

APPENDIX F

Raymond Basin Groundwater Storage Policies Western Unit



RAYMOND BASIN MANAGEMENT BOARD

4536 HAMPTON ROAD, P.O. BOX 686, LA CANADA (FLINTRIDGE), CA 91012-0686 (818) 790-4036

City of Alhambra
City of Arcadia
California-American
Water Company
East Pasadena
Water Company
H.E. Huntington Library
and Art Gallery

TO: Raymond Basin Parties
FROM: Board of Directors
DATE: March 12, 1993
SUBJECT: ADOPTION OF LONG TERM STORAGE PROGRAM

Kinneloa Irrigation
District

=====

La Canada Irrigation
District

Las Flores Water Company

Lincoln Avenue
Water Company

Pasadena Cemetery
Association

City of Pasadena

Rubio Cañon Land and
Water Association

San Gabriel County
Water District

City of Sierra Madre

Sunny Slope
Water Company

Valley Water Company

As its meeting of March 10, 1993, the Raymond Basin Management Board (Board) adopted revised groundwater storage policies and related matters implementing long term storage of groundwater in the Raymond Basin. This storage program is intended to enhance conjunctive use of water supplies and to mitigate the impact on water users of future water shortages. It is important to note that in addition to providing for the maintenance of water in storage, the policy also provides operational flexibility to all parties by providing a means, should operational conditions warrant, to carry over more than 10% of a party's decreed right into the succeeding year without losing the right to produce such water.

Enclosed is a copy of the newly adopted storage policies and related information. Key elements and requirements of the program are as follows:

1. The maximum storage allocated in the basin is 100,000 acre feet, with 150,000 acre feet being reserved for general operational purposes. The allocation of storage among parties is shown in the enclosed Table A, dated January 25, 1993 under the column entitled "Rounded Maximum Storage Allocation".
2. The storage program is only applicable to the Western Unit of the basin (Pasadena subarea and Monk Hill subarea).
3. Water placed in storage will be subject to a one time administrative charge (\$1.50/acre foot for 1993-94), and an estimated annual water loss of stored water (1% of total for 1993-94).

4. All or a portion of a party's storage allocation is transferrable between the party and another basin party or parties, with the terms of any such transfer of storage allocation to be as agreed upon by the participating parties.
5. Establishment of a long term storage program is not automatic. Parties must request Board approval of a storage program. If you want to participate in the long term storage program, beginning with the current fiscal year, two separate letters must be submitted to the Board for consideration at their April 14, 1993 meeting. We have enclosed samples of these two letters to assist you. Sample Letter "A" is a form of letter requesting basic approval of establishing a long term storage program for your agency. Please note that even if you are unsure whether or not you want to store water beyond your 10% carryover limit, it is advisable to submit your request to establish a storage program. Submitting your request and Board approval of your program does not mean that you are required to place water in your storage account at this time.

The second letter required to be submitted for Board consideration at the April 14 meeting is in accordance with Section 4.B. of the enclosed adopted storage policies. Enclosed is Sample Letter "B" that meets the requirements of this section.

If you have questions regarding any phase of the storage program, please contact Ron Palmer at the Board office. Please note that it is very important that the two cited letters be submitted to the Board prior to the April board meeting if you plan to participate in the storage program. We would appreciate receipt of such letters with the proper attachments by April 8 so that they can be included on the agenda and in the package that is mailed out to the Board prior to their April 14, 1993 meeting.

Enclosures:

1. Allocation of Unused Storage Capacity Among Basin Parties, with Table A
2. Raymond Basin Groundwater Storage Policies Western Unit
3. Sample Letter "A" -- Request for Approval of Long Term Storage Program
4. Sample Letter "B" -- Estimated Schedule of Production

Adopted March 10, 1993

RAYMOND BASIN MANAGEMENT BOARD
ALLOCATION OF UNUSED STORAGE CAPACITY AMONG BASIN PARTIES

1. Based on historic data and analyses and information developed and presented in the CH2M HILL "First Technical Assessment Devil's Gate Multi-Use Project", the Board hereby determines that approximately 250,000 acre feet of unused capacity is available for water storage in the Western Unit of the Raymond Basin.
2. The Board further hereby determines that of the total unused storage capacity available, approximately 150,000 acre feet of such storage capacity shall be allocated for basin-wide operational use.
3. The Board further determines that the remaining approximately 100,000 acre feet of unused storage capacity available shall be equitably allocated among Basin parties for maintenance of Long Term Storage programs. The amount allocated to each such party shall be the greater of:
 1. Three times the party's annual "Decreed Right, 1955" or 120 percent of the total water used in the Raymond Basin area by the party, as shown in Table 11, Water Use of the annual report of "Watermaster Service in the Raymond Basin, July 1, 1991 through June 30, 1992".
 2. Based on Section 3.1 above, the long term storage allocation for each basin party shall be as shown in the attached Table A dated January 25, 1993, under "Rounded Maximum Storage Allocation".

RAYMC BASIN MANAGEMENT BOARD GROUNDWATER STORAGE POLICIES -- ALLOCATION OF STORAGE RIGHTS IN RAYMOND BASIN
 TOTAL PRODUCTION BASED ON 1991-92 WATERMASTER REPORT; TABLE II. WATER USE

F:STRGALLA

TABLE A
 =====

JANUARY 25, 1993

PARTY	Decreed Right 1955	1991-92 Total Basin Area Water Use	Alt 1 Storage Alloc	Alt 2 Storage Alloc	Maximum Storage Alloc	Rounded Maximum Storage Allocation
Alhambra, City	1,031	2,980	3,093	3,576	3,576	3,600
Arcadia, City						
Pasa Sub	2,118					
S Anita Sub	3,526					
Arcadia Total	5,644	6,415	16,932	7,698	16,932	17,000
Cal Amer WC	2,299	2,230	6,897	2,677	6,897	6,900
East Pasa WC	515	468	1,545	562	1,545	1,600
Huntington L&AG	372	264	1,116	317	1,116	1,200
Kinneloa ID	516	589	1,548	707	1,548	1,600
La Canada ID	100	1,911	300	2,293	2,293	2,300
Las Flores WC	249	748	747	897	897	900
Lincoln Ave WC	567	1,798	1,701	2,158	2,158	2,200
Pasa Cem Assoc	91	59	273	71	273	300
Pasa, City of						
M Hill Basin	4,464					
Pasadena Sub	8,343					
Pasadena Total	12,807	30,666	13,392	12,827	13,392	13,400
Rubio Canon LWA	1,221	1,907	3,663	2,288	3,663	3,700
San Gabriel CWD	1,091	0	3,273	0	3,273	3,300
S Madre, City	1,764	2,332	5,292	2,799	5,292	5,300
Sunny Slope WC	1,558	95	4,674	114	4,674	4,700
Valley WC	797	2,786	2,391	3,344	3,344	3,400
Totals	30,622	55,249	91,866	66,299	95,902	96,500

"Alt 1 Storage Alloc" provides storage equal to 3.0 times a party's Decreed Right 1955.

"Alt 2 Storage Alloc" provides storage equal to Fiscal Yr 1991-92 total Raymond Basin area use, plus 20%.

