CHINO BASIN RECHARGE FACILITIES OPERATION PROCEDURES

GROUNDWATER RECHARGE COORDINATING COMMITTEE

MARCH 2006

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ACRONYM AND ABBREVIATIONS LIST	
7TH	Seventh Street Basin
8SN	Eighth Street Basin North
8SS	Eighth Street Basin South
8TH	Eighth Street Basins
acre-ft/mo	acre feet per month
acre-ft/yr	acre feet per year
ADFM	accumulated departure from the mean
Agreement	An agreement between the San Bernardino County Flood Control District, the Chino Basin Water Conservation District, the Inland Empire Utilities Agency, and the Chino Basin Watermaster to govern the recharge of Storm and Supplemental Water
BAN	Banana Basin
bgs	below ground surface
BRK	Brooks Street Basin
C1	Cell 1
C2	Cell 2
C3	Cell 3
CB-11	Chino Basin - 11 Turnout
CB-13	Chino Basin - 13 Turnout
CB-14	Chino Basin - 14 Turnout
CB-15	Chino Basin - 15 Turnout
CB-18	Chino Basin -18 Turnout
CBWCD	Chino Basin Water Conservation District
CCC	Cucamonga Creek Channel
CDA	Chino Desalter Authority
cfs	cubic feet per second (flow rate)
CHE	College Heights East

ACRONYM AND ABBREVIATIONS LIST	
CHW	College Heights West
CORPS	Army Corps of Engineers
DZB	DeClez Basin
DZC	DeClez Channel
DRC	Deer Creek Channel
DWR	California Department of Water Resources
DYC	Day Creek Channel
EBB	Ely Basin Bypass
EL1	Ely Basin 1
EL2	Ely Basin 2
EL3	Ely Basin 3
Facilities	The term "Facilities" means facilities that may be used for groundwater recharge, which may include basins, channels, diversion structures, rubber dams and other facilities and appurtenances owned or operated by any of the Parties in the Chino Basin
GRCC	Groundwater Recharge Coordinating Committee
HKA	Hickory Basin Afterbay
HKE	Hickory Basin East
HKW	Hickory Basin West
IEUA	Inland Empire Utilities Agency
JB	Jurupa Basin
JS	Junction Structure
LD1	Lower Day Basin 1
LD2	Lower Day Basin 2
LD3	Lower Day Basin 3
msl	mean sea level
MT1	Montclair Basins 1
MT2	Montclair Basins 2
MT3	Montclair Basins 3

ACRONYM AND ABBREVIATIONS LIST	
MT4	Montclair Basins 4
MWD	Metropolitan Water District of Southern California
MWDSC	Metropolitan Water District of Southern California
NWS	National Weather Service
O&M	operations and maintenance
OBMP	Optimum Basin Management Program
OC-59	Orange County 59 Turnout
OCWD	Orange County Water District
Parties	The Parties to the Agreement
Rainy Season	The six-month period from October 15 to April 15, however any time that weather predictions indicate that a storm is developing that may be capable of producing runoff shall be considered as occurring within the "Rainy Season"
ROM	Recharge Operations Manager—Watermaster employee responsible for planning and coordination of recharge activities
RP1	IEUA's Regional Plant 1
RWQCB	Regional Water Quality Control Board, Santa Ana Region
SAC	San Antonio Channel
SAP	Sampling and Analysis Plan
SAR	Santa Ana River
SBCFCD	San Bernardino County Flood Control District
SCADA	Supervisory Control and Data Acquisition
SEIR	Supplemental Environmental Impact Report
SSC	San Sevaine Channel
Supplemental Water	Water imported to the Chino Basin from outside the Chino Basin watershed and recycled water
SWRP	Supplemental Water Recharge Plan
TR1	Turner Basin 1
TR2	Turner Basin 2
TR3	Turner Basin 3

ACRONYM AND ABBREVIATIONS LIST	
TR4	Turner Basin 4
UPL	Upland Basin
USGS	US Geological Survey
VBN	Victoria Basin North
VBS	Victoria Basin South
Watermaster	Chino Basin Watermaster
WCC	West Cucamonga Channel
WFC	West Fontana Channel
WEI	Wildermuth Environmental, Inc.
WRP	Whittram Regional Pipeline

1. INTRODUCTION

An Optimum Basin Management Program (OBMP) for the Chino Basin (Figure 1-1) was developed pursuant to a Judgment entered in the Superior Court of the State of California for the County of San Bernardino and a February 19, 1998 ruling. Pursuant to the OBMP Phase 1 Report, Peace Agreement and associated Implementation Plan, and the November 15, 2001 Order of the Court, Chino Basin Watermaster staff and consultants completed the Phase 2 Recharge Master Plan in September 2001. Subsequently, the Inland Empire Utilities Agency (IEUA):

- Retained Tettemer and Associates to prepare design and construction documents for Chino Basin recharge facilities;
- Secured funding from Proposition 13 and other sources; and
- Awarded several construction contracts to complete modifications to existing basins and to construct two new recharge basins.

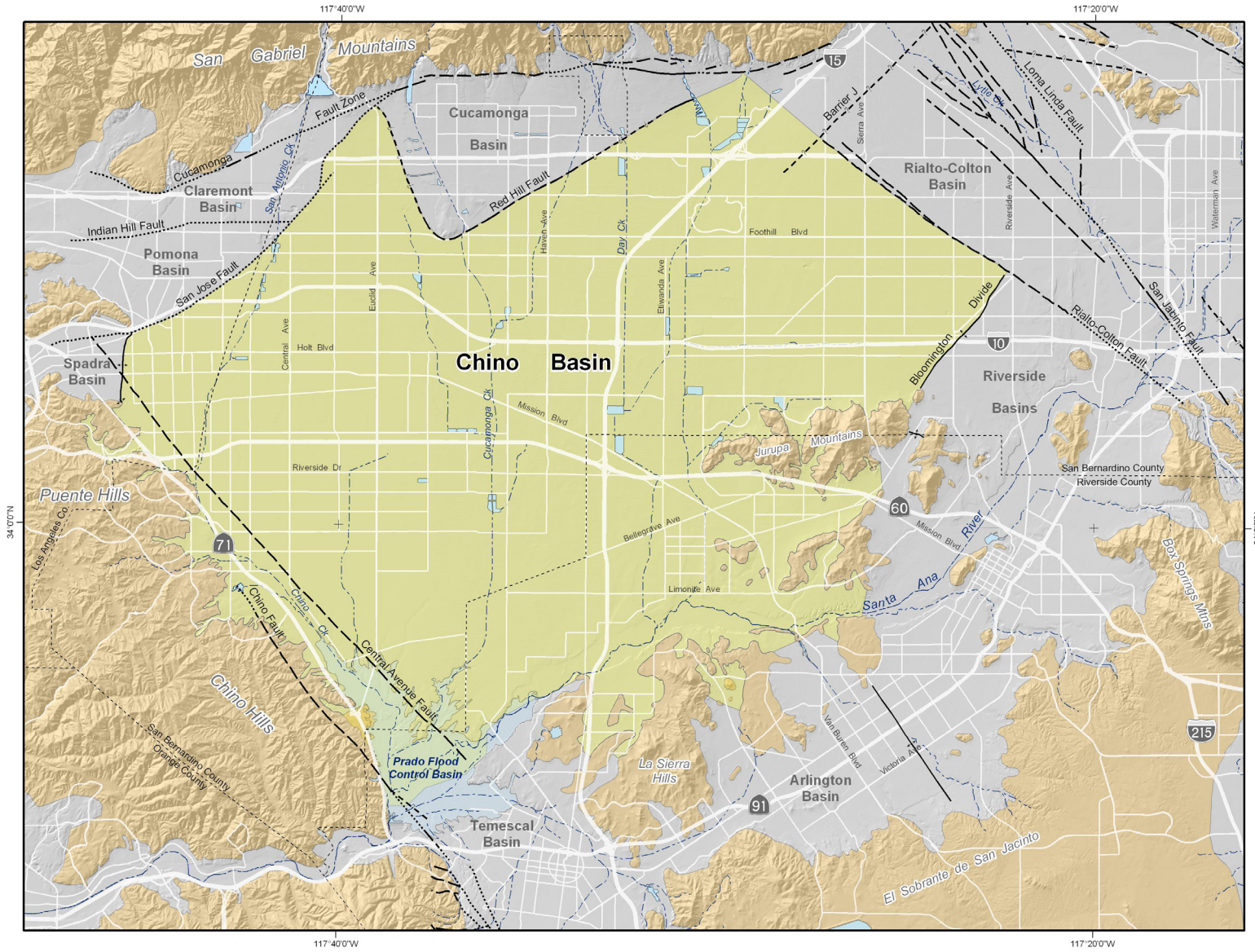
Construction of the basins and associated supervisory control and data acquisition (SCADA) was completed in December 2005.

This document contains the operating procedures for the Chino Basin recharge facilities, as they currently exist. This document is the collaborative work of the Groundwater Recharge Coordinating Committee (GRCC) whose members include the Chino Basin Watermaster, Chino Basin Water Conservation District (CBWCD), IEUA, and the San Bernardino County Flood Control District (SBCFCD). The basic operating procedures and operating mode concept were developed by Wildermuth Environmental, Inc. in 2004 and 2005. The GRCC members refined this document based on operational experience in fiscal 2004/05. These operating procedures will be routinely revised as additional recharge facilities are completed over time and with operational experience.

This document contains the following sections:

Section	Contents
1	Introduction
2	*Description of the Groundwater Recharge System* as developed in the OBMP and implemented pursuant to the Peace Agreement
3	*General Pattern of Operation* describes operation of the recharge facilities and roles of the various agencies that are participating in the operation of the recharge basins
4	*College Heights, Upland, Montclair, and Brooks Basins, San Antonio Creek System* describes the details of basin operation for the San Antonio Creek system.
5	*7th and 8th Street and Ely Basins, West Cucamonga Creek System* describes the details of basin operation for the West Cucamonga Creek system.
6	*Turner Basins, Cucamonga and Deer Creeks System* describes the details of basin operation for the Cucamonga and Deer Creeks system.
7	*Lower Day Basin, Day Creek System* describes the details of basin operation for the Day Creek system.
8	*San Sevaine, Victoria, Banana, Hickory, Jurupa, RP3, Declez Basins, Etiwanda and San Sevaine Creeks System* describes the details of basin operation for the Etiwanda and San Sevaine Creeks system.

Section	Contents
Exhibits	The *Exhibits* contain the full agreement between Watermaster, IEUA, CBWCD, and SBCFCD for recharge; the Sample Supplemental Water Recharge Plan; the Elevation-Area-Storage Curves developed by Tettemer and Associates for each basin; and the SBCFCD Emergency Operations Manual.



Main Features

Chino Basin

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

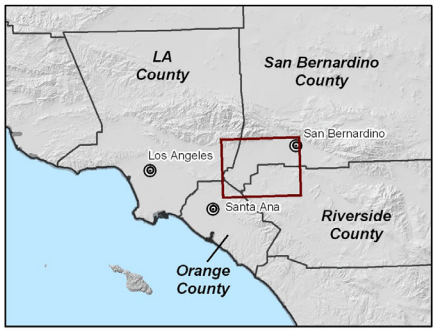
Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults & Groundwater Divides

- Location Certain
- Location Approximate
- Location Concealed
- Location Uncertain
- Groundwater Divide

Other Features

Flood Control and Conservation Basins



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Chino Basin Recharge Facilities Operation Procedures

Inland Empire Utilities Agency

Chino Basin
and Other Surrounding Groundwater Basins

Figure 1-1

2. DESCRIPTION OF THE GROUNDWATER RECHARGE SYSTEM

2.1 Chino Basin Facilities Improvement Project

IEUA and Watermaster completed the Phase II Recharge Master Plan development in August 2001 and began facility designs in December 2001. Subsequently, IEUA began the construction of the recharge improvements—most of which were completed in fall 2004 with the remaining work completed in December 2005. Figure 2-1 shows the basins included in the Chino Basin Facilities Improvement Project (CBFIP). Table 2-1 summarizes the improvements at each basin. The cost of these improvements was about $44 million. IEUA and Watermaster are planning to spend about $10 million for additional improvements to recharge storm and supplemental water.

2.2 Estimates of Supplemental Water Recharge Capacity and New Yield from Stormwater Recharge

Supplemental water, as used herein, consists of imported and recycled water. Stormwater is runoff water derived from storms. New yield from stormwater is the new recharge that occurs due to the operation of the CBFIP. Table 2-2 lists the basins that are currently used or will be used for storm and supplemental water recharge and estimates of the average annual stormwater recharge for the July 1, 2005 basin conditions and operations. Table 2-2 also contains the expected, average annual recharge estimates after completion of the CBFIP. These recharge estimates are based on Watermaster modeling studies (WEI, 2003) that incorporate most of the facility improvements that are included in the CBFIP. CBFIP improvements that were not included in the modeling studies include pump stations and force mains that are used to move storm and supplemental water from Hickory Basin to Banana Basin and from San Sevaine Creek to the RP3 Basins. The Declez Basins were not included in the Watermaster modeling studies. The current expected increase in stormwater recharge from the CBFIP is about 12,000 acre-ft/yr with a total expected recharge capacity of about 17,000 acre-ft/yr

The supplemental water recharge capacity of the entire system of recharge basins is lower than anticipated during the Phase II Recharge Master Plan (Black and Veatch, 2001). In the Recharge Master Plan, the supplemental water recharge capacity with the CBFIP was estimated to range between about 82,000 and 122,000 acre-ft/yr. The expected supplemental water recharge capacity with CBFIP improvements is about 60,000 acre-ft/yr. The major reasons for the reduced capacity are the deferment in the use of the College Heights and Upland Basins—pending the results of hydrogeological and geotechnical investigations—and the deletion of the Etiwanda Spreading Grounds and Conservation Ponds from the CBFIP. The estimates of supplemental water recharge capacity shown in Table 2-2 are expected to increase beyond 80,000 acre-ft/yr and potentially reach about 100,000 acre-ft/yr as the duration of maintenance cycles is decreased, new facilities are added, and experience is gained towards optimizing the operation of these basins.

2.3 Definition of Conservation and Multipurpose Basins

There are two types of recharge basins: conservation and multipurpose. Conservation basins are operated to recharge storm and supplemental water. Multipurpose basins are operated primarily for flood peak discharge attenuation and secondarily for the recharge of storm and supplemental water.

The multipurpose basins include:

- Upland
- 7th and 8th Street
- Lower Day
- San Sevaine Nos. 1, 2, 3, 4, & 5
- Banana and Hickory
- Jurupa
- Declez

The conservation basins include:

- Montclair Nos. 1, 2, 3 and 4
- Brooks
- Ely Nos. 1, 2, and 3
- Turner Nos. 1, 2, 3 and 4
- Victoria
- RP3
- College Heights East and West

Table 2-1
List of Facilities and Improvements for the CBFIP

Recharge Basins	New or Existing	Number of Basins	Number of Cells per Basin	Grading				Hydraulics			New MWDSC Turnout	SCADA	Other Significant Improvement
				Enlarge	Internal Berms	Optimize Bottoms	Other Minor	New Inlet	New Outlet	Rubber Dams			
Management Zone 1													
Brooks Street Basin[1]	Existing	1	1				X	X	X			X	
College Heights Basins[2]	New	2	1	X		X	X	X	X	X		X	
Montclair Basin 1	Existing	1	1									X	
Montclair Basin 2	Existing	1	1									X	
Montclair Basin 3	Existing	1	1									X	
Montclair Basin 4	Existing	1	1									X	
Eighth Street Basin	Existing	1	2		X	X	X		X			X	
Seventh Street Basin	Existing	1	1			X	X		X			X	
Upland Basin[3]	Existing	1	1	X				X	X			X	
Management Zone 2													
Ely Basin 1	Existing	1	2		X	X	X					X	
Ely Basin 2	Existing	1	1		X	X	X					X	
Ely Basin 3	Existing	1	3		X	X	X					X	
Hickory Basin	Existing	1	2		X	X	X		X	X	X	X	Pump Station and Force Main to Banana Basin
Lower Day Basin	Existing	1	3		X	X	X	X		X	X	X	
San Sevaine No. 1	Existing	1	1										
San Sevaine No. 2	Existing	1	1										
San Sevaine No. 3	Existing	1	1										
San Sevaine No.'s 4 and 5	Existing	2	1										
Turner Basins No. 1 and 2	Existing	2	1		X	X	X	X		X	X	X	
Turner Basins No. 3 and 4	Existing	2	1		X	X	X	X				X	
Victoria Basin	Existing	1	2		X	X	X	X	X			X	
Management Zone 3													
Banana Basin	Existing	1	1				X		X			X	
Jurupa Basin	Existing	0					X						Pump Station and Force Main to RP3 Ponds
Declez Basin	Existing	1	3		X	X	X		X			X	
IEUA RP3 Ponds	New	1	6	X	X	X	X	X	X	X		X	

(1) Inlet and outlet are the same facility.

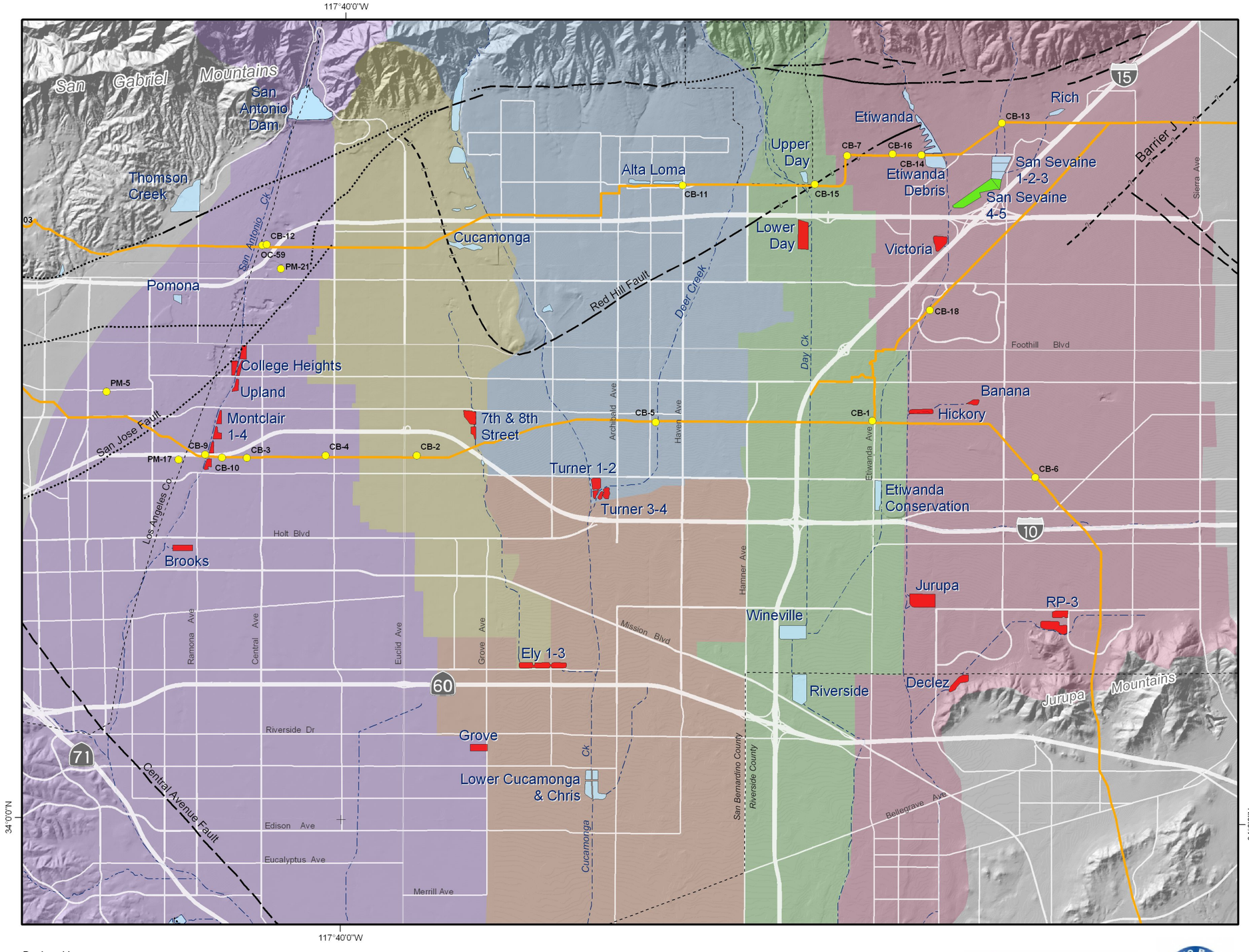
(2) Constructed but their use has been postponed indefinitely.

(3) Being constructed by Upland; supplemental water recharge plan has not been formalized.

Table 2-2
New Storm Water Recharge and Supplemental Water Recharge Estimates at Each Basin

Basin	Basin Type	Stormwater Recharge Estimates Based on CBFIP Designs and Improved Model (acre-ft/yr)			Supplemental Water															
					Operational Plan (1=on, 0=off)												Utilization When Basin Is Available	Supplemental Water Recharge Capacity (acre-ft/yr)		Recycled Water Recharge Capacity[4]
		Pre-CBFIP (pre July 2000) Estimate with [illegible]	Post-CBFIP Estimate	Increase	J	F	M	A	M	J	J	A	S	O	N	D		Pre CBFIP Estimate	Post CBFIP Estimate	
Brooks Street Basin	Conservation	1,260	1,710	450	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	3,724	1,359
College Heights Basins[2]	Conservation	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0%	0	0	0
Montclair Basin 1	Conservation	260	340	80	1	1	1	1	1	0	0	0	0	1	1	1	70%	2,331	2,331	668
Montclair Basin 2	Conservation	320	370	50	1	1	1	1	1	0	0	0	0	1	1	1	70%	3,682	3,682	1,013
Montclair Basin 3	Conservation	160	160	0	1	1	1	1	1	0	0	0	0	1	1	1	70%	1,317	1,317	369
Montclair Basin 4	Conservation	220	250	30	1	1	1	1	1	0	0	0	0	1	1	1	70%	1,697	1,697	487
Seventh and Eighth Street Basins	Multipurpose	0	1,020	1,020	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	2,196	804
Upland Basin[2]	Multipurpose	500	580	80	0	0	0	0	0	0	0	0	0	0	0	0	0%	0	0	0
Subtotal Management Zone 1		***2,720***	***4,480***	**1,760**														***9,027***	***14,947***	***4,699***
Ely Basins	Conservation	1,870	1,570	-300	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	3,167	1,184
Etiwanda spreading area (joint use of Etiwanda debris basin)	Multipurpose	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	0	0
Hickory Basin	Multipurpose	0	780	780	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	4,395	1,294
Lower Day Basin	Multipurpose	0	2,180	2,180	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	2,027	1,052
San Sevaine No. 1	Multipurpose	200	930	730	1	1	1	1	1	0	0	0	0	1	1	1	70%	8,310	8,310	2,310
San Sevaine No. 2	Multipurpose	20	110	90	1	1	1	1	1	0	0	0	0	1	1	1	70%	1,723	1,723	458
San Sevaine No. 3	Multipurpose	380	770	390	1	1	1	1	1	0	0	0	0	1	1	1	70%	3,673	3,673	1,111
San Sevaine No.'s 4 and 5	Multipurpose	150	630	480	1	1	1	1	1	0	0	0	0	1	1	1	70%	4,771	4,771	1,350
Turner Basins No. 1 and 2	Conservation	160	1,240	1,080	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	1,098	584
Turner Basins No. 3 and 4	Conservation	0	640	640	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	937	394
Victoria Basin	Conservation	30	2,090	2,060	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	2,365	1,114
Subtotal Management Zone 2		***2,810***	***10,940***	**8,130**														***18,477***	***32,465***	***10,851***
Banana Basin[1]	Multipurpose	0	410	410	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	2,196	651
Declez Basin[1]	Multipurpose	0	80	80	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	3,547	907
Etiwanda Conservation Ponds[3]	Conservation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70%	0	0	0
IEUA RP3 Ponds[1]	Conservation	0	1,330	1,330	1	1	1	1	1	0	0	0	0	1	1	1	70%	0	6,562	1,973
				0																
Subtotal Management Zone 3		***0***	***1,820***	**1,820**														***0***	***12,304***	***3,531***
Totals		***5,530***	***17,240***	**11,710**														***27,505***	***59,717***	***19,082***

1 -- Recharge Basins not optimized for storm water recharge; actual recharge performance may be greater.
2 -- College Heights and Upland Basins will not be used for supplemental water recharge for the near future, pending resolution of geotechnical issues.
3 -- Etiwanda Conservation Ponds will not be used for recharge of either storm or supplemental water for the near future due to issues with the land owner.
4 -- Assumes that recycled water would be no more than 20 percent of the combined supplemental and storm water recharge



Recharge Basins (Symbolized by Improvements)

- Chino Basin Facilities Improvement Project
- Improvement By Others
- No Improvements

Imported Water Facilities

- Service Connection/Turnout
- Imported Water Pipeline

Drainage Areas

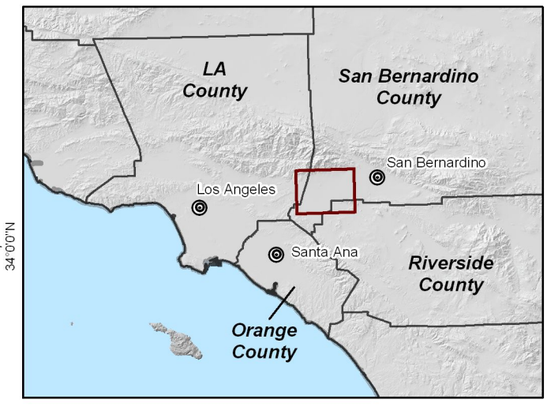
- San Antonio Creek System
- West Cucamonga Creek System
- Cucamonga and Deer Creek Systems
- Lower Cucamonga Creek System
- Day Creek System
- San Sevaine and Etiwanda Creek Systems

Other Features

- Rivers, Creeks, and Flood Control Channels

Faults

- Location Certain
- Location Approximate
- Location Concealed
- Location Uncertain



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0 1 2 3 Miles
0 2 4 KM

Inland Empire UTILITIES AGENCY

Chino Basin Watermaster — Partners in Basin Management

Chino Basin Recharge Facilities Operation Procedures

Groundwater Recharge and Imported Water Facilities

Figure 2-1

3. GENERAL PATTERN OF OPERATION

3.1 Background

The primary goals of IEUA and Watermaster that are addressed by the operation of the recharge facilities include:

- Maximizing the capture and recharge of stormwater;
- Achieving the replenishment of supplemental water as required by the Judgment; and
- Recharging other supplemental water for groundwater storage and later use.

The CBWCD's primary goal is to maximize the capture and recharge of stormwater. The primary goal of the SBCFCD and the City of Upland is to provide flood protection.

The recharge interests of the Watermaster, CBWCD, and IEUA are sometimes in conflict with the flood control function of the recharge basins. The plan of operation described herein recognizes the differences between recharge and flood control and provides for the restoration of the flood control function of the multipurpose basins prior to significant storm events. In general, for the purposes of recharge basin operation, a significant storm event is defined as having intensities of more than 0.3 inches per hour or more than 2.0 inches per 24 hours.

3.2 Recharge Basin Operator

The IEUA will be the operator of the recharge basins for the benefit of the CBWCD, IEUA, and Watermaster. The IEUA will designate specific staff to coordinate, manage and carryout activities necessary for recharge. The IEUA Groundwater Recharge Coordinator will operate the recharge basins according to the schedule developed by the GRCC and with the assistance of the IEUA Operators. The IEUA Groundwater Recharge Coordinator will generally be based at IEUA headquarters, while the IEUA Operators will be generally located at the operation control building located at the IEUA regional wastewater treatment plant No. 1 (RP-1). The CBFIP *Supervisory Control and Data Acquisition* (SCADA) system is located at these IEUA facilities to monitor and operate most of the CBFIP system. IEUA staff and others that inspect facilities and operate manual valves are herein referred to as IEUA Operators. The IEUA Groundwater Recharge Coordinator may act as an Operator and may also engage staff from the CBWCD and the Watermaster to act as IEUA Operators.

3.3 Supplemental Water Recharge Plan (SWRP)

The Watermaster is responsible for and manages supplemental water recharge in the Chino Basin. In this role, the Watermaster will develop a SWRP each year that is based on its replenishment needs and other recharge obligations (e.g. the Dry-Year Yield Program). The SWRP will be developed by the Watermaster and sent to the Groundwater Recharge Coordinating Committee (GRCC) for review by September 1 each year. The SWRP will state how much supplemental water the Watermaster wants to recharge in each basin for the then-current fiscal year. The SWRP will also include the type of supplemental water (recycled or imported), location, and source of that water (Metropolitan Water District of Southern California [MWDSC], IEUA, or others). The GRCC will provide comments to the Watermaster and the Watermaster will prepare a revised SWRP by October 15.

The IEUA Groundwater Recharge Coordinator and Operators shall not, on his/her own initiative, change the mix of imported and recycled water specified in the SWRP unless instructed to do so in writing by the Watermaster, following approval by the GRCC.

Because of the variability in the availability of imported water and stormwater, the monthly recharge schedule in the SWRP will be revised by the Watermaster every month based on actual recharge and the availability of supplemental water for recharge. The revised SWRP will be submitted to the GRCC members and updated as required. In order to minimize the review and revision time, the Watermaster will use its best efforts to coordinate with GRCC members when the SWRP is being updated.

The IEUA Groundwater Recharge Coordinator will use his/her best efforts to obtain supplemental water per the SWRP and have that water delivered through flood control channels and pipelines to the recharge basins. Prior to taking delivery of supplemental water, the IEUA Groundwater Recharge Coordinator will coordinate with conveyance and basin owners to make sure that these facilities are available to convey and recharge supplemental water.

3.4 Recharge Basin Operating Rules

Operating rules, expressed as rule curves or set points, are used for each recharge basin. For conservation basins, rule curves define the target water surface elevation and storage for each basin throughout the year. For multipurpose basins, the rule curves are simpler and are based on storm forecasting and limiting losses of supplemental water. The operating rules are tentative and meant to be reevaluated and updated for each basin as unique operational characteristics are identified through recharge experience at each basin.

3.5 Recharge Basin Operating Modes

There are three distinct operating modes:

- Conservation mode
- Pre-Storm mode
- Storm mode

These operating modes are described below.

3.5.1 Conservation Mode

During conservation mode, conservation and multi-purpose basins are operated to maximize the recharge of storm and supplemental water. The IEUA Operator shall divert supplemental water to recharge basins per the SWRP. These diversions are subject to the rule curves and maintenance schedules established for each basin.

For dedicated conservation basins, the IEUA Operator will divert supplemental water into the basins described in the SWRP. These diversions are subject to the maximum water surface elevation limits specified in the rule curve for each basin. The maximum allowable water surface elevation for each dedicated conservation basin can vary over time with maximum water elevation generally being lower in

the winter and higher in the summer. The goals of this operating scheme are to maximize stormwater capture and recharge and to minimize the loss of supplemental water from the basins due to overflow. These rule curves assume that there is an acceptable risk for loss of supplemental water that may be stored in a basin prior to a storm event. The storage levels in the rule curves assume a maximum long-term average 10-percent loss of supplemental water due to outflow from storm events. Rule curves for the conservation basins are listed in Tables 3-1 through 3-4.

The maximum volume of supplemental water that can be stored in a multipurpose basin when it is being operated in conservation mode is equal to the estimated volume of water that can be recharged in a 7-day period. Table 3-5 lists the multipurpose basins and the water surface elevation and corresponding storage that correspond to this operating rule.

Rule curves will be adjusted from year to year based on operational experience or changes in the risk of supplemental water loss that the Watermaster wishes to take.

During Conservation mode, IEUA Operators shall perform inspections of basins and convergence channels. In addition, maintenance of the recharge basins shall occur in conservation mode in rough accordance with the schedule set forth in Table 3-7. Anticipated maintenance items include trash and silt removal, erosion repair, SCADA system repairs, mechanical repairs to rubber dams and sluice gates, and weed removal.

3.5.2 Pre-Storm Mode

Pre-Storm mode consists of activities that take place to prepare multipurpose basins to receive stormwater. The Pre-Storm mode begins when the IEUA Groundwater Recharge Coordinator determines that a potentially significant storm has been forecasted to occur within 7 days. This 7-day area forecast is obtained from the website of the National Weather Service Forecast Office in San Diego, CA (www.wrh.noaa.gov/total_forecast). With this determination, the IEUA Groundwater Recharge Coordinator will cease all supplemental water deliveries to the multipurpose basins. Supplemental water deliveries to conservation basins should also be curtailed so as to free storage space for forecasted storm flows.

Two days before the forecasted storm event, the SBCFCD and the IEUA Groundwater Recharge Coordinator will determine if the expected storm is going to be significant and what actions need to be taken. If significant, the SBCFCD will inform the IEUA Groundwater Recharge Coordinator that a significant storm is imminent and the IEUA Groundwater Recharge Coordinator will open the outlet gates at the multipurpose basins to drain them and fully restore their flood control capacity. Supplemental water deliveries to conservation basins will cease five days before a significant forecasted storm event. To be clear:

- Supplemental water deliveries to all multipurpose basins will cease immediately upon determination by the SBCFCD and the IEUA Groundwater Recharge Coordinator that a potentially significant storm has been forecasted.
- Two days before the forecasted storm event, the SBCFCD will make the final determination as to whether the expected storm will be significant. If significant, the SBCFCD will inform the IEUA Groundwater Recharge Coordinator that a significant storm is approaching and the

IEUA Groundwater Recharge Coordinator will open all outlet gates at the multipurpose basins to drain these basins and fully restore their flood control capacity.

- Supplemental water deliveries to conservation basins will cease five days before a significant, forecasted storm event.

Using the notification procedure described herein, the IEUA Groundwater Recharge Coordinator will notify the Watermaster, CBWCD, and SBCFCD as each of the above steps is completed.

The SBCFCD will notify Watermaster, CBWCD, and IEUA if the significant storm forecast is withdrawn and authorize the IEUA Groundwater Recharge Coordinator to change the operation mode from Pre-Storm to Conservation Mode. The return to Conservation Mode will also be conditioned on the storage available in the basins and the prospect of additional storms.

3.5.3 Storm Mode

Storm Mode applies to multipurpose basins. Storm Mode starts with the initiation of significant rainfall and continues until the SBCFCD authorizes the IEUA Groundwater Recharge Coordinator to change the operation Mode from Storm to Conservation Mode. The IEUA Operator will not operate the multipurpose basins in Storm Mode. During Storm Mode, rubber dams will be deflated and will not be reinflated until the return to Pre-Storm or Conservation Mode is authorized by the SBCFCD. The control element (sluice gates and rubber dams) settings are provided for each creek system in their respective sections of this document.

The IEUA Operator must be ready to change the gate settings at the multipurpose basins when notified by the SBCFCD that the system can be changed to Conservation Mode. The transition from Storm Mode to Conservation Mode will occur in two phases unless the SBCFCD authorizes the complete transition to Conservation Mode. In the first phase of transition, the outlets from the multipurpose basins will be closed and the inlets at the conservation basins can be opened (if closed) at the IEUA Operator's discretion. In the second phase of transition, the deflated rubber dams may be reinflated to enhance the diversion of receding stormwater discharge into the conservation basins. To be clear:

- During Storm mode, the IEUA Operator will not operate the multipurpose basins or deliver supplemental water to any basin.
- When the storm is over or nearly over, the SBCFCD, at its discretion, will authorize the transition from Storm mode to Conservation mode in two phases:
  - First phase – close the outlets and open the inlets at the conservation basins (if closed).
  - Second phase – reinflate the rubber dams.
- SBCFCD personnel will perform inspections of the multipurpose basins during Storm mode in order to field verify conditions as reported by the SCADA system.

3.6 Coordination among CBWCD, IEUA, SBCFCD, Watermaster and Local Authorities

The IEUA Groundwater Recharge Coordinator and the Watermaster ROM shall closely monitor weather forecasts and, in particular, all forecasted storm events. The IEUA Groundwater Recharge Coordinator will be in close contact with the SBCFCD during Pre-Storm and Storm Modes. Additionally, the IEUA

Groundwater Recharge Coordinator will be in close contact with the Army Corps of Engineers regarding the discharge of stormwater from San Antonio Dam during all operational modes.

- If the U.S. Weather Service forecast (www.wrh.noaa.gov/total_forecast) is for a significant storm, defined as having intensities of more than 0.3 inches per hour or totaling more than 2.0 inches per 24 hours, the rubber diversion dams on the San Antonio, Cucamonga, Day Creek, San Sevaine, and Declez channels will be deflated. During significant storms, the SBCFCD will, in accordance with its *Emergency Operations Manual (Exhibit D herein),* establish varying phases of activity.

The IEUA Groundwater Recharge Coordinator will routinely dispatch an IEUA Operator to the basins that are being used for recharging supplemental water or retaining stormwater from a prior storm. The IEUA Operators will keep a log of their activities and observations at each basin. In the event that an emergency condition is observed, the IEUA Operator will notify the appropriate authorities and the IEUA Groundwater Recharge Coordinator. The IEUA Operator shall stay onsite until the appropriate authorities arrive or the emergency is mitigated. For emergency definitions and contacts, see Section 3.7 Emergencies below.

3.7 Emergencies

The types of emergencies that might reasonably be expected include:

- **Trespassing** – call the police and basin owner. Do not try to apprehend and/or chase trespassers out of the basin or channel.
- **Drowning or other physical injury to a person** – call 911, the fire department, police, and owner (in this order). Apply first aid if appropriate to the extent ones health and safety training allows.
- **Illegal or un-permitted discharge to a basin or channel tributary to a basin** – call the fire department hazardous materials unit, police, Regional Water Quality Control Board, and basin owner. The IEUA Operator will follow the instruction of fire department to minimize contamination and assist in containment to the extent that his/her training allows.
- **Vandalism** – call the police and facility owner. Do not try to apprehend and/or chase vandals out of the basin or channel.
- **Structural failure of some component of the recharge basin and/or associated hydraulic works** – if failure threatens people or property call the police, fire department, and basin owner; otherwise, call the basin owner.

In case of an emergency, contact the IEUA Groundwater Recharge Coordinator. For emergencies that are not listed above, IEUA Operators should use their best judgment.

Figure 3-2 illustrates the Emergency Contact Tree among the parties to the Agreement. Table 3-6a contains a list of basins and related appropriate owner contacts and phone numbers. Table 3-6b list the locations of the basins and access gates. Once notified, the IEUA Groundwater Recharge Coordinator will contact the appropriate agencies. Each agency will then contact their appropriate personnel to respond to the emergency.

3.8 Notification

3.8.1 General Questions

Questions regarding the general recharge operating plans at Chino Basin recharge facilities should be directed to the Watermaster Recharge Operations Manager (ROM). Operational inquiries should be directed to the IEUA Groundwater Recharge Coordinator. Figure 3-1 shows the Operational Contact Tree for the CBFIP operations.

3.8.2 Notification Regarding Operating Mode

- The SBCFCD will determine, at its discretion, the operational mode. When changing the operational mode, the SBCFCD will notify a responding lead individual in either Figure 3-1 or Figure 3-2, depending on the immediacy of the mode change, by email and telephone. Email will be the preferred means of notification. A notification by email or page is not considered to be delivered until a reply email or telephone call is received by the sender.

3.8.3 Notifications Regarding Availability of Facilities for Supplemental Water Recharge

The following paragraphs are based on Attachment No 2 to the *Agreement for Operation and Maintenance of Facilities to Implement the Chino Basin Recharge Master Plan* (included in its entirety as Exhibit A herein). They relate to the notification requirements for the operation of CBWCD and SBCFCD facilities after an SWRP has been developed and approved by the GRCC. Please refer to the Agreement for a complete discussion of the notification requirements.

- CBWCD will notify Watermaster and IEUA a minimum of 2 weeks in advance as to when and for what duration […] CBWCD facilities will be unavailable for recharge of supplemental water due to planned maintenance; and Watermaster and IEUA will promptly discontinue delivery of supplemental water to CBWCD facilities.
- SBCFCD will notify Watermaster and IEUA a minimum of 2 weeks in advance as to when and for what duration […] SBCFCD facilities will be unavailable for recharge of supplemental water due to planned maintenance; and Watermaster and IEUA will promptly discontinue delivery of supplemental water to SBCFCD facilities.
- Watermaster and IEUA will notify SBCFCD at least 2 weeks in advance as to when supplemental water will be available, the expected duration of such availability and the total volume of supplemental water that Watermaster or IEUA would like to recharge, and request from SBCFCD information about the availability of SBCFCD facilities for such recharge.
- Watermaster and IEUA will notify CBWCD at least 2 weeks in advance as to when supplemental water will be available, the expected duration of such availability, and the total volume of supplemental water that Watermaster or IEUA would like to recharge, and will request information from CBWCD about the availability of CBWCD facilities for such recharge.
- IEUA will notify the SBCFCD within 2 weeks, with the exception of weekends or holidays, of communicating instructions to the MWDSC to begin, increase, reduce, or cease the release of imported water for delivery to and/or through any of SBCFCD's facilities.

3.9 Basin Availability

The availability of basins for supplemental water recharge depends on the planned maintenance activities of the basin owners (the CBWCD, City of Upland, IEUA, and SBCFCD). The planned maintenance of these basins will be discussed as part of the GRCC meetings. Maintenance will be scheduled, to the extent possible, when recharge water is unavailable. Recharge activities will be avoided during scheduled maintenance.

To help schedule recharge activities, an annual maintenance schedule has been developed by the SBCFCD and is included herein as Table 3-7. This maintenance schedule anticipates that maintenance activities within these basins will generally take place from June through November. In anticipation of maintenance activities, the basins must be emptied and allowed to dry. To allow for a dry-out period, no spreading of water will be scheduled for approximately 4 weeks prior to the scheduled maintenance. For example, no supplemental spreading activities are planned during the month of June when maintenance is scheduled for July and August.

Supplemental water spreading activities may occur during these expected drying periods if they are scheduled in advance and coordinated with the appropriate basin owner through the GRCC.

Table 3-1
Rule Curves for the Montclair and Brooks Street Basins, San Antonio Creek System

Period			San Antonio Creek System													
			Montclair 1			Montclair 2			Montclair 3			Montclair 4			Brooks		
			Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full
1-Jul	to	30-Sep	1127.2	134	100%	1098	258	100%	1054	50	100%	1037	111	100%	875	65	13%
1-Oct	to	15-Oct	1127.2	134	100%	1098	258	100%	1054	50	100%	1037	111	100%	875	65	13%
16-Oct	to	31-Oct	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
1-Nov	to	15-Nov	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
16-Nov	to	30-Nov	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
1-Dec	to	15-Dec	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
16-Dec	to	31-Dec	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
1-Jan	to	15-Jan	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
16-Jan	to	31-Jan	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
1-Feb	to	15-Feb	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
16-Feb	to	29-Feb	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
1-Mar	to	15-Mar	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
16-Mar	to	31-Mar	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
1-Apr	to	15-Apr	1127.2	134	100%	1087	132	51%	1034	0	0%	1010	0	0%	875	65	13%
16-Apr	to	30-Apr	1127.2	134	100%	1098	258	100%	1054	50	100%	1037	111	100%	875	65	13%
1-May	to	15-May	1127.2	134	100%	1098	258	100%	1054	50	100%	1037	111	100%	875	65	13%
16-May	to	31-May	1127.2	134	100%	1098	258	100%	1054	50	100%	1037	111	100%	875	65	13%
1-Jun	to	30-Jun	1127.2	134	100%	1098	258	100%	1054	50	100%	1037	111	100%	875	65	13%

Table 3-2
Rule Curves for the Ely Basins, West Cucamonga Creek System

Period			Ely 1 (west)			Ely 2 (center)			Ely 3-1 (east)[2]			Ely 3-2 (east)[2]			Ely 3-3 (east)[2]		
			Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full
1-Jul	to	30-Sep	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
1-Oct	to	15-Oct	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
16-Oct	to	31-Oct	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
1-Nov	to	15-Nov	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
16-Nov	to	30-Nov	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
1-Dec	to	15-Dec	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
16-Dec	to	31-Dec	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
1-Jan	to	15-Jan	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
16-Jan	to	31-Jan	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
1-Feb	to	15-Feb	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
16-Feb	to	29-Feb	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
1-Mar	to	15-Mar	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
16-Mar	to	31-Mar	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
1-Apr	to	15-Apr	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
16-Apr	to	30-Apr	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
1-May	to	15-May	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
16-May	to	31-May	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%
1-Jun	to	30-Jun	828.0	22.0	26%	828.0	25.0	26%	823.8	11.8	100%	823.8	8.7	100%	823.8	9.1	100%

Notes
(1) Storage is based on modified elevation area and volume tables provided by Stantec. Modifications were made to reflect true storage as opposed to arbitrary elevation starting points provided by Stantec.
(2) Storage based on top of internal berms minus 1.0 foot.

Table 3-3
Rule Curves for the Turner Basins, Cucamonga and Deer Creeks System

Period			Cucamonga and Deer Creeks											
			Turner 1			Turner 2			Turner 4			Turner 3		
			Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full
1-Jul	to	30-Sep	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
1-Oct	to	15-Oct	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
16-Oct	to	31-Oct	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
1-Nov	to	15-Nov	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
16-Nov	to	30-Nov	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
1-Dec	to	15-Dec	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
16-Dec	to	31-Dec	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
1-Jan	to	15-Jan	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
16-Jan	to	31-Jan	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
1-Feb	to	15-Feb	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
16-Feb	to	29-Feb	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
1-Mar	to	15-Mar	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
16-Mar	to	31-Mar	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
1-Apr	to	15-Apr	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
16-Apr	to	30-Apr	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
1-May	to	15-May	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
16-May	to	31-May	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%
1-Jun	to	30-Jun	978.0	56.0	21%	978.0	16.0	31%	978.0	59.6	39%	978.0	25.0	50%

Table 3-4a
Rule Curves for the Banana, Hickory, and Victoria Basins, Etiwanda and San Sevaine Creeks System

Period			West Fontana Channel									Etiwanda Channel[3]					
			Banana[1]			Hickory East[2]			Hickory West[2]			Victoria North			Victoria South		
			Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full
1-Jul	to	30-Sep	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
1-Oct	to	15-Oct	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
16-Oct	to	31-Oct	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
1-Nov	to	15-Nov	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
16-Nov	to	30-Nov	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
1-Dec	to	15-Dec	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
16-Dec	to	31-Dec	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
1-Jan	to	15-Jan	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
16-Jan	to	31-Jan	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
1-Feb	to	15-Feb	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
16-Feb	to	29-Feb	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
1-Mar	to	15-Mar	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
16-Mar	to	31-Mar	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
1-Apr	to	15-Apr	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
16-Apr	to	30-Apr	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
1-May	to	15-May	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
16-May	to	31-May	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%
1-Jun	to	30-Jun	1142.0	35.0	82%	1116.0	21.9	84%	1110.0	11.1	65%	1317.5	23.7	67%	1317.5	43.2	84%

Note

(1) Elevation and corresponding storage are set to 1142.0 msl based on the downstream berm crest elevation and a 1-foot freeboard

(2) Elevation and corresponding storage are set to 1116.0 and 1110 ft msl, respectively, based on the downstream berm crest elevation and a 1-foot freeboard

(3) Elevation and corresponding storage are set to 1317.5 msl based on the dividing berm crest elevation and a 1-foot freeboard

Table 3-4b
Rule Curves for the RP3 Basins, Etiwanda and San Sevaine Creeks System

Period			Declez Channel																
			RP3-C1A[1]			RP3-C1B[1]			RP3-C3A[2]			RP3-C3B[2]			RP3-C4A[3]			RP3-C4B[3]		
			Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full	Elevation (msl)	Storage (acre-ft)	% Full
1-Jul	to	30-Sep	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
1-Oct	to	15-Oct	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
16-Oct	to	31-Oct	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
1-Nov	to	15-Nov	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
16-Nov	to	30-Nov	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
1-Dec	to	15-Dec	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
16-Dec	to	31-Dec	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
1-Jan	to	15-Jan	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
16-Jan	to	31-Jan	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
1-Feb	to	15-Feb	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
16-Feb	to	29-Feb	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
1-Mar	to	15-Mar	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
16-Mar	to	31-Mar	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
1-Apr	to	15-Apr	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
16-Apr	to	30-Apr	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
1-May	to	15-May	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
16-May	to	31-May	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%
1-Jun	to	30-Jun	951.5	17.8	87%	951.5	11.5	87%	946.0	12.9	100%	946.0	13.2	100%	941.5	14.9	89%	941.5	13.1	87%

Note
(1) Elevation and corresponding storage are set to 951.5 msl based on the dividing berm crest elevation and a 1-foot freeboard
(2) Elevation and corresponding storage are set to 946.0 msl based on the dividing berm crest elevation and a 1-foot freeboard
(3) Elevation and corresponding storage are set to 941.5 msl based on the dividing berm crest elevation and a 1-foot freeboard

Table 3-5
Rule Curves for Multipurpose Basins -- Maximum and Minimum Range for Water Surface Elevations

Basin	Percolation Rate	Basin Invert	7-Day Perc Out[1]			Maximum Conservation Storage[2]			Operating Range for Water Surface Elevation	
			Water Surface Elevation	Depth	Volume	Water Surface Elevation	Maximum Operating Depth	Volume	Min	Max
	(feet/day)	(feet msl)	(feet msl)	(ft)	(acre-ft)	(feet msl)	(ft)	(acre-ft)	(feet msl)	(feet msl)
Upland Basin	2.0	1156.0	1170.0	14.0	21	1215.0	59.0	695	1170.0	1215.0
Eighth Street North	0.5	1134.0	1137.5	3.5	24	1139.0	5.0	36	1137.5	1139.0
Eighth Street South[3]	0.5	1127.0	1135.0	8.0	7	1139.0	12.0	26	1135.0	1139.0
Seventh Street Basin	0.5	1124.0	1127.5	3.5	11	1133.0	9.0	42	1127.5	1133.0
Etiwanda spreading area (joint use of Etiwanda debris basin)	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd
Lower Day Basin Cell 1	1.5	1369.0	1377.0	8.0	23	1377.0	8.0	23	1377.0	1377.0
Lower Day Basin Cell 2	1.5	1364.0	1372.0	8.0	27	1372.0	8.0	27	1372.0	1372.0
Lower Day Basin Cell 3	1.5	1362.0	1372.0	10.0	49	1372.0	10.0	49	1372.0	1372.0
San Sevaine No. 1	1.0	1487.0	1494.0	7.0	tbd	1494.0	7.0	tbd	1494.0	1494.0
San Sevaine No. 2	1.0	1471.0	1477.0	6.0	tbd	1477.0	6.0	tbd	1477.0	1477.0
San Sevaine No. 3	1.0	1457.0	1462.0	5.0	tbd	1462.0	5.0	tbd	1462.0	1462.0
San Sevaine No 4	1.0	tbd	tbd	7.0	tbd	tbd	tbd	tbd	tbd	tbd
San Sevaine No 5	0.5	tbd	tbd	3.5	tbd	tbd	tbd	tbd	tbd	tbd
Declez Basin Cell 1	2.5	825.0	831.0	6.0	36	831.0	6.0	36	831.0	831.0
Declez Basin Cell 2	2.5	823.0	829.0	6.0	25	829.0	6.0	25	829.0	829.0
Declez Basin Cell 3	2.5	821.0	828.0	7.0	26	828.0	7.0	26	828.0	828.0

1 -- the lesser of the volume of water that can be percolated out of the basin in seven days or the maximum allowable storage with one foot of freeboard.

2 -- Water level and storage generally associated with the maximum storage with one foot of freeboard.

3 -- Exception to the rule for 7-day perc out due to basin geometry.

Table 3-6a
Emergency Contacts

Basin	Owner		Police		Fire Department		Regional Water Quality Control Board	SBCFCD Environmental Management Division	San Bernardino County Fire Department Hazardous Material Division
College Heights	CBWCD	(909) 626-2711	City of Upland Police Dept	(909) 946-7624	City of Upland Fire Dept	(909) 931-4180	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
Upland	City of Upland	(909) 931-4260	City of Upland Police Dept	(909) 946-7624	City of Upland Fire Dept	(909) 931-4180	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
Montclair[1]	CBWCD	(909) 626-2711	City of Montclair Police Dept	(909) 621-5873	City of Montclair Fire Dept	(909) 626-1217	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours							
Brooks[1]	CBWCD	(909) 626-2711	City of Montclair Police Dept	(909) 621-5873	City of Montclair Fire Dept	(909) 626-1217	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours							
7th and 8th Streets	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours	City of Upland Police Dept	(909) 946-7624	City of Upland Fire Dept	(909) 931-4180	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
Ely 1 and 2	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours	City of Ontario Police Dept	(909) 395-2001	City of Ontario Fire Dept	(909) 395-2002	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
Ely 3[1]	CBWCD	(909) 626-2711	City of Ontario Police Dept	(909) 395-2001	City of Ontario Fire Dept	(909) 395-2002	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours							
Turner[1]	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours	City of Ontario Police Dept	(909) 395-2001	City of Ontario Fire Dept	(909) 395-2002	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
	CBWCD	(909) 626-2711							
Lower Day	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours	San Bernardino County Sheriff	(909) 948-1488	City of Rancho Cucamonga Fire Dept	(909) 477-2770	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
Victoria	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours	San Bernardino County Sheriff	(909) 948-1488	City of Rancho Cucamonga Fire Dept	(909) 477-2770	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
San Sevaine	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours	San Bernardino County Sheriff	(909) 948-1488	City of Rancho Cucamonga Fire Dept	(909) 477-2770	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
Banana	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours	San Bernardino County Sheriff	(909) 829-7311	San Bernardino County Fire Dept	(909) 829-4441	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
Hickory	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours	San Bernardino County Sheriff	(909) 829-7311	San Bernardino County Fire Dept	(909) 829-4441	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
Jurupa	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours	Riverside County Sheriff	(951) 787-7912	Riverside County Fire Dept	(951) 683-4561	(951) 782-4130	(909) 387-8112 or 8116	
RP3	IEUA	(909) 993-1800	City of Fontana Police	(909) 350-7740	San Bernardino County Fire Dept	(909) 829-4441	(951) 782-4130	(909) 387-8112 or 8116	(909) 386-8401
Declez	SBCFCD	(909) 387-8063 Duty Hours & (909) 356-3805 After Hours	Riverside County Sheriff	(951) 787-7912	San Bernardino County Fire Dept	(909) 829-4441	(951) 782-4130	(909) 387-8112 or 8116	

1 -- The first entity listed is the actual owner; the second listed has a substantial interest in the facility.

Table 3-6b
Physical Locations of Basins and Access Gates

Basin	Location	City	Location of Access Gates
Montclair 1	East of San Antonio Channel, between Arrow Hwy & Moreno Drive	Montclair	North and South Ends
Montclair 2	East of San Antonio Channel, between Moreno Drive & San Jose Avenue	Montclair	North and South Ends
Montclair 3	East of San Antonio Channel, between San Jose & I-10 Hwy	Montclair	North End
Montclair 4	East of San Antonio Channel, between Palo Verde and San Bernardino Road	Montclair	E side of Helena Street
College Heights E	East of San Antonio Channel, north of Arrow Route	Upland	South End
College Heights W	West of San Antonio Channel, north of Arrow Route	Upland	South End
Upland	East of San Antonio Channel, south of Arrow Route	Upland	North End
Brooks	Southeast corner of Silicon Avenue and Brooks Street	Montclair	West End
8th Street	1/4 mile west of Grove Avenue between 8th Street and 7th Street	Upland	North and South Ends
7th Street	1/4 mile west of Grove Avenue between 7th Street and 6th Street	Upland	North and South Ends
Ely 1	Philadelphia Avenue between Walker Avenue and Baker Avenue	Ontario	East End
Ely 2	Philadelphia Avenue between Baker Avenue and Vineyard Avenue	Ontario	East and West Ends
Ely 3	Philadelphia Avenue and east of Vineyard Avenue	Ontario	East End
Turner 1 & 2	4th Street, 1/2 mile west of Archibald Avenue	Ontario	North Side
Turner 3 & 4	Archibald Avenue, 1/4 mile south of 4th Street	Ontario	East Side
Lower Day	Southeast corner of Highland Avenue and Rochester Avenue	Rancho Cucamonga	North End
Victoria	1/2 mile east of East Road on Victoria Avenue	Rancho Cucamonga	South End
San Sevaine 1-3	Southwest corner of Wilson Avenue and Cherry Avenue	Rancho Cucamonga	North End
San Sevaine 4-5	Intersection of First Street and Cherry Avenue, just west of the I-15 Freeway	Rancho Cucamonga	
Banana	Southeast corner of Banana Avenue and Whittram Avenue	Fontana	North Side
Hickory	East of San Sevaine Channel and north of Napa Street	Fontana	South End
Jurupa	Northwest corner of Mulberry Avenue and Jurupa Avenue	Fontana	East End
RP-3	Jurupa Avenue between Live Oak Avenue and Beech Avenue	Fontana	East End
DeClez	1/4 mile east of Mulberry Avenue on Philadelphia Avenue	Fontana	North Side

Table 3-7
Maintenance Schedule for Basins

Management Zone/ Channel/ Basin	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
MZ-1												
San Antonio												
College Heights East & West						Dry	1,2,3	1,2,3				
Upland						Dry	1,2,3	1,2,3				
Montclair Basins 1-4									Dry	1,2,3	1,2,3	
Brooks									Dry	1,2,3	1,2,3	
West Cucamonga												
8th Street							Dry	1,2,3,4	1,2,3,4			
7th Street							Dry	1,2,3	1,2,3			
MZ-2												
West Cucamonga												
Ely Basins 1-3							Dry	1,2,3,4	1,2,3,4			
Cucamonga												
Turner Basins 1 & 2						Dry	1,2,3	1,2,3				
Deer Creek												
Turner Basins 3 & 4									Dry	1,2,3	1,2,3	
Day Creek												
Lower Day									Dry	1,2,3	1,2,3	
Wineville									Dry	1,2,3,4	1,2,3,4	
Riverside									Dry	1,2,3,4	1,2,3,4	
Etiwanda												
Etiwanda Debris Basin						Dry	1,2,3	1,2,3				
Etiwanda Conservation Basins									Dry	1,2,3	1,2,3	
San Sevaine												
San Sevaine Basins 1-3						Dry	1,2,3	1,2,3				
San Sevaine Basins 4 & 5									Dry	1,2,3	1,2,3	
Hickory							Dry	1,2,3	1,2,3			
MZ-3												
West Fontana												
Banana							Dry	1,2,3	1,2,3			
San Sevaine												
Jurupa						Dry	1,2,3,4	1,2,3,4				
RP3							Dry	1,2,3	1,2,3			
Declez							Dry	1,2,3,4	1,2,3,4			

Activity Codes:

1 – Dozer work

2 – Excavation of silt

3 – Grading

4 – Center flow

4. College Heights, Upland, Montclair, and Brooks Street Basins, San Antonio Creek System

4.1 Facilities Description

4.1.1 Facility Ownership and General Location

The locations of the College Heights, Upland, Montclair, and Brooks Street Basins and related facilities are shown in Figure 2-1.

MWDSC Turnout OC-59. MWDSC Turnout **OC-59**, which is located at the intersection of the San Antonio Channel and Miramar Avenue (extended) in San Bernardino County, is a 42-inch diameter conical plug, motor-operated flow control valve on the Rialto Reach of the Foothill Feeder. Its flow capacity ranges from a minimum of 10 cfs to a maximum of 300 cfs as recorded by an adjacent 42-inch diameter venturi meter. Imported water in the MWDSC Rialto Pipeline can be released directly into the San Antonio Channel by scheduling the desired flow from the MWDSC Eagle Rock Control Center at (626) 844-5610.

College Heights Basins. The College Heights Basins are owned by the CBWCD and their location is shown in Figure 2-1. These basins are located northeast of the intersection of Monte Vista Avenue and Arrow Route—one basin on each side of the San Antonio Channel. The entrance to the College Heights West Basin (**CHW**) is located approximately 250 feet east of Monte Vista Avenue on the north side of Arrow Route. The entrance to the College Heights East Basin (**CHE**) is also on the north side of Arrow Route just east of the College Heights West Basin entrance and approximately 50 feet east of the San Antonio Channel. The College Heights Basins and their related diversions and control features are shown in Figure 4-1.

Upland Basin. The Upland Basin (**UPL**) is owned by the City of Upland and is shown in Figure 2-1. This basin is located adjacent to the east side of San Antonio Channel, south of Arrow Route. The entrance to the Upland Basin is located on the north side of the Basin on Arrow Route. The Upland Basin and its related diversions and control features are shown in Figure 4-1.

Montclair Basins. The Montclair Basins (**MT1**, **MT2**, **MT3**, and **MT4**) are owned by the CBWCD and are shown in Figure 2-1. These basins are located along the San Antonio Channel just south of Arrow Highway and north of San Bernardino Street in the City of Montclair. Of the four Montclair Basins, Montclair No. 1 (**MT1**) and Montclair No. 2 (**MT2**) can be accessed from Moreno Drive, Montclair No. 2 (**MT2**) and Montclair No. 3 (**MT3**) can be accessed from San Jose Avenue, and Montclair No. 4 (**MT4**) can be accessed from Helena Avenue. The Montclair Basins and their related diversions and control features are shown in Figure 4-3.

Brooks Street Basin. The Brooks Street Basin (**BRK**) is owned by the CBWCD and its location is shown in Figure 2-1. Brooks Street Basin is located along the San Antonio just south of Brooks Street, between Ramona Avenue and Silicon Avenue (Figure 4-4). Access to this basin is from the Silicon Avenue entrance. Brooks Basin and its related diversion and control features are shown in Figure 4-4.

4.1.2 Facility Control Elements

Table 4-1 presents the control elements at each of the basins. Sluice gates with the "**-A**" designation are automated sluice gates, which can be controlled remotely through the SCADA system; whereas the "**-M**"

designation means the sluice gates are manually operated. All control elements and basin abbreviations are shown in **bold** to make them easy to identify in the tables and text.

Table 4-1
Control Elements in the San Antonio Creek System

Basin	Control Element	Operator
OC-59	Turnout from the MWDSC Rialto Pipeline used to discharge State Project Water to San Antonio Channel	42-inch diameter conical plug, motor-operated flow control valve. Actuated by MWDSC.
CHW/ CHE	San Antonio Channel Rubber Dam	Rubber Dam operated from adjacent Control Building or SCADA
CHW	San Antonio Channel Inlet to College Heights West	Automated Sluice Gate **SAC-CHW-A**
CHE	San Antonio Channel Inlet to Junction Structure to College Heights East	Automated Sluice Gate **SAC-CHE-A**
UPL	San Antonio Channel Inlet to Upland Basin	Automated Sluice Gate **SAC-UPL-A**
MT1	San Antonio Channel Inlet to Montclair Basin 1	Automated Sluice Gate **SAC-MT1-A**
MT1/MT2	Montclair Basin 1 Outlet to Montclair Basin 2	Manual Sluice Gate **MT1-MT2-M**
MT2/MT3	Montclair Basin 2 Outlet to Montclair Basin 3	Manual Sluice Gate **MT2-MT3-M**
BRK	San Antonio Channel Inlet to Brooks Street Basin	Automated Sluice Gate **SAC-BRK-A**

The locations of the sluice gates are shown in Figures 4-1, 4-2, 4-3, and 4-4 for the College Heights, Upland, Montclair, and Brooks Street Basins, respectively.

4.1.3 College Heights Basins

An independent inlet exists to each of the College Heights Basins. Both inlets are located in the San Antonio Channel (SAC). Water can be delivered to the College Heights West (**CHW**) and/or to the College Heights East (**CHE**) Basins through side channel inlets (one on the east side and one on the west side of the SAC). Flows through these inlets are controlled by motor-actuated valves, **SAC-CHW-A** and **SAC-CHE-A**, and by the inflatable rubber dam. In order to increase the diversion of water, a rubber dam is located within San Antonio Creek, just downstream of the basin inlets. When the dam is inflated, water in the channel backs up and can enter either or both of the inlets. The use of supplemental water in the College Heights and Upland Basins is to be carefully balanced so as to avoid seepage from the College Heights Basins into the Upland Basin and/or the Claremont Pit.

4.1.4 Upland Basin

The inlet to the Upland Basin (**UPL**) is located in the same diversion structure as College Heights East. The Upland Basin diversion functions in the same way as College Heights East. Flows through this inlet

are controlled by a motor-actuated valves, **SAC-UPL-A**, and by the inflatable rubber dam. The use of supplemental water in the Upland Basin is restricted to 140 acre-feet of storage and is to be carefully monitored through perimeter monitoring wells.

4.1.5 Montclair Basins

The Montclair Basins (**MT1**, **MT2**, **MT3**, and **MT4**) collect residential drainage and stormwater from local drainage inlets and can receive water from San Antonio Creek through an automated sluice gate (**SAC-MT1-A**) to Montclair No. 1 (**MT1**). A future project may connect IEUA's recycled water system to the Montclair Basins.

