

**MWD**

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

January 26, 1993

To: Board of Directors (Engineering & Operations Committee--Action)
 (Water Problems Committee--Action)

From: General Manager

Subject: Groundwater Recovery Program Agreement for Menifee Basin
 Desalter Project

Report

The Eastern Municipal Water District (EMWD) has requested financial assistance for the Menifee Basin Desalter Project (Project) under the principles of Metropolitan's Groundwater Recovery Program (GRP). The Project, which will be located in the Menifee Groundwater Basin, will increase groundwater production by treating groundwater containing total dissolved solids (TDS) and other minerals in excess of drinking water standards and then serving about 3,360 acre-feet per year (AFY) of that treated water to meet EMWD's municipal needs. Attachment 1 describes Project features. The Project includes the construction of a series of extraction wells, pipelines, a treatment plant and appurtenant facilities needed to recover contaminated groundwater and to dispose of brine. Groundwater levels will be maintained by pumping unused safe yield and by in-lieu replenishment where reclaimed water is substituted for existing pumping. That pumping is now supporting demands for landscape irrigation and a recreational lake.

Under a proposed agreement, Metropolitan's financial contribution to the Project would be adjusted annually to equal those Project costs exceeding Metropolitan's water rate, subject to a maximum program contribution set by your Board (currently \$250 per acre-foot), which may be increased in the future. The agreement term would be 20 years. The financial contribution would be provided to EMWD as a water sales payment through a yield-purchase arrangement similar to that used for previously approved GRP projects.

To deal with the inherent uncertainty associated with developing a groundwater project, the agreement will include financial provisions for the final project to operate at 20 percent higher than Project capacity. Hence, the maximum amount of water purchased by Metropolitan would be 4,032 AFY which is 120 percent of Project capacity (3,360 AFY).

Metropolitan's contribution rate is estimated as \$250 per acre-foot for each year of Project operation. However, Metropolitan would recalculate this contribution rate annually based on documented Project cost data and changes in the treated noninterruptible water rate. Attachment 2 is a forecast of Metropolitan's annual contributions to this Project. Metropolitan's annual contribution beginning in fiscal year 1994-1995 will be approximately \$840,000 and will be included in future Operation and Maintenance budgets.

Pursuant to the California Environmental Quality Act, an Environmental Impact Report (EIR) has been prepared for this Project by EMWD, acting as Lead Agency. Because Metropolitan is a Responsible Agency for the Project, your Board and any advisory committees acting on the Project are required to consider the environmental effects of the Project as shown in the EIR prior to making a decision on it. The EIR Executive Summary is attached to this letter. The full EIR is available in the office of the Executive Secretary.

As a Responsible Agency, Metropolitan has responsibility for mitigating or avoiding only the direct or indirect environmental effects of those parts of the Project it decides to carry out, finance, or approve. In this case, EMWD has adopted mitigation measures for all direct impacts and some of the indirect impacts of the Project. Additionally, EMWD found that the mitigation measures for the indirect, growth inducing impacts are within the responsibility and jurisdiction of public agencies other than EMWD and Metropolitan. Your Board should find that all the mitigation measures for the Project are within the responsibility and jurisdiction of another agency, and have been or can and should be adopted by those agencies.

Board Committee Assignments

This letter is referred for action to:

The Water Problems Committee pursuant to Sections 2481(d) and (i) of Metropolitan's Administrative Code granting it authority regarding policies dealing with the sale and delivery of water for various uses, and underground storage of water and the use thereof; and

The Engineering and Operations Committee pursuant to Section 2431(c) of Metropolitan's Administrative

Code granting it authority regarding facilities for the production, exchange, sale, storage and treatment of water.

Recommendations

WATER PROBLEMS AND ENGINEERING & OPERATIONS COMMITTEES FOR ACTION.

1. That your Board and any advisory committees acting on the Menifee Basin Desalter Project certify that they have considered the environmental effects of the Project as shown in the Environmental Impact Report documents prior to making a decision on the Project and find that the mitigation measures for the Project are within the responsibility and jurisdiction of other public agencies and have been or can and should be adopted by those agencies.