Adopted March 10, 1993

RAYMOND BASIN GROUNDWATER STORAGE POLICIES
WESTERN UNIT

- 1: The policies contained herein supersede prior policy statements pertaining to storage plans for the storage of water in the Western Unit of the Raymond Basin.

2. The intent of these policies is to encourage the conjunctive use of the Raymond Basin by the parties to the Judgment. Any party who believes that they have been harmed by the storage of waters in the basin may bring their grievance to the Board. The Board will consider such grievance on an emergency basis. If the Board finds that a party has been harmed, the Board will take immediate steps to mitigate the harm. A Board decision will be rendered within 45 days of submittal of the grievance.

3. Paragraph XII of the Raymond Basin Judgment includes provisions that the Board shall have the power:
 - A. To determine the amount of storage capacity that is available in the basin from time to time for groundwater storage programs;
 - B. To allocate such storage capacity among the parties and provide for its use and the recapture of equivalent amounts of stored water.

It is the Board's position that its authority to determine storage capacity is absolute and that such storage capacity may only be allocated and used by parties to the Judgment. Consequently, storage programs undertaken for the benefit of non-parties may be accomplished only through arrangements with parties to the Judgment. The right to produce water stored for the benefit of a non-party through an arrangement with a party shall remain with the party and may not be transferred to or exercised by the non-party.

4. Long Term Storage is defined as storage held in the Western Unit of the Raymond Basin pursuant to Board approval which is over and above a party's annual allowable extraction right. Any party, pursuant to Board approval, may establish a Long Term Storage account and store water in the Western Unit as Long Term Storage. Such storage will be governed by the following:
 - A. Carryover in excess of limits set forth in the Judgment or as set by the Board may be placed into long term storage by any party. A party wanting to place excess carryover into long term storage must establish a Long Term Storage account. A request to establish a Long Term Storage account must be submitted to the Board for their consideration and approval. The request must include an operational and quantitative description of the method of implement-

Adopted March 10, 1993

ing the program, including the maximum amount of water to be stored under the program.

- B. Parties maintaining Long Term Storage accounts shall submit an annual pumping schedule showing how the stored water is expected to be produced. The schedule shall be submitted at the Board's regular meeting in April of each year and shall cover the next succeeding Watermaster year. The report may be summary in form but shall show for each subarea of the basin the anticipated amount of 1) decreed right production, including carryover and spreading credits; 2) stored water production, segregated in the same manner as reported in the annual report of Watermaster Services in the Raymond Basin. It is recognized that water supply and operational conditions during the year may cause substantial departures from the submitted schedule.
- C. The maximum amount of water that may be placed in storage by a party shall be as determined by the Board.
A party, by agreement with another party and subject to Board approval, may utilize all or a portion of the other party's unused storage allocation.
- D. Parties, by agreement with other parties and subject to Board approval, may establish storage accounts in subareas where they have no allowable extraction right. Likewise, parties may establish storage accounts for the benefit of agencies outside the basin.
- E. Changes in storage will be measured as of the end of any watermaster year. The amount of water continuously in storage during a watermaster year is defined as either the balance in storage at the beginning of the year or the balance at the end of the year, whichever is smaller. Additions to storage during the year are defined as the amount by which the end of the year gross balance exceeds the beginning of year gross balance.
- F. Gross amount placed in storage will be subject to a one time administrative charge per acre foot as established by the Board. The charge will apply to all additions to storage during the year just ended. The charge will be due and payable within 90 days after the end of the watermaster year.
- G. Amounts in storage will be subject to an annual percentage loss as determined by the Board. The loss will apply to the amount of water continuously in storage during the watermaster year. The loss will be calculated at the end of each year and will be satisfied during the following year. The loss may be satisfied from a party's allowable extraction right or by a reduction in the storage balance.

Adopted March 10, 1993

- H. The one time administrative charge and the annual loss percentage will be determined at the Board's annual April meeting. Such determinations will become effective July 1 of the succeeding watermaster year.
- I. Storage will be accounted for by subarea. Amounts placed into storage by direct recharge will be assigned to storage in the subarea in which the recharge occurred. Amounts placed into storage by in-lieu operations will be assigned to storage in the subarea in which the reduction in pumping occurred.
- J. Parties maintaining or establishing Long Term Storage accounts must submit their accounting for prior year storage activity within thirty days after the close of the watermaster year. The accounting must show how changes in storage balances related to the party's production and allowable extraction right. A party may allocate underproduction to long term storage or decreed right carryover, whichever they choose, subject to limits contained in the Judgment, or within limits set by the Board which may exceed the limits in the Judgment. Overproduction shall be charged against a party's Long Term Storage account. The accounting is subject to Board approval.

APPENDIX G

Five Tiered Rate Structure

**La Cañada Irrigation District
Water Rate Schedule (Bimonthly)
Effective as of September 2004**

<u>Consumption Use</u>	<u>Charge</u>
First 100 units	\$2.15 per unit
101 - 150 units	\$2.36 per unit
151 - 200 units	\$2.60 per unit
201 - 250 units	\$2.90 per unit
over 250 units	\$3.22 per unit

Note:
Each unit is 100 cubic feet

APPENDIX H

Water Conservation Guidelines

LA CAÑADA IRRIGATION DISTRICT WATER CONSERVATION ALERT SYSTEM

LOCAL WATER SUPPLY SITUATION

In an effort to inform our customers of the present water supply situation in the local area and to impart the important need for water conservation, La Cañada Irrigation District (LCID), together with Crescenta Valley Water District, Valley Water Company and Foothill Municipal Water District, will be initiating a water conservation alert system this summer. Our goal is to keep the local La Cañada-La Crescenta communities aware of the status of their water supply and to encourage conservation, thus increasing water supply reliability.

Foothill Municipal Water District (FMWD), which supplies the local water agencies with imported water, has recently announced that it will be operating at full capacity this summer, in order to meet local agency demands during peak periods. The reliance on imported water has steadily increased over the past six to ten years in the FMWD service area (La Crescenta, La Cañada Flintridge and Altadena). This increase in demand can be attributed to diminished local groundwater supply in the Verdugo Basin and the ever-increasing need for additional water, as numerous residential properties are redeveloped.

LCID does not anticipate being unable to meet the average water demand of its customers. However, the District may be in a situation where its ability to meet peak demands may be in jeopardy for short periods of time this summer. This might occur, if a hot weather period coincides with mechanical failure on our supplier's system or problems within our own system. Summer peak demands are caused by outdoor water use, and this is where water conservation efforts should be focused.

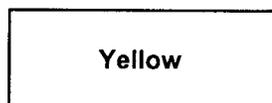
THE ALERT SYSTEM

The key to avoiding any water interruptions, therefore, is increasing customer awareness of our supply situation in order to reduce the peak demands, when necessary. The District has created a voluntary water conservation alert system whereby the colors of green, yellow, and red will indicate supply status and the requested customer response as shown below.



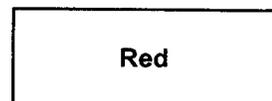
NORMAL WATER CONSERVATION ALERT

FOLLOW VOLUNTARY WATER CONSERVATION GUIDELINES
MINIMIZE INDOOR WATER USE



HIGH WATER CONSERVATION ALERT

ODD/EVEN WATERING DAYS
MINIMIZE INDOOR WATER USE



CRITICAL WATER CONSERVATION ALERT

CURTAIN OUTDOOR WATER USE TO A MAX OF 2 DAYS A WEEK
MINIMIZE INDOOR WATER USE

Water Conservation Alert !