4.1.6 Brooks Street Basin

The Brooks Street Basin (**BRK**) collects residential drainage and stormwater from local drainage inlets and can also receive stormwater and imported water from San Antonio Creek through an automated sluice gate (**SAC-BRK-A**). Note that this same inlet (**SAC-BRK-A**) can be used to discharge water from Brooks Street Basin to San Antonio Creek if the water level in the basin is higher than water level in the San Antonio Creek Channel. A future project will connect IEUA's recycled water system to the Brooks Street Basin.

4.1.7 Operating Limits for Basins on San Antonio Creek System

Table 4-2 contains the operating limits for the basins on the San Antonio Creek system. The Rule Curves for these basins are contained in Table 3-1.

Table 4-2
Operating Limits for Basins on the San Antonio Creek System

Basins	Bottom Elevation (ft msl)	Maximum Operating Depth (ft)	Maximum Operating Elevation (ft msl)	Storage Volume at Maximum Operating Depth (af)	Spill Elevation (ft msl)	Storage Volume at Spillway Elevation (af)	Typical Percolation Rate (ft/day)
CHW	1224	10	1234	39.4	1243	87.8	2.5
CHE	1224	10	1234	33.4	1243	83.0	2.5
UPL	1156	59	1215	695	na	na	2.0
MT1	1099	28	1127	117	1127.2	117	1.5
MT2	1070	28	1098	258(1)	1102	308	1.5
MT3	1034	20	1054	33	1054	33	1.5
MT4	1010	27	1037	111	1037	111	1.5
BRK	860	29	875/893(2)	185(2)	889.5	na	1.5

(1) When CBWCD gives permission to use Basin 2 max operating elevation = 1098 feet MSL
(2) Brooks Street Basin has a desired maximum operating elevation of 893 feet msl. Groundwater monitoring is being done in piezometers adjacent this basin to determine slope stability. Pending evaluation of this monitoring data, 875 feet msl will be the maximum operating water surface elevation for supplemental recharge operations. Storm water can be retained in Brooks Street Basin in excess of 875 feet msl provided that no additional supplemental water will be discharged into the basin until the water surface elevation falls below 875 feet msl.

4.2 Supplemental Water Recharge Operations

4.2.1 Supplemental Water Deliveries in Conservation Mode

The operational procedures for operating the Montclair (**MT1**, **MT2**, **MT3**, and **MT4**), and Brooks Street (**BRK**) Basins are described below. The procedures for the College Heights and Upland Basins are still being developed and will be included in subsequent versions of this document.

The IEUA Operator can make imported water deliveries to the Montclair and Brooks Street Basins for recharge by turning on the **OC-59** turnout, which discharges imported water into San Antonio Creek. This water could then be diverted into Montclair No. 1 (**MT1**)—then internally to Montclair Nos. 2 through 4 (**MT2**, **MT3**, and **MT4**)—and/or Brooks Street Basin (**BRK**). These deliveries need to be managed such that the maximum volume in storage in these basins is less than or equal to the levels specified in their respective rule curves. During the Rainy Season, in order to create sufficient storage space for the capture and containment of stormwater, the Watermaster and IEUA will be limited to recharge Supplemental Water to Montclair Basins Nos. 1 and 2 and, upon receiving special authorization from the CBWCD, in limited quantities at Basins Nos. 3 and 4 (Exhibit A).

Before delivering supplemental water to the basins, the IEUA Groundwater Recharge Coordinator shall check with the U. S. Army Corps of Engineers and the SBCFCD for any activity in San Antonio Creek, both within the portion of the channel conveying the imported water to the basins and downstream thereof. This may require field reconnaissance of the channel to check for people and/or obstructions. The IEUA Groundwater Recharge Coordinator shall also check with the CBWCD to ensure that the basins are available for recharge.

Prior to the actual delivery of the imported water, the IEUA Groundwater Recharge Coordinator shall open the inlet sluice gate to direct the water to the desired basin; for example:

- Sluice gate **SAC-MT1-A** to direct water into Montclair No. 1 (**MT1**).
- Sluice gate **SAC-BRK-A** to direct water into Brooks Street Basin (**BRK**).

Operations during recharge:

- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator' discretion, the IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Operator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be limited to what can be safely observed above water. The IEUA Operators shall examine the condition and position of all the sluice gates and inlet grates. While still at the facilities, the IEUA Operators shall report the condition and status of these improvements and staff gage observations in each basin to the IEUA Groundwater Recharge Coordinator who shall confirm

the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.

- As the water levels in the Montclair and/or Brooks Street Basins reach the maximum levels allowed in the rule curves, the IEUA Groundwater Recharge Coordinator shall contact the supplier of the supplemental water and request that the flow rate be reduced as a means to equalize the delivery rate with the recharge rate of the facility. The IEUA Groundwater Recharge Coordinator will notify the Watermaster ROM whenever he or she deems it advisable to make changes in the delivery rate of supplemental water.
- During supplemental water recharge operations, on a weekly basis or more often as may be determined by the IEUA Groundwater Recharge Coordinator, the IEUA Operators shall visually monitor the delivery of water and physically inspect the condition of the basin inlet grates. While patrolling the basins, the IEUA Operators shall examine the condition and position of sluice gates, **SAC-MT1-A** and **SAC-BRK-A**, and record these observations in a field book. While still at the sites, the IEUA Operator shall report the condition and position of these gates and staff gage observations to the IEUA Groundwater Recharge Coordinator who shall compare the reported data with the comparable information from the SCADA system. Any noteworthy discrepancies between field observations and SCADA data shall be reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies as appropriate.
- Periodically during the delivery of supplemental water, the IEUA Operator shall make a tally of the volume of supplemental water delivered and check this volume against the volume of supplemental water ordered. The tally shall be performed at least weekly and a projection will be made as to when the total recharge goal for these basins will be achieved. When the total recharge goal is met, the IEUA Groundwater Recharge Coordinator shall schedule with the MWDSC for closure of **OC-59** or for a reduced rate (if OCWD is taking water). Similarly, when anticipating the recharge goal for recycled water deliveries, the IEUA Groundwater Recharge Coordinator shall schedule the closure of the appropriate IEUA recycled water valves. The IEUA Groundwater Recharge Coordinator will keep the members of the GRCC informed on such matters.
- Once scheduled deliveries of Watermaster supplemental water are complete for these facilities, the IEUA Groundwater Recharge Coordinator shall notify the CBWCD and the Watermaster ROM. Sluice gates **SAC-MT1-A** and **SAC-BRK-A** may remain open to capture dry-weather flows, but should be adjusted to insure that the **OC-59** discharge intended for OCWD, if any, is not diverted into the basins. If scheduled supplemental water is being delivered through SBCFCD channels, then the IEUA Groundwater Recharge Coordinator shall also notify the SBCFCD when deliveries are complete.

4.2.2 Supplemental Water Deliveries in Pre-Storm Mode

At the discretion of the IEUA Groundwater Recharge Coordinator, supplemental water can be delivered to the Montclair No. 1 (**MT1**) Basin and the Brooks Street Basin (**BRK**), as in Conservation Mode, up to

two days before the forecasted significant storm. These deliveries must be consistent with the rule curves for these basins. All deliveries of supplemental water must cease at least 2 days before the forecasted significant storm unless the CBWCD and Watermaster ROM agree that supplemental water deliveries can continue and that the deliveries do not conflict with US Army Corp of Engineers operations at San Antonio Dam. Under no circumstance shall supplementary water deliveries be permitted on the day of a forecasted significant storm.

4.2.3 Supplemental Water Deliveries in Storm Mode

No deliveries of supplemental water will be made during Storm Mode.

4.3 Stormwater Operations and Capture during Storm Mode

4.3.1 Coordination among CBWCD, IEUA, and Watermaster

The IEUA Groundwater Recharge Coordinator and the Watermaster ROM shall closely monitor weather forecasts and, in particular, all forecasted storm events. The IEUA Groundwater Recharge Coordinator will be in close contact with the CBWCD during Pre-Storm and Storm Modes. Additionally, the IEUA Groundwater Recharge Coordinator will be in close contact with the Army Corps of Engineers regarding the discharge of stormwater from San Antonio Dam during all operational modes. Contact information for inquiries and notifications is listed in Figure 3-1.

4.3.2 First Storm of the Season

In advance of the first storm event of the season, an IEUA Operator shall close inlet gates **SAC-MT1-A** and **SAC-BRK-A** to the Montclair No. 1 **(MT1)** and Brooks Street (**BRK**) Basins, respectively. When the IEUA Groundwater Recharge Coordinator determines that the turbidity of the stormwater is acceptable, an IEUA Operator can divert stormwater into the Montclair and Brooks Street Basins. The IEUA Operator will then use the SCADA system to open sluice gates **SAC-MT1-A** and **SAC-BRK-A.** This procedure is to be performed only in advance of the first storm event of the season.

4.3.3 Stormwater Capture

The following are the procedures to operate the Montclair Basins for the recharge of stormwater:

- If there is flow passing **SAC-MT1-A** and the turbidity is low enough, an IEUA Operator will open **SAC-MT1-A**.
- The IEUA Operator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators will visually observe the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Operator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be

limited to what can be safely observed above water. The IEUA Operators shall visually examine the condition and position of all the sluice gates and inlet grates. While still at the facilities, the IEUA Operators shall report the condition and status of the gates and staff gage readings in each basin to the IEUA Operator who shall confirm the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Operator will address the discrepancies and other issues as appropriate.

- The **SAC-MT1-A** sluice gate will generally remain open to divert stormwater into Montclair No. 1 (**MT1**) until it is determined that there is continuous discharge from **SAC-MT1-A** through the basins and out of Montclair No. 4 (**MT4**) to the San Antonio Creek Channel.
- Once the stormwater discharge in San Antonio Creek Channel ceases, the IEUA Groundwater Recharge Coordinator shall close the **SAC-MT1-A** sluice gate.

The following are the procedures to operate the Brooks Street Basin **(BRK)** for the recharge of stormwater:

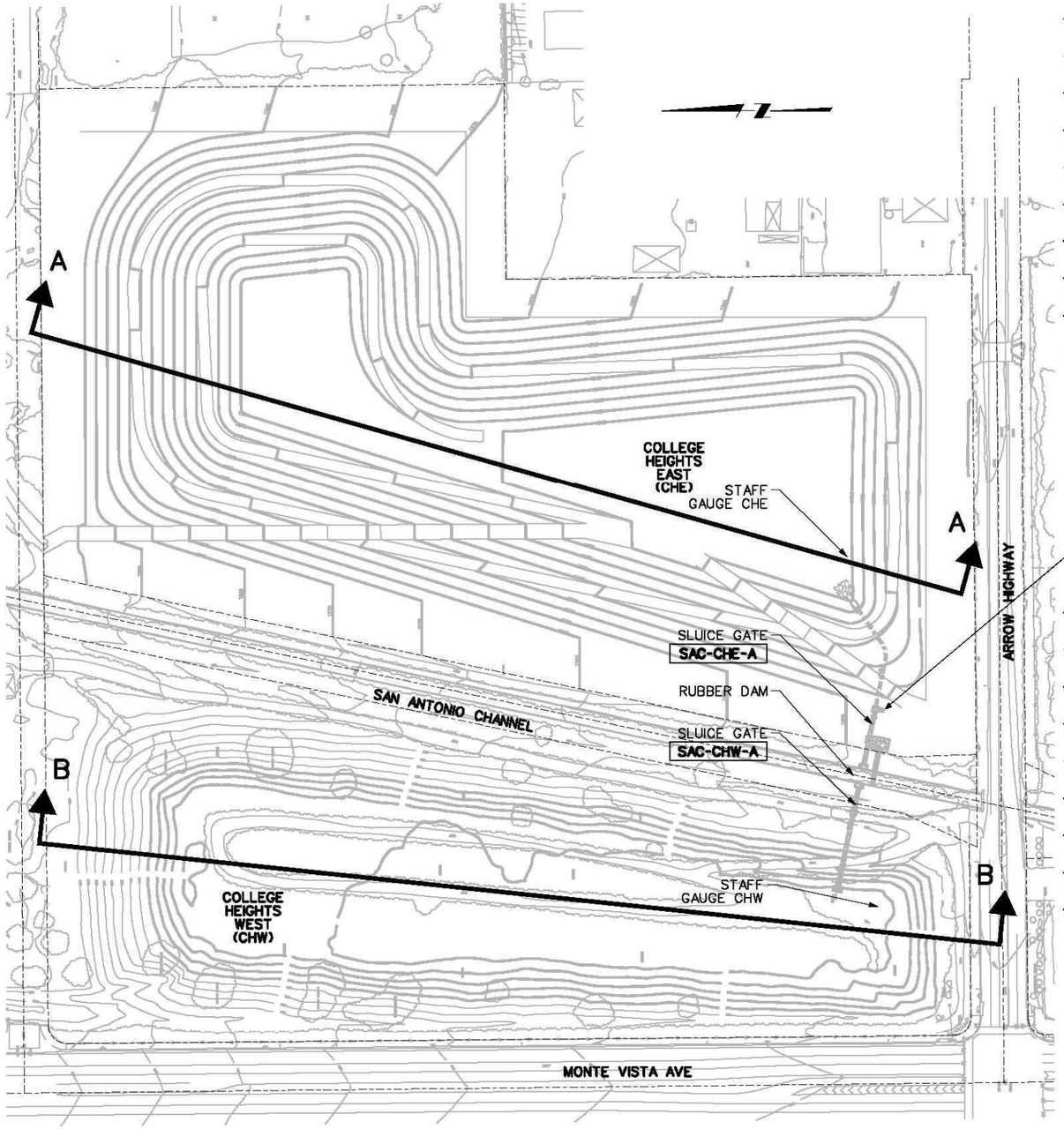
- Stormwater discharge in San Antonio Creek may be diverted into the Brooks Street Basin (**BRK**) through **SAC-BRK-A** under the following conditions:
  - If there is flow passing **SAC-BRK-A** and the turbidity is low enough; and
  - If the water level in the Brooks Street Basin (**BRK**) is less than 893 feet msl and is not rising.
- The IEUA Operator will monitor the depth of water in the basin remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's' discretion, the IEUA Operators will physically inspect the basin during the following situations:
  - As the basin is filling;
  - When a maximum operating level is reached;
  - When sluice gate changes are made; and
  - When the IEUA Operator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be limited to what can be safely observed above water. The IEUA Operators shall visually examine the condition and position of all sluice gates and inlet grates. While still at the facilities, the IEUA Operators shall report the condition and status of the gates and staff gage readings in each basin to the IEUA Operator who shall confirm the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Operator will address the discrepancies and other issues as appropriate.
- Once opened, the **SAC-BRK-A** sluice gate will generally remain open to divert stormwater into the Brooks Street Basin (**BRK**) until the water level in the Brooks Street Basin (**BRK**) reaches 893 feet msl. If the water level in Brooks Street Basin **(BRK**) exceeds 893 feet msl, then **SAC-BRK-A** will be closed and remain closed until the water level drops to 893 feet msl.

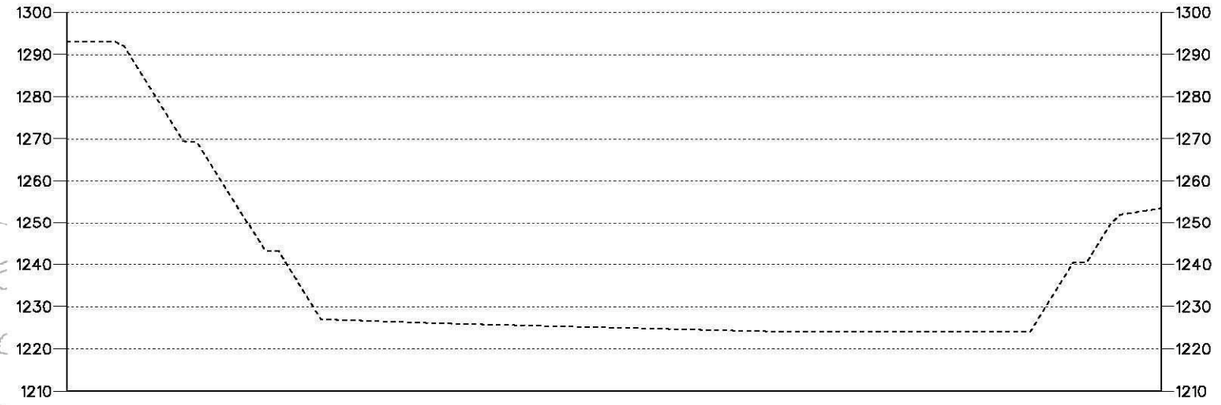
- Once the stormwater discharge in San Antonio Creek ceases, the IEUA Groundwater Recharge Coordinator shall open the **SAC-BRK-A** sluice gate unless coordinating with the OCWD for their import water deliveries.
- Inlet elevations to Brooks Street Basin are 898 feet msl from San Antonio Creek (**SAC-BRK-A**) and 909 feet msl at the uncontrolled inlet from the West State Street Storm Channel. Local inflows that raise the basin levels above these elevations create the potential for the loss of storm flow.

Table 4-3
Control Elements For The San Antonio Creek System and Associated Storm Settings

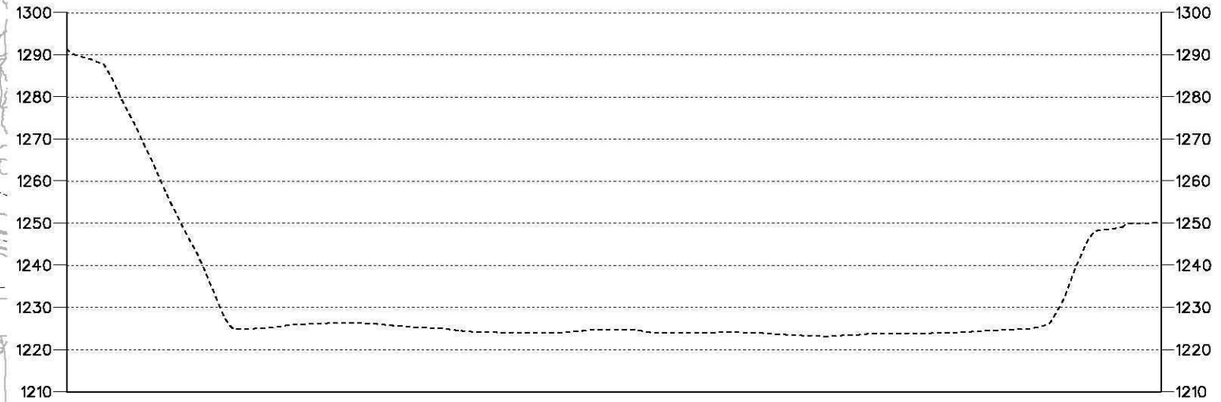
Basin		Control Element	Operator	Control Element Settings		
Facility	Type			First Storm	Non-Significant Storm	Significant Storm
OC59		MWDSC Turnout	MWDSC	Closed	Closed	Closed
SAC		San Antonio Channel Rubber Dam	Rubber dam operated from adjacent control building or SCADA	Deflated	Deflated	Deflated
CHE	Cons	San Antonio Channel to College Heights East	Automated Sluice Gate (**SAC-CHE-A**)	Closed	Open	Closed
CHW	Cons	San Antonio Channel to College Heights West	Automated Sluice Gate (**SAC-CHW-A**)	Closed	Closed	Closed
UPL	Multipurpose	San Antonio Channel to Upland	Automated Sluice Gate (**SAC-UPL-A**)	Closed	Closed	Closed
MT1	Cons	San Antonio Channel to Montclair 1	Automated Sluice Gate (**SAC-MT1-A**)	Closed	Open	Open
MT2	Cons	Montclair 1 to Montclair 2	Manual Sluice Gate (**MT1-MT2-M**)	Open	Open	Open
MT3	Cons	Montclair 2 to Montclair 3	Manual Sluice Gate (**MT2-MT3-M**)	Open	Open	Open
MT4	Cons	Montclair 3 to Montclair 4	Passive Overflow	na	na	na
SAC		Montclair 4 to San Antonio Creek	Passive Overflow	na	na	na
BRK	Cons	San Antonio Channel to Brooks Basin	Automated Sluice Gate (**SAC-BRK-A**)	Closed	Open	Varies[1]

(1) Generally, gate should be open to capture storm water from San Antonio Creek. Gate **SAC-BRK-A** must be closed if water surface elevation in Brooks Street





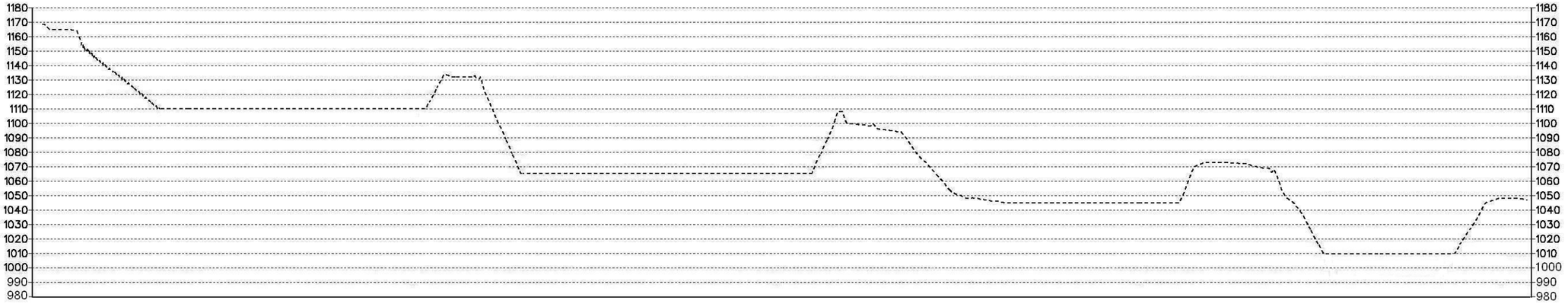
SECTION A-A



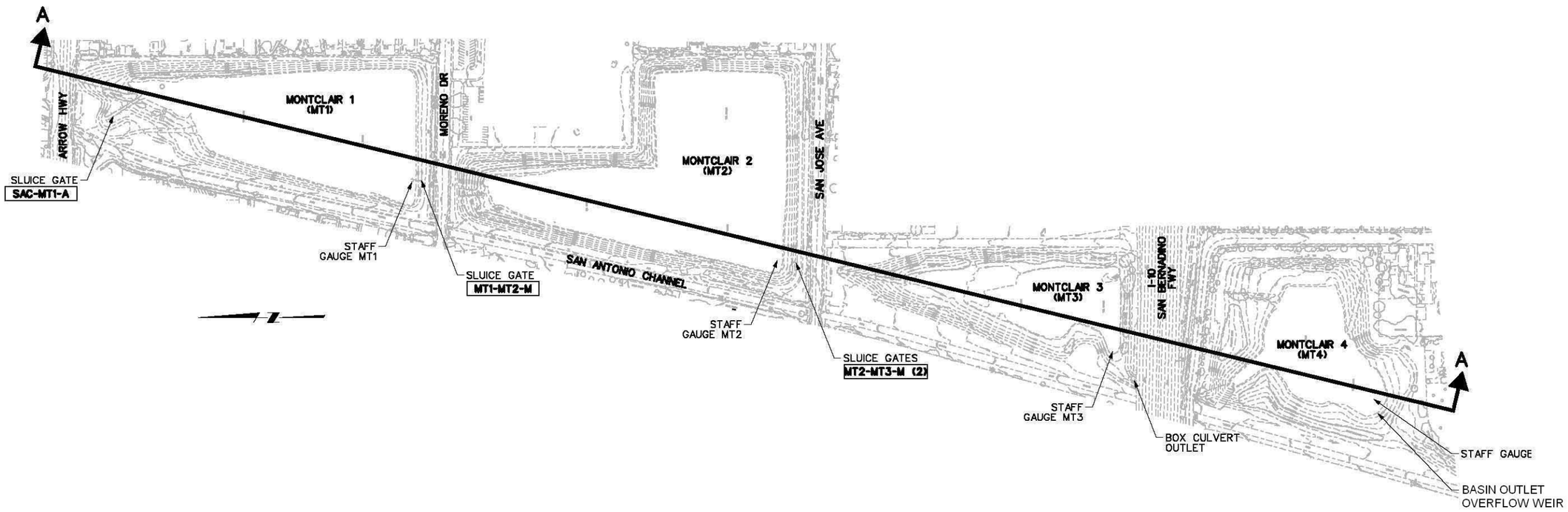
SECTION B-B

SCALE			FIGURE
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures Plan and Profile College Heights Basins	4-1

Placeholder for Figure 4-2

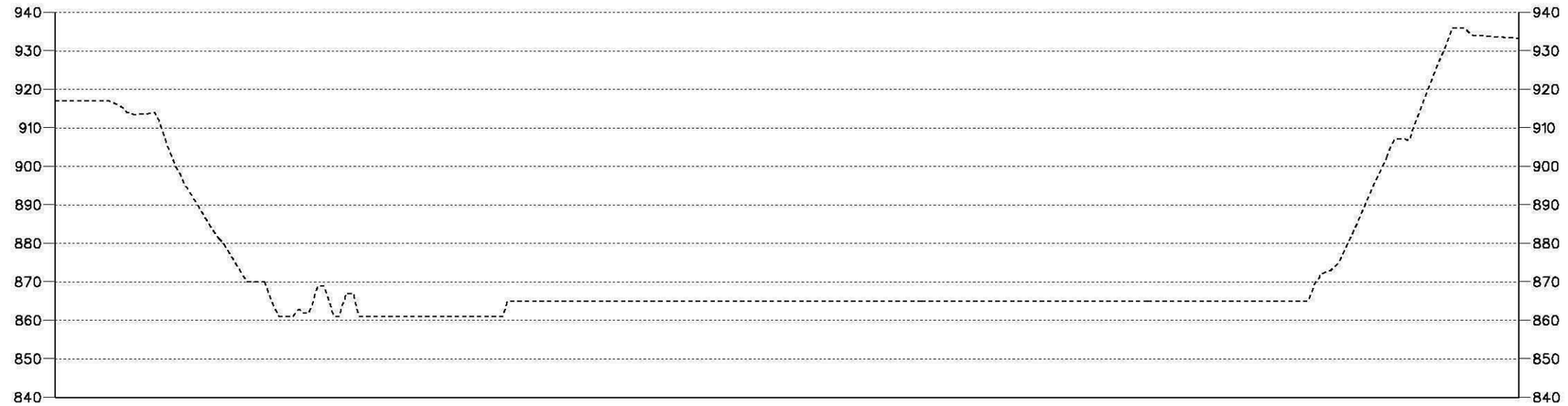


SECTION A-A

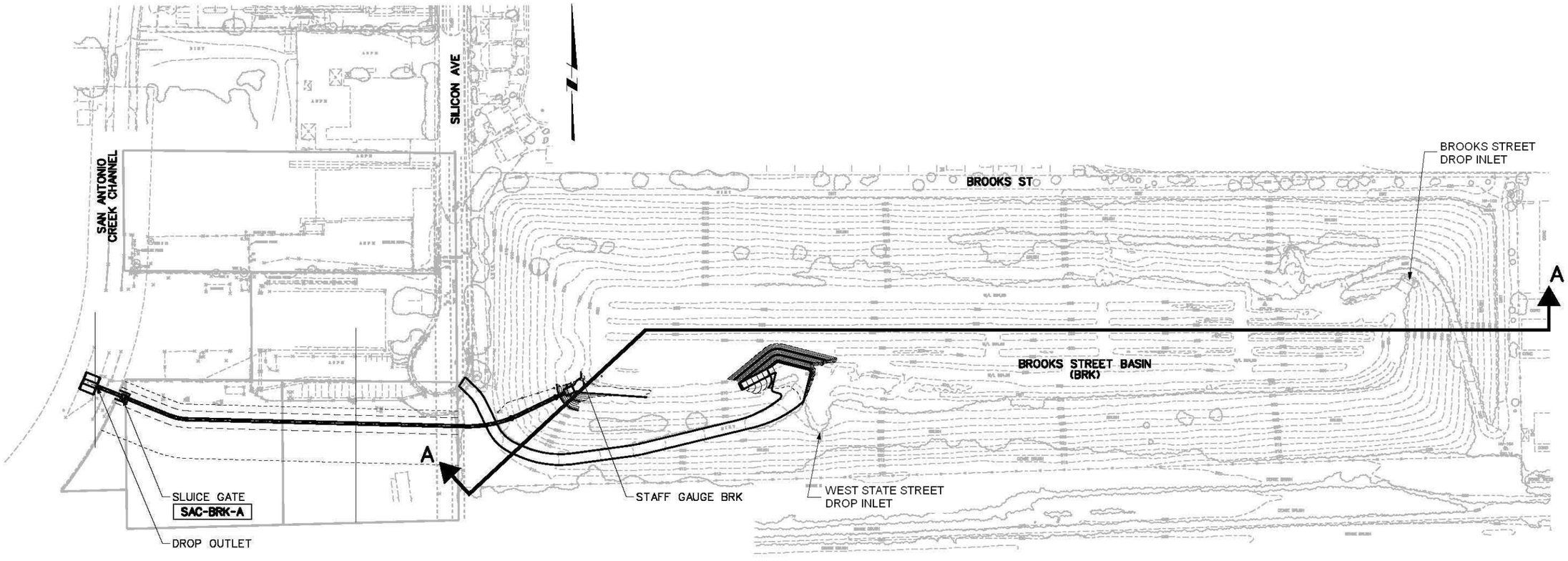


SCALE			
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures	Plan and Profile Montclair Basins No. 1 through No. 4

FIGURE 4-3



SECTION A-A



SCALE				FIGURE
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures	Plan and Profile Brooks Street Basin	4-4

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5. 7TH AND 8TH STREET BASINS, ELY BASINS, WEST CUCAMONGA CREEK SYSTEM

5.1 Facilities Description

5.1.1 Facility Ownership and General Location

The locations of the 7th Street, 8th Street, and Ely Basins, and related facilities are shown in Figure 2-1.

7th and 8th Street Basins. The locations of the 7th and 8th Street Basins are shown in Figures 2-1 and 5-1. The 8th Street Basin is owned by the SBCFCD and is located along the West Cucamonga Channel (**WCC**) between 8th Street and 7th Street on the border between the Cities of Upland and Ontario. The 8th Street Basin consists of two cells: 8th Street Basin North (**8SN**) and 8th Street Basin South (**8SS**). Both are located north of 7th Street. The 7th Street Basin (**7TH**) is owned by SBCFCD and is located along the West Cucamonga Channel (**WCC**) between 7th Street and 6th Street. The 8th Street Basin North (**8SN**), the 8th Street Basin South (**8SS**), and the 7th Street Basin (**7TH**) can all be accessed from 7th Street. The entrances to the 8th Street Basins are on the north side of 7th Street and the entrances to the 7th Street Basin (**7TH**) are on the south side of 7th Street. An additional entrance to the 8th Street Basins is located on the south side of 8th Street.

Ely Basins. The locations of the Ely Basins are shown in Figures 2-1 and 5-2. Ely Basins 1 & 2 (**EL1** and **EL2**) are owned by the SBCFCD and Ely Basin 3 (**EL3**) is owned by the CBWCD. The Ely Basins are located along the West Cucamonga Channel (**WCC**) just north of Philadelphia Street between the southerly projection of Walker Avenue and S. Carlos Avenue in the City of Ontario. More specifically, Ely 1 Basin (**EL1**) is located west of Baker Avenue, Ely 2 Basin (**EL2**) is located between Baker Avenue and Vineyard Avenue, and Ely 3 Basin (**EL3**) is located east of Vineyard Avenue. The Ely 1 (**EL1**) and Ely 2 (**EL2**) Basins can be accessed from Baker Avenue and both the Ely 2 (**EL2**) and Ely 3 (**EL3**) Basins can be accessed from Vineyard Avenue as shown in Figure 5-2.

5.1.2 Facility Control Elements

Table 5-1 presents the control elements at each of the basins. Sluice gates with the "**-A**" designation are automated sluice gates, which can be controlled remotely through the SCADA system; whereas the "**-M**" designation means the sluice gates are manually operated. All control elements and basin abbreviations are shown in **bold** to make them easy to identify in the tables and text.

Table 5-1
Control Elements in the West Cucamonga Creek System

Basin	Control Element	Operator
8SN	8th Street North to 8th Street South	Manual Sluice Gate **8SN-8SS-M**
8SS	8th Street South to 7th Street	Automated Sluice Gate **8SS-7TH-A**
7TH	7th Street to West Cucamonga Creek	Automated Sluice Gate **7TH-WCC-A** Manual Sluice Gate **7TH-WCC-M**

Table 5-1
Control Elements in the West Cucamonga Creek System

Basin	Control Element	Operator
EL1	West Cucamonga Creek Channel to Ely Basin 1 Bypass	Manual Sluice Gate **WCC-EL1B-M**
EL1	West Cucamonga Creek Channel to Ely Basin 1	Manual Sluice Gate **WCC-EL1-M**
EL1	Ely Basin 1 to Ely Basin 2	Manual Sluice Gate **EL1-EL2-M**
EL1	Ely Basin 1 Bypass to Ely Basin 2	Manual Sluice Gate **EL1B-EL2-M**
EL2	Ely Basin 2 Bypass to Ely Basin 3	Manual Sluice Gate **EL2B-EL3-M**
EL2	Ely Basin 2 to Ely Basin 3	Manual Sluice Gate **EL2-EL3-M**
EL3	Ely Basin 3 Distribution Channel to Cell 1	Manual Sluice Gate **EL3DC-C1-M**
EL3	Ely Basin 3 Distribution Channel to Cell 2	Manual Sluice Gate **EL3DC-C2-M**
EL3	Ely Basin 3 Distribution Channel to Cell 3	Manual Sluice Gate **EL3DC-C3-M**
EL3	Recycled Water Inlet to Ely Basin 3 Distribution Channel	Automated Sluice Gate **RW–EL3DC-A**
EL3	Outlet to West Cucamonga Creek Channel	Automated Sluice Gate **EL3-WCC-A**

The locations of the sluice gates are shown in Figure 5-1 for the 8th and 7th Street Basins and Figure 5-2 for the Ely Basins.

5.1.3 7th and 8th Street Basins

The 8th Street Basin collects residential drainage and stormwater from five local drainage inlets and receives water from the West Cucamonga Channel (**WCC**). Eventually, recycled water will be delivered to the basin via a recycled water pipeline. The 8th Street Basin is divided into two cells, North (**8SN**) and South (**8SS**), by an internal berm. Flow from the north cell (**8SN**) to the south cell (**8SS**) is controlled by a manually operated 54-inch diameter sluice gate. Flow from the 8th Street South Basin (**8SS**) into the 7th Street Basin (**7TH**) is through an automated 48-inch diameter sluice gate or a spillway (if the water elevation exceeds 1150 feet msl). Water can also top a soil cement berm housing the sluice gate and enter 7th Street Basin through a culvert under 7th Street. The 7th Street Basin (**7TH**) then discharges flow back into the West Cucamonga Channel (**WCC**) through an automated 36-inch diameter sluice gate, a manually operated sluice gate, or a spillway if the water elevation exceeds 1134 feet msl.

5.1.4 Ely Basins

The Ely Basins collect residential drainage and stormwater from five local drainage inlets and from the West Cucamonga Channel. Ely 1 Basin (**EL1**), the western-most basin, also receives treated groundwater from a treatment facility owned and operated by General Electric (GE) on a year-round basis. The GE treatment plant discharge enters Ely 1 Basin (**EL1**) via the West Cucamonga Channel. GE discharge shuts off automatically based on a level switch in EL1. Recycled water can be delivered separately to all three Ely Basins via a recycled water pipeline in Philadelphia Street. Ely 3 Basin (**EL3**) is divided into three cells via internal berms, which can receive recycled water via a distribution channel on its south side. Under typical flow conditions, Basin 1 outlets to Basin 2, Basin 2 outlets to Basin 3, and Basin 3 outlets back into the West Cucamonga Channel.

5.1.5 Operating Limits for Basins on West Cucamonga Creek System

Table 5-2 contains the operating limits for the 7th Street, 8th Street, and Ely Basins. The Rule Curves for these basins are in Table 3-2.

Table 5-2
Operating Limits for Basins on the West Cucamonga Creek System

Basins	Bottom Elevation (feet msl)	Maximum Operating Depth (feet)	Maximum Operating Elevation (feet msl)	Storage Volume at Maximum Operating Depth (af)	Spillway Elevation (feet msl)	Storage Volume at Spillway Elevation (af)	Typical Percolation Rate (ft/day)
8SN	1134	5	1139	36	na	na	0.5
8SS	1127	12	1139	26	na	na	0.5
7TH	1124	9	1133	42	1134	48	0.5
EL1	823	5	828	22	835	85	0.5
EL2	825	3	828	25	835	96	0.5
EL3C1	820	3.8	823.8	12	835	136	0.5
EL3C2	820	3.8	823.8	9			
EL3C3	820	3.8	823.8	9			

5.2 Supplemental Water Recharge Operations

Recycled water is the only supplemental water available to the Ely Basins and may be available to the 7th and 8th Street Basins in the future. This section of the Recharge Operations Procedures will be modified in the future when recycled water is available to the 7th and 8th Street Basins.

5.2.1 Supplemental Water Deliveries in Conservation Mode

Before delivering recycled water to Ely 3 Basin (**EL3**), the IEUA Operator shall check with the CBWCD and SBCFCD for any activity in the Ely 3 Basin (**EL3**). This will require an inspection of the basin prior to the delivery of recycled water to the basin. Prior to the actual delivery of recycled water:

- The IEUA Operator shall close the outlet sluice gate **EL3-WCC-A**.

- The IEUA Groundwater Recharge Coordinator will select the cell(s) that will be used for recharge, direct IEUA Operators to open the sluice gate for those cells to receive water, and close the sluice gates to the cell(s) that will not be used.

Operations during recharge:

- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator' discretion, the IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Operator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be limited to what can be safely observed above water. The IEUA Operators shall examine the condition and position of all the sluice gates and inlet grates. While still at the facilities, the IEUA Operators shall report the condition and status of these improvements and staff gage observations in each basin to the IEUA Groundwater Recharge Coordinator who shall confirm the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.
- As the water level in a cell or cells reaches the maximum level specified in the rule curves, the IEUA Groundwater Recharge Coordinator shall reduce the recycled water inflow rate to equalize the delivery rate with the recharge rate of the facility. The IEUA Groundwater Recharge Coordinator will notify the CBWCD, Watermaster, and the SBCFCD whenever he/she deems it advisable to make changes in the delivery rate of the supplemental water.
- During imported water recharge operations, on a weekly basis or as may be determined by the IEUA Groundwater Recharge Coordinator, the IEUA Operators shall visually monitor the delivery of water, physically inspect the condition of the basin, and record these observations in a field book. While still at the site, the IEUA Operator shall report the condition and position of these gates and water levels at staff gages to the IEUA Groundwater Recharge Coordinator who shall compare the reported data with the comparable information from the SCADA system. The IEUA Groundwater Recharge Coordinator shall respond accordingly to any noteworthy discrepancies between field observations and SCADA data.
- Periodically during the delivery of recycled water, the IEUA Groundwater Recharge Coordinator shall make a tally of the volume of recycled water delivered and check this volume against the volume of recycled water ordered. The tally shall be performed at least weekly and a projection will be made as to when the total recycled water recharge goal for this basin will be achieved. These recharge computations will be submitted to the Watermaster ROM. The Watermaster ROM will keep the members of the GRCC informed on such matters.

- Once deliveries of recycled water are complete for this facility, the IEUA Operator shall notify the CBWCD and the Watermaster ROM.

5.2.2 Supplemental Water Deliveries in Pre-Storm Mode

Recycled water deliveries to the Ely 3 Basin (**EL3**) during Pre-Storm Mode can be made up to 48 hours preceding the forecasted storm event provided that the water levels in the cells in the Ely 3 Basin (**EL3**) are less than or equal to the water levels in the associated rule curves.

5.2.3 Supplemental Water Deliveries in the Storm Mode

No deliveries of recycled water will be made to these basins during Storm Mode.

5.3 Stormwater Operations and Capture during Storm Mode

5.3.1 Coordination among CBWCD, IEUA, SBCFCD, and Watermaster

The IEUA Operator and the Watermaster ROM shall closely monitor weather forecasts and in particular will monitor all forecasted storm events. The IEUA Operator will be in close contact with the SBCFCD during Pre-Storm and Storm Modes. The IEUA Operator will respond to the directions of the SBCFCD "Storm Alert Officers" (listed in Figure 3-1).

5.3.2 First Storm of the Season

Since these are flow-through basins, there are no special provisions for the first storm of the season.

5.3.3 Stormwater Capture

The following are the procedures to operate the 7th and 8th Street and Ely Basins for the recharge of stormwater for a storm that has a non-significant precipitation forecast:

- Close sluice gates **8SS-7TH-A**, **7TH-WCC-A, 7TH-WCC-M,** and **EL3-WCC-A**. These gates should remain closed throughout the storm unless the SBCFCD directs the IEUA Operator to open these gates during or following the storm. Open sluice gates **8SN-8SS-M, EL1-EL2-M, EL2-EL3-M,** and **EL1B-EL2-M**—leave these gates open unless directed to close them by the SBCFCD or for some other compelling reason.
- Automated sluice gate EL3-WCC-A is programmed to open when the water level in the Ely 3 Basin (**EL3**) reaches an elevation of 835 feet msl.
- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's discretion, the IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Operator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be

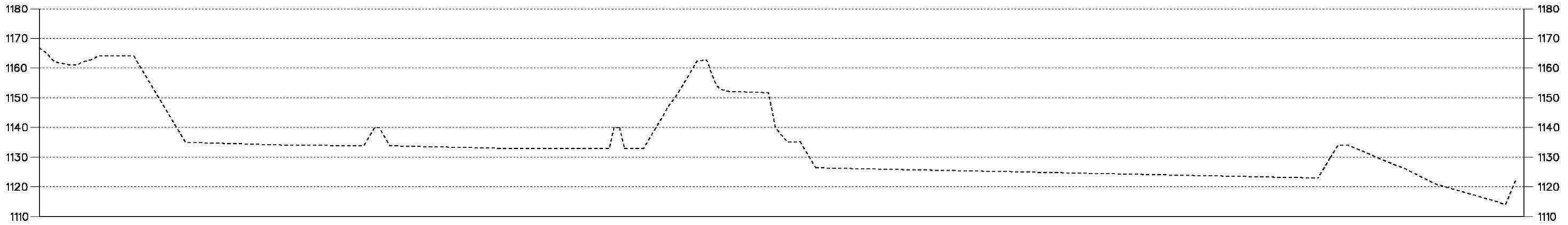
limited to what can be safely observed above water. The IEUA Operators shall examine the condition and position of all the sluice gates and inlet grates. While still at the facilities, the IEUA Operators shall report the condition and status of these improvements and the water level in each basin to the IEUA Groundwater Recharge Coordinator who shall confirm the reported data with the SCADA information. All grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.

The following are the procedures to operate the 7th and 8th Street and Ely Basins for the recharge of stormwater for a storm that has a significant precipitation forecast:

- The 8**SS-7TH-A** and **7TH-WCC-A** gates should be opened 24 hours prior to the storm's arrival and the basins should be fully drained to restore full flood control function before the storm starts.
- The **EL3-WCC-A** gate should be opened 24 hours prior to the storm's arrival and the basins should be fully drained to restore full flood control function before the storm starts. **EL3-WCC-A** should be closed before the storm begins. Automated sluice gate **EL3-WCC-A** is programmed to open when the water level in the Ely 3 Basin (**EL3**) reaches elevation 835 feet msl. The SBCFCD is responsible to ensure that **EL3-WCC-A** is either closed or open pursuant to SBCFCD storm operations procedures.
- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's discretion, the IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Operator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be limited to what can be safely observed above water. The IEUA Inspectors shall examine the condition and position of all the sluice gates and inlet grates. While still at the facilities, the IEUA Operators shall report the condition and status of these improvements and staff gage observations in each basin to the IEUA Groundwater Recharge Coordinator who shall confirm the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.
- Near the end of the storm, the IEUA Groundwater Recharge Coordinator can close sluice gates **8SS-7TH-A** and **7TH-WCC-A** following authorization from the SBCFCD.
- Near the end of the storm, the IEUA Groundwater Recharge Coordinator can close sluice gate **EL3-WCC-A** following authorization from the SBCFCD.

Table 5-3
Control Elements for the West Cucamonga Creek System and Associated Storm Settings

Basin		Control Element	Operator	Control Element Settings		
Facility	Type			First Storm	Non-Significant Storm	Significant Storm
8SN	MP	8th St. North to 8th St. South	Manual Sluice Gate (**8SN-8SS-M**)	Open	Open	Open
8SS	MP	8th St. South to 7th St. Basin	Automated Sluice Gate (**8SS-7TH-A**)	Open	Open	Open
7TH	MP	7th St. Basin to West Cucamonga Channel	Automated Sluice Gate (**7TH-WCC-A**)	Open	Closed	Open
EL1	MP	West Cucamonga Channel to Ely 1 Basin	Manual Sluice Gate (**WCC-EL1-M**)	Open	Open	Open
EL2	Cons	Ely 1 Basin to Ely 2 Basin	Manual Sluice Gate (**EL1-EL2-M**)	Open	Open	Open
EL3	Cons	Ely 2 Basin to Ely 3 Basin	Manual Sluice Gate (**EL2-EL3-M**)	Open	Open	Open
EL3	Cons	Ely 3 Basin to Cell 1	Manual Sluice Gate (**EL3DC-C1-M**)	Open	Open	Open
EL3	Cons	Ely 3 Basin to Cell 2	Manual Sluice Gate (**EL3DC-C2-M**)	Open	Open	Open
EL3	Cons	Ely 3 Basin to Cell 3	Manual Sluice Gate (**EL3DC-C3-M**)	Open	Open	Open
EL3	Cons	Ely 3 to West Cucamonga Channel	Automated Sluice Gate (**EL3-WCC-A**)	Open	Closed	Open



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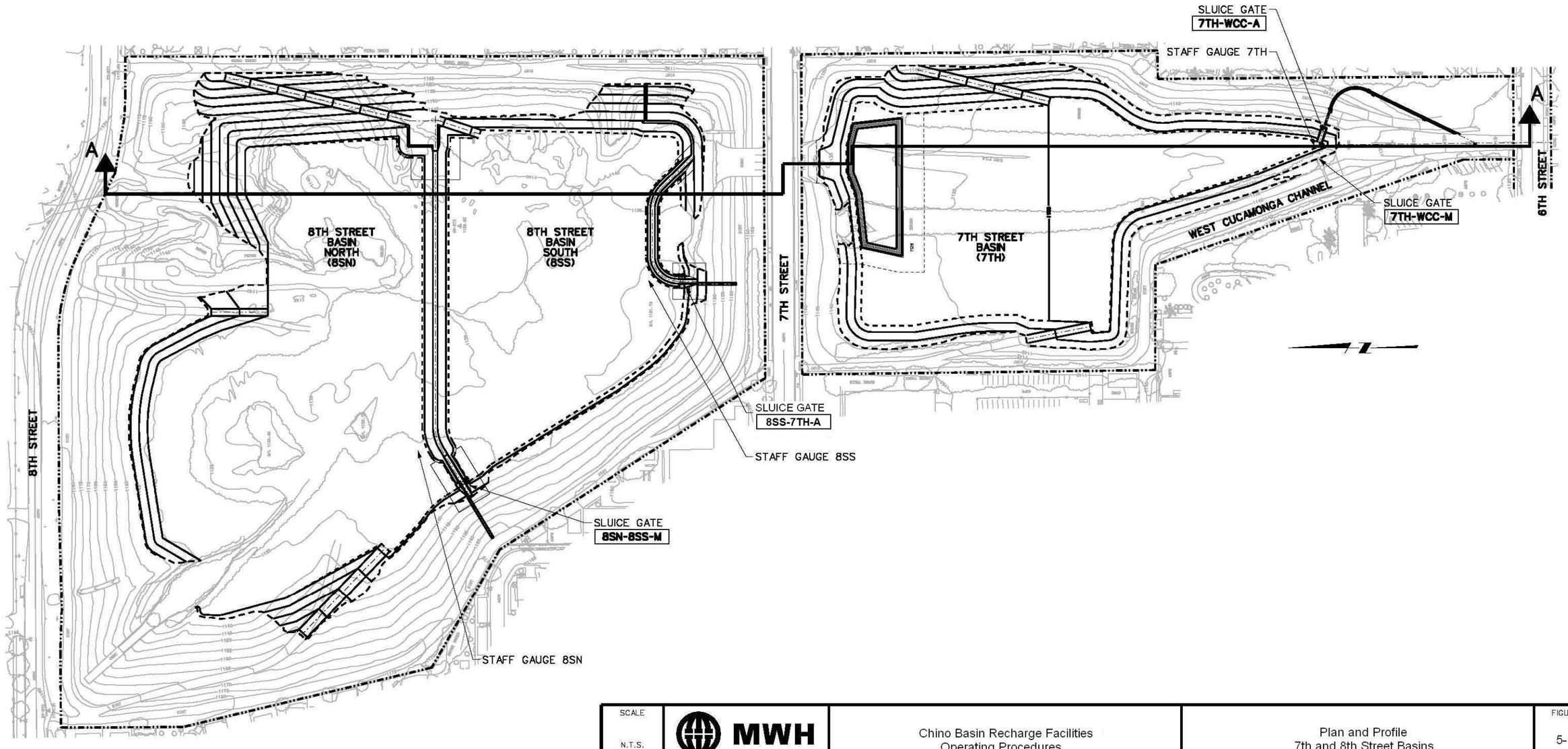
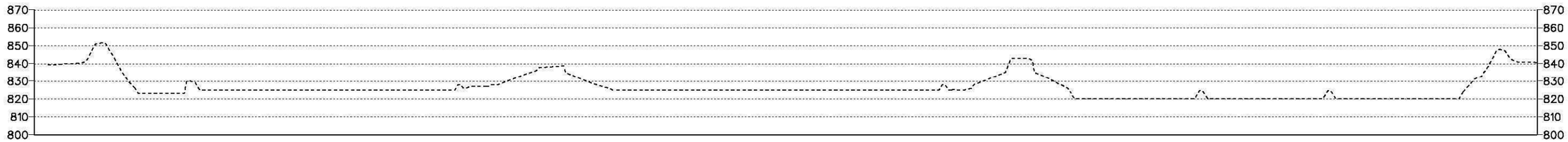


SCALE				FIGURE
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures	Plan and Profile 7th and 8th Street Basins	5-1



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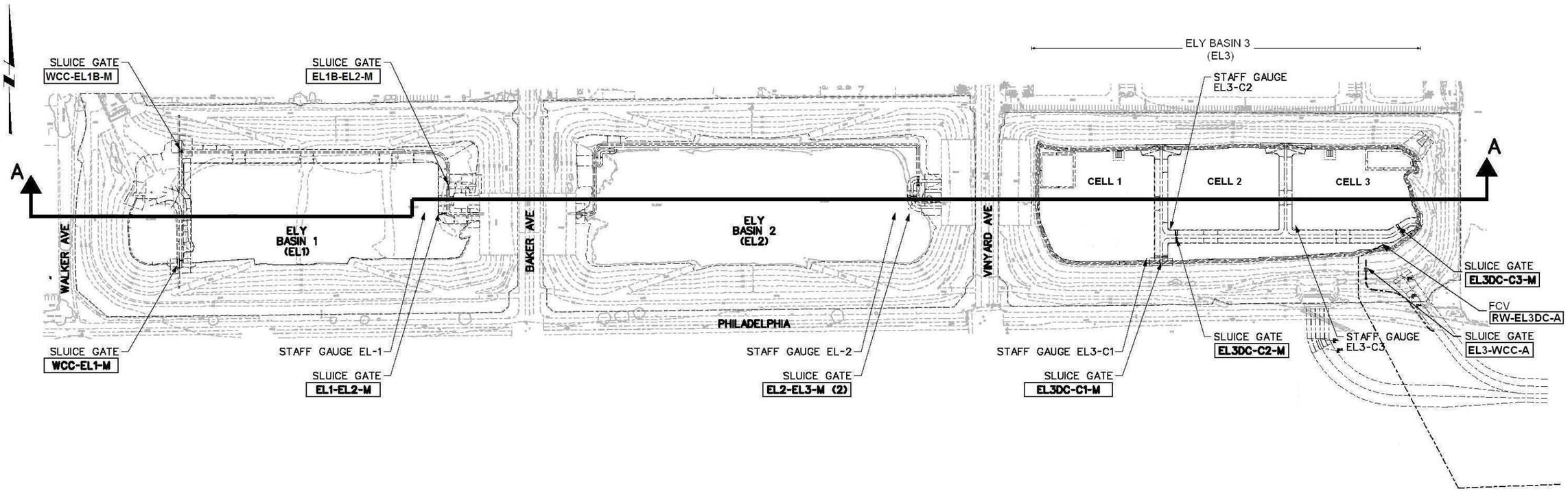


SCALE			FIGURE
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures	Plan and Profile Ely Basins No. 1 through No. 3	5-2

6. TURNER BASINS, CUCAMONGA AND DEER CREEKS SYSTEM

6.1 Facilities Description

6.1.1 Facility Ownership and General Location

The locations of the Turner Basins and related facilities are shown in Figure 2-1.

MWDSC Turnout CB-11. MWDSC turnout **CB-11**, which is located on the northwest corner of the intersection of Banyan Street and Haven Avenue in Rancho Cucamonga, is a 24-inch diameter vertical-sleeve type, motor-operated control valve. Its flow capacity ranges from a minimum of 4 cfs to a maximum of 40 cfs as recorded by an adjacent 24-inch diameter venturi meter. Imported water in the MWDSC Rialto Pipeline can be released directly into the Haven Avenue storm drain (owned by the City of Rancho Cucamonga) that connects to the Deer Creek Channel at the Church Street Basin. The IEUA Operator can schedule the delivery of imported water at this turnout by calling the MWDSC Eagle Rock Control Center at (626) 844-5610.

Turner Basins. The north 350 feet, approximately, of Turner Basin 1 (**TR1**) is owned by the CBWCD. The remaining portion of Turner Basin 1 and Turner Basins 2, 3, and 4 (**TR2**, **TR3** and **TR4**) are owned by the SBCFCD. These basins are located just southwest of the intersection of 4th Street and Archibald Avenue in the City of Ontario. These basins and their related diversions and flow control features are shown in Figures 6-1 and 6-2. The entrance gate to Turner Basins 1 and 2 is located on the south side of 4th Street, 1/2 mile west of Archibald Avenue, just east of the Cucamonga Creek Channel (**CCC**). The entrance to Turner Basins 3 and 4 is located about 3/8 mile south of 4th Street and south of the Deer Creek Channel (**DRC**) on the west side of Archibald Avenue.

6.1.2 Facility Control Elements

The Turner Basins can receive stormwater from the Cucamonga Creek Channel, the Deer Creek Channel, and/or local storm drains. Stormwater or imported water released into the Deer Creek Channel from **CB-11** can be directed into Turner Basin 1 or Turner Basin 4 by opening the Deer Creek Channel inlet sluice gates **DRC-TR1-A** or **DRC-TR4-A**, respectively. Recycled water deliveries are also planned, but the facilities have not been completed yet. Water in **TR1** can be let into **TR2** by manually opening the valve **TR1-TR2-M**. Water in **TR4** can be let into **TR3** by manually opening the valve **TR4-TR3-M**.

Table 6-1 presents the control elements of the Turner Basins. Sluice gates with the "**-A**" designation are automated sluice gates, which can be controlled remotely through the SCADA system; whereas the "**-M**" designation means the sluice gates are manually operated. All control elements and basin abbreviations are shown in **bold** to make them easy to identify in the tables and text.

Table 6-1
Control Elements in the Cucamonga and Deer Creeks System

Basin	Control Element	Operator
TR1	Cucamonga Creek Inlet to Turner Basin 1	Automated Sluice Gate **CCC-TR1-A**
TR1	Cucamonga Creek Rubber Dam	Rubber Dam operated from adjacent Control Building or SCADA
TR1	42-inch diameter pipeline to connect Turner Basin 1 to Turner Basin 2	Manual Sluice Gate **TR1-TR2-M**
TR4	42-inch diameter pipeline to connect Turner Basin 4 to Turner Basin 3	Manual Sluice Gate **TR4-TR3-M**
CB-11	Turnout from the MWDSC Rialto Pipeline used to discharge State Project Water to the Haven Avenue Pipeline and then to the Deer Creek Channel	24-inch diameter vertical-sleeve type, motor-operated control valve. Actuated by MWDSC
TR1 and TR4	Deer Creek Drop Inlet to either Turner Basin 1 and Turner Basin 4 through 48-inch diameter diversion pipelines	Automated Sluice Gates **DRC-TR1-A** and **DRC-TR4-A**

The locations of the sluice gates, drop inlet, rubber dam, and the rubber dam control building are shown in Figures 6-1 and 6-2 for Turner Basins 1 (**TR1**) and 2 (**TR2**) and Figure 6-2 for Turner Basins 3 (**TR3**) and 4 (**TR4**).

6.1.3 Turner Basins 1 and 2

There are two independent inlets to Turner Basin 1 (**TR1**): one located in the Cucamonga Creek Channel (**CCC**) for stormwater only and one in the Deer Creek Channel (**DCC**) for both stormwater and imported water. Water can be delivered to the Turner Basin 1 (**TR1**) through a side channel inlet located in the Cucamonga Creek Channel. Flow through this inlet is controlled by **CCC-TR1-A**. A rubber dam constructed within the Cucamonga Creek Channel just downstream of the channel inlet can be inflated to increase the diversion of stormwater. When the dam is inflated, water in the channel backs up and enters the channel side inlet.

The second inlet to Turner Basin 1 is located in the Deer Creek Channel. A drop-inlet structure within the channel can capture water traveling down the channel. The water can then be directed into Turner Basin 1 and/or Turner Basin 4. Motor actuated sluice gates are located on the pipelines that connect the drop inlet to Turner Basin 1 **(DRC-TR1-A)** and Turner Basin 4 **(DRC-TR4-A)**.

If water is only being delivered from the Cucamonga Creek Channel to Turner Basin 1 and the water level within the basin reaches an elevation of 974.3 feet msl, the diverted water can potentially cross-flow into Turner Basin 4 through the DCC drop inlet structure. This operational scenario may be used to fill Turner Basin 4 (and Turner Basin 3) with water delivered via the Cucamonga Creek Channel. Sluice gates **DRC-TR1-A** and **DRC-TR4-A** must both be opened for water to cross Deer Creek Channel and flow from Turner Basin 1 to Turner Basin 4. However, once the water surface elevation in Turner Basin 1

reaches 980.5 feet msl, the water flowing across the drop inlet into Turner Basin 4 can top the drop inlet structure and discharge into the Deer Creek Channel. Since the loss of water back to DCC is not desirable, the water elevation in Turner Basin 1 should be kept below 980.5 feet msl while the sluice gate **DRC-TR1-A** is in an open position.

Flow from Turner Basin 1 to Turner Basin 2 passes through a 42-in diameter pipeline. This pipeline has a manual sluice gate, **TR1-TR2-M**, that can isolate the two basins. Turner Basin 2, if allowed to spill or drain, will discharge back into the Cucamonga Creek Channel. The spill elevation of Turner Basin 2 is 990 feet msl.

A rapid drawdown situation in Turner Basins 1 & 2 must be avoided. The outlet works should be operated such that the rate of drawdown in the basins will not exceed 0.75 feet per day. Opening sluice gate **TR1-TR2-M**, which connects the two basins, while one basin contains significantly more water than the other basin, may create a rapid drawdown situation. To avoid rapid drawdown, sluice gate **TR1-TR2-M** shall be operated so that the drawdown does not exceed the maximum of 0.75 feet per day. Note that it is possible and acceptable for water levels in these basins to decrease from percolation at rates greater than 0.75 feet/day.

6.1.4 Turner Basins 3 and 4

Turner Basins 3 and 4 receive water from local street drains (urban runoff) and from the Deer Creek Channel. The drop inlet structure in the Deer Creek Channel can divert water (storm or imported water) traveling along the channel and deliver it through a 48-inch diameter pipeline to Turner Basin 4. Flow through this pipeline can be controlled by sluice gate **DRC-TR4-A**. Water can also be delivered to Turner Basin 4 from Turner Basin 1, as described for Turner Basins 1 & 2.

The pipeline connection from Turner Basin 3 to Turner Basin 4 is controlled with sluice gate **TR3-TR4-M** and can be used to isolate Turner Basin 4 from Turner Basin 3.

6.1.5 Operating Limits for Basins on the Cucamonga and Deer Creeks System

Table 6-2 contains the operating limits for the Turner Basins. The Rule Curves for these basins are contained in Table 3-3.

Table 6-2
Operating Limits for Basins in the Cucamonga and Deer Creeks System

Basins	Bottom Elevation (feet msl)	Maximum Operating Depth (feet)	Maximum Operating Elevation (feet msl)	Storage Volume at Maximum Operating Depth (af)	Spillway Elevation (feet msl)	Storage Volume at Maximum Operating Depth (af)	Typical Percolation Rate (ft/day)
TR1	965	13	978	56	na	266	0.5
TR2	968	10	978	16	990	52	0.5
TR4	966	12	978	60	na	120	0.5
TR3	961	17	978	25	986*	50	0.5

*Note – only possible if Deer Creek gate **DRC-TR4-A** is shut and local flow fills basins

6.2 Supplemental Water Recharge Operations

The detailed operational procedures for operating the Turner Basins are described below. Supplemental water consists of imported and recycled water. Imported water delivered via the Deer Creek Channel can be diverted to Turner Basin 1 (and subsequently Turner Basin 2) and/or Turner Basin 4 (and subsequently Turner Basin 3). The following are the procedures for delivering supplemental water to either of these basins.

6.2.1 Supplemental Water Deliveries in Conservation Mode

The IEUA Operator can make imported water deliveries to Turner Basins 1 and 4 for recharge by turning on the **CB-11** turnout, which discharges imported water into the Haven Avenue storm drain that is connected to Deer Creek, and then diverting this water into Turner Basin 1 and/or Turner Basin 4. These deliveries need to be managed such that the maximum volume in storage in these basins is less than or equal to the levels specified in their respective rule curves. In no case should the water levels in either Turner Basins 1 or 4 exceed a maximum water surface elevation of 978 feet msl—this water elevation was chosen because the floor of the Deer Creek Channel is at or about 980 feet msl. Maintaining a higher water surface elevation would likely result in supplemental water flowing over the inlet and thereby being lost downstream to the Santa Ana River.

During the transition from Storm Mode to Conservation Mode, the rule curve for Turner Basin 1 requires that the water surface elevation be at or below 978 feet msl; thus, no imported water deliveries will be made to Turner Basin 1 if the water surface elevation exceeds its rule curve limit of 978 feet msl.

Before delivering supplemental water to the basins, the IEUA Operator shall check with the City of Rancho Cucamonga for any activities in the Haven Avenue Storm Drain. The IEUA Operator shall also check with the SBCFCD for any activity in the basins, and Deer Creek, both within the portion of the channel conveying the imported water to the basins and downstream thereof. This may require "driving" the Haven Avenue storm drain and Deer Creek channel to check for people and/or obstructions.

Prior to the delivery of the supplemental water, the IEUA Operator shall open the inlet valve to Turner Basin 1, (**DRC-TR1-A**), and/or the inlet valve to Turner Basin 4 (**DRC-TR4-A**).

Operations during recharge:

- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's discretion, the IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Operator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be limited to what can be safely observed above water. The IEUA Operators shall examine the

condition and position of all the sluice gates and inlet grates. While still at the facilities, the IEUA Operators shall report the condition and status of these improvements and staff gage observations in each basin to the IEUA Groundwater Recharge Coordinator who shall confirm the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.

- As the water level in Turner Basin 1 and/or Turner Basin 4 reaches the maximum level specified in the rule curve, the IEUA Groundwater Recharge Coordinator shall contact the supplier of supplemental water and request that the flow rate be reduced as a means to equalize the delivery rate with the recharge rate. The IEUA Groundwater Recharge Coordinator will notify the Watermaster ROM and the SBCFCD whenever he/she deems it advisable to make changes in the delivery rate of supplemental water.
- During recycled water recharge operations, on a weekly basis or more often as may be determined by the IEUA Groundwater Recharge Coordinator, IEUA Operators shall visually monitor the delivery of water and shall physically inspect the condition of the basin sluice gates **DRC-TR1-A**, **DRC-TR4-A**, **TR1-TR2-M,** and **TR3-TR4-M,** and other features of basin. The IEUA Operator shall record these observations in a field book. While still at the site, the IEUA Operator shall report the condition and position of these gates and water levels at staff gages to the IEUA Groundwater Recharge Coordinator who shall compare the reported data with the comparable information from the SCADA system. The IEUA Groundwater Recharge Coordinator shall respond accordingly to any noteworthy discrepancies between field observations and SCADA data.
- Periodically during the delivery of supplemental water, the IEUA Groundwater Recharge Coordinator shall make a tally of the volume of recycled water delivered and check this volume against the volume of recycled water ordered. The tally shall be performed at least weekly and a projection will be made as to when the total recycled water recharge goal for this basin will be achieved. These recharge computations will be submitted to the Watermaster ROM. The Watermaster ROM will keep the members of the GRCC informed on such matters.
- Once deliveries of supplemental water are complete for this facility, the IEUA Groundwater Recharge Coordinator shall notify the Watermaster ROM. Sluice gates **DRC-TR1-A**, **DRC-TR4-A**, and **CCC-TR1-A** may remain open to capture dry-weather flows.

