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METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

EXECUTIVE SECRETARY

Karen E. Dorr
EXECUTIVE SECRETARY

November 22, 1995

To: Board of Directors (Engineering and Operations Committee--Information)

From: *for* General Manager

Submitted by: *for* Edward G. Means, III
Chief of Operations

Subject: Status of the Implementation of Northridge Earthquake Assessment Report
Recommendations

Timothy J. Dorr
Michael B. Young

RECOMMENDATION(S)

For information only.

EXECUTIVE SUMMARY

The status of 71 improvement projects identified in the Northridge Earthquake Assessment Report is attached.

DETAILED REPORT

Operations presented a preliminary report of the effects of the January 17, 1994 Northridge earthquake on the District's facilities, distribution system, employees, and member agencies to the Board in March 1994. A more detailed assessment of the District's emergency response and recovery efforts followed in November 1994. It included recommendations for improvement of the District's Emergency Response Plan and related activities, equipment, communication, and coordination with member agencies.

The intent of the Report was to identify both the positive aspects of Metropolitan's emergency response and those areas requiring improvement. The Report reviewed the District's

Emergency Response Program, and briefly outlined the emergency response responsibilities of various groups within the District. Attached is a summary of the current status of the projects outlined in the Action Plan.

Each division manager reviewed the 97 recommendations contained in the Report. They identified 71 projects for improving Metropolitan's emergency response and its relationship with member agencies. A brief description of each project follows in the attached Action Plan for Emergency Preparedness/Response Projects. Some projects await implementation of recommendations in the Business Resumption Plan. Key areas of improvements that are being implemented include:

- Revising and updating the Emergency Response Plan, associated programs, and related policies and procedures;
- Expanding the Emergency Preparedness/Response Program by having Metropolitan assume a leadership role in emergency preparedness with member agencies, reactivating the MARS Steering Committee, developing mutual aid agreements, and coordinating emergency drills and exercises among member agencies and utilities;
- Developing a formal Business Resumption Plan for critical office operations;
- Purchasing equipment and supplies to facilitate the recovery process; and
- Reporting to the Board the status of the improvement project periodically.

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Attachment

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ACTION PLAN FOR EMERGENCY PREPAREDNESS/RESPONSE PROJECTS

COMMUNICATIONS	Responsible Division	% Complete	Orig. Due Date Adj. Due Date	Estimated Cost	Funding Fiscal Year	Comments
Install a dedicated "800" telephone number to provide toll-free calling for employees requiring information and or assistance following a disaster.	Operations T. Rankin	Complete	3/95	\$300 annually + usage	O&M 94/95	Installed 3/95
During a major disaster, the District could lose communications with banks and other investment agents and be unable to direct the reinvestment of funds. A program/procedure will be developed to provide for the automatic reinvestment of District funds, in the event the treasurer is unable to communicate investment instructions due to loss of communications.	Finance R. Marumoto	30%	10/95 12/96	TBD	O&M	Discussions ongoing with District's bank Part of BRCC process.
The boil water advisory issued by the Department of Water and Power did not clearly identify the affected areas following the Northridge earthquake. Establish a program which will offer assistance to the agency issuing the order, to better define boundaries of the boil water advisory.	Public Affairs Malinowski	Complete	11/94	None	N/A	Water Quality has developed the WQ Emergency Response Manual
In order to provide immediate, accurate information on water quality conditions, a toll-free 800 number will be installed and the number will be listed in appropriate publications. This telephone line will be used to provide recorded water quality information to member agencies, sub-member agencies and other entities as needed.	Water Quality R. Mann	Complete	11/94	\$300 annually + usage	O&M	(800) 354-4420 Eagle Rock has WINS
Due to commercial telephone service interruptions, key personnel were unable to contact the Gene Headquarters Emergency Call Center for reporting instructions. In order to correct this problem, an evaluation of alternative methods for emergency response personnel to receive reporting instructions will be conducted.	Operations L. Gorman	Complete	6/95	TBD	O&M	Satellite paging system purchased and distributed
The two-way radio system link to the repeater site on Mt. Lukens was inoperative due to interruption of service on commercial telephone lines. Additionally, the Jensen on-site radio base station is effective for short distances only. Installation of a digital microwave system will provide reliable alternative communications to all major District facilities.	Information Systems Leo Yu	15%	12/96	\$2,000,000	Capital	
Commercial telephone lines were blocked and/or out of service following the earthquake. Action has been initiated, through legal counsel, to have the District's essential service lines designated as a Health and Safety priority.	Information Systems Leo Yu	20%	3/95	TBD	O&M	
Evaluate portable communication requirements for DATS and other emergency response personnel.	Engineering/ Operations	25%	9/95	TBD	O&M	
To facilitate communication during an emergency, a procedure will be established for designation of radio channels for specific functions.	Operations D. Litchfield	50%	2/95	\$300	O&M	
The number of existing telephone outlets installed at the District Field Command Centers will not meet the expected demand during emergency situations. Additional telephone outlets and telephones will be installed to accommodate emergency response personnel.	Operations/ Information Systems Leo Yu	25%	6/95	\$1,000	O&M	

