

CENTRAL BASIN MUNICIPAL WATER DISTRICT

JANUARY 7, 2004 - Water Resources
Morse, Cole

JANUARY 26, 2004 - Board Meeting

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INFORMATION CALENDAR

SALINITY ORGANIZATIONS

SUMMARY:

All throughout California salinity in potable water supplies is a growing problem. Salinity can originate from “hard” water, salt water intrusion due to over pumping, urban/agricultural and other activities.

The Metropolitan Water District of Southern California (MWD) is also concerned about salt impacts. In 1999, they commissioned a salinity management study with the United States Bureau of Reclamation. This study determined that elevated salinity affects water softeners, water heaters, cooling towers, agricultural crops, water taste, creates challenges with water reuse, and causes significant economic hardships. For every 100 mg/L increase in salinity levels in MWD imported water, the study calculated an expense of \$95 million dollars on an annual basis to residents, groundwater, agriculture, commercial, utilities, and industrial components. This same \$95 million could be saved every year for a 100 mg/L decrease in salinity levels.

Subsequently, results of this study led the MWD Board of Directors to institute a goal that they will deliver water with ≤ 500 mg/L salinity (total dissolved solids). Exhibit “A” illustrates some historical MWD salinity values. The table below illustrates the average salinity levels in various source waters for Southern California.

Water Source	Average Salinity (mg/L)
Ocean Water	34,450
Brackish Groundwater	3,300
Central Basin Recycled Water (Los Coyotes)	841
Colorado River	635 [^]
Central Basin Recycled Water (San Jose)	569
Central Basin Groundwater	430 [*]
State Project Water (West Branch)	346 [^]
State Project Water (East Branch)	245 [^]
Brewer Desalter RO Effluent	123
Single Pass Softened	100
Single Pass RO	~20
Double Pass RO	<5

* From 1999-2003

[^] Twenty-eight year average (1974-2001)

Higher levels of salt in imported water increases salinity in water reuse and groundwater recharge, ultimately increasing salt levels in groundwater. Therefore, the following salinity organizations seek to address this growing problem of salinity management (Exhibit "B", A Collaborative Declaration, provides an overview of each one of these).

Colorado River Salinity Control Forum

This group consists of state representatives from the Colorado River Basin states (Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming) and seeks to implement measures that reduce salt input to the Colorado River by adopting water quality standards as well as an Environmental Protection Agency Implementation Plan.

Joint Water Reuse Task Force

Various research organizations participate in this task force to promote and fund research on salinity management, as well as recycled water.

Multi-State Salinity Coalition

Water utilities/districts, government agencies, and various research groups from Texas, Nevada, Arizona, and California meet regularly to promote technology and salinity control techniques that improve the quality of potable water supplies.

Northern California Salinity Coalition

This Coalition brings together northern California agencies to collaborate on projects, programs, and methods to reduce salinity problems for its member agencies. Solutions can be found with desalination of sea water and brackish groundwater, better control of salts in wastewater, as well as improved groundwater management to reduce saltwater intrusion. Exhibit "C" provides more detailed information on this coalition.

U.S. Desalination Coalition

A non-profit national coalition of agencies whose mission is to pursue federal money in support of ocean-water desalination and brackish groundwater desalination.

Southern California Salinity Coalition

Thirteen Southern California water agencies form this Coalition that focuses on salinity removal, water quality protection, watershed planning, salinity education, and various research priorities. These entities also recently sponsored the 2nd Annual National Salinity Management and Desalination Summit on December 8-9, 2003. The purpose of the summit was to bring together utility, governmental, and legislative organizations to discuss issues and solutions to salinity management and desalination. Central Basin is a participating organization in this coalition. Exhibit "D" provides a description of the Strategic Plan for this Coalition.

February Workshop

As part of its education component, the Southern California Salinity Coalition is hosting a Salinity Roundtable February 25, 2004. This event is to bring interested parties together with the staffs of the Santa Ana, Los Angeles, and San Diego Regional Water Quality Control Boards to discuss issues associated with increases in salinity in Southern California.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Committee on January 7, 2004 and agendaized to the January 26, 2004 Board meeting as information for discussion.

RECOMMENDED MOTIONS:

This item is for information only.

LIST OF EXHIBITS:

- Exhibit "A" - Historical MWD salinity values
- Exhibit "B" - A Collaborative Declaration
- Exhibit "C" - Northern California Salinity Coalition
- Exhibit "D" - Southern California Salinity Coalition Strategic Action Plan