



Board Workshop

July 10, 2009

**District Office
1965 Placentia Avenue
Costa Mesa, CA 92627**

**BOARD OF DIRECTORS
MESA CONSOLIDATED WATER DISTRICT
1965 Placentia Avenue, Costa Mesa, CA 92627
Friday, July 10, 2009
9:00 a.m. Adjourned Regular Board Meeting**

AGENDA

CALL TO ORDER

PLEDGE OF ALLEGIANCE

PUBLIC COMMENTS

Non-Agendized Matters: Members of the public are invited to address the Board on matters, which are not on the Agenda. Each speaker is limited to three (3) minutes. The Board will set aside thirty (30) minutes for public comments.

Agendized Matters: Members of the public may comment on Agenda items before action is taken, or after the Board has discussed the item. Each speaker is limited to five (5) minutes.

ITEMS TO BE ADDED, WITHDRAWN, OR REORDERED ON THE AGENDA

At the discretion of the Board, all items appearing on this agenda, whether or not expressly listed as an Action Item, may be deliberated and may be subject to action by the Board.

The following list of agenda topics is subject to reordering by the Board as to the time during the workshop that each topic will be discussed or action taken.

I. ACTION ITEMS:

A. CLOSED SESSION:

1. CONFERENCE WITH REAL PROPERTY NEGOTIATORS –
PURSUANT TO GOVERNMENT CODE SECTION 54956.8:
Property: Capital Project # CM-394 (OC-44 feeder)
District Negotiator: General Manager
Negotiating Parties: Poseidon Resources
Under Negotiation: Possible use of Mesa Consolidated Water District property by
outside company for purposes of delivering desalinated potable water to other agencies.
2. PUBLIC EMPLOYEE APPOINTMENT
PURSUANT TO GOVERNMENT CODE SECTION 54957:
Title: General Manager

RETURN TO OPEN SESSION.

B. DISTRICT MANAGEMENT:

Recommendation: Discuss and possibly take action.

II. DISCUSSION ITEMS:

A. COLORED WATER TREATMENT FACILITY EXPANSION:

Recommendation: Review and discuss information, and provide direction to staff.

B. EMERGENCY INTERTIE STUDY:

Recommendation: Review and discuss information, and provide direction to staff.

C. FINANCIAL POLICIES:

Recommendation: Receive information.

III. DIRECTORS' COMMENTS:

A. DIRECTORS' COMMENTS:

1. Director Ohlig-Hall:
2. Director Atkinson:
3. Director Shoenberger:
4. Director Bockmiller:
5. President Dewane:

In compliance with California law and the Americans with Disabilities Act, if you need disability-related modifications or accommodations, including auxiliary aids or services in order to participate in the meeting, or if you need the agenda provided in an alternative format, please contact the District Secretary at (949) 631-1206. Notification 48 hours prior to the meeting will enable Mesa to make reasonable arrangements to accommodate your requests.

Agenda materials that are public records, which have been distributed to a majority of the Mesa Board of Directors (Board), will be available for public inspection at the District Boardroom, 1965 Placentia Avenue, Costa Mesa, CA. If materials are distributed to the Board less than 72 hours prior or during the meeting, the materials will be available in the Boardroom.

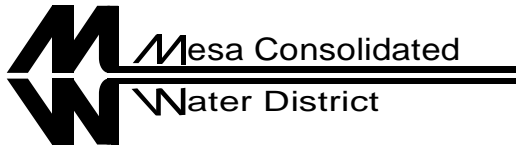
ADJOURN TO A REGULAR BOARD MEETING TO BE HELD ON TUESDAY, JULY 14, 2009 AT 7:00 P.M.

ACTION ITEMS:

A. CLOSED SESSION:

1. CONFERENCE WITH REAL PROPERTY NEGOTIATORS –
PURSUANT TO GOVERNMENT CODE SECTION 54956.8:
Property: Capital Project # CM-394 (OC-44 feeder)
District Negotiator: General Manager
Negotiating Parties: Poseidon Resources
Under Negotiation: Possible use of Mesa Consolidated Water District
property by outside company for purposes of delivering desalinated
potable water to other agencies.

2. PUBLIC EMPLOYEE APPOINTMENT
PURSUANT TO GOVERNMENT CODE SECTION 54957:
Title: General Manager



**MEMORANDUM
Board Workshop**

TO: Board of Directors
FROM: Lee Pearl
General Manager
DATE: July 10, 2009
SUBJECT: District Management

RECOMMENDATION

Discuss and possibly take action.