11/20/95

1

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ACTION PLAN FOR EMERGENCY PREPAREDNESS/RESPONSE PROJECTS

DAMAGE ASSESSMENT TEAMS (DAT)	Responsible Division	% Complete	Orig. Due Date Adj. Due Date	Estimated Cost	Funding Fiscal Year	Comments
Because some members of the Valley Area DAT were unable to immediately report to their assigned areas, a review of the procedures for DAT reporting will be conducted. This review will allow for alternates to be assigned, should a DAT member not be able to report to his/her site. Verification that all alternate DAT members live outside of the service area they are responsible for will also be included in the review. DAT members will be required to report to the designated Field Incident Command Center, upon arrival at their assigned location.	Engineering C. Sandberg	Complete	12/95	\$3,000	O&M	
In order to improve emergency response coordination between Engineering DATs and field management, regular meetings and training exercises will be scheduled with the DATs and the Area Superintendent at each site.	Engineering C. Sandberg	Complete	N/A	\$25,000	O&M	On-going
Purchase disposable cameras (time stamped for replacement) and distribute ten (10) to each facility. The cameras will be used by DAT members to record observed damage following a disaster. The photographs will also be used to help substantiate claims for disaster assistance filed with FEMA and OES.	Administrative Services N. Muehter	Complete	12/94	\$1,200	O&M	Cameras were purchased and distributed to the 7 DAT reporting sites.
DISASTER ASSISTANCE						
Establish a policy for the collection, storage, and distribution of food, clothing, and supplies donated for MWD emergency victims.	Human Resources B.Linderman	15%	6/95	TBD	O&M	
Issues arose concerning leaves of absence following the earthquake. A policy will be developed to define emergency leave.	Human Resources B. Linderman	50%	TBD	TBD	O&M	
Information will be sent to employees on an annual basis regarding services available through the District's Employee Assistance Program.	Human Resources B.Linderman	20%	12/94	TBD	O&M	
There are no current policies to deal with emergency cash donations. A formal policy will be established for the acceptance and distribution, or assignment, of cash donations offered for employee assistance and repairs.	Finance C. Portner	N/A	N/A	None	N/A	Not feasible

ACTION PLAN FOR EMERGENCY PREPAREDNESS/RESPONSE PROJECTS

EMERGENCY PREPAREDNESS	Responsible Division	% Complete	Orig. Due Date	Estimated Cost	Funding Fiscal Year	Comments
			Adj. Due Date			
Incorporate the requirements of the Standardized Emergency Management System (SEMS), as required by Senate Bill 1841, into the District's emergency response/preparedness plans and programs. Compliance is required by December, 1996.	Operations L. Gorman	On-going	12/96	TBD	O&M	Complete with the exception of revisions to the Emergency Response Plan.
Some emergency response personnel did not have knowledge of alternate routes to all critical District facilities. Provide maps identifying the locations of all District facilities, including alternate routes, and distribute to all emergency response personnel.	Operations L. Gorman	Complete	1/95	\$1,000	O&M	
Review, revise, and maintain the Emergency Response Plan and emergency preparedness programs incorporating additional personnel from Purchasing, Water Quality and other groups to facilitate improved response during emergency situations. Regularly review and revise the plan to insure that emergency call lists and emergency response staff are current. Establish procedures to provide relief shifts for emergency response staff.	Operations B. Canning	Complete*	On-going	\$75,000 annually	O&M	* Need to identify representative from Purchasing
EMERGENCY OPERATIONS CENTER						
The Sunset facility EOC is in a structure which is not sufficiently resistant to seismic motion. The EOC will be relocated to the Eagle Rock control center, the construction of a new Control Center is scheduled to be completed in January 1996. The EOC will temporarily be located at the Weymouth Filtration Plant's Incident Command Center, when the Sunset facility is vacated.	Operations D. Litchfield	Completed	3/96	Eagle Rock Control Center Project	Capital	EOC relocation from Sunset to Weymouth is complete. Eagle Rock CC to be completed late '96.
Facilities at the filtration plants are not equipped to serve as field incident command centers. Establish Field Incident Command Centers, at major District facilities, equipped appropriately to facilitate local or regional emergency response activities.	Operations D. Litchfield	75%	3/95	\$150,000	O&M	
Establish EOC procedures to advise member agencies and emergency response agencies when EOC operations have been suspended or transferred to a local field office Incident Command Center.	Operations B. Canning	Complete	3/96	\$1,000	O&M	Implemented in MARS manual

