

**Testimony of Robert A. DeLoach  
General Manager/Chief Executive Officer  
Cucamonga Valley Water District**

**Before the**

**Subcommittee on Water and Power  
Committee on Natural Resources  
United States House of Representatives**

**Regarding**

**“Sustainable Water Supplies for the West: Part I – Protecting Groundwater Resources”**

**Introduction**

Chairman Napolitano, Representative Baca and Representative Solis. My name is Robert DeLoach. I am the General Manager/CEO of the Cucamonga Valley Water District (CVWD). Our District is a retail water and sewer agency located in Rancho Cucamonga, California, serving a population of approximately 175,000 people in the western portion of San Bernardino County within the Santa Ana Watershed.

Our agency receives approximately 50% of its water supply from the State Water Project through the Inland Empire Utilities Agency, a member agency of the Metropolitan Water District of Southern California (MWD). Approximately 40% of our locally developed water supply comes from two local groundwater basins, and the remaining 10% comes from local mountain sources in the form of surface water. Our primary source of groundwater is the Chino groundwater basin, one of the largest groundwater basins in the state covering over 240 square miles. In addition to our agency, the Chino Basin provides groundwater supplies to the City of Ontario, City of Chino, City of Chino Hills, City of Pomona, City of Fontana, City of Upland, the Monte Vista Water District and the West Valley Water District, as well as a variety of industrial and agricultural uses.

Additionally, CVWD is the majority shareholder of the Fontana Union Water Company, and in that capacity we manage an extensive array of groundwater rights within the Rialto and Colton Basins as well as the Chino Basin. We also have extensive surface water rights within the Lytle Creek region in the northern portion of the Santa Ana Watershed.

Today, I appear before this committee on behalf of the Cucamonga Valley Water District, the Chino Basin Watermaster and on behalf of the Fontana Union Water Company.

### **Perchlorate and VOC's and Groundwater Production within the Chino Basin Region**

Throughout the Santa Ana Watershed, which consists of 41 individual groundwater basins, 16 have perchlorate or other volatile organic compound (VOC) contamination. Approximately 30 wells have been shut down due to contamination. Overall, it is estimated that some 170 wells in the watershed are at risk due to perchlorate contamination within the various groundwater basins due to Federal activities. Approximately 550,000 acre feet may be impacted in the watershed. In the Chino Basin alone, where in 2006 groundwater production exceeded 120,000 acre feet, 39 of the 115 wells have detectable levels of perchlorate. More than one in three exceeds the current State of California "action level" for perchlorate.

The incidences of perchlorate in the region (particularly in Chino Basin and the Rialto/Colton Basins) have two primary sources of introduction. In most cases, we associate the incidence of perchlorate in groundwater as emanating from the defense and aerospace related industry. The use of perchlorate either as ammonium or potassium perchlorate is used in the manufacture of propellant for rockets and missiles, and in the manufacture of fireworks or related type uses. Nationwide more than 90 percent of all perchlorate manufactured (or roughly 20 million pounds per year) is purchased by defense and aerospace industries. The defense and aerospace industries have disposed of perchlorate in various states across the country since the 1950's, with many of these states reporting perchlorate contamination in their groundwater.

It is important to note that the primary industry in the Chino Basin region dating back to the early 1900's was and remains although to a lesser degree, agriculture. With advancements in science and technology, studies indicate that perchlorate may originate from natural resources and some types of commonly applied fertilizers that contain Chilean Nitrates. These fertilizers were imported into the region by the United States Department of Agriculture. The Chino Basin Watermaster has conducted isotope testing to determine the "place of origin" of the perchlorate contamination within the entire groundwater basin. These tests are ongoing but sufficient evidence exists that indicates that both synthetic based and fertilizer based perchlorate exists within the basin.

The existence of perchlorate represents major concerns for local water providers in terms of both water supply and cost. Estimates for remediation, with the typical 'pump and treat' technology using Ion Exchange range from \$1.0 -- \$3.0 million per production well as the initial capital investment. While staggering, the capital expense does not reflect the operation and maintenance costs which can exceed \$500,000 per well on an annual basis. It is estimated that across the entire Santa Ana Watershed the costs to maintain existing well production could range from \$300 million to \$1.0 billion. It is important to note that such an investment **would not** produce a single drop of new water. This is water supply already in production.

Treating perchlorate as already noted represents tremendous financial impacts to local water providers, many of which provide water to economically depressed areas. Attempting to recover or underwrite these costs on the backs of our local ratepayers is at best unreasonable and at worst unacceptable. Even in instances where the perchlorate levels are low enough to treat by blending contaminated water with higher quality water, the availability and cost of the "blend" water may

be prohibitive. In many instances this "blend water" is imported water from the State Water Project which has already been treated to drinking water standards approved by the California Department of Health and is in most cases the most costly supply of available water to local water producers. In the long-term, this practice of using imported water to blend down the contamination levels to drinking water standards is problematic, as will be described below in detail.

In addition to the limitations noted previously on delivery of imported water to the region, the ability for retail water providers to actually increase their imported water supplies is in many instances limited by the physical characteristics of their respective delivery systems. In the case of the City of Rialto, five of the City's wells are contaminated with perchlorate affecting approximately 9,000 gallons per minute (GPM) of flow. The City is without an alternative source of supply because they do not have a physical connection for imported water. Funding a new connection to the imported water system and then constructing a treatment plant to treat the water is cost prohibitive for this community. Fontana Water Company, which is adjacent to the City of Rialto, recently constructed a 25 million gallon per day treatment plant at a cost exceeding \$35.0 million.