A color-coded system will be displayed on a flag and a sign at our District office at 1443 Foothill Blvd. and at other locations in the District, such as the Sheriff's Station and the library; there will also be newspaper coverage. Water is essential to our lives and businesses, and it takes everyone's help to conserve and protect this natural resource.

We hope that you will be able to assist us in our efforts to conserve water and ensure adequate supply for all of our residents by following the guidelines set for each level of alert and exercising awareness when using water inside and outside of your residence or business. Please feel free to contact us should you have any questions.

Voluntary Water Conservation Guidelines:

1. Adjust sprinklers and irrigation times to avoid overspray, runoff and waste; and reduce the frequency of landscape irrigation cycles
2. Avoid landscape irrigation between the hours of 9:00 a.m. and 5:00 p.m. and on windy days
3. Reduce the amount of turf and install new drought tolerant landscaping, low water-using trees and plants, and efficient irrigation systems
4. Shut off decorative fountains, unless a water recycling system is used
5. Do not hose down driveways, patios, sidewalks, and other paved surfaces, except for health or sanitary reasons
6. Install pool and spa covers to minimize water loss due to evaporation
7. Do not allow the hose to run while washing any vehicle; use a bucket or a hose with an automatic cut-off valve
8. Observe any waste of water from surrounding properties, or in the community, and report such water waste to the District for follow-up (818) 790-6749

Minimizing Indoor Water Usage:

1. Retrofit indoor plumbing fixtures with low-flow devices
2. Check faucets, toilets and pipes, both indoor and outdoor (including house service laterals and sprinkler piping) for leaks and repair them.
3. Wash only full loads of dishes or clothes in automatic washers, and don't let indoor faucets run for any longer than absolutely necessary
4. Turn water system off when leaving property unoccupied for an extended period of time
5. Do not leave faucet water running while brushing teeth and minimize length of showers

Watering Days For High or Critical Alerts:

Odd / Even

For each customer account, odd-day outdoor water use is requested when the last digit of the customer's street address is odd and the calendar date is odd (e.g. 1,3,5,7.....31) in any particular month. Even-day outdoor water use is requested when the last digit of the customer's street address is even and the calendar date is even (e.g. 2,4,6,8.....30) in any particular month.

Twice per Week

Reducing outside water and irrigation use to two days out of seven should be enough to sustain most landscapes for a short period while helping greatly to reduce peak demands on the water distribution system.

APPENDIX I

Emergency Response and System Chlorination Plan

**LA CAÑADA
IRRIGATION DISTRICT**

**EMERGENCY
RESPONSE
&
SYSTEM
CHLORINATION
PLAN**

OCTOBER, 2004

TABLE OF CONTENTS

INTRODUCTION	1
EMERGENCY CHAIN OF COMMAND.....	3
NATURAL DISASTERS	3
ACTION PLANS	
CASTLE ROAD FACILITY - BREACH	5
WATER SYSTEM CONTAMINATION THREAT FOR ALL SITES	5
POWER OUTAGE	6
SCADA SYSTEM FAILURE	7
PROCEDURES FOR HANDLING RUPTURED RESERVOIRS	7
PROCEDURES FOR HANDLING MAJOR WATER MAIN BREAKS	8
EMERGENCY CHLORINATION PROCEDURES	8
EMERGENCY RESPONSE PLAN TRAINING	9
APPENDIX A	
EMERGENCY CHLORINATION PLAN SCHEMATIC	A-1
EMERGENCY CHLORINATION BY PRESSURE ZONE	A-2
APPENDIX B	
CONSUMER ALERT DURING WATER OUTAGES OR PERIODS OF LOW PRESSURE.....	B-1
SAMPLE BOIL WATER ORDER	B-2
CANCELLATION OF BOIL WATER ORDER	B-3
SAMPLE DO NOT DRINK YOUR TAP WATER NOTICE	B-4
CANCELLATION OF UNSAFE WATER ALERT	B-5
APPENDIX C	
WATER QUALITY EMERGENCY NOTIFICATION PLAN	C-1
DISTRICT STAFF TELEPHONE NUMBERS	C-2
EMERGENCY TELEPHONE NUMBERS	C-2
RBMB EMERGENCY PREPAREDNESS CONTACT NUMBERS	C-3
AGENCY CONTACT LIST	C-4
RBMB PUMPING AND REPAIR EQUIPMENT	C-5
LA COUNTY FIRE DEPARTMENT CONTACT NUMBERS	C-6
SOUTHERN CALIFORNIA EDISON CONTACT NUMBERS	C-7
EDISON SERVICE ACCOUNTS INFORMATION.....	C-8
RBMB EMERGENCY PREPAREDNESS CONTRACTORS LIST	C-9
RBMB EMERGENCY PREPAREDNESS COMMUNICATIONS SYSTEMS	C-11
APPENDIX D - WATER SYSTEM SCHEMATICS AND DIAGRAMS	
DISTRICT OFFICE AND SHOP.....	D-1
PUMP AND PRESSURE ZONE LAYOUT	D-2
PICKENS CANYON SYSTEM CONTROL VALVES.....	D-3
RECEIVING RESERVOIR CONTROL VALVES	D-4
RESERVOIRS NO. 2 AND 2A CONTROL VALVES.....	D-5
RESERVOIR NO. 4 AND 4A CONTROL VALVES.....	D-6
RESERVOIR NO. 6 CONTROL VALVES	D-7
RESERVOIR NO. 7.....	D-8
RESERVOIR NO. 8 CONTROL VALVES	D-9
RESERVOIR NO. 9 CONTROL VALVES	D-10

LA CAÑADA IRRIGATION DISTRICT

EMERGENCY RESPONSE PLAN

INTRODUCTION:

An Emergency Response Plan (ERP) is a documented plan that describes the actions a Community Water System would take in response to various major events. These major events include natural disasters as well as man-made disasters, including terrorist attacks. The Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Bioterrorism Act) requires that "all community water systems serving more than 3,300 population (1,000 service connections) shall prepare or revise an Emergency Response Plan that incorporates the results of Vulnerability Assessments (VA) that have been completed. The updated Emergency Response Plan shall be certified to EPA within 6 months of completing the Vulnerability Assessment."

This ERP for La Cañada Irrigation District (District) has been updated specifically to include the results of the Vulnerability Assessment completed in June 2004. The results of the VA include the identification of facilities deemed critical to the District's water utility operations, as well as include recommendations on facility upgrades and security policies and procedures in order to reduce the risk associated with an attack on a critical facility. This ERP contains action plans for scenarios deemed to be detrimental to the District's water utility operations and outlines procedures that water utility personnel should take in order to respond effectively to any emergency and return the water utility to normal operations.

This ERP applies to all District water utility personnel under any case of emergency that is directly stressing the water utility. Supervisors should review this plan with their employees at least annually. Various disaster situations should be discussed so that each individual will know what to do for a variety of situations. It is important for each person to act immediately in carrying out their respective assignments without the need for specific orders.

