

CENTRAL BASIN MUNICIPAL WATER DISTRICT**JULY 7, 2004 - Water Resources**

Morse, Apodaca

JULY 26, 2004 - Board Meeting

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Approved by: Richard Nagel

INFORMATION CALENDAR

MWD WATER QUALITY TASTE AND ODOR ISSUESSUMMARY:

In early June, the State Water Project's Castaic Lake experienced an algae bloom that resulted in taste and odor impacts for thousands of Metropolitan Water District (MWD) customers. While the water remained safe to drink, the earthy, musty, and moldy taste and odor generated customer complaints from most MWD member agencies. Los Angeles County Waterworks and California American Water Company both reported customer complaints to Central Basin staff.

The unpleasant taste and smell is caused by a blue-green algae bloom, common in freshwater in the warmer summer months. Some species of blue-green algae produce a by-product called Geosmin that results in earthy, musty, and moldy odors.

Copper sulfate is a known treatment for Geosmin, because it kills the blue-green algae that produce Geosmin. It does not harm humans or fish, and does not impact other strains of blue-green algae. On June 10, copper sulfate was dropped from a helicopter on a section of Castaic Lake where algae was present, and was repeated on June 21. In addition to the copper sulfate treatment, MWD also made some operational changes at their filtration plants that helped minimize the impacts to customers.

Although MWD rated the water aesthetics as "acceptable" during the outbreak, sensitive individuals can detect Geosmin between 5 and 10 parts per trillion (ppt). The Jensen Filtration Plant was distributing water with over 20 ppt of Geosmin. Consumers were advised to refrigerate an open pitcher of water to minimize the taste and odor.

The last daily email report from MWD on the issue informed member agencies of the following:

- Water quality continues to improve at Castaic Lake;
- Castaic Lake algal activity has declined since the copper sulfate treatment on June 21;
- Geosmin levels leaving the Jensen Filtration Plant on June 23 were 11 ppt; influent was 7 ppt; and
- Flavor Profile rated the water aesthetics as "acceptable".

The taste and odor episodes are not a health hazard – they are an unpleasant experience that consumers often deal with for several weeks of each year during the warm summer months. A graph illustrating geosmin levels in Castaic Lake over the last eight years shows this repetitive cycle occurring in Exhibit "A".

MWD has successfully dealt with this situation for many years, and continues to plan ahead for additional taste and odor outbreaks. While current measures include copper sulfate treatment and operational changes, ozone treatment is being added to the MWD filtration plants, which will virtually eliminate this problem in the future.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

None.

COMMITTEE STATUS:

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

RECOMMENDED MOTION:

This item is for information only.

LIST OF EXHIBITS:

Exhibit "A" - Graph Illustrating Geosmin Levels in Castaic Lake

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