

JAN 10 1995



MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
EXECUTIVE SECRETARY

Barbara E. Doff
EXECUTIVE SECRETARY

December 8, 1994

(Executive Committee--Action)
To: Board of Directors (Special Committee on Water Quality
and Environmental Compliance--Action)
From: General Manager
Subject: Tenth Year of Voluntary Research Subscription Program--
American Water Works Association Research Foundation

Report

The American Water Works Association Research Foundation (AWWARF) has asked Metropolitan to participate in the tenth year of its Voluntary Research Subscription Program. The amount requested for the calendar year 1995 is \$350,000. Metropolitan's contribution, along with the contributions from other water utilities and consulting firms, will be used to fund critical applied research projects in the drinking water field.

The AWWARF is a nonprofit corporation that was established in 1967 to promote, coordinate, and finance applied research in the operation and management of public water supply systems. Currently, AWWARF has 793 utility subscribers and 52 consulting firm subscribers.

Applied research topics funded by AWWARF address key problems identified by the water industry, and provide essential information for impacting the development of drinking water regulations. Reports on these studies are disseminated to all subscribers on a regular basis.

Metropolitan has benefited from AWWARF's program in a number of areas including:

- the Information Collection Rule
- the Disinfectants/Disinfection By-Products (D/DBP) Rule;
- the Enhanced Surface Water Treatment Rule;
- taste and odor control strategies;
- detection and treatment of microbial pathogens; and
- consumer attitude surveys on water quality.

In addition, AWWARF has funded forty-two projects to date (a total of \$11.6 million) related to research on Cryptosporidium, a protozoan parasite which caused over 400,000 waterborne illnesses in the City of Milwaukee in early 1993. AWWARF is also committing \$10 million to DBP research over the next five years to ensure that the development of the second stage of the D/DBP Rule is based on sound science.

Metropolitan provides considerable input into AWWARF's research direction as Executive Assistant to the General Manager Duane L. Georgeson is currently the Chairman of the Executive Committee of the Board of Trustees for AWWARF. Metropolitan also has staff currently serving in an advisory capacity on 17 different projects. In addition, Associate Director of Water Quality Roy Wolfe is the chair of the Technical Proposal Review Committee, which make recommendations for distributing approximately \$800,000 per year for unsolicited or special projects. Finally, Metropolitan is a participating/cooperating utility on fifteen projects and is scheduled to receive \$133,000 in arsenic and DBP research over the next few years and a total of \$420,000 for research on ozone and PEROXONE.

Utility contributions are based on \$1.50 per million gallons delivered per year, with credits given for water purchased from subscribing wholesalers and water sold wholesale. Metropolitan contributed \$325,000 in the calendar year 1994.

Adequate funds for one-half of the proposed \$350,000 contribution have been budgeted for fiscal year (FY) 1994/95 because payments must be made on a calendar year basis. If this recommendation is approved by your Board, the other half of the proposed \$350,000 contribution would be included in the FY 1995/96 budget. The proposed contribution is categorically exempt from the California Environmental Quality Act because it involves only feasibility and planning studies.

Recommendation

**EXECUTIVE COMMITTEE AND SPECIAL COMMITTEE ON WATER QUALITY
AND ENVIRONMENTAL COMPLIANCE FOR ACTION.**

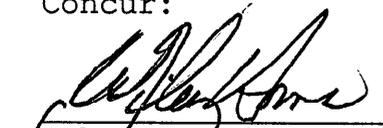
It is recommended that the Board authorize the General Manager to make payment of \$350,000 to the AWWARF as Metropolitan's contribution to fund AWWARF's applied research program during calendar year 1995.

John R. Wodraska
General Manager

Submitted by:

Mark Beuhler
Mark D. Beuhler
Director of Water Quality

Concur:


John R. Wodraska
General Manager

JSS/RLW/sdf
s:/staff/awwarf95.doc

Attachment

Attachment
MWDSC Current Involvement with AWWARF

<u>Project Title</u>	<u>Principal Investigator</u>	<u>Duration of Study</u>	<u>WQD Staff Involved</u>	<u>Monies Receiving</u>
Demonstration-Scale Evaluation of Engineering Aspects of the Ozone/Peroxide Advanced Oxidation Process	J.T. Gramith, MWDSC	Jul.'89- Jun.'95	ODP, Chemistry, Microbiology	\$140,000
Factors Affecting Disinfection By-Products Formation During Chloramination	J.M. Symons, U. of Houston	7/1/93- 1/1/96	Org. Chem. Res., Pilot plant	\$48,000
Analytical Chemistry of Arsenic in Drinking Water	A. Eaton, Montgomery Labs	Aug.'93- May '95	Inorg. Chem.	\$35,000
Strategies to Control Bromide and Bromate	Amy & Siddiqui, U. of Colorado	Nov.'94- Mar.'96	Pilot plant, Inorg. Chem.	\$25,000
Arsenic Treatability Options and Evaluation of Residuals Management Issues	Amy & Edwards, U. of Colorado	Jan.'95- Jan.'97	Pilot plant	\$30,000
Impacts of Ozonation on the Formation of Chlorination and Chloramination By-Products	P. Singer, U. of North Carolina	10/1/91- 12/31/94	S.W. Krasner	\$0
Arsenic and Removal by Enhanced Coagulation and Membranes Processes	Herring & Elimelech, UCLA	Jan.'94- Jan.'96	Pilot plant	\$0
Chloramine Decomposition Kinetics and Degradation Products in Distribution System and Model Waters	Valentine & St. Clair U. of Iowa	Dec.'93- Dec.'95	S.E. Barrett, Field Monitor.	\$0

<u>Project Title</u>	<u>Principal Investigator</u>	<u>Duration of Study</u>	<u>WQD Staff Involved</u>	<u>Monies Receiving</u>
Evaluation of the By-Products Produced by the Treatment of Groundwaters with Ultraviolet (UV) Radiation and Post-Disinfection Following Irradiation	J.P. Malley, Jr.; U. of New Hampshire	9/1/92-1/31/95	C.J. Hwang (PAC Member)	\$0
Analytical for Polymers, Associated Contaminants, and Oxidative By-Product	W.H. Glaze, U. of North Carolina	Nov.'93-Jan.'96	T.S. Tanaka (PAC Member)	\$0
Application of PCR Technologies for Virus Detection in Groundwater	-----	-----	M.H. Stewart (PAC Member)	\$0
Ozone Energy Efficiency (joint project with the Electrical Power Research Institute)	K. Rakness, Process Applications, Inc.	Jul.'94-Jul.'96	S.J. McLean (PAC Member)	\$0
Ozone Disinfection of <u>Giardia</u> and <u>Cryptosporidium</u>	G. Finch	Jul.'93-Jul.'95	R.L. Wolfe (PAC Member)	\$0
Development and Validation of Rational Design Methods of Disinfection	C. Haas Drexel U.	Jan.'93-Jul. 95	R.L. Wolfe (PAC Member)	\$0
Ultraviolet Disinfection of Groundwater	A. Margolin J.Malley, U. New Hamp.	Dec.'94-Jul.'96	R.L. Wolfe (PAC Member)	\$0
Flow Cytometry for Pathogen Detection	J. Standridge Wisconsin	Dec.'94-Jul.'96	R. DeLeon (PAC Member)	\$0
Fatty Acid Profiling for Identification of Environmental Bacteria	L. Briganti Hackensack Wtr.	Jul.'91-Mar.'95	R.L. Wolfe (PAC Member)	\$0