6.2.2 Supplemental Water Deliveries in Pre-Storm Mode

At the discretion of IEUA Groundwater Recharge Coordinator, supplemental water can be delivered to Turner Basins 1 and 4, as in Conservation Mode, up to 48 hours before a forecasted storm. These deliveries must be consistent with the rule curves for these basins. All deliveries of supplemental water must cease at least two days before the forecasted storm unless both the SBCFCD and Watermaster ROM concur that supplemental water deliveries can continue. In no case will supplemental water deliveries be permitted within 24 hours of a forecasted storm.

Once all inflows of supplemental water have ceased coming into the basins, the IEUA Groundwater Recharge Coordinator shall contact the IEUA Operator and request that **TRI-TR2-M** be closed.

6.2.3 Supplemental Water Deliveries in the Storm Mode

No deliveries of supplemental water will be made to the Turner Basins during Storm Mode.

6.3 Stormwater Operations and Capture during Storm Mode

6.3.1 Coordination among CBWCD, IEUA, SBCFCD, and Watermaster

The IEUA Operator and the Watermaster ROM shall closely monitor weather forecasts and, in particular, all forecasted storm events. The IEUA Operator will be in close contact with the SBCFCD during Pre-Storm and Storm Modes. The IEUA Operator will respond to the directions of the SBCFCD "Storm Alert Officers" (listed in Section 3).

6.3.2 First Storm of the Season

In advance of the first storm event of the season, the IEUA Operator shall close all inlet gates to the Turner Basins **(DRC-TR1-A**, **DRC-TR4-A**, and **CCC-TR1-A**). When the GRCC, using qualitative turbidity measurements, determines that the turbidity of the stormwater is acceptable, the IEUA Groundwater Recharge Coordinator will divert stormwater into the Turner Basins. The IEUA Operator will then open sluice gates **DRC-TR1-A**, **DRC-TR4-A**, and **CCC-TR1-A**.

6.3.3 Stormwater Capture

The following are the procedures to operate the Turner Basins for the recharge of stormwater:

- Open sluice gate **CCC-TR1-A.**
- Inflate the rubber dam in Cucamonga Creek.
- Open **DRC-TR1-A** and/or **DRC-TR4-A** (depending on the storage space available for stormwater recharge in Turner Basin 1 and Turner Basins 3 and 4, respectively).
- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Operator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be limited to what can be safely observed above water. IEUA Operators shall examine the condition and position of all the sluice gates, inlet grates, and the rubber dam. While still at the facilities, IEUA Operators shall report the condition and status of these improvements and the staff gage observations in each basin to the IEUA Groundwater Recharge Coordinator who shall confirm

the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.

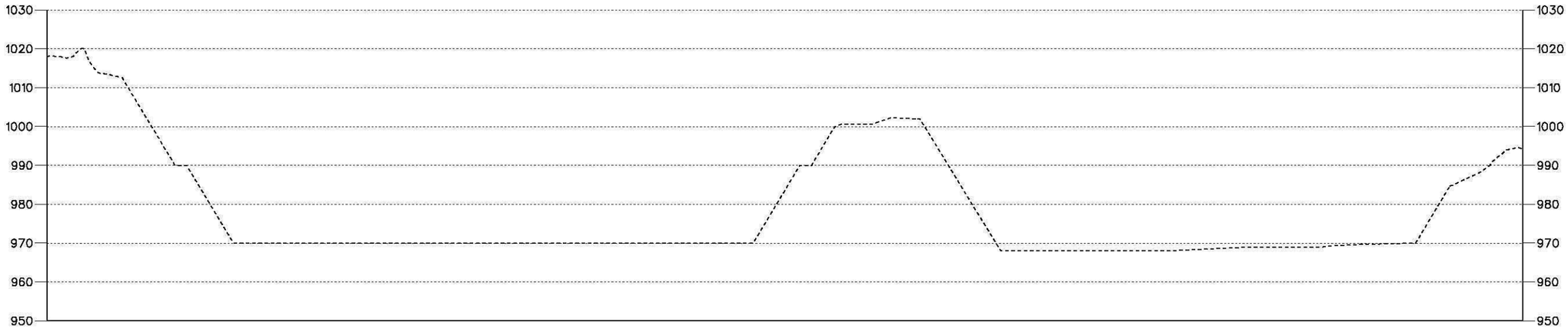
- If the rubber dam in Cucamonga Creek Channel is deflated, the IEUA Groundwater Recharge Coordinator will periodically contact the SBCFCD to request permission to inflate the rubber dam.
- If permission is given by the SBCFCD to inflate the rubber dam, then the IEUA Groundwater Recharge Coordinator will attempt to re-inflate the dam unless the water level sensor in the channel indicates that the water depth in the channel is greater than 1.25 feet. Consequently, the IEUA Groundwater Recharge Coordinator shall monitor the status of the rubber dam and the water surface elevation in the channel upstream of the rubber dam no less than once every 15 minutes to make sure that the rubber dam is inflated and deflated appropriately. Table 6-3 describes conditions that should be considered and avoided when operating the Turner Basins during Storm Mode.

Table 6-3
Conditions to Avoid during Storm Mode for Turner Basins

Basin	Water Surface Elevation (feet msl)	Special Considerations
TR1 and TR4	>974.3	If sluice gates **DRC-TR1-A** and **DRC-TR4-A** are open and the water level in either basin exceeds 974.3 feet msl, water may be flowing from one basin to the other.
TR1 and TR4	>980.5	If sluice gate **DRC-TR1-A** is open and sluice gate **DRC-TR4-A** is closed, or the opposite, water stored in a basin will discharge to the Deer Creek Channel
TR1	995.0	Turner 1 is close to spilling into Turner 2. Close **CCC-TR1-A** and deflate the rubber dam.
TR1	1000.0	Water will spill into Turner 2 and then into Cucamonga Creek Channel.
TR2	990.0	Water will spill into the Cucamonga Creek. Close **TR1-TR2-M** to isolate Turner 2.

Table 6-4
Control Elements for the Cucamonga and Deer Creeks System and Associated Storm Settings

Basin		Control Element	Operator	Control Element Settings		
Facility	Type			First Storm	Non-Significant Storm	Significant Storm
CB-11		MWDSC Turnout	MWDSC Turnout	Closed	Closed	Closed
TRN		Cucamonga Channel Rubber Dam	Rubber dam operated from adjacent control building or SCADA	Deflated	Inflated	Deflated
TR1	Cons	Cucamonga Channel to Turner Basin 1	Automated Sluice Gate (**CCC-TR1-A**)	Closed	Open	Open
TR2	Cons	Turner Basin 1 to Turner Basin 2	Manual Sluice Gate (**TR1-TR2-M**)	Open	Open	Open
TR1	Cons	Deer Creek Channel to Turner Basin 1	Automated Sluice Gate (**DRC-TR1-A**)	Closed	Closed	Closed
TR3	Cons	Deer Creek Channel to Turner Basin 4	Automated Sluice Gate (**DRC-TR4-A**)	Closed	Open	Closed
TR4	Cons	Turner Basin 3 to Turner Basin 4	Manual Sluice Gate (**TR3-TR4-M**)	Open	Open	Open



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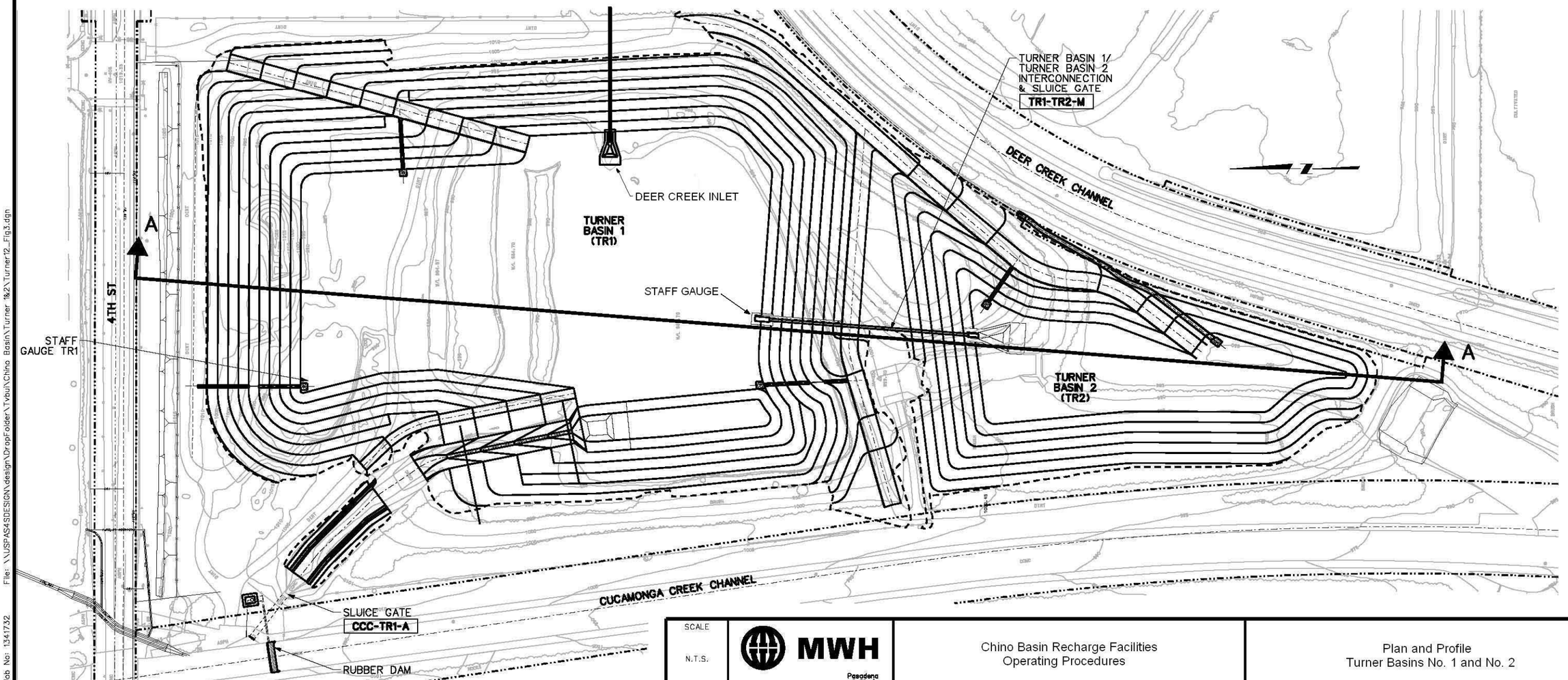
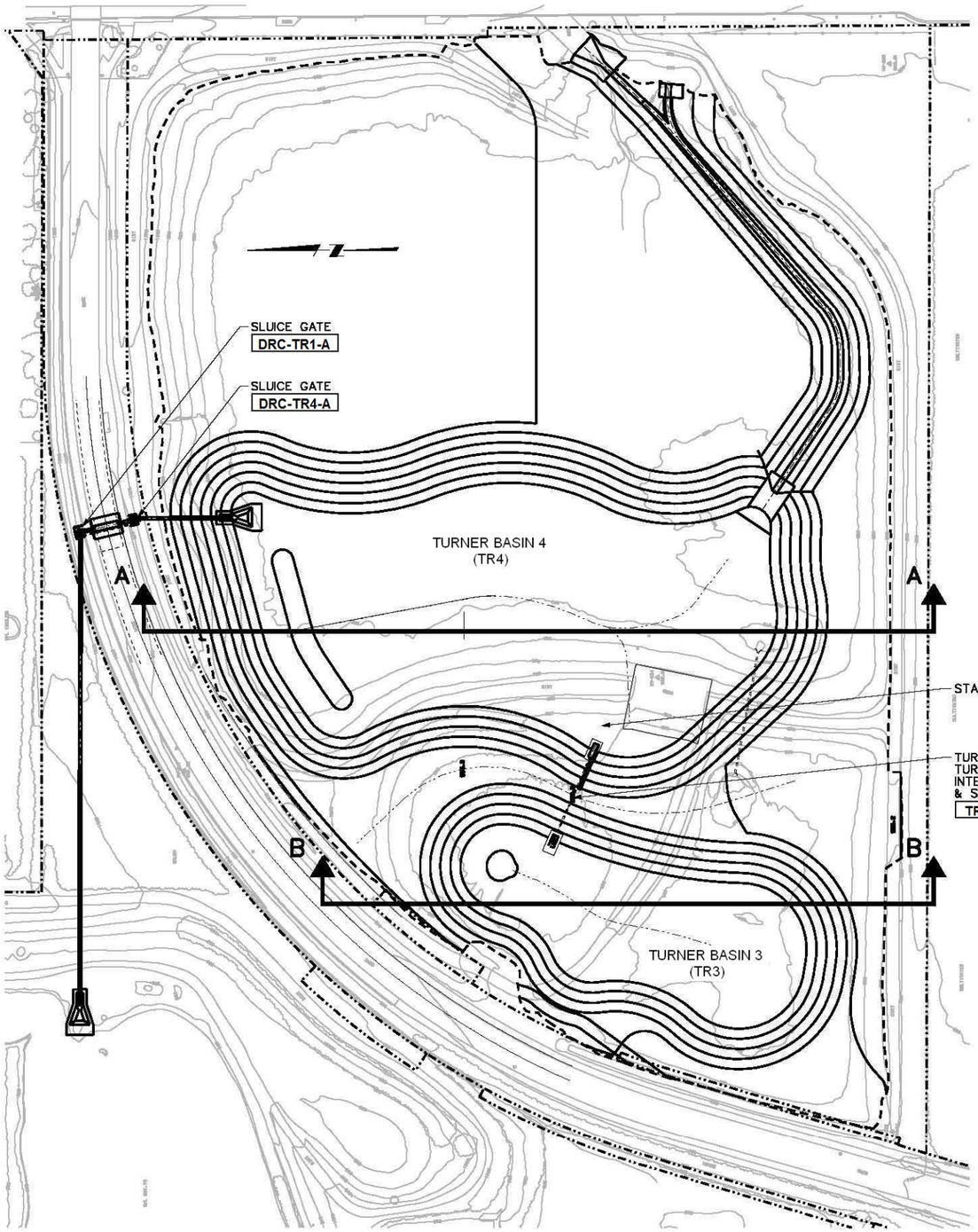
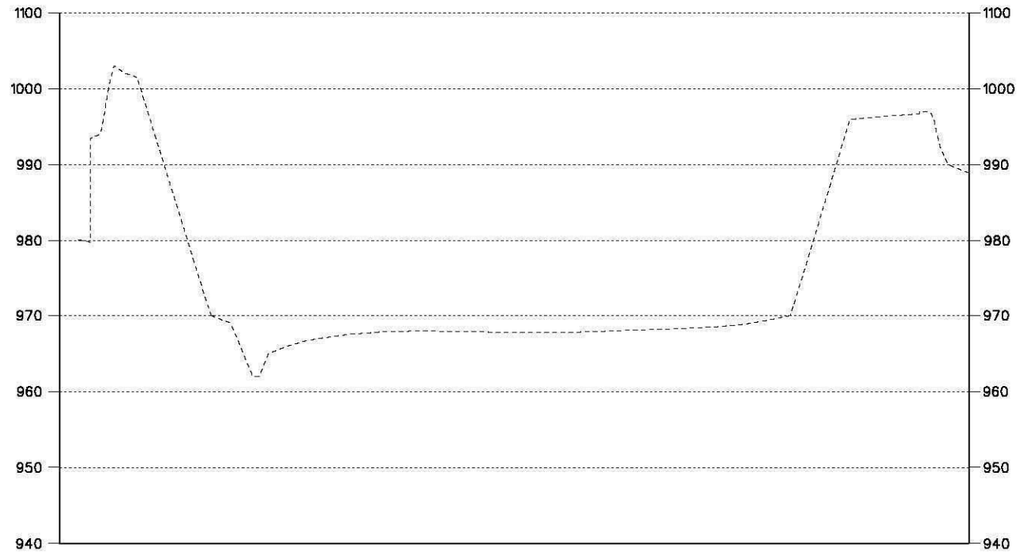


SCALE			FIGURE
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures	Plan and Profile Turner Basins No. 1 and No. 2	6-1





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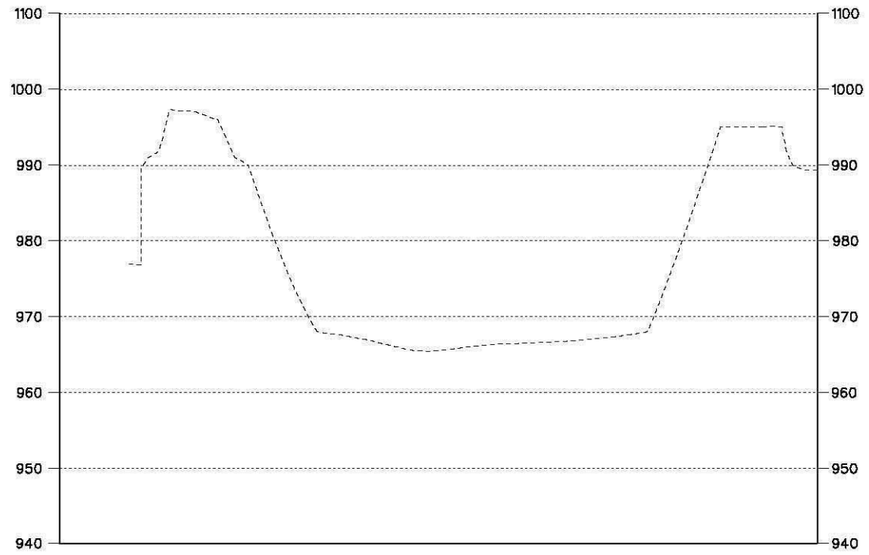


SECTION B-B

SCALE			FIGURE
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures Plan and Profile Turner Basins No. 3 and No. 4	6-2

7. LOWER DAY BASIN, DAY CREEK SYSTEM

7.1 Facilities Description

7.1.1 Facility Ownership and General Location

The locations of the Lower Day Basin and related facilities are shown in Figure 2-1.

MWDSC Turnout CB-15. MWDSC Turnout **CB-15**, which is located immediately east of the Day Creek Channel where it passes beneath Banyan Street in Rancho Cucamonga, is a 20-inch by 14-inch horizontal sleeve type, motor-operated flow control valve. Its flow capacity ranges from 3 cfs to 30 cfs and is recorded by an adjacent 20-inch magnetic flow meter. Imported water in the MWDSC Rialto Pipeline can be released directly into the Day Creek Channel through **CB-15** by requesting the desired flow from the MWDSC Eagle Rock Control Center at (626) 844-5610. Although rated to 30 cfs, **CB-15** should not be operated at more than 21 cfs, lest water will spill over the rubber dam and be lost down stream.

Lower Day Basins. The Lower Day Basins (**DB3**) are owned by the SBCFCD. The facilities, consisting of Lower Day Basins 1, 2, and 3 (**LD1**, **LD2,** and **LD3**, respectively), are located west of Day Creek Channel on the southeast corner of Highland Avenue and Rochester Avenue (Figure 7-1). The entrance to the facilities is located approximately 350 feet south of Highland Avenue on the east side of Rochester Avenue. The facility entrance and control elements are shown in Figure 7-1.

7.1.2 Facility Control Elements

The Upper Day Basin receives stormwater from local drainage channels, but has no capability to receive supplemental water. Stormwater, after entering the Upper Day Basin, flows by a 60-inch diameter RCP outlet to the northwest corner of Lower Day Basin 1.

Imported water released into the Day Creek Channel through **CB-15** can be directed into the Lower Day Basins by inflating the Day Creek Channel rubber dam and opening the basin inlet sluice gate **DYC-LD1-A**.

Table 7-1 lists the control elements at each of the basins. Sluice gates with the "**-A**" designation are automated sluice gates, which can be controlled remotely through the SCADA system; whereas the "**-M**" designation means that the sluice gates are manually operated. All control elements and basin abbreviations are shown in **bold** to make them easy to identify in the tables and text.

Table 7-1
Control Elements in the Day Creek System

Basin	Control Element	Operator
CB-15	Turnout from the MWDSC Rialto Pipeline used to discharge State Project Water to the Day Creek Channel	20-inch by 14-inch horizontal sleeve type, motor-operated flow control valve. Actuated by MWDSC
LD1	Day Creek Channel Inlet to Lower Day Basin 1	Automated Sluice Gate **DYC-LD1-A**

Table 7-1
Control Elements in the Day Creek System

Basin	Control Element	Operator
LD1	Day Creek Rubber Dam	Rubber Dam operated from adjacent control building or SCADA
LD1	Lower Day Basin 1 to Lower Day Basin 2	Manual Sluice Gate **LD1-LD2-M**
LD2	Lower Day Basin 2 to Lower Day Basin 3	Manual Sluice Gate **LD2-LD3-M**
LD3	Lower Day Basin 3 outlet to Day Creek Channel	Manual Sluice Gate **LD3-DYC-M**

The locations of the sluice gates, the rubber dam, and the rubber dam control building are shown in Figure 7-1.

7.1.3 Lower Day Basins

Water can be diverted into the Lower Day Basins via an inlet on the west side of the Day Creek Channel. This side channel inlet is connected to a 36-inch diameter reinforced concrete pipeline that will deliver water to the **LD1** Basin. Water from this channel inlet is controlled by sluice gate **DYC-LD1-A**.

In order to increase the diversion of water, a rubber dam is located within the Day Creek Channel just downstream of the channel inlet. When the dam is inflated, water in the channel backs up and can enter the channel inlet.

Flow into the upper basin, **LD1**, will initially fill that basin and cascade into the middle basin, **LD2**. Similarly, water from **LD2** will cascade into **LD3**. Flows between **LD1** and **LD2** and between **LD2** and **LD3** are controlled by sluice gates **LD1-LD2-M** and **LD2-LD3-M**, respectively. **LD3** also has an outlet sluice gate **LD3-DYC-M** that can be used to control the flow from the **LD3** back into the Day Creek Channel.

7.1.4 Operating Limits for Lower Day Creek Basins on the Day Creek System

Table 7-2 contains the operating limits for the individual basins in the Lower Day Basin. The Rule Curves for these basins are contained in Table 3-4.

Table 7-2
Operating Limits for Basins on the Day Creek System

Basins	Bottom Elevation (feet msl)	Maximum Operating Depth (feet)	Maximum Operating Elevation (feet msl)	Storage Volume at Maximum Operating Depth (af)	Spill Elevation (fee msl)	Storage Volume at Spillway Elevation (af)	Percolation Rate (ft/day)
LD1	1370	8	1378	26	1395	502	1.5
LD2	1365	8	1373	31			
LD3	1362	8	1373	31			

7.2 Supplemental Water Recharge Operations

Imported water is currently the only supplemental water available to the Lower Day Basin. Operation procedures for recycled water deliveries will be incorporated in this manual later when recycled water deliveries can occur.

7.2.1 Supplemental Water Deliveries in Conservation Mode

Before delivering imported water to Lower Day Basin, the IEUA Operator shall check with the SBCFCD for any activity in the conveying channel, both upstream and downstream of the channel inlet and in Lower Day Basin. This will require an inspection of the basin prior to the delivery of imported water to the basin. Prior to the actual delivery of imported water:

- The IEUA Operator shall close the outlet sluice gate **LD3-DYC-M** ,
- Open the inlet sluice gate to **LD1**, **DYC-LD1-A**, and sluice gates **LD1-LD2-M** & **LD2-LD3-M**, and
- Inflate the rubber dam.

Operations during recharge:

- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's discretion, the IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Operator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be limited to what can be safely observed above water. The IEUA Operators shall examine the condition and position of all the sluice gates, channel inlet grates, and the rubber dam. While still at the facilities, the IEUA Operators shall report the condition and status of these improvements and the staff gage observations in each basin to the IEUA Groundwater Recharge Coordinator

who shall confirm the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.

- As the water levels in the cells reach the maximum levels specified in the rule curves, the IEUA Groundwater Recharge Coordinator shall equalize the delivery rate with the recharge rate of the facility. The IEUA Groundwater Recharge Coordinator will notify the Watermaster ROM and the SBCFCD whenever he/she deems it advisable to make changes in the delivery rate of the imported water.
- Periodically during the delivery of imported water, the IEUA Groundwater Recharge Coordinator shall make a tally of the volume of imported water delivered and check this volume against the volume of imported water ordered. The tally shall be performed at least weekly and a projection will be made as to when the total recharge goal for this basin will be achieved. These recharge computations will be submitted to the Watermaster ROM. The Watermaster ROM will keep the members of the GRCC informed on such matters.
- Once deliveries of imported water are complete, the IEUA Groundwater Recharge Coordinator shall notify the Watermaster ROM.

7.2.2 Supplemental Water Deliveries in Pre-Storm Mode

No deliveries of supplemental water will be made to the Lower Day Basin during Pre-Storm Mode.

7.2.3 Supplemental Water Deliveries in the Storm Mode

No deliveries of supplemental water will be made to the Lower Day Basin during Storm Mode.

7.3 Stormwater Operations and Capture during Storm Mode

7.3.1 Coordination among IEUA, SBCFCD, and Watermaster

The IEUA Groundwater Recharge Coordinator and the Watermaster ROM shall closely monitor weather forecasts and in particular will monitor all forecasted storm events. The IEUA Groundwater Recharge Coordinator will be in close contact with the SBCFCD during Pre-Storm and Storm Modes. IEUA Operators will respond to the directions of the SBCFCD "Storm Alert Officers" (listed in Section 3).

7.3.2 First Storm of the Season

Prior to the first storm of the season, sluice gate **DYC-LD1-A** shall be closed and the rubber dam will be deflated. Sluice gate **DYC-LD1-A** shall remained closed and the rubber dam deflated until the SBCFCD authorizes sluice gate **DYC-LD1-A** be opened and the rubber dam inflated when it is determined that the turbidity of the stormwater is acceptable. The IEUA Groundwater Recharge Coordinator will then divert stormwater into the Lower Day Basin.

7.3.3 Stormwater Capture

The following are the procedures to operate the Lower Day Basin for the recharge of stormwater for a storm that has a non-significant precipitation forecast:

- The IEUA Groundwater Recharge Coordinator will open the inlet sluice gate to **LD1** (**DYC-LD1-A**), direct the IEUA Operators to open manual sluice gates **LD1-LD2-M** & **LD2-LD3-M**, and close Lower Day Basin 3 outlet sluice gate **LD3-DYC-M** .
- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's discretion, the IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Operator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be limited to what can be safely observed above water. The IEUA Operators shall examine the condition and position of all the sluice gates, channel inlet grates, and the rubber dam. While still at the facilities, the IEUA Operators shall report the condition and status of these improvements and the staff gage observations in each basin to the IEUA Groundwater Recharge Coordinator who shall confirm the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.

The following are the procedures to operate the Lower Day Basin for a storm that has a significant precipitation forecast:

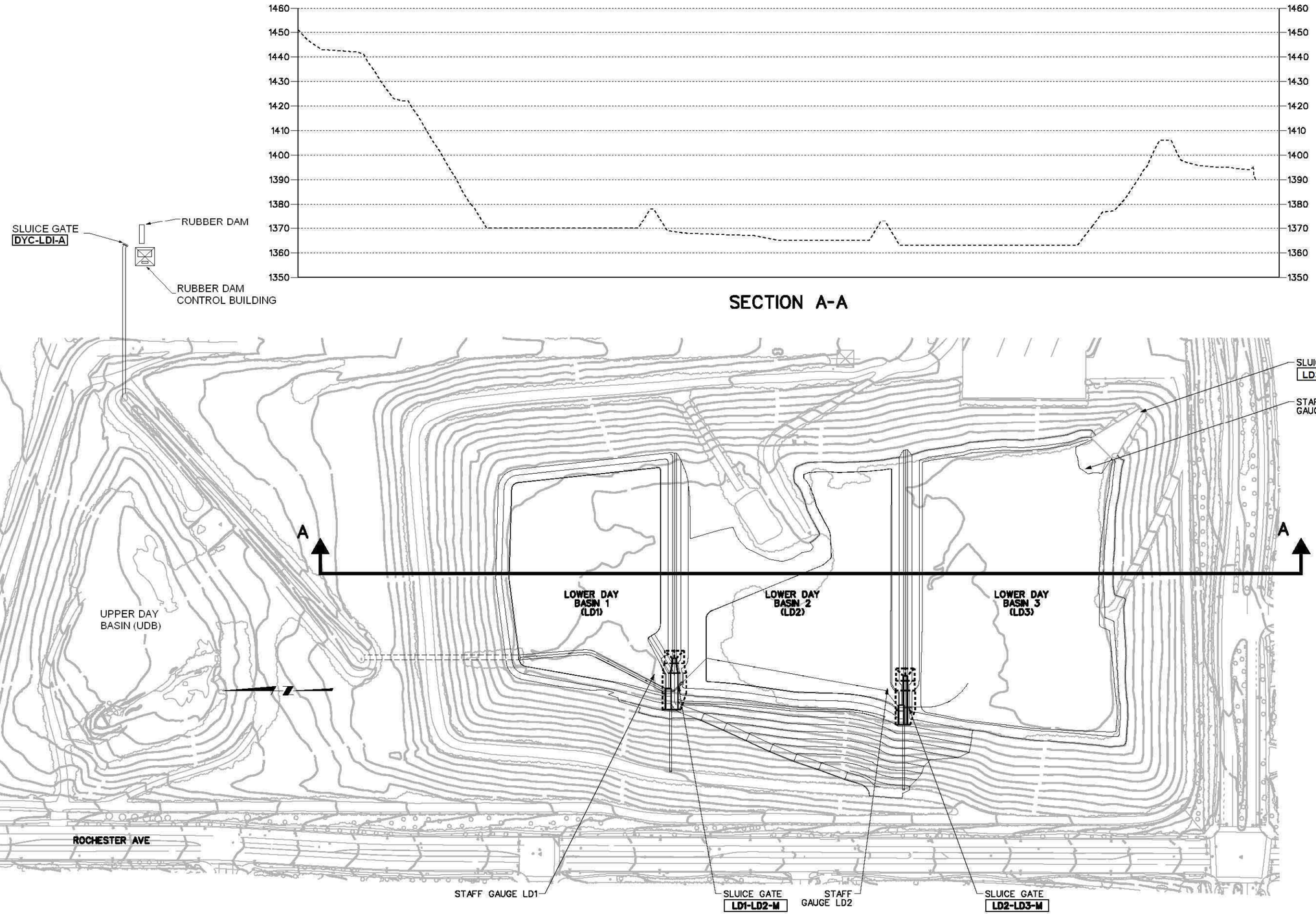
- Sluice gate **LD3-DYC-M** should be opened 24 hours prior to the storm's arrival and the basin should be fully drained before the storm starts.
- Sluice gate **DYC-LD1-A** shall be closed and the rubber dam deflated.
- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Operator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be limited to what can be safely observed above water. IEUA Operators shall examine the condition

and position of all the sluice gates, inlet grates, and the rubber dam. While still at the facilities, IEUA Operators shall report the condition and status of these improvements and the staff gage observations in each basin to the IEUA Groundwater Recharge Coordinator who shall confirm the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.

Near the end of the storm, if the SBCFCD provides authorization via email, the Lower Day Basins may be changed to Conservation Mode and stormwater may be captured and recharged.

Table 7-3
Control Elements for the Day Creek System and Associated Storm Settings

Basin		Control Element	Operator	Control Element Settings		
Facility	Type			First Storm	Non-Significant Storm	Significant Storm
CB-15		MWDSC Turnout	MWDSC Turnout	Closed	Closed	Closed
LD		Day Creek Channel Rubber Dam	Rubber dam operated from adjacent control building or SCADA	Deflated	Inflated	Deflated
LD1	MP	Day Creek Channel to Lower Day Basin 1	Automated Sluice Gate **(DYC-LD1-A**)	Closed	Open	Open
LD2	MP	Lower Day 1 to Lower Day 2	Manual Sluice Gate (**LD1-LD2-M**)	Open	Open	Open
LD3	MP	Lower Day 2 to Lower Day 3	Manual Sluice Gate (**LD2-LD3-M**)	Open	Open	Open
LDC	MP	Lower Day 3 to Day Creek Channel	Manual Sluice Gate (**LD3-DYC-M**)	Closed	Closed	Open



SCALE N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures	Plan and Profile Lower Day Basin	FIGURE 7-1

Plot Date: 16-NOV-2004
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8. SAN SEVAINE, VICTORIA, BANANA, HICKORY, JURUPA, RP3, AND DECLEZ BASINS, ETIWANDA AND SAN SEVAINE CREEKS SYSTEM

8.1 Facilities Description

8.1.1 Facility Ownership and General Location

The locations of the recharge basins and related facilities on the Etiwanda and San Sevaine Creeks system are shown in Figure 2-1

MWDSC Turnout CB-13. MWDSC Turnout **CB-13**, which is located on the northwest corner of the Cherry and Summit Avenues in Rancho Cucamonga, is a 24-inch diameter vertical sleeve type, motor operated control valve. Discharge capacity ranges from 0 to 20 cfs as recorded by an adjacent 24-inch diameter venturi meter. Imported water in the MWDSC Rialto Pipeline can be released directly into the San Sevaine Channel from **CB-13** by requesting the desired flow from the MWDSC Eagle Rock Control Center at (626) 844-5610.

San Sevaine Basins No. 1 through No. 5. The flow-through San Sevaine Basins 1-5 are owned and operated by the SBCFCD. These basins are located immediately northwest of the interchange of the I-15 and I-210 freeways in the City of Rancho Cucamonga (Figure 8-2). The entrance gate to San Sevaine Basins 1, 2, and 3 is located on the southwest corner of Wilson Avenue and Cherry Avenue. The entrance gate to San Sevaine Basins 4 and 5 is located at the intersection of First Street and Cherry Avenue just west of the I-15 Freeway. The locations of these two entrances and MWDSC Turnout **CB-13** are shown in Figure 8-1. Overflow from San Sevaine Basin 5 enters the San Sevaine Channel and flows south where it can be subsequently diverted into Victoria, Hickory, and Jurupa Basins.

MWDSC Turnout CB-14. MWDSC turnout **CB-14**, which is located in an undeveloped parcel of land immediately south of Wilson Avenue and ¼ mile west of the Etiwanda Creek Channel, is a 12-inch diameter manually operated, lubricated plug valve. Its flow ranges from a minimum of 3 cfs to a maximum of 30 cfs as recorded by an Annubar flow meter. A solar panel is used to power the automatic meter reader. Imported water in the MWDSC Rialto Pipeline can be released from the turnout into a pipeline that carries the water approximately ¼ mile north of Wilson Ave. where it discharges into the uppermost of the Etiwanda Spreading Grounds. The IEUA Operator can schedule the delivery of imported water at this turnout by calling the MWDSC Eagle Rock Control Center at (626) 844-5610. The Control Center in turn dispatches a field crew to open and adjust the plug valve to the desired flow rate

Etiwanda Debris Basin. The Etiwanda Debris Basin is currently under construction.

Victoria Basin. Victoria Basin is owned and operated by the SBCFCD and is located one half mile east of East Road on Victoria Avenue in Rancho Cucamonga (Figure 8-1). The entrance gate to Victoria Basin is located on Victoria Avenue, one quarter mile east of East Avenue. The location of Victoria Basin is shown in Figure 2-1.

Etiwanda Conservation Basins. The Etiwanda Conservation Basins are currently under evaluation.

MWDSC Turnout CB-18. MWDSC Turnout **CB-18**, which located on the southeast corner of the intersection of W. Liberty Street and the San Sevaine Channel in Rancho Cucamonga, is a 24-inch vertical sleeve type, motor operated control valve. Its flow capacity ranges from 3 cfs to 30 cfs as recorded by an 18-inch diameter magnetic flow meter. Imported water in the Etiwanda Cross Feeder can be released

directly into the San Sevaine Channel from **CB-18** by requesting the desired flow from the MWDSC Eagle Rock Control Center at (626) 844-5610.

San Sevaine Channel Rubber Dam. Flow released from MWDSC Turnout **CB-18** into the San Sevaine Channel can be dammed behind an inflatable rubber dam located ¼ mile north of intersection of the San Sevaine and West Fontana Channels. A channel inlet on the upstream side of the rubber dam can be used to divert this water into Hickory Basin. If the rubber dam at the Hickory Channel is not inflated, flow from **CB-18** continues south down the San Sevaine Channel towards Jurupa Basin.

Whittram Regional Pipeline. The Whittram Regional Pipeline (**WRP**), a combination of 16-inch and 12-inch diameter pipelines, distributes recycled water for recharge in Hickory Basin and Banana Basin. The pipeline connects to the Etiwanda North Distribution Pipeline and extends eastward along Whittram Avenue from Etiwanda Avenue to the Banana Basin.

Banana Basin. Banana Basin (**BAN**) is owned by the SBCFCD. Banana Basin is located just south of Whittram Avenue at its intersection with Banana Avenue. The layout of Banana Basin is shown in Figure 8-3. This Basin is located on the West Fontana Channel. The entrance to Banana Basin is located at the intersection of Whittram Avenue and Banana Avenue. This Basin is located in an unincorporated area of the San Bernardino County between the cities of Rancho Cucamonga and Fontana.

Hickory Basin. Hickory Basin is owned by the SBCFCD. Hickory Basin is located immediately northwest of the California Speedway and is accessed from Napa Street. The layout of Hickory Basin is shown in Figure 8-4. This Basin is located on the West Fontana Channel. Hickory Basin is divided into two cells called Hickory Basin East (**HKE**) and Hickory Basin West (**HKW**). Discharge enters Hickory Basin East from the West Fontana Channel on the east side of the basin and discharges west to the Hickory Basin West and thence to the Hickory Basin Afterbay (**HKA**) before discharging to the San Sevaine Channel. The entrance to Hickory Basin is located on Napa Street immediately east of the San Sevaine Channel. This Basin is located in an unincorporated area of the San Bernardino County between the cities of Rancho Cucamonga and Fontana.

Jurupa Basin. Jurupa Basin is owned and operated by the SBCFCD and is located at the northwest corner of the intersection of Mulberry and Jurupa Avenues in the City of Fontana. The entrance gate to Jurupa Basin and its pump station is located ¼ mile north of Jurupa Avenue on the west side of Mulberry Avenue. The location of the entrance gate to Jurupa Basin and the Jurupa Pump Station is shown in Figure 8-5. The SBCFCD is currently issuing a contract for the construction of a drop inlet from the San Sevaine Channel into Jurupa Basin. Construction is to be completed by the third quarter of 2007. Currently Jurupa Basin receives only local stormwater from two storm drains. After the construction of the drop inlet is complete, the Jurupa Basin will be capable of receiving imported and recycled water deliveries from the San Sevaine Channel. Water within Jurupa Basin can be pumped through the Jurupa Force Main (42-inch diameter CML steel pipe) by the Jurupa Pump Station (20 cfs at 108 feet of head) to the RP-3 Basins for recharge.

RP3 Basins. The RP3 Basins are owned by the IEUA and are located just south of Jurupa Avenue between Live Oak Street and Beech Avenue (Figures 8-6 and 8-7). Although the RP3 site extends from Jurupa Avenue south to Declez Channel, usable recharge cells occupy only a portion the entire site: the

southeastern part of the site contains Cell 2, which is part of an environmental mitigation to maintain certain native species of plants. The RP3 recharge cells occupy the remainder of the site and consist of three recharge cells (1, 3, & 4); each divided into cells "a" and "b." A feeder channel from the Declez Channel can deliver water to each of these three recharge cells as well as to Cell 2. The entrance to the RP3 Facility is located approximately 450 feet south of Jurupa Avenue along Beech Avenue (Figure 8-6).

Declez Basin. The Declez Basin is owned by the SBCFCD and is located on the Declez Channel between Philadelphia Street and Mulberry Street in an unincorporated area of Riverside County (Figure 8-8). The entrance to the basin is located on Philadelphia Street approximately ½ mile from Country Village Road/Mulberry Avenue just past the Declez Channel. The address for the Facility is 13978 Philadelphia Street in the community of Glen Avon. Declez Basin is divided into three cells (**DB1**, **DB2**, and **DB3**)

8.1.2 Facility Control Elements

Table 8-1 presents the control elements at the Etiwanda and San Sevaine Creeks System. Sluice gates with the "**-A**" designation are automated sluice gates, which can be controlled remotely through the SCADA system; whereas the "**-M**" designation means the sluice gates are manually operated. All control elements and basin abbreviations are shown in **bold** to make them easy to identify in the tables and text.

Table 8-1
Control Elements in the Etiwanda and San Sevaine Creek Systems

Basin	Control Element	Operator
CB-13	Turnout from the MWDSC Rialto Pipeline used to discharge State Project Water to San Sevaine Creek upstream of the San Sevaine Basins	24-inch diameter vertical sleeve type, motor operated control valve
CB-15	Turnout from the MWDSC Rialto Pipeline used to discharge State Project Water to the Etiwanda Spreading area	12-inch diameter manually operated, lubricated plug valve
VBN	Etiwanda Channel Inlet to Victoria Basin North	Automated Sluice Gate **ETI-VBN-A**
VBN	Victoria Basin North to Victoria Basin South	Manual Sluice Gate **VBN-VBS-M**
VBS	Victoria Basin South to Etiwanda Channel	Automated Sluice Gate **VBS-ETI-A**
BAN	Banana Basin Outlet to West Fontana Channel	Automated Sluice Gate **BAN-WFC-A**
BAN	Whittram Regional Pipeline Inlet to Banana Basin	Automated Valve **WRP-BAN-A**
CB-18	Turnout from the MWDSC Etiwanda Cross Feeder used to discharge State Project Water to San Sevaine Creek	24-inch vertical sleeve type, motor operated control valve
HKE	Whittram Regional Pipeline Inlet to Hickory East Cell	Automated Valve **WRP-HKE-A**
HKE	Hickory East Basin to Hickory West Basin	Automated Sluice Gate **HKE-HKW-A**

Table 8-1
Control Elements in the Etiwanda and San Sevaine Creek Systems

Basin	Control Element	Operator
HKW	San Sevaine Channel Rubber Dam	Rubber dam operated from adjacent control building or SCADA
HKW	San Sevaine Channel Inlet to Hickory West Basin	Automated Sluice Gate **SSC-HKW-A**
HKW	Hickory West Basin to Hickory Basin Afterbay	Manual Sluice Gate **HKW-HKA-M**
RP3-C1a	Jurupa Basin to RP3 Cell 1a	Automated valve **JB-C1a-A**
RP3-C1a	RP3 Cell 1a to Junction Structure	Manual Sluice Gate **C1a-JS-M**
RP3-C1b	RP3 Cell 1b to Junction Structure	Manual Sluice Gate **C1b-JS-M**
RP3	Feeder Channel to RP3 Junction Structure	Manual Sluice Gate **FC-JS-M**
RP3	Declez Channel Inlet to Feeder Channel	Automated Sluice Gate **DZC-FC-A**
RP3	Declez Channel Rubber Dam	Rubber dam operated from adjacent control building or SCADA
RP3-C2	Feeder Channel to RP3 Cell 2	Manual Sluice Gate **FC-C2-M**
RP3-C3a	Feeder Channel to RP3 Cell 3a	Manual Sluice Gate **FC-C3a-M**
RP3-C3b	Feeder Channel to RP3 Cell 3b	Manual Sluice Gate **FC-C3b-M**
RP3-C4a	Feeder Channel to RP3 Cell 4a	Manual Sluice Gate **FC-C4a-M**
RP3-C4b	Feeder Channel to RP3 Cell 4b	Manual Sluice Gate **FC-C4b-M**
	Feeder Channel Flow Control	Manual Sluice Gate **FC1-M**
	Feeder Channel Inlet to Declez Channel	Manual Sluice Gate **FC2-DZC-M**
DB1	Declez Basin 1 to Declez Basin2	Automated Sluice Gate **DB1-DB2-A**
DB2	Declez Basin 2 to Declez Basin 3	Automated Sluice Gate **DB2-DB3-A**
DB3	Declez Basin 3 to Declez Channel	Automated Sluice Gate **DB3-DZC-A**

San Sevaine Basins No. 1 through No. 5. San Sevaine Basins 1-5 are "flow-through" basins without specific control elements. Stormwater or imported water from **CB-13** enters San Sevaine Basin 1 (**SS1**) from the rip-rapped San Sevaine Channel and several local drainage channels. When **SS1** fills to the level of its spillway, the flow cascades into succeeding downstream basins: **SS2**, **SS3**, **SS4**, and **SS5**. Historically, only **SS1**, **SS2,** and **SS3** have been used when **CB-13** is operated at its maximum discharge rate of 20 cfs. Stormwater flows could exceed the capacities of all five San Sevaine Basins, in which case the water spills over into the concrete lined San Sevaine Channel.

Victoria Basin. The Victoria Basin is an "off-channel" basin that receives local runoff plus stormwater flows from both the Etiwanda and San Sevaine Channels through drop inlet structures. Flow in San Sevaine Channel is diverted into Victoria Basin through a drop inlet. Flow through this drop inlet is controlled by an automated 48-inch diameter sluice gate. A similar 48-inch diameter automated sluice gate controls the flow from the Etiwanda Channel into Victoria Basin. Victoria Basin is divided by a berm into two cells: Victoria Basin North (**VBN**) and Victoria Basin South (**VBS**). Flow from **VBN** to **VBS** is controlled by a manually operated 36-inch diameter sluice gate, and flow out of **VBS** back into Etiwanda Channel is controlled by an automated 36-inch diameter sluice gate.

Banana Basin. Banana Basin receives stormwater from local storm drains and from the West Fontana Channel, which enters the southeast corner of the basin. Banana Basin has an automated sluice gate (**BAN-WFC-A**) that controls releases into the West Fontana Channel. Water leaving Banana Basin flows westerly in the West Fontana Channel for 0.5 miles and then into Hickory Basin. A recycled water control valve (**WRP-BAN-A**) controls the release of recycled water into Banana Basin from the Whittram Regional Pipeline. The locations of these valves are shown in Figure 8-3.

Hickory Basin. Hickory Basin can receive stormwater, imported water, and recycled water. Stormwater is received at its eastern end (**HKE)** from the West Fontana Channel. Both stormwater and imported water are received at its western end (**HKW)** from the San Sevaine Channel inlet (**SSC-HKW-A**). Recycled water is received from the Whittram Regional Pipeline. A rubber dam is located just downstream of the San Sevaine Channel inlet to increase the diversion of storm and imported water into cell **HKW**. Hickory Basin can discharge back into the San Sevaine Channel at its western end via a 36-inch diameter drain with a manually operated sluice gate (**HKW-HKD-M**) or in extreme conditions over an uncontrolled spillway. The locations of these control elements are shown in Figure 8-4.

Jurupa Basin. The Jurupa Basin is a flow-by basin whose purpose is to divert storm and supplemental water from the San Sevaine Channel for temporary storage. A pump station located in the Jurupa Basin will be used in the future to pump storm and supplemental water to RP3 for recharge. Currently there is no inlet to divert water from the channel into the basin and therefore this facility is not operable. This Operation Procedures Manual will be updated when the inlet is constructed in 2007.

RP3 Basins. There is one stormwater inlet from Declez Channel into the RP-3 Basin complex, located in the southeast corner of the complex. Water entering from Declez Channel will be stormwater and local dry-weather water. This water can be delivered to the RP3 feeder channel through a side channel inlet located in the Declez Creek Channel. Flow through the inlet is controlled by an automated valve, **DZC-FC-A**. A rubber dam is located in the Declez Channel just downstream of the channel inlet to increase the diversion of water. When the dam is inflated, water in the channel backs ups and enters the channel

side inlet. There is a pipeline (force main) coming from the Jurupa Basin that can deliver supplemental water to Cell 1a.

Water diverted from the Declez Channel enters a diversion structure that delivers water to the feeder channel. Water diverted to the feeder channel can be diverted in any of the four basins on site. Dry-weather flows will generally be directed to Cell 2. There are manually operated sluice gates within the feeder channel that divert flow into individual cells. Excess water not diverted into the recharge cells from the feeder channel can be drained back into the Declez Channel.

Water from the Jurupa Pump Station can be delivered to the RP3 site via the Jurupa Force Main, which discharges into Cell 1a. Jurupa Basin may contain supplemental water (imported and/or recycled water) as well as stormwater. It may be desirable to deliver supplemental water to Declez Basin (further down stream of the RP-3 Facility). This can be achieved by pumping supplemental water from the Jurupa Basin to the RP3 Basin then diverting water back into the Declez Channel.

Declez Basin. Declez Basin is a flow through basin on the Declez Channel. As water flows down the Declez Channel it passes sequentially through the three cells (**DB1**, **DB2**, and **DB3**) of Declez Basin. In the future, supplemental water will be delivered to Declez Basin via the RP3 Recharge Basin complex and thence through the Declez Channel. Currently the basin receives only storm and urban dry-weather runoff. The Declez Basin has automated sluice gates that control flow from the Declez Basin 1 to Declez Basin 2, Declez Basin 2 to Declez Basin 3, and Declez Basin 3 to the Declez Basin Afterbay, and thence to the Declez Channel.

8.1.3 Operating Limits for Basins on the Etiwanda and San Sevaine Creeks System

Table 8-2 contains the operating limits for the basins in the Etiwanda and San Sevaine Creeks System. The Rule Curves for these basins are contained in Tables 3-5a and 3-5b.

Table 8-2
Operating Limits for Basins on the Etiwanda and San Sevaine Creek Systems

Basins	Bottom Elevation (feet msl)	Maximum Operating Depth (feet)	Maximum Operating Elevation (feet msl)	Storage Volume at Maximum Operating Depth (af)	Spillway Elevation (feet msl)	Storage Volume at Spillway Elevation (af)	Typical Percolation Rate (ft/day)
SS1	1487	4	1491	TBD	1493	TBD	2.5
SS2	1471	6	1477	TBD	1477	TBD	0.5
SS3	1457	5	1462	TBD	1462	TBD	0.5
SS4							
SS5							
VBN	1313	3	1316	19.0	1318	28.5	1.5
VBS	1309	7	1316	31.8	1318	47.1	1.5
BAN	1133	11	1144	60	1146	76	0.5
HKE	1110	3	1113	10	1115	18	0.5
HKW	1101	12	1113	30	1115	43	0.5

Table 8-2
Operating Limits for Basins on the Etiwanda and San Sevaine Creek Systems

Basins	Bottom Elevation (feet msl)	Maximum Operating Depth (feet)	Maximum Operating Elevation (feet msl)	Storage Volume at Maximum Operating Depth (af)	Spillway Elevation (feet msl)	Storage Volume at Spillway Elevation (af)	Typical Percolation Rate (ft/day)
Jurupa	885	42	927	1365	927	1365	0.5
RP3-C1a	948	2	950	10	952	20	2.5
RP3-C1b	948	2	950	6.3	952	13.2	2.5
RP3-C2	949	4	953	31.4	955	48.1	2.5
RP3-C3a	941	3	944	7.4	946	12.9	2.5
RP3-C3b	941	3	944	6.3	946	13.2	2.5
RP3-C4a	937	3	940	9.6	942	13.1	2.5
RP3-C4b	937	3	940	7.3	942	15.1	2.5
DB1	825	5	830	29.3	832	42.7	2.5
DB2	823	5	828	20.1	830	29.1	2.5
DB3	821	6	827	21.8	829	30.0	2.5

8.2 Supplemental Water Recharge Operations

Supplemental water is available for recharge in basins for the Etiwanda and San Sevaine Basins as shown below in Table 8-3.

Table 8-3
Sources of Supplemental Water Available to Basins on the Etiwanda and San Sevaine Creeks System

Basin	Imported Water From MWDSC	Recycled Water From IEUA
SS1	Yes	No
SS2	Yes	No
SS3	Yes	No
SS4	No	No
SS5	No	No
VBN	In Future	In Future
VBS	In Future	In Future

Table 8-3
Sources of Supplemental Water Available to Basins on the Etiwanda and San Sevaine Creeks System

Basin	Imported Water From MWDSC	Recycled Water From IEUA
BAN	Yes	Yes
HKE	Yes	Yes
HKW	Yes	Yes
RP3-C1a	In Future	In Future
RP3-C1b	In Future	In Future
RP3-C2	In Future	In Future
RP3-C3a	In Future	In Future
RP3-C3b	In Future	In Future
RP3-C4a	In Future	In Future
RP3-C4b	In Future	In Future
DB1	In Future	In Future
DB2	In Future	In Future
DB3	In Future	In Future

Improvements to the IEUA recycled water distribution system and the recharge facilities will make imported and recycled water available to most of these facilities. These improvements will be completed by the end of 2007. This manual will be modified in the future to incorporate the operation of the completed facilities. Presently, the San Sevaine 1-3, Banana, and Hickory Basins can accept imported water.

8.2.1 Supplemental Water Deliveries in Conservation Mode

Before delivering supplemental water to the basins, the IEUA Groundwater Recharge Coordinator shall check with the SBCFCD for any activity in the Etiwanda and San Sevaine Creeks System, including the basins and the portion of the channel conveying the imported water to the basins and downstream thereof. This may require "driving" the channel to check for people and/or obstructions.

Prior to the actual delivery of supplemental water, the IEUA Groundwater Recharge Coordinator shall contact the MWDSC Eagle Rock Operations Center at (626) 844-5610 to order water at a discharge rate not to exceed 30 cfs.

Operations during recharge:

- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's discretion, the IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.

  - When sluice gate changes are made.
  - When the IEUA Groundwater Recharge Coordinator observes an abnormal operation.

- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be limited to what can be safely observed above water. The IEUA Operators shall examine the condition and position of all sluice gates, inlet grates, and the rubber dam. While still at the facilities, the IEUA Operators shall report the condition and status of these improvements and the staff gage observations in each basin to the IEUA Groundwater Recharge Coordinator who shall confirm the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.
- As the water level in the cells reaches the maximum level specified in the rule curves, the IEUA Groundwater Recharge Coordinator shall reduce the inflow rate to equalize the delivery rate with the recharge rate of the facility. The IEUA Groundwater Recharge Coordinator will notify the Watermaster ROM and the SBCFCD whenever he/she deems it advisable to make changes in the delivery rate of the imported water.
- During imported water recharge operations, on a weekly basis or as may be determined by the IEUA Groundwater Recharge Coordinator, the IEUA Operators shall visually monitor the delivery of water, physically inspect the condition of the basin, and record these observations in a field book.
- Periodically during the delivery of imported water, the IEUA Groundwater Recharge Coordinator shall make a tally of the volume of imported water delivered and check this volume against the volume of imported water ordered. The tally shall be performed at least weekly and a projection will be made as to when the total recharge goal for this basin will be achieved. These recharge computations will be submitted to the Watermaster ROM. The Watermaster ROM will keep the members of the GRCC informed on such matters.
- Once deliveries of imported water are complete, the IEUA Groundwater Recharge Coordinator shall notify the Watermaster ROM.

8.2.2 Supplemental Water Deliveries in Pre-Storm Mode

Supplemental water deliveries to the RP3 and Victoria Basins during Pre-Storm Mode can be made up to 48 hours preceding the forecasted storm event provided that the water levels in the basins are less than or equal to the water levels in the associated rule curves. No supplemental water deliveries can be made to the San Sevaine, Banana, Hickory, or Declez Basins during Pre-Storm Mode.

8.2.3 Supplemental Water Deliveries in the Storm Mode

No deliveries of imported water will be made to these basins during Storm Mode.

8.3 Stormwater Operations and Capture during Storm Mode

8.3.1 Coordination among IEUA, SBCFCD and Watermaster

The IEUA Groundwater Recharge Coordinator and the Watermaster ROM shall closely monitor weather forecasts and, in particular, all forecasted storm events. The IEUA Groundwater Recharge Coordinator will be in close contact with the SBCFCD during Pre-Storm and Storm Modes. IEUA Operators will respond to the directions of the SBCFCD "Storm Alert Officers" (listed in Section 3).

8.3.2 First Storm of the Season

The settings for all operable control elements in the Etiwanda and San Sevaine Creeks System are listed in Table 8-4. The settings for the first storm of the season were established to bypass debris accumulation in the channels and thus minimize maintenance.

8.3.3 Stormwater Capture

The following are the procedures to operate the Etiwanda and San Sevaine Creek Basins for the recharge of stormwater for a storm that has a non-significant precipitation forecast:

- The IEUA Groundwater Recharge Coordinator will set the gates and rubber dams as per Table 8-4 for a non-significant storm.
- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's discretion, the IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Groundwater Recharge Coordinator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. Inspections shall be limited to what can be safely observed above water. The IEUA Operators shall examine the condition and position of all sluice gates, inlet grates, and the rubber dam. While still at the facilities, the IEUA Operators shall report the condition and status of these improvements and the staff gage observations in each basin to the IEUA Groundwater Recharge Coordinator who shall confirm the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.

The following are the procedures to operate the Etiwanda and San Sevaine Creek Basins for the recharge of stormwater for a storm that has a significant precipitation forecast:

- All outlet gates for multipurpose basins shall be opened by an IEUA Operator 48 hours prior to the storm's arrival to allow the basin to drain and such that the basins will be fully drained before the storm starts.
- The IEUA Groundwater Recharge Coordinator will monitor the depth of water in the basins remotely through the SCADA system. At the IEUA Groundwater Recharge Coordinator's discretion, the IEUA Operators will physically inspect the basins during the following situations:
  - As the basins are filling.
  - When a maximum operating level is reached.
  - When sluice gate changes are made.
  - When the IEUA Groundwater Recharge Coordinator observes an abnormal operation.
- At the IEUA Groundwater Recharge Coordinator's discretion, IEUA Operators shall physically inspect the facilities for unsatisfactory conditions or abnormal operations. The IEUA Operators shall examine the condition and position of all the sluice gates, inlet grates, and the rubber dam. While still at the facilities, the IEUA Operators shall report the condition and status of these improvements and the staff gage observations in each basin to the IEUA Groundwater Recharge Coordinator who shall confirm the reported data with the SCADA information. All inlet grates that have 10% or more of their surface area covered with debris and/or any noteworthy discrepancies between field observations and SCADA data shall be immediately reported to the Watermaster ROM. The IEUA Groundwater Recharge Coordinator will address the discrepancies and other issues as appropriate.
- Near the end of the storm, if the SBCFCD provides authorization via email to change from storm to conservation mode, the IEUA Groundwater Recharge Coordinator will set all sluice gate settings as listed in Table 8-4 subject to rule curve considerations.

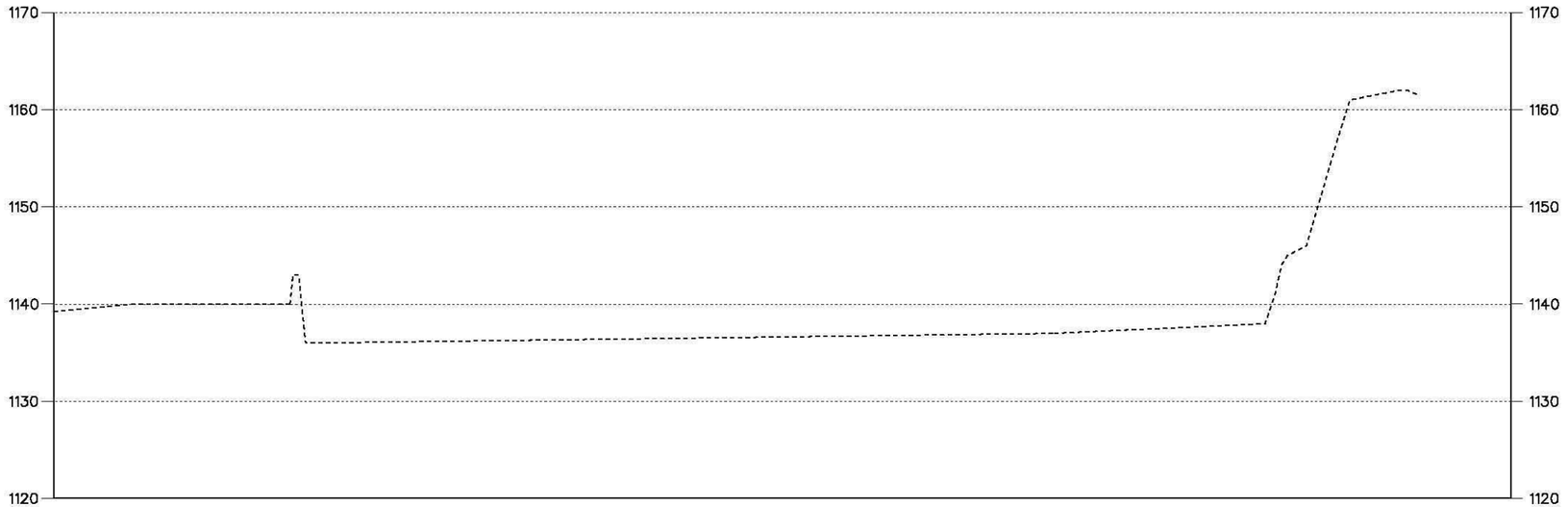
Table 8-4
Control Elements for the San Sevaine and Etiwanda Creeks System
and Associated Storm Settings

Basin		Control Element	Operator	Control Element Settings		
Facility	Type			First Storm	Non-Significant Storm	Significant Storm
CB13		MWDSC Turnout	MWDSC Turnout	Closed	Closed	Closed
SS1	MP	na	na	na	na	na
SS2	MP	na	na	na	na	na
SS3	MP	na	na	na	na	na
SS4	MP	na	na	na	na	na
SS5	MP	na	na	na	na	na
CB14		MWDSC Turnout	MWDSC Turnout	Closed	Closed	Closed
VBN	Cons	San Sevaine Channel Outlet/Inlet to Victoria Basin North	Automated Sluice Gate **(SSC-VBN-A)**	Closed	Open	Closed
VBN	Cons	Victoria Basin North to Victoria Basin South	Manual Sluice Gate (**VBN-VBS-M)**	Open	Open	Open
VBS	Cons	Victoria Basin South to San Sevaine Channel	Automated Sluice Gate (**VBS-SSC-A)**	Closed	Closed	Closed
CB18		MWDSC Turnout	MWDSC Turnout	Closed	Closed	Closed
BAN	MP	Banana Basin Outlet to West Fontana Channel	Automated Sluice Gate (**BAN-WFC-A**)	Open	Closed	Open
BAN	MP	Whittram Regional Pipeline Outlet to Banana Basin	Automated Valve (**WRP-BAN-A**)	Closed	Closed	Closed
HKE	MP	Whittram Regional Pipeline Outlet to Hickory East Cell	Automated Valve **(WRP-HKE-A**)	Closed	Closed	Closed
HKE	MP	Hickory East Cell to Hickory West Cell	Automated Sluice Gate **(HKE-HKW-A**)	Open	Open	Open
HKW	MP	San Sevaine Channel Rubber Dam	Rubber dam operated from adjacent control building or SCADA	Deflated	Inflated	Deflated
HKW	MP	San Sevaine Channel Inlet to Hickory West Cell	Automated Sluice Gate (**SSC-HKW-A**)	Closed	Open	Closed
HKW	MP	Hickory West Cell to Hickory Basin Afterbay	Manual Sluice Gate (**HKW-HKA-M**)	Open	Closed	Open
RP3	Cons	DeClez Channel Rubber Dam	Rubber dam operated from adjacent control building or SCADA		Inflated	Deflated
RP3	Cons	DeClez Channel Outlet/Inlet to Feeder Channel	Automated Sluice Gate (**DZC-FC-A**)	Closed	Open	Open
RP3-C1a	Cons	Jurupa Basin to RP3 Cell 1a	Automated valve (**JB-C1a-A**)	na	na	na
RP3-C1a	Cons	RP3 Cell 1a to Junction Structure	Manual Sluice Gate (**C1a-JS-M**)	Open	Open	Open
RP3-C1b	Cons	RP3 Cell 1b to Junction Structure	Manual Sluice Gate (**C1b-JS-M)**	Open	Open	Open
RP3	Cons	Feeder Channel to RP3 Junction Structure	Manual Sluice Gate (**FC-JS-M**)	Open	Open	Open
RP3	Cons	DeClez Channel Rubber Dam	Rubber dam operated from adjacent control building or SCADA	Deflated	Inflated	Deflated
RP3-C2	Cons	Feeder Channel to RP3 Cell 2	Manual Sluice Gate (**FC-C2-M**)	Open	Open	Open
RP3-C3a	Cons	Feeder Channel to RP3 Cell 3a	Manual Sluice Gate (**FC-C3a-M**)	Open	Open	Open
RP3-C3b	Cons	Feeder Channel to RP3 Cell 3b	Manual Sluice Gate (**FC-C3b-M**)	Open	Open	Open
RP3-C4a	Cons	Feeder Channel to RP3 Cell 4a	Manual Sluice Gate (**FC-C4a-M**)	Open	Open	Open
RP3-C4b	Cons	Feeder Channel to RP3 Cell 4b	Manual Sluice Gate (**FC-C4b-M**	Open	Open	Open
		Feeder Channel Flow Control	Manual Sluice Gate (**FC1-M**)	Open	Open	Open
		Feeder Channel Outlet to DeClez Channel	Manual Sluice Gate(**FC2-DC-M**)	Closed	Closed	Closed
DB1	MP	DeClez Basin 1 to DeClez Basin 2	Automated Sluice Gate (**DB1-DB2-A**)	Closed	Closed	Open
DB2	MP	DeClez Basin 2 to DeClez Basin 3	Automated Sluice Gate (**DB2-DB3-A**)	Closed	Closed	Open
DB3	MP	DeClez Basin3 to DeClez Channel	Automated Sluice Gate (**DB3-DC-A**)	Closed	Closed	Open

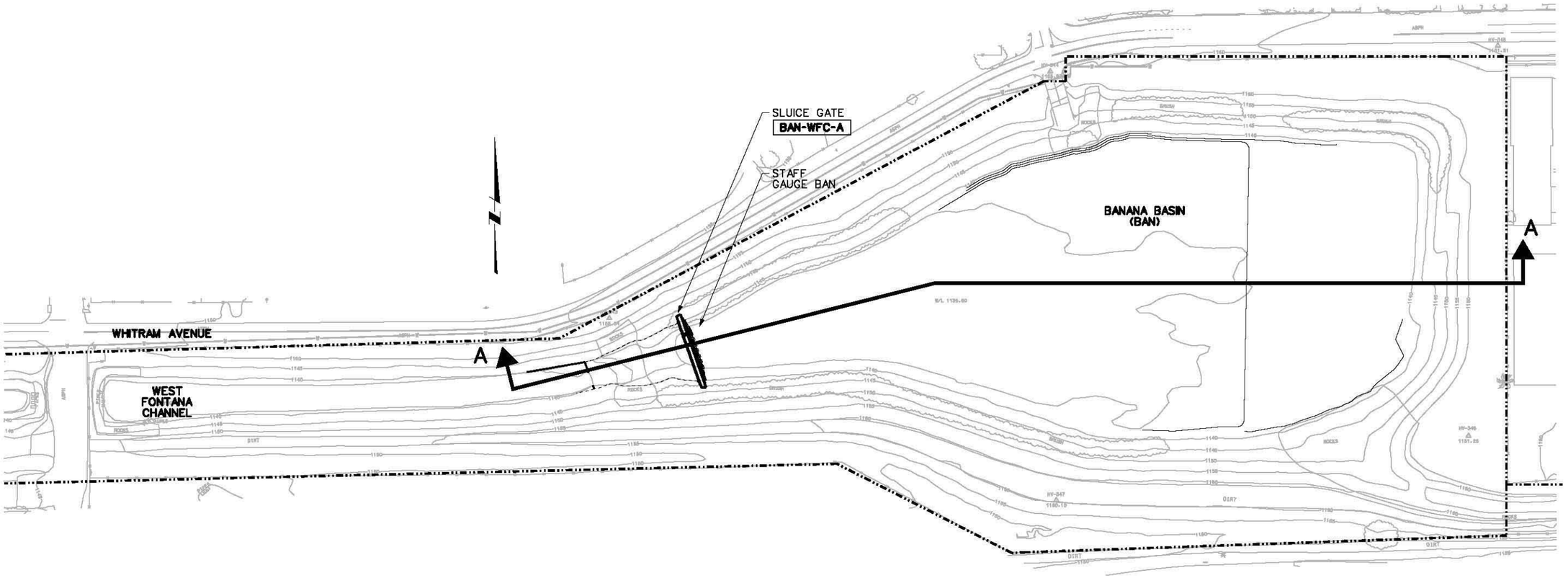
Notes: na - not applicable; MP - multipurpose; Cons - conservation.