11/20/95

ACTION PLAN FOR EMERGENCY PREPAREDNESS/RESPONSE PROJECTS

EQUIPMENT/MATERIAL/SUPPLIES	Responsible Division	% Complete	Orig. Due Date Adj. Due Date	Estimated Cost	Funding Fiscal Year	Comments
Provision the EOC with the necessary supplies and equipment needed for extended operations.	Operations D. Litchfield	Complete	3/96	\$4,000	O&M	
No lodging or food services were available for emergency response personnel. Establish contracts with local vendors to provide lodging and food service for employees responding to emergencies.	Operations A. Hernandez	10%	3/95	Actual usage only	O&M	
Metropolitan's ability to mobilize emergency personnel, materials, and supplies, following the earthquake, was impacted by damage to streets, freeways and bridges. The Cessna 210 airplane will be replaced in fiscal year 95/96 and staff is evaluating the benefit of replacing the Cessna with a helicopter which could be used to improve emergency response and facilitate daily District operations.	Operations J. Brara	N/A	1/95	TBD	O&M	Evaluated and rejected
Purchase a larger wheel type back hoe to facilitate emergency excavations.	Operations A. Ubrun	N/A	9/95	\$110,000	O&M	Budget Request Denied Deferred to 95/96 FY
Provide pipeline repair crews with required monitoring, ventilation, and communication equipment.	Operations	Complete	3/95	TBD	O&M	
To facilitate the timely distribution of written notifications to appropriate agencies, install a FAX machine and personal computer with word processing software in the EOC.	Operations D. Litchfield	Complete	3/95	\$5000	O&M	Equipment recieved, software is being installed
Establish an agreement with local car rental agencies for vehicle availability following a major disaster. This agreement would insure the District "first right of refusal" in the event of a major disaster that renders the District's vehicle fleet inoperable or inaccessible.	Administrative Services K. Marchal	Complete	1/95	Actual usage only	O&M	
Install seismic restraints for desktop computer equipment at all District facilities.	AdminServices /Operations	20%	6/95 3/96	\$100,000	O&M	Operations is responsible for field facilities.
The District's check-writing system was recently converted to an electronic laser printer system and the stock of blank checks was eliminated. To allow checks to be prepared manually should the laser-printer check system suffer an outage during an earthquake, blank checks will be stored off-site.	Finance R. Marumoto	Complete	9/95	TBD	O&M	

ACTION PLAN FOR EMERGENCY PREPAREDNESS/RESPONSE PROJECTS

POLICY AND PROCEDURES	Responsible Division	% Complete	Orig. Due Date	Estimated Cost	Funding Fiscal Year	Comments
			Adj. Due Date			
Update and maintain a list of emergency response personnel's pager, cellular telephone, and radio call numbers and place the lists in the appropriate facilities.	Operations M. Smull	Complete	1/95	\$1,000	O&M	On-going
Establish procedures requiring patrollers to use earthquake inspection forms in order to improve the documentation process.	Operations	On-going	3/95	\$2,000	O&M	Ops Emergency Preparedness coordinating training with Patrollers
Emergency reporting areas were not clearly identified, and work assignments for some emergency response personnel were not well coordinated. Incorporate the Incident Command System procedures in accordance with SEMS. Establish a procedure requiring the Incident Command (Area Superintendent) to designate a back-up to remain in the field Incident Command Center at all times to direct inspection and repair operations and maintain a clear chain of command.	Operations L. Gorman	20%	12/96	\$4,000	O&M	ICS system needs to be implemented at all levels. SEMS training is being developed.
Coordinate work schedule emergency response tasks with the Incident Commander, to ensure related hazards and health/safety issues are identified and addressed up front.	Operations/ ECD J. Bell	On-going	Check List Completed	None	N/A	
Complete procedure to ensure that all incidents, where safety procedures were not followed, are investigated and documented to prevent potential future incidents, and train personnel on the new procedure.	Environmental Compliance J. Bell	75%	8/95	\$5,000	O&M	
Establish a procedure requiring employees to notify Human Resources when they change their address and/or telephone number. Human Resources will check annually to determine that employee information is current.	Human Resources I. Birch	70%	11/94	\$5,000	O&M	
Employee information, such as home telephone numbers and addresses are confidential. Establish a policy to permit designated personnel access to specific employee information during emergency situations.	Human Resources I. Birch	10%	12/94	\$1,000	O&M	
Due to the fact that the District's draft system is limited to issuance of drafts not exceeding \$500.00, an emergency draft procedure will be developed. The new procedure will allow authorized employees to issue drafts (during a declared emergency only) in excess of the current \$500.00 limit, if necessary for District requirements.	Finance C. Portner	10%	6/95 12/96	TBD	O&M	Alternate procedure is under review May increase to \$1,000.
A major disaster could cause an outage of the District's payroll system. Establish emergency payroll procedures to insure that employees can be paid if the payroll system suffers an outage.	Finance D. Furukawa	20%	12/95 12/96	None	N/A	Alternate procedure is under review

