

Rec'd 9/14/07

September 13, 2007

Ms. Tam Doduc, Chair
State Water Resources Control Board
Office of Research, Planning and Performance
1001 "I" Street, 16th Floor
Sacramento, CA 95814

Mr. Lester Snow, Director
California Department of Water Resources
P.O. Box 942836, Room 1115-1
Sacramento, CA 94236-0001

Subject: Comments on Public Workshop: Climate Change and Water Resources

Dear Chair Doduc and Director Snow:

The Santa Clara Valley Water District (District) applauds the Department of Water Resources (DWR) and State Water Resources Control Board's (Water Board) leadership in addressing the real and significant threats of climate change to water resource management in California. At your August 23, 2007 joint Climate Change and Water resources workshop, you solicited input on: (1) how your agencies could contribute to meeting the goals of AB 32 and integrate climate change considerations into existing policies, regulatory responsibilities, and grant programs; and (2) how climate change directly impacts various programs carried out by your agencies and what could be done to address those impacts. We appreciate the opportunity to provide additional written detail and comments, in addition to the oral testimony provided by Greg Zlotnick at the workshop.

Climate change directly affects the District's mission of providing a healthy, safe, and enhanced quality of living in Santa Clara County through watershed stewardship and comprehensive management of water resources in a practical, cost-effective, and environmentally sensitive manner. The District manages wholesale drinking water resources and provides stewardship for the county's five watersheds, including 10 reservoirs, more than 800 miles of streams and three significant groundwater sub-basins. The District also provides flood protection throughout Santa Clara County.

Recommendations to Meet AB 32 Goal

The District believes that DWR and the Water Board should seek to implement a broad spectrum of actions, policies and emissions reductions which will result in mitigation of climate change effects, while at the same time advancing adaptive solutions to ensure the health, welfare and economy of California. We also recommend that both agencies evaluate whether investment in operational and infrastructure changes within your agencies' jurisdiction and mission could affect the ability of the state to meet AB 32 goals. In addition, where appropriate, DWR and the Water Board may want to develop mitigation protocols to offset such investments or develop alternatives more suited to adapting to climate change while meeting California's water supply reliability, water quality, and environmental needs.

At the regulatory level, DWR and the Water Board can assist CARB in meeting the AB 32 GHG emissions goal by facilitating the development and implementation of state-of-the-art water use efficiency practices and technologies to reduce energy use resulting from the transport, treatment, heating and disposal of water resources. Water savings from water use efficiency programs result in significant energy savings and air quality benefits, including reductions of GHG's. Both agencies can also assist CARB by quantifying the energy savings and GHG emission savings associated with state-of-the-art water use efficiency practices and best available technologies. Specifically, we recommend the following actions to increase water conservation in California:

- Ensure maximum water use efficiency benefits in the Model Local Water Efficient Landscape Ordinance required by AB1881. For instance, improve landscape water efficient tools and practices, including green friendly landscaping that does not result in negative water quality implications.
- Ultra-high efficiency appliances should become standard in new developments and incentives to encourage retrofits on resale of properties could be implemented.
- Identify the possibility of improved implementation and enforcement of water use efficiency ordinances and permit requirements.
- Improve incentives for residential and Commercial/Industrial/Institutional (CII) water use efficiency improvements.
- Continue to improve water conservation Best Management Practices (BMP) implementation, i.e. take them to the next level, while continuing to monitor and facilitate implementation of current BMPs by agencies that are lagging and consider a grant or low/no interest loan program for those without the financial wherewithal to comply.
- Increase incentives for installing dual plumbing for recycled water use in new developments.

At the state policy level, DWR and the Water Board should work together on the integration of energy policies with water policies, and this integration should be encouraged beyond both agencies. Increased coordination among state resource management agencies (i.e., SWRCB, DWR, CARB, California Energy Commission, California Public Utilities Commission) will lead to more effective water and energy policies. Toward this end, the District recommends that DWR incorporate an energy intensity analysis into the current California Water Plan update process.