Placeholder for Figure 8-1

Placeholder for Figure 8-2

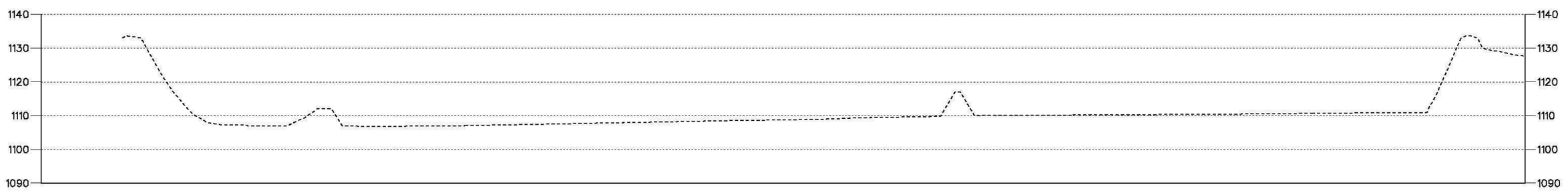


SECTION A-A

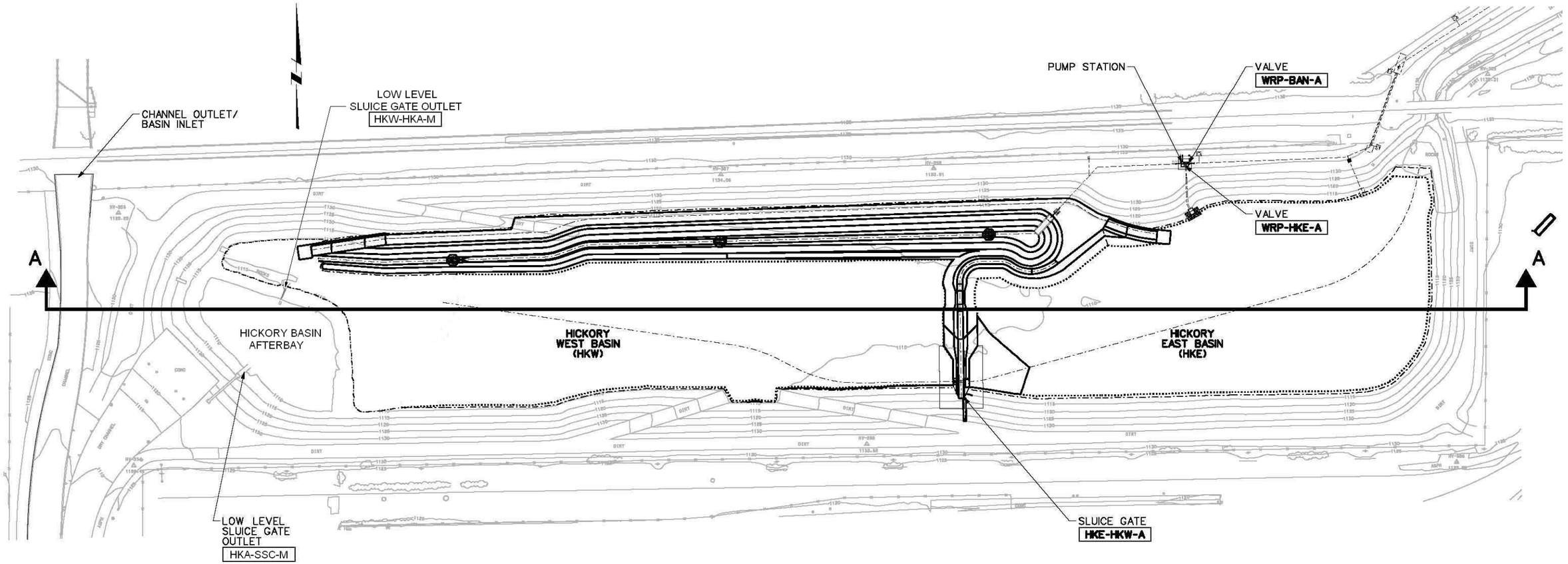


SCALE				FIGURE
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures	Plan and Profile Banana Basin	8-3

Job No: 1341732 File: \\USPAS4\DESIGN\design\DropFolder\Tvbui\Chino Basin\Banana\Banana_Fig4.dgn User: tvbui Plot Date: 16-NOV-2004

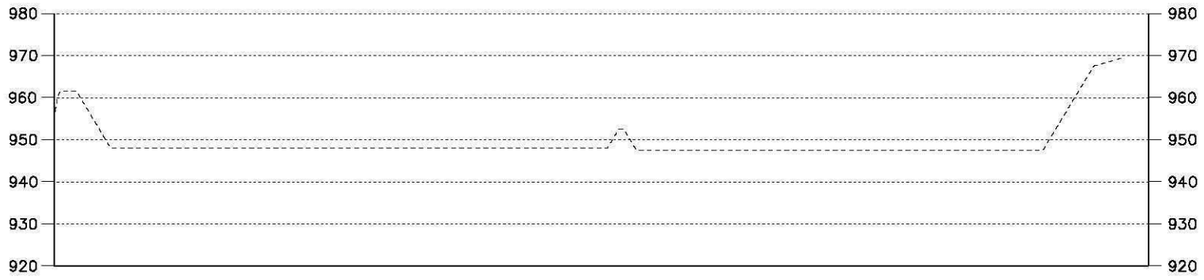


SECTION A-A

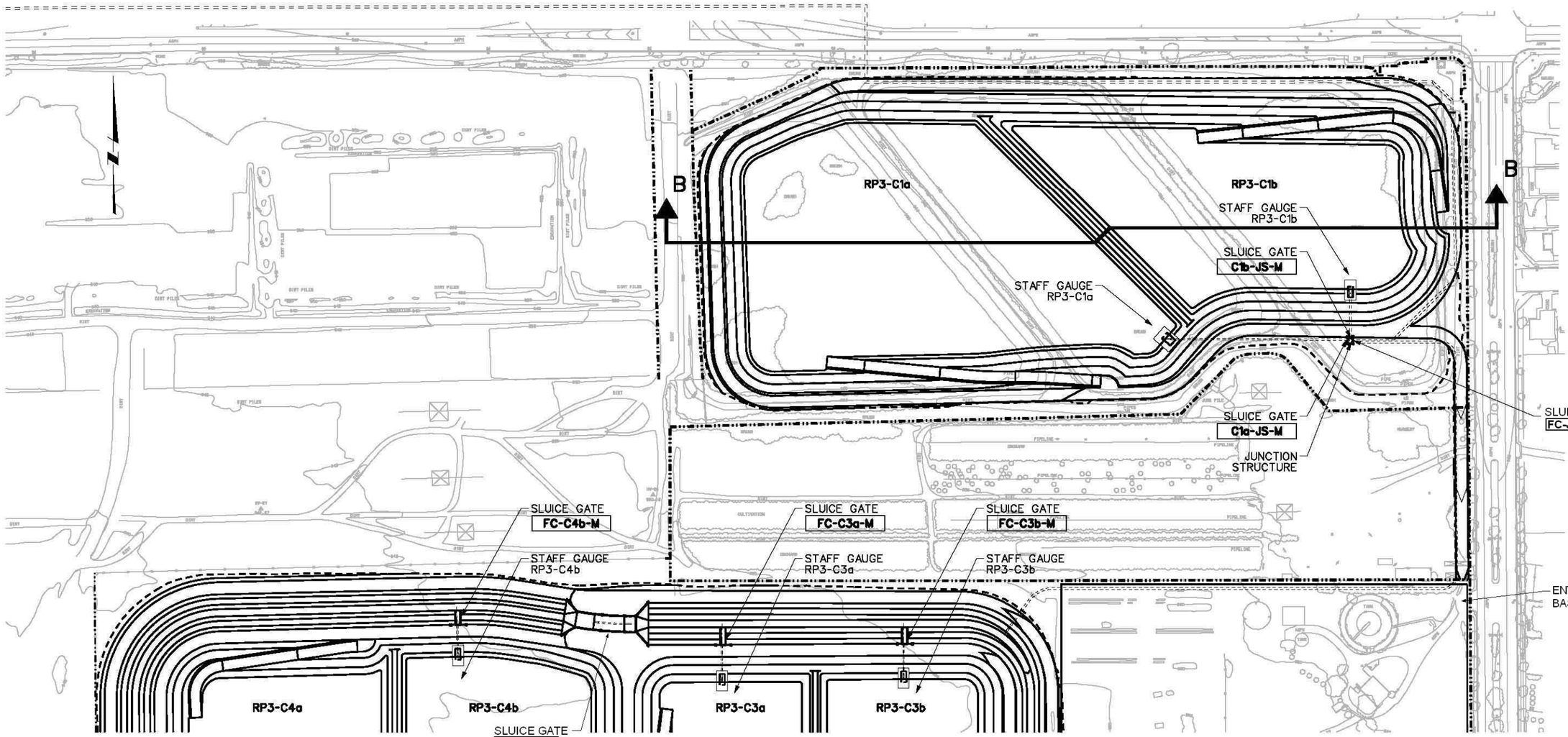


SCALE				FIGURE
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures	Plan and Profile Hickory Basin	8-4

Placeholder for Figure 8-5



SECTION B-B



SCALE			FIGURE
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures	Plan and Profile RP3 Basins, Northern Section	8-6

Plot Date: 16-NOV-2004
User: tvbui
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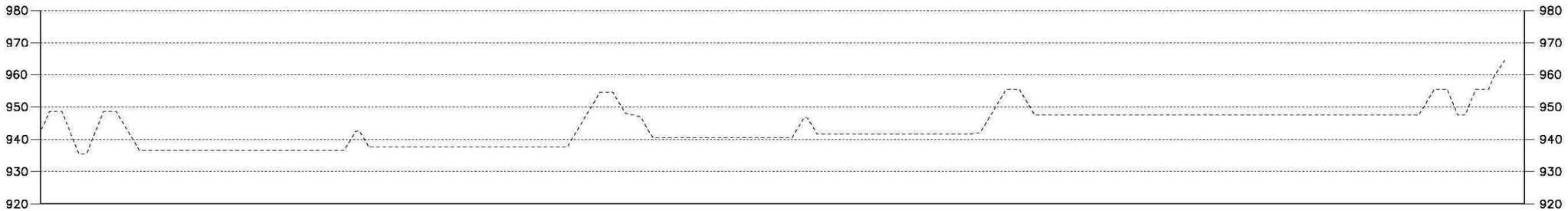
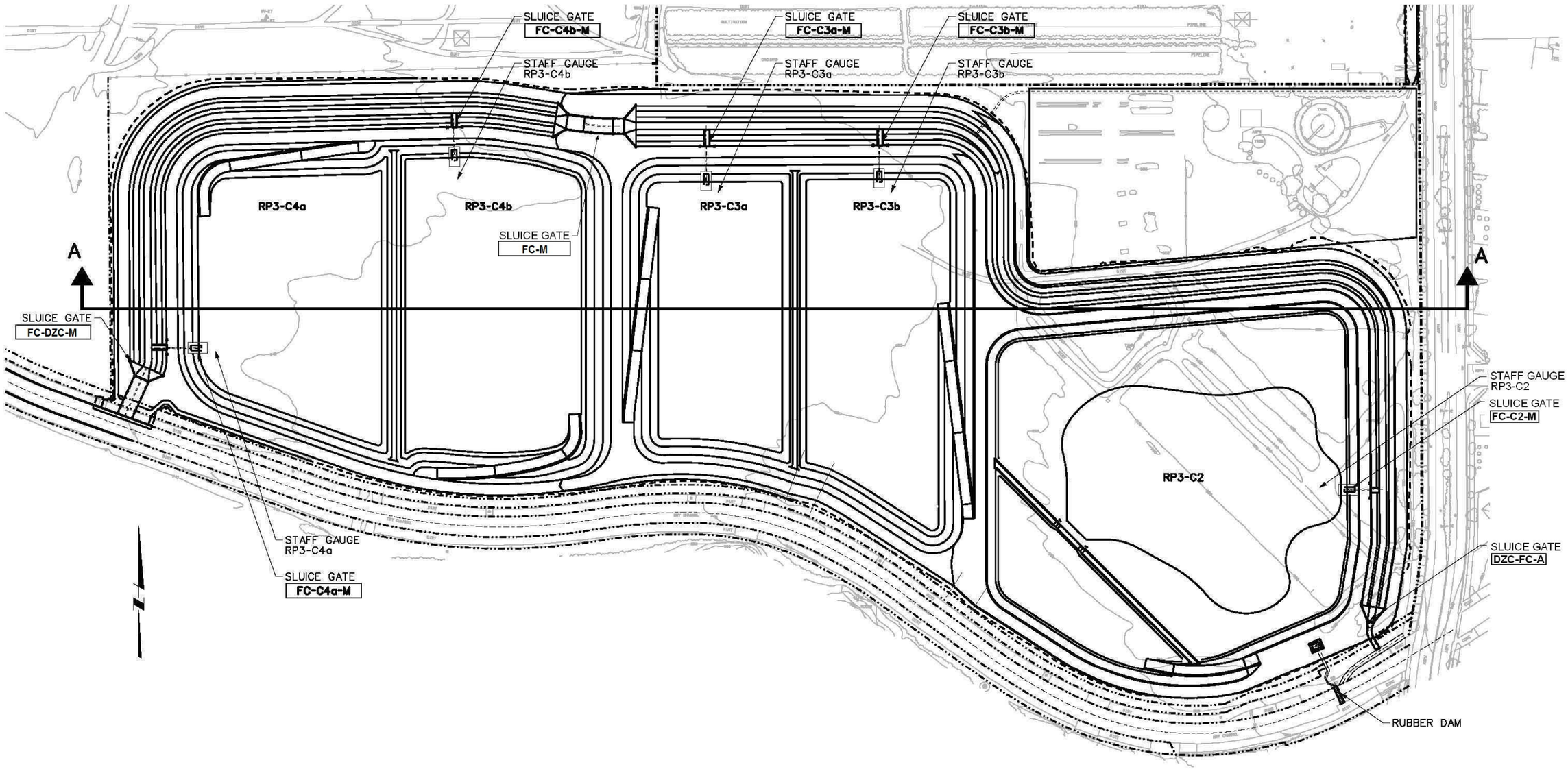
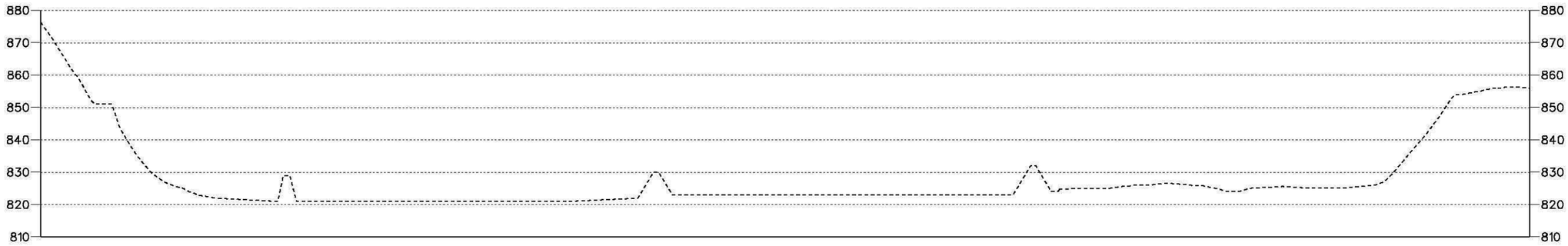
Job No: 1341732



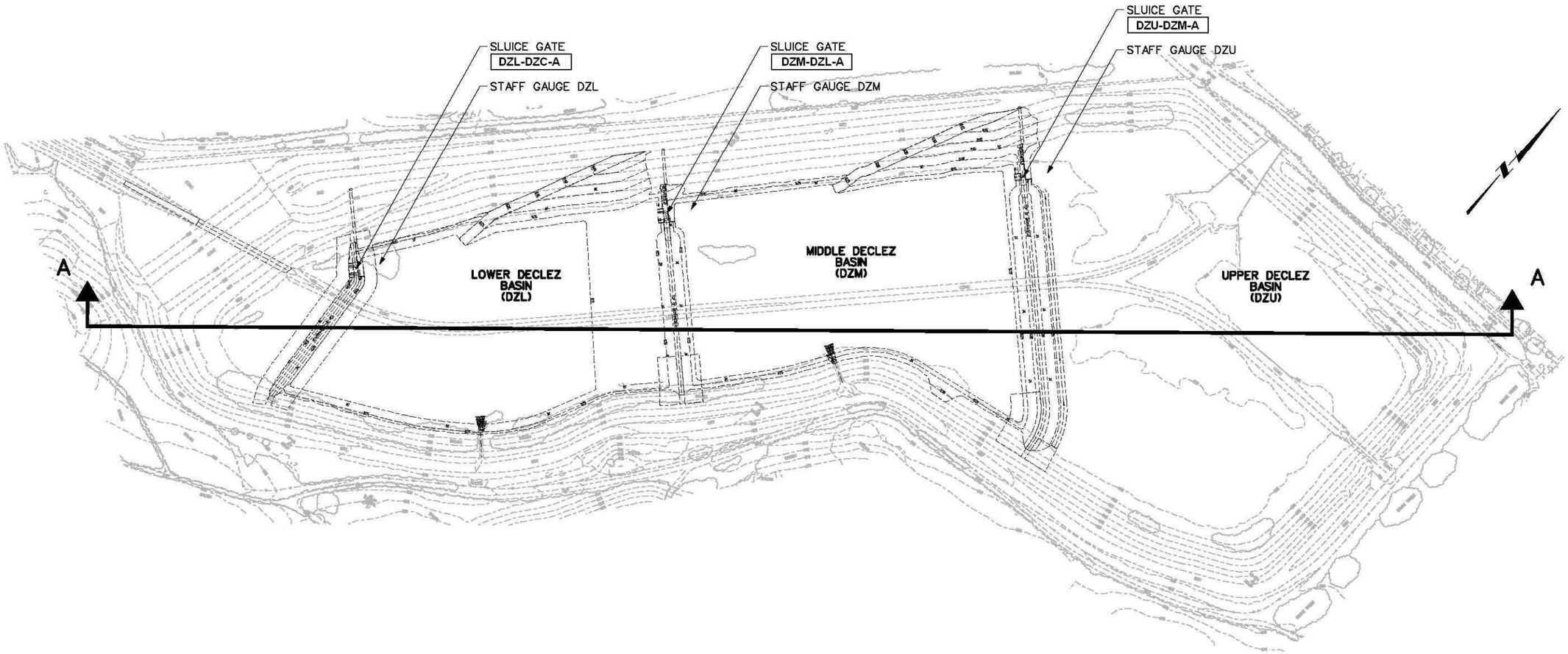
SECTION A-A



SCALE			FIGURE
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures Plan and Profile RP3 Basins, Southern Section	8-7



SECTION A-A



SCALE				FIGURE
N.T.S.	MWH Pasadena California	Chino Basin Recharge Facilities Operating Procedures	Plan and Profile Declez Basin	8-8

Plot Date: 16-NOV-2004
User: tvbui
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Job No: 13417.32

EXHIBITS

EXHIBIT A

AGREEMENT

Orig Recharge facilities

REPORT/RECOMMENDATION TO THE BOARD OF SUPERVISORS OF SAN BERNARDINO COUNTY, CALIFORNIA AND RECORD OF ACTION

January 14, 2003

Agreement No. 03-0083

FROM: KEN A. MILLER, Director
Department of Public Works - **Flood Control**

SUBJECT: **AGREEMENT FOR OPERATION AND MAINTENANCE OF FACILITIES TO IMPLEMENT THE CHINO RECHARGE BASIN MASTER PLAN**

RECOMMENDATION: Acting as the governing body of the Flood Control District (District), approve agreement between the District, Inland Empire Utilities Agency, Chino Basin Water Conservation District, and Chino Basin Watermaster for Operation and Maintenance of Facilities to implement the Chino Basin Recharge Master Plan.

BACKGROUND INFORMATION: The projected population in the Santa Ana Watershed area is projected to increase by 2,000,000 over the next 25 years. To adequately provide water for the growth, efforts must be taken to capture storm water and reclaimed water and recharge it into the Chino Groundwater Basin to replenish the groundwater. On January 29, 2002, the Board approved a Memorandum of Agreement with the water agencies that are a party to this agreement to allow Flood Control Facilities to be used for this recharge program as stated in the Memorandum of Agreement. The present agreement sets forth the conditions for reimbursement of Maintenance and Operations costs to the District and other parties for the recharge program. The agreement also establishes the Groundwater Recharge Coordinating Committee that will plan and coordinate the schedules for recharge water conveyance in district channels and diversion into District basins. Each party is entitled to appoint one member and one alternate member to the Committee. The term of the agreement is 30 years.

REVIEW BY OTHERS: This item was reviewed by Deputy County Counsel Charles S. Scolastico on December 6, 2002 and by the County Administrative Office (Tom Forster, Administrative Analyst) on December 9, 2002.

FINANCIAL IMPACT: There will be no financial impact to the District. The cost to improve the flood control facilities, to recharge the water, and the construction of the water distribution systems necessary to transport water to the flood control facilities will be at no expense to the District. Any additional maintenance and operational costs incurred by the District will be reimbursed by the Chino Basin Water Agencies.

SUPERVISORIAL DISTRICT(S): 2nd and 4th

PRESENTER: Ken A. Miller, 387-7906

cc: PW-Miller
PW-Golondzinier w/4 agreements
Contractors c/o PW
Auditor w/agreement
IDS w/agreement
CAO-Forster
County Counsel-Scolastico
File w/agreement

jr

Rev 07/97

Record of Action of the Board of Supervisors
Agreement No. 03-0083

APPROVED BOARD OF SUPERVISORS
COUNTY OF SAN BERNARDINO

MOTION	MOVE	AYE	AYE	AYE	SECOND
	1	2	3	4	5

J. RENEE BASTIAN, CLERK OF THE BOARD

BY _____

DATED: January 14, 2003

ITEM 013

Ont Recharge facilities

REPORT/RECOMMENDATION TO THE BOARD OF SUPERVISORS OF SAN BERNARDINO COUNTY, CALIFORNIA AND RECORD OF ACTION

January 14, 2003

Agreement No. 03-0083

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Department of Public Works - **Flood Control**

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SUPERVISORIAL DISTRICT(S): 2nd and 4th

PRESENTER: Ken A. Miller, 387-7906

cc: PW-Miller
PW-Golondzinier w/4 agreements
Contractors c/o PW
Auditor w/agreement
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CAO-Forster
County Counsel-Scolastico
File w/agreement

jr

Rev 07/97

Record of Action of the Board of Supervisors
Agreement No. 03-0083

APPROVED BOARD OF SUPERVISORS
COUNTY OF SAN BERNARDINO

MOTION	MOVE	AYE	AYE	AYE	SECOND
	1	2	3	4	5

J. RENEE BASTIAN, CLERK OF THE BOARD

BY _____

DATED: January 14, 2003

ITEM 013

SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT
F A S
CONTRACT TRANSMITTAL

FOR COUNTY USE ONLY

ORIGINAL

E / M / X	X / / /	New / Change / Cancel	Vendor Code	SC	Dept. 097	A	Contract Number 03-1083
County Department: Public Works				Dept. 097	Orgn. 097		Contractor's License No.
County Department Contract Representative: Theodore M. Golondzinier, Assistant Director					Ph. Ext. 77914		Amount of Contract
Fund: RFZ	Dept.: 097	Organization: 097	Appr.	Obj/Rev Source	Activity	GRC/PROJ/JOB Number	

Commodity Code	Estimated Payment Total by Fiscal Year					
	FY	Amount	I/D	FY	Amount	I/D
Project Name: Chino Basin Recharge						
Master Plan Implementation						
Operation and Maintenance						

CONTRACTOR Chino Basin Watermaster, Chino Basin Water Conservation District, Inland Empire Utilities Agency

Birth Date _____ Federal ID No. or Social Security No. _____

Contractor's Representative John V. Rossi

Address 8632 Archibald Avenue, Suite 109, Rancho Cucamonga CA 91730 Phone (909) 484-3888

Nature of Contract: *(Briefly describe the general terms of the contract)*

This Agreement sets forth the conditions for reimbursement of Maintenance and Operations costs to the District and other parties for the recharge program and establishes the Groundwater Recharge Coordinating Committee that will plan and coordinate the schedules for recharge water conveyance in district channels and diversion into District basins with District Operation and Maintenance schedules. The term of the agreement is 30 years.

(Attach this transmittal to all contracts not prepared on the "Standard Contract" form.)

Approved as to Legal Form	Reviewed as to Affirmative Action	Reviewed for Processing
► [signature]	► [signature]	► [signature]
County Counsel		Agency Administrator/CAO
Date 12-6-02	Date 12-9-02	Date

AGREEMENT
FOR
OPERATION AND MAINTENANCE OF FACILITIES
TO IMPLEMENT THE
CHINO BASIN RECHARGE MASTER PLAN

The parties that are signatories to this Agreement are the San Bernardino County Flood Control District (SBCFCD), the Chino Basin Water Conservation District (CBWCD), the Chino Basin Watermaster (Watermaster), and the Inland Empire Utilities Agency (IEUA), and shall be known collectively as "the Parties."

WHEREAS, the Parties are signatories to the Recharge Master Plan Implementation Memorandum of Agreement (RMPIMOA) (Attachment 1 hereto) which sets forth some of the operational policies and actions necessary to implement *Program Element 2 – Develop and Implement Comprehensive Recharge Program* of the Optimum Basin Management Program for the Chino Basin; and

WHEREAS, the Parties, in accordance with their respective Acts and Powers, desire to cooperate in a program to implement certain portions of the Recharge Master Plan for the purpose of assisting Watermaster in developing adequate groundwater recharge capabilities to meet the future needs of the Chino Basin; and

WHEREAS, the RMPIMOA calls for subsequent Agreements among the Parties to address the specifics of Facilities' operations, maintenance, conservation plans, cost sharing and other elements necessary to define how and by whom each recharge Facility will be operated and maintained; and

WHEREAS, the Parties have agreed to enter into this Agreement in partial fulfillment of the need for the subsequent Agreements that are called for in the

RMPIMOA and to set forth the relationship among the Parties relative to cooperation in and coordination of groundwater recharge at Facilities owned or operated by SBCFCD, CBWCD or IEUA.

NOW THEREFORE BE IT RESOLVED THAT THE PARTIES HEREBY AGREE THAT:

I. DEFINITIONS

1. **Definitions**. For the purposes of this Agreement the following terms shall have the following meanings:

   a. The term "Facilities" means facilities that may be used for groundwater recharge, which may include basins, channels, diversion structures, rubber dams and other facilities and appurtenances owned or operated by any of the Parties in the Chino Basin.

   b. The term "Supplemental Water" means both water imported to Chino Basin from outside Chino Basin watershed, and recycled water.

   c. The term "Rainy Season" typically means the six-month period from October 15 to April 15, however any time that weather predictions indicate that a storm is developing that may be capable of producing runoff shall be considered as occurring within the "Rainy Season."

II. PURPOSE

2. **Purpose**. Except as otherwise provided herein, and for the purpose of groundwater recharge, this Agreement, including any amendments and permits necessary to operate the Facilities, will govern the groundwater recharge related operation and maintenance of the Facilities identified in Attachment 2.

3. **Use of Facilities for Recharge.** In recognition of the capital investment being made by Watermaster, by IEUA, and by the State of California through grant funding to improve the overall recharge capabilities of SBCFCD, CBWCD and IEUA Facilities and to construct pipelines and appurtenances to convey Supplemental Water and native storm water to the Facilities for recharge, and subject to the priorities set forth in Section III and VI of this Agreement, the Parties will make all reasonable efforts to assure that the Facilities are made available to the maximum practicable extent for groundwater recharge.

III. PRIORITIES

4. **Flood Control Priority.** The priority for use of capacity in the Facilities is first for flood control, second for recharge of native water and third for recharge of Supplemental Water. To protect property and public safety, in the event of unplanned or emergency situations, each of the Parties will have the sole authority to determine when their respective Facilities are available for recharge of Supplemental Water and to release water or to order the cessation of the delivery of Supplemental Water to maintain the full flood control capacity of their Facilities.

5. **Overlapping Agreements.** During those times when the Watermaster and/or the IEUA are not physically utilizing the Facilities for the recharge of Supplemental Water, the SBCFCD, CBWCD or IEUA may have and enter into subsequent and overlapping Agreements for use of their respective Facilities with others having similar needs. Provided however, actual use, as opposed to planned or scheduled use, of the Facilities by the Watermaster and/or IEUA for spreading Supplemental Water shall take precedence over all other uses except those related to controlling, managing, and recharging local storm water flows, or scheduled or emergency maintenance. Notwithstanding the above, the Parties acknowledge that recharge of Supplemental Water in the Chino Basin may only take place after approval by the Watermaster.

6. **Ownership and Easements.** All Facilities owned by the SBCFCD are under the exclusive control of its Board of Supervisors and its designated officers and employees and, except as agreed-to herein, no other person shall interfere with, regulate, or control any of such Facilities, or the water flowing therein, without the special written authority from the Board of Supervisors or its duly authorized representatives. All Facilities owned by the CBWCD are under the exclusive control of its Board of Directors and its designated officers and employees and, except as agreed-to herein, no other person shall interfere with, regulate, or control any of such Facilities, or the water flowing therein, without the special written authority from the Board of Directors of the CBWCD or its duly authorized representatives. All Facilities owned by IEUA are under the exclusive control of its Board of Directors and its designated officers and employees and, except as agreed-to herein, no other person shall interfere with, regulate, or control any of such Facilities, or the water flowing therein, without the special written authority from the Board of Directors of IEUA or its duly authorized representatives.

IV. MONITORING

7. **Accounting for Recharged Water.** Watermaster will be responsible for the accounting of all water recharged at the Facilities, including any water that is lost for whatever reason.

8. **Monitoring at Facilities**. IEUA will supply SBCFCD with a Supervisory Control and Data Acquisition (SCADA) monitoring and control system operating console along with maintenance and technical support. IEUA will also supply CBWCD and Watermaster with a SCADA monitoring console along with maintenance and technical support. The SBCFCD system will have a maintenance lock-out feature so that all gate and dam controls can not be overridden, but can be locked closed during maintenance operations. Where SCADA monitoring sensors can provide data for flood control purposes, IEUA will allow, where possible, their connection to the SBCFCD Automated

Local Evaluation in Real Time (ALERT) system. IEUA will have access to information from the ALERT system. To the greatest extent possible, all information systems will share data with the other Parties.

V. BASIN IMPROVEMENTS

9. **Approval of Improvements to Facilities.** Where Watermaster or IEUA desires to provide improvements within SBCFCD or CBWCD Facilities, they shall submit plans and specifications thereof for SBCFCD or CBWCD review and approval. The approving Party thereafter agrees to allow such improvements and to issue any necessary permits in an expeditious manner, and Watermaster or IEUA agrees to assume all costs in connection therewith. With the SBCFCD's or CBWCD's concurrence, Watermaster or IEUA may contract with any other public or private entity or entities to provide said improvements. If Watermaster or IEUA has not already obtained a permit to perform the improvements in SBCFCD Facilities, then the entity who is contracted to perform the improvements shall apply for any required permits. Whenever Watermaster or IEUA contracts with others to perform work within SBCFCD or CBWCD Facilities, they shall ensure that the contractors comply with the terms and conditions of this Agreement and any relevant permits prior to entry upon such Facilities. When Watermaster or IEUA contracts for work, any and all procurement of labor, equipment, materials and services necessary to carry out construction of improvements shall be in accordance with the normal bidding and procurement procedures and policies of the respective Parties.

10. **Removal of Improvements from Facilities.** All water conveyance, discharge, monitoring, and spreading Facilities constructed under this Agreement shall be removed from SBCFCD's or CBWCD's Facilities at Watermaster's or IEUA's expense should this Agreement be terminated, unless SBCFCD's or CBWCD's approval is given to allow said Facilities to remain in place.

VI. ONGOING FIELD OPERATIONS

11. **Coordination of Field Operations.** To the extent practicable, the Parties will coordinate their field operations, which includes maintenance activities, relative to the delivery of Supplemental Water to the Facilities.

12. **Security at Facilities.** Watermaster shall be responsible for appropriate security and surveillance of the areas used for ponding, conveying and spreading of Supplemental Water when such water is present at the Facilities. Watermaster will assume responsibility for security and surveillance of the improvements they make to the Facilities. Watermaster may employ guards or other security systems for this purpose.

13. **Maintenance Priorities at Facilities.** Maintenance personnel for SBCFCD Zone 1 assets will be allocated first for the purpose of providing flood control related maintenance and secondarily for the purpose of providing recharge related maintenance.

14. **Performance of Maintenance.** Watermaster and IEUA may utilize contractors to provide recharge related Additional Activities at the Facilities.

Watermaster may choose to have the Additional Activities, as identified in the budget, performed by an entity other than SBCFCD, CBWCD or IEUA, but only after consultation with and in coordination with SBCFCD, CBWCD or IEUA. SBCFCD, CBWCD and IEUA after consultation will cooperate with Watermaster to facilitate such performance by another entity. Any such entity and its contractors must comply with the rules and regulations of SBCFCD, CBWCD, or IEUA, including obtaining a permit(s), providing insurance, and reimbursement of costs for administration and inspection. As applicable, any and all procurement of labor, equipment, materials and services necessary to carry out performance of Additional Activities shall be in accordance with the normal bidding and procurement procedures and policies of Watermaster or the respective party performing the maintenance.

15. **Encroachment.** The Parties hereto shall not authorize or permit encroachment by others upon the Facilities owned by the other Parties.

16. **Damage to Facilities.** Under no circumstances shall the use of the Facilities by Watermaster or IEUA result in damage or degradation to the Facilities owned by the Parties hereto. Joint periodic inspections by the Parties to this Agreement shall be made if one or more of the Parties report that Facilities have received damage or are experiencing degradation. The purpose of the joint inspection will be to agree upon whether the work performed under this Agreement has caused the damage or degradation to the Facilities and to agree upon the corrective action needed to repair the damage or degradation. Once agreement has been reached, documentation shall be submitted to Watermaster identifying said damage or degradation, along with the agreed corrective action. Watermaster shall pay all costs for the corrective action. During the Rainy Season should the SBCFCD, CBWCD or IEUA discover that their respective Facilities have been damaged and require emergency corrective repair work in order to safely capture and detain storm water runoff, such agency or agencies will document the cause and extent of damage (e.g., through the use of photos, etc.) and shall proceed to make the necessary emergency corrective repairs. As soon as practicable following the discovery that such Facilities require emergency corrective work, such agency shall inform Watermaster of its decision to perform the emergency corrective work and of its intent to invoice Watermaster for the costs associated therewith. Scheduling priorities and dispute resolution, including but not limited to resolution of disputes relating to emergency repairs, and operation and maintenance issues will be addressed through the Groundwater Recharge Coordinating Committee (GRCC).

VII. RECYCLED WATER

17. **Recycled Water**. Subject to approval by Watermaster, IEUA will have the primary responsibility for supplying and physically delivering recycled water to the

Facilities in coordination with the other recharge and flood control activities at those Facilities. Excluding the real property and the existing fixtures and structures that are presently owned by others, and further excluding any new fencing that is installed by IEUA under the Chino Basin Recharge Facilities Implementation Project, IEUA will be the owner of all recycled water installations and works installed by IEUA. Relative to the use of the Facilities for recharge of recycled water:

a. Prior to the physical recharge of recycled water under this Agreement, IEUA shall prepare and process a request to, and shall obtain any necessary approvals from, the State of California Regional Water Quality Control Board, Santa Ana Region ("SARWQCB") and California Department of Health Services ("DHS"). Copies of such approvals shall be provided to CBWCD, SBCFCD and Watermaster.

b. IEUA shall take all necessary and feasible steps to ensure that at all times, all recycled water supplies delivered by IEUA comply with the water quality and discharge provisions established in NPDES Permits from the SARWQCB and DHS.

c. IEUA shall prepare and submit to the SARWQCB, as required, project monitoring and reporting requirements, which are established for the project by the SARWQCB and the DHS. Copies of all documents will be submitted simultaneously to Watermaster. IEUA shall continue to provide project monitoring, as required by the SARWQCB and DHS, after termination of this Agreement.

d. Ownership of monitoring equipment and other Facilities installed by IEUA under the terms of this Agreement will continue to vest with IEUA after termination of this Agreement. Any costs incurred to comply with any of the requirements set forth herein with regard to recycled water shall be the sole responsibility of IEUA.

e. IEUA will ensure that any necessary approvals and agreements between those third parties to whom IEUA provides recycled water and the Watermaster are obtained for storage and/or recharge of

recycled water in the Chino Groundwater Basin, at no cost to SBCFCD, CBWCD or Watermaster.

f. No provision of any other permit or agreement between IEUA and any other third party shall operate to relieve IEUA from any of its obligations under this Agreement.

g. IEUA shall cease spreading of recycled water immediately should levels of chemicals and other constituents increase beyond permitted levels identified in IEUA's NPDES and DHS Permits and/or in any other regulatory or permitting agency's permits or agreements. IEUA will have the sole responsibility for mitigation or cleanup activities required by regulatory entities related to the spreading of recycled water.

h. No provision of this Agreement is intended to require, nor shall it be deemed to require, that SBCFCD or CBWCD become a primary user of, or otherwise become responsible for, any monitoring and/or testing of recycled water that is recharged by IEUA, or that CBWCD or SBCFCD be required to accept responsibility for compliance with any and all requirements imposed by the SARWQCB, which, in the absence of this Agreement, would be the responsibility of IEUA or other third parties.

i. IEUA shall complete the design and construction of improvements at Facilities necessary to connect, convey and deliver recycled water supplies for recharge purposes, at no cost to CBWCD and SBCFCD.

VIII. COSTS

18. **Budgeting.** Each fiscal year, using the procedures described in Attachment 2, IEUA will prepare, with the assistance of the other Parties, for consideration by Watermaster for each of the Facilities, a proposed budget of expenditures for operation, maintenance, repairs and improvements as well as for

establishing and maintaining prudent operating and improvement reserves for the next fiscal year (the "Consolidated Budget") and a planning budget of such expenditures for each of the following two fiscal years (the "Planning Budget"). Each of the Consolidated Budget and the Planning Budget will include: (a) a description of the activities that would normally be performed by SBCFCD, CBWCD and IEUA absent this Agreement ("Normal Activities") and the estimated costs that would normally be incurred for the performance of such activities ("Base Costs"); and (b) a description of Additional Activities identified by the Parties to be performed to facilitate and accommodate recharge of Supplemental Water or to correct any conditions, created by the use of Facilities for recharge of Supplemental Water, that cause SBCFCD, CBWCD, or IEUA to incur additional costs ("Additional Activities") and the estimated costs that would be incurred for the performance of such additional activities ("Additional Costs"). Normal Activities and Additional Activities include but are not limited to the activities listed in Attachment 2.

19. **Approval of Budgets**. In accordance with Attachment 2, Watermaster may approve or disapprove the Additional Costs in the Consolidated Budget and the Planning Budget submitted by IEUA or, after consultation with the other Parties, approve amended versions, provided, however, that Watermaster may not disapprove budgeted Additional Costs incurred in order to correct any conditions, as identified under the procedures of paragraph 16 of this Agreement, created by the use of Facilities for recharge of Supplemental Water. Upon approval of the Consolidated Budget and Planning Budget, Watermaster will notify the other Parties of such approval and authorize the other Parties to perform the Additional Activities.

20. **Books and Records**. SBCFCD, CBWCD and IEUA will maintain their books and records to adequately and accurately, describe and separately itemize all expenditures for Base Costs and for Additional Costs to the best practical extent. [See Attachment 2.]

21. **Submission of Invoices.** Not more often than monthly, SBCFCD and CBWCD will submit to IEUA, and IEUA will submit to itself, invoices, with supporting documentation, for actual Additional Costs, including overhead (i.e., payroll burden plus departmental overhead) charged on labor only, incurred by SBCFCD and CBWCD for either completed or partially completed Additional Activities which are included in the Consolidated Budget (as such budget may be amended from time to time in accordance with Attachment 2). Watermaster will also transmit to IEUA its claim for reimbursement for costs incurred which are included in the Consolidated Budget (as such budget may be amended from time to time in accordance with Attachment 2). Within 30 days of the received date of the invoice IEUA will pay the Parties for the amounts invoiced. In the event of a dispute over the amounts invoiced, IEUA will pay the amount invoiced and the applicable Parties will meet and confer with Watermaster and IEUA within 30 days to resolve the dispute.

22. **No Fees or Charges.** SBCFCD, CBWCD and IEUA will not impose fees or charges for use of their Facilities for the recharge of Supplemental Water and native storm water under this Agreement by Watermaster or IEUA.

IX. INDEMNITY

23. **Mutual Indemnification.** Each of the Parties except the SBCFCD agrees to indemnify, defend and hold harmless each of the other Parties except the SBCFCD and their authorized officers, employees, directors, managers, agents and volunteers from any and all claims, actions, losses, damages, and/or liability arising out of this Agreement that are based upon the negligence of the indemnifying party, including the acts, errors or omissions of any person and for any costs or expenses incurred by the Parties on account of any claim therefore, except where such indemnification is prohibited by law. Indemnification with regard to SBCFCD shall be governed by Paragraph 24, below.

24. **Indemnification Regarding SBCFCD.**

24A. Watermaster, IEUA, and CBWCD agrees to indemnify, defend and hold harmless the County, SBCFCD and its officers, employees, agents, and volunteers from any and all claims, actions, losses, damages, and/or liability arising out of this Agreement that are based upon their negligence including the acts, errors or omissions of any person and for any costs or expenses incurred by Watermaster, IEUA, CBWCD and their officers, employee, agents, and volunteers in connection with this Agreement.

24B. The County and SBCFCD agrees to indemnify and hold harmless Watermaster, IEUA, CBWCD and their officers, employees, directors, managers, agents, and volunteers from any and all claims, actions, losses, damages, and/or liability arising out of this Agreement that are based upon its negligence including the acts, errors or omissions of any person and for any costs or expenses incurred by the County, SBCFCD and its officers, employees, agents, and volunteers in connection with this Agreement.

24C. In the event the County, SBCFCD, and/or Watermaster, IEUA, CBWCD is found to be comparatively at fault for any claim, action, loss or damage which results from their respective obligations under this Agreement, the County, SBCFCD and/or Watermaster, IEUA, CBWCD shall indemnify the other to the extent of its comparative fault.

25. **Insurance.** Without in any way affecting the indemnity herein provided and in addition thereto, the Watermaster and IEUA shall secure and maintain throughout the term of the Agreement the following types of insurance with limits as shown:

a. Workers' Compensation. A program of Workers' Compensation insurance or a State-approved Self-Insurance Program in an amount and form to meet all applicable requirements of the Labor Code of the State of California, including Employer's Liability with two hundred fifty thousand dollar ($250,000) limits, covering all persons providing services on behalf of the Watermaster and IEUA and all risks to such persons under this Agreement.

b. Comprehensive General and Automobile Liability Insurance. This coverage to include contractual coverage and automobile liability coverage for owned, hired, and non-owned vehicles. The policy shall have combined single limits for bodily injury and property damage of not less than one million dollars ($1,000,000).

c. Additional Named Insured. All policies, except for Workers' Compensation policies shall contain additional endorsements naming the Parties hereto, their directors and managers, the County and their officers, employees, agents, and volunteers as additional named insured with respect to liabilities arising out of the performance of services hereunder.

d. Waiver of Subrogation Right. Watermaster and IEUA shall require the carriers of the above required coverages to waive all rights of subrogation against the SBCFCD and the County and the CBWCD, their officers, employees, agents, volunteers, contractors, directors, managers and subcontractors.

e. Policies Primary and Non-Contributory. All policies required above are to be primary and non-contributory with any insurance or self-insurance programs carried or administered by the SBCFCD or CBWCD.

f. Proof of Coverage. The Watermaster and IEUA shall immediately furnish certificates of insurance to the SBCFCD and CBWCD evidencing the insurance coverage, including endorsements, above required prior to the commencement of performance hereunder, which certificates shall provide that such insurance shall not be terminated or expire except without thirty (30) days written notice to the SBCFCD and CBWCD, and Watermaster and IEUA shall maintain such insurance from the time Watermaster and IEUA commence performance hereunder until the completion of such performance. Within sixty (60) days of the commencement of this

Agreement, the Watermaster and IEUA shall furnish certified copies of the policies and all endorsements.

g. Insurance Review. The above insurance requirements are subject to periodic review by the SBCFCD and CBWCD. The San Bernardino County Risk Manager is authorized, but not required, to reduce or waive any of the above insurance requirements whenever the Risk Manager determines that any of the above insurance is not available, is unreasonably priced, or is not needed to protect the interests of the SBCFCD. In addition, if the Risk Manager determines that heretofore unreasonably priced or unavailable types of insurance coverage or coverage limits become reasonably priced or available, the Risk Manager is authorized, but not required, to change the above insurance requirements to require additional types of insurance coverage or higher coverage limits, provided that any such change is reasonable in light of past claims against the SBCFCD, the County, inflation, or any other item reasonably related to the SBCFCD's or County's risk.

h. Reduction or Waiver. Any such reduction or waiver for the entire term of the Agreement and any change requiring additional types of insurance coverage or higher coverage limits must be made by amendment to this Agreement. Watermaster and IEUA agree to execute any such amendment within thirty (30) days of receipt.

i. General Liability Insurance. During the term of this Agreement, Watermaster and IEUA shall maintain $10,000,000 in general liability insurance.

X. GENERAL

26. **General Compliance Responsibilities.** No provision of this Agreement is intended to require, nor shall it be deemed to require, that any of the Parties will become responsible for or accept any responsibility for compliance with any

requirements imposed by other entities which, in the absence of this Agreement, would be the responsibility of the other Parties.

27. **Independent Contractors.** It is agreed that in the performance of the services by each Party to this Agreement, each Party and their officials, employees, and agents, shall act and be independent contractors of the other Party, and not as an agent or employee of the other Party, and shall obtain no rights to any benefits which accrue to employees of the other Party.

28. **Neutral Interpretation.** This Agreement constitutes the product of negotiations of the Parties hereto and any enforcement hereof will be interpreted in a neutral manner and not more strongly for or against any Party based upon the source of the draftsmanship hereof. This Agreement shall be construed in accordance with the laws of the State of California. The Parties agree and acknowledge that counsel for the Parties have mutually reviewed this Agreement and that the provisions of Civil Code § 1654 shall not apply to the interpretation of this Agreement.

29. **Material Covenants.** The failure or refusal of one Party to perform a material covenant within a reasonable time shall relieve the other Parties from any further performance under this Agreement with respect to that individual Party. Absent a material breach, the covenants contained in this Agreement shall continue in full force and effect.

30. **Other Agreements.** No provision of this Agreement is intended to require, nor shall it be deemed to require, that the Parties enter into any agreements, or obtain any approvals from any other agency or third party which would constitute a violation of or prevent any of the Parties from complying with any other agreement or permit in effect as of the date of this Agreement, or which would require the SBCFCD, CBWCD or IEUA to waive, compromise, or violate any of their respective statutory duties or responsibilities, or which would require Watermaster to compromise or violate the Judgment. No provision of this Agreement is intended to interfere with or in any way

supercede other agreements between the Parties or between any of the Parties and third parties. Each Party will notify the other Parties should it enter into other agreements with third parties that might affect the Facilities.

31. **Workers Compensation Claims.** If any of the Parties or San Bernardino County attempts to seek recovery from the other Parties for Workers Compensation benefits paid to an employee, the Parties agree that any alleged negligence of the employee shall not be construed against the employer of that employee.

32. **No Discrimination.** The Parties each covenant that there shall be no discrimination against or segregation of any person, group or employee due to race, color, creed, religion, sex, marital status, age, disability, nation origin, ethnicity or ancestry, in any action or activity pursuant to this Agreement.

33. **Notices.** All notices, approvals, consents or other documents required or permitted under this Agreement shall be in writing and, except as otherwise provided herein, shall be effective upon personal delivery or three days after deposit in the United States mail, registered or certified, with first class postage fully prepaid, addresses as follows:

San Bernardino County Flood Control District
825 East Third Street
San Bernardino CA 92415-0835

Chino Basin Water Conservation District
PO Box 2400
Montclair, CA 91763-0900

Inland Empire Utilities Agency
P.O. Box 697
Rancho Cucamonga, CA 91729

Chino Basin Watermaster
8632 Archibald Avenue, No. 109
Rancho Cucamonga, CA 91730

34. **Term.** The initial term of this Agreement shall be until December 31, 2032 unless it is earlier terminated for any of the following reasons by any of the Parties:

a. Substantial breach of the terms or conditions of this Agreement and failure to cure after notice.

b. Violation of any of the covenants and conditions of this Agreement, or the inability to perform under the terms of this Agreement, on thirty (30) days written notice to the other Party. The 30-day notice requirement shall not apply in the event of an emergency.

c. Subsequent enactment or amendment of laws, rules or regulations which render performance under this Agreement impracticable for any Party.

35. **No Liability Upon Termination.** In the event that this Agreement is terminated, no Party shall incur any further liability or obligation under the Agreement, except to fulfill any obligations then-existing at the time of termination, if any, based upon prior actions already taken pursuant to this Agreement (for example, any continuing duty to make payments for outstanding claims and legal actions, and services rendered and/or material and property purchases).

36. **Meet and Confer.** The Parties agree to meet and confer to review this Agreement whenever any of them may request such review, but at least once every five years. This Agreement may be amended by agreement of all of the Parties. This Agreement may be terminated by any Party without cause after December 31, 2032 provided notice of such termination is given one year prior.

37. **Successors and Assigns.** This Agreement shall inure to the benefit of and be binding upon the successors and assigns of the Parties.

XI. Groundwater Recharge Coordinating Committee

38. A Groundwater Recharge Coordinating Committee (GRCC) is hereby created.

a. Each Party is entitled to appoint one member and one alternate member to the GRCC. Members will serve at the pleasure of their respective appointing Parties.

b. The initial meeting of the GRCC will be held at the call of Watermaster. The initial meeting of the GRCC shall be scheduled by Watermaster to occur no later than March 31, 2003.

c. At the initial meeting, and annually thereafter, the members will select a chairperson and such other officers as they deem appropriate.

d. The GRCC will meet at least quarterly and as often as necessary to facilitate full coordination of groundwater recharge operations.

e. The primary function of the GRCC is to provide coordination of the operation, maintenance and use of the Facilities for groundwater recharge in the Chino Basin in order to achieve the purposes set forth in this Agreement.

f. The GRCC is charged with developing and maintaining detailed criteria for groundwater recharge operations for each Facility consistent with this Agreement, creating and maintaining a communications plan and network to assure that the multiple uses of the Facilities are properly coordinated and to enable planned activities to be modified when necessary without convening meetings of the GRCC.

g. The GRCC will prepare an annual operating plan for the recharge related activities at the Facilities and will coordinate the preparation of the budgets for the Facilities described in Paragraph 18 of this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement with an effective date of the 23rd day of January 2003.

Dated: 12/18/02

INLAND EMPIRE UTILITIES AGENCY

By ______________________

Approved as to Form:

____

Title: General Counsel

Dated: 12/11/02

CHINO BASIN WATER CONSERVATION DISTRICT

By ______________________

Approved as to Form:

____

Title: District Counsel

Dated: 1-23-03

SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT

By ______________________

Approved as to Form:

____

Title: ______________________

SIGNED AND CERTIFIED THAT A COPY OF THIS DOCUMENT HAS BEEN DELIVERED TO THE CHAIRMAN OF THE BOARD
J. RENEE BASTIAN
Clerk of the Board of Supervisors of the County of San Bernardino

By ______________________
Deputy

Dated: 12/12/02

CHINO BASIN WATERMASTER

By ______________________

Approved as to Form:

____

Title: General Counsel

Attachment No. 1

To Agreement

FOR

OPERATION AND MAINTENANCE OF FACILITIES

TO IMPLEMENT THE

CHINO BASIN RECHARGE MASTER PLAN

RECHARGE MASTER PLAN IMPLEMENTATION MEMORANDUM OF AGREEMENT

AND

TABLE 1 RECHARGE GOALS FOR EACH BASIN

RECHARGE MASTER PLAN IMPLEMENTATION
MEMORANDUM OF AGREEMENT

The purpose of this Memorandum of Agreement (MOA) is: to define some of the operational policies and actions necessary to implement *Program Element 2 -- Develop and Implement Comprehensive Recharge Program* of the Optimum Basin Management Program (OBMP) for the Chino Basin, to define the PARTIES that are tasked with its implementation and the specific actions to be taken by each party. The PARTIES that are signatories to this MOA include the Chino Basin Watermaster (Watermaster), the Chino Basin Water Conservation District (CBWCD), Inland Empire Utilities Agency (IEUA), and the San Bernardino County Flood Control District (SBCFCD). Watermaster, CBWCD, IEUA and SBCFCD are collectively referred to herein as the PARTIES.

RECITALS

Whereas the need for a comprehensive recharge program is described in the OBMP Phase I report dated August 1999 and the Peace Agreement dated June 29, 2000; and

Whereas Watermaster completed a Recharge Master Plan Phase II Report dated August 2001 which contains descriptions of the existing and potential recharge facilities in the Chino Basin; and

Whereas the PARTIES, in accordance with their respective Acts and Powers, desire to cooperate in a program to implement certain portions of the Recharge Master Plan for the purpose of assuring that the Chino Basin has adequate recharge capabilities to meet its future needs; and

Whereas increasing the yield of the Chino Basin by increased capture of storm flow will improve ambient water quality and increase the assimilative capacity of the Chino Basin; and

Whereas the Recharge Master Plan investigations demonstrated that the best and least expensive way to put this available storm flow runoff to beneficial use is groundwater recharge; and

Whereas IEUA, acting on behalf of the Watermaster, has submitted an application for Proposition 13 grant funding to pay for half of the capital cost of the recharge facility improvements, up to $19 million, described in the Recharge Master Plan; and

Whereas IEUA will retain a design consultant in December 2001 to complete a preliminary design report; and

Whereas the final design and specifications for the recharge facility improvements must be completed by April 15, 2002 to ensure that the projects can be constructed and that IEUA will receive funding under Proposition 13 for these facilities.

NOW THEREFORE BE IT RESOLVED THAT:

1. The PARTIES to this MOA hereby agree that the flood control function of the various basins or facilities capable of artificial recharge in the Chino Basin takes priority over the artificial recharge function. For the purposes of this MOA, artificial recharge includes storm and supplemental water recharge that occurs only through active and discretionary activities of the PARTIES. The PARTIES agree that to the extent that artificial recharge can be incorporated into the operation of the basins without risk of flood damage and loss of life or without impeding or impairing flood control activities, recharge will be optimized. Multi-purpose projects are high priority and will be considered on a case-by-case basis.

2. Facilities Operations. In order for water to be stored in the basins, the PARTIES will need to know in advance of the coming of significant storms. Currently, long range forecasting of the weather is obtained by SBCFCD. When significant storms are predicted to occur in the Chino Basin area, the volume of water in conservation storage in each basin will be reduced accordingly to preserve the flood control function in anticipation of storm water inflows. Conservation plans will be developed for each of the facilities that include a schedule of conservation pool elevations, criteria that define when water can be stored for conservation and when water in conservation storage must be released to restore the full flood protection capabilities of the basins or allow for facility maintenance and repair, etc. Preliminary conservation goals for each basin are included in Table 1. Initially, for basins that receive supplemental water (as defined in the Judgment and

12/18/2001

Peace Agreement), the volume of water in conservation storage will be reduced by either reducing or stopping altogether supplemental water inflows to the basins to provide adequate storage space to capture the runoff from the expected storm event. These conservation plans will be developed in detail in subsequent agreements, and they may be modified over time based on operational experience, improvements in weather and flood forecasting, management technologies and other considerations.

3. Many facilities listed in Table 1 will be monitored remotely for flood control and other purposes. These facilities may be operated either through an automatic control system or by manually operating controls at each facility. A PARTY can delegate the operation and control of some or all of its facilities to others. The SBCFCD shall have the authority to empty its basins at its sole discretion to prevent risk of flood damage or loss of life or for immediate maintenance. Pursuant to Article 5.1(f) of the Peace Agreement, the PARTIES agree to undertake Recharge using water of the lowest cost and the highest quality, giving preference as far as possible to the augmentation and the Recharge of native storm water.

4. Maintenance. Activities to maintain or improve recharge performance at basins will be done at periods chosen by the PARTIES to optimize recharge of storm water and supplemental water. The PARTIES will identify the entities to perform this maintenance for each facility. Watermaster will pay the incremental cost increase of basin operations that are in addition to the ordinary and customary operation and maintenance activities presently practiced. Such incremental cost increases will include charges resulting from the planned optimization of recharge and other percolation restoration efforts arising or made more costly due to the presence of supplemental water in the basins. The planned optimization of recharge will include the environmental impacts that are present and policies will be established to maintain the optimum characteristics of the recharge facilities.

5. Financing and Accounting. It is the intent of the PARTIES that the costs associated with implementation of the Recharge Master Plan will be paid by Chino Basin Watermaster and IEUA (including SAWPA Proposition 13 funding). It is also not the intent of the PARTIES that capital costs associated with the Recharge Master Plan projects be borne by either CBWCD or SBCFCD. The PARTIES will account for their efforts associated with the Recharge Master Plan projects in order that "In-kind" contributions are consistent with the contractual requirements to demonstrate local share matching funds required for Proposition 13 funding are being contributed It is the intent of the PARTIES that other projects that are not otherwise committed and that meet the intent of the Recharge Master Plan activities, will be counted toward the local share of matching funds.

6. Subsequent Agreements. The PARTIES will immediately work to develop subsequent agreements necessary to address the specifics of facilities operations, maintenance, repayment, etc. It is anticipated the Subsequent Agreements will be completed in the first quarter of 2002, prior to completion of final design.

IN WITNESS WHEREOF, the PARTIES hereto have caused this Memorandum of Agreement to be executed on the dates herein shown.

INLAND EMPIRE UTILITIES AGENCY

_____ __, 2002 By _____

CHINO BASIN WATER CONSERVATION DISTRICT

_____ __, 2002 By _____

SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT

FEB 12 2002 By _____

CHINO BASIN WATERMASTER

Jan 24, 2002 By _____

SIGNED AND CERTIFIED THAT A COPY OF
THIS DOCUMENT HAS BEEN DELIVERED
TO THE CHAIRMAN OF THE BOARD
J. RENEE BASTIAN
Clerk of the Board of Supervisors
of the County of San Bernardino

By _____ 2/12/2002

Table 1
Recharge Goals for Each Basin

Basin	Storm Water Conservation Goal	Supplemental Water Recharge Capacity Goals	
		Imported Water	Recycled Water
	(acre-ft/yr)	(acre-ft/yr)	(acre-ft/yr)
Management Zone 1			
Montclair Basin 1	350	2,215	1,846
Montclair Basin 2	780	4,438	3,698
Montclair Basin 3	370	953	794
Montclair Basin 4	440	1,075	896
Brooks Street Basin	1800	1,881	1,568
Upland Basin	1000	4,935	4,112
College Heights Basins	100	8,958	7,465
Seventh and Eighth Street Basins	1550	1,181	984
Subtotal Management Zone 1	6,390	25,635	21,362
Management Zone 2			
San Sevaine No. 1	820	7,288	6,073
San Sevaine No. 2	20	2,484	2,070
San Sevaine No. 3	640	3,127	2,606
Rich Basin	860	2,524	2,104
San Sevaine No.'s 4 and 5 (combined into one basin)	500	4,601	3,834
Ely Basins	2,800	2,907	2,423
Etiwanda spreading area (joint use of Etiwanda debris basin)	1,635	4,886	4,886
Hickory Basin	840	2,606	2,172
Victoria Basin	940	2,883	2,402
Turner Basin No. 2&4	1,800	1,895	1,579
Lower Day Basin	500	2,343	1,954
Turner Basin No. 1	860	505	421
Subtotal Management Zone 2	12,215	38,051	32,523
Management Zone 3			
Jurupa Basin	650	635	529
Wineville Basin	600	586	489
Etiwanda Conservation Ponds	1,060	3,257	2,714
IEUA RP3 Ponds	1,700	4,886	4,072
Declez Basin	260	977	814
Banana Basin	800	2,020	1,683
Subtotal Management Zone 3	5,070	12,361	10,301
Totals	23,675	76,047	64,187

Attachment No.2
to
Agreement
FOR
OPERATION AND MAINTENANCE OF FACILITIES
TO IMPLEMENT THE
CHINO BASIN RECHARGE MASTER PLAN

The purpose of this Attachment No. 2 is generally to describe (1) the budgeting, funding, billing and payment processes to be used by the Parties in the implementation of this Agreement, (2) the Facilities covered by this Agreement, (3) the lists of normal and additional maintenance activities referred to in Paragraph 18 of the Agreement and paragraphs C2, C3, D2, D3, E2 and E3 of this Attachment and (4) the guidelines for creation and operation of annual operating plans for each Facility. This Attachment 2 may be amended periodically by unanimous agreement of the members of the Groundwater Resources Coordinating Committee (GRCC) It is the intent of the Parties that the GRCC will have reasonable flexibility to create procedures or time schedules that may deviate somewhat from those set forth below, provided that all of the affected Parties agree.

