's and USEPA's approved Clean Water Act Section 303(d) List for the Colorado River Region identifies the Salton Sea as water quality limited, in part, because selenium concentrations violate the 5 ppb WQO contained in the Basin Plan (CRWQCB-CRBR 1993). The List also identifies the Alamo River and Imperial Valley drains as impaired by selenium among other pollutants. The impacts of selenium on aquatic ecosystems are well documented. CRWQCB-CRBR Exhibit No. 3 details the impacts. Division staff prepared the Exhibit based on a review of published literature on the matter. Pertinent literature references are identified in the exhibit too. Suffice to say that selenium is a significant water quality issue because even at relatively low concentrations (< 3 ppb) it is toxic to biological resources. For example, adverse impacts to birds and pupfish include failure of eggs to hatch and possible compromise of bird immunity systems (Lucas et

¹ As you know, we are also preparing and transmitting to IID and USBR detailed comments on their draft EIS/EIR.

al.1999). Other well-documented impacts include bird eggshell thinning and embryo abnormalities (Bennett 1998).

The draft EIS/EIR acknowledges that the transfer as envisioned will likely cause selenium concentrations to increase from current levels and cause significant selenium impacts on the drains and rivers. That is to say, it characterizes the selenium impacts as significant for the purposes of CEQA. However, it concludes that the transfer as proposed would not likely have significant selenium impacts on the Salton Sea itself. Further, it concludes that the significant impacts in the aforementioned Salton Sea tributaries are "unavoidable" and "unmitigatable" (see Table ES-1 of draft EIS/EIR). I cannot subscribe to those conclusions. Here is why.

Regarding the projected selenium concentrations in the aforementioned waters, we estimate that the increases in selenium concentrations in the drains and in the Alamo and New River would be significantly greater than the increases projected by the draft EIS/EIR as a result of the proposed transfer. CRWQCB-CRBR Exhibit 4, prepared by Division staff under my supervision, contains our estimates and assumptions used for the estimates. Specifically, the draft EIS/EIR projects that selenium in the Alamo River outlet to Sea would be about 7.8 ppb, and that there would be no significant impact for the New River delta with the Sea. For one thing, the historic selenium data included in the draft EIS/EIR show that selenium concentration in the water column in New River outlet area is already about 7 ppb (see Table 3.1 of draft EIS/EIR), which in itself contradicts the conclusion. This notwithstanding, we estimate that selenium in the rivers' delta areas with the Sea could be as high as about 10 ppb for the Alamo River delta and as high as 7 ppb for the New River delta. Also, research conducted by USGS (Setmire et al. 1993) shows that tilewater averages about 25 ppb in selenium. As one cuts down the tailwater that currently dilutes the selenium concentrations found in tilewater, selenium concentrations in the drains could also increase significantly. In fact, the same USGS study documented that there are drains whose tilewater already has selenium concentrations of up to 300 ppb. Considering that there are over 1200 miles of open drains in Imperial County, whose beneficial uses include REC I, REC II, and WARM, the consequences of having over 1200 miles of selenium-laden drains could be of catastrophic proportions. The Region's Basin Plan selenium WQO for those waters is 5 ppb, which is the same level as the selenium objective contained in the State's Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. The difference between our calculations and the EIS/EIR's notwithstanding, both the EIS/EIR's and our projections show that the transfer as proposed would cause further water quality degradation, which fails to comply with the WQO. Based on this, we therefore believe the transfer as proposed would exacerbate current selenium impairments in the rivers and drains, which would further violate the Basin Plan WQO and violate Resolution No. 68-16;

Regarding the impacts on the Sea, the draft EIS/EIR conclusion seemingly runs counter to logic based on the acknowledged impacts on the tributaries and the preceding analysis. Perhaps more importantly, it also lacks supporting documentation for the purposes of CEQA—a fact implicitly acknowledged by the draft EIS/EIR (see p. 3.1-99 of the draft EIS/EIR). While the selenium concentrations in the Sea water column are in the order of 1-2 ppb, which suggest that selenium is precipitating and/or being volatilized, it is nevertheless impairing the Sea's beneficial uses as shown by over 15 years of fish tissue data collected through the State's Toxic Substances Monitoring(TSM) Program. That data are available online at the State Board's web site and are incorporated herein by reference. Again, the Sea is already on the Section 303(d) List because of the significantly elevated selenium concentrations in fish tissue as demonstrated by the TSM data. In fact, an advisory for consumption of fish from the Sea has been in effect since the early 90s because of the threat to public health posed by the selenium concentrations in fish tissue. That is