2. That the General Manager be authorized to execute an agreement with Eastern Municipal Water District to implement the Project, said agreement to be consistent with the major terms and conditions in this letter and in form approved by the General Counsel.


for Carl Boronkay

JV:bvf

Attachments

Attachment 1

Description Menifee Basin Desalter Project

The Menifee Basin Desalter Project (Project), will consist of the construction and operation of a series of wells, pipelines, and treatment facilities to recover contaminated groundwater from the Menifee Basin. The Project well field will be located north of Newport Road between Lindenberg Road and Menifee Road approximately 3.5 miles north of the treatment facility. A pipeline will be constructed to convey wellwater to the treatment facility to be located at the site of the existing Sun City Regional Water Reclamation Facility (RWRP). The Project will also include about one third participation in a 31-mile long regional brine disposal pipeline that will connect to the existing SARI line.

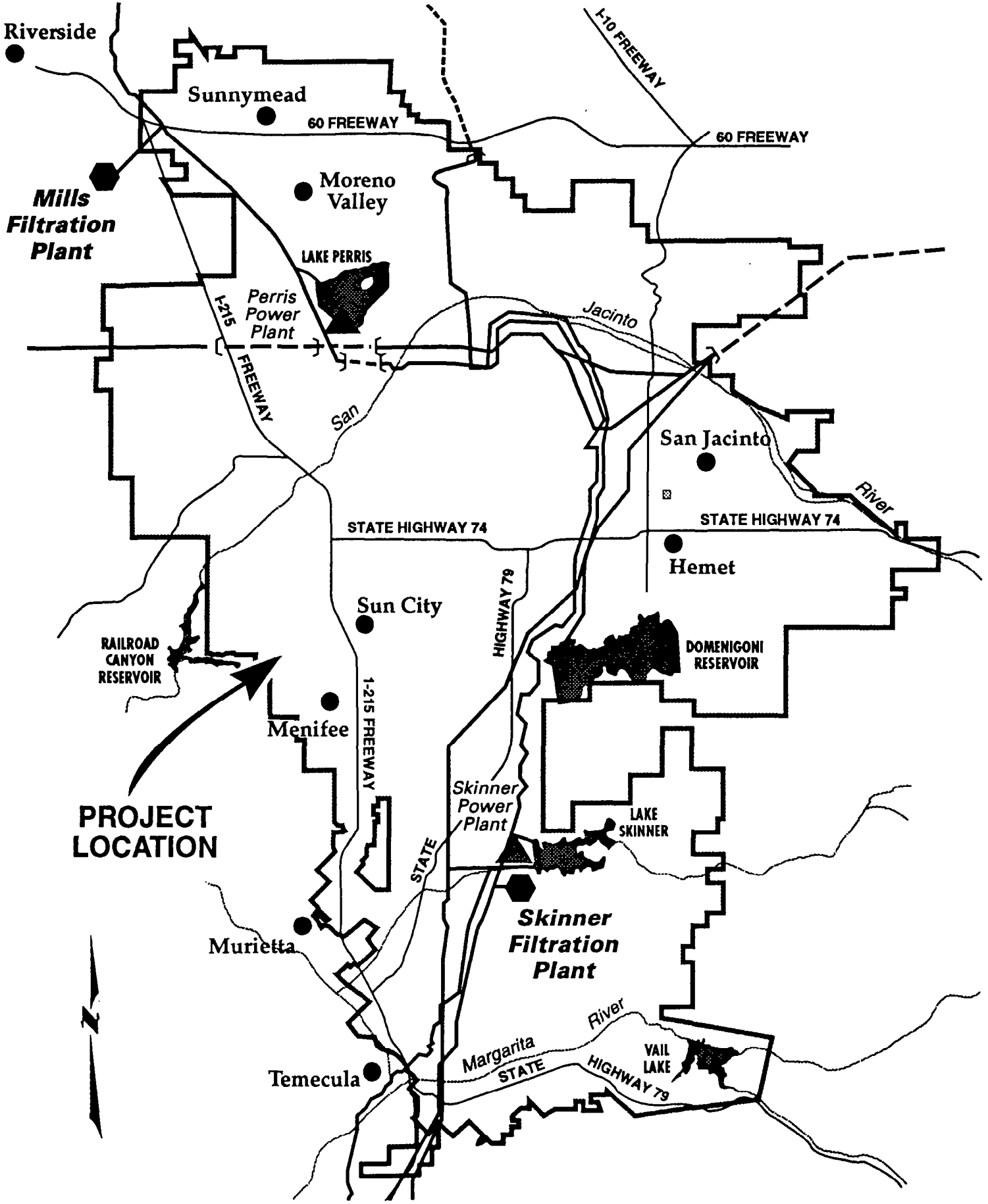
The Project will involve the extraction of groundwater containing high concentrations of total dissolved solids (TDS), chloride, sulfate, iron and manganese; treatment of the groundwater at a central facility, conveyance of product water to the local potable water system, and disposal of the treatment facility's brine to the Santa Ana Regional Interceptor (SARI). Facilities required for in-lieu replenishment with reclaimed water are included as part of the Project. The reclaimed water will be used for landscape irrigation in lieu of existing pumping from the Menifee Basin.