A. **Budgeting and Funding Process.** In order to facilitate the timely review and approval by Watermaster of the Consolidated Budget and Planning Budget called for in Paragraph 18 of the Agreement, the Parties will each submit individual budgets for Additional Costs for the ensuing fiscal year to IEUA, with copies to the other Parties, no later than February 1st of each fiscal year. IEUA will then prepare a Consolidated Budget and Planning Budget and circulate such budgets for review and comment by March 1st. IEUA will consult with the GRCC as part of the preparation process. IEUA will use its best efforts to resolve any questions or concerns of the Parties during such review. IEUA will submit the Consolidated Budget and Planning Budget, with any changes, to Watermaster by April 1st. Watermaster will adopt a final Consolidated Budget and Planning Budget on or before June 1st of each year. Watermaster shall

supply a copy of said Consolidated Budget and Planning Budget to the Parties on or before June 15th. Any amendment to the Consolidated Budget shall be submitted to the Parties for review and comment at least 30 days prior to action thereon by Watermaster. The Consolidated Budget for Additional Costs for the ensuing fiscal year will be the sum of the amounts approved by Watermaster for IEUA, CBWCD and SBCFCD plus the amount budgeted by Watermaster for its own costs. Quarterly, in advance, Watermaster will pay to IEUA the portion, as shown by the Consolidated Budget, of the estimated amount needed to fund the portion of the total budget to be expended during the quarter. IEUA will place the amounts received into a Recharge O & M Account. If the Consolidated Budget is amended during the fiscal year and the result of such amendment is to increase appropriations, such increased amounts will be paid quarterly over the remaining fiscal year.

B. **Payment Process.** Not later than the 15th day of each month CBWCD and SBCFCD will transmit to IEUA, and IEUA will transmit to itself, with copies to Watermaster, the invoices that are called for in Paragraph 21 of the Agreement, and Watermaster will transmit to IEUA its claim for reimbursement for costs incurred. IEUA will then, within fifteen days, pay each of the four agencies separately for their invoiced amounts from amounts received from Watermaster.

C. **San Bernardino County Flood Control District Facilities.**

1. Facilities. The following Facilities owned or operated (either through contract or easement) by SBCFCD, collectively the SBCFCD Facilities, may be subject to this Agreement:

- Brooks Basin, also known as the Brooks Street Basin (through contract)
- Ely Basins Nos. 1 and 2
- Ely Basin No. 3 (through easement)
- Etiwanda Spreading Grounds

- Hickory Basin
- Lower Day Creek Basin, also known as Day Creek Basins Nos. 1 and 2
- Montclair Basins Nos. 1-3 (through easement)
- San Sevaine Basins Nos. 1, 2, 3, 4 and 5
- Turner Basin No.1
- Turner Basins Nos. 2,3 and 4
- Victoria Basin
- Banana Basin
- Declez Basin
- Etiwanda Conservation Basins, leased through 2004
- Jurupa Basin
- Wineville Basin
- Other facilities such as channels, diversion structures, and appurtenances

2. Nonexclusive List of Maintenance Activities that may normally be performed by SBCFCD at facilities owned or operated by SBCFCD("Normal Activities").
   a. Generally, any activities that SBCFCD would have performed in the absence of this Agreement.
   b. Maintenance, repair and replacement of the exterior fencing.
   c. Maintenance, repair and replacement of SBCFCD signage on the exterior fencing and at entrances to warn against and prohibit trespass.
   d. Maintenance, repair and reconstruction of the pre-existing stormwater diversion, conveyance and discharge structures and their appurtenances, excluding any additional maintenance, repair and reconstruction attributable to the conveyance or recharge of Supplemental Water.

e. Debris removal, weed control and pest management work, excluding any such work that is attributable to or made more difficult by the conveyance or recharge of Supplemental Water.

f. Routine inspections weekly during the storm season and quarterly during the non-storm season.

g. Environmental or other permit processing for maintenance activities excluding additional environmental or other permit processing attributable to the conveyance or recharge of Supplemental Water or the extended holding of storm water.

3. Nonexclusive List of Additional Maintenance Activities that may be identified by Watermaster, IEUA and SBCFCD. (Additional Activities)

a. Generally, any activities specifically requested by Watermaster or IEUA or other activities that are made necessary due to recharge of Supplemental Water.

b. Any additional maintenance, repair, and reconstruction work to the Facilities themselves, including any of their existing storm water diversion, conveyance, and discharge structures and their respective appurtenances that is attributable to or made more difficult by the conveyance or recharge of Supplemental Water.

c. Any vector control and nuisance abatement and also any additional debris removal, weed control, and pest management attributable to or made more difficult by the conveyance or recharge of Supplemental Water.

d. Additional inspections or mitigation monitoring.

e. Maintenance, repair and replacement of pre-existing gravity-type water measurement structures and their appurtenances that are necessary to measure the flow rates of water diverted to the Facilities.

f. Additional data processing, meeting attendance, budget preparation, operations coordination or other similar additional activities.

g. Any additional slope area cleaning and weeding to remove material attributable to or made more difficult by the conveyance or recharge of Supplemental Water.

h. The removal and disposal of silt, vegetation or debris deposits that are attributable to or made more difficult by the conveyance or recharge of Supplemental Water.

i. Compliance with any requirements of the California Division of Safety of Dams or other local, state or federal agencies when such requirements are attributable to the use of Facilities for recharge of Supplemental Water.

j. SCADA system operation, monitoring, and maintenance.

k. Rubber Dam operation, maintenance and energy costs

l. Repair of Facilities due to liquefaction or to the presence of recharge water.

m. Any pumping necessary to gain access to the floor or sides of a Facility and its appurtenances in order to perform maintenance and repair functions.

n. Security patrols.

o. Clean-up of biofilms and insoluble non-biodegradable metabolites.

p. Odor control.

q. Repairing, maintaining, cleaning and reconstructing any gates, structures, housing, trash racks/grates, conduits, dams, buildings, fencing, SCADA components, berms and the appurtenances, parts and fixtures of each that are constructed as part of the Chino Basin Recharge Facilities Implementation Project or that become clogged, impaired, damaged or contaminated as a result of the conveyance, delivery, percolation or recharge of imported water.

r. Repairing, maintaining, cleaning and reconstructing any gates, structures, housing, trash racks/grates, conduits, dams, buildings, fencing, SCADA components, berms and the appurtenances, parts and fixtures of each that are constructed and used for the delivery of recycled water to SBCFCD's Facilities, including but not limited to those works, Facilities and recharge surfaces that become clogged, impaired, damaged or contaminated as a result of the recharge of recycled water.

4. Annual Operating Plans. Through the GRCC, the Parties will coordinate the annual preparation of an operating plan for each Facility, including estimated schedules for planned outages to facilitate maintenance activities. While the details of the plans are expected to be developed over time by the Parties, the plans should take cognizance of the following general guidelines:

   a. SBCFCD will notify Watermaster and IEUA a minimum of two weeks in advance as to when and for what duration any of the Facilities will be unavailable for recharge of Supplemental Water due to planned maintenance and Watermaster and IEUA will promptly discontinue delivery of Supplemental Water to such Facilities.

   b. Watermaster and IEUA will interrupt diversions of Supplemental Water to the Facilities immediately upon notification by SBCFCD that such interruption is necessary due to pending storms or unforeseen emergency conditions. It is the responsibility of IEUA or Watermaster to either cease making deliveries of Supplemental Water to, or release Supplemental Water from, the Facilities that are used for regulating storm water flows so as to restore the required storage space for stormwater containment in the Facilities.

   c. Watermaster and IEUA will notify SBCFCD at least two weeks in advance as to when Supplemental Water will be available, the expected duration of such availability and the total volume of

Supplemental Water that Watermaster or IEUA would like to recharge, and request from SBCFCD information about the availability of Facilities for such recharge.

d. IEUA will notify the SBCFCD within two weeks, weekends and holidays excepted, of communicating instructions to Metropolitan Water District of Southern California (MWDSC) to begin, increase, reduce or cease the release of imported water for delivery to any Facility, or of deciding to begin, increase, decrease or cease the delivery of recycled water to any Facility, and request from SBCFCD information about the availability of Facilities for such recharge.

e. During any period of time that SBCFCD Facilities are available for recharge of Supplemental Water and Supplemental Water is available the Parties will use their best efforts to recharge the full amount of Supplemental Water Watermaster and IEUA request to recharge during that period.

f. Watermaster and IEUA will interrupt deliveries or diversions of Supplemental Water to the Facilities pursuant to requests by SBCFCD in order to accommodate inspection, maintenance or construction functions by SBCFCD.

g. Water occupying that portion of the Facilities whose purpose is flood control shall be emptied by order of SBCFCD 24 hours in advance of storms to provide full flood control capacity.

h. Watermaster and IEUA will control deliveries of Supplemental Water to the Facilities as necessary to prevent exceeding the design capacity of the channels.

i. In general, the floors of the Facilities will not be ripped or disked except following an activity involving the operation of heavy equipment there, and then only after the floor has been cleansed of silt and other materials that might impede the percolation rate of the Facilities. All Facility floors that are ripped or disked will be floated

or otherwise made smooth to avoid having silt deposited in cuts or furrows made by the ripping or disking operation. The Watermaster shall determine and fund activities to improve Facility recharge capability. The work activities described in this paragraph will be conducted only when authorized in advance by SBCFCD and only upon first receiving environmental permits and clearances from others when so required.

D. **CHINO BASIN WATER CONSERVATION DISTRICT FACILITIES.**

1. Facilities. The following Facilities owned by CBWCD, collectively the CBWCD Facilities, are subject to this Agreement:

- Brooks Basin, also known as the Brooks Street Basin
- Montclair Basins
- College Heights Basin, also known as the College Heights Basins
- Ely Basin No. 3
- Other facilities existing at the time of this Agreement that are a part of the above identified Facilities such as channels and diversion structures, and the appurtenances of each, except for such facilities that may, by way of law or otherwise, be the property of others.

2. Nonexclusive List of Maintenance Activities that would normally be performed by CBWCD at Facilities owned by CBWCD. ("Normal Activities").

a. Generally, any activities that CBWCD would have performed in the absence of this Agreement.

b. Maintenance, repair and replacement of the exterior fencing.

c. Maintenance, repair and replacement of CBWCD signage on the exterior fencing and at entrances to warn against and prohibit trespass.

d. Maintenance, repair and replacement of exterior landscaping and irrigation works.

e. Maintenance, repair and reconstruction of the existing stormwater diversion, conveyance and discharge structures and their appurtenances, excluding any additional maintenance, repair and reconstruction attributable to the conveyance or recharge of Supplemental Water.

f. Maintenance, repair and replacement of existing water level sensor installations and their appurtenances, including but not limited to their structural and electronic components.

g. Debris removal, weed control and pest management work, excluding any such work that is attributable to or made more difficult by the conveyance or recharge of Supplemental Water.

h. Routine inspections weekly during the storm season and twice monthly during the non-storm season.

3. Nonexclusive List of Additional Maintenance Activities that may be identified by Watermaster, IEUA and CBWCD. ("Additional Activities")

   a. Generally, any activities specifically requested by Watermaster or IEUA or other activities that are made necessary or more difficult due to recharge of Supplemental Water.

   b. Any additional maintenance, repair, and reconstruction work to the Facilities themselves, including any of their existing stormwater diversion, conveyance, and discharge structures and their respective appurtenances that is attributable to or made more difficult by the conveyance or recharge of Supplemental Water.

   c. Maintenance, repair and operation of the flow measurement device installed within CBWCD's diversion structure on the San Antonio Creek Channel including any required calibration.

   d. Any vector control and nuisance abatement and also any additional debris removal, weed control, and pest management

attributable to or made more difficult by the conveyance or recharge of Supplemental Water.

e. Additional inspections or mitigation monitoring.

f. Additional data processing, meeting attendance, budget preparation, operations coordination or other similar additional activities.

g. Any additional slope area cleaning and weeding to remove material attributable to or made more difficult by the conveyance or recharge of Supplemental Water.

h. The removal and disposal of silt, vegetation or debris deposits that are attributable to or made more difficult by the conveyance or recharge of Supplemental Water.

i. Compliance with any requirements of the California Division of Safety of Dams or other local, state or federal agencies when such requirements are attributable to the use of Facilities for recharge of Supplemental Water.

j. CBWCD's downloading and processing of information stored on its water level sensors used to estimate the approximate volumes of the different categories of water recharged.

k. Any pumping necessary to gain access to the floor or sides of a Facility and its appurtenances in order to perform maintenance and repair functions.

l. Repairing, maintaining, cleaning and reconstructing any gates, structures, housing, trash racks/grates, conduits, dams, buildings, fencing, SCADA components, berms and the appurtenances, parts and fixtures of each that are constructed as part of the Chino Basin Recharge Facilities Implementation Project or that become clogged, impaired, damaged or contaminated as a result of the conveyance, delivery, percolation or recharge of imported water.

m. Repairing, maintaining, cleaning and reconstructing any gates, structures, housing, trash racks/grates, conduits, dams, buildings,

fencing, SCADA components, berms and the appurtenances, parts and fixtures of each that are constructed and used for the delivery of recycled water to CBWCD's Facilities, including but not limited to those works, Facilities and recharge surfaces that become clogged, impaired, damaged or contaminated as a result of the recharge of recycled water.

n. Clean-up of bio films and insoluble non-biodegradable metabolites.

o. Odor control.

4. Annual Operating Plans. Through the GRCC, the Parties will coordinate the annual preparation of an operating plan for each Facility, including estimated schedules for planned outages to facilitate maintenance activities. While the details of the plans are expected to be developed over time by the Parties the plans should take cognizance of the following general guidelines:

   a. CBWCD will notify Watermaster and IEUA at least two weeks in advance as to when and for what duration any of the Facilities will be unavailable for recharge of Supplemental Water for reasons other than storm events or unforeseen emergency conditions and Watermaster and IEUA will promptly discontinue delivery of Supplemental Water to such Facilities.

   b. Watermaster and IEUA will interrupt diversions of Supplemental Water to the Facilities immediately upon notification by SBCFCD or CBWCD that such interruption is necessary due to pending storms or unforeseen emergency conditions. It is the responsibility of IEUA or Watermaster to either cease making deliveries of Supplemental Water to, or release Supplemental Water from, the Facilities that are used for regulating stormwater flows so as to restore the required storage space for stormwater containment in the Facilities.

   c. Watermaster and IEUA will notify CBWCD as soon as possible but at least one week in advance as to when Supplemental Water will be available, the expected duration of such availability and the total volume of Supplemental Water that Watermaster or IEUA would

like to recharge, and request from CBWCD information about the availability of Facilities for such recharge.

d. Any of the Parties will notify the other Parties and the SBCFCD within twelve hours, weekends and holidays excepted, of communicating instructions to MWDSC to begin, increase, reduce or cease the release of Supplemental Water for delivery to any Facility, or of deciding to begin, increase, decrease or cease the delivery of recycled water to any Facility.

e. During any period of time that CBWCD Facilities are available for recharge of Supplemental Water and Supplemental Water is available, the Parties will use their best efforts to recharge the full amount of Supplemental Water Watermaster and IEUA request to recharge during that period.

f. Watermaster and IEUA will interrupt diversions of Supplemental Water to the Facilities pursuant to requests by CBWCD in order to accommodate inspection, maintenance or construction functions by CBWCD or SBCFCD. CBWCD will make every effort to plan and coordinate such functions in order to minimize interruptions of recharge activities.

g. Watermaster and IEUA will control deliveries of Supplemental Water to the Facilities as necessary to prevent overflow into the San Antonio and West State Street Channels except during periods when the U.S. Army Corps of Engineers or the SBCFCD, respectively, have advised them in writing that capacity for such overflows exists in the Channels.

h. CBWCD, after notifying the Army Corps of Engineers, and Watermaster, will open fully the diversion gate to the Montclair Basins in advance of storms predicted to exceed one quarter of an inch. Except when such storms are expected or when the diversion gate is being used to divert water for Watermaster, the gate will be kept closed.

i. At the Montclair Basins during the Rainy Season, in order to create sufficient storage space for the capture and containment of stormwater, Watermaster and IEUA will be limited to recharge of Supplemental Water at Basins Nos. 1 and 2 and, upon receiving special authorization from CBWCD, in limited quantities at Basins Nos. 3 and 4.

j. In general, the floors of the Facilities will not be ripped or disked except following an activity involving the operation of heavy equipment there, and then only after the floor has been cleansed of silt and other materials that might impede the percolation rate of the Facilities. All basin floors that are ripped or disked will be floated or otherwise made smooth to avoid having silt deposited in cuts or furrows made by the ripping or disking operation. The work activities described in this paragraph will be conducted only when authorized in advance by CBWCD. The work activities described in this paragraph will be conducted only when authorized in advance by CBWCD and only upon first receiving environmental permits and clearances from others when so required.

E. INLAND EMPIRE UTILITIES AGENCY FACILITIES

1. Facilities. The following Facilities owned by IEUA, collectively the IEUA Facilities, are subject to Agreement:
    - RP-3 Basins
2. List of Maintenance Activities that would normally be performed by IEUA at Facilities owned by IEUA (normal activities).
    a. Generally, any activities that IEUA would have performed in the absence of Agreement.
    b. Maintenance, repair and replacement of exterior fencing;
        (1) signage on the exterior fencing and at entrances to warn against and prohibit trespass;

(2) exterior landscaping and irrigation works;

(3) diversion, conveyance and discharge structures and their appurtenances, excluding any additional maintenance, repair and reconstruction attributable to the conveyance or recharge of imported water;

(4) water level sensor installations and their appurtenances, including but not limited to their structural and electronic components;

c. debris removal, weed control and pest management, excluding any additional maintenance, repair and reconstruction attributable to the conveyance or recharge of imported water; and

d. routine inspections.

3. List of Additional Maintenance Activities that may be identified by Watermaster (additional activities).

a. Generally, any activities specifically requested by Watermaster or other activities that are made necessary due to recharge of imported water.

b. Additional maintenance, repair and reconstruction of stormwater diversion, conveyance and discharge structures and their appurtenances.

c. Additional debris removal, weed control or pest management.

4. General Operating Plan. Subject to the need to respond to unexpected events the Parties will operate generally as follows:

a. IEUA will notify Watermaster at least one month in advance as to when and for what duration any of the Facilities will be available for recharge of Supplemental Water subject only to unexpected storm flows.

b. Watermaster will notify IEUA at least two weeks in advance as to the total volume of Supplemental Water that Watermaster would like to recharge.

c. IEUA will use its best efforts to recharge the full amount of Supplemental Water that Watermaster would like to recharge, subject to the priorities set forth in Agreement.

d. IEUA, after due reasonable notification of Watermaster, may interrupt diversions of Supplemental Water to the Facilities in order to accommodate inspection, maintenance or construction functions or in order to capture storm flows for recharge.

EXHIBIT B

SAMPLE-SUPPLEMENTAL WATER RECHARGE PLAN

Exhibit B
Sample-Supplemental Water Recharge Plan
(July 1, 2005 - June 30, 2006)

Channel/Basin Data - 05/06	Turnout Capacity (cfs)	Basin Recharge (cfs)	Basin Recharge (AFD)	Jul				Aug				Sep				Oct				Nov				Dec				Jan				Feb				Mar				Apr				May				Jun				Utilization (%)	Annual Recharge (AFY)
				I	S	R	Total	I	S	R	Total	I	S	R	Total	I	S	R	Total	I	S	R	Total	I	S	R	Total	I	S	R	Total	I	S	R	Total	I	S	R	Total	I	S	R	Total	I	S	R	Total	I	S	R	Total		
San Antonio Channel - CB59	300																																																
College Heights East (MZ1)		4	8	240	0	0	240	240	0	0	240	0	0	0	0	0	0	0	0	0	0	0	0	120	120	0	240	120	120	0	240	120	120	0	240	120	120	0	240	120	120	0	240	240	0	0	240	240	0	0	240	70	1512
College Heights West (MZ1)		6	12	360	0	0	360	360	0	0	360	0	0	0	0	0	0	0	0	0	0	0	0	180	180	0	360	180	180	0	360	180	180	0	360	180	180	0	360	180	180	0	360	360	0	0	360	360	0	0	360	70	2268
Upland (MZ1)		15	30	900	0	0	900	900	0	0	900	0	0	0	0	0	0	0	0	0	0	0	0	450	450	0	900	450	450	0	900	450	450	0	900	450	450	0	900	450	450	0	900	900	0	0	900	900	0	0	900	70	5670
Montclair 1,2,3,4 (MZ1)		20	40	1200	0	0	1200	1200	0	0	1200	0	0	0	0	0	0	0	0	0	0	0	0	600	600	0	1200	600	600	0	1200	600	600	0	1200	600	600	0	1200	600	600	0	1200	1200	0	0	1200	1200	0	0	1200	70	7560
Brooks (MZ1)		6	12	360	0	0	360	360	0	0	360	0	0	0	0	0	0	0	0	0	0	0	0	180	180	0	360	180	180	0	360	180	180	0	360	180	180	0	360	180	180	0	360	360	0	0	360	360	0	0	360	70	2268
West Cucamonga Channel	0																																																
8th Street (MZ1)		9	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	540	0	540	0	540	0	540	0	540	0	540	0	540	0	540	0	540	0	540	0	0	0	0	0	0	0	0	35	945
7th Street (MZ1)		4	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	0	0	0	0	0	0	0	35	420
Ely 1 (MZ2)		3	6	0	0	180	180	0	0	180	180	0	0	0	0	0	0	0	0	0	0	0	0	0	90	90	180	0	90	90	180	0	90	90	180	0	90	90	180	0	90	90	180	0	0	180	180	0	0	180	180	70	1134
Ely 2 (MZ2)		2	4	0	0	120	120	0	0	120	120	0	0	0	0	0	0	0	0	0	0	0	0	0	60	60	120	0	60	60	120	0	60	60	120	0	60	60	120	0	60	60	120	0	0	120	120	0	0	120	120	70	756
Ely 3 Cells 1,2,3 (MZ2)		2	4	0	0	120	120	0	0	120	120	0	0	0	0	0	0	0	0	0	0	0	0	0	60	60	120	0	60	60	120	0	60	60	120	0	60	60	120	0	60	60	120	0	0	120	120	0	0	120	120	70	756
Riverside Drive Drain	0																																																
Grove (MZ2)		2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	0	120	0	120	0	120	0	120	0	120	0	120	0	120	0	120	0	120	0	0	0	0	0	0	0	0	35	210
Cucamonga/Deer Cr Channels - CB11	30																																																
Turner 1&2 (MZ2)		5	10	240	0	60	300	240	0	60	300	0	0	0	0	0	0	0	0	0	0	0	0	120	120	60	300	120	120	60	300	120	120	60	300	120	120	60	300	120	120	60	300	240	0	60	300	240	0	60	300	70	1890
Turner 3&4 (MZ2)		5	10	240	0	60	300	240	0	60	300	0	0	0	0	0	0	0	0	0	0	0	0	120	120	60	300	120	120	60	300	120	120	60	300	120	120	60	300	120	120	60	300	240	0	60	300	240	0	60	300	70	1890
Day Creek Channel - CB15	30																																																
Lower Day Cells 1,2,3 (MZ2)		5	10	300	0	0	300	300	0	0	300	0	0	0	0	0	0	0	0	0	0	0	0	150	150	0	300	150	150	0	300	150	150	0	300	150	150	0	300	150	150	0	300	300	0	0	300	300	0	0	300	70	1890
Wineville (MZ3)		3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	180	0	180	0	180	0	180	0	180	0	180	0	180	0	180	0	180	0	180	0	0	0	0	0	0	0	0	35	315
Riverside (MZ3)		3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	180	0	180	0	180	0	180	0	180	0	180	0	180	0	180	0	180	0	180	0	0	0	0	0	0	0	0	35	315
Etiwanda Channel- CB14	30																																																
Etiwanda Debris Basin (MZ2)		5	10	300	0	0	300	300	0	0	300	300	0	0	300	300	0	0	300	300	0	0	300	300	0	0	300	300	0	0	300	300	0	0	300	300	0	0	300	300	0	0	300	300	0	0	300	300	0	0	300	70	2520
Victoria (MZ2)		13	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	780	0	780	0	780	0	780	0	780	0	780	0	780	0	780	0	780	0	780	0	0	0	0	0	0	0	0	35	1365
Etiwanda Conservation Ponds (MZ3)		10	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Sevaine Channel - CB13	23																																																
San Sevaine #1 (MZ2)		20	40	1200	0	0	1200	1200	0	0	1200	0	0	0	0	0	0	0	0	0	0	0	0	600	600	0	1200	600	600	0	1200	600	600	0	1200	600	600	0	1200	600	600	0	1200	1200	0	0	1200	1200	0	0	1200	70	7560
San Sevaine #2 (MZ2)		4	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	0	0	0	0	0	0	0	35	420
San Sevaine #3 (MZ2)		4	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	240	0	0	0	0	0	0	0	0	35	420
San Sevaine 4&5 (MZ2)		14	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	840	0	840	0	840	0	840	0	840	0	840	0	840	0	840	0	840	0	840	0	0	0	0	0	0	0	0	35	1470
Jurupa (MZ3)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West Fontana Channel - CB18	30																																																
Banana (MZ3)		5	10	240	0	60	300	240	0	60	300	0	0	0	0	0	0	0	0	0	0	0	0	120	120	60	300	120	120	60	300	120	120	60	300	120	120	60	300	120	120	60	300	240	0	60	300	240	0	60	300	70	1890
Hickory East and West (MZ2)		5	10	240	0	60	300	240	0	60	300	0	0	0	0	0	0	0	0	0	0	0	0	120	120	60	300	120	120	60	300	120	120	60	300	120	120	60	300	120	120	60	300	240	0	60	300	240	0	60	300	70	1890
Declez Channel	0																																																
RP3 Cell 1 (MZ3)		12	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	720	0	720	0	720	0	720	0	720	0	720	0	720	0	720	0	720	0	720	0	0	0	0	0	0	0	0	35	1260
RP3 Cell 2 (MZ3)		2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	0	120	0	120	0	120	0	120	0	120	0	120	0	120	0	120	0	120	0	0	0	0	0	0	0	0	0	0
RP3 Cell 3 (MZ3)		9	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	540	0	540	0	540	0	540	0	540	0	540	0	540	0	540	0	540	0	540	0	0	0	0	0	0	0	0	35	945
RP3 Cell 4 (MZ3)		10	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	0	600	0	600	0	600	0	600	0	600	0	600	0	600	0	600	0	600	0	0	0	0	0	0	0	0	35	1050
Declez Cells 1,2,3 (MZ3)		10	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	0	600	0	600	0	600	0	600	0	600	0	600	0	600	0	600	0	600	0	0	0	0	0	0	0	0	35	1050
			TOTAL	**5820**	**0**	**660**	**6480**	**5820**	**0**	**660**	**6480**	**300**	**0**	**0**	**300**	**300**	**0**	**0**	**300**	**300**	**0**	**0**	**300**	**3060**	**8910**	**450**	**12420**	**3060**	**8910**	**450**	**12420**	**3060**	**8910**	**450**	**12420**	**3060**	**8910**	**450**	**12420**	**3060**	**8910**	**450**	**12420**	**5820**	**0**	**660**	**6480**	**5820**	**0**	**660**	**6480**		**51639**

Notes

Imported
1) Imported flow set to 0 in Sep, Oct, and Nov for planned maintenance
2) Imported flow set to 50% in Dec, Jan, Feb, Mar, and Apr

Storm
1) Storm flow set to 50% in Dec, Jan, Feb, Mar, and Apr

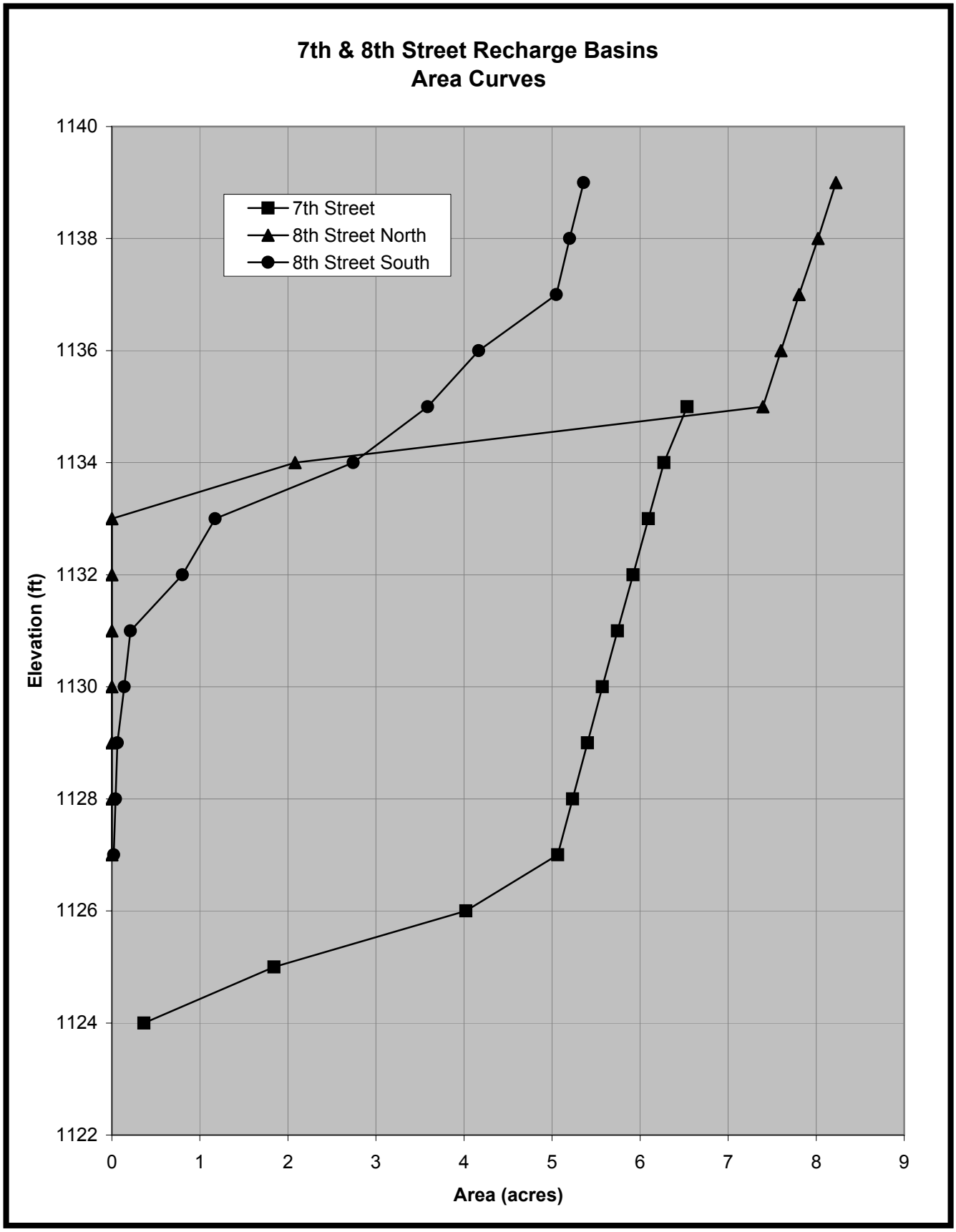
Basin Recharge Capacity
1) Recharge capacity determined primarily from measured imported water flows
2) For basins w/o measured imported water, recharge capacity is the product of mid-depth recharge area times measured recharge rate

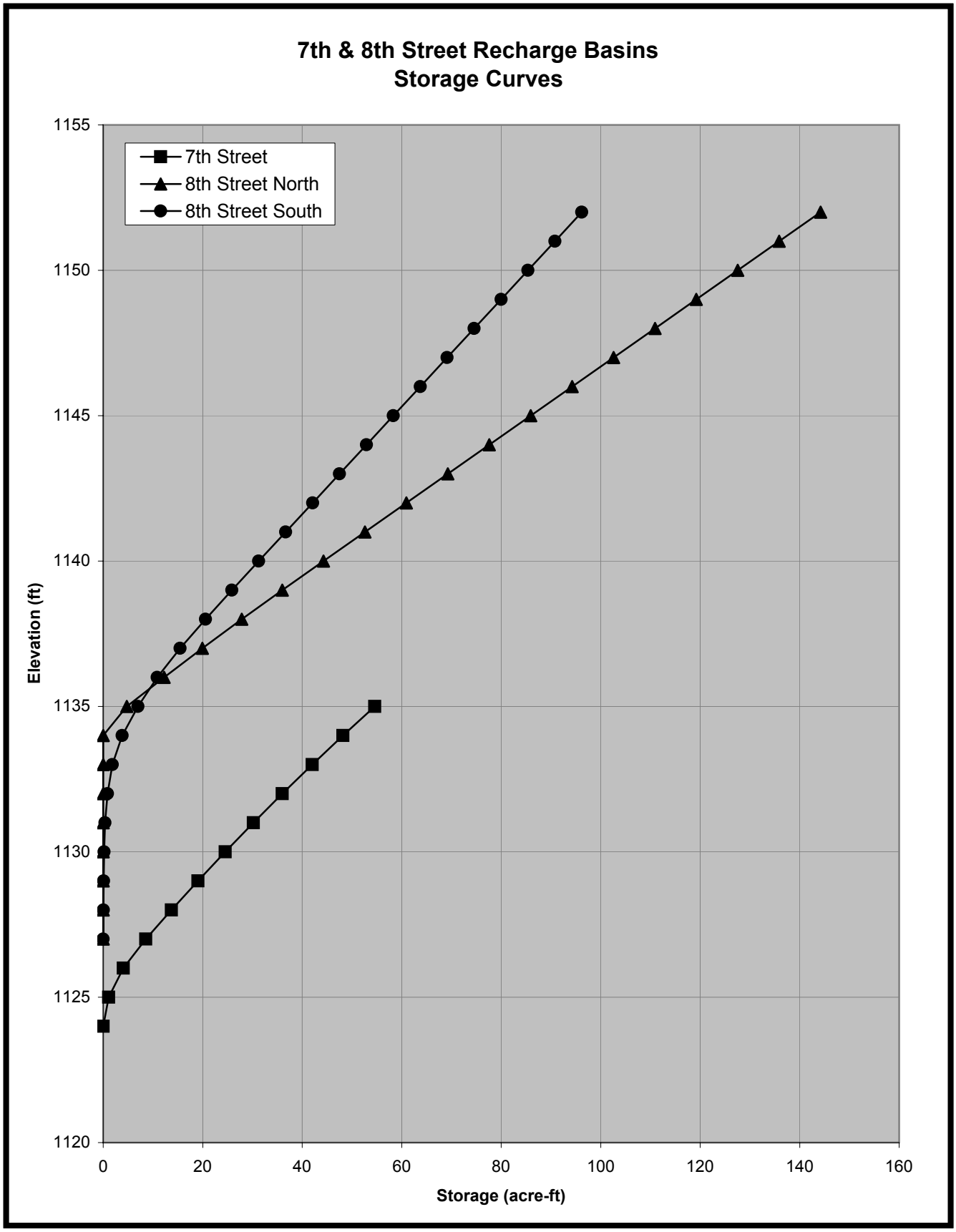
Recycled
1.) Recycled flows in Turner, Banana, and Hickory Basins limited to 20% of total flows per DHS Permit
2.) Recycled flows in Ely Basins limited by basin recharge capacity

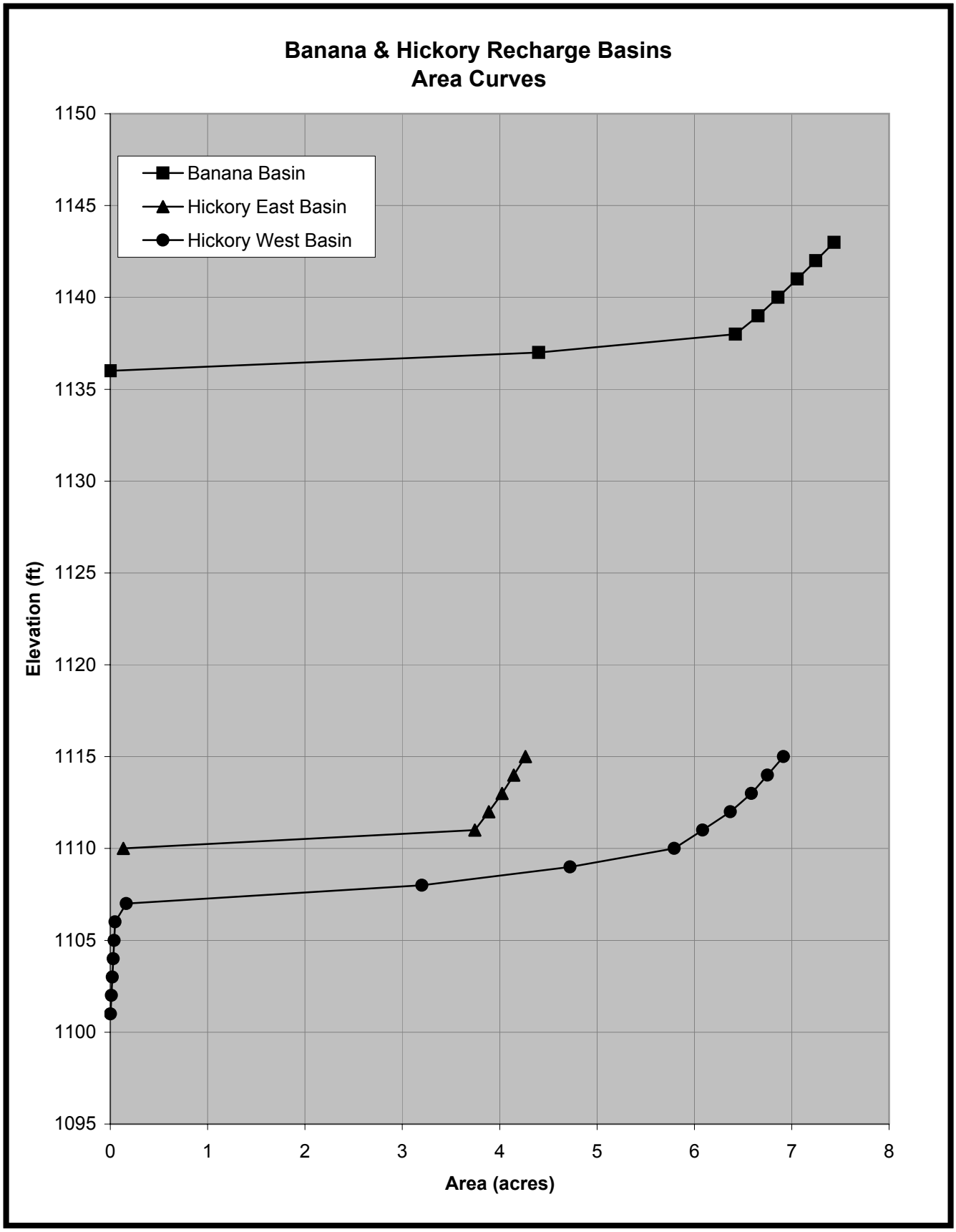
Utilization
1.) For basins w/supplemental water sources, utilization is set at 70% to reflect supply interruptions, transitions fro one source to another source, unplanned maintenance, and miscellaneous interruptions.
2.) For basins w/o supplemental water sources, utilization is set at 35% to reflect irregular distribution of storm events, resulting in dry basins even during storm season

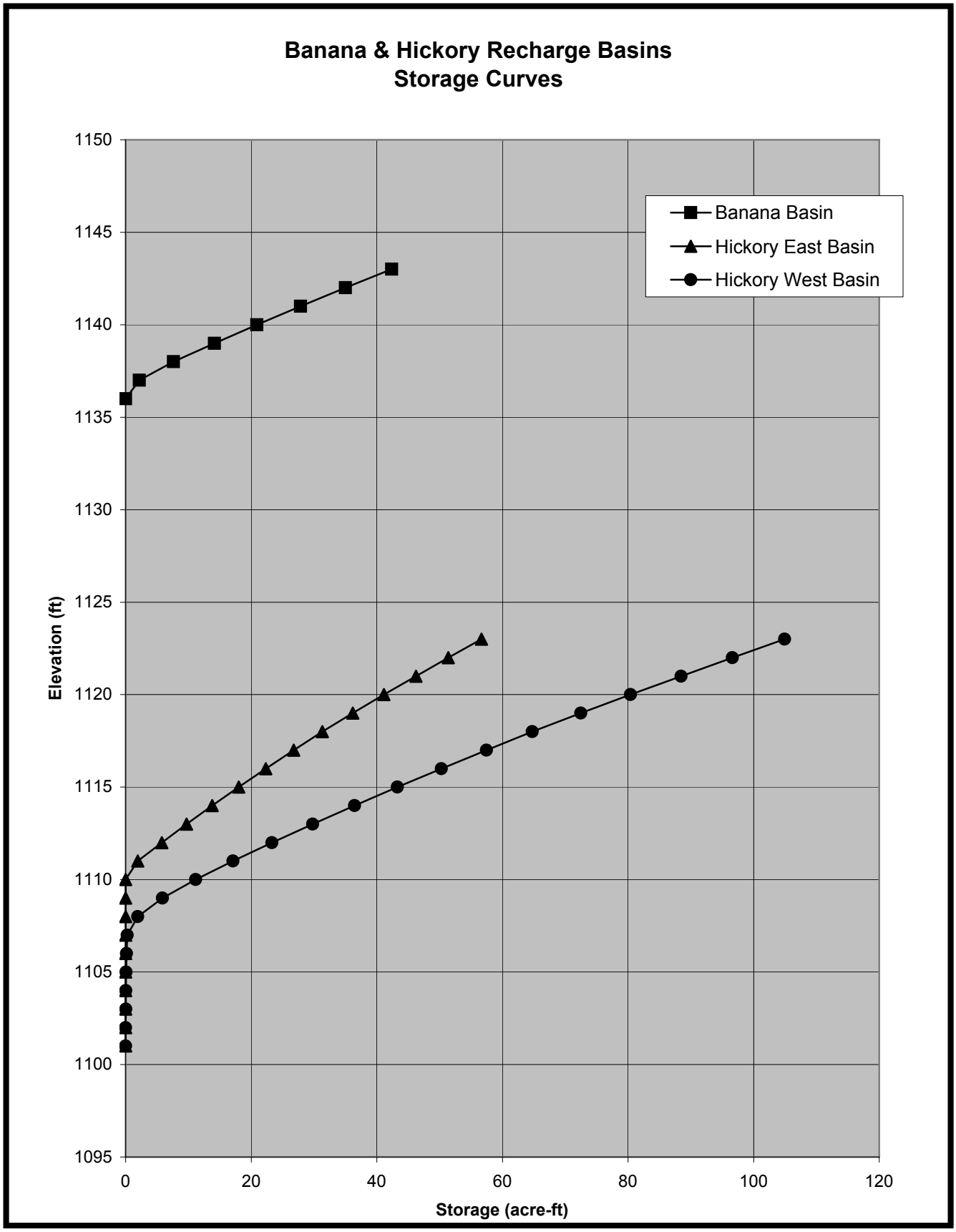
EXHIBIT C

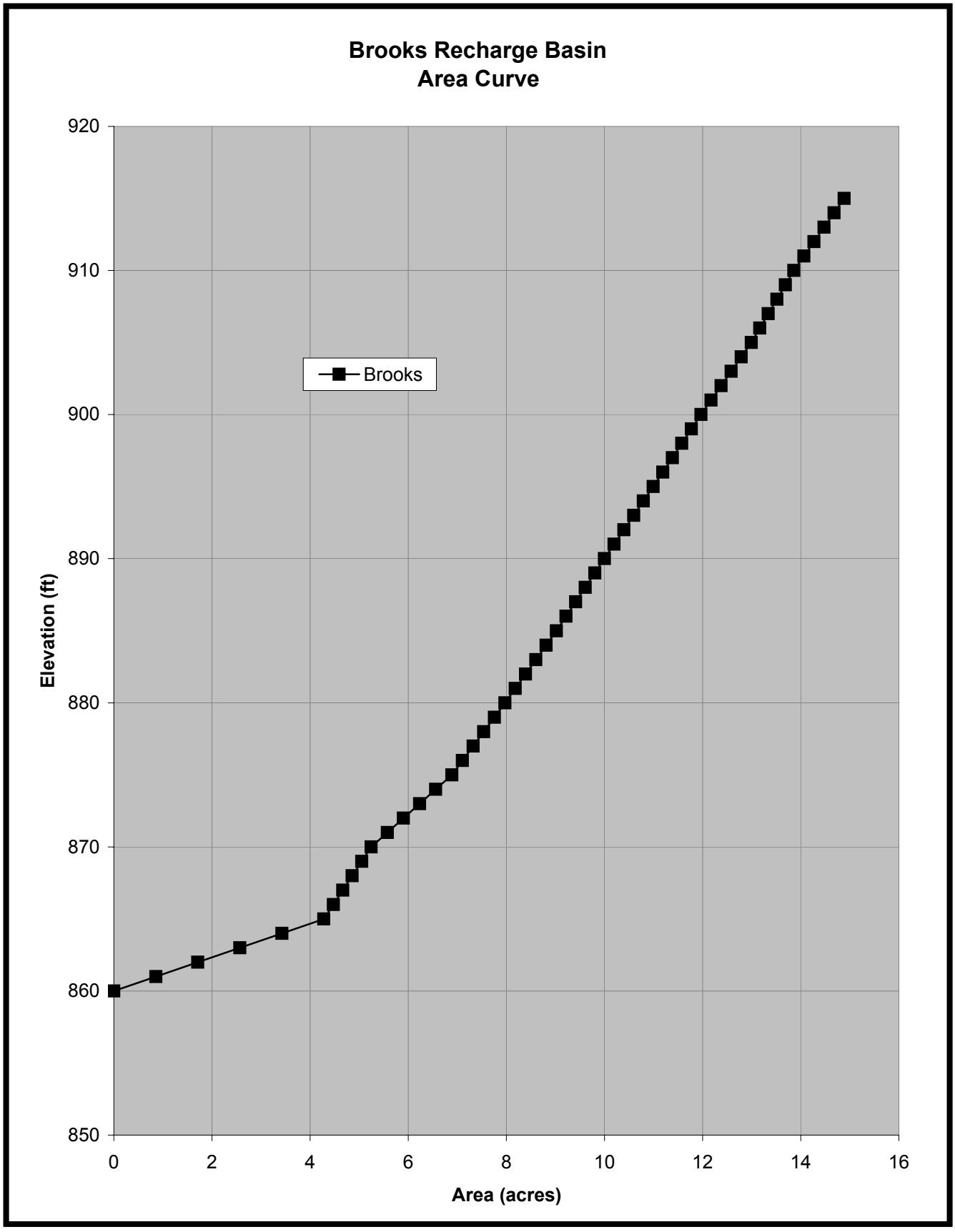
ELEVATION-AREA-STORAGE CURVES

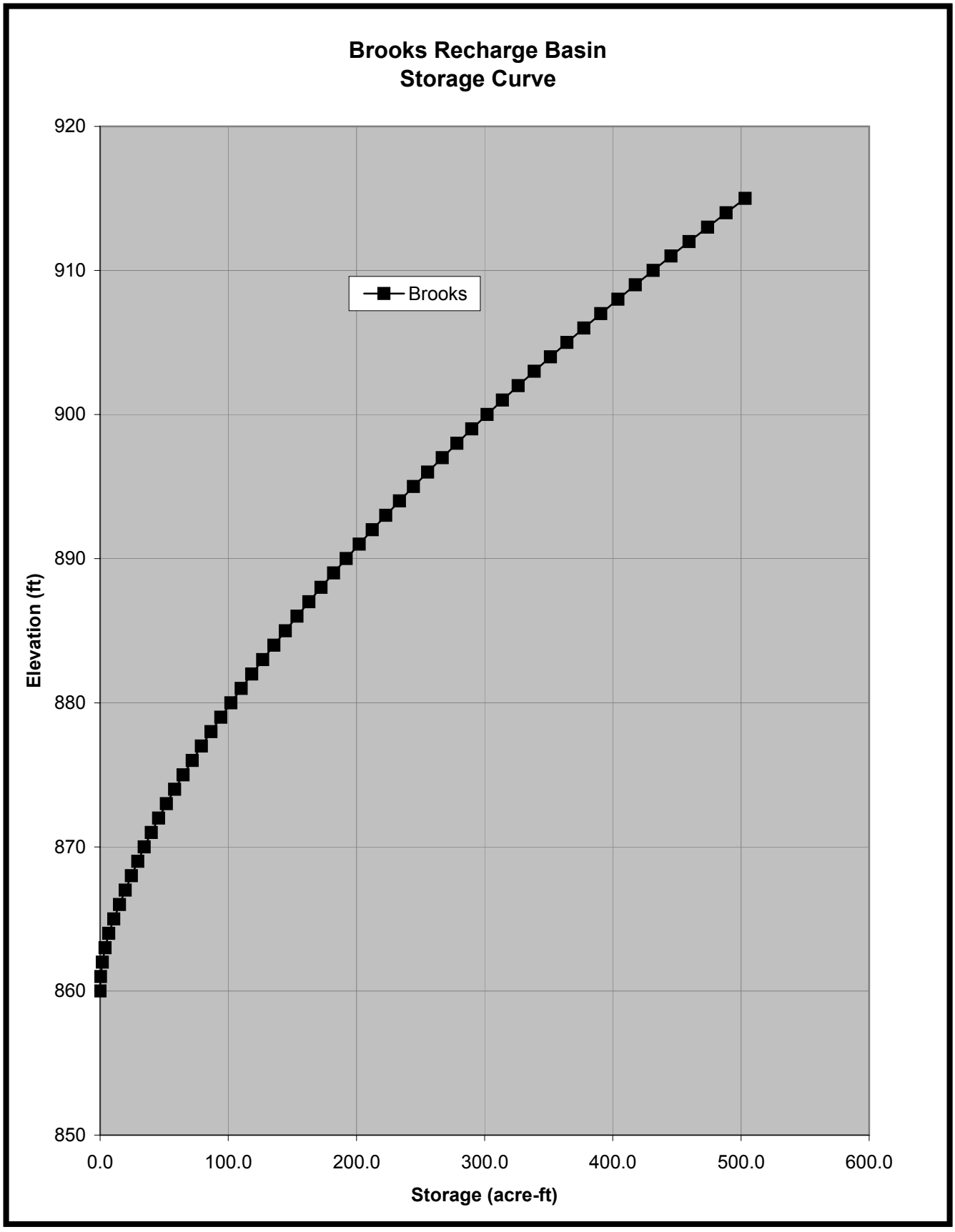

7th & 8th Street Recharge Basins
Area Curves
7th Street
8th Street North
8th Street South
Elevation (ft)
1140
1138
1136
1134
1132
1130
1128
1126
1124
1122
0
1
2
3
4
5
6
7
8
9
Area (acres)

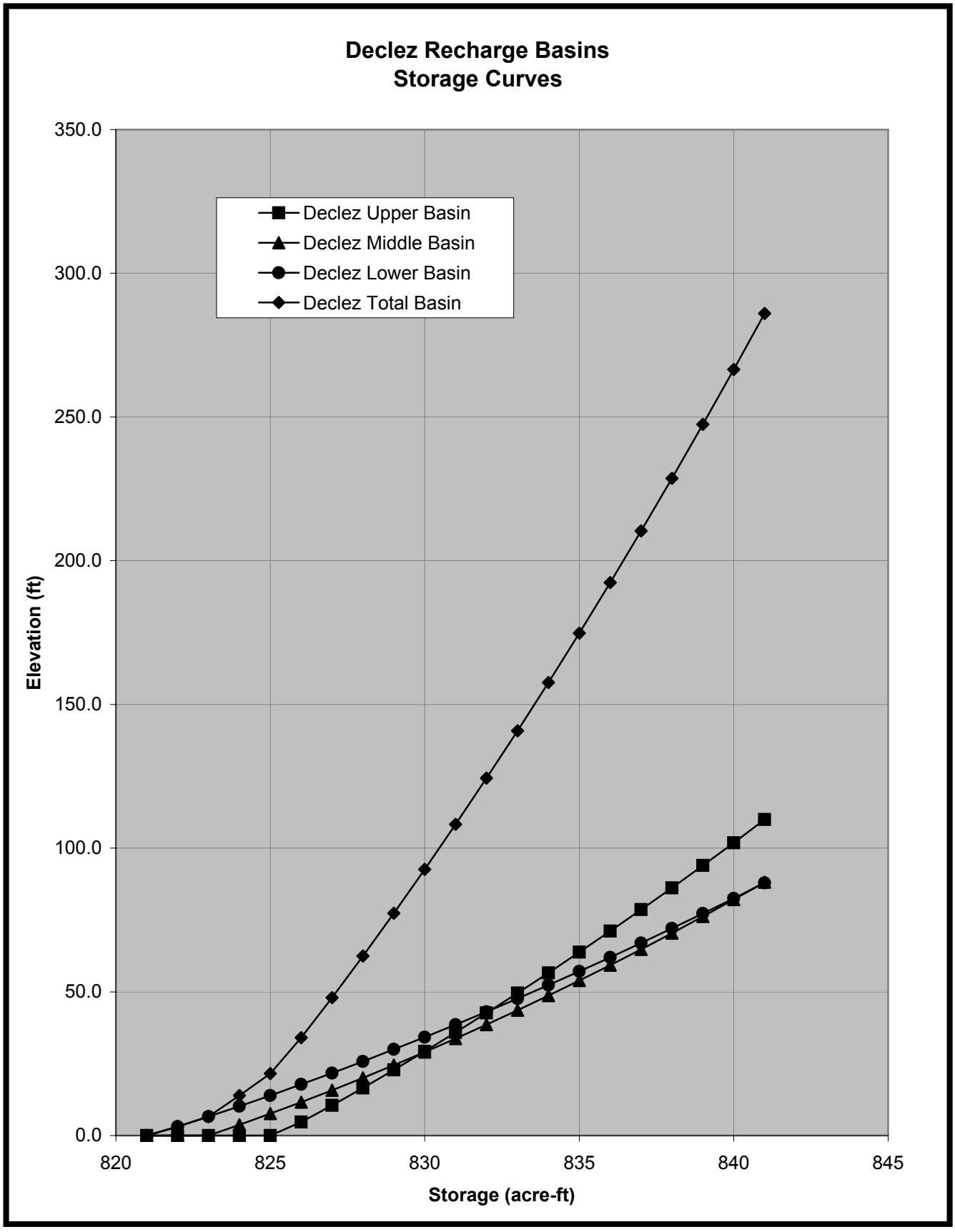

7th & 8th Street Recharge Basins
Storage Curves
7th Street
8th Street North
8th Street South
Elevation (ft)
1155
1150
1145
1140
1135
1130
1125
1120
0
20
40
60
80
100
120
140
160
Storage (acre-ft)

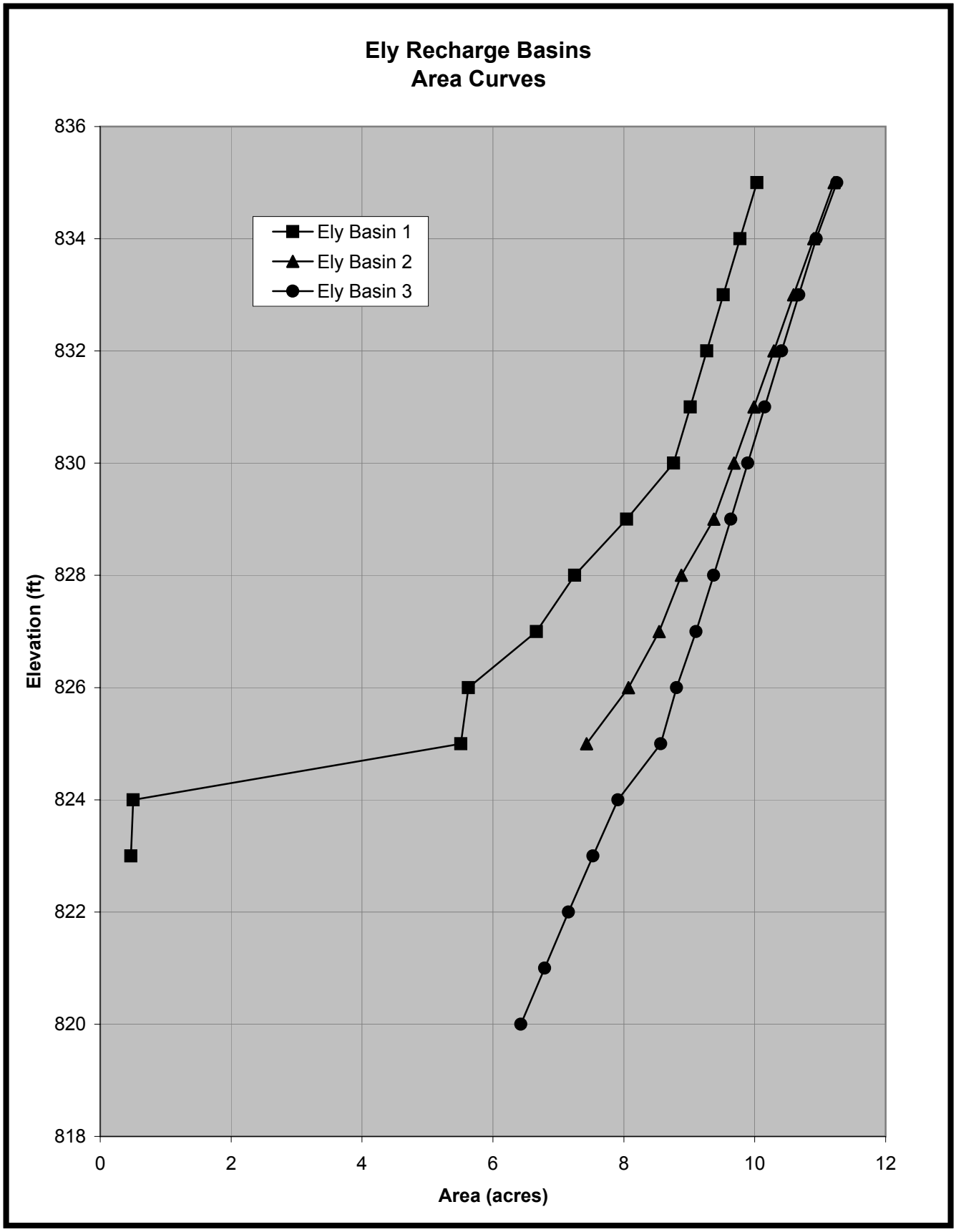

Banana & Hickory Recharge Basins
Area Curves
Banana Basin
Hickory East Basin
Hickory West Basin
Elevation (ft)
1150
1145
1140
1135
1130
1125
1120
1115
1110
1105
1100
1095
0
1
2
3
4
5
6
7
8
Area (acres)

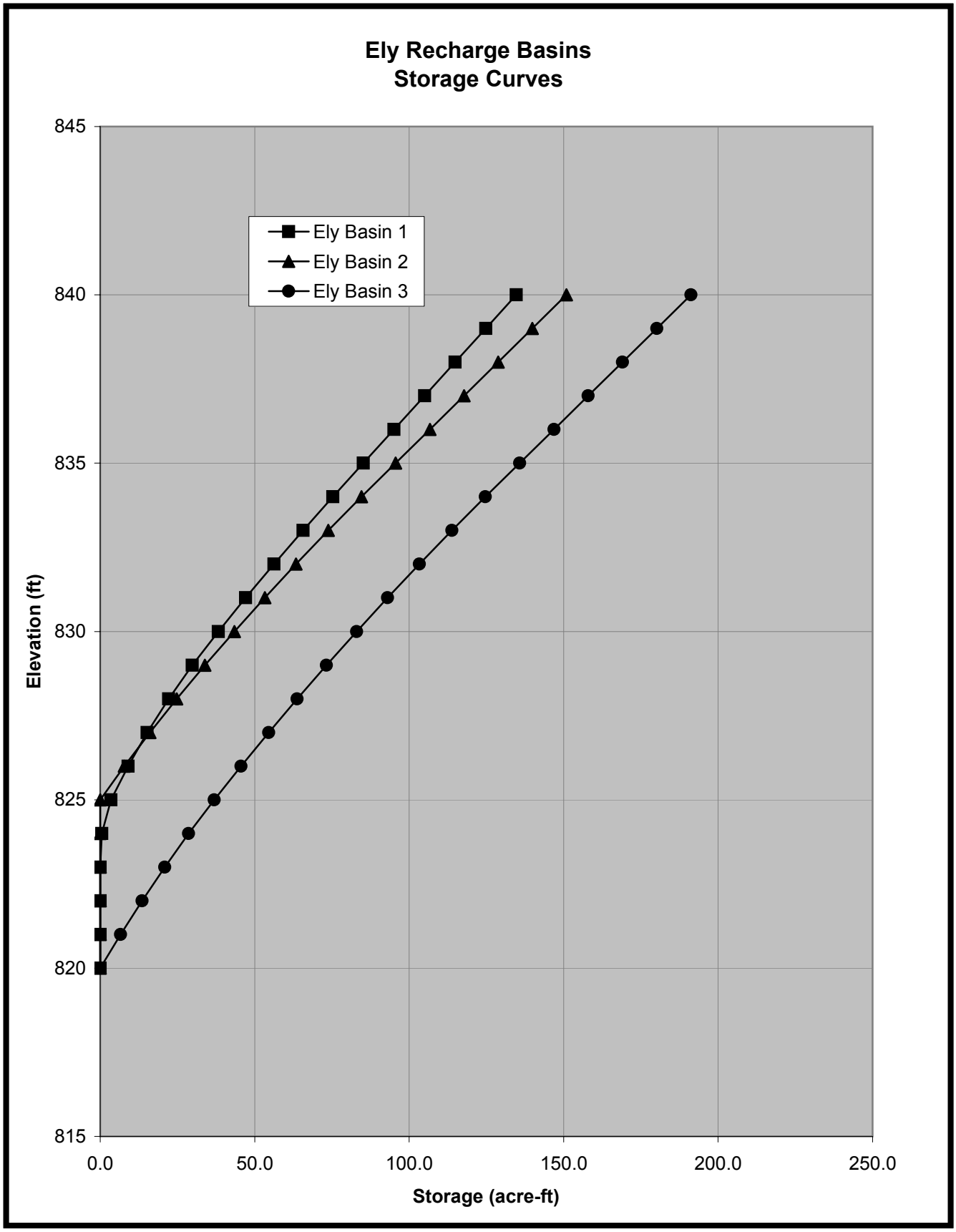

Banana & Hickory Recharge Basins
Storage Curves
Elevation (ft)
Storage (acre-ft)
Banana Basin
Hickory East Basin
Hickory West Basin
1150
1145
1140
1135
1130
1125
1120
1115
1110
1105
1100
1095
0
20
40
60
80
100
120

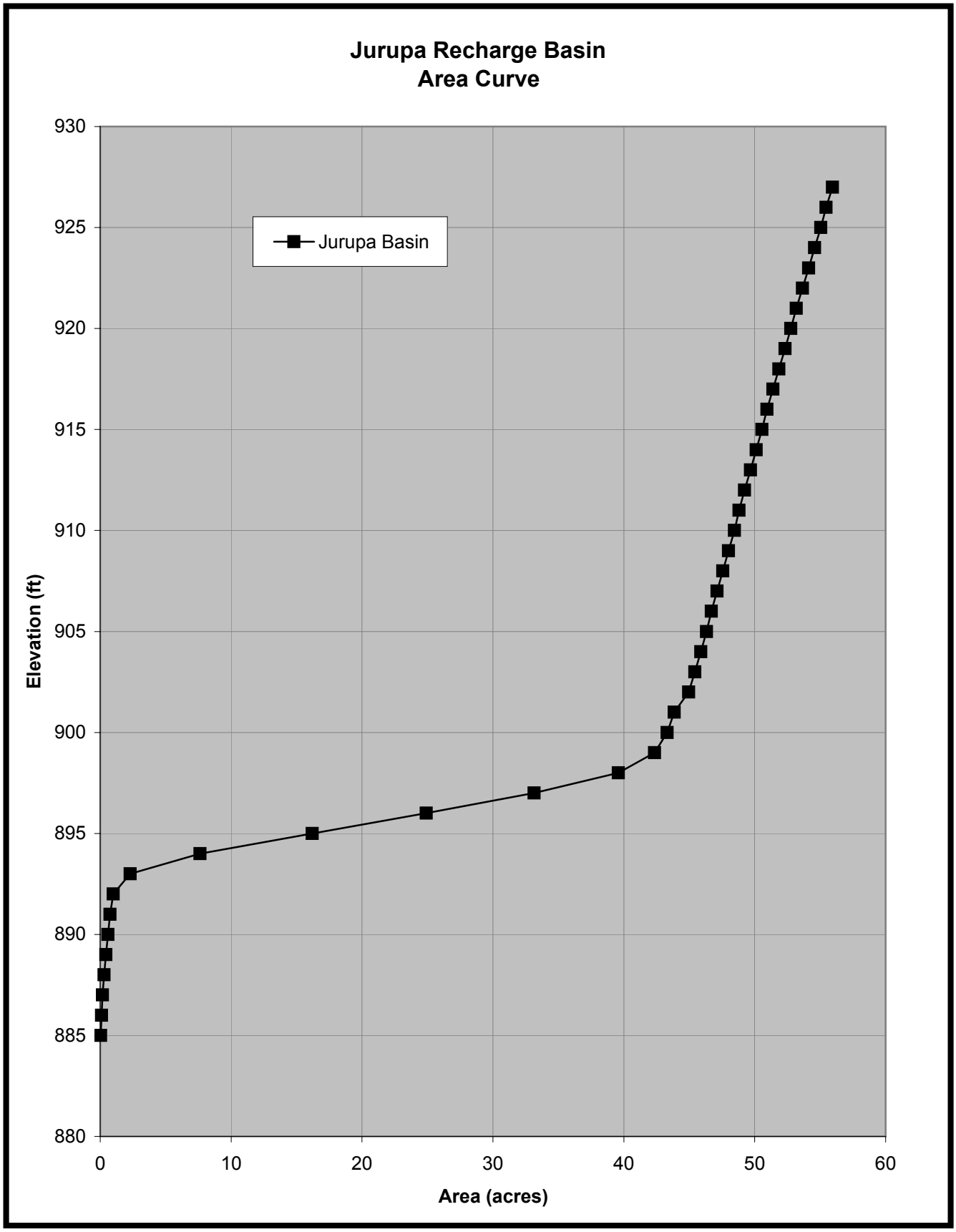

Brooks Recharge Basin
Area Curve
920
910
900
890
880
870
860
850
Elevation (ft)
Brooks
0
2
4
6
8
10
12
14
16
Area (acres)

