Salinity-1/31/06
Workshop

CALIFORNIA URBAN WATER AGENCIES

RECEIVED
JAN 2006
SWRCB
Executive Ofc.

January 20, 2006

Ms. Selica Potter
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Subject: Comment Letter – 1/31/06 Board Workshop on Salinity

Dear Members of the State Water Resources Control Board and the Central Valley Regional Water Quality Control Board:

The California Urban Water Agencies (CUWA) commends the State Water Resources Control Board (State Water Board) and the Central Valley Regional Water Quality Control Board (Regional Water Board) for beginning to address salinity issues in the Central Valley in a comprehensive manner. Given the complexity of salinity issues in the Central Valley and the fact that any regulatory or policy changes are likely to affect many stakeholders in different ways, the State Water Board and Regional Water Board should coordinate efforts and work with interested stakeholder groups to effectively address salinity issues.

CUWA's members rely on Central Valley water as a source of drinking water for over 20 million consumers in the Central Valley, Bay Area, and Southern California. We are interested in salinity management in the Central Valley because salinity and several ionic constituents of salinity adversely affect drinking water supplies. We are currently working with the Regional Water Board, the State Water Board, and a group of stakeholders to conduct the technical studies needed to develop a Drinking Water Policy for the Central Valley, as required by the Record of Decision for the Final Programmatic Environmental Impact Statement/Environmental Impact Report for the CALFED Bay-Delta Program. Total dissolved solids (TDS), a measure of salinity, along with chloride and bromide, ionic components of salinity, are included as constituents of concern for the Drinking Water Policy.

Drinking Water Concerns

Elevated levels of salinity in water supplies have adverse health effects, aesthetic impacts, and implications for the use and reuse of the water.

- Health Impacts - Bromide, a major ionic component of seawater, is problematic for CUWA's members taking water from the Sacramento-San Joaquin Delta. Bromide reacts with disinfectants and organic matter present in the source water to form carcinogenic byproducts that are regulated by the U.S. Environmental Protection Agency and the California Department of Health Services. Brominated trihalomethanes and haloacetic acids are formed when chlorine is used as the disinfectant and bromate is formed when ozone is used.

- Aesthetic Impacts - High levels of salinity and chloride, one of the constituents of TDS, can also impart an unpleasant taste in drinking water, undermining consumers' confidence in their water supply.

- Use and Reuse of Water – Elevated levels of salinity can impose higher costs on consumers through the accelerated corrosion of plumbing and water using appliances such as water heaters, and can adversely affect industrial process water uses such as for cooling towers. Elevated salinity levels also impact the ability to implement water management programs such as water recycling and groundwater storage and conjunctive use.

There are existing salinity targets and water quality objectives that provide some protection for drinking water quality. The Bay-Delta Water Quality Control Plan includes salinity objectives for locations within the Sacramento-San Joaquin Delta (Delta) that provide protection for drinking water, agricultural water and fish and wildlife beneficial uses. Currently, the western portion of the Delta is listed as impaired, under section 303(d) of the Clean Water Act, for electrical conductivity, a measure of salinity. In addition, Article 19 (a) of the State Water Contract sets a target of 220 mg/L for TDS and 55 mg/L for chlorides over the long term for State Water Project deliveries, although the target is rarely achieved. When salt is added to Central Valley water bodies or concentrated through water use, the increased load of salt adversely affects the ability to meet salinity objectives in the Delta.

Many municipal water suppliers have established their own goals for TDS and chloride based on local requirements and consumer expectations.

- Contra Costa Water District - CCWD has established a chloride goal of 65 mg/L to meet consumer expectations and has built Los Vaqueros Reservoir for water quality purposes, in order to meet that goal. Reservoir performance can be significantly impacted when Delta salinity increases.

- Metropolitan Water District of Southern California - MWD has established a TDS goal of 500 mg/L to minimize economic and aesthetic impacts. While TDS in State Project water is below the target, Metropolitan depends on relatively low salinity State Project water to blend with high salinity Colorado River supplies.