The treatment process includes pretreatment for iron and manganese, a treatment plant that will remove TDS, blending of product water and groundwater, followed by degasification to remove excess carbon dioxide and chlorination for disinfection. Brine disposed in the new pipeline to the SARI line, will be conveyed to the County Sanitation District of Orange County facilities for treatment. Approximately 800 AFY of brine will be discharged to the SARI pipeline.

The Project will supply an estimated 3,360 acre-feet per year (AFY) of treated water for use in the EMWD potable water system.

EASTERN MUNICIPAL WATER DISTRICT

MENIFEE BASIN DESALTER PROJECT LOCATION



Attachment 2

MENIFEE BASIN DESALTER PROJECT
Projection of MWD contributions

MWD Contributions

<u>Fiscal Year</u>	<u>Per Acre-Foot</u> <u>(\$/AF)</u>	<u>Annual Total</u> <u>(\$)</u>
1994-1995	250	840,000
1995-1996	250	840,000
1996-1997	250	840,000
1997-1998	250	840,000
1998-1999	250	840,000
1999-2000	250	840,000
2000-2001	250	840,000
2001-2002	250	840,000
2002-2003	250	840,000
2003-2004	250	840,000
2004-2005	250	840,000
2005-2006	250	840,000
2006-2007	250	840,000
2007-2008	250	840,000
2008-2009	250	840,000
2009-2010	250	840,000
2010-2011	250	840,000
2011-2012	250	840,000
2012-2013	250	840,000
2013-2014	250	840,000
		<u>840,000</u>
		\$16,800,000

Attachment 3

NOTICE OF DETERMINATION

TO: X Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

FROM: Eastern Municipal Water District
Post Office Box 8300
2045 S. San Jacinto Street
San Jacinto, CA 92383-1300
(714) 925-7676

 X County Clerk
County of Riverside
3470 12th Street
Riverside, CA 92501

SUBJECT: Filing of Notice of Determination in Compliance with Section 21108 or 21152
of the Public Resources Code

Menifee Basin Desalter Project

Project Title

91042027 Larry Libeu (714) 925-7676

State Clearinghouse Number Contact Person Area Code/Number/Ext.

The project area is Menifee Village, in Menifee Valley, Riverside County, California, and
is east of Interstate 215, southeast of Sun City, I.D. No. U-1

Project Location and I.D. No(s).

A 3 MGD desalter will be constructed to extract and reclaim non-potable brackish groundwater.

Project Description

The treated groundwater would be integrated into EMWD's domestic water supply.