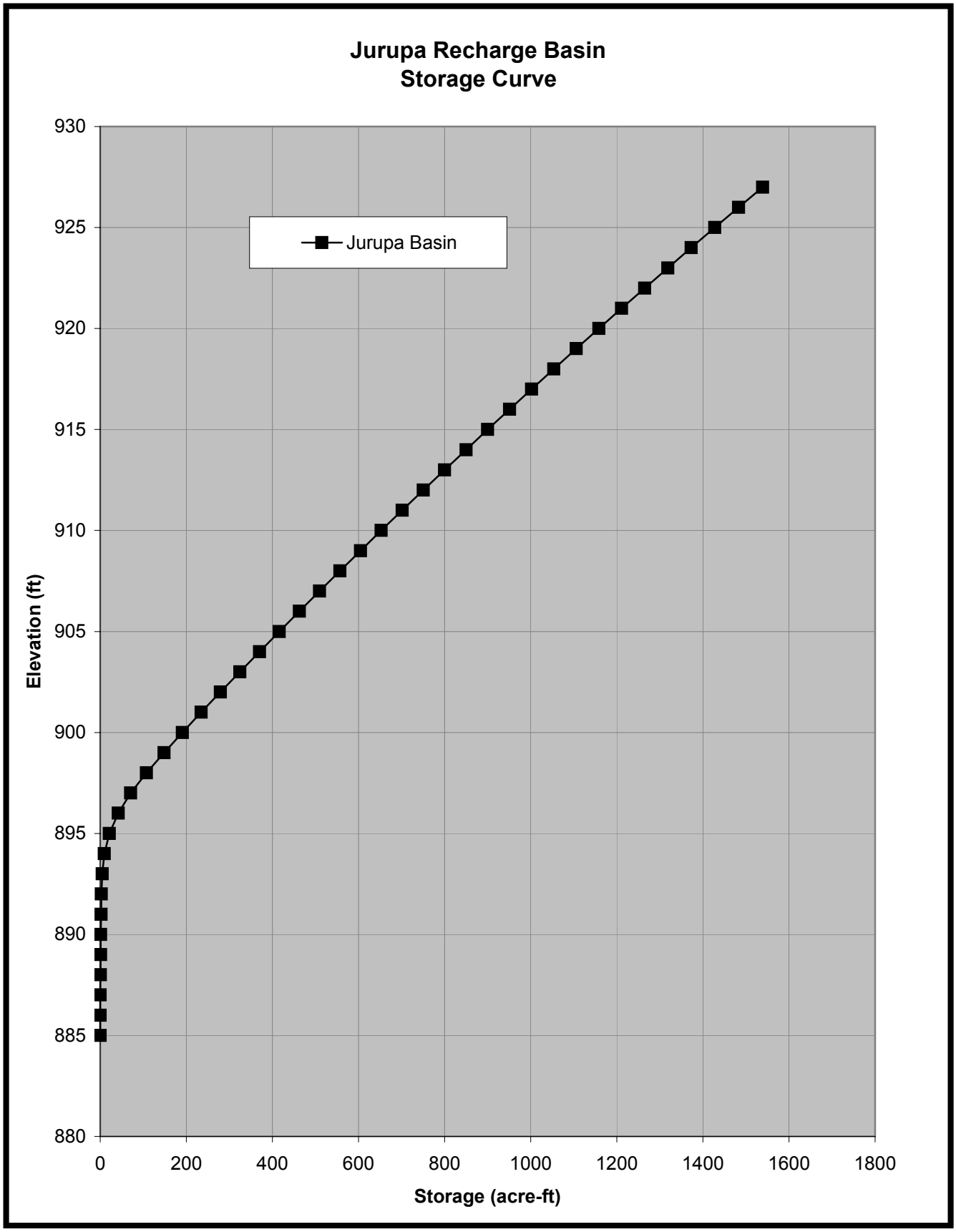

Brooks Recharge Basin
Storage Curve
920
910
900
890
880
870
860
850
Elevation (ft)
Brooks
0.0
100.0
200.0
300.0
400.0
500.0
600.0
Storage (acre-ft)

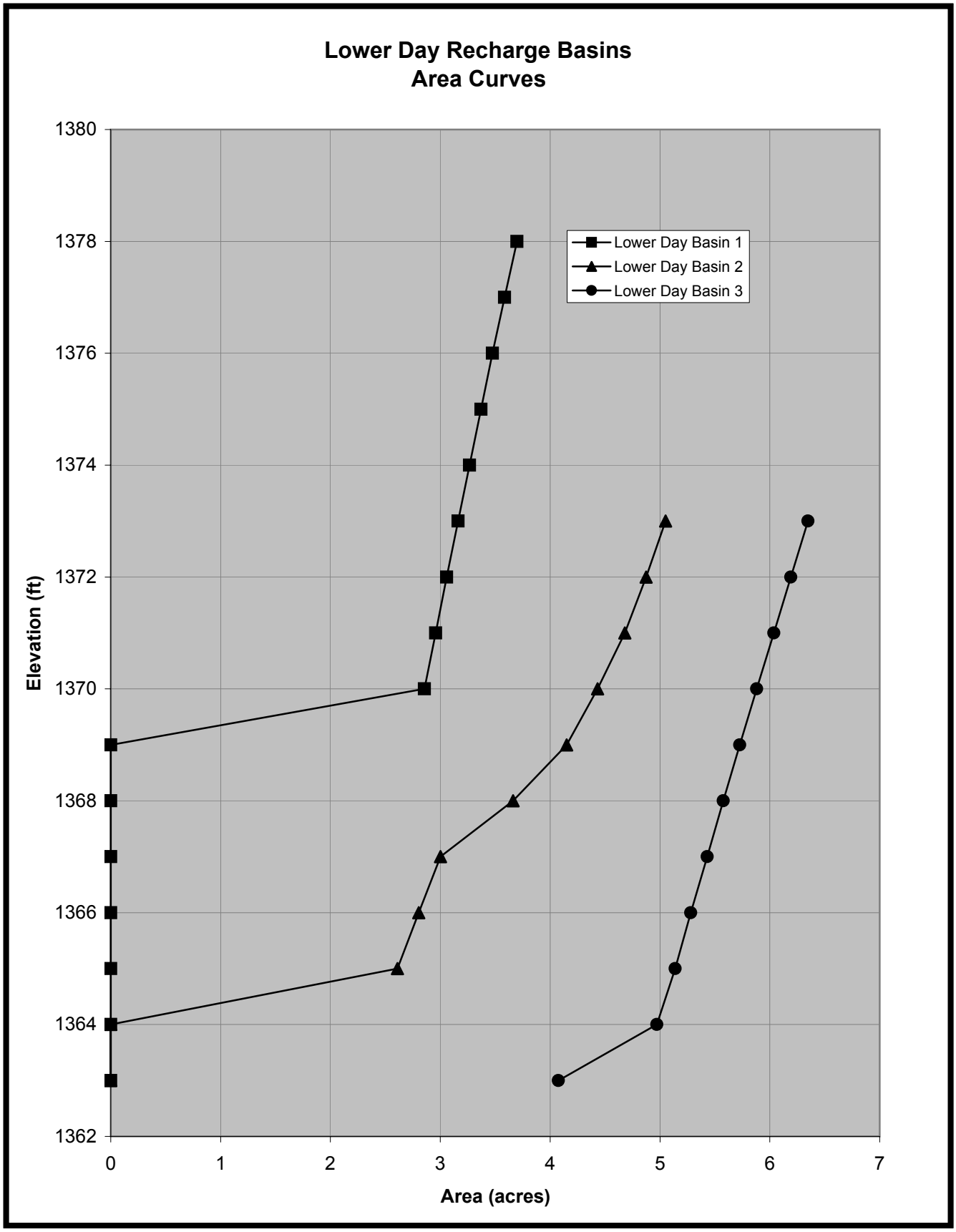

Declez Recharge Basins
Storage Curves
Declez Upper Basin
Declez Middle Basin
Declez Lower Basin
Declez Total Basin
Elevation (ft)
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
820
825
830
835
840
845
Storage (acre-ft)

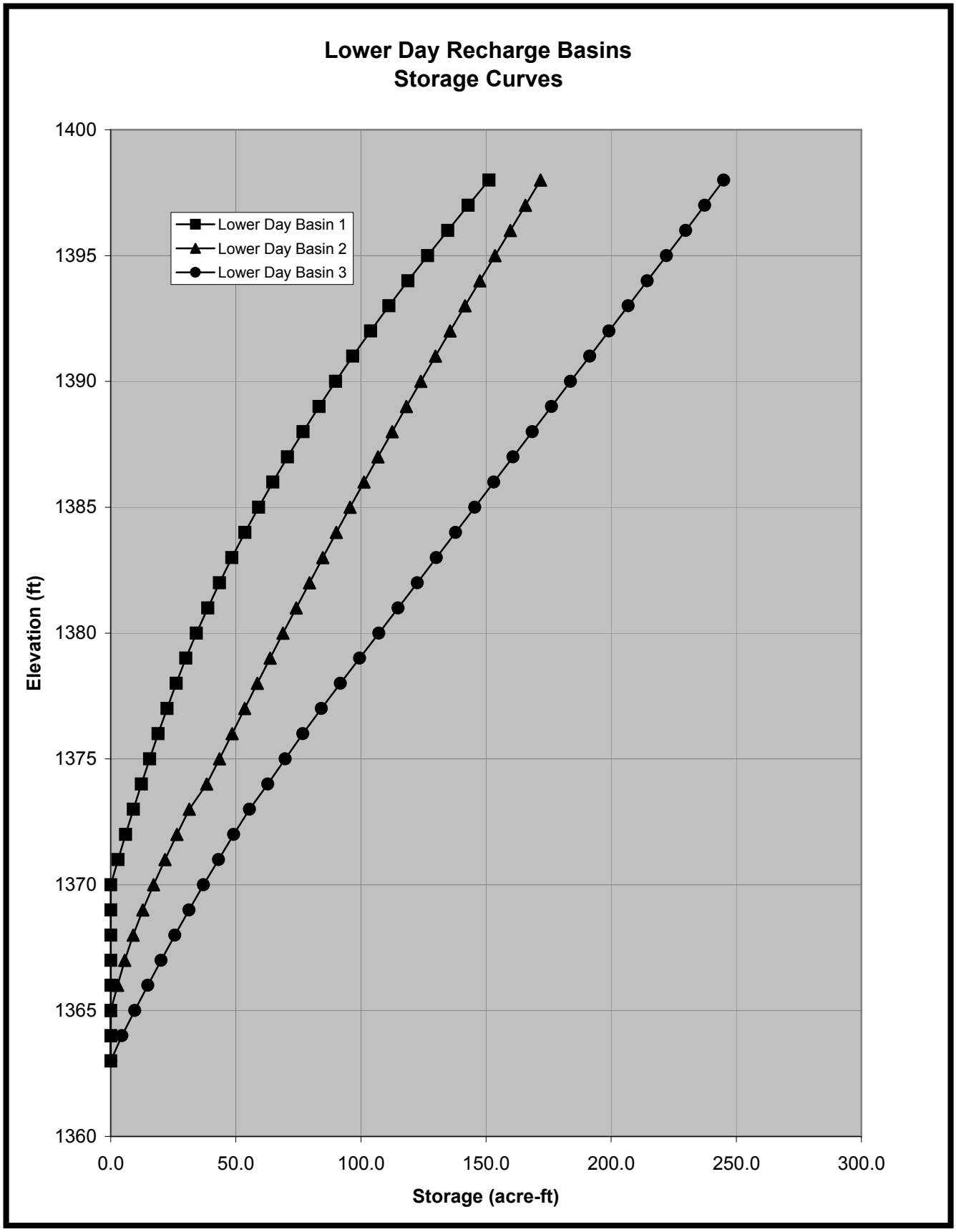

Ely Recharge Basins
Area Curves
Ely Basin 1
Ely Basin 2
Ely Basin 3
Elevation (ft)
836
834
832
830
828
826
824
822
820
818
0
2
4
6
8
10
12
Area (acres)


Ely Recharge Basins
Storage Curves
Ely Basin 1
Ely Basin 2
Ely Basin 3
Elevation (ft)
845
840
835
830
825
820
815
0.0
50.0
100.0
150.0
200.0
250.0
Storage (acre-ft)

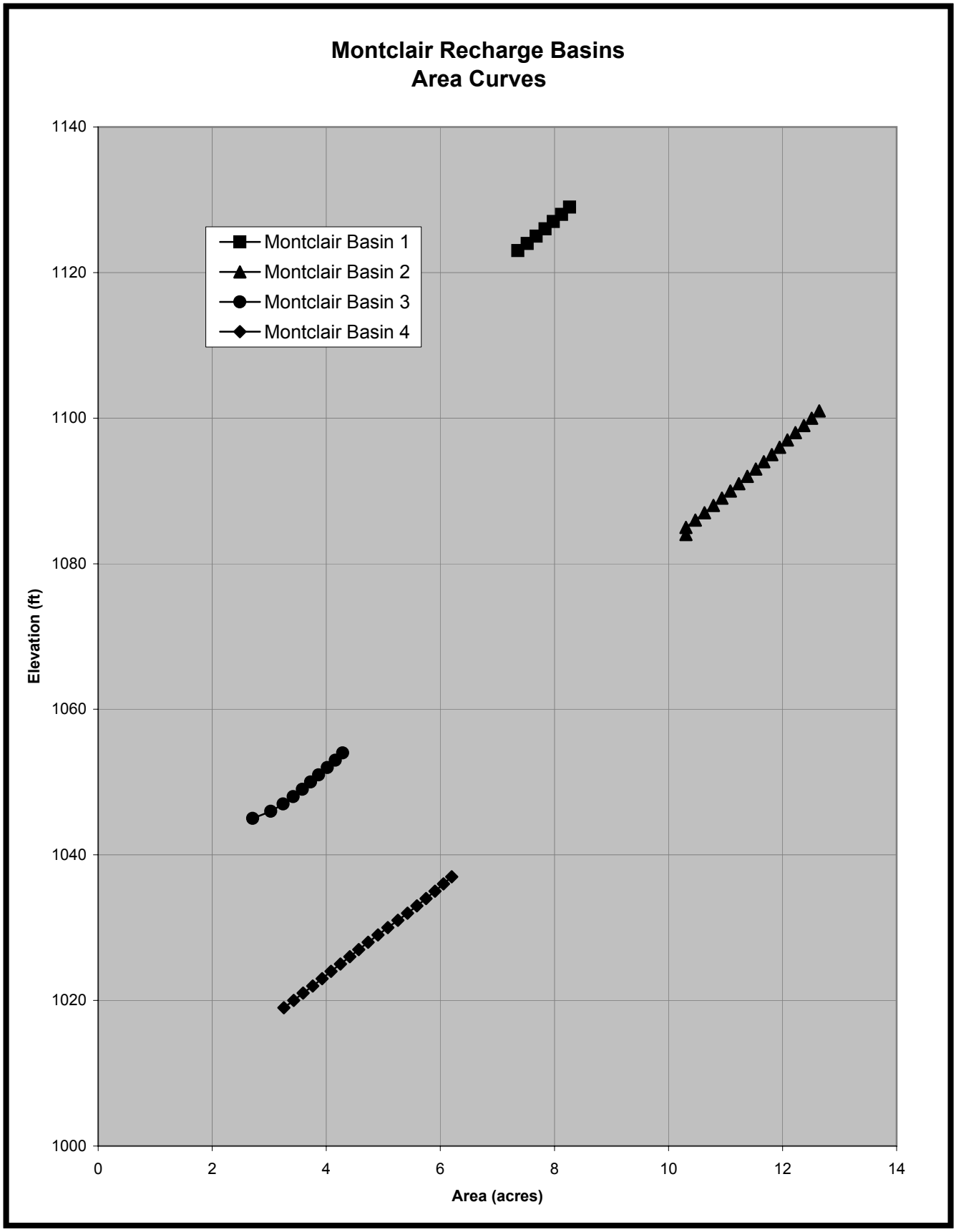

Jurupa Recharge Basin
Area Curve
Jurupa Basin
Elevation (ft)
930
925
920
915
910
905
900
895
890
885
880
0
10
20
30
40
50
60
Area (acres)

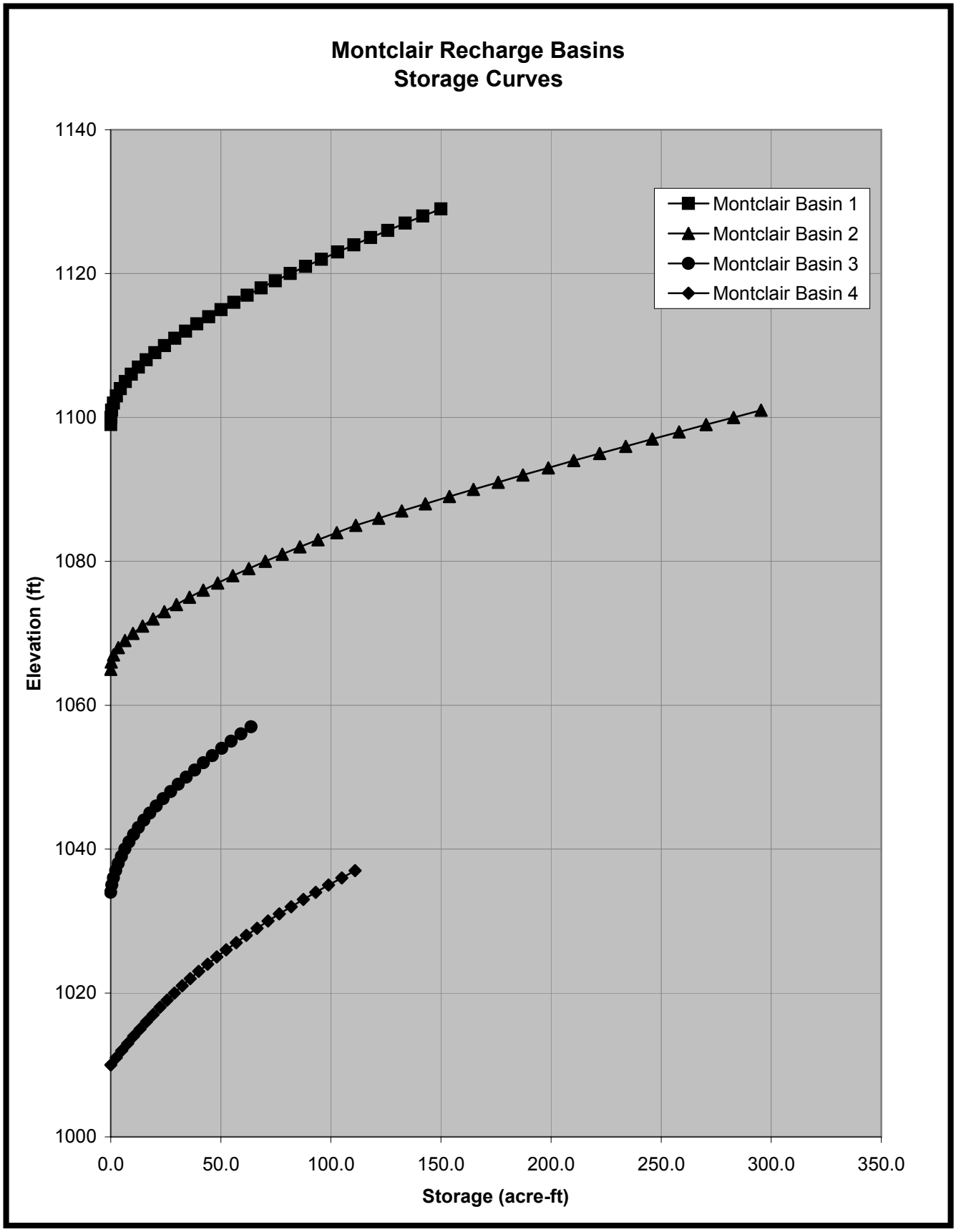

Jurupa Recharge Basin
Storage Curve
Jurupa Basin
Elevation (ft)
930
925
920
915
910
905
900
895
890
885
880
0
200
400
600
800
1000
1200
1400
1600
1800
Storage (acre-ft)


Lower Day Recharge Basins
Area Curves
Elevation (ft)
1380
1378
1376
1374
1372
1370
1368
1366
1364
1362
0
1
2
3
4
5
6
7
Area (acres)
Lower Day Basin 1
Lower Day Basin 2
Lower Day Basin 3

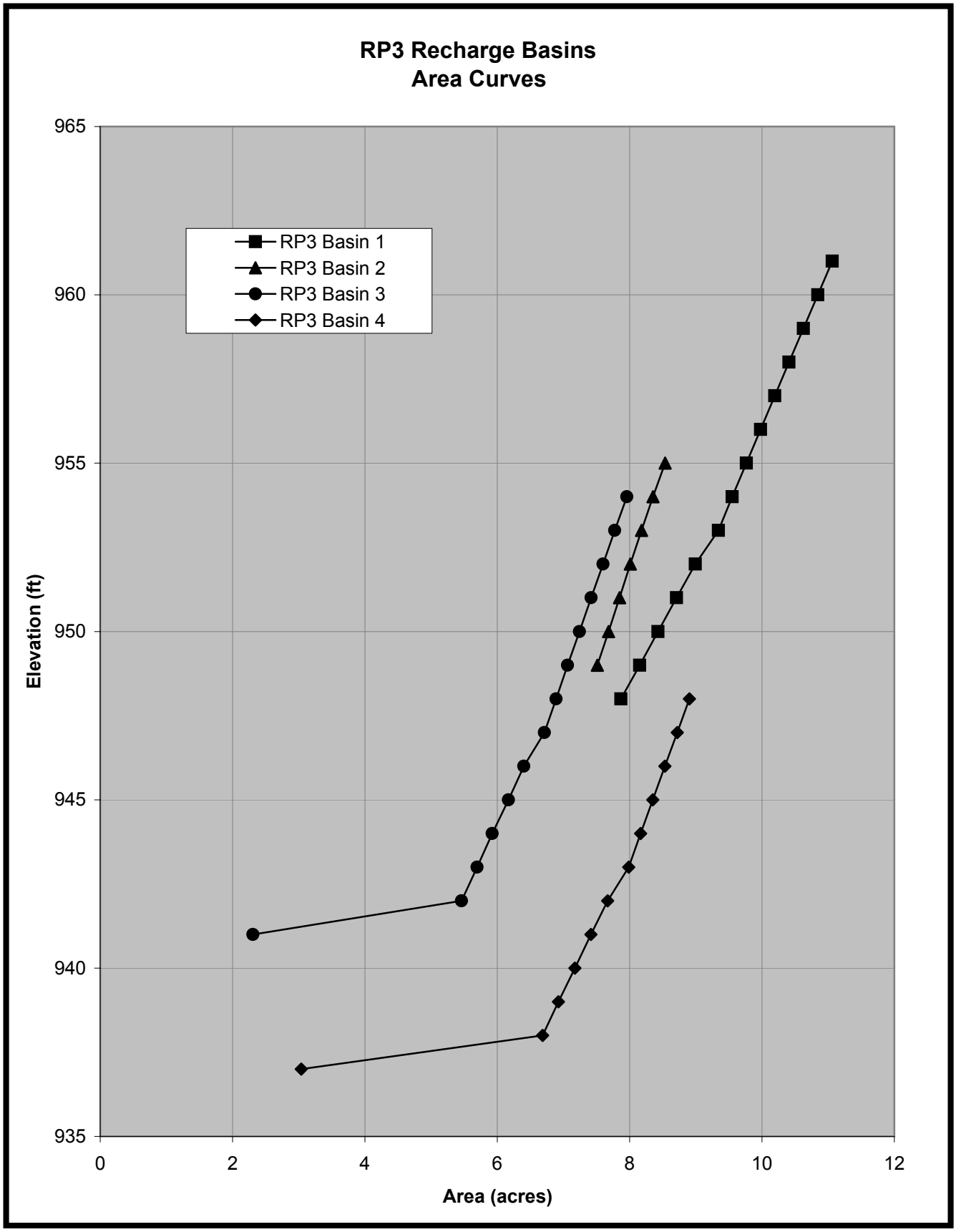


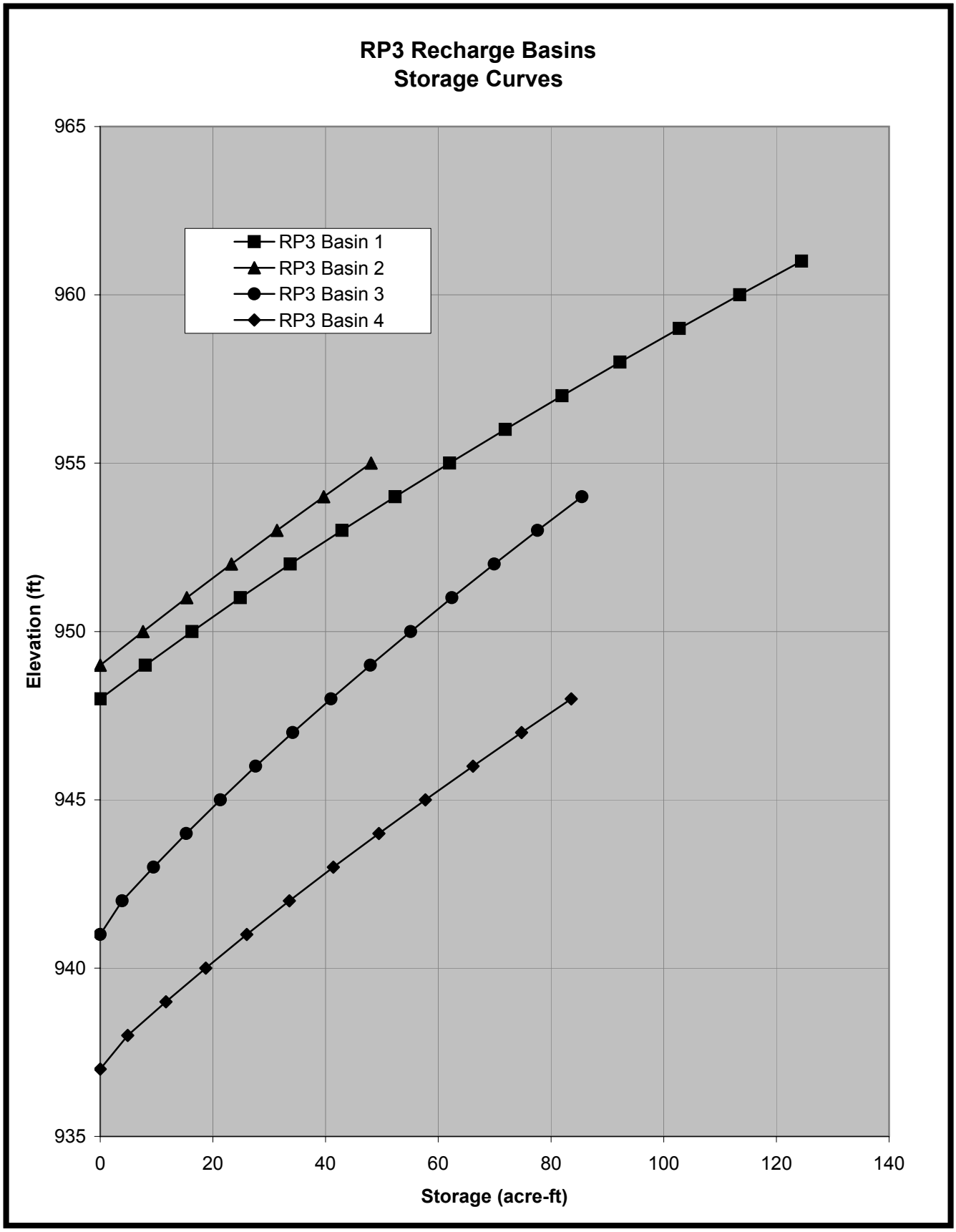
LowerDay-Stage-Storage-122005.xls -- Storage Curves
3/10/2006

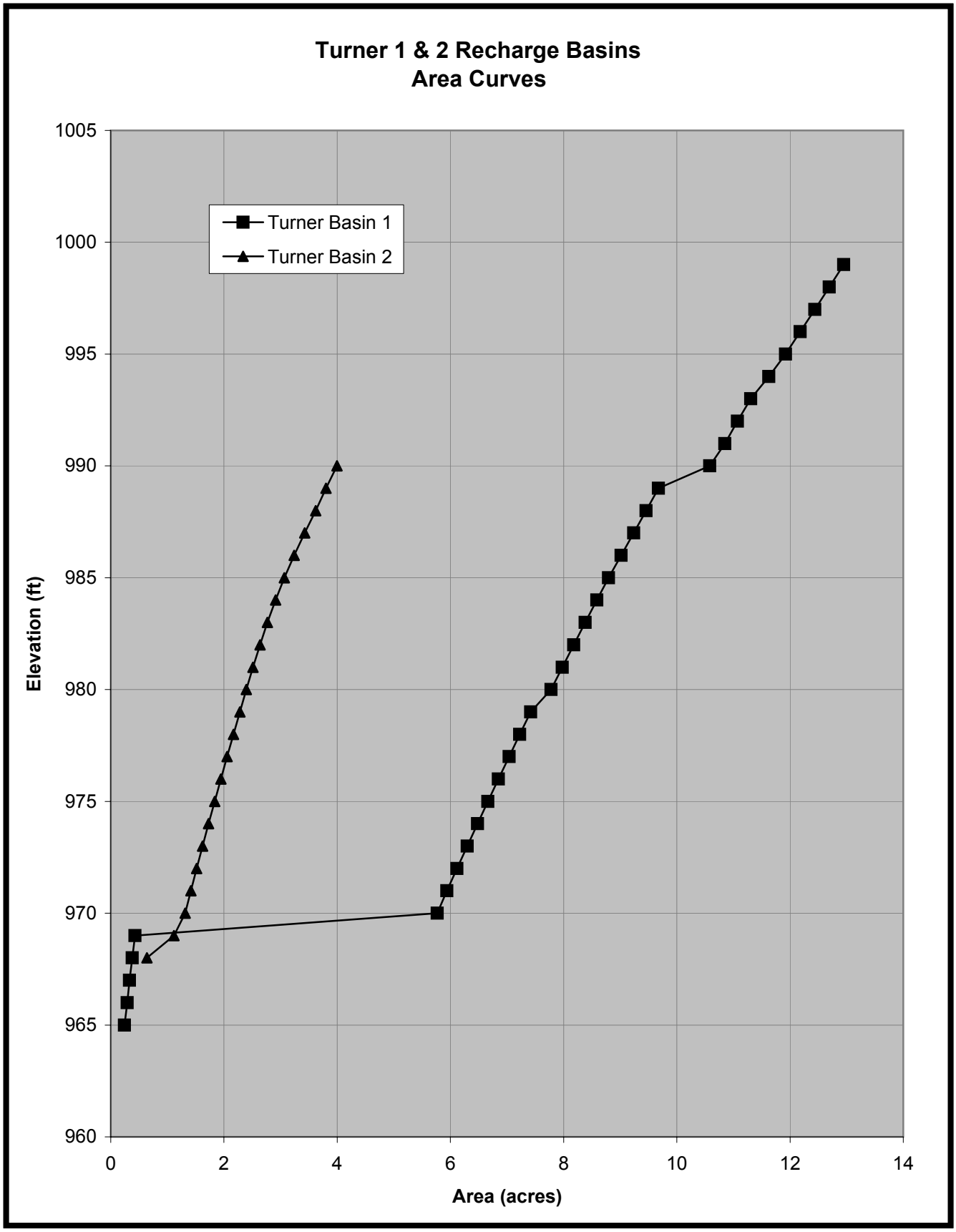

Montclair Recharge Basins
Area Curves
Montclair Basin 1
Montclair Basin 2
Montclair Basin 3
Montclair Basin 4
Elevation (ft)
1140
1120
1100
1080
1060
1040
1020
1000
0
2
4
6
8
10
12
14
Area (acres)

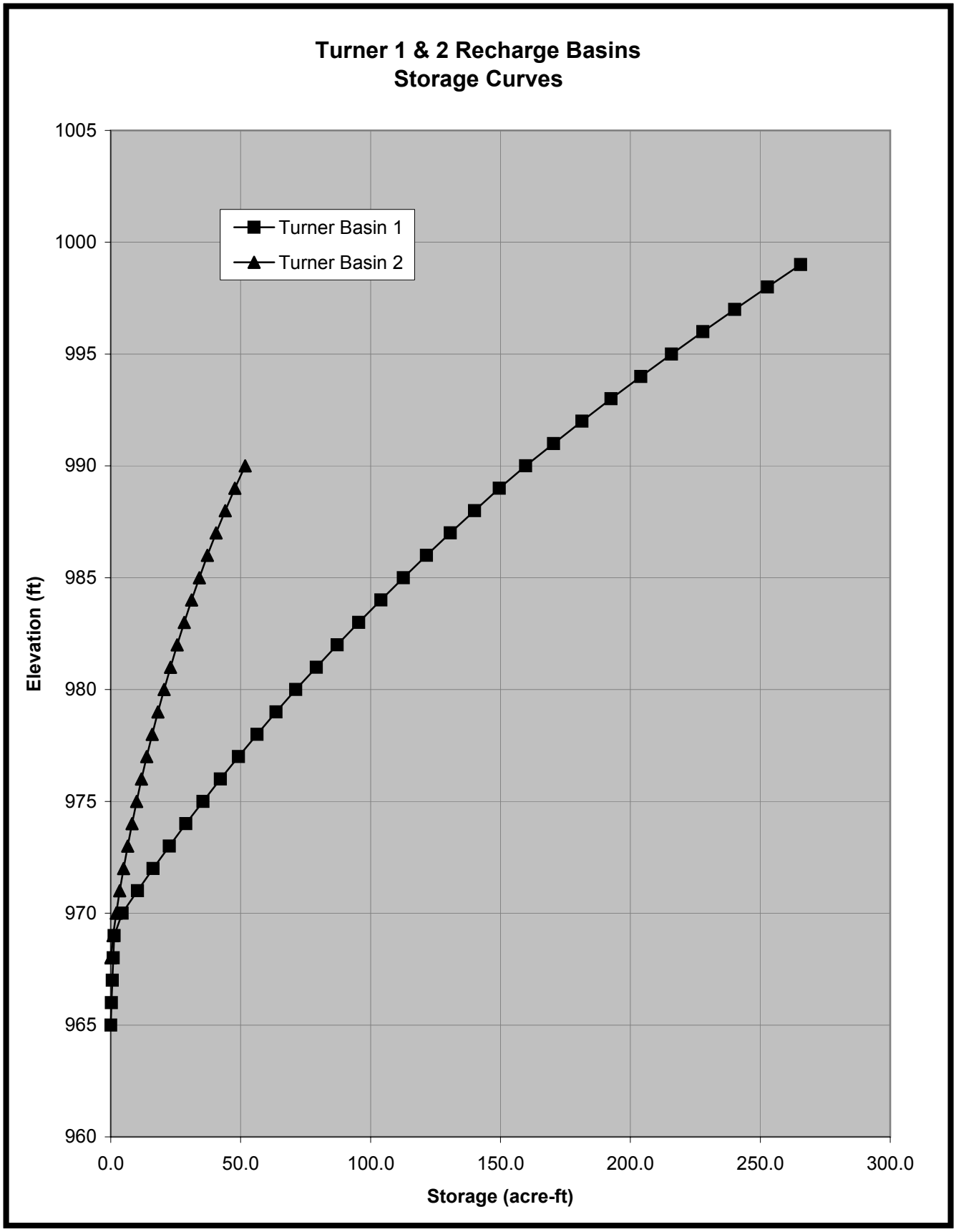


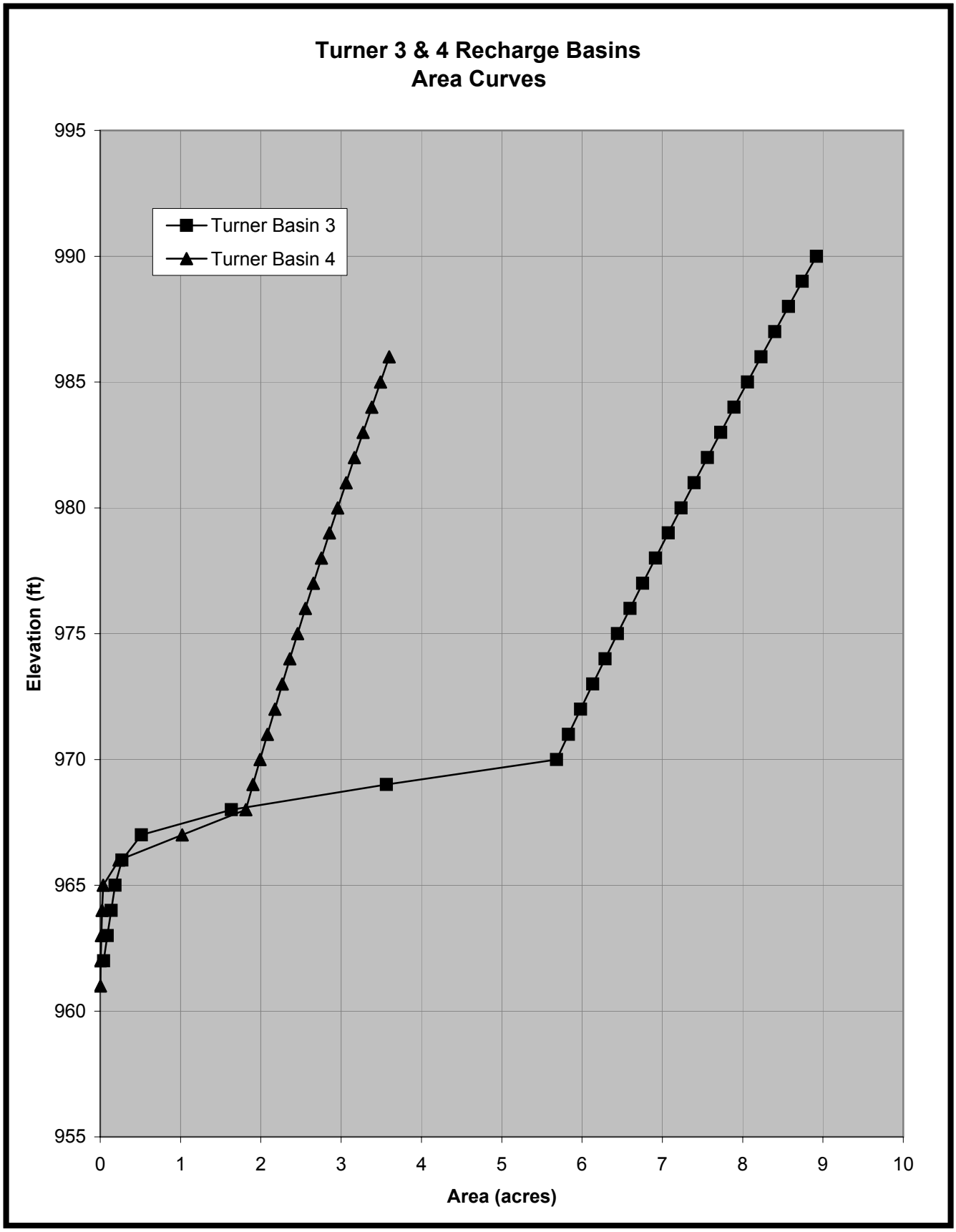
Montclair-Stage-Storage-122005.xls -- Storage Curves
3/10/2006

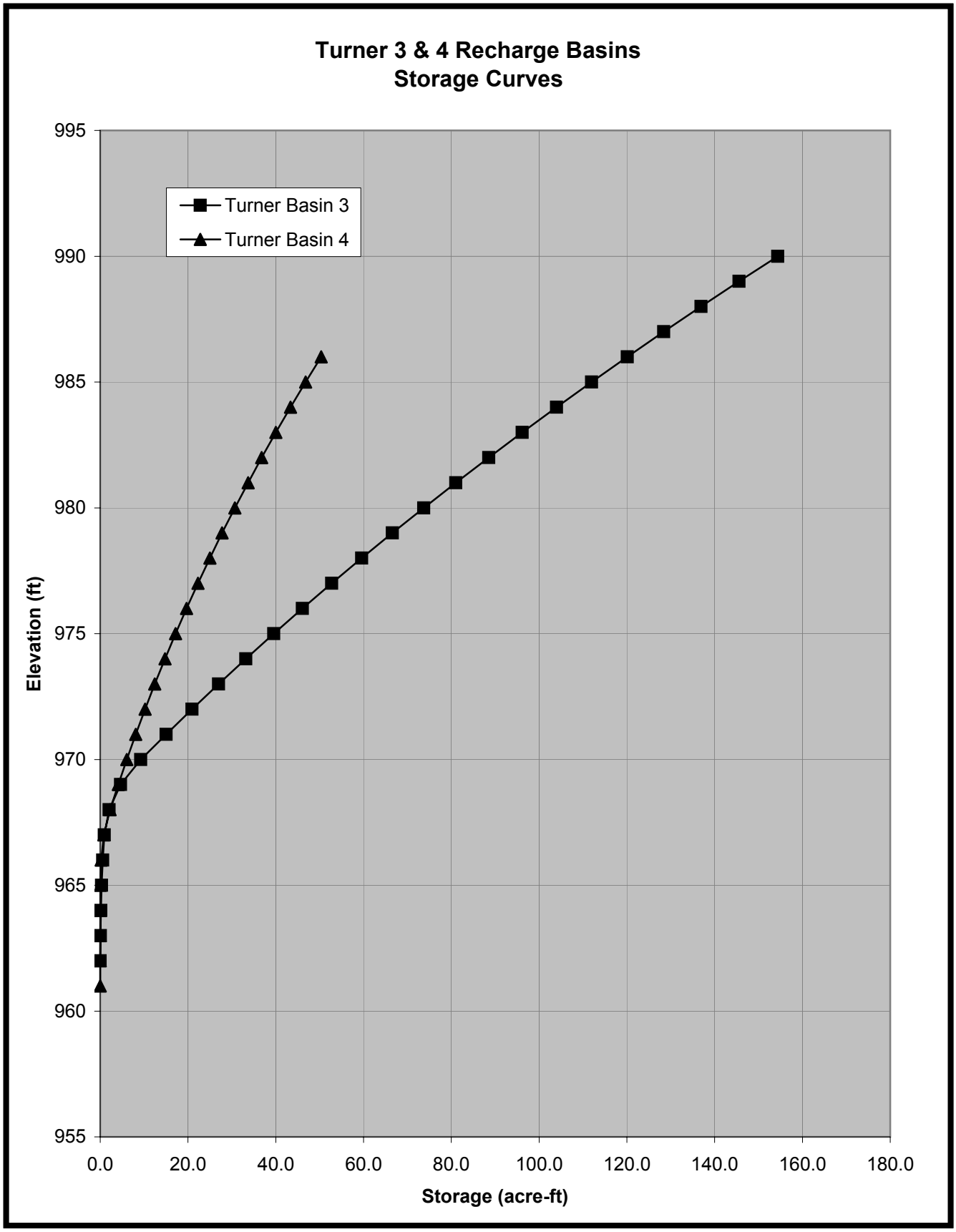

RP3 Recharge Basins
Area Curves
RP3 Basin 1
RP3 Basin 2
RP3 Basin 3
RP3 Basin 4
Elevation (ft)
965
960
955
950
945
940
935
0
2
4
6
8
10
12
Area (acres)

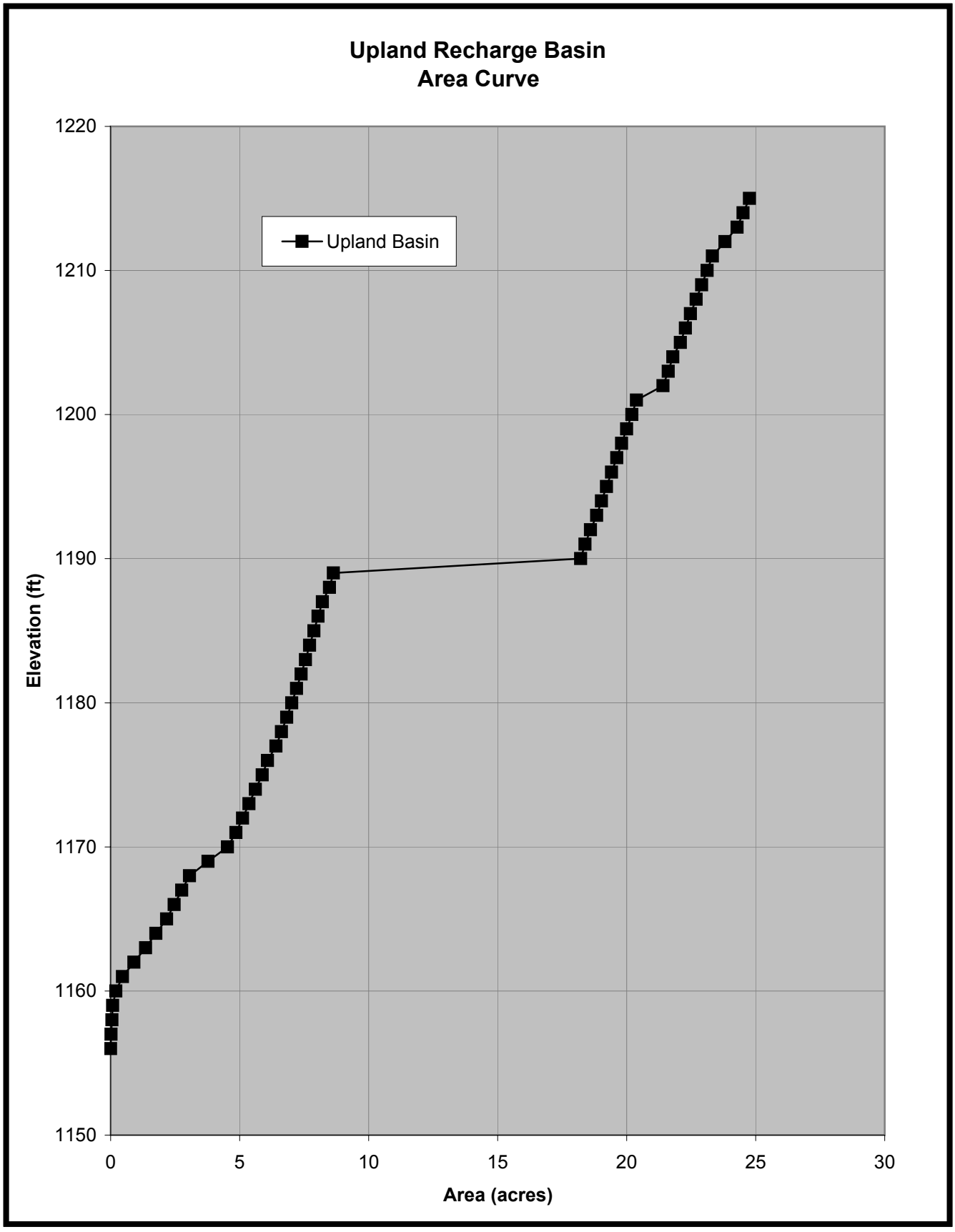

RP3 Recharge Basins
Storage Curves
RP3 Basin 1
RP3 Basin 2
RP3 Basin 3
RP3 Basin 4
Elevation (ft)
965
960
955
950
945
940
935
0
20
40
60
80
100
120
140
Storage (acre-ft)

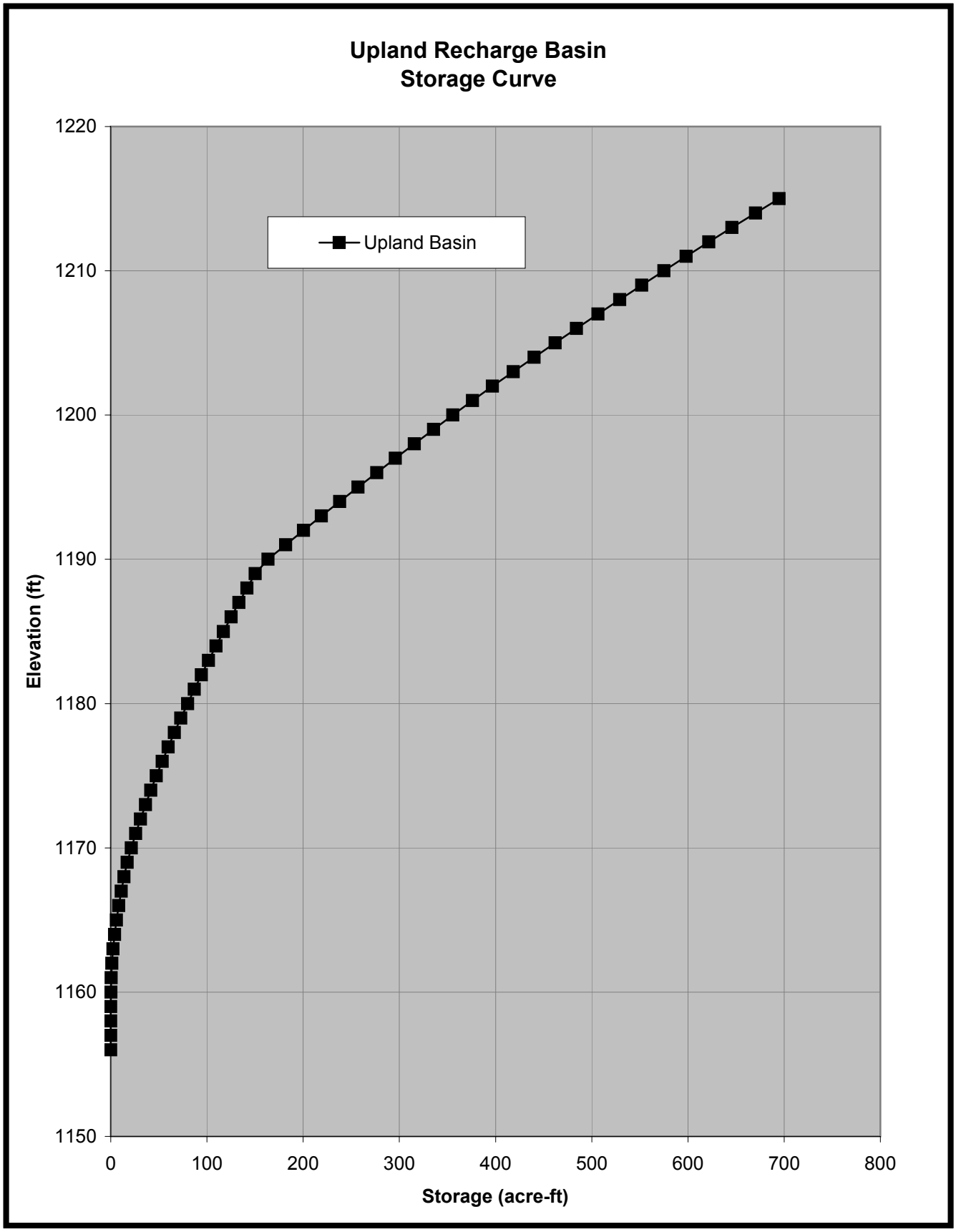

Turner 1 & 2 Recharge Basins
Area Curves
Turner Basin 1
Turner Basin 2
Elevation (ft)
1005
1000
995
990
985
980
975
970
965
960
0
2
4
6
8
10
12
14
Area (acres)

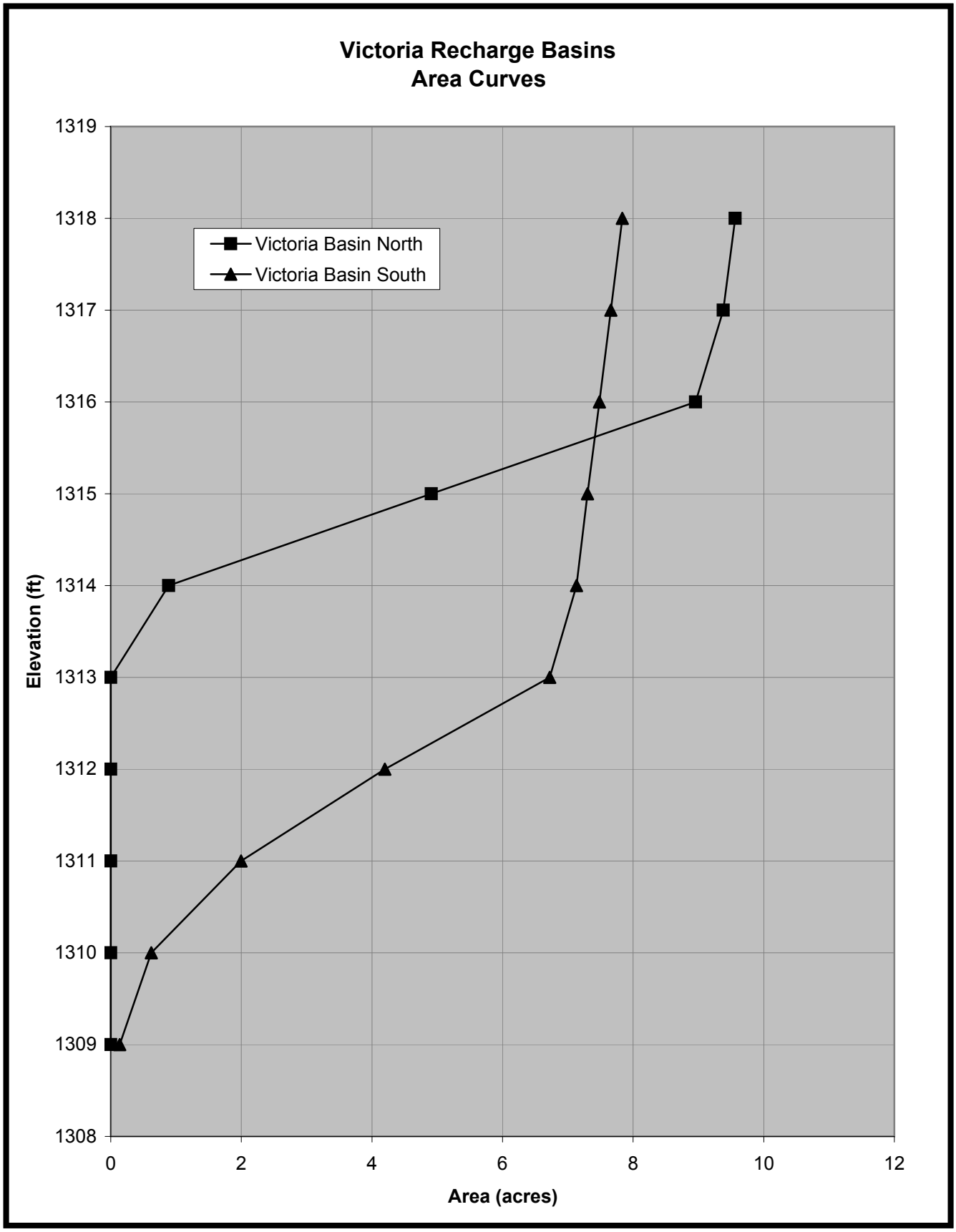

Turner 1 & 2 Recharge Basins
Storage Curves
Turner Basin 1
Turner Basin 2
Elevation (ft)
1005
1000
995
990
985
980
975
970
965
960
0.0
50.0
100.0
150.0
200.0
250.0
300.0
Storage (acre-ft)

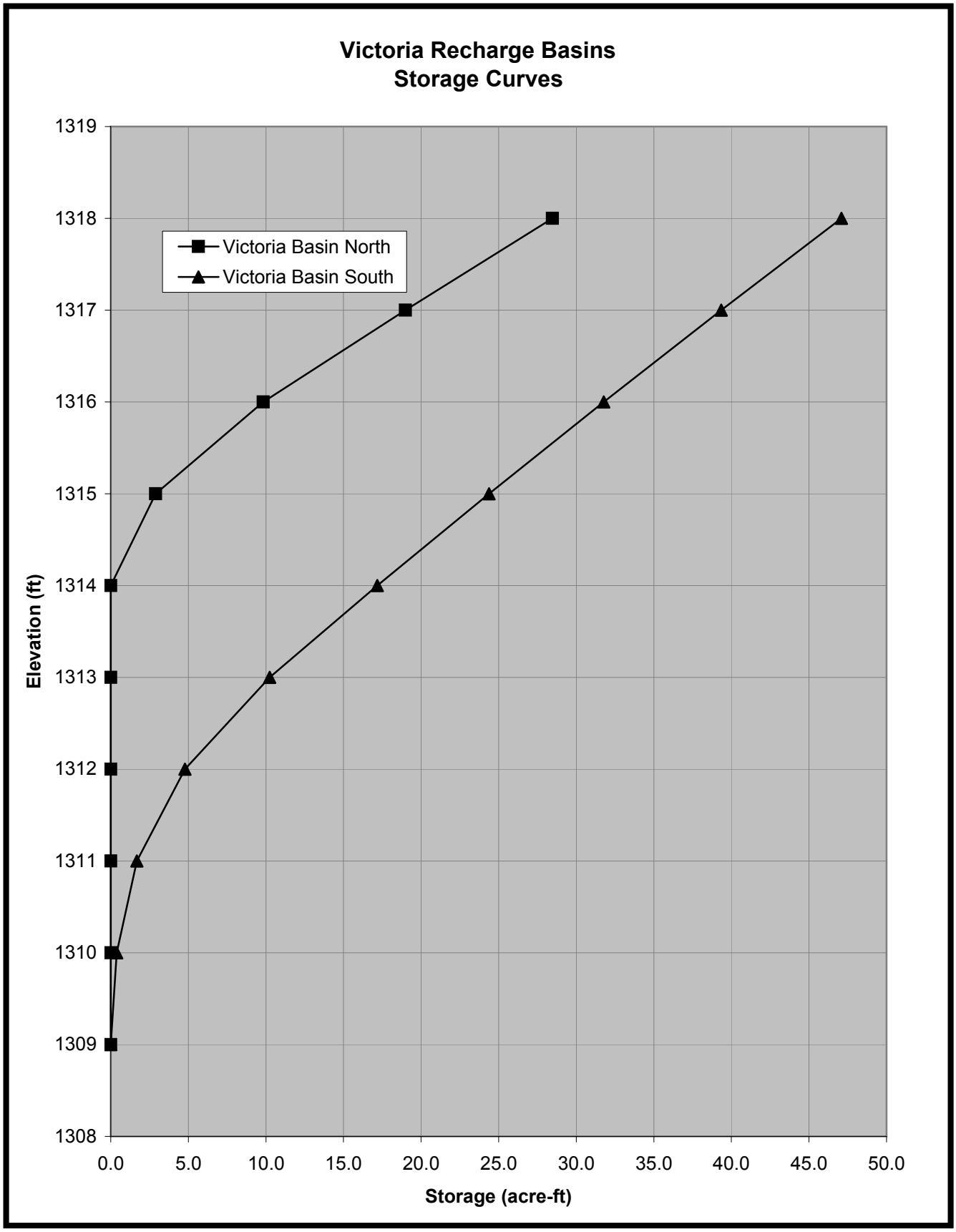

Turner 3 & 4 Recharge Basins
Area Curves
Turner Basin 3
Turner Basin 4
Elevation (ft)
995
990
985
980
975
970
965
960
955
0
1
2
3
4
5
6
7
8
9
10
Area (acres)


Turner 3 & 4 Recharge Basins
Storage Curves
Turner Basin 3
Turner Basin 4
Elevation (ft)
995
990
985
980
975
970
965
960
955
0.0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
180.0
Storage (acre-ft)


Upland Recharge Basin
Area Curve
Upland Basin
Elevation (ft)
1220
1210
1200
1190
1180
1170
1160
1150
0
5
10
15
20
25
30
Area (acres)


Upland Recharge Basin
Storage Curve
Upland Basin
Elevation (ft)
1220
1210
1200
1190
1180
1170
1160
1150
0
100
200
300
400
500
600
700
800
Storage (acre-ft)


Victoria Recharge Basins
Area Curves
Victoria Basin North
Victoria Basin South
Elevation (ft)
1319
1318
1317
1316
1315
1314
1313
1312
1311
1310
1309
1308
0
2
4
6
8
10
12
Area (acres)


Victoria Recharge Basins
Storage Curves
Victoria Basin North
Victoria Basin South
Elevation (ft)
1319
1318
1317
1316
1315
1314
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1312
1311
1310
1309
1308
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
Storage (acre-ft)

EXHIBIT D

SBCFCD EMERGENCY OPERATIONS MANUAL

STORM OPERATIONS MANUAL

FOR

SAN BERNARDINO COUNTY
PUBLIC AND SUPPORT SERVICES GROUP
DEPARTMENT OF PUBLIC WORKS

DURING

STORM PERIODS

Revised 10/17/06

STORM OPERATIONS MANUAL

SAN BERNARDINO COUNTY

DEPARTMENT OF PUBLIC WORKS

2006/2007

PAGE

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ATTACHMENTS

STORM OPERATIONS MANUAL
FOR ACTIVITIES OF
SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS
DURING EMERGENCY PERIODS
2006-2007

1. SITUATION: This Manual has been prepared for the guidance and direction of all employees of the San Bernardino County Department of Public Works during and following emergencies. The Manual covers surveillance, operation and repair of Department facilities, patrol, data collection and data evaluation activities, which may be necessitated at any time during the storm season. Included are storms resulting from general winter storms of varying intensities and duration covering relatively large drainage areas. Also included are summer thunder emergencies, which are typically of high intensity but short duration and are usually confined to a relatively small drainage area.

1a. CONCEPT OF OPERATIONS: Following October 2003 wild fires and the subsequent flood activities, Concept of Operations (FAST-CONOPS) was developed to address potential issues associated with flood, mud and debris flows, and the plan of action of the Flood Area Safety Task Force (FAST). CONOPS provides Guidelines until further notice, due to the unstable condition of the burned areas, and is hereby incorporated into this manual and is attached as Attachment #10.

Similarly, in response to FAST-CONOPS and in order to streamline its response during emergencies, the Department of Public Works (DPW) developed Concept of Operations (DPW-CONOPS), included below. As pages I through X.

This Manual may also be used to respond to other types of emergencies (i.e., fires, train derailments, earthquakes, civil unrest, etc.).

SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS

CONCEPT OF OPERATIONS
(DPW-CONOPS)

STORM OPERATIONS

Prepared by:
Dept. of Public Works

March 2007

Disclosure: *All contents of this Concept of Operations are PUBLIC SAFETY SENSITIVE. The contents are not to be duplicated or distributed to the public without the permission of the San Bernardino County Department of Public Works. For additional information contact the San Bernardino County Department of Public Works at (909) 387-7906.*

CONCEPT OF OPERATIONS (DPW-CONOPS)
for
SAN BERNARDINO COUNTY DEPT. OF PUBLIC WORKS
STORM OPEATIONS

This CONOPS has been prepared for the guidance and direction of all employees of the San Bernardino County Department of Public Works during and following emergencies, specifically storm events. The CONOPS summarizes surveillance, operation and repair of Department facilities, patrol, data collection and data evaluation activities, which may be necessitated at any time during the storm season. It is intended to be used in conjunction with the Public Works Department's Storm Operations Manual. This CONOPS will be modified as watershed conditions change or as needed.

Included are storms resulting from general winter storms (October 15th through April 15th) of varying intensities and duration covering relatively large drainage areas. Also included are summer/monsoon season (June 1st through September 30th), which are typically of high intensity but short duration and are usually confined to a relatively small drainage area.

This CONOPS may also be used to respond to other types of emergencies (i.e., fires, train derailments, earthquakes, civil unrest, etc.). The information included in this document is "situation" and "incident" driven and subject to revision. The Director of Public Works has the ability to modify activities in these guidelines in response to current situations and predicted changes.

Trigger Point Phases and Activities

There are four phases that apply to FAST operations, they are as follows:

Phase 1 – Alert Phase
Phase 2 – Readiness Phase
Phase 3 – Activation Phase
Phase 4 – Enhanced Activation Phase

Although progressive, conditions may require cycles of escalation and de-escalation as well as skipping a phase. The phases are categorized according to rainfall predictions. The official source for weather information will be the San Diego National Weather Service (NWS).

Summer and winter storm activities have different trigger points and warning times due to the nature of seasonal storms. The basic activities for each season are similar. Summer events have a much shorter warning time.