This document contains the following information:

- The emergency chain-of-command is defined and outlined.
- Policies and procedures are defined for natural disasters and for after-hours/weekend emergencies.
- Action plans are defined for facility breach, water system contamination, power outage, SCADA system failure, rupture of reservoirs, major water main breaks, and emergency chlorination.
- Emergency Response Plan Training Procedures

- Internal/external notification lists and phone numbers
- Water Quality Emergency Notification Plan
- Sample consumer notices that are to be issued in the event of a water emergency.
- Water system maps and diagrams

LA CAÑADA IRRIGATION DISTRICT

EMERGENCY RESPONSE PLAN

EMERGENCY CHAIN OF COMMAND:

The District Manager will be in charge, during an emergency. He will delegate responsibilities to District field personnel and office staff, as needed. The Field Superintendent and Office Manager will be next in command, should the Manager be unavailable.

The Field Superintendent and his staff will be in charge of water production and distribution, as well as emergency repairs, system shutdowns and arranging for contract assistance, should it be required. The Manager or Field Superintendent will oversee the field emergency operations and determine repair work on a priority basis. The Manager or Field Superintendent will be responsible for ordering major system shutdown, and notifying the DOHS concerning water quality problems. The release of information to District customers, the City of La Cañada Flintridge and media outlets regarding the possibility of contaminated drinking water supply shall be the Manager's responsibility. The office staff, under the Office Manager's direction, will handle the direct communication with customers, law enforcement, City authorities and media concerning major water outages, contamination and general information concerning water service throughout the system.

The District office will function as the command center, during a water system emergency and will handle all communication with field staff and management, utilizing the District's radio system.

NATURAL DISASTERS (EARTHQUAKES):

During Office Hours:

- 1) Check the immediate office and shop area for injuries and damage.
- 2) If building structure is unsafe to occupy, move outdoors to a safe location and set up a command post, where staff can operate.
- 3) All utilities serving office and shop facility will be checked to determine damage, if any. See the diagram of the office/shop for location of power disconnects, gas and water shut-off valves and fire extinguishers.
- 4) Everyone should check with their families to determine if there are problems. Those who are experiencing emergencies will be allowed to leave to take care of personal problems.

- 5) If electrical power is out, and the office/shop is unusable, the on site portable generator will be put into operation to provide minimum power to operate lighting, telemetering, phone and radio communications.
- 6) An inspection crew will be deployed to check general conditions throughout system. At each site, a check of facilities will take place and written comments will be made on the Emergency Inspection Report. The field crew will report by radio, if possible, any problems discovered in the field to the office command post, etc.
- 7) If power has failed throughout the system, the District pumps should be operated on standby generator power and should remain so, until utility power is restored.
- 8) The District's crew will attempt to respond to the most critical and hazardous conditions first. They will attempt to contain and control the emergency situation at a reservoir, pump station or large main break first. (See appropriate Action Plan section.)
- 9) If the reservoir and/or main line rupture creates a health hazard, emergency notification will be made via the media and/or local law enforcement, otherwise a door to door notification that "water may not be safe for human consumption and boiling water is necessary" will be instituted.
- 10) If a long term power outage is evident, the District will acquire additional diesel fuel to maintain generator operation at each site. (Prior arrangements made with local Union Oil dealer to pump fuel from station storage, if needed.)
- 11) If telephone service is not disrupted, the available office staff will log reports of system leaks and customer complaints.
- 12) The District will assist other utility companies and agencies within the area, if feasible.

After Hours and Weekend Emergency Response Plan:

- 1) After the individuals' families are safe and situated, all field employees should report to the District office immediately.
- 2) The first person to arrive at the office/shop will check gas, water, and electrical systems for damage. (See the diagram of the office/shop for locations of shut-off valves, power disconnects and fire extinguishers.)
- 3) A command post will be set-up in a safe location in the office/shop or outside the buildings, where information can be received.
- 4) If power is out and the office/shop are useable, the on site portable generator will be put into operation to provide power to operate lighting, telemetering, phone

- and radios communication equipment. Mobile radios and cellular phones will be used for communications.
- 5) An inspection crew will be deployed, as outlined in item (6) on page 4 of this plan.
 - 6) A staff member will remain at the office/command post to receive and give information to field crews.
 - 7) The field crew will attempt to respond to the most critical conditions first.
 - 8) If telephone service is not disrupted, we will contact remaining District staff for assistance as needed.

ACTION PLANS:

Castle Road Facility - Breach:

- 1) Notify District staff and L.A. County Sheriff's Office.
- 2) Shut down station and isolate damaged portion of system, if possible.
- 3) Notify Foothill Municipal Water District (FMWD) regarding station's operating status.
- 4) Avoid disturbing areas at site that may have been intentionally damaged (possible crime scene).
- 5) Begin repairs at site, as soon as possible
- 6) (Major Damage) Alert office of possible systemwide outage and need for notification of DOHS, City of La Cañada Flintridge and media to mandate water use restricted to inside water use only.
- 7) Determine backup supply to maintain water service, if possible - Zone II as source.
- 8) Release water from Receiving Reservoir into Los Amigos Zone I Reservoir to avoid outages.
- 9) Request additional supply of water from FMWD at Hampton Road Station and No. 1 & 6 Wells to offset loss of source and provide support on east side of system.
Note: If a similar breach occurs at the District's Hampton Road facility the response would be the same. The only change would be that additional water supply from FMWD would take place at the Castle Road facility to offset the loss of service at Hampton Road.
- 10) Also see Emergency Procedures for Handling Ruptured Reservoirs.

Water System Contamination Threat for All Sites:

- 1) Notify District staff
- 2) Record all information regarding threat
- 3) Avoid disturbing site, if threat warning turns out to be credible.
- 4) If there is no evidence of actual system contamination and the threat warning can be explained,

take no further action and return to normal operation.

- 5) If threat warning can not be explained begin threat decision process.

Stage 1 - Is the Threat Possible?

- a) Notify local law enforcement
- b) Notify Dept. of Health Services
- c) Evaluate threat warning & make decisions in consultation with Dept. of Health Services & local law enforcement.
- d) Prepare additional notification lists, if the situation escalates to Stage 2.
- e) If the threat is not possible, return to normal operations. Otherwise, proceed to Stage 2.

Stage 2 - Is the Threat Credible?

- a) Activate notification
- b) Evaluate whether the threat is credible in consultation with assisting agencies
- c) Visually inspect physical evidence & determine whether there is a change in normal system operating parameters (i.e. chlorine residuals, turbidity, odor, color, pH, etc.).
- d) Conduct actions & testing as recommended by monitoring & sampling experts.
- e) If the Threat is not credible, return to normal operations. Otherwise, proceed to Stage 3.

Stage 3 - Has the Incident Been Confirmed?

- a) Initiate full ERP activation
- b) Follow State Incident Command System.
- c) Isolate portion of system or backflush.
- d) Shut down system, if obvious or confirmed contamination warrants.
- d) Issue public notice & issue follow-up media press releases.
- f) Continue sampling & water monitoring.
- g) Assess need to remediate storage tanks

Power Outage:

- 1) Notify all District staff of power outage status.
- 2) Determine facilities effected by power failure
- 3) Check each site that is scheduled to be operating to determine if standby generators are operating properly.
- 4) Check fuel levels at each generator for adequate supply.
- 5) Communicate with SCE to verify outage problem and estimated time when service will be re-established.