This is to advise that the Eastern Municipal Water District has approved the above
described project on July 17, 1991 and has made the following determinations
regarding the above described project:

1. The project X will, ~~___ will not~~ have a significant effect on the environment.
2. X An Environmental Impact Report was prepared for this project pursuant
to the provisions of CEQA.
 A Negative Declaration was prepared for this project pursuant to the
provisions of CEQA.
3. Mitigation measures X were, were not made a condition of the approval
of the project.
4. A statement of Overriding Considerations X was, was not adopted for this
project.
5. The project X is, is not subject to Wildlife Impact Fee (AB 3158) as
the Initial Study found X potential, no potential' for adverse effect
on wildlife resources.

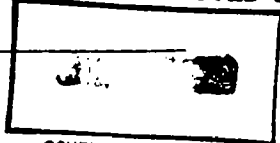
This is to certify that the final EIR with comments and responses and/or record of project
approval is available to the General Public at:

2045 S. San Jacinto Street, San Jacinto, California

Date Received for Filing and Posting at OPR

July 17, 1991

FILED AND POSTED BY



H. Al. [Signature]
Manager By
Chairman of the District Staff
Environmental Assessment Committee

Date July 17, 1991

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TO: X Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

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This is to certify that the final EIR with comments and responses and/or record of project approval is a COUNTY CLERK General Public at:

2045 S. FILED San Jacinto Street San Jacinto, California

te Received JUL 17 1991 and Posting at OPR

July 17, 1991

WILLIAM E. CONERLY
COUNTY CLERK
County of Riverside, State of California

Date Jul 17 1991

H. Al. [Signature]
Manager By
Chairman of the District Staff
Environmental Assessment Committee

EXECUTIVE SUMMARY

**DRAFT ENVIRONMENTAL IMPACT REPORT
MENIFEE BASIN DESALTER PROJECT**

State Clearinghouse No. 91042027

June 1991

Prepared for:

EASTERN MUNICIPAL WATER DISTRICT

2045 S. San Jacinto Street

Post Office Box 8300

San Jacinto, California 92383-1300

(714) 925-7676

Prepared by:

K.S. Dunbar & Associates

Environmental Engineering

4300 Stevens Creek Boulevard, Suite 285

San Jose, California 95129

(408) 241-6612

**EXECUTIVE SUMMARY
DRAFT ENVIRONMENTAL IMPACT REPORT
MENIFEE BASIN DESALTER PROJECT
Eastern Municipal Water District**

PROJECT PURPOSES

Eastern Municipal Water District (EMWD) is seeking State financing under the Agricultural Drainage Water Management Loan Program to finance the Menifee Basin Desalter Project. Agricultural drainage from the surrounding area combined with relatively flat topographical characteristics and slow surface drainage have caused total dissolved solids (TDS) concentrations in the Menifee Groundwater Basin as high as 7,000 mg/l (average \approx 2,000 mg/l). Consequently, this project would intercept that degraded water, stop the migration of the high TDS plume and recover water that would otherwise be lost from production due to its high salt content. In the future, it would also provide for storage of high quality water to help alleviate drought conditions. The Metropolitan Water District of Southern California (MWD), Southern California's major water supply importer, recently implemented Stage V of its Incremental Interruption and Conservation Plan (IICP). The IICP established monthly target quantities of Metropolitan-supplied water for each member agency to utilize based upon Metropolitan's need for overall demand reductions and the member agency's need for water service in the service classes offered by Metropolitan. Stage V of MWD's IICP included a fifty percent reduction in non-firm deliveries to its member agencies and a twenty percent reduction in firm deliveries to its member agencies. Implementation of this project would provide an additional local water supply to EMWD and decrease the use of limited imported water supplies in accordance with the terms of the IICP.

