

PHELAN PIÑON HILLS COMMUNITY SERVICES DISTRICT

2010 Urban Water Management Plan

June 2011



Prepared By:
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2010 URBAN WATER MANAGEMENT PLAN



**Phelan Piñon Hills
Community Services District**

June 22, 2011

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ACRONYMS and ABBREVIATIONS

AB	Assembly Bill
AF	Acre Feet
AFY	Acre Feet per Year
ARRA	American Recovery and Reinvestment Act of 2009
ASCE	American Society of Civil Engineers
AWPF	Advanced Water Purification Facilities
AWWA	American Water Works Association
BAP	Base Annual Production
BMP	Best Management Practices
BPP	Basin Production Percentage
BTEX	Benzene, Toluene, Ethyl Benzene, Xlenes
CALSIM	California Water Allocation and Reservoir Operations Model
CCF	Hundred Cubic Feet
CCR	Consumer Confidence Reports
CDPH	California Department of Public Health
CDR	Center for Demographic Research
CEQA	California Environmental Quality Act
CFS	Cubic Feet Per Second
CIMIS	California Irrigation Management Information System
CSA	Community Supported Agriculture
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
DBP	Disinfection Byproducts
D/DBP	Disinfectants and Disinfection Byproducts
DMM	Demand Management Measure
DOE	Department of Energy
DOF	California State Department of Finance
DPH	Department of Public Health
DWR	California State Department of Water Resources
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ET	Evapotranspiration
Eto	Evapotranspiration From a Standardized Grass Surface
Etr	Evapotranspiration From a Standardized Alfalfa Surface
FPA	Free Production Allowance
FY	Fiscal Year
GPCD	Gallons Per Capita Per Day
GPD	Gallons Per Day
GPF	Gallons Per Flush
GPM	Gallons Per Minute
IAWP	Interim Agricultural Water Program
ICS	Intentionally Created Surplus

ACRONYMS and ABBREVIATIONS (cont'd)

IDM	IDModeling
IID	Imperial Irrigation District
In	Inches
IRP	Integrated Resources Plan
IRWM	Integrated Regional Water Management
LAFCO	Local Agency Formation Commission
LRP	Local Resources Program
LTFP	Long Term Facilities Plan
M&I	Municipal and Industrial
MAF	Million Acre Feet
MCL	Maximum Contaminant Level
MEEC	Mojave Environmental Education Consortium
MDAB	Mojave Desert Air Basin
Metropolitan	Metropolitan Water District of Southern California
MGD	Million Gallons per Day
Mg/L	Milligrams Per Liter
MIN	Minutes
MOU	Memorandum of Understanding
MPR	Master Plan Report
MTBE	Methyl Tertiary Butyl Ether
MWA	Mojave Water Agency
ng/L	Nanogram per Liter
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OEHHA	Office of Environmental Health Hazard Assessment
PEIR	Program Environmental Impact Report
PHG	Public Health Goal
PPHCSD	Phelan Piñon Hills Community Services District
QSA	Quantification Settlement Agreement
R ³ Project	Regional Recharge and Recovery Project
RHNA	Regional Housing Needs Assessment
RO	Reverse Osmosis
RUWMP	Regional Urban Water Management Plan
RWMP	Regional Water Management Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition System
SCAG	Southern California Association of Governments
SCMWD	Sheep Creek Mutual Water Company
SCWA	Sonoma County Water Agency
SDWA	Safe Drinking Water Act
SWP	State Water Project
SWRCB	State Water Resources Control Board

ACRONYMS and ABBREVIATIONS (cont'd)

TAF	Thousand Acre Feet
TDS	Total Dissolved Solids
ug/L	Micrograms Per Liter
ULFT	Ultra Low Flush Toilet
USBR	U.S. Bureau of Reclamation
USEPA	United States Environmental Protection Agency
UWMP	Urban Water Management Plan
VOC	Volatile Organic Compounds
WMP	Water Master Plan
WRCC	Western Regional Climate Center