ACTION PLAN FOR EMERGENCY PREPAREDNESS/RESPONSE PROJECTS

TRAINING	Responsible Division	% Complete	Orig. Due Date Adj. Due Date	Estimated Cost	Funding Fiscal Year	Comments
Provide training on applicable safety practices and procedures for managers, supervisors, and non-field employees who are not assigned to a field facility, but may report to field facilities following an emergency.	Environmental Compliance J. Bell	10%	5/95	TBD	O&M	
Some emergency response personnel do not have an understanding of emergency reporting instructions and their assigned duties. The specific duties and responsibilities of all designated emergency response staff will be clarified and training provided, as needed, to the appropriate personnel.	Operations B. Canning AdminServ J. Cox	On-going	3/95	\$2,000	O&M	Ongoing traing with LAFD. Bulletin distributed.
Clarify the purpose of the Gene Headquarters Emergency Call Center and distribute information to all employees and post the procedures in the EOC, Operations Control Center and field Incident Command Centers.	Operations L. Gorman	Complete	1/95	\$1,000	O&M	
MEMBER AGENCIES						
Member and sub-agencies did not have sufficient resources to determine water quality conditions within their systems. Evaluate the feasibility of establishing a "mutual aid type" program to provide water quality assistance to areas impacted by the earthquake.	Water Quality J. Smith	Complete	10/95	TBD	O&M	Member Agency WQ managers have created a WQ response system.
Information regarding interconnections between agencies is limited. Evaluate the interconnections between agencies to determine the capability of "Wheeling" water during and emergency situation.	Operations	25%	TBD	TBD	O&M	
Review the EOC activation policy and Member Agency Response System (MARS) 2-way radio broadcasting procedures. Revise the procedures to facilitate the needs of Metropolitan, member agencies and other emergency response organizations, including, State Office of Emergency Service, County EOC's and other entities as needed. Schedule tests and training to familiarize other agencies with new procedures.	Operations B. Canning	On-going	6/95	TBD	O&M	
MWD will assist Member Agencies to develop a generic emergency response plan that conforms to the standardized Emergency Management System (SEMS) as required by Senate Bill 1841.	Operations L. Gorman	Complete	12/96	TBD	O&M	MWD distributed SEMS Manuals, member agencies to independently develop response plan
Expand the Emergency Preparedness program to include: Reactivation of the MARS Steering Committee; Metropolitan to assume a leadership role in coordinating emergency response activities between the District and its Member Agencies; and establish a program to annually coordinate and conduct drills and emergency exercises for emergency response personnel and Member Agencies.	Operations T. Rankin	Complete	TBD	\$100,000	O&M	
Two Member Agencies are not signatories to the MARS agreement. District representatives will meet with agencies to discuss signing the MARS agreement.	Operations T. McDonnell	10%	3/95	\$2,000	O&M	