PROJECT SUMMARY

The Menifee Basin Desalter Project would be constructed to intercept the high TDS plume thereby protecting the higher quality groundwater in the Basin while at the same time desalting and recovering the brackish groundwater of the Menifee Basin in the Menifee Valley area of the EMWD. The project includes extracting high TDS groundwater and processing it through a Reverse Osmosis Desalter unit, to a useable domestic level product water of approximately 500 milligrams per liter (mg/l). The treated water will be integrated into the EMWD's domestic delivery system. The desalting plant will use a hybrid process with reverse osmosis (RO) as the primary treatment and electro dialysis reversal (EDR) to concentrate the RO brine. Groundwater will be blended with RO product water to minimize the quantity of water treated and offset post-treatment costs while meeting drinking water standards. The project will produce approximately three million gallons of high quality water daily.

NEED FOR PROJECT

The Menifee Groundwater Basin contains approximately 110,000 acre-feet of brackish water (TDS \approx 2,000 mg/l) which is unsuitable for most uses. EMWD is primarily dependent on

imported water supplies. Therefore, implementation of this groundwater recovery program would increase EMWD's local water supplies, decrease its dependency on limited imported supplies while at the same time improve its overall water supply reliability.

PROJECT BENEFITS

The proposed project would intercept the high TDS plume and protect the higher quality groundwater in the Basin while at the same time utilize an otherwise lost resource and provide a high quality local water supply. Implementation of this project would also decrease EMWD's dependency on limited imported water supplies and provide for future storage for high quality water to assist in drought relief, if necessary.

IMPACTS AND MITIGATION MEASURES

Impacts from implementing the Menifee Basin Desalter Project could result directly from construction and operation or indirectly from growth accommodation. These direct and indirect effects are summarized below.

Significant Impacts

The only significant impacts which can not be mitigated to a level of insignificance associated with the Menifee Basin Desalter Project are the potential indirect growth accommodating impacts associated with the increased local water supply capabilities of the proposed facilities. These growth accommodating impacts and suggested mitigation measures are summarized in Table ES-1. As shown in Table ES-1, most of the mitigation measures are beyond the authority and capability of Eastern Municipal Water District to implement directly.

Therefore, local, regional, State and Federal agencies must work together to achieve successful implementation of the recommended mitigation measures.

**TABLE ES-1
AGENCIES RESPONSIBLE FOR SECONDARY IMPACT MITIGATION MEASURES**

IMPACT	MITIGATION MEASURES	RESPONSIBLE AGENCY
Increases in traffic congestion and air emissions	Improving transportation facilities to limit VMT; policy and technical changes to reduce emissions	Caltrans, Riverside Co.
Changes in local topography	Zoning laws and grading ordinances	Riverside Co., and local cities
Decreased natural vegetation, open space and visual amenities	Conserve open space, scenic vistas and vegetation through zoning, public acquisition, developer dedication, etc.	Riverside Co., local cities, county developers and public interest groups.
Increase in energy consumption	Implementation of energy conservation measures; development of more generating facilities	CPUC, SCEC, SCGC, CEC, Riverside Co., local cities, EMWD

IMPACT	MITIGATION MEASURES	RESPONSIBLE AGENCY
Increased cost of housing, utilities and urban services	Provide low and moderate income housing, conservation of natural resources.	Local housing authorities, CPUC, utility companies, Riverside Co., developers
Encroachment on wildlife habitat	Preserve rare and endangered species habitat; limit encroachment on wildlife habitat.	USFWS, CDFG, Riverside Co., local cities
Impacts on surface water quality from surface runoff and waste discharge	Issue and enforce NPDES permits, monitor impacts and take actions for control. Implement Basin Plan Water Quality Control Objectives	CRWQCB
Potential increase in erosion and geologic hazards	Control erosion and grading through ordinances and enforcement	Riverside Co., and local cities
Potential loss of cultural resources	Perform cultural surveys; inventory and monitor sites	Riverside Co., and local cities
Increase in water consumption	Educate public about water conservation strategies; increase capacity of water reclamation facilities	EMWD, local water suppliers
Increased need for wastewater services	Educate public about water conservation	EMWD, local water suppliers
Increased generation of solid waste	Educate citizens to reduce waste generation; reuse and recover materials; ensure landfills are run safely	CIWMB, Riverside Co.