PHASE	UNIT	ACTIVITIES
Pre-Storm Season	*FCD Operations Division*	• Set-up storm routes for patrols. • Check storm patrol vehicles and equipments. • Update Department personnel roster for change in contact phone #s. • Check previous storm patrol members' comments on repair/maintenance of gauges, gates etc. • Review basins, staff gauges, outlet, fence, access road, spillways etc. • Review water recharge operations related to IEUA. • Review and update Emergency (Storm) Operations Manual. • Review and update Storm Operations Chart. • Coordinate informational meeting with Storm Patrol groups. • Coordinate dry-run for Storm Patrol groups. • Assemble reports from basin and facilities inspections. • Obtain pictures of all basins for prior-storm condition documentation for FEMA. • Prepare all basins, dams, and channels for winter operations.
	FCD Planning Division	• Prepare storm route maps and Storm Operations Chart. • Prepare charts and exhibits for DOC as needed. • Prepare and distribute Memo on Sandbag Policy. • Update Cities and other Agency contact #s. • Gather informational pamphlets for distribution. • Take prior-storm condition pictures of all Priority Debris Basins for documentation purposes (and submit to FEMA Coordinator). • Arrange for control and aerial flight of all Priority Debris Basins prior to Sept. 15th. • Coordinate information meetings with all DOC Units to make them aware of their specific duties. • Review general work orders for Storm Patrols and as needed for other activities.
	Trans Operations Division	• Prepare Electronic Message Boards and identify locations for placement. (Note: When FC Ops receives their message boards, this function will transfer the FC Ops.)
	Water Resources Division	• Define trigger points for Alert Phases. • Review the use of alert and warning systems. • Review TENS (Telephone Emergency Notification System) message. and coverage maps. Coordinate with Comm center to make logical flood hazard call groups.

PHASE	UNIT	ACTIVITIES
PHASE 1 Alert Phase	**Summer Storm** Trigger Points	Prior to rainfall, when the NWS San Diego issues a **Special Weather Statement, Hazardous Weather Outlook,** or **Flash Flood Potential Index (FFPI)** that **indicates** potential thunderstorm activity is possible that could produce rainfall rates of **3/4" per hour intensity**.
	Winter Storm Trigger Points	If rain is predicted by NWS San Diego within a **3-day forecast** then Phase 1 activities may be implemented.
	Flood Control Engineer	• Coordinate conference call with NWS, County OES, Sheriff, County Fire, Red Cross, IEUA and other agencies as needed.
	Storm Alert Officer	• Issue FAST Page: o Call Comm Center at 909-356-3805. o Inform that you are calling from Public Works DOC and would like to speak to a Supervisor. o Inform Supervisor that you are calling from Public Works DOC and would like to issue a 9949 FAST page as follows: ▪ "FAST CONOPS is going to Alert Phase 1. NWS has issued a (Flash Flood Watch or…) through (end time). Public Works will monitor weather." or, if de-escalating: ▪ "FAST CONOPS is downgrading to Alert Phase 1. Public Works will be monitoring the weather." • Send email DPW Domain of Phase Alert status as follows: o "FAST CONOPS is going to Alert Phase 1, meaning that a significant storm event has been forecast by the NWS, to occur in our area within the next few days. The DOC and/or Storm Patrols will not be activated at this time. Public Works staff will be monitoring the weather." • Send email to possibly affected City/Town Public Works agencies. • Increase monitoring of weather patterns and begin preliminary planning for a possible flood event. • Ensure that all charts and maps are available in DOC. • Ensure 3-ring binder available in the DOC for Storm Intelligence/Data Evaluation Unit.
	Field Ops Center	• Verify that all water recharge control structures, within District facilities are in OPEN position to allow maximum flood control capacity per the Chino Basin Recharge Facilities Operations Procedure Manual.

PHASE	UNIT	ACTIVITIES
PHASE 2 Readiness Phase	**Summer Storm** Trigger Points	Prior to rainfall, when a NWS San Diego **Special Weather Statement** or a **Flash Flood Potential Index (FFPI) predicts** a storm event that could produce rainfall rates of **¾" per hour intensity,** or a **Flash Flood Watch**. Phase 2 also continues the Phase 1 activities.
	Winter Storm Trigger Points	Prior to rainfall, when a NWS San Diego **Special Weather Statement** or a **Quantitative Precipitation Statement (QPS) predicts** a storm event that will produce **1½" of rain in a 24-hour period or ½" per hour intensity**. This phase could also include a Flash Flood Watch. Phase 2 also continues the Phase 1 activities.
	Flood Control Engineer	• Coordinate conference call with NWS, County OES, Sheriff, County Fire, Red Cross, IEUA and other agencies as needed.
	Storm Operations Center	• Issue FAST Page: o Call CommCenter at 909-356-3805. o Inform that you are calling from Public Works DOC and would like to speak to a Supervisor. o Inform Supervisor that you are calling from Public Works DOC and would like to issue a 9949 FAST page as follows: ▪ "FAST CONOPS is upgrading to Readiness Phase 2. NWS has issued a (Flash Flood Watch/Flash Flood Warning) through (end time). Public Works will continue monitoring the weather." or, if de-escalating: ▪ "FAST CONOPS is downgrading to Readiness Phase 2. Public Works will continue monitoring the weather." • Send email DPW Domain of Phase Alert status as follows: o "FAST CONOPS is going to Alert Phase 2, meaning that a significant storm event has been forecast by the NWS to occur in our area within the next few hours. The DOC and/or Storm Patrols will not be activated unless the storm event reaches our area and/or increases in intensity. All scheduled personnel for DOC and/or Storm Patrols will be contacted regarding their shift, should activation be necessary. Public Works staff will continue monitoring the weather." • Send email to possibly affected City/Town Public Works agencies. • Monitor NWS radar sites, ALERT gages etc. and inform Field Operations Officer and/or Flood Control Engineer of emergency/condition.
	Computer Unit	• Set up Public Works DOC in Hearing Room.

PHASE	UNIT	ACTIVITIES
PHASE 2 Readiness Phase	*Field Ops Center*	• Set-up storm patrol units and approx. time. Notify employees as needed. • Reserve vehicles and check radios inside the vehicles. • Conduct shift change briefing. • Notify Road staff to place Electronic Message Boards, if necessary. • If not already done, drop all rubber dams and open all basin gates.
	Field Ops Officer	• Direct the Field Ops Center to arrange for food in the event of DOC activation.
PHASE 3 Activation Phase	**Summer Storm** Trigger Points	After the rainfall has started, if NWS San Diego issues a Flash **Flood Watch,** with the chance of **Significant Flooding,** or a **Flash Flood Warning,** or any area experiences rainfall of **¾" per hour (per rain gages)** with a forecast that the duration of the rain will be long and/or the intensity of the rain will increase. Phase 3 also continues the Phase 2 activities.
	Winter Storm Trigger Points	After the rainfall has started, if NWS San Diego issues a **Flash Flood Warning** or any area experiences rainfall of **½" per hour (per rain gages)** with a forecast that the duration of the rain will be long and/or the intensity of the rain will increase. Phase 3 also continues the Phase 2 activities.
	FCD Planning / Operations Divisions	• Issue Charge Numbers for DOC and Storm Patrols activation. • Issue Work Orders for repair requests by Operations and DOC.
	Flood Control Engineer	• Coordinate conference call with NWS, County OES, Sheriff, County Fire, Red Cross, IEUA and other agencies as needed.

PHASE	UNIT	ACTIVITIES
PHASE 3 Activation Phase	*Storm Operations Center*	• Issue FAST Page: o Call CommCenter at 909-356-3805. o Inform that you are calling from Public Works DOC and would like to speak to a Supervisor. o Inform Supervisor that you are calling from Public Works DOC and would like to issue a 9949 FAST page as follows: ▪ "FAST CONOPS is upgrading to Activation Phase 3. NWS has issued a (Flash Flood Watch/Flash Flood Warning) through (end time). Public Works DOC is being activated." or, if de-escalating: ▪ "FAST CONOPS is downgrading to Activation Phase 3. Public Works DOC will remain activated." • Send email DPW Domain of Phase Alert status as follows: o "FAST CONOPS is going to Alert Phase 3, meaning that a significant storm event has reached our area. Please note that the DOC and Storm Patrols are now being activated. All scheduled DOC personnel, who have been already contacted, should report to the DOC immediately to begin their shift. All scheduled Storm Patrols personnel are to follow instructions already given." • At each subsequent storm event, the starting shift will change to the next shift (i.e Shift #2) and alternates will be used with experienced staff. • Send email to possibly affected City/Town Public Works agencies. • Monitor NWS radar sites, ALERT gages etc. and inform Field Operations Officer and/or Flood Control Engineer of emergency/condition. • Maintain contact with NWS to determine storm conditions and to provide assessment of local conditions. • Prepare and Issue appropriate TENS message if needed. • Establish Unified Command structure per the FAST CONOPS.
	Storm Intelligence / Data Evaluation Unit	• Print out all weather related information (Forecasts, Watches, Warnings, QPS and/or QPF, etc.) and place in binder. • Coordinate with Storm Com Unit to show areas of concern on wall maps. • Determine available basin capacities based on Storm Patrol Unit information on flow depths. • Provide Weather Forecasts to Storm Com Unit as needed or hourly basis for radio broadcast. • Prepare status reports for the Field Operations Officer.
	Field Ops Center	• Conduct shift change briefing. • Determine if Station 1 needs to go on a shift schedule.
	Storm Patrol Unit	• Brief and de-brief Strom Patrols. • Coordinate Storm Patrols and monitor facility conditions.
	Seven Oaks Dam Unit	• Provide DOC with details of gate settings and water release information as instructed by Orange County. • Monitor releases and notify Cities to close river crossings if warranted.

PHASE	UNIT	ACTIVITIES
PHASE 3 Activation Phase	*Storm Patrol Com Unit (STA 5)*	• Maintain a log of all communication with all Storm Patrol Units. • List of damaged facilities and road closures. • Broadcast Weather Forecasts as needed or hourly basis.
	Field Operations Officer	• Direct the Field Ops Center to call-in Emergency Resident Engineers and assign as needed to problem areas **ONLY** in the event that FCD Operations forces are unable to respond to incidents. • Direct the Field Ops Center to call-in Procurement Unit to assist Operations or Emergency RE's. • Direct the Field Ops Center to call-in R/W Unit to assist in obtaining rights to enter property for post-storm emergency repair work. (NOTE: FCD does not need right-of-entries during an event.). • Provide updates on any road closures and/or status of flood control facilities to the Public Information Officer (PIO).Provide updates on any road closures and/or status of flood control facilities to the Public Information Officer (PIO).

PHASE	UNIT	ACTIVITIES
PHASE 4 Enhanced Activation Phase	**Summer Storm** Trigger Points	During the monitoring of the rain event by the Public Works Storm Watch Engineer, when NWS San Diego issues a **Flash Flood Warning** for **Significant Flooding** or any area experiences rainfall of **1" per hour or more**. Phase 4 also continues the Phase 3 activities.
	Winter Storm Trigger Points	During the monitoring of the rain event by the Public Works Storm Watch Engineer, when NWS San Diego issues a **Flash Flood Warning** or any area experiences rainfall of **1" per hour or more**. Phase 4 also continues the Phase 3 activities.
	Flood Control Engineer	• Coordinate conference call with NWS, County OES, Sheriff, County Fire, Red Cross, IEUA and other agencies as needed.
	Storm Operations Center	• Issue FAST Page: o Call CommCenter at 909-356-3805. o Inform that you are calling from Public Works DOC and would like to speak to a Supervisor. o Inform Supervisor that you are calling from Public Works DOC and would like to issue a 9949 FAST page as follows: ▪ "FAST CONOPS is upgrading to Enhanced Activation Phase 4. Public Works DOC will remain activated." • Send email DPW Domain of Phase Alert status as follows: o "FAST CONOPS is going to Alert Phase 4, meaning that the storm event has become more intense in our area. The DOC and Storm Patrols will remain activated until notified otherwise." • Send email to possibly affected City/Town Public Works agencies. • Monitor NWS radar sites, ALERT gages etc. and inform Field Operations Officer and/or Flood Control Engineer of emergency/condition. • Maintain contact with NWS to determine storm conditions and to provide assessment of local conditions. • Conference call with IEUA to plan the capture of storm water. • Should County Fire request plan for evacuations, develop a plan for re-entry.
	Storm Operations Officer	• Evaluate access to erosion and debris hazard areas (especially in burned watershed areas). Access may be prohibited. • Inform County OES, as soon as possible, to allow time to initiate appropriate contacts such as American Red Cross for voluntary and mandatory evacuations. • Direct DPW rep to go to the County EOC as liaison.
	All Other Units	• Continue Phase 3 activities.

PHASE	UNIT	ACTIVITIES
De-Escalation Phase	*Admin.*	• Inform staff of those who assisted and express appreciation. • Initiate Safety Assessment Teams (SAT) if necessary.
	Storm Alert Officer	• Issue FAST Page: o Call CommCenter at 909-356-3805. o Inform that you are calling from Public Works DOC and would like to speak to a Supervisor. o Inform Supervisor that you are calling from Public Works DOC and would like to issue a 9949 FAST page as follows: ▪ "FAST CONOPS is being deactivated" • Send email DPW Domain of Phase Alert status as follows: o "FAST CONOPS is now being deactivated, along with the DOC and Storm Patrols."
	FCD Planning Division	• Estimate debris in basins from collected Survey data. • Issue Work Orders as needed for clean-up and repair work. • Activate Documentation Survey Unit to obtain video documentation of all damage both flood and road. • Assists in deactivation of the DOC • Collects all DOC data, working papers, maps and files them.
	Storm Patrol Unit	• Collect storm patrol documentation, prepare summary and give to FCD Planning to file. • Return vehicles to the designated Divisions.
	Field Operations Officer	• Initiate SAT field review and request report, including pictures. • Provide updates on any road closures and/or status of flood control facilities to the Public Information Officer (PIO). • Generate Significant Event Report. • Direct Surveyor's to collect data on debris within basins and provide info to FCD Planning Division. • Ends the Unified Command Structure if re-entry is not necessary.
	FCD Operations Division	• Report weekly debris removal quantities. • Issue emergency Purchase Requisitions for work $25,000 or less to contractors to begin emergency clean-up. • Prepare contracts/agreements to continue emergency clean-up if amount exceeds $25,000. • Keep accurate counts of debris being removed from basins for future FEMA reimbursements. • Obtains PM and inspectors from Contacts Division Consultant list as work load and follow on weather dictates.
	Computer Unit	• Return all computers and phones to DOC cabinet.
	Water Resources Division	• Determine the frequency of the storm event.
	FEMA Coordinators	• Collect data from Ops for preliminary damage assessment.

2. MISSION: The Director of Department of Public Works (Flood Control Engineer), or the designated representative, will activate the Department personnel in accordance with this procedure. Normally, sufficient advance warning will be available to implement this Manual in an orderly manner. In the event of night and/or weekend implementation, advice to implement this procedure may be expected from the Field Operations Officer, if a routine emergency intensifies to an impending serious extent. The Storm Alert Officer will, upon arrival, open the building, assume responsibility and implement the Storm Operations Procedure. The Storm Alert Officer will notify the guard station (387-7845) that the building is being opened due to an emergency condition and shall request that the parking lot gates be opened.

2a. Storm Conditions: The Storm Procedure for the Department is in three (3) phases or conditions: Condition Green/1, Condition Orange/2 and Condition Red/3. Each of these phases includes varying degrees of mobilization, patrolling, operation, maintenance and reporting.

Pertinent information of these phases is summarized in the following paragraphs:

2b. Condition Green/1: (DPW-CONOPS Phase 1 or 2). This condition will exist whenever there is a forecast for heavy rainfall. Heavy rainfall is defined by the U.S. Weather Bureau as rainfall of more than 0.30-inches per hour - or rainfall, which would produce a 24-hour total of more than 2.0-inches. Such an emergency would be one which is of expected short duration but sufficiently intense as to warrant surveillance in specific areas. The major operations during this phase will be directed by the Field Operations Center. General duties are outlined in Paragraph 4a. (Refer to Attachment 1, Green Line).

In Condition Green/1 the Field Operations Center will be located in the Department's Transportation Operations radio dispatch area (Station 1) located in Room 120 of the S. Wesley Break Building.

2c. Condition Orange/2: (DPW-CONOPS Phase 3). This condition will prevail when a heavy rainfall situation exists and is forecast to continue for at least 24-hours with anticipated flooding situations developing to the point where complete surveillance, both day and night, is required.

Condition Orange/2 will be activated at the direction of the Flood Control Engineer or Field Operations Officer. In Condition Orange/2, the Field Operations Center and the Storm Operations Center will be located where radio and telephone communications are available in the Department Operations Center (DOC) located in the Department's Hearing Room/124.

Organizational lines leading to unit functions are shown in orange on the chart with names of individuals involved. Under Condition Orange/2, two 12-hour shifts are activated for portions of the Storm Operations Center and Field Operations Center as indicated on the Storm Operations Chart (Attachment 1).

2d. Condition Red/3: (DPW-CONOPS Phase 4). When, in the judgment of the Flood Control Engineer, Field Operations Officer, or the designated Storm Alert Officer, an extreme flood emergency exists or appears imminent, all Department personnel not already committed to flood emergency work will be activated. This situation will be known as Condition Red/3, and names of personnel to perform specific emergency duties at this time are shown at the terminus of red organizational lines on the Storm Operations Chart. It is anticipated that emergency conditions at this stage of operation will be extreme, and additional personnel made available under Condition Red/3 will be distributed between field and office assignments as needed. (NOTE: Manning for progressively severe emergency conditions is in addition to that for previous conditions).

In Condition Red/3, the Field Operations Center and the Storm Operations Center will be located in the DOC located in the Hearing Room/124.

3. EXECUTION: The Storm Operations Chart (Attachment 1) lists Department personnel to be directly involved in all phases of emergency operations and shows both functional and area assignments. Organizational lines, based on the existing or anticipated severity of the emergency, indicate units and names of personnel to be activated for specific duties and shifts. All Department personnel, whether or not named for a specific emergency duty, are expected to be available for assignment, as required.

All shifts will be of 12-hour duration. The starting time for each shift shall depend on the storm event. Overtime, standby and call back will be administered as stated in the Memorandum of Understanding for each labor unit. Time will be charged to job numbers using feature numbers 30 (emergency maintenance) or 32 (emergency maintenance overtime). The use of the two 12-hour shifts for personnel is dictated by the shortage of personnel with knowledge and experience to handle the required duties satisfactorily over three 8-hour shifts. When initiating the double shift arrangement, those individuals who are scheduled to report for night shift duty will normally be released from their regular duties at noon. Personnel scheduled for the day shift will be expected to remain on duty until 1900 hours. Key shift personnel will overlap duty hours sufficiently long enough to assure a thorough exchange of information.

Concept of Operations (Duties and Responsibilities):

3a. Flood Control Engineer: The San Bernardino County Flood Control District was created by the California Legislature under "The San Bernardino County Flood Control District Act", Chapter 73, Statutes of 1939, adopted and effective April 20, 1939.

The District was formed following the disastrous floods of March, 1938 "...to provide for the control and conservation of flood and stormwaters and for the protection of watercourses, watersheds, public highways, life and property in said District from damage or destruction from such waters..."

Toward this end, maintenance, repair and protection of the watercourses, levees and improvements under District cognizance is to be pursued within the limits of the Flood Control Act.

By Legislative action, the District is empowered with broad functions, including flood control and prevention; water supply, its protection, development and conservation; watershed and watercourse protection measures; and other powers in harmony with these interests. The District has wide powers to acquire land, accept governmental assistance and funds, coordinate the interests of local, state and federal agencies, assess local taxes and incur bonded indebtedness.

It is the responsibility of the Flood Control Engineer, to the maximum extent of these resources available, to implement the foregoing Flood Control Act. This procedure will provide an emergency means for attaining that objective.

3b. Storm Alert Officer: The Flood Control Planning and Water Resources Division Chiefs are assigned on a two-week rotation basis (Attachment 1) as Storm Alert Officer. Their assignment will be to act as assistants to, or on behalf of, the Flood Control Engineer and the Field Operations Officers. The Storm Alert Officer will work closely with the Flood Control Engineer and Field Operations Officer, by providing the most current storm conditions. This duty will be in addition to their assignments as indicated on the Storm Operations Chart.

It is the Storm Alert Officer's responsibility to monitor conditions on a 24-hour basis during off-work hours for the period of their assignment. Monitoring may consist of one or more of the following:

(a) A portable computer is assigned to the Storm Alert Officer during his tour of duty for home monitoring of weather information and emergency data. Operation information will accompany the computer. (The portable PC accesses weather reports from Weather Network via an 800 telephone number).

(b) Check weather conditions and forecasts by calling the National Weather Service (NWS). During Condition Orange/2 and Condition Red/3, provide an assessment of the local conditions to the NWS Duty Forecaster. The NWS Duty Forecaster can also provide current weather conditions and forecasts.

The NWS San Diego office is responsible for providing forecasts for the valley, mountains and desert areas adjacent to Apple Valley and Yucca Valley. The NWS Las Vegas office will cover the remainder of the County (Barstow, Twentynine Palms, Needles, etc.).

(858) 675-8705 - NWS Duty Forecaster, San Diego
(702) 263-9750 - NWS Duty Forecaster, Las Vegas
(213) 554-1212 - Los Angeles Recording
(805) 988-6615 - Weather Information, Oxnard - NOAA
(916) 979-3056 - River Forecast Center

(c) Check evening weather reports on TV.

(d) Make use of the computer facilities located in the Hydrology Section. Instructions for the operations of the computer to access weather information are listed on Attachment 6, Page 35. (This will be used for backup situations and when Conditions Orange and Red exist). Water Resources Division receives a fax weather report from Fox Weather that is sent to Transportation Operations Division and is then faxed to the yards and appropriate divisions.

When it appears that a storm capable of producing heavy rainfall is moving into the area, or that rainfall is likely to increase in intensity, the Storm Alert Officer shall establish and maintain liaison with the Field Operations Officer and/or Regional Superintendents.

3c. Field Operations Officer: It will be the responsibility of the Field Operations Officer to maintain liaison between the Flood Control Engineer and the Storm Alert Officer, Field Operations Center and Emergency Information Coordinator. Field Operations Officer will decide when impounded water in basins used for water spreading must be release to provide for storm water storage.

The Field Operations Officer will monitor all activities and determine if federal assistance is required under applicable public laws.

3d. Storm Operations Center: Once a storm condition has been declared, the Storm Alert Officer will assume the responsibility for the Storm Operations Center. It is the responsibility of the Storm Alert Officer to notify and summon the necessary staff to duty to function in the capacities as noted on the Storm Operations Chart.

It will be the responsibility of the Storm Operations Center to assure that the staff is sufficiently briefed and trained in advance so as to minimize confusion and indecision when or if an emergency situation arises which necessitates the implementation of this procedure.

It will be the responsibility of the Storm Operations Center to coordinate the efforts and inputs from the units reporting to the office and to assure that parallel and higher officers are informed of storm emergencies.

It will be the responsibility of the Storm Operations Center to maintain liaison between the following agencies during flood emergency situations:

a. Corps of Engineers, Los Angeles District (213) 452-3440

b. Department of Water Resources, State of California (661) 944-8600
Area Control Center

c. California Disaster Office, Region VI - San Diego Office (858) 565-3490
of Emergency Services

d. Condition Orange/2 – Department of Public Works Transportation Operations Station 1.

e. Seven Oaks Dam (Dam Tender's Field Office) (909) 389-7605
- Orange County Flood Control – Bill Hisey (714) 567-6292
(714) 567-6275
- Riverside County Flood Control – Steve Thomas (951) 955-1280

f. County Emergency Operations Center at Rialto Airport - Emergency Information Coordinator, located in County Emergency Operations Center, when County Emergency Operations Center activates.
(909) 356-3998

g. Chino Basin Recharge Project
- IEUA – Garth Morgan (909) 993-1721

h. ED/Public Services Group, Assistant County Administrator, (909) 387-4532 - As Necessary

NOTE: See Attachment 4, Page 27, for additional "Emergency Telephone Numbers" and Section 5a, Page 12, "Liaison With Other Agencies".

The Storm Operations Center will summon alternate individuals to duty to substitute for absentees or assist as required during storm periods.

During Conditions Green/1 and Orange/2, Storm Operations Center staff will plot problem areas on charts and maps (Attachment 3, Page 26), and will assist the Data Evaluation Unit in this duty during Condition Red/3.

After the Storm Alert Officer has established a functioning Storm Operations Center staff, with assigned duties, he is to monitor the emergency intensity at that time.

3e. Emergency Information Coordinator: It will be the responsibility of the Emergency Information Coordinator to maintain liaison with the County of San Bernardino Emergency Operations Center, which is to be activated during extreme emergency or disaster conditions.

Personnel assigned to this station will act as information agents between the Flood Control Engineer or designated representatives in charge of emergency operations and the County Emergency Operations Center. Denise Benson, Manager, Office of Emergency Services, is located at the County Emergency Operations Center at 1743 Miro Way, Rialto, CA, (909) 356-3998.

This station will be manned at the discretion of the Flood Control Engineer or upon activation of the County's Emergency Operations Center and will continue until the emergency ceases to exist.

Reference material will be maintained by the Department at the space assigned, as necessary, including District systems maps, project overlays, telemetry and gauging station maps and County road maps. A hand-held portable 800 MHz radio will be provided by the Department as needed to keep the Coordinator informed of latest occurrences.

Routine inquiries from the press, the public, or other concerned agencies, will be referred to the County Emergency Operations Center and will be handled by that office. Emergency details will be channeled to the Department representative at that post who will provide the assigned Emergency Operations Officer with current information. (Higher priority queries will normally be referred to the Flood Control Engineer).

4. ADMINISTRATION AND LOGISTICS: The Field Operations Center, Storm Patrol Unit, Storm Patrol Communications Unit (Station 5), Storm Intelligence Unit, and Data Evaluation Unit will be responsible for duties listed and will be implemented at the direction of the Field Operations Center and the Storm Operations Center.

4a. Field Operations Center: The basic responsibility assigned to the Field Operations Center is to assure the operation of Department facilities and provide such repairs as are feasible during storm periods. During a Condition Green/1 situation, only such mobilization is required as is necessary to perform the Field Operations Center precautionary functions (see Condition Green/1, Attachment 1, Storm Operations Chart). The designated field operations forces will patrol their areas to determine and assure readiness of all systems to accommodate storm flow conditions. The specific responsibility of these field units should include the following:

(1) Spreading grounds headworks and diversion works that are equipped with control gates should be set to effect channel flow only, unless some diversion is desired, in which case an operator must be continuously on duty at the works during emergency flow.

(2) In accordance with adopted Basin Operation Plan, insure that flood control basins fitted with gates and channels fitted with rubber dams, which are manually controlled or SCADA controlled, as part of the Chino Basin Facilities Improvement Project, are set to provide maximum flood control capacity.

(3) Side drainage gates should be made debris free and should be checked for proper seating.

(4) Equipment and material should be readied for use at debris accumulation locations or at other locations where trouble might occur.

(5) Maintain photos of facilities before the event. Supervisory personnel assigned to each Zone/Yard are responsible for the operation of all Department facilities within their Zone/Yard, including regulation of water control gates controlling basins, spreading grounds, channels and County Maintained Road System. General direction for such regulation will be provided by radio through DPW Station 1; however, in emergency situations, such as a basin which is filling rapidly and will soon overflow, cognizant field personnel will take precautionary or corrective action at once and immediately report their action to the Field Operations Center. The latter office will then forward this report to the Field Operations Officer.

The Field Operations Center will provide and mobilize labor forces, equipment and material as practical to minimize hazards to life and damage to private or public property.
During storm operations, rental equipment (such as trucks, dozers, cranes, drag lines, clam shells, loaders, etc.) may, with approval from the Flood Control Engineer and/or his designee, be rented from contractors, equipment suppliers and owner-operators. In a severe storm, when major streams might be overflowing or breaching their banks or roads damaged, and available publicly owned equipment has been committed, the supply of outside rental equipment could prove valuable. A current list of contractors and owner-operators having heavy equipment for possible use is maintained by the Transportation Operations Division, Procurement Support, together with addresses, phone numbers and equipment data. In absence of the Equipment Unit, rental equipment should be obtained through the Field Operations Center, as per the Storm Operations Chart.

The Field Operations Center will be staffed by personnel of the various Divisions, assignments being made on the basis of two (2) 12-hour shifts. In Condition Green/1 this control center will be located at Station 1.

The Storm Operations Chart for Field Operations Center also shows Maintenance and Construction Supervisor I or II classifications or an acting supervisor to be assigned in direct charge of each 12-hour zone shift. In addition, a work crew is assigned to duty in each Zone/Yard or multiple zone area, with a crew-chief in charge. The work crew will normally work a day shift, but its hours are subject to adjustment as dictated by the emergency situation. In special situations requiring round-the-clock activities, the work crew will also be divided into a day and a night shift.

In Condition Orange/2 and Condition Red/3, the Department's Field Operations Center and the Storm Operations Center will be located in the DOC, Hearing Room/124. The Storm Patrol Communications Unit (Station 5) has dual responsibilities: one part pertains directly to the Department's Field Operations Center for problem areas during the storm; the other part to the Storm Operations Center for data information regarding problem areas and records.

4b. Field Operations Communication Unit (Station 1): It will be the responsibility of the Field Operations Communications Unit (Station 1) to coordinate with the Field Operations Center by handling emergency radio calls and utilizing the radio to direct Transportation and Flood Control Operations, receiving emergency phone calls and relaying messages, as necessary, and maintaining an accurate log of time (24-hour clock), location and events. (NOTE: This Unit will refrain from dispensing information to outside agencies or individuals. Such queries will be referred to the Flood Control Engineer, Emergency Information Coordinator or Field Operations Officer as appropriate).

The normally assigned working area will be in the Department's Transportation Operations Division.

The personnel shall consist of a minimum of two (2) facility-oriented employees: one (1) for radio operation and one (1) for operation of the telephone. A third person (preferably secretarial) will be assigned whenever possible or necessary to maintain a log of events.

Any malfunction to radio equipment will be promptly reported to the Equipment Unit, Communications and Emergency Operations Center.

The post-emergency duties of this unit will be to prepare the logs in final draft form for record purposes.

4c. Storm Patrol Unit: The Storm Patrols (Routes A, B, C, D, E, F, G, H and I) will physically report to, operate out of, and be under the direction of the Field Operations Center, as shown on the Storm Operations Chart. The Storm Patrol Unit will be responsible to see that the Storm Patrol Routes are adequately manned and equipped. Storm Patrol Route J will be under the direction of the Desert Regional Superintendent.

The duties and responsibilities of the Storm Patrols are detailed in separate packages, complete with route maps, checklists, etc., for each Storm Patrol Route. An outline is included as Attachment 2, Page 19.

4d. Seven Oaks Dam: The damtender shall maintain regular communication with Station 5 with status of storm event around the dam. The damtender shall operate according to the provisions of the Seven Oaks Dam Emergency Action Plan dated June 2001.

4e. Storm Patrol Communications Unit (Station 5): This Unit will work under the direction of the Storm Operations Center and will be activated at the start of Condition Orange/2 or as conditions may warrant. This Unit will be located in the DOC during Conditions Orange/2 and Red/3.

The base radio operator is to keep written, detailed records and notes pertaining to all emergency activity. This will include, but not be limited to, recorded complaints on the telephone, conversations between Operations personnel, Hydrology personnel, Supervisory personnel, Patrols, emergencies, movement of equipment and other information received. The base radio operator is to keep a continuous log of all Storm Patrol personnel who are in the field, will transcribe notes and messages and maintain a continuous computer log of time and events. The base radio operator is to call all Storm Patrol Units in the field at 1-hour intervals and advise Field Operations Officer immediately if any unit fails to respond.

4f. Storm Intelligence Unit: The Storm Intelligence Unit will work under the direction of the Storm Operations Center and will be fully activated under Condition Orange/2. (It can expect to be partially activated under advanced Condition Green/1 situations). In accordance with adopted Basin Operations Plan, Storm Intelligence Unit shall advise the Field Operations Officer on capturing of storm water in recharge basins.

The normally assigned working areas will be in the Water Resources Division's Hydrology Section and the DOC.

The Storm Intelligence Unit will consist of a Weather Data Section and Field Data Section.

4f(1) Weather Data Section: This Section will operate under the direction of the Storm Operations Center/Officer and will be responsible for collecting and/or obtaining hydrologic data from the District's "Alert" and Telephone Interrogated Systems, District Cooperative Observer Precipitation Stations, U.S.G.S. Stream Flow Stations, as well as the Corps of Engineers Rainfall Reporting Network and Dam Report Network. Coordination will be maintained with the mentioned agencies so that a maximum amount of data is available to all parties. Whenever required, one secretary for taking phone calls, obtaining and relaying weather data, and distributing facsimile copies to the County Emergency Operations Center. All information will be date/time stamped and bound in order for review.

This Section will closely monitor weather reports and forecasts. Records will be maintained on precipitation and runoff data. Summaries of all vital inputs will be submitted to the Flood Control Engineer, Storm Operations Center and Field Operations Center.

4f(2) Field Data Section: This Section will operate under the direction of the Storm Operations Center/Officer.

Field Data Section personnel will be responsible for making direct stream flow measurements and the operation of the District's stream flow, telemetry and precipitation gage networks, to the maximum extent possible and consistent with personnel safety.

Special equipment required will include: stream velocity measuring equipment, powerful flashlights, electronic test equipment, camera, inclement weather gear and a radio-equipped vehicle.

Measuring and recording hydrological equipment will be maintained to the maximum extent possible, consistent with personnel safety.

Post-emergency procedures will include the preparation of data and records for use in preparing the emergency report.

4g. Data Evaluation Unit: This Unit will be activated for Condition Orange/2 and Condition Red/3 by the Storm Alert Officer and will continue to function as long as that emergency condition prevails.

The normally assigned working area will be in the DOC located in the Hearing Room.

The specific duties of this Unit include: obtaining drawings, plans, prints and making appropriate engineering sketches, as required by higher authority.

Since prints or copies of papers and/or drawings may be required on an expeditious basis, it will be the responsibility of personnel assigned to this Unit to assure that emergency access to necessary reproduction equipment is available, and that they are familiar with the care and operation of such equipment. Keys for the Reproduction Room and copy machines are available from a Field Operations Officer. Additionally, copy machines are available in most Divisions.
This Unit will maintain and assure the availability of the most recent data and forms necessary to perform tabulations and calculations. This includes point flow graphs indicating the rate of flow for any measured flow depth at each checkpoint on each route.

The Unit will maintain and assure the availability of the necessary District facility maps and overlays for locating and exhibiting problem areas during a Condition Red/3 emergency (Attachment 3, Page 26).

The Unit will provide during storms and floods, on a highest priority basis, the Storm Alert Officer with calculated rates of flow, time of measurement and locations which shall be marked on blank overlay maps to pin point problem areas and areas of increasing activity.

The post-emergency duties of this Unit will be to compile and prepare any data, records and sketches in final form; to accumulate and assemble the collection flow data from the total storm, and to assist in the preparation of the final draft form for record purposes. Also, reference graphs, forms, maps and overlays will be returned to the Water Resources Division.

4h. Documentation Survey Unit: This Unit can be activated under Condition Green/1, Condition Orange/2, or Condition Red/3 by the Field Operations Center or the Field Operations Officer and will work under their direction for the duration of the emergency.

The purpose of this Unit is to establish video and other photographic documentation of emergency conditions, storm flows and damage as it is happening or as soon thereafter as conditions permit. This information is required during all emergency events to assist in establishing damage estimates, damaged areas and overflow limits, and to document Department operations during the emergency. The prime function is video documentation for immediate playback and review of field conditions and operations by Department personnel and others with a need to know.

Additionally, this Unit will prepare photographic documentation and field notes of emergency information, storm overflow, damage, restoration and other pertinent data to be included in Department files and the Emergency Report.

The Unit will consist of two 2-person teams equipped and trained in the use of video and digital 35mm cameras. One team will be designated as Flood Control documentation and one team will be designated as Transportation documentation. Each team will be manned by personnel familiar with various aspects peculiar to the specific team to which they are assigned. Documentation assignments will be made on a priority basis, with an effort to assign teams to their specialty, but cross coverage assignments can be made. When activated, the teams can serve as roving patrols at the discretion of the Field Operations Officer.

Post-emergency duties may include preparation of any maps, exhibits and presentations required to document the emergency event for later use in the Emergency Report, emergency and restorations funding requests, claim litigation, and historic records.

5. COMMAND, CONTROL AND ADMINISTRATION: The Department Operations Center (DOC) is located at the S. Wesley Break Center, 825 East Third Street, San Bernardino, California, in Hearing Room 124. This DOC will be activated during Condition Orange/2, and Condition Red/3 when emergency situations require the involvement of Department of Public Works.

This DOC is equipped with; one (1) portable 800 MHz radio base station (Station 5), four (4) computers, eight (8) telephones, and an emergency lighting system. Additionally, this DOC will be staffed with appropriate personnel to manage the necessary functions of the DOC. Departments/Sections/Yards from outside the DOC can communicate with these functions/units during periods of DOC activation by using the telephone numbers that are listed in the table below:

FUNCTION/UNIT	TELEPHONE NUMBER	GLOBAL LIST USER ACCOUNTS
1. Flood Control Engineer	(909) 387-8022 or (909) 387-8032	DPWEOCADM
2. Field Operations Officer	(909) 387-8028 or (909) 387-8035	DPWEOCADM
3. Storm Alert Officer	(909) 387-8030 or (909) 387-8034	DPWEOCADM
4. Field Operations Center	(909) 387-8023 or (909) 387-8036	DPWEOCINT
5. Storm Intelligence Unit	(909) 387-8023 or (909) 387-8036	DPWEOCINT
6. Storm Patrol Unit	(909) 387-8025 or (909) 387-8026	DPWEOCCOM
7. Storm Patrol Communications Unit	(909) 387-8021 or (909) 387-8037	DPWEOCCOM
8. Data Evaluation Unit	(909) 387-8033 or (909) 387-8029	DPWEOCDAT
9. Finance Unit	(909) 387-8027 or (909) 387-8031	DPWEOCFIN

Furthermore, Departments/Sections/Yards can communicate with DOC staff by E-mail. An exchange mailbox is displayed on the Global Address List for five (5) DOC functions/units. To communicate with these functions/units by E-mail please, use the Global Address List User Accounts that are listed in the table above.

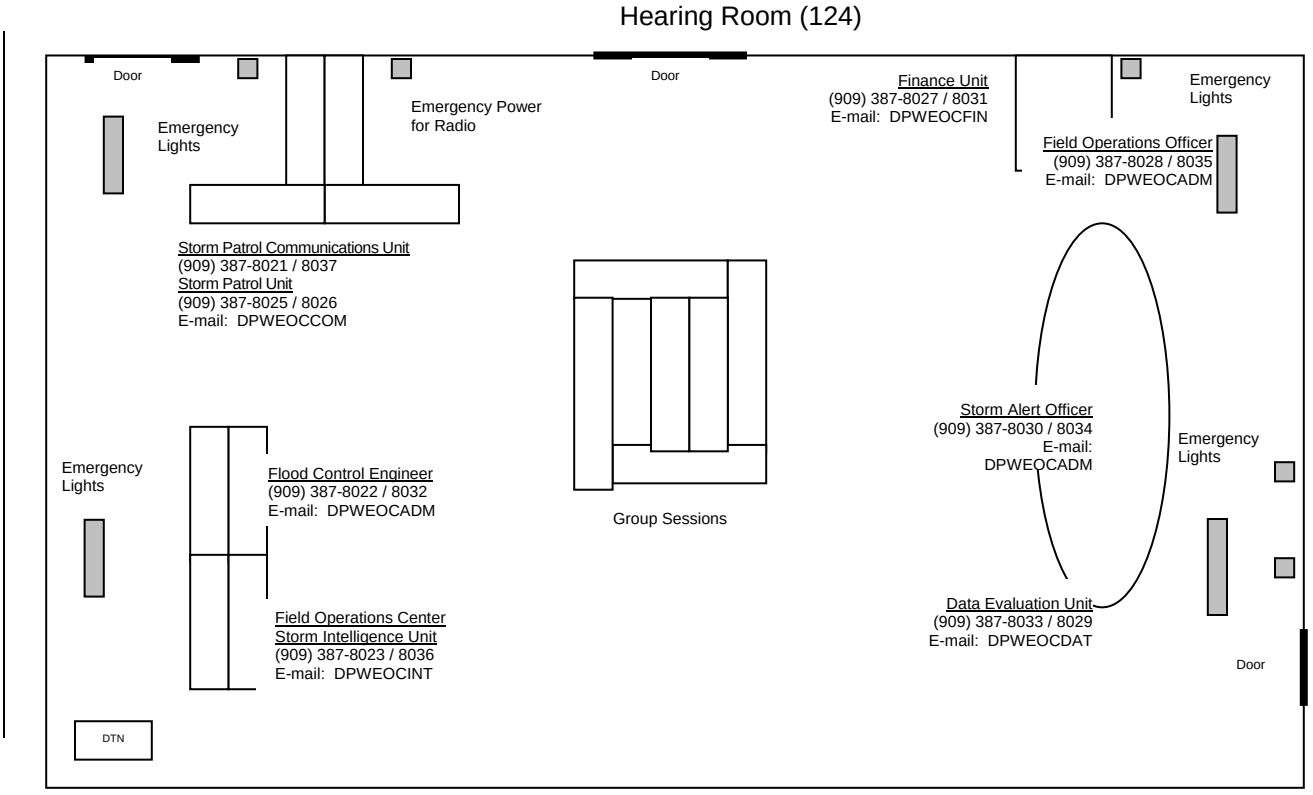
DEPARTMENT OF PUBLIC WORKS EMERGENCY OPERATIONS CENTER (DPWEOC)

EMPLOYEE ROSTER

Flood Control Engineer	⇒	Vana Olson	Storm Intelligence Unit	⇒	Mike Fox
Field Operations Officer	⇒	Mazin Kasey	Data Evaluation Unit	⇒	Jim Borcuk
Field Operations Officer	⇒	A. Ignatius	Storm Patrol Unit	⇒	Ken Eke
Field Operations Officer	⇒	Vacant	Storm Patrol Communications	⇒	Jean Hansen
Storm Alert Officer	⇒	M. Walker/B. Biggs	Finance Unit	⇒	D. Kang/Rudy Wibawa

Note:

- Employees assigned to the below listed positions may not always be on location in the DOC. During periods of time when employees are absent from the DOC, their assigned telephone inside the DOC will be forwarded to a telephone at their location/job site.
- Emergency Lights – battery or generator powered
- Emergency Power for Radio – Emergency 120 volts electric circuit for 800 MHz radio base station (generator powered).
- Computer Services shall maintain a list of compatible laptops as a source of battery power for DPWEDC Laptops.



5a. Liaison With Other Agencies

The following is a guide for the Storm Alert Officer, in accordance with Section 3d, to be used in maintaining liaison with concerned agencies under Emergency situations.

5a(1) Los Angeles District, Corps of Engineers
911 Wilshire Boulevard
Post Office Box 2711
Los Angeles, CA 90017-3401

District Engineer, Colonel Alex Dornstauder
Phone: (213) 452-3961

(213) 452-3349, Chief of Construction and Operations, George Beams
(213) 452-3447, Emergency Operations, Ed Andrews
(213) 452-5474 or (916) 557-6859, Human Resources - Barbara Warren

The Corps' "Natural Disaster Activities" memorandum (revised annually) embodying "Extracts for Cooperating Agencies", is available in the Department's Field Operations Center. It contains pertinent information regarding flood-fighting activities and coordination thereof between the Corps of Engineers and local agencies, such as San Bernardino County Flood Control District.

5a(2) Department of Water Resources, State of California
Southern District Office
P.O. Box 29068, Glendale, Calif., 91209-9068
770 Fairmont Avenue
Glendale, California 91203-1035
Phones: (818) 500-1645: Mark Stuart, ext. 222
Chuck Keene, ext. 235

The Department of Water Resources publication "Flood Emergency Operations Manual" is available in the Department's Field Operations Center. The Manual contains flood-fighting information of all types, including names, addresses and phone numbers of State and local officials involved in flood emergency situations.

5a(3) Office of Emergency Services
3650 Schriever Avenue
Mather, California 95655
Phone: (916) 845-8510 - Director
(916) 845-8911 or (800) 852-7550 24-hr Warning Center

This office is organized for the purpose of coordinating efforts of local flood control agencies during periods of disaster or emergency. Requests from local officials for declaration of a State of Disaster are referred to the Governor's Authorized Representative of the Office of Emergency Services for action.

5a(4) Office of Emergency Services
Denise Benson, Manager
1743 Miro Way, Rialto
Phone: (909) 356-3998
Fax: (909) 356-3965

Phone: (909) 356-3805 c/o Fire Dispatch
Emergency: (909) 356-3811
Fax: (909) 356-3809

Commcenter, 1771 Miro Way, Rialto
Communications Dispatch Center (24 hours) Phone (800) 472-2376

5a(5) Office of Emergency Services (O.E.S)
State of California
Area Coordinator for San Bernardino County Fire Services
Pat Dennen, Chief, Central Valley Fire District, Admin.
157 W. 5th St., 2nd Floor, San Bernardino, CA 92415-0451
Phone: (909) 356-3811(Dispatch)

The State O.E.S. will normally be contacted by the County Emergency Operations Center when their assistance is required. The State O.E.S. has access to heavy equipment, which may be required in emergency situations.

5b. County Emergency Operations Center
DATA REQUIRED FOR COUNTY E.O.C. OPERATIONS

1. Gathering of basic data relating to situation of emergency.
2. Maintaining event and activity log.
3. Notification of selected department of E.O.C. activation.
4. Time period before arrival.
5. Information gathered for deciding initial action.
6. Recall, etc.
7. Preparing information to be released to public.
   a. Water, food, etc.
   b. Gathering, collecting, staying in certain areas.
   c. Controlling County resources.

The above will take time. Delay will be the hardest to live with during initial disaster or preparation.

Traffic and road problems will be of major importance.

Gathering of information for submission to State O.E.S. will be the next major problem.

Preparing data for Board of Supervisors will be next requirement.

Discussion of problems to respond with joint efforts.

Problems facing County E.O.C staff:
Relief forces trained/oriented.
Updated resources/materials on hand.

Is information gathered -- enough to support declaration of local emergency for County requesting State and Federal assistance.

Periodical meetings of Departments involved for updating situation.

News releases -- available to inform public.

5c. Post-Emergency Activities and Responsibilities

5c(1) Photographs:

At the end of an emergency, or during its concluding phases, selected personnel will be assigned, on a priority basis, to photograph damage problem areas and damages resulting therefrom, including the collection of data to be used in compiling claims for reimbursement for damages in accordance with the provisions of Public Law 93-288, or other applicable statutes.

Cameras will be provided for photographing extraordinary storm caused conditions or other damages. Personnel using privately owned cameras, with the approval of their Supervisors, will be furnished with film or reimbursed for film costs incurred. All digital and still photos shall be submitted to the Storm Patrol Unit for record keeping. Naming convention shall be consistent with established guidelines.

Photographic documentation of emergency conditions will be submitted to the Chief of the Flood Control Planning Division, for use in preparation of the formal Emergency Report. Copies of road damage photos shall be supplied to Transportation Operations and Transportation Program Management Divisions for filing Road FEMA, and FEHR claims. Other Divisions may, as required, obtain copies.

5c(2) Records and Reports:

As stressed throughout, the chronological documentation of events, decisions, activities, etc. are of the utmost importance. This data is required, not only for the preparation of the formal Emergency Report, but to provide specific after-the-fact information required by all Divisions of the Department. It is incumbent upon all Supervisory and Management personnel to assure that all records, reports, data, etc., for which they, or their subordinates are responsible, are accurate, complete and properly assembled before their Emergency duties are officially terminated.

Completed records and reports will be submitted to the Chief, Flood Control Planning Division, for preparation of the formal "Emergency Report".

5c(3) Final Storm Report:

A Storm Report will be filed on each significant event (storms greater than 10-year) which occurs. The Report will be due within 30 days after the event. The Flood Control Planning Division will be the lead Division responsible for the preparation and publishing of the Report. Assistance will be given by the Flood Control Operations Division, Transportation Operations Division, Water Resources Division and Transportation Program Management Division. Transportation Operations Division and Flood Control Operations Division will furnish information on damage to Department facilities, photographs and information of an operational nature. Water Resources Division will provide data on rainfall, streamflows and related items. Transportation Program Management Division will assist in the writing of the Report. Responsibility for the format and content will lie with the Flood Control Planning Division. The Flood Control Planning Division will obtain photographs and other information gathered during the course of the emergency from the documentation unit and the Maintenance Yard Supervisors. The Flood Control Planning Division will be responsible for dispatching special teams of photographers and information gatherers to locations where damage has occurred. Photos, maps and other documentation will be made and cataloged for future use and or inclusion into the emergency report. (Photos must be taken prior to repairs, as well as after, per Federal disaster aid requirements.) In order not to duplicate the effort of the patrols, the dispatch of special teams will be coordinated with the person responsible for dispatching patrols. Where possible, the special teams will be used to supplement or take the place of the patrols on certain routes or portions of certain routes. If deemed necessary by the Storm Alert Officer, the special teams may be called on to report on matters other than those that they are specifically sent out for.

The Storm Report is intended to contain information useful in compiling restoration claims or in settling claims against the County and the Department. The Report shall contain an estimate of damages to Department facilities and to other properties in the community. It shall contain such information as is available at the time of the filing of claims for reimbursement, whether or not a disaster was declared, and such other information as may be useful when referred to in the future. The completed Storm Report will be filed in the Flood Control front file, with copies to be distributed as appropriate.

5d. Cost Accounting Procedures

Major emergencies may cause great damage, justifying state and federal disaster declarations. Such declarations make the costs of cleanup and repairs eligible for reimbursement of a major part of the costs from federal and/or state disaster programs.

These disaster programs are intensely regulated and all expenditures must be verified for eligibility and audited by state and federal agencies. Therefore, in order to insure maximum reimbursement it is imperative that all costs incurred in connection with storm related activities are properly coded.

TRANSPORTATION/FLOOD CONTROL OPERATIONS DIVISIONS

Routine Storm (Non-Disaster)

Unless specific work order numbers are established as set forth under the "MAJOR EMERGENCIES" section below, Transportation/Flood Control Operations personnel shall charge to appropriate maintenance job numbers, sections and features as follows:

Transportation System -

Job Number - use the 6 digit road number found in Maintained Road Book

Sequence - use the 3 digit code sequence following the road number in the Maintained Road Book

Activity Code - use Activity Code 6050 for regular time emergency maintenance and Activity Code 6065 for overtime emergency maintenance

Flood Control System -

Job Number - use 98 as the first 2 digits to identify it as emergency maintenance

- use the appropriate zone number 1-6 as the third digit

- use the 3 digit "project number" found in the Flood Control System Number Index for the last 3 digits

Section - use the 2 digit number called "facility reach" in the Number Index

Activity Code - use Activity Code 6050 for regular time emergency maintenance and Activity Code 6065for overtime emergency maintenance

Major Emergencies

When it appears that a disaster type event (storm) is involved, work order numbers will be assigned for each identified damage location or area to facilitate accounting of the costs and the preparation of claims for state and federal reimbursements. Road work order numbers are 6 digits beginning with "H" and Flood Control work order numbers begin with "F". Charges made to both Trans and Flood Control work covered by work orders are to be coded as follows:

Job Number - use the 6 digit work order number assigned

Section - none needed on work order projects

Feature - use the appropriate feature to describe the work being done from the Master Features List in the PSG Accounting Manual. Commonly used feature numbers that conform with the federal disaster program categories are:

Feature 9000 Disaster-Debris Removal-FEMA Category A

Feature 9200 Disaster-Emergency Protective Measures
FEMA Category B

Feature 9400 Disaster-Emergency/Temporary Repairs
FEMA Category B

Feature 9100 Disaster-Permanent Work
FEMA Category C (Road)
Category D (F.C.D.)

Work order numbers will normally be issued whenever it appears that costs at any location will exceed $3,000. Geographical areas may be combined into area-wide projects for widespread debris removal (FEMA Category A) or emergency protective work (FEMA Category B), except for on system roads covered under FEHR (roads that exceed rural minor collector level).

For Federal reimbursements, yards must maintain organized documents including updated daily schedules, damage photos with date and location noted, and corresponding photo negatives.

OTHER DIVISIONS

When personnel from outside the Transportation and Flood Control Operations Divisions are engaged in emergency watch, patrolling, damage assessment or other area-wide activities during emergency periods the costs shall be charged to the following transportation and flood control accounts as appropriate:

Transportation System

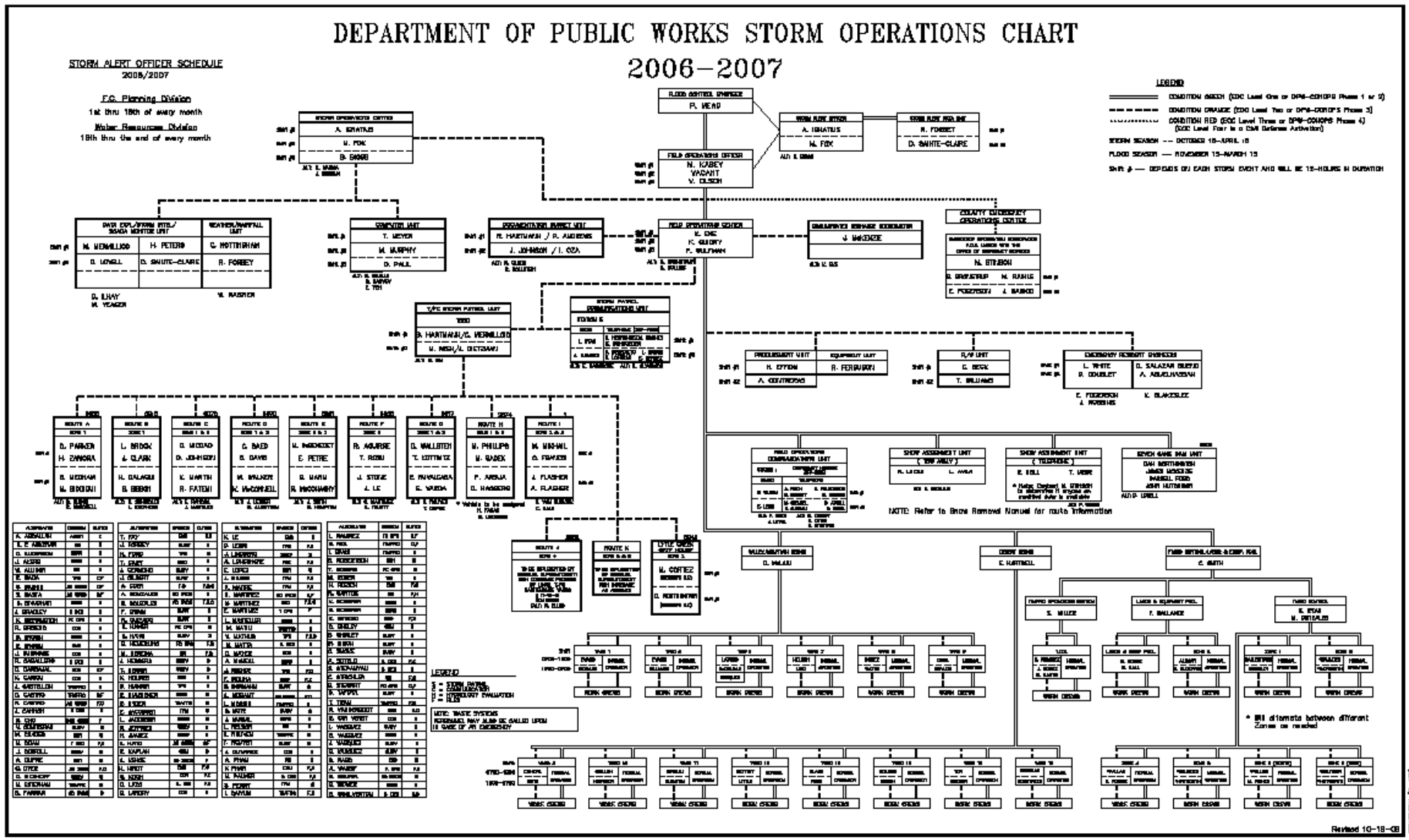
Job Number	-	H09000 (to be used countywide)
Section	-	none needed
Feature	-	use 6050 for regular time and 6065 for overtime

Flood Control System

Job Number	-	981000 Zone 1 982000 Zone 2 983000 Zone 3 984000 Zone 4 985000 Zone 5 986000 Zone 6
Section	-	none needed
Feature	-	use 6050 for regular time and 6065 for overtime

If the activity involves more than one zone or a combination of transportation and flood control activities, charges shall be prorated between the appropriate job numbers involved. No fund, cost center or O/A codes are required with these job numbers.

DEPARTMENT OF PUBLIC WORKS STORM OPERATIONS CHART
2006–2007



ATTACHMENT 2
SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS
STORM PATROL GUIDE
STORM PATROL OUTLINE

The following pertains to the duties and responsibilities of the personnel assigned to, or designated as "Alternates" for, Storm Patrols:

1. The Storm Patrols (Routes A, B, C, D, E, F, G, H and I) will physically report to, operate out of, and be under the direction of the Storm Patrol Unit, as shown on the Storm Operations Chart. The Storm Patrol Unit will be responsible to see that the Storm Patrol Routes are adequately manned and equipped. Storm Patrol (Route J) will physically report to the Desert Regional Superintendent.

2. Storm Patrol Routes (A, B, C, D, E, F, G, H and I) in the Valley area are shown collectively on an overlay of the southwest portion of the San Bernardino County Flood Control District Facility Maps (Scale 1 in. = 2,000 ft.), and Storm Patrol Route "G" on the Mojave River is shown on a Zone 4 Desert Map of San Bernardino County (Scale 1/2 in. = 1mile), both located in the Flood Control Operations Division office. A small Sectional Map (Scale 1 in. = 4,000 ft.) is provided for each of the Valley Routes and a small Sectional Map (Scale 1/2 in. = 2 miles) of Route "J" route, together with a "Check Point Record Form" for use by each patrol.

3. The patrol routes shown on the maps are intended to provide minimum inspection coverage for each Flood Control District System. In the interest of minimizing the time required to complete a patrol under emergency conditions, only a sufficient number of checkpoints are shown to serve as "indicators" for gauging emergency effects and emergency damage in each area or subarea. The routes and channel crossings shown are those expected to remain open during an average event of only moderate severity, or during the early stages of an event that may eventually develop a high degree of severity. It should be recognized that portions of the patrol routes shown on the map may become impassable during major events and that alternate routes and check-points must be utilized to the maximum extent consistent with safety.

4. During Condition Green/1, the various Field Operations Supervisors, under the direction of the Field Operations Officer and Regional Superintendents will monitor their respective assigned Zones/Yards for any trouble spots. For situations of or approaching Condition Orange/2 severity, the Storm Patrol Unit will call out a sufficient number of Storm Patrol Routes to cover the affected areas. Under Condition Red/3, all Storm Patrol Routes will be covered. Each Patrol Unit must assure the best coverage practicable consistent with conditions existing at the time. During impassable or hazardous situations, the Patrol unit will use their best judgment in working out alternate routes to reach as many of the designated checkpoints as possible. In case of serious doubt, they will consult by phone or radio with the Storm Patrol Unit. In the event of extensive activity in a particular area, they may be requested to stay in that area as a special observer until relieved, with either the remaining part of the Patrol Route left unpatrolled, if not particularly active, or a relief furnished either as the observer or to patrol the balance of the route.

5. The special duties and responsibilities of personnel assigned to this Unit are as follows:

    a. It will be the responsibility of the Storm Patrol Unit to assure that each individual listed as being assigned to Patrol duty is equipped with flashlights and appropriate rain gear (hat, jacket, trousers and boots), and that other equipment is available for issue to each Patrol. It will be the responsibility of each individual assigned to Patrol duty to obtain and safeguard issued rain gear and flashlight and to have them when called to emergency duty.

    b. It will be the responsibility of the Storm Patrol Unit to assure that each patrol is familiar with its route, check points, entries to be made on the check-point record and that all equipment and completed records are turned in at the end of each patrol.

    c. It is desired that the maximum practicable coverage of Flood Control District and related facilities be obtained, consistent with safety of Patrol personnel performing hazardous acts, such as attempting to ford a channel carrying a flood flow of high velocity and unknown depth. As to time controls, an unreasonable amount of time will not be devoted to reaching a checkpoint that has become inaccessible by normal or alternate routing. Relief crews will normally begin a route where the previous crew left off.

d. Patrol Units will not normally report over the air such routine information as gauge readings, depths and widths of channel flow, etc., but will enter all such information on the checkpoint record. In special circumstances, and when directed by higher authority, such reports will be forwarded to the DOC by radio. Patrol Units will be contacted by the Storm Patrol Communication Unit (Station 5) on a routine basis, approximately every hour, requesting checkpoint locations, current location, and current weather conditions. Information of an impending serious nature will be relayed promptly to appropriate staff. Such information as the actual or impending failure of a dam, levee, dike, bridge or other critical facility shall be given the highest priority and promptly reported by radio or other available means of communication. Due to the high volume of radio traffic during flood emergency situations, sound judgment must be exercised as to the necessity for radio transmissions.

e. In using the Storm Patrol Checkpoint Record, all applicable items will be filled in, with damage estimates, estimated flow-depths and widths where gage readings are not available. It should be remembered that these records will serve several purposes. They will be useful during the emergency in guiding future patrol activities, as well as in helping to anticipate emergency-fighting work that will be needed in a specific area. They will also be useful after the emergency in attempting to produce stream hydrographs or other hydrographic data when actual stream-gauging data is unavailable. Since times of entry of data are to be recorded, the record will later prove useful in reconstructing the chronology of related events. Special items of possible interest and value not covered under the regular column entries should be listed under "Remarks".

f. A copy of the "Storm Operations Manual" is available at each Division office for use and reference. Each employee assigned to Storm Patrol duty is expected to familiarize themselves with the provisions of this Manual.

g. Each Patrol will be furnished with a vehicle, flares, shovel, route map, camera, checklist of specific locations to be observed and checkpoint record to note observations as indicated. Requirements may arise for Patrol Units to take photographs of problem and/or damage areas where and when feasible.

6. Special and unique instructions are applicable to the operation of the Lytle Creek Gatehouse, as follows:

a. The Gatehouse operation personnel will be called out by, and will work under, the direction of Field Operations Officer during Condition Orange/2 and will work under the direction of the Storm Operations Center during Condition Red/3.

b. The assigned working area will be the Lytle Creek Gatehouse and assigned personnel will report to this station during storm emergencies.

c. The personnel shall consist of a minimum of two (2) Department employees trained in proper operation of gate opening and closing by Flood Control Operations Division.

d. This Unit will operate on two 12-hour shifts in accordance with the Storm Operations Chart during both Condition Orange/2 and Condition Red/3.

e. It will be the responsibility of this Unit to coordinate, by phone or radio, all operations of the gate with Field Operations Officer during Condition Orange/2 and the Storm Operations Center and Field Operations Officer during Condition Red/3, in accordance with the "Operation and Maintenance Manual" as furnished by the Corps of Engineers.

f. Records will be maintained of gate heights during emergency and any opening or closing of gates, carefully noting 24-hour clock times of operation.

g. Radio and phone will be maintained and operated in the Gatehouse for emergency operation conditions. Also, a radio-equipped County vehicle should be at the Gatehouse during the emergency condition as standby communications.

7. Special and unique instructions are applicable to the operation of the Seven Oaks Dam, as follows.

    a. The Gatehouse personnel will be called out by the Flood Control Operations Superintendent and will work in cooperation with the USACE, Reservoir Operations Center during all Conditions.

    b. The assigned working area will be the Seven Oaks Dam Gatehouse and related structures and assigned personnel will report to the USACE, Reservoir Operations Center. Appropriate notification will be provided to the Field Operations Center through the Flood Control Operations Superintendent.

    c. The personnel shall consist of a minimum of four (4) Department Dam Operators and two (2) alternate Dam Operators from Orange County trained in proper gate operation by the USACE and the Local Sponsors.

    d. Two-man units will conduct gate operations. These units will operate on two 12-hour shifts in accordance with the Storm Operations Chart during all Conditions and/or as directed by the USACE, Reservoir Operation Center.

    e. It will be the responsibility of the Units to coordinate, by phone, radio or e-mail, all operations of the gates with the USACE, Reservoir Operation Center and the Flood Control Operations Superintendent during all Conditions, in accordance with the "Operations & Maintenance Manual" as furnished by the USACE.

    f. Dam Operators will record all gate changes directed by the USACE, Reservoir Operations Center. Records will be maintained on the Seven Oaks Dam Flood Control Basin Operation Report stored at the Gatehouse.

    g. Radio, phone and internet connection will be maintained and operated in the Gatehouse for emergency operations conditions. A County vehicle equipped with both a County and USACE radio frequency shall be at the Gatehouse during the emergency condition as standby communications. Also, a laptop computer is assigned to the Dam to provide internet and e-mail access.

8. The Equipment Unit will maintain a listing of vehicle equipment numbers that will be used on patrol. This list will be available in that office.

9. Post-emergency duties of all Patrol Units will include the assurance that all notes, records, photographs, negatives and reports are turned in to the Storm Patrol Unit, completed in final draft form. This responsibility will take priority over normally assigned duties and will be considered as part of the Emergency Condition.

STORM PATROL VEHICLES

Automotive Transportation

The following vehicles will be available for Storm Patrol Routes and other field units assigned to the DOC.