- 6) If necessary, field staff will move portable 400 kw unit to Hampton Road Station or Well No. 6 to provide backup power to operate these sites.
- 7) When power is re-established, field staff will check all sites to determine if normal operation has taken place and generators are back in standby status.

SCADA System Failure:

- 1) Initial check of office SCADA System equipment to determine if system needs to be rebooted. Check to be sure that electrical power is available.
- 2) If electricity is on, proceed with rebooting the SCADA computer terminal.
- 3) If the SCADA System can not be made operational, then immediately call Byrd Industrial Electronics at (909) 985-9191.
- 4) Begin checking the individual pump stations and reservoir sites to determine if the pumps are operating and if reservoir levels are correct. Write down the status at each site and the time when each site was checked.
- 5) Return to office with system information and attach it to the Daily Operations Report.
- 6) Notify the Manager or Field Superintendent of the system status.
- 7) Regular facility checks, as described in item (4) above will be necessary at a minimum of every four hours, until the SCADA System has returned to normal operation.

Procedures for Handling Ruptured Reservoirs:

- 1) Turn off booster pump that pumps water into ruptured reservoir. (See Pumping and Pressure Zone Layout)
- 2) Close necessary main line gate valves to restrict water flowing to ruptured reservoir (See Reservoir Site Plans)
- 3) If possible, pump water from ruptured reservoir to another reservoir. Use portable generator, if power is not available. (Make sure that the reservoir receiving the pumped water is not ruptured.)
- 4) If you cannot pump to another reservoir and the rupture is causing damage to private property, open the reservoir drain valve and drain the water to the street, after closing the main inlet-outlet valve.

Procedures for Handling Major Water Main Breaks:

- 1) Determine the location of the major main line break and try to isolate the specific section of main by closing down the main gate valves within the given area.
- 2) Breaks in main pump lines should be isolated, if possible, by closing down the gate valves and attempting to reroute water flows around the rupture. Avoid shutting down any main lines that are providing fire suppression
- 3) Major main line breaks that could drain a District reservoir in a short period of time will require that the reservoir be isolated from the system by closing the main reservoir inlet/outlet valves.
Note: Certain conditions must be quickly and accurately analyzed, such as fire suppression and public safety, before a reservoir can be isolated.

Emergency Chlorination Procedures:

Should the system require emergency chlorination, 1" taps are available on the discharge piping at all pumping facilities, as shown on the Emergency Chlorination Plan and Emergency Chlorination by Pressure Zone.

- 1) Trailer mounted gas chlorination equipment is available for emergency use from Foothill Municipal Water District.
- 2) All District reservoirs can be quickly and easily hand chlorinated, should it be required.
- 3) A stock of liquid 12.5% chlorine solution in one gallon containers is stored at the Receiving Reservoir and in the District shop. Eight gallons of liquid chlorine will provide approximately a one part per million dosage of disinfectant in one million gallons of water.

La Cañada Irrigation District
Emergency Response Plan Training

All water utility staff must be aware of their duties and responsibilities in the event of an emergency. Training can include briefing sessions, classroom sessions, or mock exercises. Refresher training should be done on a regular basis. Drills and exercises that challenge the information in the ERP, such as tabletop workshops or functional exercises, should be conducted at least annually. Examples of training sessions are presented below:

- **Orientation Sessions:** Orientation sessions work well for basic instruction and explaining ERP procedures. Written tests may be employed to ensure some level of comprehension by the attendees.
- **Table-Top Workshop:** Table-top workshops involve developing scenarios that describe potential problems and provides certain information necessary to address the problems. The idea is to present staff and emergency response officials with a fabricated event, have them verbally respond to a series of questions, and then evaluate whether the responses match what is written in the ERP.
- **Functional Exercises:** The functional exercise is considered the most effective training tool, next to a real emergency, because a team of simulators is trained to develop a realistic major event. By using a series of pre-scripted messages, the simulation team sends information in to personnel assigned to carry out the ERP procedures. Both the simulators and personnel responding to the simulation are focused on carrying out the procedures to test the validity of the ERP.
- **Full Scale Drills:** These are the most costly and time-consuming training programs, but can be extremely effective. In a full-scale drill, emergency response personnel and equipment are mobilized to a scene, an emergency scenario is presented, and they respond as directed by the ERP.

The District will provide new employees with a copy of the ERP during the initial meeting for study. A second meeting will be scheduled and questions will be asked regarding the ERP to determine whether or not the new employee understands the ERP and how it will be utilized in an emergency, if necessary. Changes or updates to the ERP will be distributed to each employee for review and will be presented and reviewed with the entire staff at a special meeting. Copies of the District's ERP are located in the District office and the District shop. The District Manager will also have a copy in his possession at all times. The office and field staff will review the ERP annually or more frequently, as necessary. Field training sessions will be held annually with

all outside personnel participating. This session will provide a hands-on exercise to demonstrate the entire system operation and steps that would be required to be taken in the various types of emergencies that can occur. The District participates each year in area-wide emergency training drills, directed by the City of La Cañada Flintridge. These drills generally involve all local water agencies, fire, sheriff, other utilities, local hospitals, schools and the Red Cross. Table-top exercises and actual field events are also included.

APPENDIX J

Water Shortage Contingency Ordinance

CERTIFIED COPY OF RESOLUTION
LA CANADA IRRIGATION DISTRICT

I, DOUGLAS M. CAISTER, Secretary of La Canada Irrigation District, a CALIFORNIA Corporation, hereby certify that the following is a true and correct copy of the Resolution duly adopted by the Board of Directors of said Corporation at a meeting thereof duly held on the eleventh day of October, 2005, at which meeting a quorum of said Board was at all times present and acting; and that said Resolution has not been modified or rescinded and is at the day of this Certificate in full force and effect:

2005:10 URBAN WATER MANAGEMENT POLICY:

The Board reviewed the Water Shortage Contingency Policy to be incorporated into the District's Urban Water Management Plan (UWMP) presently being prepared by Stetson Engineers, Inc. A general discussion was held concerning the Water Shortage Contingency Policy and on motion duly made, seconded and unanimously approved, the following resolution was adopted:

WHEREAS, La Cañada Irrigation District (LCID) is a public water agency empowered to provide domestic water supply and fire protection within its boundaries, in the City of La Cañada Flintridge; and

WHEREAS, LCID is dependent upon imported water from Foothill Municipal Water District, a wholesale water agency, to provide 90% of the water LCID delivers to its customers; and

WHEREAS, any curtailment of the imported water supply to LCID, due to drought or other unforeseen conditions, would require a reduction of water consumption by at least 10 percent in order to protect and conserve the public water supply and lessen the demand on remaining water in storage; and

WHEREAS, La Cañada Irrigation District has the power and authority to adopt and enforce water conservation measures within its district boundaries pursuant to the Water Code of the State of California.

NOW, THEREFORE, the Board of Directors of La Cañada Irrigation District resolves as follows:

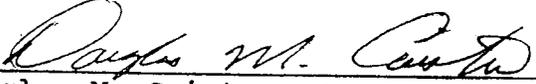
- 1) In the event of a water shortage, it will be necessary and in the best interests of the water users within LCID's service area to conserve and protect existing water supplies against waste and unreasonable uses by implementing water conservation measures to reduce consumption by at least 10 percent.
- 2) A phased program beginning with voluntary measures to reduce consumption will best achieve the goal of conserving the water supply without causing unnecessary adverse economic consequences.
- 3) If voluntary measures do not achieve the goal of a ten percent reduction in water use, or if a severe drought

condition is declared by the Metropolitan Water District of Southern California, the Board will consider the adoption of a mandatory water conservation program. The staff and legal counsel are directed to prepare such a program for Board consideration.