DISCUSSION

This item has been agendaized to provide an opportunity to the Board of Directors should they need to take action regarding the management of Mesa.

FINANCIAL IMPACT

There is no financial impact to Mesa for this discussion.



MEMORANDUM Board Workshop

TO: Board of Directors

FROM: Robert R. McVicker, P.E.
District Engineer

DATE: July 10, 2009

SUBJECT: Colored Water Treatment Facility Expansion

RECOMMENDATION

Review and discuss information, and provide direction to staff.

PRIOR BOARD DISCUSSION/ACTION

May 14, 2009 Engineering and Operations Committee Meeting
May 26, 2009 Board of Directors Meeting
June 11, 2009 Engineering and Operations Committee Meeting

STRATEGIC PLAN

Goal #1: Provide a safe and reliable water supply.
Goal #2: Practice continuous infrastructure renewal and improvement.
Goal #3: Be financially responsible and maintain competitive rates.

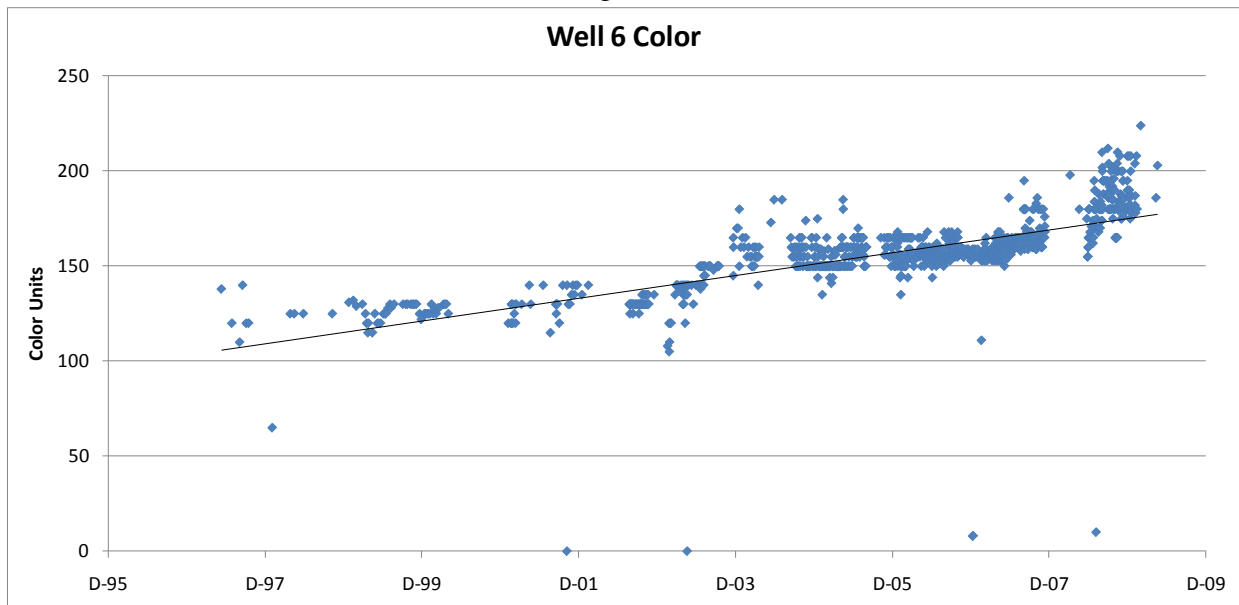
DISCUSSION

At the May 26, 2009 Board meeting, the Board directed staff to prepare and issue a request for proposal for design services for the treatment technology replacement and expansion of the Colored Water Treatment Facility (CWTF).

The CWTF was conceived and designed based on the assumption that the color levels in the source water would continue to be 120 color units in the future. Over time the color level in the source water has steadily increased to color levels reaching and exceeding 200 color units (see Figure 1). The current color removal technology is ozone contacting followed by biologically active filtration to reduce the assimilable organic carbon. Due to increased levels of bromide in the source water an additional treatment step, catalytic carbon with the addition of ammonium chloride to extend the bed life of the carbon, was added to reduce the level of bromate in the finished water. The current color removal technology is close to reaching its limit of

effectiveness as color levels increase to above 200 color units. In addition, the cost of treatment with the added bromate treatment is significantly greater than alternative treatment technologies.