PRIMARY VEHICLES

ROUTE	VEHICLE #	DIVISION	TYPE
A	06055	Flood Control Ops	Blazer 4X4
B	05918	Flood Control Ops	Pickup 4X4
C	06075	Flood Control Ops	Blazer 4X4
D	06070	Water Resources	Blazer 4X4
E	05861	Flood Control Engineering	Blazer 4X4
F	06056	Flood Control Ops	Blazer 4X4
G	06017	Flood Control Engineering	Explorer 4X4
H	02874	Flood Control Engineering	Ford Escape Hybrid
J	02852	Transportation Operations	Explorer 4X4
Lytle Creek Gatehouse	05948	Flood Control Ops	Pickup 4X4
Documentation Survey Unit	05250	Traffic	Dodge Ram Pickup
Documentation Survey Unit	05654	Traffic	Pickup

STORM PATROL ROUTE 'A'

(Upland, Rancho Cucamonga)

SHIFT	DIVISION	NAME
Shift 1	Traffic	D. Parker
Shift 1	Water Res.	H. Zamora
Shift 2	FC Ops	B. Mecham
Shift 2	Traffic	M. Siddiqui
Alternates:	F. C. Engineering	D. Bunch
	SSE	R. McDowell

STORM PATROL ROUTE 'B'

(Upland, Rancho Cucamonga)

SHIFT	DIVISION	NAME
Shift 1	FC Ops	L. Brock
Shift 1	Traffic	J. Clark
Shift 2	FC Ops	N. Calagui
Shift 2	T. Design	S. Gibson
Alternates:	SSE	C. Schindler
	T. Design	L. Stephens

STORM PATROL ROUTE 'C'

(Fontana/Rancho Cucamonga)

SHIFT	DIVISION	NAME
Shift 1	FC Eng	D. Nicdao
Shift 1	T. Design	D. Johnson
Shift 2	FC Eng	K. Martin
Shift 2	T. Design	R. Fatemi
Alternates:	SSE	E. Ranosa
	T. Design	J. Martinez

STORM PATROL ROUTE 'D'

(Devore, North San Bernardino)

SHIFT	DIVISION	NAME
Shift 1	T. Design	C. Saed
Shift 1	T. Design	S. Davis
Shift 2	FC Planning	M. Walker
Shift 2	FC Eng	K. McConnell
Alternates:	TPM	J. Lesser
	FC Eng	R. Albritton

STORM PATROL ROUTE 'E'

(San Bernardino)

SHIFT	DIVISION	NAME
Shift 1	T. Design	M. DeBenedet
Shift 1	Traffic	Ed Petre
Shift 2	T. Ops	G. Mann
Shift 2	T. Design	R. McConaghy
Alternates:	FC Eng	J. Smith
	Traffic	W. Hampton

STORM PATROL ROUTE 'F'

(San Bernardino,Highland)

SHIFT	DIVISION	NAME
Shift 1	TPM	R. Aguirre
Shift 1	FC Eng	T. Rosu
Shift 2	FC Ops	J. Stone
Shift 2	FC Ops	J. Le
Alternates:	T. Design	C. Martinez
	T. Design	M. Truett

STORM PATROL ROUTE 'G'

(Chino, Chino Hills, Montclair, Ontario)

SHIFT	DIVISION	NAME
Shift 1	T. Design	D. Wallsten
Shift 1	T. Design	T. Kottwitz
Shift 2	Traffic	E. Ruvalcaba
Shift 2	EMD	E. Varga
Alternates:	Traffic	H. Nguyen
	Contracts	T. Dupre

STORM PATROL ROUTE 'H'

(Fontana, Rialto)

SHIFT	DIVISION	NAME
Shift 1	Traffic	M. Phillips
Shift 1	F.C. Planning	M. Sadek
Shift 2	T. Design	P. Arsua
Shift 2	Traffic	D. Hagberg
Alternates:	Traffic	H. Farah
	T. Design	W. Lindberg

STORM PATROL ROUTE 'I'

(Redlands, Yucaipa)

SHIFT	DIVISION	NAME
Shift 1	F.C. Eng.	M. Mikhail
Shift 1	FC Eng.	O. Frances
Shift 2	Contracts	J. Flasher
Shift 2	Water Res.	A. Flasher
Alternates:	T. Design	C. Hale
	T. Design	D. Van Buskirk

STORM PATROL ROUTE 'J'

(Mojave River)

SHIFT	DIVISION	NAME
As Needed	T. Ops	D. Bowen
Alternate	Contracts	R. Ellis

To be implemented by Desert Regional Superintendent with coverage provided by local Road Yards Numbers 11 – 12 and 16.

ATTACHMENT 3
SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS
STORM OPERATIONS MANUAL
WALL MAPS AND CHARTS

The F. C. Operations Division is responsible for providing display maps or charts that will be utilized during storm operations. The displays or maps are to be posted at the beginning of each storm season, which commences on October 15th and ends on April 15th. The various maps or charts are listed below:

1. Storm Operations Chart - The Chart will be updated yearly by the F. C. Planning Division and copies will be distributed to key personnel in the Department. The Chart shall have indicated on it the three (3) conditions that will exist during a major emergency. The three (3) conditions are **GREEN/1, ORANGE/2,** and **RED/3.** Also indicated on the Chart will be the schedule for the Storm Alert Officer. This Chart should be posted at Station 1 of the Transportation Operations Division and the Department's Field Operations Center.

2. A general map, 3' x 5', showing facilities in the southwest portion of the County, will be in the DOC. An overlay on this map shows storm patrol routes with numbers indicating locations to be inspected.

Other miscellaneous items: To assist in the operations during a storm, the following items shall be made available in the DPWEOC.

- A collection of the various Emergency and Storm Operations Manuals used by other Governmental agencies, such as D.W.R. "Flood Emergency Operations Manual", Corps of Engineers "Natural Disaster Activities", Facility O & M Manual, Emergency Patrol Data, and other miscellaneous emergency operations data.

- San Bernardino County Road System Map.

- An up-to-date listing of equipment suppliers with names, addresses, and telephone numbers (provided by the Equipment Unit).

- The tape recorder installed at 387-7995 shall be in an operable condition.

- A status chart of actions taken, event history chart, listing of people and equipment in the field and their location (these can be computer generated).

- Seven Oaks Dam Water Lever vs Time and Discharge Rate Chart.

- Date Time Stamp for Weather Reports.

- Alert Substation

- SCADA Substation

- Emergency Response GIS System on all laptops.

ATTACHMENT 4
SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS
EMERGENCY TELEPHONE NUMBERS

I. CITIES WITHIN SAN BERNARDINO COUNTY

ADELANTO (Area Code 760)			
City Hall		246-2300	
Fire - County Fire	(909)	356-3811	(24 Hour/Emergency) 911 Rancho Road
		246-3344	(Business)
Police		245-4211	(24 Hour/Emergency)
APPLE VALLEY (Area Code 760)			
Town Hall		240-7000	(Non-Emergency)
		245-5311	(24 Hour/Emergency) Dispatch Center
Fire		245-6280	(24 Hour/Emergency)
Police		245-4211	(24 Hour/Emergency)
BARSTOW (Area Code 760)			
City Hall		256-3531	
	(760)	245-5311	(24 Hour/Emergency) Dispatch Center
Fire		256-2251	(Business)
		245-5311	(24 Hour/Emergency) Dispatch Center
Police		256-2211	(24-hour/Emergency)
BIG BEAR LAKE			
City Hall		866-5831	
Fire		866-7566	(Business) Fire Protection District
	(909)	866-0100	(Business)
Sheriff		356-3850	(24 Hour/Emergency)
CHINO			
City Hall		627-7577	
Fire		597-7775	(Chino Valley Independent Fire District)
		356-3811	(24 Hour/Emergency) SBCO Fire Number
Police		591-9851	(Business)
		628-1234	(24 Hour/Emergency)
CHINO HILLS			
City Hall		364-2610	
Fire		356-3805	(Business)
		356-3811	(24 Hour/Emergency)
	(909)	983-5911	Ontario Fire Dispatch
	(909)	465-6837	Chino Hills Dispatch
Sheriff		356-3850	(24 Hour/Emergency)
COLTON			
City Hall		370-5099	
		370-5051	(City Manager)
Fire		356-3805	(Business)
		356-3811	(24 Hour/Emergency) or 911
Police		370-5000	(24 Hour/Business)
FONTANA			
City Hall		350-7600	
Fire		829-4441	(Business)
		356-3811	(24 Hour/Emergency) or 911
Police		350-7740	(Business)
		350-7700	(24 Hour/Emergency) or 911
GRAND TERRACE			
City Hall		824-6621	(Business)
Fire		825-0221	(Business)
		356-3811	(24 Hour/Emergency)
Police		824-0680	(Non-Emergency) Sheriff Dispatch
		387-8313	(24 Hour/Emergency) Sheriff Dispatch

HESPERIA (Area Code 760)

City Hall		947-1000	
Fire		947-8023	(Business)
	(909)	356-3811	(24 Hour/Emergency) or 911
Police		245-4211	(24 Hour/Emergency)

HIGHLAND

City Hall		864-6861	
Fire		862-3031	
		862-1760	(Business)
		881-6900	(24 Hour/Emergency)
Police		387-8313	(24 Hour/Emergency)

LOMA LINDA

City Hall		799-2800	
		799-2810	(City Manager)
Fire		356-3805	(Business)
		799-2877	(Administration Fire)
		356-3811	(24 Hour/Emergency)
Police		356-3850	(24 Hour/Emergency)

MONTCLAIR

City Hall		626-8571	
Fire		626-1217	(Business)
		983-5911	(24 Hour/Emergency)
Police		621-4771	(24 Hour/Emergency)

NEEDLES (Area Code 760)

City Hall		326-2113	
Fire		326-2833	(Business)
		326-2833	(After Hours Non-Emergency)
	(800)	472-2376	(24 Hour/Emergency)
	(909)	356-3805	(24 Hour/Emergency)
Police		326-9200	(Business)
		245-4211	(24 Hour/Emergency)

ONTARIO

City Hall		395-2000	
Fire		983-5911	(24 Hour)
		911	(Emergency)
Police		986-6711	(24 Hour Emergency)

RANCHO CUCAMONGA

City Hall		477-2700	
Fire		477-2770	(Business)
	(909)	983-5911	(Non-Emergency/24 Hour)
		911	(Emergency)
Police		941-1488	(24 Hour/Emergency)

REDLANDS

City Hall		798-7500	
Fire		798-7600	(Business)
		356-3811	(24 Hour/Emergency)
Police		798-7681	(24 Hour/Emergency)

RIALTO

City Hall		820-2525	
Fire		820-2501	(Business)
		356-3811	(24 Hour/Emergency)
Police		820-2550	(24 Hour/Emergency)

SAN BERNARDINO

City Hall		384-5211	
Fire		384-5777	(24 Hour/Emergency)
Police		383-5311	(24 Hour/Emergency)
City Yard		384-5353	

TWENTYNINE PALMS (Area Code 760)

City Hall		367-6799	
Sheriff		367-9544	(24 Hour/Emergency)
Fire		367-7524	(24 Hour/Emergency)

UPLAND

City Hall		931-4100	
Fire		983-5911	(24 Hour/Emergency)
Police		982-1331	(24 Hour/Emergency)

VICTORVILLE (Area Code 760)

City Hall		955-5000	(Non-Emergency)
Fire	(760)	245-5311	(24 Hour/Emergency-Dispatch)
		245-6280	(24 Hour/Emergency)
Police		245-4211	(24 Hour/Emergency)

YUCAIPA

City Hall		797-2489	
Fire		797-1000	(Business)
	(909)	881-6900	(24 Hour/Emergency-Dispatch)
Police		790-3105	(Business)
		356-3850	(Sheriff Dispatch-24 Hour/Emergency)
		790-3100	(24/Hour Emergency)

YUCCA VALLEY (Area Code 760)

Town Hall		369-7207	
Fire		365-3335	(Business)
		911	(24 Hour/Emergency)
Sheriff	(760)	365-9413	(Non-Emergency)
		365-2364	(24 Hour/Emergency-Dispatch)

II. CITIES OR AGENGIES OUTSIDE SAN BERNARDINO COUNTY

RIVERSIDE

City Hall	(951)	826-5312	(Call Center)
	(951)	826-5311	(City Hall)
Fire	(951)	826-5321	(Business)
	(951)	787-7911	(24 Hour/Emergency)
Police	(951)	826-5700	(Business)
	(951)	787-7911	(24 Hour/Emergency)

COUNTY OF ORANGE

Seven Oaks Dam Operations	(714)	567-6230	(Business)
		567-6300/06	(Operations)-Rick Benites
		448-0757	(24 Hour/Emergency)

COUNTY OF RIVERSIDE

San Gorgonio Ranger District		794-1123	
San Jacinto Ranger District		659-2117	
Seven Oaks Dam Operations		(951) 955-1299	
Prado Dam Operations	(213)	452-3623	
	(213)	452-3440	(EOC-Riverside Operations Center)

POMONA

City Hall		620-2051	
Fire		620-2201	(Business)
		620-2087	(24 Hour/Emergency)
Police		620-2156	(Business)
		622-1241	(24 Hour/Emergency)

III. COUNTY OF SAN BERNARDINO

Communication Center	356-3805	(After hrs.)
Emergency Dispatch	356-3811	
County Fire Dispatch	(800) 472-2376	
Department of Public Works	387-8104	
After 5 p.m., weekends & holidays	356-3805	
Area Coordinator: Denise Benson	356-3998	
Central Valley Fire Department	829-4441	
	356-3811	(Emergency)
Office of Emergency Services		
Denise Benson, Manager	356-3998	
24-hour answering service after 5 p.m. and weekends	356-3805	
Radio Dispatch, FCD Office & Lot	387-8063	
Fleet Mgmt. Director, Roger Weaver	387-7870	(Business)
	499-7682	(Cell)
Lytle Creek Gate House	386-5141	
Seven Oaks Dam	389-7605	

IV. SHERIFF'S OFFICE & SUB-STATIONS

James Coronado, Deputy Chief	387-3636
San Bernardino Ofc (Night & Holiday)	387-8313
Sheriff's Dept. - Aviation Division	356-3800
Central Dispatch	356-3850

SHERIFF DISPATCH

Apple Valley	(760) 245-4211
Adelanto	(760) 245-4211
Baker	(760) 245-4211
Barstow	(760) 245-4211
Big Bear Lake	866-7581 or 356-3850
Chino	465-6638
Chino Hills	465-0837 or 356-3850
Colorado River	(760) 326-9200 or (760) 245-4211
Fontana	829-7311 or 356-3850
Grand Terrace	387-8313 or 356-3850
Havasu	(760) 326-9200 or (760) 245-4211
Hesperia	(760) 245-4211
Loma Linda	387-8313 or 356-3850
Lucerne Valley	(760) 245-4211
Morongo Basin Station	(760) 245-4211
Needles	(760) 326-9200 or (760) 245-4211
Parker	(760) 326-9200 or (760) 245-4211
Phelan	(760) 245-4211 or (760) 245-4211
Rancho Cucamonga	941-1488 or 356-3850
Rialto	829-7311 or 387-8313 or 356-3850 875-3210 (Rialto Police)
Trona	(760) 245-4211
Twentynine Palms	(760) 245-4211
Twin Peaks	337-6131 or 356-3850
Victor Valley	(760) 245-4211
Victorville	(760) 245-4211
West End Ontario	465-0837 or 356-3850 986-6711 (Ontario Police Department)
Wrightwood	(760) 245-4211
Yucaipa	790-3100 or 356-3850

V. UTILITY COMPANIES

Southern California Edison Co. (Day or Night)	(800) 962-6269 (24-hr.)
Southern California Gas Co. (Day or Night)	(800) 427-2200 (Emergency)
Verizon. (Day)	(800) 483-1000
(Night Calls-Repair)	611
IEUA (Scada Control)	993-1721

VI. STATE OF CALIFORNIA

Office of Emergency Services	(916) 845-8911 (24-hr.)
Disaster Assist. Div.	(916) 845-8100
Department of Water Resources	
Operations (Area Control)	(661) 944-8600 (24-hr.)
Safety Division (Ron Mountjoi)	(661) 944-8616
Power Plant at Devil Canyon	(661) 944-8760 (24 hr.)
Office of Emergency Services	(562) 795-2900
Caltrans	(909) 383-4561 Business 383-4640
Highway Patrol (Inland TMC)	(909) 388-8000
Emergency Number	(909) 388-8060 or 388-8050
Dispatch	(909) 388-8070
Highway Conditions	(800) 427-7623 or (916) 445-7623

Dept. of Forestry and Fire Protection	881-6900 Business
EC Center	881-6916
Chino Hills	597-6665
CIW-Training Facility Fire Comp	597-7137
Crafton Hills	797-2313
Devore	887-3630
Fire Devore Station 2	473-8680
CDF	883-1112
East Highland	862-1760
Highland	862-3031
Highland Station 2	884-4100
CDF Dispatch St.1	(800) 992-4494
Lucerne Valley	(760) 248-7525
Phelan	(760) 868-3555
Pilot Rock	338-2812
Prado	597-2911
San Bernardino Station	881-6900 (Business)
Yucaipa	797-1000
Yucca Valley	(760) 365-4411

VII. FEDERAL

Weather Information - U.S. Weather Service	
Los Angeles	(213) 554-1212
Corps of Engineers	
L. A. Flood Operations	(213) 452-3385
U.S. Forestry Service	794-1123
Arrowhead Ranger District	382-2782
Big Bear Ranger District	382-2790
Cajon/Lytle Creek	382-2850 or 382-2851 Business
Mill Creek/San Jacinto	794-1123
U. S. Geological Survey	
Poway Office	
(Valley, Mountains, East and North Desert Area)	(858) 679-4015
San Antonio Dam and Channel	
Corps of Engineers-Brian Tracy, Supervisor	(213) 452-3527
Reservoir Operation Center	(213) 452-3623

VIII. WATER RELEASES FROM LAKE ARROWHEAD INTO THE MOJAVE RIVER

Dam Control 24-hour emergency (909) 337-2595 Then press 0
Alassol (909) 332-2595

Desert Communications
(Should be notified of the most recent
information on dam releases) (760) 245-6280

IX. DEPARTMENT OF FISH AND GAME

For emergency work in streams, basins or other areas under the jurisdiction of the State Department of Fish and Game, contact should be made with the local warden within 72 hours of the start of work.

Environmental Services (909) 484-0167
3602 Inland Empire Blvd., Suite C220
Ontario, CA 91764
Dispatch (Lake Perris are) (951) 443-2969

(1602 Permits)
North/East Desert (760) 372-1461 Main office
Rebecca Jones (work/home/fax) (661) 285-5867
Tanya Moore- Victor Valley Area (760) 955-8139
(1602 Permits)
Mtn/Valley Area
Jeff Brandt (909) 987-7166

X. ARMY CORPS OF ENGINEERS - REGULATORY BRANCH

David Castenon, Chief (213) 452-3406
Mark Durham, Section Chief, South Coast Section (213) 452-3416
915 Wilshire Blvd.
Los Angeles, CA 90017-3401

SEVEN OAKS DAM – OPERATION, MAINTENENACE AND WATER RELEASE

Seven Oaks Dam Unit
(Darrell Ford, John Hutchinson,
Dan Worthington) (909) 389-7605

Down Stream Water Right Holders

WATER COMPANY	DAYTIME PHONE	24-hr Phone	Name of Contact
Bear Valley Mutual Water Company	(909) 793-4901	(909) 794-8980	*Jim Evans
East Valley Water District-Eng Div	(909) 888-8986	(909) 889-9501	*Switchboard
Lugonia Water Company	(909) 793-4901	(909) 794-2455	*David Knight
City of Redlands Water Dept.	(909) 798-7698	(909) 798-7516	*Switchboard
San Bernardino Valley Municipal Water District	(909) 387-9200	(909) 387-9200	*On Call Tech.
San Bernardino Valley Water Conservation District	(909) 793-2503	(909) 793-3827	*Lawrence Libeu Cell- 645-0846

ATTACHMENT 5
EMERGENCY CONTACT WITH OTHER AGENCIES

LOCAL

1.	COUNTY EMERGENCY SERVICES		350-1247
2.	SHERIFF		356-3850
3.	PUBLIC UTILITIES (Refer to P.U. Directory)		
4.	CITIES: (City Hall)		
	a.	Adelanto	(760) 246-2300
	b.	Apple Valley	(760) 240-7000
	c.	Barstow	(760) 256-3531
	d.	Big Bear Lake	866-5831
	e.	Chino	627-7577
	f.	Chino Hills	264-2610
	g.	Claremont	399-5441
	h.	Colton	370-5099
	i.	Fontana	350-7600
	j.	Grand Terrace	824-6621
	k.	Hesperia	(760)947-1000
	l.	Highland	864-6861
	m.	Loma Linda	799-2800
	n.	Montclair	626-8571
	o.	Needles	(760)326-2113
	p.	Ontario	395-2000
	q.	Pomona	620-2261
	r.	Rancho Cucamonga	477-2700
	s.	Redlands	798-7500
	t.	Rialto	820-2525
	u.	San Bernardino	384-5211
	v.	Twentynine Palms	(760)367-6799
	w.	Upland	931-4100
	x.	Victorville	(760)955-5000
	y.	Yucaipa	797-2489
	z.	Yucca Valley	(760)369-7207
5.	COUNTIES:		
	a.	Riverside Fire Dept.	
		Office of Emergency Services	(951) 940-6949
		Sheriff (24-Hr.)	(951) 780-9894
	b.	Orange County Fire Authority	
		Office of Emergency Services	(714) 448-0757
		Sheriff (24-Hr.)	(714) 628-7000 or (714) 628-7008
	c.	Los Angeles-Southern Region	
		Fire Dispatch	629-5333
6.	INLAND EMPIRE UTILITIES AGENCY		357-0241
7.	SAN ANTONIO WATER COMPANY		982-4107
8.	RAILROADS:		
	a.	BNSF Railway	(800) 832-5452
9.	COUNTY DEPARTMENT OF PUBLIC WORKS		387-7910 or 387-8063 Radio Dispatch
10.	METROPOLITAN WATER DISTRICT		(213)217-6000
11.	ONTARIO INTERNATIONAL AIRPORT		937-2700
12.	CALIFORNIA STATE UNIVERSITY S.B. Security		537-5165
13.	SAN BERNARDINO VALLEY MUNICIPAL WATER DIST.		387-9200
14.	MOJAVE WATER AGENCY		(760) 946-7000
		Kirby Brill, Manager - Cell	(760) 792-8517
		Kurt Carlson, Director – Cell	(760) 403-3661

15.	BEAR VALLEY MUTUAL WATER COMPANY and wtr co.	(Business) 793-4901 or 794-8980
	Michael Hufffstutler, Manager	557-3067 - cell
		799-9553 residence
	Jim Evans, Water Mgr. – Cell	(909) 583-1479
16.	ORANGE COUNTY WATER DISTRICT	(714) 378-3200
17.	ORANGE COUNTY FLOOD CONTROL	(714) 567-6300
18.	RIVERSIDE COUNTY FLOOD CONTROL	(951) 955-1200
19.	CITY OF REDLANDS WATER DEPARTMENT	798-7516
20.	CITY OF SAN BERNARDINO WATER DEPARTMENT	384-5141 San Bernardino Municipal Wtr District
21.	DEVORE WATER COMPANY	887-3310 or (909) 709-3113 Cell-Emergency
22.	EAST VALLEY WATER DISTRICT	889-9501
23.	MUSCOY MUTUAL WATER	887-2964
24.	SOUTH MESA WATER COMPANY	795-2401
25.	WESTERN HEIGHTS WATER COMPANY	790-1901
26.	YUCAIPA VALLEY WATER DISTRICT	797-5117
27.	SAN BERNARDINO VALLEY WATER CONSERVATION DST.	793-2503
	Larry Libeu	645-0846 Cell

ATTACHMENT 6
SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS
STORM OPERATIONS MANUAL

PROCEDURE FOR ACCESSING COMPUTER WEATHER INFORMATION

Presently, the DTN computers are in Water Resources Division, Hydrology Section, Operations and the DOC. They are a source for current satellite and radar imagery as well as special weather statements issued by the national weather service.

Our contract meteorologist, FOX WEATHER, prepares a daily weather report and QPF. This information is accessed by Water Resources Staff is posted in Microsoft Outlook under public folders/county wide information/internal topics/public services group/trans flood control/weather.

Changing needs in the Hydrology Section require continuing modification of software and hardware that can update these instructions. It is strongly recommended that you contact the Hydrology Section supervisors to obtain a familiarization session with the equipment before using it.

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InterNet Access to ALERT data: Data can be found on Internet using the Water Resources site at address - http://www.co.san-bernardino.ca.us/trnsprtn/pwg/default.htm. Then click on the ALERT button and select Current Weather Conditions.

THE ALERT WEATHER COMPUTER

This system is not accessible through a regular computer because it uses a different operating system. Proprietary source code running under the QNX platform now handles the function of gathering ALERT data. Generally, one dedicated computer will be active in the Water Resources, Hydrology Section and a second will be in the DOC.

This system will allow one to monitor any of the County's ALERT precipitation and stream-flow gauges and will provide real-time data as required.

Should you have any problems or questions, contact Water Resources Division at 387-8213.

In order to request data from a particular alert gauge station you will need to know the station numbers.

These can be found by going to the Hydrology home page, clicking on ALERT, then either PRECIPITATION TOTALS (5- min through 7-day) or PRECIPITATION INTENSITIES (5-min through 24-hour) for the latest information pushed onto our website. Maps of the gage locations can be found by selecting the Site locations and clicking on GO immediately below the links to PRECIPITATION TOTALS and PRECIPITATION INTENSITIES.

ATTACHMENT 7
TRANSPORTATION MAINTENANCE YARDS & LABOR & EQUIPMENT POOL
TELEPHONE LIST

VALLEY/MOUNTAIN ROAD YARDS		**HOT LINES**
Regional Supt. – Dee McLain	387-8070	
YARD 1 (West Valley @ CHINO) *SPEED #120*		
Dist Sup - Bob Evans - 7000 Merrill Ave	597-6270	597-2050
Mnt/Con Sup II – Rick Williams	597-6270	
YARD 3 (West Valley @ FONTANA) *SPEED #123*		
Dist Sup – Bob Evans - 17618 Arrow Route	823-8811	
Mnt/Con Sup II – Bill Henopp	823-8811	
YARD 4 1896 Wilderness Road	867-3683	867-4214
YARD 5 (East Valley)		
Dist Sup – John Latsko - 825 E. Third St, Bldg. #6	387-8071	387-8076
Mnt/Con Sup II – Sam McDonald	387-8073	
Mnt/Con Sup II – Rob Vasquez	387-8073	
YARD 7 (CRESTLINE) *SPEED #128*		
Dist Sup - Bruce Nelson - 23188 Crest Forest Drive	338-2140	338-3713
Equipment Operator III – Ralph Lind	338-2140	
YARD 8 (BLUE JAY) *SPEED #130*		
Dist Sup – Isaias Gomez - 26830 St. Hwy. 189	336-7509	336-7659
Mnt/Con Sup II – Andy Watts	336-7509	
YARD 9 (BIG BEAR) *SPEED #132*		
Dist Sup - Jim Dibel - 42090 North Shore Dr.	866-2167	866-7027
DESERT ROAD YARDS		
Regional Supt – Ed Hartwell *SPEED #138*	(760) 949-0478	
YARD 2 (BIG RIVER) *SPEED #122*		
Dist Sup - Kevin Canepa - 7172 Tecumseh	(760) 665-8873	
YARD 10 (29 PALMS) *SPEED #134*		
Dist Sup - Henry Guillen - 73663 Manana	(760) 367-9504	
Mnt/Con Sup II Brud Hancock	(760) 367-9504	
YARD 50 62499 State Hwy. 62	(760) 366-6378	(Fax)
YARD 11 (BALDY MESA) *SPEED #135*		
Dist Sup – Carl Sevelin - 12397 Sycamore St.	(760) 949-0335	(760) 949-3498
Mnt/Con Sup II –Frank Blanton	(760) 949-0335	
YARD 12 (BARSTOW) *SPEED #139*		
Dist Sup – Roy Montry - 29802 Hwy. 58	(760) 256-3631	(760) 256-3631
Mnt/Con Sup. II – Bill Little	(760) 256-3631	
YARD 13 (TRONA) *SPEED #140*		
Mnt/Con Sup II - Larry Blake - 80311 Trona Road	(760) 372-5888	

YARD 14 (BAKER) *SPEED #141*
Mnt /Con Sup II - Delvin Holmes - 56500 Hwy. 127 ..... (760) 733-4736

YARD 15 (NEEDLES) *SPEED #142*
Dist Sup - Don Toy - 5 Airport Rd. ..... (760) 326-2535
E.O. III - Gary Gregor ..... (760) 326-2535

YARD 16 (APPLE VALLEY) *SPEED #143*
Dist Sup - Craig Sherman - 11923 Joshua Rd. ..... (760) 247-8208
Mnt/Con Sup II - Joe Bonetpels……..(760) 247-8208

FLOOD CONTROL OPERATIONS / LABOR AND EQUIPMENT POOL
Flood Control Supt - Chris Smith-Bldg #9 387-8000
Flood Control Operations Supv - Scott Ryan.....387-8016
Flood Control Operations Supv - Frank Ballance 387-8004
Flood Mnt/Con Sup II - Manuel Gonzales.....387-8019
Road Mnt/Con Sup II – Steve Hall 387-8075

Trans. Operations Supv – Steve Miller.....387-8251
Mnt/Con Sup II - David Ramirez 387-8079

FLOOD CONTROL YARDS
ZONE 1 – Rancho Cucamonga 12158 Baseline Road *SPEED #144*.....899-4366
Mnt/Con Sup II - Jack Ballesteros 899-4366
Mnt/Con Sup I – Berlyn Crowley.....899-4366

ZONE 2 – San Bernardino Building 9
Mnt/Con Sup II – Lamar Allman.....387-8003
Mnt/Con Sup I – David Ramirez 387-8017

ZONES 3 & 6 - LOW DESERT – Trailer #2
Mnt/Con Sup II – John Hayworth.....387-8010
Mnt/Con Sup I – Roger Grunden……387-8020

ZONES 4 & 6 - HIGH DESERT (Baldy Mesa Yard – 12397 Sycamore St.)
Mnt/Con Sup II - George Pallas *SPEED #135*.....(760) 949-2415 (760) 949-0335

EQUIPMENT SUPERINTENDENT
Rick Ferguson 387-8080

ATTACHMENT 8
CELL PHONE/PAGER NUMBERS

CELL PHONE NUMBERS

Pat Mead	(909) 838-2274	Chris Smith	(909) 239-9631
	(909) 633-5833	Rick Ferguson	(909) 239-3183
Mazin Kasey	(909) 289-1167	Dee McLain	(909) 649-1341
Vana Olson	(909) 239-2763	Mike Hodge	(909) 649-1502
		Ed Hartwell	(760) 221-3902

PAGER NUMBER (County 800 MHz System) – 1-800-4COUNTY (426-8689)

Below is a list of employees and their respective pager identification number. To leave a numeric page dial (800) 426-8689 and enter the employee's pager identification number. To leave a text message address your e-mail card as follows: to **ISD Paging**, subject **Pager *xxxx***.

	Storm Alert Engineer	2379	Operations - Trans	Mc	3022
Water Resources	Fox, Mike	2484	Operations -Trans	Hodge, Mike	2388
Trans. Planning	Biggs, Brendon	2540	Operations - Trans	Guidry, Ken	2382
Flood Planning	Ignatius, Annesley	2520	Operations - Trans	Mann, Grant	3023
Administration	Mead, Pat	3990	Operatiions - Trans	Wilson, Dawn	1960
Administration	Vacant	2519	San Sevaine/Etiwanda	Carbajal, Dan	1962
Administration	Kasey, Mazin	3026	San Sevaine/Etiwanda	Collins, Bill	3987
Administration	Ferguson, Rick	2386	Seven Oaks/Operations	Ford, Darrell	3021
Administration	Stinson, Monica	2389	Seven Oaks/Operations	Hodge, Michael	2378
Administration	Rich Olson	3986	Yard 1-Chino	Williams, Rick	2356
Administration	Tim Meyer	7203	Yard 2 - Big River	Canepa, Kevin	2357
Environmental Mgt	Martinez, Manuel	2374	Yard 3 - Fontana	Evans, Robert T.	2358
Environmental Mgt	Vandergoot, Ron	2375	Yard 5 - San Bernardino	Latsko, John	2360
Operations - Flood	Brock, Larry	2228	Yard 7 - Crestline	Nelson, Bruce	2362
Operations - Flood	Worthington, Dan	2227	Yard 8 - Blue Jay	Gomez, Isaias	2363
Operations - Flood	Vacant	2226	Yard 9 - Big Bear	Dibel, James	2364
Operations - Flood	Mecham, Brad	2384	Yard 10 - 29 Palms	Guillen, Henry	2365
Operations - Flood	Eke, Ken	2377	Yard 11 - Baldy Mesa	Sevelin, Carl	2366
Operations - Flood	Vacant	2224	Yard 12 - Barstow	Montry, Roy	2367
Operations - Flood	Mish, Marty	2109	Yard 13 - Trona	Blake, Larry	2368
Operations - Flood	Smith, Chris	2376	Yard 14 - Baker	Holmes, Delvin	2481
Operations - Flood	Balance, Frank	2391	Yard 15 - Needles	Toy, Donald	3988
Operations - Pool	Hall, Steve	2395	Yard 16 - Apple Valley	Sherman, Craig	2361
Operations - Pool	Gonzales, Manuel	2394	Zone 1 - Rancho Cuc	Ryan, Scott	2393
Operations - TOS	Kloepfer, Brian	2392	Zone 1 - Rancho Cuc	Ballesteros, Jack	2396
Operations - TOS	Martin, Ronald	2390	Zone 2 - San Bernardino	Allman, Lamar	2397
Operations - Trans	Bowen, Don	2383	Zones 3 & 6 - Low Desert	Hayworth, John	2398
Operations - Trans	Lucas, Rick	3025	Zones 4 & 6 - High Desert	Pallas, A. George	2399
Operations - Trans	McCollum Robert	2385	Bark Beetle Inspector	Gallardo, Juan	3984
Operations - Trans	Hartwell, Ed	2381			

ATTACHMENT 9

RADIO CALL SIGNS AND FREQUENCIES

AREA YARD OR DIVISION	PAY CENTER	NAME	CALL SIGN	VEHICLE #	800 ID#	800 SERIAL#
29 PALMS	510	BRUD HANCOCK	1001	5579	708558	581HQL0369
29 PALMS	510	YARD OFFICE	29 PALMS	BASE	709541	581HRE0114
29 PALMS	510	GILBERT SANCHEZ	1004	VARIOUS	709652	581HRE0231
29 PALMS	510	RICHARD COLELLA	1003	VARIOUS	709653	581HRE0232
29 PALMS	510	ROSALIO TORRES	1007	VARIOUS	709803	581HRE0382
29 PALMS	510	HENRY GUILLEN	1000	1708	709827	581HRE0406
29 PALMS	510	DAVID HOPKINS	1002	VARIOUS	709832	581HRE0411
29 PALMS	510	WINSTON BULLOCK	1006	VARIOUS	709833	581HRE0412
29 PALMS	510	ROBERT JOHNSON	1005	VARIOUS	709871	581HRE0450
29 PALMS	510	RANDY HART	1008	VARIOUS		
AMIN-DIRECTOR	579	PAT MEAD	1			
ADMIN-ASST DIR.	529	VARIOUS	STATION 3	BASE	709529	581HRE0102
ADMIN-ASST DIR	560	MAZIN KASEY	2	6052	709718	581HRE0297
ADMIN-ASST DIR	939	VANA R. OLSON	4	6054	710641	722ABC0846
ADMIN-ASST DIR	529	VACANT	3	6053	710645	722ABC0850
APPLE VALLEY	516	JERRY GIVENS	1605	19603	708869	581HQY0027
APPLE VALLEY	516	ROBERT CHEEK	1603	15186	709114	581HQY0282
APPLE VALLEY	516	APPLE VALLEY YD.	APPLE VALLEY	BASE	709527	581HRE0100
APPLE VALLEY	516	CRAIG SHERMAN	1600	2359	709748	581HRE0327
APPLE VALLEY	516	SHANE GORMAN	1606	8734	709804	581HRE0383
APPLE VALLEY	516	KEVIN ADDISON	1601	15166	709805	581HRE0384
APPLE VALLEY	516	JERRY HENDERSON	1602	15184	709807	581HRE0386
APPLE VALLEY	516	JOE BONETPELS	1604	5567	709819	581HRE0398
APPLE VALLEY	516	JIM LEACH	1608	8456		
APPLE VALLEY	516	DAVID QUIROZ	1607	27910		
BAKER	514	VARIOUS	1401	5555	709412	581HQY0580
BAKER	514	BAKER YARD	BAKER YARD	BASE	709521	581HRE0094
BAKER	514	DELVIN HOLMES	1400	8457	709867	581HRE0446
BAKER	514	VARIOUS	1402	19601	709948	581HRE0527
BAKER	514	VARIOUS		49036		
BAKER	514	DELVIN HOLMES	1400	HANDY TALK		
BALDY MESA	511	CARL SEVELIN	1100	1294	708560	581HQL0371
BALDY MESA	511	CARL EVERSOLE	1102	51065	709141	581HQY0309
BALDY MESA	511	EDMOND REBHAN	1104	26019	709181	581HQY0349
BALDY MESA	511	FRANK OPICE	1105	51066	709211	581HQY0379
BALDY MESA	511	LARRY JEWETT	1107	27921	709497	581HRE0070
BALDY MESA	511	Yd. 11 Base			709525	581HRE0098
BALDY MESA	511	VINCE ARLOTTI	1111	5574	709646	581HRE0225
BALDY MESA	511	ED JASSO	1106	8764	709741	581HRE0320
BALDY MESA	511	FRANK BLANTON	1101	5578	709799	581HRE0353
BALDY MESA	511	JUSTIN SNYDER	1108	27911	709825	581HRE0404
BALDY MESA	511	MIKE TAULBEE	1103	51029	709947	581HRE0526
BALDY MESA	511	HOWARD SWITZER	1109	19607	710060	581HRE0639
BALDY MESA	511	DAVID CHRISTOPH	1110	49046		
BARSTOW	512	MONTRY	1200	1292	709810	581HRE0389
BARSTOW	512	LITTLE	1201	5724	709808	581HRE0387
BARSTOW	512	HAYWARD	1202	5569/51069	709816	581HRE0388
BARSTOW	512	JACOBSEN	1203	15139/51067	709812	581HRE0391
BARSTOW	512	CRUZ	1204	8765	709815	581HRE0394
BARSTOW	512	ROBERTSON	1205	5537/21081	709811	581HRE0382

BARSTOW	512	VARIOUS	8713	8713	709823	581HRE0402
BARSTOW	512	VARIOUS	19608	19608	709667	581HRE0246
BARSTOW	512	VARIOUS	8713	8713	709809	581HRE0395
BARSTOW	512	VARIOUS	49044	49044	709194	581HQY0362
BARSTOW	512	VARIOUS	19600	19600	709719	581HRE0298
BARSTOW	512	VARIOUS	8661	8661	709946	581HRE0525
BIG BEAR	509	DEAN SAYLOR	901	15129	708196	581HQA0004
BIG BEAR	509	RUSS HOGAN	902	8440	708476	581HRE0520
BIG BEAR	509	YARD 9	BIG BEAR	BASE	709534	581HRE0107
BIG BEAR	509	VARIOUS	51071	51071	709611	581HRE0190
BIG BEAR	509	CHRIS FREDERICK	49037	49037	709617	581HRE0196
BIG BEAR	509	VARIOUS	26027	26027	709651	581HRE0230
BIG BEAR	509	DEAN SAYLOR	51030	51030	709656	581HRE0235
BIG BEAR	509	RICHARD RODRIGUEZ	903	8449	709680	581HRE0338
BIG BEAR	509	VARIOUS	26018	26018	709755	581HRE0334
BIG BEAR	509	VARIOUS	26020	26020	709759	581HRE0259
BIG BEAR	509	JIM DIBEL	900	2713	709822	581HRE0401
BIG BEAR	509	CHUCK TAPIA	904	8748	710382	581AYE0045
BIG RIVER	502	YARD 502	BIG RIVER BASE	BASE	709522	581HRE0095
BIG RIVER	502	KEVIN CANEPA	200	15149	709788	581HRE0367
BIG RIVER	502	MIKE BROWN	202	27912	709835	581HRE0414
BIG RIVER	502	ERIC RONK	201	8458	709869	581HRE0448
BIG RIVER	502	KEVIN CANEPA	200			
BLUE JAY	508	RNG SPGS YARD	S RNG PGS BASE	BASE	708342	581HQL0050
BLUE JAY	508	BARK BEETLE INSPECTOR	SLIPMOUNT	SLIPMOUNT	708502	581HQL0313
BLUE JAY	508	VARIOUS	807	SLIPMOUNT	708853	581HQY0011
BLUE JAY	508	TOM LEANOE	804	SLIPMOUNT	709022	581HQY0190
BLUE JAY	508		806	5454	709341	581HQY0509
BLUE JAY	508	VARIOUS		SLIPMOUNT	709464	581HRE0037
BLUE JAY	508	BLUE JAY BASE	BLUE JAY	BASE	709540	581HRE0113
BLUE JAY	508	VARIOUS	VARIOUS	SLIPMOUNT	709650	581HRE0229
BLUE JAY	508	JASON SOLIS	808	SLIPMOUNT	709659	581HRE0238
BLUE JAY	508	JEFF ENGLE	802	SLIPMOUNT	709192	581HQY0360
BLUE JAY	508	ANDY WATTS	801	SLIPMOUNT	709636	581HRE0215
BLUE JAY	508	ISAIAS GOMEZ	800	2715	709746	581HRE0325
BLUE JAY	508		803	15123	709025	581HQY0193
BLUE JAY	508	JOHN DECADENA	805	8746	709845	581HRE0424
BLUE JAY	508	VARIOUS	VARIOUS	SLIPMOUNT	709847	581HRE0426
BLUE JAY	508	VARIOUS	VARIOUS	SLIPMOUNT	709849	581HRE0428
BLUE JAY	508	VARIOUS	VARIOUS	SLIPMOUNT	709478	581HRE0051
BLUE JAY	508	VARIOUS	809	SLIPMOUNT	710012	581HRE0591
CHINO	501	LUIS SOSA	103	15168	708613	581HQL0424
CHINO	501	JOSE SANCHEZ	110	8454	709033	581HQY0201
CHINO	501	RODNEY REIMANN	107	15140	709415	581HQY0583
CHINO	501	VARIOUS	104/ 106	VARIOUS	709472	581HRE0045
CHINO	501	RICK WILLIAMS	CHINO YD.	CHINO YD.	709537	581HRE0110
CHINO	501	DON WENDEL	104	8763	709612	581HRE0191
CHINO	501	OPHILIO CARDOZA	102	5773	709687	581HRE0266
CHINO	501	RICK WILLIAMS	101	5530	709782	581HRE0361
CHINO	501	VARIOUS	109 / 103	VARIOUS	709896	581HRE0475
CONTRACTS	551	TONY DUPRE	69	1291	709666	581HRE0245
CONTRACTS	551	JOE OLIVAREZ	68	5272	709678	581HRE0257
CRESTLINE	507	VARIOUS			709094	581HRE0473
CRESTLINE	507	CRESTLILNE YARD	CRESTLINE YARD	BASE	709535	581HRE0108
CRESTLINE	507	VARIOUS	26024	26024	709651	581HRE0230
CRESTLINE	507	VARIOUS	VARIOUS	VARIOUS	709654	581HRE0233
CRESTLINE	507	VARIOUS	VARIOUS	VARIOUS	709660	581HRE0239
CRESTLINE	507	VARIOUS	VARIOUS	VARIOUS	709713	581HRE0292

CRESTLINE	507	BRUCE NELSON	700	5400	709824	581HRE0403
CRESTLINE	507	VARIOUS	26007	26007	709838	581HRE0417
CRESTLINE	507	VARIOUS	26023	26023	709839	581HRE0418
CRESTLINE	507	VARIOUS	703	8747	709841	581HRE0420
CRESTLINE	507	RALPH LIND	701	5565	709842	581HRE0421
ENVIRON. MGMT	977	VARIOUS			708266	581HQA0074
ENVIRON. MGMT	977	RON VANDERGOOT	77	5922	708600	581HQL0411
ENVIRON. MGMT	977	MANUEL MARTINEZ	78	5933	709696	581HRE0275
ENVIRON. MGMT	977	VARIOUS	5947	5947	713109	722ABQ0958
ENVIRON. MGMT	977	VARIOUS	5881	5881	713121	722ABU0620
ENVIRON. MGMT	977	NARESH VARMA		1250		
FC OPERATIONS	920	HEARING ROOM	STATION 5		709705	581HRE0284
FC OPERATIONS	920	KEN EKE	6	6016	709674	581HRE0253
FC OPERATIONS	920	JEAN HANSEN	STATION 5		709530	581HRE0103
FC OPERATIONS	920	JAMES MCKENZIE JR.	83			
FC OPS. - PERMITS	927	SAMEH BASTA	81	6075	709674	
FC OPS. - PERMITS	927	MARTY MISH	81	6075	709764	581HRE0103
FC OPS. - PERMITS	927	LARRY BROCK	84	5918	709675	581HRE0254
FC OPS. - PERMITS	927	JERRY STONE	85	6056	709770	581HRE0349
FC OPS. - PERMITS	927	NAPOLEON CALAGUI	86			
FC OPS. - PERMITS	927	MATT CORTEZ				
FC OPS. - PERMITS	928	JUSTIN LE	88			
FC OPS. - PERMITS	928	BRENDA HARTMANN	82	5948	710647	722ABC0881
FC OPS. - PERMITS	928	DAN WORTHINGTON	5785	5785	709753	581HRE0332
FC OPS. - PERMITS	928	BRAD MECHAM	89	5424	708206	581HQA0014
FC PLANNING	981	ANNESLEY IGNATIUS	7	1249	708748	581HQQ0449
FED PROJ/FC ENGR	962	DAVID LOVELL	L1288	6010	709670	581HRE0249
FED PROJ/FC ENGR	962	VARIOUS	VARIOUS	5861	709856	581HRE0435
FLOOD (POOL)	924	FRANK BALANCE	12	6097	709702	581HRE0281
FLOOD (POOL)	924	JOE BONTEPELS	13	5800	709870	581HRE0449
FLOOD (POOL)	524	MIKE HODGE	14	15131	709716	581HRE0295
FLOOD (POOL)	924	MANUEL GONZALES	15	5926	709766	581HRE0345
FLOOD (POOL)	924	ROBERT LUJAN	20	29804	709686	581HRE0265
FLOOD (POOL)	524	VARIOUS	21	29803	709792	581HRE0371
FLOOD (POOL)	524	STEVE HALL	22	5485	708735	581HQQ0436
FLOOD (POOL)	924	DANNY ESPARZA	25	6013	709817	581HRE0396
FLOOD (POOL)	924	ROBERT SILVA	26	8690	709277	581HQY0445
FLOOD (POOL)	524	CHUCK TRAVATO	27	5517	709754	581HRE0333
FLOOD (POOL)	924	ROBERT IMBRIANI	28	8696	709482	581HRE0055
FLOOD (POOL)	924	LEE PARIS	30			
FLOOD (POOL)	924	VARIOUS	32	5509	710002	581HRE0581
FLOOD (POOL)	524	VARIOUS	34	13786	709624	581HRE0203
FLOOD (POOL)	921	SCOTT RYAN	2600	6098	709709	581HRE0288
FLOOD (POOL)	524	VARIOUS	5500	5500	709712	581HRE0291
FLOOD (POOL)	524	VARIOUS	5795	5795	709436	581HQY404
FLOOD (POOL)	924	DARRELL FORD	5931	5931	709781	581HRE0360
FLOOD (POOL)	924	VARIOUS	7135	7135	708829	581HQQ0530
FLOOD (POOL)	524	VARIOUS	8613	8613	709723	581HRE0302
FLOOD (POOL)	924	VARIOUS	19503	19503	709802	581HRE0381
FLOOD (POOL)	924	VARIOUS	19504	19504	709647	581HRE0226
FLOOD (POOL)	924	VARIOUS	27984	27984	709875	581HRE0454
FLOOD (POOL)	924	VARIOUS	27985	27985	709881	581HRE0460
FLOOD (POOL)	924	VARIOUS	27906	27906	709622	581HRE0201
FLOOD (POOL)	924	VARIOUS	27980	27980	709880	581HRE0459
FLOOD (POOL)	924	VARIOUS	27981	27981	709858	581HRE0437
FLOOD (POOL)	924	VARIOUS	27982	27982	709857	581HRE0436
FLOOD (POOL)	924	VARIOUS	27983	27983	709854	581HRE0433
FLOOD (POOL)	924	MACIAS	43083	43083	709623	581HRE0202

FLOOD (POOL)	524	VARIOUS	49035	49035	709707	581HRE0286
FLOOD (POOL)	924	CHUCK TRAVATO	49203	49203	709315	581HQY0483
FLOOD (POOL)	924	VARIOUS	49204	49204	709672	581HRE0251
FLOOD (POOL)	924	LUCERO	51302	51302	709648	581HRE0227
FLOOD (POOL)	524	VARIOUS	81010	81010	709689	581HRE0268
FLOOD (POOL)	924	VARIOUS	81008	81008	709894	581HRE0473
FLOOD (POOL)	924	VARIOUS	7143	7143	709725	581HRE0304
FLOOD (POOL)	924	LEE PARIS	50212	50212	709649	581HRE0228
FLOOD (POOL)	924	CARNELL	5972/47000	5972/47000	709943	581HRE0522
FLOOD (POOL)	924	TRAILER 1 BASE			709526	581HRE0099
FLOOD (POOL)	924	VARIOUS	8664	8664	709726	584HRE0305
FLOOD OPS - BLDG 9	920	BLDG. 9 (CHRIS SMITH)	Base	BASE	709342	581HQY0510
FLOOD OPS - BLDG 9	928	CHRIS SMITH	11	6023	709720	581HRE0299
FONTANA	503	MELENDEZ	304	19506	709385	581HQY0553
FONTANA	503	R. WILLIAMS	301	5583	709509	581HRE0082
FONTANA	503	BASE (EVANS)	FONTANA YARD	BASE	709538	581HRE0111
FONTANA	503	VACANT	307	5575	709703	581HRE0282
FONTANA	503	EVANS	300	1295	709750	581HRE0329
FONTANA	503		304	5768	709780	581HRE0359
FONTANA	503	MARMOLEJO	302	28508	709789	581HRE0368
FONTANA	503	JOHNSON	8453	8453	709790	581HRE0369
FONTANA	503	GARCIA	305	8755	709791	581HRE0370
FONTANA	503	BEDFORD	303	49047	709850	581HRE0429
FONTANA	503	LEHR	302	5688	709855	581HRE0434
NEEDLES	515	GARY GREGOR	1501	5540	709407	581HQY0575
NEEDLES	515	BASE UNIT	NEEDLES YARD	BASE	709523	581HRE0096
NEEDLES	515	DON TOY	1500	15134	709663	581HRE0242
NEEDLES	515	MIKE MIRANDA	1502	15183	709865	581HRE0444
NEEDLES	515	JACK SMITH	1503	28029	709873	581HRE0452
NEEDLES	515	LARRY MERICAL	1504	8762	709945	581HRE0524
PVMT MGMT	528	VARIOUS	96		709761	581HRE0340
PVMT MGMT	528	VARIOUS		8660		722ABC0847
RANCHO CUC	921	JACK BALLESTEROS	2100	5970	708321	581HQL0029
RANCHO CUC	921	B.KLEOPFER	2105	8654	708804	581HQQ0505
RANCHO CUC	921	VARIOUS	2107	8659 / 81007	708887	581HQY0045
RANCHO CUC	921	VARIOUS	2103	8693	709006	581HQY0174
RANCHO CUC	921	VARIOUS	48003	48003	709070	581HQY0238
RANCHO CUC	921	RC YARD	RC YARD	BASE	709138	581HQY0306
RANCHO CUC	921	VARIOUS	2102	8659	709642	581HRE0221
RANCHO CUC	921	VARIOUS	2104	8658	709777	581HRE0356
RANCHO CUC	921	VARIOUS	27908	27908	709778	581HRE0357
RANCHO CUC	921	VARIOUS	2109	8809	709785	581HRE0364
RANCHO CUC	921	VARIOUS	2106	20920/20977	709922	581HRE0501
RANCHO CUC	921	VARIOUS	2108	8732	709938	581HRE0517
RANCHO CUC	921	VARIOUS	51303	51303	709980	581HRE0559
RANCHO CUC	921	B.CROWLEY	2101	6022	713968	SBCX800145
SAN BERNARDINO	505	DAVE MELLOR	505	8759	709632	581HRE0211
SAN BERNARDINO	505	ROD WHITE	509* SLIP MOUNT	5572	708686	581HOO3070
SAN BERNARDINO	505	YARD 5 ROAD 8 BASE	YARD 5	BASE	709536	581HRE0109
SAN BERNARDINO	505	YARD 5 ROAD 6 BASE	YARD 5	BASE	709539	581HRE0112
SAN BERNARDINO	505	CARLOS TENORIO	504	5584	709628	581HRE0207
SAN BERNARDINO	505	ROD WHITE	509	49043	709985	581HRE0564
SAN BERNARDINO	505	STEVE ANDREWS	508* SLIP MOUNT	15167	709634	581HRE0213
SAN BERNARDINO	505	VARIOUS	51078	51078	709637	581HRE0216
SAN BERNARDINO	505	VARIOUS	510* SLIP MOUNT	8455	709668	581HRE0247
SAN BERNARDINO	505	SLYVESTER LINDSEY	506	8733	709820	581HRE0270

SAN BERNARDINO	505	VARIOUS	515	8850	709714	581HRE0293
SAN BERNARDINO	505	SAM MCDONALD	502	15130	709737	581HRE0316
SAN BERNARDINO	505	ROB VASQUEZ	501	5534	709760	581HRE0339
SAN BERNARDINO	505	JOHN LATSKO	500	2361	709786	581HRE0365
SAN BERNARDINO	505		503* SLIP MOUNT	15185	709793	581HRE0372
SAN BERNARDINO	505	VARIOUS	26022	26022	709806	581HRE0385
SAN BERNARDINO	505	PAUL TROY	507	5502	713883	566ATY0063
SAN BERNARDINO	505	JOHN LATSKO	500			
SB Crack Seal Crew	506	VARIOUS	08712	8712	708924	581HQY0092
SB Crack Seal Crew	506	JOHN HARR	602	8711	709753	581HRE0332
SB Crack Seal Crew	506	MIKE WAKEFIELD	601	15158	709801	581HRE0380
SB Crack Seal Crew	506	VARIOUS	7142	7142	710643	722ABC0848
SURVEYOR	247	OFFICE/JEEP	5450	5450	708244	581HQA0052
SURVEYOR	247	VARIOUS	7137	7137	709219	581HQY0387
SURVEYOR	247	OFFICE/CHEVY BLAZER	2716		709448	581HRE0021
SURVEYOR	247	JEFFRIES, RUSSELL	07138	7138	709450	581HRE0023
SURVEYOR	247	SHIRLEY, ROBERT	07171	07171	709481	581HRE0054
SURVEYOR	248	VARIOUS			709862	581HRE0441
SURVEYOR	247	MORMANN, MIKE	7179	7179	710027	581HRE0606
SURVEYOR	247	OFFICE/CHEVY YUKON	2749	2749	709301	not listed
SURVEYOR	247	HERRIN	7170	7170	709485	not listed
TPM	578	STEPHEN PERRY	P0768	2396	710580	722AAA2026
TRAFFIC DIVISION	547	LEONARD AVILA	45	20715	708271	581HQA0079
TRAFFIC DIVISION	549	STATION 4	TRAFFIC BASE	STATION 4	709531	581HRE0104
TRAFFIC DIVISION	547	STEVE GIBSON	37	5779	709664	581HRE0243
TRAFFIC DIVISION	548	VARIOUS	48	5256	709694	581HRE0273
TRAFFIC DIVISION	548	TRUMAN MCVEY	49	5091	709695	581HRE0274
TRAFFIC DIVISION	548	JERRY CLARK	36	1463	709701	581HRE0280
TRAFFIC DIVISION	548	VARIOUS	46	5271	709706	581HRE0285
TRAFFIC DIVISION	547	DOUG HAGBERG	38	5087	709743	581HRE0322
TRAFFIC DIVISION	548	VARIOUS	40	5027	709758	581HRE0337
TRAFFIC DIVISION	548	LARRY MORRIS	44	1174	709821	581HRE0400
TRAFFIC DIVISION	547	LORI STEPHENS	50	15208	709865	581HRE0264
TRAFFIC DIVISION	545	WALTER HAMPTON	39	5220	710465	722AZA0337
TRAFFIC DIVISION	545	DANNY CASTRO	47	5624	710578	722AZL0685
TRAFFIC DIVISION	547	JOHNNY MARTINEZ	42	20651	710579	
TRAFFIC DIVISION	549	JACOB BABICO	43	1299		
TRAFFIC OPERATION	525	TOS - BLDG. 6	STATION 7	BASE	709524	581HRE0097
TRAFFIC OPERATION	525	VARIOUS	8710	8710	708645	581HQQ0346
TRAFFIC OPERATION	525	RON MARTIN	18	15187	708780	581HQQ0481
TRAFFIC OPERATION	525	VARIOUS			709515	581HRE0088
TRAFFIC OPERATION	525	VARIOUS	27954	27954	709662	581HRE0241
TRAFFIC OPERATION	525	VARIOUS	7139	7139	709671	581HRE0250
TRAFFIC OPERATION	525	STEVE MILLER	17	5086	709673	581HRE0252
TRAFFIC OPERATION	525	VARIOUS	8774	8774	709681	581HRE0260
TRAFFIC OPERATION	525	VARIOUS	8777	8777	709682	581HRE0261
TRAFFIC OPERATION	525	ED CAZAREZ	16	1293	709688	581HRE0267
TRAFFIC OPERATION	525	VARIOUS	8773	8773	709697	581HRE0276
TRAFFIC OPERATION	525	VARIOUS	8776	8776	709756	581HRE0335
TRAFFIC OPERATION	525	VARIOUS	8775	8775	709996	581HRE0575
TRAFFIC OPERATION	525	VARIOUS	29999	29999	710116	581HRE0695
TRAFFIC OPERATION	525	VARIOUS	8616	8616	710646	722ABC0851
TRANS - SUPER		ED HARTWELL		2767	709830	581HRE0409
TRANSOPERATIONS	520	KEN GUIDRY	5	1705	708568	581HQL0379
TRANSOPS - ADMIN	521	DEE MCLAIN	8	2764	709115	581HQY0283
TRANSOPS - PERMITS	526	BOB MCCOLLUM	94	1628	709698	581HRE0277
TRANSOPS - PERMITS	526	DON BOWEN	93		709843	581HRE0422

TRANSOPS - PERMITS	526	RICK LUCAS	95	2714	710054	581HRE0633
TREE CREW	525	VARIOUS	11725	11725	708264	581HQA0072
TREE CREW	525	VARIOUS	48002	48002	709625	581HRE0204
TREE CREW	525	VARIOUS	19	7144	709742	581HRE0321
TRONA	513	TRONA YARD	TRONA	BASE	709533	581HRE0106
TRONA	513	VARIOUS	1301	VARIOUS	709813	581HRE0392
TRONA	513	LARRY BLAKE	1300	VARIOUS	709814	581HRE0393
WATER RESOURCES	971	RANDY FORBEY	54	5510	709745	581HRE0324
WATER RESOURCES	970	VARIOUS	5489	5489	709757	581HRE0336
WATER RESOURCES	970	BILL RAISNER	87	5943	709866	581HRE0445
ZONE 2	922	DAVID RAMIREZ	2201	5887	708194	581HQA0002
ZONE 2	922	LAMAR ALLMAN	2200	5904	709767	581HRE0346
ZONE 2	922	PRICE CHRIS	2208	5953		
ZONE 2	922	JOE BAIRD	2204	8692	709657	581HRE0236
ZONE 2	922	MICHAEL GONZALES	2207	28031	708426	581HQL0134
ZONE 2	922	BROCK JONES	2206	28038	709944	581HRE0523
ZONE 2	922	WILLIAM MADDOX	2203	28039	709017	581HQY0185
ZONE 2	922	GREG ROBERG	2205	48004	709710	581HRE0289
ZONE 2	922	MANUEL RESENDEZ	2202	08695/50210	709630	581HRE0209
ZONE 3,5,6	923	JOHN HAYWORTH	2300	5820	710063	581HRE0642
ZONE 3,5,6	923	RODGER GRUNDER	2301	5855	709831	581HRE0410
ZONE 3,5,6	923	RON HILDERBRANDT	2302	08666/50213	709554	581HRE0133
ZONE 3,5,6	923	BILL SPALDING	2303	8691	709715	581HRE0294
ZONE 3,5,6	923	VINCENT HELMS	2304	27600	708792	581HQQ0493
ZONE 3,5,6	923	RODNEY MILTON	2305	49206		
ZONE 3,5,6	923	RICHARD LUCERO	2306	28037	709561	581HRE0140
ZONE 4	926	CRANFILL,BOBBY	2602	08663/50214	708773	581HRE0515
ZONE 4	926	PALLAS, GEORGE	2601	5929	709018	581HQY0186
ZONE 4	926	TONY PEREZ	2605	27601	709222	581HQY0390
ZONE 4	926	PATTENAUDE, RON	2604	08662/49207	709447	581HRE0020
ZONE 4	926	PFEIFFER,JAMES	2603	8694	709859	581HRE0438
FLOOD (POOL)	924	VARIOUS	49013	49013	709765	581HRE0344
FLOOD (POOL)	924	VARIOUS	8760	8760	709837	581HRE0416
FLOOD (POOL)	924	VARIOUS	81012	81012	709775	
FLOOD (POOL)	927	VARIOUS	27907	27907	709621	581HRE0200
SURVEYOR	247	HERRERA	7178	7178	709772	not listed
SURVEYOR	247	VARIOUS				
SURVEYOR	247	VARIOUS				
SURVEYOR	247	VARIOUS				

SATPHONE INSTRUCTIONS 

Turn on the phone by hitting the red button on the lower, left of the phone.
When asked to input the PIN, input 1111 and hit OK.
Wait for “Completed”, wait for “Iridium” to show on the screen.
When “Iridium” shows on the screen, it is ready to send and receive.
If “Iridium” does not show on the screen, get out to a clear view of the sky area and wait for “Iridium” to show on the screen.

To get to voice mail:

1. Push the key with the envelope on it  , when it says **select?**, hit the OK key.
2. When asked to input your voicemail number, input for satphone1, 00 8816 414 43098. (This may already be programmed for you).

2A. Enter the password when asked, for satphone1: 1443028

3. When asked to input your voicemail number, input for satphone2 00 8816 414 43099. (This may already be programmed for you).

3A. Enter the password when asked, for satphone2. 1443029

The following cell phones and office phones will have international dialing to be able to call thesatphones. These phones need to dial as follows: (Satphone1) 011 8816 414 43028 or (Satphone2) 011 8816 414 43029.

To call the listed phones below, you must prefix the number with the 001 that is shown. 00 is the international dialing number for that phone, 1 is the United States.

Director
Pat Mead 001(909)838-2774 cell, 001(909)387-7906 office
Assistant Directors
Vana Olson 001 (909)239-2763 cell, 001(909)387-7918 office
Annesley Ignatius 001(909)633-5833 cell, 001(909)387-7913 office
Mazin Kasey 001(909)289-1167 cell, 001(909)387-7916 office
Transportation Operations
Ken Guidry 001(909)855-8597 cell, 001(909)387-8039 office
Flood Control Permits
Ken Eke 001(909)649-1498 cell, 001(909)387-7997 office
Public Works Operations Supervisors
Dee McLain 001(909)649-1341 cell, 001(909)387-8070 office
Ed Hartwell 001(760)221-3902 cell, 001(760)949-0478 office
Chris Smith 001(909)239-9631 cell, 001(909)387-8000 office
Computer Services **001**(951)233-2003 cell
To call from one satellite phone to the other satellite phone.

Hit MR (Memory Recall), 1(location), OK, at Call? Hit OK It will say CALLING on the screen and you will hear a beeping tone……be very, very, patient. You may have to look at the screen to see if it says RECALL? hit OK when it does say RECALL? again, be very patient.

Alternative method:
Direct dial from one satphone to the other as follows:
Dial 00 8816 414 43028 for Satphone-1
Dial 00 8816 414 43029 for Satphone-2
This all works very slowly so be very patient.

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, Ca 91730
Tel: 909.484.3888 Fax: 909.484.3890 www.cbwm.org

April 12, 2007

I, Paula S. Molter, am an employee of the Chino Basin Watermaster ("Watermaster"). As part of its normal course of business, Watermaster maintains a library of documents relevant to the Chino Groundwater Basin and Watermaster's role as the arm of the Court administering the Chino Basin Judgment. It is part of my regular duties to retrieve such documents from the library in response to requests from various parties.

I hereby certify that the attached document, titled ***Chino Basin Recharge Facilities: Operation Procedures, March 2006***, is a full, true and accurate copy of that document, on file and of record in the Watermaster library.

Paula S. Molter

Paula S. Molter