- 4) The following measures will be requested to be taken by all water users within LCID's service area with the goal to reduce individual water use by at least 10 percent.
 - A. Do not hose down driveways, patios, sidewalks or other paved areas. Use a broom or blower instead.
 - B. Install water saving devices on plumbing fixtures.
 - C. Where possible, install and use spa and swimming pool covers to reduce evaporation.
 - D. Check faucets, toilets, and pipes, both indoors and outdoors for leaks and repair them immediately.
 - E. Irrigate lawns and landscaping before 10:00 a.m. or after 5:00 p.m.. Do not overwater.
 - F. Adjust sprinklers and irrigation systems to avoid overspray, run-off, and waste. Avoid watering in windy weather.
 - G. Freeway landscaping, parks, school grounds, and golf courses, should not be watered between the hours of 10:00 a.m. and 5:00 p.m. Reclaimed water should be used whenever possible.
 - H. Do not allow the hose to run while washing the car. Use a bucket or an automatic cutoff on the hose.
 - I. When installing new residential landscaping, plant low water demand trees and plants. Avoid large turf areas, which consume large quantities of water.
 - J. Developers of commercial and industrial properties are requested to use low water use landscaping plants and designed to provide for permanent water conservation.

5. In the event of a water shortage, the Board hereby directs staff to increase its public information and education measures by providing water conservation informational material to the public.

IN WITNESS WHEREOF, the undersigned has executed this Certificate and Affixed the Corporate Seal of said Corporation this fourteenth day of October, 2005.



Douglas M. Caister, Secretary
La Canada Irrigation District

APPENDIX K

Metropolitan Water District of Southern California's Draft May 2005 Regional Urban Water Management Plan

DRAFT

**THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
REGIONAL URBAN WATER MANAGEMENT PLAN**

Prepared by:

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
Water Resource Management Group
700 North Alameda Street
Los Angeles, CA 90012

and

Economic Insights
A & N Technical Services, Inc.
M-Cubed
The Writing Company

May 2005

**Supply Capability and Projected Demands for Average,
Single Dry and Multiple Dry Years**

Table II-4
Multiple Dry-year Supply Capability¹ & Projected Demands²
 (Repeat of 1990-92 Hydrology)
Supply Capability¹ & Potential Reserve or Replenishment
 (acre-feet per year)

	2005	2010	2015	2020	2025	2030
<u>Current Supplies</u>						
Colorado River	742,000	885,700	1,042,700	1,135,200	1,142,700	
California Aqueduct	1,310,300	1,396,100	1,166,100	1,140,300	1,140,300	
In-Basin Storage	455,300	531,700	530,400	513,000	499,200	
<u>Supplies Under Development</u>						
Colorado River ²	0	0	150,000	114,800	107,300	
California Aqueduct	0	175,000	370,000	370,000	370,000	
In-Basin Storage	0	89,000	200,000	200,000	200,000	
Maximum Supply Capability¹	2,507,600	3,077,500	3,459,200	3,473,300	3,459,500	
Total Demands on Metropolitan³ (Firm & Replenishment)	2,245,200	2,175,600	2,320,900	2,534,100	2,688,500	
Potential Reserve & System Replenishment Supply	262,400	901,900	1,138,300	939,200	771,000	

1 -- Represents expected supply capability for resource programs.

2 -- Total Colorado River Aqueduct Deliveries limited to 1,250,000 acre-feet per year.

3 -- Based on SCAG 98 RTP, SANDAG 1998 forecasts and member agency projections of local supplies.

Table II-5
Single Dry-year Supply Capability¹ & Projected Demands²
 (Repeat of 1977 Hydrology)
Supply Capability¹ & Potential Reserve or Replenishment
 (acre-feet per year)

	2005	2010	2015	2020	2025	2030
<u>Current Supplies</u>						
Colorado River	742,000	885,700	1,042,700	1,135,200	1,144,700	
California Aqueduct	1,017,300	1,017,300	842,300	842,300	842,300	
In-Basin Storage	730,400	790,000	787,800	757,900	734,300	
<u>Supplies Under Development</u>						
Colorado River ²	0	0	150,000	114,800	107,300	
California Aqueduct	0	175,000	370,000	370,000	370,000	
In-Basin Storage	0	89,000	200,000	200,000	200,000	
Maximum Supply Capability¹	2,489,700	2,957,000	3,392,800	3,420,200	3,396,600	
Total Demands on Metropolitan³ (Firm & Replenishment)	2,169,300	2,096,100	2,266,500	2,487,900	2,618,700	
Potential Reserve & System Replenishment Supply	320,400	860,900	1,126,500	932,300	777,900	

1 -- Represents expected supply capability for resource programs.

2 -- Total Colorado River Aqueduct Deliveries limited to 1,250,000 acre-feet per year.

3 -- Based on SCAG 98 RTP, SANDAG 1998 forecasts and member agency projections of local supplies.

Table II-6
Average Supply Capability¹ & Projected Demands²
Supply Capability¹ & Potential Reserve or Replenishment
(acre-feet per year)

	2005	2010	2015	2020	2025	2030
<u>Current Supplies</u>						
Colorado River	742,000	885,700	1,042,700	985,200	992,700	
California Aqueduct	1,800,800	1,803,200	1,743,900	1,734,900	1,725,900	
In-Basin Storage	0	0	0	0	0	
<u>Supplies Under Development</u>						
Colorado River ²	0	0	0	0	0	
California Aqueduct	0	45,000	200,000	200,000	200,000	
In-Basin Storage	0	0	0	0	0	
Maximum Supply Capability¹	2,542,800	2,733,900	2,986,405	2,920,100	2,918,600	
Total Demands on Metropolitan³ (Firm & Replenishment)	2,169,300	2,096,100	2,266,500	2,487,900	2,618,700	
Potential Reserve & System Replenishment Supply	373,500	637,800	720,100	432,200	299,900	

1 -- Represents expected supply capability for resource programs.

2 -- Total Colorado River Aqueduct Deliveries limited to 1,250,000 acre-feet per year.

3 -- Based on SCAG 98 RTP, SANDAG 1998 forecasts and member agency projections of local supplies.

II.3

Beacu
will o
staket
group
water
makir

Public
of the
data t
agenc
partic
agenc
comm

Stages of Action Plan

II.4 Water Surplus and Drought Management Plan

In April of 1999, Metropolitan's Board of Directors adopted the Water Surplus and Drought Management Plan (WSDM Plan). This plan will provide policy guidance for management of regional water supplies to achieve the reliability goals of Southern California's Integrated Resources Plan (IRP). Through effective management of its water supply, Metropolitan fully expects to be 100 percent reliable in meeting all non-discounted non-interruptible demands throughout the next ten years.

Unlike Metropolitan's previous shortage management plans, the WSDM Plan recognizes the link between surpluses and shortages, and it integrates planned operational actions with respect to both conditions. The WSDM Plan continues Metropolitan's commitment to the regional planning approaches initiated in the IRP.