Recommendations to Integrate Climate Change Considerations into Existing Policies, Regulatory Responsibilities, and Grant Programs

The District supports your joint desire to integrate climate change considerations into existing programs and responsibilities. It is critical that the future efforts of your agencies take into consideration, not only mitigating climate change, but consideration of how to adapt to its ongoing and ultimate impacts. We offer the following specific recommendations for your consideration:

- DWR should encourage the California Urban Water Conservation Council to incorporate energy costs and benefits into its standard cost-benefit methodology and encourage water agencies to report the positive energy savings of water conservation programs.
- Further investigate and quantify the water use-energy nexus. For example, more research is needed regarding water-related end use energy in the CII sector, as well as the energy used for distribution of, and advanced treatment of, recycled water.

- Provide funding or perform pilot studies on the water-energy nexus comparing groundwater pumping with other local water supply options.
- Increase financial support, incentives and grants for water use efficiency programs to capitalize on significant energy savings, air quality benefits, and global climate change mitigation and adaptation benefits associated with these programs.
- Develop a water use efficiency public outreach effort commensurate with 'Flex Your Power', or even combine the two, to highlight the water-energy nexus.
- Develop on regional scales: climate, hydrology and watershed/water supply models so that local agencies can better plan for future climatic and hydrologic changes. Conducting such modeling at the State level will encourage consistency and decrease the likelihood of agencies utilizing different assumptions and model types.
- Require that the climate and energy implications of serving water to projects proposed in local General Plans be evaluated in Urban Water Management Plans.
- Increase public information and outreach efforts, including a statewide media campaign educating the public about the benefits of expanding recycled water use.
- Implement the recommendations of the "Water Recycling 2030" report prepared by the California Recycled Water Task Force.
- The State Water Board and Regional Water Boards should expedite permitting for recycled water projects that help conserve precious drinking water especially during drought situations.
- Remove unnecessary barriers to groundwater recharge, and reevaluate current regulations for efficacy and appropriate balance of risk/benefit.

Summary of How Climate Change Directly Impacts Various District Programs

Rising global temperatures are causing sea levels to rise, which will have global consequences. Sea level rise threatens the Sacramento-San Joaquin Delta levee system and waterways, which are critical for conveying about half of Santa Clara County's water supply and the water for 25 million Californians. Failure of these levees would not only decrease the quantity of imported water available to the county, but it would also increase the salinity of Delta water, adversely affecting water quality and Bay-Delta ecosystems. Warming temperatures can also alter sensitive ecosystems resulting in increased regulatory prescriptions to be applied to the imported water system. Overall, these factors significantly affect the District's capability to provide a reliable water supply.

In addition, sea level rise threatens all of the bay front areas of Santa Clara County. Bay front levees protecting Silicon Valley were not built to accommodate rising sea levels. Businesses and residential neighborhoods surrounding the bay, major transportation corridors and three sanitary treatment plants are within the zone of risk to flooding due to increasing sea level.

Furthermore, rising sea levels could result in increased saltwater intrusion into coastal groundwater basins. Salt water intrusion could be a threat in Santa Clara County, but by a different mechanism than you see with communities with sandy coastal aquifers. Increased groundwater pumping and increasing salinity inland, could pose a threat of saltwater intrusion in the county. In addition, with sea-level rise pushing saline water further upstream, some percolation of more saline waters could occur.

Additionally, the warmer, drier and longer summers would decrease local water supplies; increase the demand for water; and, impact fish and wildlife in the county's watersheds. These scenarios represent the reality of climate change over the next several decades.