Figure 1



Staff has identified and evaluated two alternative treatment technologies. These technologies are membrane treatment and coagulation, sedimentation, filtration or conventional treatment. The unit cost for treatment with the two alternatives is comparable at the current color levels, but at increased color levels approaching 300 color units the membrane treatment has a lower unit cost. The main driver in the cost difference is the cost to dispose of solids generated from the conventional treatment alternative that increases significantly as the level of color increases.

Staff has also evaluated the benefits of increasing the capacity of the CWTF along with the change in treatment technology. The CWTF was designed to be expanded but after construction of the first phase and investigation of the hydrogeology of the Newport Mesa and surrounding area, Orange County Water District (OCWD) was reluctant to support the expansion. This reluctance stemmed from the fact that the aquifers being pumped by the source wells to the CWTF do not have confining layers that are present in other areas of the basin that have colored water. OCWD's concern is that the water pumped from the source wells would be a blend of colored and clear water and would not be eligible for the exemption of the Basin Equity Assessment, which is OCWD's method to support water quality improvement projects in the Orange County groundwater basin, unless the production was all colored water. Mesa and OCWD reached a compromise in which OCWD will support the expansion if Mesa installs flow through packers in the wells to provide assurance to OCWD that the majority of the water produced from the wells will be from the lower colored water containing aquifers. One of the impacts of installing the packers is that the source water for the expanded project will have an increased level of color in the water.

Staff evaluated the economics of four scenarios. These scenarios are: 1) the color level stabilizes and the CWTF is operated as it has been in the past at 4,000 gallons per minute; 2) the color level increases such that the CWTF must be shut down and imported water is purchased in place of water produced by the CWTF; 3) a new membrane plant is constructed with a capacity of 6,000 gallons per minute; and 4) new membrane plant with 50 percent grant funding. To

compare the alternatives staff prepared water rate projections based on inflation rates between three and five percent and the water supply costs for each of the scenarios. Table 1 shows the rate projections and Table 2 shows the projected water supply costs for the three scenarios.

Table 1
Projected Water Rates (\$/unit)

<i>Fiscal Year</i>	<i>FY10</i>	<i>FY11</i>	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>
Scenario 1	\$2.50	\$2.63	\$2.74	\$2.84	\$2.94	\$3.05
Scenario 2	\$2.50	\$2.75	\$2.96	\$3.08	\$3.19	\$3.32
Scenario 3	\$2.50	\$2.63	\$2.60	\$2.69	\$2.78	\$2.87
Scenario 4	\$2.50	\$2.56	\$2.53	\$2.62	\$2.71	\$2.80

Table 2
Projected Water Supply Costs (millions of dollars)

<i>Fiscal Year</i>	<i>FY10</i>	<i>FY11</i>	<i>FY12</i>	<i>FY13</i>	<i>FY14</i>	<i>FY15</i>
Scenario 1	\$9.5M	\$10.4M	\$11.0M	\$11.5M	\$12.0M	\$12.5M
Scenario 2	\$9.5M	\$10.8M	\$12.0M	\$12.6M	\$13.2M	\$13.8M
Scenario 3	\$9.5M	\$9.4M	\$9.1M	\$9.5M	\$9.9M	\$10.4M
Scenario 4	\$9.5M	\$9.4M	\$9.1M	\$9.5M	\$9.9M	\$10.4M

Numerous assumptions were made to estimate water supply costs for the scenarios and the resulting water rate projections. Water demands were assumed to stay relatively flat. Imported water rates were projections provided by Municipal Water District of Orange County (MWDOC). The OCWD Replenishment Assessment was assumed to increase by five percent per year. The Basin Production Percentage was assumed to be reduced to 57 percent starting in FY10 and remain there for the duration of the analysis based on the lack of availability of imported replenishment water. Operating costs for clear groundwater and the CWTF are based on historical data. The estimated operating cost for membrane treatment based on Tetra Tech’s report dated April 30, 2009, “Membrane Treatment at the Colored Water Treatment Facility.” An inflation rate of three percent was used for future increases in operating costs for groundwater. The CWTF and membrane treatment as well as general and administrative costs were included in the rate calculations. Salary costs were inflated at an annual rate of 2.75 percent.