- CPUC = California Public Utilities Commission
- SCEC = Southern California Edison Company
- SCGC = Southern California Gas Company
- CEC = California Energy Commission
- EMWD = Eastern Municipal Water District
- USFWS = U.S. Fish and Wildlife Service
- CDFG = California Department of Fish and Game
- CRWQCB = California Regional Water Quality Control Board
- CIWMB = California Integrated Waste Management Board

Eastern Municipal Water District is granted enumerated powers under the California Water District Code, Section 71590 et. seq. These powers do not give the District authority to regulate growth. The District is essentially in a "will serve" position and is required to provide the necessary facilities to adequately supply the public with water. Riverside County and the local cities have regulatory authority and are responsible to manage growth in conformance with the adopted regional plans [i.e., *Air Quality Management Plan (AQMP)*, *Mobility Plan (RMP)*, and *Growth Management Plan (GMP)*]. They are also responsible for planning for facilities and programs to avoid impacts and/or to mitigate the impacts of growth.

However, in order to assist the Southern California Association of Governments, the South Coast Air Quality Management District, and the local agencies in complying with the above mentioned plans, Eastern Municipal Water District, to the extent it is authorized and empowered to do so under the California Water Code and the State Constitution,

implemented a mitigation plan on September 5, 1990, in conjunction with its San Jacinto Water Reclamation Plan. That plan included the following:

- Take steps to increase the awareness of its customers and the public at large to recent changes in air quality stature and regulation, both at the state and local level, and the effects these changes would have on the way of life in the South Coast Air Basin (*SCAB*).
- Implement those mitigation measures contained in development project EIR's within the Eastern Municipal Water District's area of influence to the extent possible.
- Update its Urban Water Management Plan for the project area.
- Update its Agricultural Water Management Plan for the project area.
- Provide evidence that Riverside County and the local cities within the project area will update their respective General Plans and relevant community and specific plans to bring them into conformance with the AQMP, RMP, and GMP in accordance with an established timetable and implementation schedule.
- Provide evidence that each of the involved local agencies have made a commitment to implement the appropriate local governmental measures identified in the AQMP.
- Provide evidence that each of the involved governing bodies intend to adopt any necessary changes to other portions of their respective General Plans to make them internally consistent with the changes identified above.
- Provide evidence that each of the involved governing bodies have approved schedules and assigned staff responsibilities for implementing the adopted air quality objectives consistent with the AQMP.
- Consistent with SCAG's request that Eastern implement as many of the AQMP tier one control measures as appropriate, Eastern would employ the following mitigation measures in an attempt to improve the air quality within the area. These mitigation measures would be an attempt to express Eastern's concern for the air quality within the SCAB and to support the efforts of SCAG and SCAQMD to attain National Ambient Air Quality Standards within SCAB are as follows:
 - a. Eastern would employ only electric motor driven pumps in the extraction wells associated with the Menifee Basin Desalter Project.
 - b. Eastern would utilize only low volatile organic compound (*VOC*) paints at its treatment facilities and its offices.

- c. Eastern would conduct a test program with Southern California Edison on the electrification of its vehicles. As soon as feasible, Eastern would modify and/or replace those vehicles employing fossil fuels with vehicles employing new cleaner burning fuels. Ultimately, this could result in the replacement or modification of up to 150 vehicles.
- d. Eastern would employ a full-time transportation coordinator to ensure District personnel are offered all possible incentives for ridesharing.
- e. Eastern would study employee mass transit alternatives for implementation when the District relocates its administrative offices from the City of San Jacinto to the City of Perris. The total number of employees affected by this could approximate 400.
- f. Eastern would comply with SCAQMD Rule 1110.2 by retro-fitting all of its internal combustion engines with advanced emission control systems, at the rate of 25 percent per year.
- g. Eastern would continue to employ energy conservation measures (*e.g., use of natural gas instead of fossil fuels in all of its facilities*).
- h. Eastern would continue to employ a regulatory compliance officer to insure District compliance with all air quality rules and regulations, to facilitate development of advanced emission control strategies, and to support regional air quality planning endeavors.
- i. Eastern would continue to employ a hazardous materials compliance officer to restrict and regulate the use of hazardous materials within Eastern's service area.
- j. Eastern would conduct a feasibility study relative to monitoring influent to its facilities to identify which waste generators might be operating in violation of SCAQMD regulations.
- k. Eastern would continue its firm no smoking policy in all of its facilities to promote clean air and health.