Increases in average air temperature are already decreasing the Sierra snow pack, which is by far the largest water "storage" facility in the state. California is expected to lose 70 percent to 90 percent of the Sierra snow pack by 2100 as a result of the increase in average temperature. Precipitation patterns are also expected to change as a result of rising temperatures. The exact patterns are unknown, but it is predicted that we will see more extremes and a potentially shorter, more intense rainy season. Earlier snowmelts and increased precipitation caused by climate change are predicted to produce alterations in runoff which are expected to result in potentially reduced exports, ironically from the system that will have more water flowing through it in narrower windows of time. This could reduce the amount of water available to meet peak demands in late spring and summer. In addition to reducing water supply, increased temperatures and increased dry periods will tend to offset the effectiveness of water conservation programs due to increased demands.

Unprecedented long-lasting droughts that leave our largest reservoirs dry are also anticipated. Locally, as temperatures rise and precipitation patterns change, endangered natural habitats and fisheries, together with plant and animal species, may suffer further decline or disappear. This will affect NCPP/HCPP programs currently being developed in Santa Clara County.

The effects of climate change extend beyond water supply concerns. Climate change will challenge the District's ability to provide stewardship for the county's watersheds and adequate flood protection for residents and businesses.

Recommendations on What Can be Done to Address Those Impacts.

There are two levels of response necessary to address climate change. One is to take action to mitigate and adapt to actual impacts expected from rising global temperatures. The other is to change the way we do business to account for climate change impacts when planning our flood protection projects and water supply strategies.

The District has demonstrated significant energy savings and air emissions reductions through the District's water use efficiency projects and other programs. The District will continue to expand its water conservation programs and other related water resource management efforts. We encourage DWR and the Water Board to champion the following efforts, with both policy and financial support:

- Integrate energy savings and air quality benefits into cost-benefit analyses for water conservation programs. The results of these analyses can be factored into programmatic decisions to maximize multiple benefits.
- Encourage cost-sharing partnerships between water wholesale agencies and water retailers for conservation programs.
- Expand regional water conservation programs co-offered with other regional water agencies. Offering regional programs is more cost-effective and leads to shared knowledge, thus providing financial and intellectual leverage.
- Develop and encourage Water Agency-Energy Utility partnerships.

September 13, 2007

Chair Doduc and Director Snow

- Work with cities and other land use agencies to encourage installation of water use efficient appliances.
- Increase available grant funding. Additional sources of funding may be available through the energy sector.
- Increase funding in other local programs, such as the Groundwater Local Assistance Program. The District, as with other agencies, has many groundwater management programs that are under-funded and additional funding is sorely needed. Increased funding for local solutions would assist local agencies with long term reliability.
- Evaluate the use or development of bond funding for groundwater cleanup and planning.
- Conduct research or studies on infrastructure needs, particularly the need and benefit of local or regional storage for both flood capture and conservation storage.
- Support locally and regionally developed strategies that are adaptive and flexible for water resource management and the establishment of balanced water supply portfolios.
- Increase funding for Integrated Regional Water Management (IRWM). These partnerships enhance the ability to provide improved water supply adaptability, reliability and quality.
- Be flexible, but consistent, in supporting regions' IRWM plans and implementation efforts. Regions throughout California have invested significant resources in developing IRWM Plans that respond to their local issues and priorities and those prioritization efforts should be respected.

Again, the District applauds DWR and the Water Board for their leadership in the area of climate change and water resources, and sincerely appreciates the opportunity to provide input to your agencies. We look forward to DWR and the Water Board acting on the specific recommendations outlined in this letter. The District is proud of its leadership in this arena, as evidenced in our recent report "Watts to Water". I have enclosed a copy for your information and it is also available on-line at www.valleywater.org

If you have any additional questions, or if the District can be of further assistance, please feel free to contact me at 408-265-2607, ext. 2080, or Greg Zlotnick directly at 408-265-2607, ext. 2081.

Sincerely,

Original Signed by

Keith Whitman
Water Supply Manager

Cc: via electronic mail

Ms. Selica Potter, State Water Resources Control Board, Office of Research, Planning and Performance, 1001 "I" Street, 16th Floor, Sacramento, CA 95814
spotter@waterboards.ca.gov