### **Federal Policies, Federal Actions Impacting the Region's Groundwater Resource**

Presently, imported water supplies to the Chino Basin region exceed 57,000 acre feet annually. The Santa Ana Watershed region, and specifically the Chino Basin, is one of the fastest growing areas of the nation. Today imported water deliveries to all of southern California are being reduced through actions of the Federal Government.

Statewide, annual allocations from the Colorado River have been reduced by 800,000 acre feet which heavily impact the Metropolitan Water District. Although CVWD does not directly take deliveries of Colorado River water, this action by the Federal Government places added pressure on the Metropolitan Water District and any retail water provider who depends on MWD to meet their water supply requirements. At the same time, water supplies from the California State Water Project are being reduced or restricted, due in part through the Federal actions and policies associated with the CALFED program.

This reduction of imported water supplies has placed an added burden and reliance on our local groundwater supplies. Agencies throughout the Santa Ana Watershed including the Chino Basin are attempting to deal with this new reality by developing alternative sources of water supply such as recycled water. With an investment exceeding \$95.0 million over the past six years, agencies within the Chino Basin have developed over 8,000 acre feet of a new, drought-proof reliable source of water. This quantity is expected to double this next year.

Despite the obvious economical and supply benefits of recycled water to augment our groundwater supplies, we are faced with two new realities: First, the U.S. Department of the Interior proposes to "devolve," or to eliminate the Title XVI water recycling program--which should be the financial backbone for funding recycled water projects. Second, much of our

groundwater is contaminated through the actions of the Federal Government. As already stated, over 90% of the perchlorate and volatile organic compounds (VOC's) in groundwater comes from Department of Defense related activities. These actions equate to what we describe as the "Federal squeeze-play." Imported water deliveries are being reduced, funding for recycled water is being eliminated and our groundwater supplies are contaminated with perchlorate and other VOC's.

### **The Chino Basin Watermaster and the Optimum Basin Management Plan**

Pursuant to a court ordered judgment, the Chino Basin Watermaster manages the groundwater basin for the benefit of groundwater producers within the Chino Basin. The groundwater producers consist of a three user groups: Local municipal producers, the largest group, depends on Watermaster and the basin to meet the bulk of their drinking water requirements, The second largest group is the agricultural community, which has transitioned from citrus and vineyard production and other food product crops to Confined Animal Feeding Operations (CAFO's), or dairy cattle. The smallest group consists of industrial users who rely on locally produced groundwater for various manufacturing and process water requirements.

Each of these producer groups make up the management structure of the Watermaster. Their objective is to ensure that each producer is able to produce both the quantity and quality of water to meet the water supply needs to the greatest extent possible from the basin. In so doing the Watermaster produced a management plan entitled the Optimum Basin Management Plan or OBMP.

The OBMP contains several program elements; the first being the requirement to develop a comprehensive monitoring plan for the basin including monitoring of groundwater quality. That effort produced mapping of perchlorate and other VOC's which have been used in coordination with the producers and the Regional Water Quality Control Board to develop a comprehensive strategy to deal with the contamination. Included as Attachment "A" is a sample of the type of monitoring work and mapping conducted by the Watermaster to identify the scope of the contamination problem including isotope mapping. Watermaster also formed a Water Quality Committee, of which I serve as Chairman, which consists of local producers, MWD, and the Regional Board. The Committee worked with our team of consultants and developed the following:

- Continued groundwater monitoring of perchlorate and other water quality parameters including water levels to determine the effect of pumping of known and defined plumes,
- Identified treatment technologies and their effectiveness,
- Utilizing the isotope technology, conducted analysis of existing perchlorate plumes to identify the source of the contaminant,

- Analyzed cost impacts for well head treatment, replacement water, and capital improvements related to remediation or dilution of perchlorate to drinking water standards,
- Identified appropriate technical actions necessary to address the perchlorate problem including providing technical and administrative support to the Regional Board and groundwater management groups outside the Chino Basin, and
- Identified potential responsible parties or industries including agriculture that may have contributed to the perchlorate contamination.

In addition to Watermaster's efforts to manage the water quality issues related to perchlorate and VOC contamination in the Basin, several other groups have been formed within the Santa Ana Watershed to investigate perchlorate related issues in the watershed.

Regional Board Perchlorate Task Force

- Organized through the Santa Ana Regional Water Quality Control Board in cooperation with EPA Region 9.
- Formed to investigate Potential Responsible Parties for perchlorate contamination and mapping within the Rialto-Colton Basins.

Inland Empire Perchlorate Task Force

- Formed to negotiate a solution to the perchlorate problems incurred by Fontana Water Company and the West Valley Water District.

Mayor's Advisory Committee on Water Contamination (Perchlorate)

- Formed to advise the mayor and city council on perchlorate contamination issues in the City of Rialto

Madam Chairwoman, the Cucamonga Valley Water District, along with the Chino Basin Watermaster takes our respective roles in groundwater basin management and water supply very seriously. Perchlorate is a serious problem that has impacted our local groundwater resources and the local economy. We are looking for solutions that can be implemented now. Throughout the entire region there is a need to fully characterize the various contamination plumes in a coordinated fashion or assist existing entities such as the Watermaster in their ongoing efforts. We need to coordinate on data collection and monitoring to identify movement of the various contaminant plumes, and that they are contained and ultimately cleaned up. We need to identify water supply alternatives that are cost effective and reliable, such as developing funding for recycled water.

Our agency remains committed to doing all that we can to ensure that our groundwater supplies are protected in a cost effective manner. We appreciate the efforts your committee has undertaken to conduct this hearing and solicit information regarding this issue.

Thank you, Madam Chairwoman, for your time and consideration.