FINANCIAL IMPACT

The capital cost of a membrane treatment plant at the CWTF is estimated to be \$14.7 million. The annual debt service if bonds are sold assuming an interest rate of 4 percent and a term of 20 years would be \$1.1 million per year. Construction of a 6,000 gallons per minute membrane treatment plant at the CWTF could reduce future water supply costs between \$2.1 million and \$3.1 million per year resulting in a reduction of future water rate increases between \$0.18 and \$0.45 per unit.

Colored Water Treatment Facility Expansion

Mesa Consolidated Water District Board of Directors Meeting

May 26, 2009

Background

- Well 6 color increases (120 c.u. to 200 c.u.)
- Current technology at limit
- Current technology – bromate treatment costly
- Imported water shortage
 - Imported water rate increases
 - Imported replenishment water discontinued
 - Imported water allocation

Background continued

- Groundwater supply
 - Accumulated overdraft near 400,000 acre feet
 - Basin Production Percentage (BPP) reduced from 69% to 62%
 - Future reductions in BPP likely
 - No imported replenishment water for at least five years
 - If drought pattern persists BPP could be as low as 51%
 - Firm untreated water purchase
 - Expansion of Groundwater Replenishment System
 - 57% is probably a good planning number

5/26/2009

Mesa Consolidated Water District

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Project Description

- 6,000 gallons per minute membrane treatment plant
- Similar to Irvine Ranch Water District's Deep Aquifer Treatment Plant
- Tetra Tech prepared cost estimate and prepared report "Membrane Treatment at the Colored Water Treatment Facility"
- Capital Cost = \$14,660,000
- Unit Cost = \$474 (with MWD LRP subsidy)
- 14 - 16 months to construct with design-build
- 18 - 22 months to construct with design-bid-build

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Water Supply Cost Implications

- Loss of Colored Water Treatment Facility (CWTF)
 - Increase in annual water cost of \$1,500,000 (BPP = 57%)
- Project Constructed assuming CWTF can continue
 - Decrease in annual water cost of \$2,300,000 (BPP = 57%)
 - Decrease in annual water cost of \$1,400,000 (BPP = 67%)
 - Decrease in annual water cost of \$1,200,000 (BPP = 72%)
- Project Constructed assuming no CWTF
 - Decrease in annual water cost of \$3,800,000 (BPP = 57%)
- Annual debt service for \$14,660,000 at 20 years, 4%
 - \$1,100,000 per year

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Recommendation

- Recommend the Board of Directors direct staff to issue a request for proposal for design services for the treatment technology replacement and expansion of the Colored Water Treatment Facility

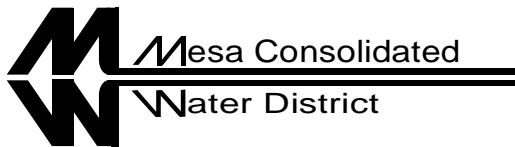
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Financial Decisions

- Cost of project
 - \$14,660,000
- Grant Funding
 - Mostly likely \$1 million (Federal)
 - Pursuing all other options
- Financing
 - \$14,000,000 @ 4% for 20 years (0.13 cents)
- Discussion



MEMORANDUM Board Workshop

TO: Board of Directors

FROM: Robert R. McVicker, P.E.
District Engineer

DATE: July 10, 2009

SUBJECT: Emergency Intertie Study

RECOMMENDATION

Review and discuss information, and provide direction to staff.

PRIOR BOARD DISCUSSION/ACTION

May 14, 2009 Engineering and Operations Committee
June 11, 2009 Engineering and Operations Committee
June 23, 2009 Board of Directors Meeting

STRATEGIC PLAN

Goal #1: Provide a safe and reliable water supply.

DISCUSSION

At the June 23, 2009 Board meeting, the Board directed staff to schedule the discussion of the Emergency Intertie Study for the July workshop.

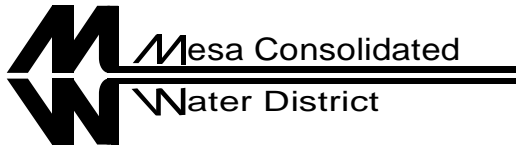
Staff has participated in a series of meetings with the cities of Newport Beach (CNB) and Santa Ana (CSA) and Irvine Ranch Water District (IRWD) staff to identify and study the interties between the agencies distribution systems. The goals of the meetings are to identify, map, and quantify the amount of water that can be moved between agencies in the event of emergencies and a protocol for the use of the interties.