- Alameda County Flood Control and Water Conservation District, Zone 7 – Zone 7 has a TDS goal of 500 mg/L and relies on lower salinity State Project water to blend-down higher salinity groundwater.

Recommendations

CUWA urges the State Water Board and the Regional Water Board to take actions to manage salinity in the Central Valley. The salinity problem will be exacerbated by the increased population of the Central Valley that is projected for the next 20 years.

Population increases will lead to more consumptive use of waters of the Central Valley and to increased discharges of wastewater and urban runoff.

Regional Water Board Regulatory Efforts. As acknowledged in the staff report, "Overview of Salinity Issues in the Central Valley", Regional Water Board regulatory programs address a variety of dischargers, "but the degree to which salt has been addressed may vary from program to program and from site to site." CUWA urges the Regional Water Board to review its regulatory efforts for all dischargers and develop a consistent approach that focuses on reducing the load of salt discharged to drinking water sources. The Regional Water Board should work collaboratively with all stakeholders to develop a scientifically sound and cost-effective watershed-based solution.

Water Quality Objectives for the San Joaquin River. CUWA supports the efforts of the San Joaquin River Water Quality Management Group which has demonstrated the availability of near-term actions to greatly improve the salinity levels in the lower San Joaquin River and assure the achievement of TMDL objectives for salinity at Vernalis. The State Water Board should support the recommendations of the Group and assist in funding those recommendations, including the Westside Drainage Plan, which will eliminate highly saline subsurface agricultural drainage from about 100,000 acres in the Grasslands Drainage basin discharging to the lower San Joaquin River.

Improvements in Delta Water Quality. CUWA strongly supports the CALFED Water Quality Program and the CALFED goal of continuously improving Delta water quality for all beneficial uses. The CALFED Program includes Delta water quality improvement actions that are part of the Delta Improvements Package and are expected to result in reduced salinity levels in the central and south Delta (e.g., Franks Tract Project, San Joaquin River Salinity Management, and the relocation of drinking water intakes). To implement projects that improve Delta drinking water, State Water Board and Regional Water Board support for funding will be needed and additional regulatory actions may be necessary to protect the investments that will be made to improve Delta water quality.

Disposal of San Joaquin Valley Agricultural Drainage. As acknowledged in the Regional Water Board staff report, disposal options for San Joaquin Valley agricultural drainage must be carefully considered, and the technical and economic feasibility must be fully evaluated. The potential water quality impacts at drinking water intakes in the Delta must be fully evaluated for each drainage alternative before an alternative is selected. Solutions like the Westside Drainage Plan incorporated in the San Joaquin River Water Quality Management Group's Recommendations eliminate discharges of subsurface saline agricultural drainage to water bodies through a combination of source reduction, on farm recycling and reuse, concentration of salts on halophytic crops and ultimate treatment of final tailwater discharges. Such solutions should be pursued where feasible in lieu of discharges to water bodies.

It is critical to achieve an appropriate balance between our use of water and the protection of water supplies for subsequent uses. This issue has significant potential economic impacts and should be carefully considered. Alternate methods for preventing or removing salinity from water exist, and some advanced wastewater treatment processes or

the treatment of an incoming water supply can be expensive. In many cases, particularly in southern California, water utilities find it necessary to blend alternate sources of water to manage salinity to a level acceptable to their customers. This has implications to State regulatory programs, protection of public health, financial challenges for water and wastewater utilities, and agricultural water management practices. Solutions will not be simple, and will require long-term engagement of stakeholders both within the Central Valley and those reliant on water supplies originating in the Central Valley watersheds.

CUWA appreciates the efforts of the State Water Board and the Regional Water Board to address Central Valley salinity issues in a comprehensive manner. We look forward to working with you on this issue.

Sincerely,

Steve Macaulay
Executive Director