to say, current selenium levels already impair the REC I and WARM habitat beneficial uses established for the Sea in the Basin Plan—a fact acknowledged by the Regional Board, the State Board, and USEPA through the Section 303(d) List². Another significant concern here is that uses being further impaired are defined as “Exiting Uses” pursuant to provisions contained in Title 40 of the Code of Federal Regulations (40 CFR Part 131.3(e)). Unless a more stringent use is established in lieu of the designated use, Title 40 CFR **prohibits** the removal of a use (i.e., cannot redesignate a use defined in the Basin Plan) if the use is an Existing Use or the use will be attained by the implementation of technology based effluent limits for point sources of pollution and implementation of BMPs to control nonpoint sources of pollution (40 CFR, Part 131.10(d)). After the implementation of limits and controls, if an Existing Use cannot be attained, a Use Attainability Analysis is required prior to modification of the use (40 CFR, Part 131.10(j)).

One has to also question the foundation of the conclusions that selenium impacts are “unavoidable” and “unmitigatable.” Those statements implicitly summarily dismiss the requirements of the Section 303(d) of the Clean Water Act, which dictate implementation of BMPs to address the existing selenium impacts. Through the TMDL process we have learned that there are BMPs available to mitigate the selenium impacts that irrigated agriculture causes on surface waters. BMPs are actually being implemented in California’s Central Valley and Colorado’s Gunnison River Basin to address similar impacts.

Stakeholders in the Central Valley are using an algal-bacterial process to reduce selenium in surface waters in the Panoche Water District near Los Banos. Preliminary results from that project suggest that selenium reductions could be as much as 70% (Stuart 2001). Also, in the Broadview Water District near Firebaugh in the Central Valley, stakeholders are using wetland management to address selenium impairments in that area. Data from that project suggest that reductions could be as much as 90% (Agrarian Research and Management Company, Ltd. 2001). In Imperial County itself the Citizens Congressional Task Force on the New River is also implementing wetland pilot projects to address overall surface water pollution. Preliminary data from the Task Force show selenium reductions in the order of 20-50%. In Colorado, the Uncompahgre Water Users Association has been working to address the selenium impairments that 12,000 acres of irrigated farmland within the Gunnison River Basin are causing on the Upper Colorado River Basin. Specifically, the Association has established a target selenium reduction of about 6,200 lbs/year for the Uncompahgre River, which is also 303(d) listed, based on recent research conducted by the USGS. The research demonstrated that the simple lining of water laterals in the Montrose Arroyo, located in the Uncompahgre River Basin, minimizes leaching of selenium, which in turn reduces the selenium loading on the Uncompahgre River, a tributary to the Colorado River, by as much as 28% (USGS 2001). The point here is that there are BMPs available to mitigate selenium impacts. Also, consideration of farmland fallowing must be given more consideration than it has been given thus far, as it would have less selenium impacts than the proposed methods of water conservation, which rely heavily on tailwater recovery systems.

Another concern is that draft EIS/EIR proposes the creation of 5,000 acres of fishponds to mitigate certain environmental impacts. There are those who would argue that based on the Law of the River, Colorado River water cannot be used for environmental mitigation within the context of the proposed transfer. If it is not going to be fresh Colorado River water, the alternative must likely be

² Based on the State Board decision on the TOSCO case (State Board Order WQ 2001-06, one may argue that the fact that the surface waters are 303(d) listed does not imply in itself a lack of assimilative capacity. I believe that that argument, however, is inappropriate in this case because the TSM Program data for the Sea consistently show elevated selenium concentrations and because even the draft EIS/EIR projects violations of the WQO throughout the drains and at least one of the rivers.

agricultural runoff, which would be laden with selenium, which would, based on the preceding discussions, may also pose a hazard to the biological resources and aquatic ecosystem created by, sustained by, or using the ponds.

Conclusions and Recommendations

I believe the significance of the aforementioned concerns cannot be overlooked from a regulatory perspective. Whether the transfer can proceed or not in light of these concerns is not the point here. The purpose of raising the concerns is to alter you and the State Board of issues that must be addressed during the transfer proceedings. The transfer as proposed conflicts with our Basin Plan, the Clean Water Act Section 303(d) requirements, State Board Resolution No. 68-16, the Strategic Plan. Therefore, we respectfully suggest you bring them to the attention of the State Board during its upcoming hearings on the proposed transfer. In the meantime, and at the staff level, we are sending separate and detailed comments to the IID and United State Bureau of Reclamation addressing other significant concerns regarding their draft EIS/EIR.

Attachments: CRWQCB-CRBR Exhibit No. 3
CRWQCB-CRBR Exhibit No. 4

References

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