ACTION PLAN FOR EMERGENCY PREPAREDNESS/RESPONSE PROJECTS

GENERAL	Responsible Division	% Complete	Orig. Due Date Adj. Due Date	Estimated Cost	Funding Fiscal Year	Comments
Drawings of local facilities are not up-to-date and are not available in the field. Establish a procedure to update and distribute drawings of all facilities throughout the District so that damage can be accurately evaluated and recommendations for repair be made.	Engineering C. Sandberg	5%	9/95	\$250,000	O&M	Task modified to include only the drawings essential for repair. (Approx 300,000 drwgs)
Access to District facilities was difficult due to public safety closures of streets and highways, and MWD emergency identification cards were not accepted by some law enforcement agencies. To correct this problem, the District will issue Identification Cards that will be accepted by Public Safety agencies for access to District Facilities during emergency situations. Additionally magnetic placards will be available for District vehicles denoting them as "emergency response" vehicles. Dash-board placards will be provided to personnel not assigned District vehicles, identifying them as authorized emergency responders.	Operations A. Hernandez	75%	12/95	\$20,000	O&M	Digital Camera
The District's Telecommuting Program will be expanded and modified to include: a personal computer "loaner pool" for home based work; in-house training for managers and staff; policies and procedures for telecommuting following a disaster; and new marketing strategies.	Administrative Services J. Cox	50%	6/95	\$100,000	O&M	
Following a disaster, key Finance personnel may be unable to travel to the Headquarters building to conduct financial operations. Key financial personnel will be added to the Emergency Response Plan. The emergency response teams members will report to alternate locations to insure continuity of the District's critical financial operations.	Finance C. Portner	50%	6/95 12/96	None	N/A	Appropriate personnel and locations under review
Changes in Los Angeles building requirements have prevented the use of the emergency generator which supports the District's communications systems at Cal Plaza. Administrative Services will oversee the resolution of outstanding issues and work with the Mayor's office to expedite a final inspection by the City's Building Inspector.	Administrative Services	Complete	1/95	N/A	N/A	
Not all District employees participate in the automatic payroll deposit program. In order to help facilitate the payment of employee payroll during an outage of the automatic payroll system, a program will be initiated to increase employee participation in the automatic payroll deposit program.	Finance R. Marumoto	20%	6/95 12/96	None	N/A	To be discussed with bargaining units as a meet and confer item
A formal Business Resumption Plan is being developed for critical office operations. The plan will ensure that each division establishes non-conflicting business resumption procedures and identifies the resources necessary to support critical business activities following a disaster.	Operations L. Gorman	Complete	6/95	\$250,000	O&M	
Expand the District's GIS system to provide information to aid in the recovery and /or assistance process. Additional network programs will include: reference maps and drawings; geographic; transportation; and employee information. This project will include an evaluation of Divisional needs for network access and a cost benefit analysis.	Planning/ Resources K. Reagan	8%	TBD	TBD	O&M	Developing Master Plan with other Divisions

ACTION PLAN FOR EMERGENCY PREPAREDNESS/RESPONSE PROJECTS

COMPLETED PROJECTS	Responsible Division	Cost	Funding
The Member Agency emergency call lists need to be updated more frequently. A procedure was established to update the listing on a periodic basis.	Operations	Negligible	O&M
A fuel/tube truck was purchased in order to maintain equipment and vehicle operations during emergency situations. The fuel vehicle will provide fuel for emergency repair equipment at various District facilities.	Operations	\$108,923	Emergency Out-of-Budget
There was difficulty in mobilizing weld trucks in time to install new pipe sections. An 8-pack inverted type welding machine powered by District portable generators was purchased to facilitate improved emergency response.	Operations	\$32,226	Emergency Out-of-Budget
Access bridges to piping headers on chlorine railcars fell. In order to correct this, written guidelines, insuring that bridge assemblies remain in the up position except when access to manway (chlorine piping headers) is necessary.	Operations	None	N/A
Chlorine railcars were not secured, and moved 1-2 feet on the tracks. In order to correct this problem railcar wheel chocks were purchased and will be used when the railcars are in a stationary position.	Operations	Negligible	O&M
Because power at the Jensen on-site radio base station was inadvertently disconnected, a permanent power cable was installed. This installation will insure the base station cannot be disconnected from its power source.	Information Systems	\$200	O&M
The Telecommunications emergency call roster was not up to date. The call-out roster was updated and distributed to the EOC and other appropriate emergency response personnel. A procedure was established to update the telecommunications emergency call-out roster.	Information Systems	\$500	O&M
The EOC emergency response personnel reported difficulty using the emergency telephones in the EOC. The telephone system was reconfigured so that EOC staff would have access to ROLM phones. The emergency back-up system will be utilized only if the primary telephone system fails.	Information Systems	\$1,000	O&M
Additional communication technicians were designated to report to the EOC following emergency situations.	Information Systems	None	N/A
A procedure was established requiring communication technicians to regularly inspect and test the EOC telephone systems.	Information Systems	None	O&M
A kit was prepared for designated Public Affairs personnel which contains a directory of media numbers, Member Agency FAX numbers, Director's FAX numbers and other important information.	Public Affairs	\$500	O&M
The mobile communications trailer is currently the only alternative to the Sunset EOC. A back-up EOC has been established at the Weymouth Filtration Plant.	Operations	\$25,000	O&M
Standard limits for petty cash are insufficient following a disaster. A procedure was established to increase petty cash limits at facilities impacted by an emergency while in the recovery phase.	Finance	None	N/A

11/20/95