The progress to date includes development of a Geographical Information System (GIS) coverage mapping each agencies major pipelines and the interties. The next step is to develop a computer hydraulic model of the systems and model the flows between agencies under various emergency scenarios with interties open to supply water in the emergency. The plan is to develop a request for proposal and hire a consultant to prepare the model and run scenarios with the model. The cost of the model would be allocated amongst the agencies according to a pre-determined formula such as

number of pipeline sections modeled. The preliminary estimate for the cost of the work is \$120,000; therefore, Mesa's share would be approximately \$30,000.

FINANCIAL IMPACT

No funds were budgeted in the FY10 budget for Mesa's participation in the study. Should the Board desire to participate in the study an appropriation from Working Capital Cash in the amount of approximately \$30,000 would be required.



MEMORANDUM Board Workshop

TO: Board of Directors

FROM: Victoria L. Beatley
Financial Services Manager

DATE: July 10, 2009

SUBJECT: Financial Policies Review Update

RECOMMENDATION

Receive information.

STRATEGIC PLAN

Goal #3: Be financially responsible and maintain competitive rates.

DISCUSSION

During the FY09 Budget discussions, the Board of Directors (Board) directed staff to work with the Finance Committee to review and update Mesa's Designated Funds Policy. The intent of the review was to further define the purpose of the funds and to outline criteria for fund levels.

In October 2008 the Finance Committee reviewed Resolution No. 1359, which governs designated fund levels and how those funds can be spent. After discussion of the resolution, staff was asked to bring this item back to the Finance Committee in November with the changes and clarifications recommended by the Finance Committee.

In November 2008 the Finance Committee reviewed and discussed the designated funds policy which included changes from the October Finance Committee meeting. The Committee requested certain portions of the policy be clarified to include sources of information and that some of the sections of the policy be consolidated. It was noted that the funding level for the Asset Replacement fund will have to be increased based on the recommendation from the auditors to shorten the useful lives of some of Mesa's assets.

In January 2009, the Finance Committee reviewed and discussed a Request for Quote for a financial advisor to perform an economic analysis to determine the feasibility of refinancing a portion of Mesa existing debt, specifically the 1998 Certificates of Participation. The Committee also discussed what could be done to increase Mesa's credit rating, which would result in more favorable terms of any refinanced debt.

In February the Finance Committee recommended that the Board enter into a contract for Financial Advisor services with Fieldman | Rolapp & Associates to assist with the economic analysis, updating Mesa's financial policies, and assisting with achieving the highest credit rating possible for Mesa.

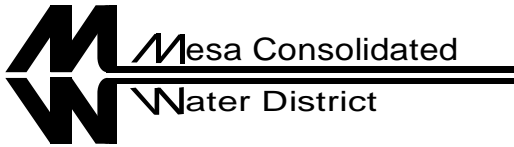
In May representatives from Fieldman | Rolapp attended the Finance Committee meeting and presented information regarding the types of, and minimum/maximum amounts, for recommended Designated Funds for the Committee to discuss. The Committee asked for additional information regarding the types and size of the municipalities that are referred to when discussing the industry standards so that they could better understand the comparison. Additionally, when discussing the proposed minimum/maximum level for Rate Stabilization, the Committee provided some insight regarding the stability of Mesa's revenues and the Board's commitment to raising rates when needed in support of lowering the fund level requirements.

In June representatives from Fieldman | Rolapp attended the Finance Committee meeting and reviewed the proposed list of Designated Funds with minimum balance recommendations. The Committee discussed the minimum balance recommendations and thought the funds could be structured such that different funds are aggregated with a maximum total for those funds, which would be less than the sum of the maximum of each individual fund. The types of funds that would be aggregated would be ones where there would be little likelihood of those funds needing to be used at the same time. This would reduce the maximum accumulation of funds while still being financially responsible.

The Financial Advisors will bring back recommendations to the July Finance Committee meeting. It is anticipated that after the July Finance Committee meeting draft financial policies will be brought forward to the Board. Once the fund types and levels are determined, the Board can then decide how and over what time period to fund the minimum balances.

FINANCIAL IMPACT

There is no financial impact to Mesa for the discussion of this workshop topic. There may be future financial impacts to Mesa depending upon the outcome of the policy development and Board direction regarding Designated Funds.



**MEMORANDUM
Board Workshop**

TO: Board of Directors
FROM: Lee Pearl
General Manager
DATE: July 10, 2009
SUBJECT: Directors' Comments

Director Ohlig-Hall:

Director Atkinson:

Director Shoenberger:

Director Bockmiller:

President Dewane: