

CENTRAL BASIN MUNICIPAL WATER DISTRICT

JANUARY 7, 2004 - Water Resources

Morse, Cole

JANUARY 26, 2004 - Board Meeting

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INFORMATION CALENDAR

RECYCLED WATER ENERGY EVALUATION -  
DEPARTMENT OF WATER RESOURCES

SUMMARY:

In August 2003, the Board authorized a \$100,000 agreement with the Department of Water Resources (DWR) to receive funding for studies that examine energy saving issues related to the use of recycled water. The Board also authorized agreements with consultants, academic institutions and research organizations for conducting the studies. Materials developed from these studies will be available to DWR for dissemination throughout the state.

Three of the five studies are solely sponsored by the DWR funding. These studies will be presented at the WaterReuse Association's 2004 California Section Annual Conference in February. A brief description of each study and progress made to date are described below.

Study on the Energy Requirements to Import Water Compared with Recycling Water, Desalinating Water, and Pumping Water

Robert Wilkinson, PhD, a professor at the University of California-Santa Barbara, is conducting a study that compares the relative energy cost to import water, recycled water, pump groundwater, and desalinate water. The study includes each water supply from the source, through treatment, and ending in the purveyor's system. Central Basin Staff have collected this data from various sources. Dr. Wilkinson is currently compiling the data and composing a draft report and presentation.

Use of Title 22 Water Use in Refineries

Puckorius & Associates (Puckorius) is conducting a study that examines the energy and economic benefits refineries experience due to recycled water use in boiler feed and cooling towers. Puckorius has contacted Southern California refineries to acquire the data needed for this study. A draft report is currently being written.

Analysis of Benefits of Recycled Water Use in Dye Houses

Water 3 Engineering, Inc. (Water 3) is responsible for a study illustrating the potential benefits of using recycled water in dye houses. Central Basin staff has provided potable and recycled water quality data for constituents that could potentially affect the dyeing process. The analysis focuses on the water quality consistency that is available with recycled water, compared with the imported water's variability. A final analysis is expected by December 30, 2003.

The final two studies are only partially funded by DWR, with other agencies collaborating together to provide full project funding. A description of these two studies and progress to date are described below:

Comparison of Nanofiltration and Reverse Osmosis in Terms of Water Quality and Operational Performance for Treating Recycled Water

This project is being funded by DWR \$20,000 (via the Central Basin contract), West Basin \$96,000, Water Replenishment District \$20,000, American Water Works Association Research Foundation (AwwaRF) \$100,000, and the WateReuse Foundation (WRF) \$100,000. This Project will be conducted by the Colorado School of Mines over a 2 year period. Since August, staff coordinated between the Colorado School of Mines, and AwwaRF to submit the Project proposal, address proposal comments, and finalize the Project details. In December, AwwaRF issued a formal approval and funding award to this Project. Subsequently, staff has been finalizing contract and budget specifications with the intent to start the Project in January of 2004.

Salt Management Guide

In addition to \$20,000 from DWR, both Central Basin and West Basin will be contributing funds to this Project. This Project will evaluate and recommend various landscape management practices to address salinity issues. Although, the WRF has conceptually approved this Project for funding, staff is working with various other agencies to secure additional finances. This will enhance the Project as well as decrease the District's contribution. Staff has also assembled a research team of various University Professors and Salinity experts, and recommended this team to the WRF for approval, while refining the "Scope of Work". Staff hopes that this Project can begin by the Spring of 2004, and should last 1-2 years.

FISCAL IMPACTS:

Funds for the five (5) studies are included in the fiscal year 2003-04 budget. All expenditures are to be reimbursed by DWR.

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 MOTION:

This item is for information only.