The benefits of Metropolitan's contingency planning approach have been evident in recent years. Of particular note are the region's successes in dealing with operational constraints such as the rehabilitation of the Colorado Aqueduct in 2003, the disruption to Delta diversions caused by the Jones Tract flooding in 2004, and the strong position of local storage despite five years of dry conditions.

WSDM Plan Development

Metropolitan and its member agencies jointly developed the WSDM Plan during 1998 and 1999. This planning effort included more than a dozen half-day and full-day workshops and more than three dozen meetings of Metropolitan and member agency staff. The result of the planning effort is a consensus plan addressing a broad range of regional water management actions and strategies.

WSDM Plan Principles and Goals

The guiding principle of the WSDM plan is to manage Metropolitan's water resources and management programs to maximize management of wet year supplies and minimize adverse impacts of water shortages to retail customers. From this guiding principle come the following supporting principles:

- Encourage efficient water use and economical local resource programs.
- Coordinate operations with member agencies to make as much surplus water as possible available for use in dry years.
- Pursue innovative transfer and banking programs to secure more imported water for use in dry years.
- Increase public awareness about water supply issues.

The WSDM plan also declared that, should mandatory import water allocations be necessary, those allocations would be calculated on the basis of need, as opposed to any type of historical purchases. The WSDM plan contains the following considerations that would go into an equitable allocation of imported water:

- Imp
- Inv
- Pop
- Cha
- Par
- Inv

Ensuri

As a re
Metro
reliabil
Metro
period:
possibl

Local

Metro
yield o
withou
betwe
conser
deman

Colora

Under
service
studie
Progra
the dro
approx

State

Metro
Curre
progra
progra
Water
reserv

¹This a
Count

WATER

- Impact on retail consumers and regional economy;
- Investments in local resources, including recycling and conservation;
- Population growth;
- Changes and/or losses in local supplies;
- Participation in Metropolitan's Non-firm (interruptible) programs;
- Investment in Metropolitan's facilities.

Ensuring Regional Reliability

As a result of the investments made in conservation, water recycling, storage, and supply, Metropolitan has identified a resource management plan that should result in 100 percent reliability for non-discounted non-interruptible demands through 2025. A key element of Metropolitan's strategy is to store surplus supplies during wet periods for use during drought periods. The resource management strategy and supply additions to Metropolitan that make this possible include:

Local Resources

Metropolitan has co-funded more than 74 local supply projects that provided an annual contract yield of 118 thousand acre feet (taf) in 2004. Projects developed by the member agencies without Metropolitan funding provided an additional 155 taf, for a total of 273 taf. In addition, between 1990 and 2003 Metropolitan and its member agencies invested a total of \$290 million in conservation programs. Metropolitan estimates that conservation reduced the region's 2003 demand by 654 taf, compared to the 1996 IRP goal of 571 taf.

Colorado River Region

Under existing agreements, over 800 taf¹ of water is currently available to Metropolitan's service area in dry years from the Colorado River region. Additional programs currently being studied include the Lower Coachella Storage Program. Implementation of the Hayfield Storage Program and the Chuckwalla Storage Program is currently on hold, pending the conclusion of the drought in the Colorado River Basin. When fully operational, these could supply approximately 450 taf additional dry-year water to the region.

State Water Project Region

Metropolitan has continued to explore out of regions water storage and transfer programs. Current water storage agreements provide for dry year supplies of almost 400 taf. Transfer programs provide additional water, but this amount varies from year to year. Additional programs that could supply 125 taf are under development. In addition, Metropolitan's State Water Project Contract allows it to store up to 220 taf of carryover water in SWP storage reservoirs.

¹This amount includes 30 taf of the eventual 200 taf transfer agreement between San Diego County Water Authority and the Imperial Irrigation District.

Regional Storage

Metropolitan has undertaken a number of projects to increase the level of in-region water storage to compensate for the reduced availability of its imported water supplies. The key projects are summarized below:

- Diamond Valley Lake was filled for the first time by early 2002. Completion of this project added 800 taf of storage to Metropolitan's mix of resources, of which 400 taf are available for use as regulatory/carryover storage.
- In 1995, Metropolitan entered into an agreement with Calleguas MWD to jointly develop the North Las Posas Conjunctive Use Program. Phases 1 and 2 of this program are expected to be operational in-line by 2005, with facilities to manage the full 210 taf of storage due to be operational by 2010.
- With the help of state Proposition 13 grant funds, Metropolitan and its member agencies have expanded groundwater storage in the region. The five contractual storage programs signed to date will provide 181 taf of storage. Three additional contracts² currently being finalized will provide an additional 8,900 af, for a total of approximately 190 taf of dry-year storage capacity.
- Metropolitan is also continuing to work with its member agencies in the Pasadena area to develop an additional 66 taf of storage in the underlying Raymond Basin.

Together, these programs will provide capability to store 866 taf of supplies for dry years.

The WSDM Plan guides the operations of these resources to ensure short- and long-term regional reliability. It identifies the expected sequence of resource management actions Metropolitan will execute during surpluses and shortages to minimize the probability of severe shortages and eliminate the possibility of extreme shortages and shortage allocations.

Surplus and Shortage Stages

The WSDM Plan distinguishes between *Surpluses*, *Shortages*, *Severe Shortages*, and *Extreme Shortages*. Within the WSDM Plan, these terms have specific meanings relating to Metropolitan's capability to deliver water to its customers.

Surplus: Metropolitan can meet full-service and interruptible program demands, and it can deliver water to local, regional and out-of-region storage.

Shortage: Metropolitan can meet full-service demands and partially meet or fully meet interruptible demands, using stored water or water transfers as necessary.

Severe Shortage: Metropolitan can meet full-service demands only by using stored water, transfers, and possibly calling for extraordinary conservation. In a Severe Shortage, Metropolitan may have to curtail Interim Agricultural Water Program deliveries.

Extreme Shortage: Metropolitan must allocate available supply to full-service customers.

² These agreements are with the City of Compton, Three Valleys Municipal Water District, and the City of Long Beach.

The
stage
short
prog
stor
supp
eval
app
man
and
curr
moc

Sto

Met
be r
the
stor
sea:
inte
mar
larg

Sur
gro
Ser
wal

Su
gro
Ser
car

Su
gre
to :

Su
Co

Su
sto

W,

The WSDM Plan also defines five surplus management stages and seven shortage management stages to guide resource management activities. These stages are not defined merely by shortfalls in imported water supply, but also by the water balances in Metropolitan's storage programs. Thus, a ten percent shortfall in imported supplies could be a stage one shortage if storage levels are high. If storage levels are already depleted, the same shortfall in imported supplies could potentially be defined as a more severe shortage. Each year, Metropolitan evaluates the level of supplies available and existing levels of water in storage to determine the appropriate management stage for that year. Each stage is associated with specific resource management actions designed to (1) avoid an Extreme Shortage to the maximum extent possible and (2) minimize adverse impacts to retail customers should an Extreme Shortage occur. The current sequencing outlined in the WSDM Plan reflects anticipated responses based on detailed modeling of Metropolitan's existing and expected resource mix.