Impacts Reduced to a Less Than Significant Level

Potentially significant impacts and mitigation measures recommended to reduce them to insignificance associated with the Menifee Basin Desalter Project are summarized in Table ES-2.

**Table ES-2
Summary of Impacts and Mitigation Measures
Menifee Basin Desalter Project**

Impact Category	Environmental Impact	Impact Significance*	Mitigation Measure	Impact Significance After Mitigation*
Climate	No impacts anticipated	I	None required	I
Air Quality	Short-term impacts from construction equipment emissions (i.e., fugitive dust and exhaust)	PS	Standard dust control and equipment maintenance.	I
	Vehicle emissions from construction workers and trucks moving equipment and materials to the site.	I	None required.	I
Seismicity	Seismic event could damage facilities and disrupt their operation.	PS	Soil and geotechnical studies to be completed for all facilities. Design for appropriate seismic loads. Alternative power supplies at each major facility. Routine monitoring of pipe conditions, use of flexible couplings.	I
Soils	Potential wind and water erosion of disturbed soils.	PS	Standard erosion control measures to be implemented.	I
Groundwater Resources	Lower the groundwater table in the Menifee Basin.	S	Implement either Groundwater Impact Alternative 2, 3, or 4.	I
Surface Water Resources	No impacts anticipated.	I	None required.	I
Noise	Construction noise levels could exceed ambient levels.	PS	Limit construction to weekdays during the daytime (i.e., 7:00 a.m. to 7:00 p.m.). Muffle and maintain equipment to achieve desired sound levels.	I
	Operational noise levels could be a nuisance.	PS	Proper selection of equipment and enclosure of noisy operations. Have workers participate in safety training programs.	I

*Menifee Basin Desalter Project DEIR
Executive Summary*

Impact Category	Environmental Impact.	Impact Significance*	Mitigation Measure	Impact Significance After Mitigation*
Topography/Geography	Grading could impact the topography.	I	None required.	I
Vegetation	No impacts anticipated.	I	None required.	I
Wildlife	Brine ponds could create conditions conducive to avian botulism.	PS	Maintain appropriate water quality conditions in brine ponds and in adjacent reclaimed water storage ponds. Establish a brine monitoring program.	I
Endangered and Threatened Species	No impacts anticipated.	I	None required.	I
Recreation	No impacts anticipated.	I	None required.	I
Esthetics	Expansion of a major public works facility.	PS	Design to harmonize with the surroundings. Landscape plans to select plants for easy care and hardiness in the environment to be encountered. Control exterior lighting.	I
History	No impacts anticipated.	I	None required.	I
Cultural Resources	No impacts anticipated.	I	Should artifacts, bone, pottery or shell be unearthed during construction, work should be stopped until the site has been cleared by an archeologist.	I
Social and Economic	No impacts anticipated.	I	EMWD should continue to investigate the best methods of financing the project.	I
Land Use	No impacts anticipated.	I	None required.	I
Energy	Increased energy demands.	I	None required.	I
Transportation	No impacts anticipated.	I	None required.	I
Hazardous or Toxic Wastes	No impacts anticipated.	I	None required.	I
Secondary (Growth-Related) Impacts	Potential secondary impacts of increasing local water supply.	PS	Mitigation required by agencies other than EMWD.	PS

*S = Significant I = Insignificant
PS = Potentially Significant B = Beneficial