Storage Actions by Surplus Stage

Metropolitan's supply situation is considered to be in surplus as long as net annual deliveries can be made to water storage programs. Deliveries for storage in the Diamond Valley Lake and in the SWP terminal reservoirs continue through each surplus stage, provided that there is available storage capacity. Withdrawals from Diamond Valley Lake for regulatory purposes or to meet seasonal demands may occur in any stage. Deliveries to other storage facilities may be interrupted, depending on the amount of the surplus. The following section discusses the management actions to be taken under various levels of surplus, ranked from the smallest to the largest amount of surplus.

Surplus Stage 1. Metropolitan may curtail or temporarily suspend (1) deliveries to regional groundwater basins under the Conjunctive Use and Cyclic Storage programs; (2) deliveries to Semitropic and Arvin-Edison groundwater storage programs; (3) deliveries of SWP carryover water to SWP reservoirs; and (4) contractual groundwater storage deliveries.

Surplus Stage 2. Metropolitan may curtail or temporarily suspend (1) deliveries to regional groundwater basins under the Conjunctive Use and Cyclic Storage programs; (2) deliveries to Semitropic and Arvin-Edison groundwater storage programs; and (3) deliveries of SWP carryover water to SWP reservoirs.

Surplus Stage 3. Metropolitan may curtail or temporarily suspend (1) deliveries to regional groundwater basins under the Conjunctive Use and Cyclic Storage programs; and (2) deliveries to Semitropic and Arvin-Edison groundwater storage programs.

Surplus Stage 4. Metropolitan may curtail or temporarily suspend deliveries under the Conjunctive Use and Cyclic Storage programs.

Surplus Stage 5. Metropolitan will make deliveries to all available in-region and out-of-region storage resources, including deliveries under the Conjunctive Use and Cyclic Storage programs.

Shortage Actions by Shortage Stage

When Metropolitan must make net withdrawals from storage to meet demands, it is considered to be in a shortage condition. Under most of these stages, it is still able to meet all end-use demands for water. The following summaries describe water management actions to be taken under each of the seven shortage stages.

Shortage Stage 1. Metropolitan may make withdrawals from Diamond Valley Lake.

Shortage Stage 2. Metropolitan will continue Shortage Stage 1 actions and may draw from out-of-region groundwater storage.

Shortage Stage 3. Metropolitan will continue Shortage Stage 2 actions and may curtail or temporarily suspend deliveries to Long Term Seasonal and Replenishment Programs in accordance with their discounted rates.

Shortage Stage 4. Metropolitan will continue Shortage Stage 3 actions and may draw from conjunctive use groundwater storage (such as the North Las Posas program) and the SWP terminal reservoirs.

Shortage Stage 5. Metropolitan will continue Shortage Stage 4 actions. Metropolitan's Board of Directors may call for extraordinary conservation through a coordinated outreach effort and may curtail Interim Agricultural Water Program deliveries in accordance with their discounted rates. In the event of a call for extraordinary conservation, Metropolitan's Drought Program Officer will coordinate public information activities with member agencies and monitor the effectiveness of ongoing conservation programs. The Drought Program Officer will implement monthly reporting on conservation program activities and progress and will provide quarterly estimates of conservation water savings.

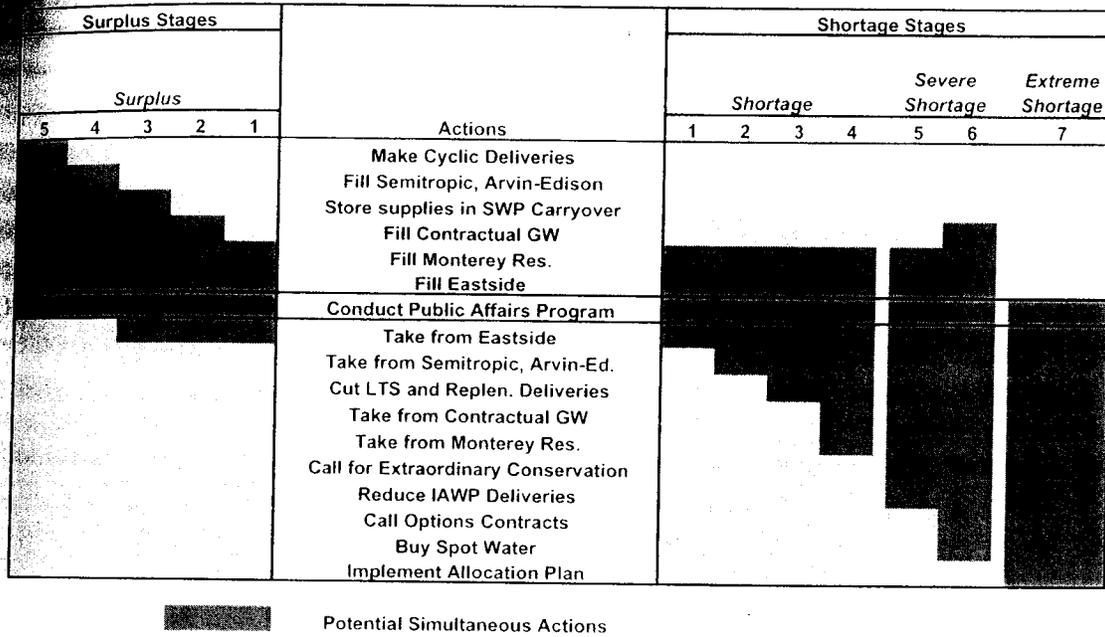
Shortage Stage 6. Metropolitan will continue Shortage Stage 5 actions and may exercise any and all water supply option contracts and/or buy water on the open market either for consumptive use or for delivery to regional storage facilities for use during the shortage.

Shortage Stage 7. Metropolitan will discontinue deliveries to regional storage facilities, except on a regulatory or seasonal basis, continue extraordinary conservation efforts, and develop a plan to allocate available supply fairly and efficiently to full-service customers. The allocation plan will be based on the Board-adopted principles for allocation listed previously. Metropolitan intends to enforce these allocations using rate surcharges. Under the current WSDM Plan, the surcharges will be set at a minimum of \$175 per af for any deliveries exceeding a member agency's allotment. *Any deliveries exceeding 102% of the allotment will be assessed a surcharge equal to three times Metropolitan's full-service rate.*

Figure II-1 shows the actions under each surplus and shortage stage, as well as the transitions to each supply declaration. Metropolitan will declare a shortage whenever water supply conditions require resource management activities included in Shortage Stages 1-4. Metropolitan will declare a Severe Shortage if supply conditions require undertaking actions in Shortage Stages 5-

Metropolitan will declare an Extreme Shortage if Shortage Stage 7 actions are
 The overriding goal of the WSDM Plan is to never reach Shortage Stage 7, an Extreme
 Given present resources, Metropolitan fully expects to achieve this goal over the next

**Figure II-1
 Resource Stages, Anticipated Actions, And Supply Declarations**



Annual Reporting Schedule on Supply/Demand Conditions

Managing Metropolitan’s water supply resources to minimize the risk of shortages requires timely and accurate information on changing supply and demands conditions throughout the year. To facilitate effective resource management decisions, the WSDM Plan includes a monthly schedule for providing supply/demand information to Metropolitan’s senior management and Board of Directors, and for making resource allocation decisions. This schedule is shown in Table II-8.