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1 INTRODUCTION

1.1 PURPOSE AND UWMP SUMMARY

An Urban Water Management Plan (UWMP or Plan) prepared by a water purveyor is intended to ensure the appropriate level of reliability of water service sufficient to meet the needs of its various categories of customers during normal, single dry or multiple dry years. The California Water Management Planning Act of 1983 (Act), as amended, requires urban water suppliers to develop an UWMP every five years in the years ending in zero and five. Under normal circumstances, all 2010 UWMPs would have been due for submittal to the Department of Water Resources (DWR) by December 31, 2010; however, Senate Bill (SB) 7-7 (or SBX7-7) provided an additional six months to retail urban water supply agencies to allow them to conduct additional required water conservation analyses. Thus, the District's 2010 UWMP must now be adopted by July 1, 2011 and submitted to DWR within 30 days of adoption.

The legislature declared that waters of the state are a limited and renewable resource subject to ever increasing demands; that the conservation and efficient use of urban water supplies are of statewide concern; that successful implementation of plans is best accomplished at the local level; that conservation and efficient use of water shall be actively pursued to protect both the people of the state and their water resources; that conservation and efficient use of urban water supplies shall be a guiding criterion in public decisions; and that urban water suppliers shall be required to develop water management plans to achieve conservation and efficient use.

The Phelan Piñon Hills Community Services District (PPHCSD or District) 2010 UWMP has been prepared in compliance with the requirements of the Act, as amended to 2010¹ (Appendix A), and includes the following:

- District Service Area
- District Facilities
- Water Sources and Supplies
- Water Quality Information
- Water Reliability Planning
- Water Use Provisions
- Water Demand Management Measures
- Water Shortage Contingency Plan
- Water Recycling

1.2 UWMP UPDATE PREPARATION

The District's 2010 UWMP was prepared by Psomas for the District and incorporates changes enacted by recent legislation including SB 1087 (2005), AB 1376 (2007), AB

¹California Water Code, Division 6, Part 2.6; §10610, et. seq. Established by Assembly Bill 797 (1983).

1465 (2010), and SBX7-7 (2010). A brief summary of each of these legislative changes, as well as other related legislative changes, follows:

- SB 1087 (2005) – Requires retail water suppliers to include single family and multiple family projections for lower income and affordable households in their UWMPs. This legislation is intended to assist the water agencies in complying with the requirements Government Code Section 65589.7, which requires water suppliers to grant a priority for provision of service to housing units affordable to lower income households.
- AB 1376 (2007) – Requires each urban water supplier to notify the Planning Department of any City or County within which the supplier provides water with at least 60 days prior notice that the supplier will be reviewing the plan and considering amendments or changes to it.
- AB 1465 (2010) – Clarifies that urban water suppliers that are members of the California Urban Water Conservation Council (CUWCC) and comply with the provisions of the “*Memorandum of Understanding Regarding Urban Water Conservation in California*”² dated December 10, 2008, as it may be amended (MOU), may submit their annual reports required under the CUWCC MOU as evidence of compliance without the need for any additional documentation in their UWMPs.
- SBX7-7 (2010) – Requires urban water suppliers to include the following information in their 2010 UWMPs with respect to a targeted 20 percent water conservation reduction by 2020: (1) baseline daily per capita use; (2) urban water use target; (3) interim water use target; and (4) compliance daily per capita water use, including technical bases and supporting data for those determinations.
- SBX7-7 (2010) – Extends the deadline for adoption of urban retail water suppliers 2010 UWMPs until July 1, 2011, to provide sufficient time to prepare the additional required water conservation analyses described in the previous bullet.

Other legislation, which does not directly impact UWMPs, but affects eligibility for grants and loans, includes:

- AB 1420 (2007) – This legislation contains several provisions relating to urban water management plans, including:
 - Conditions eligibility for State grant and loan funding to an urban water supplier awarded or administered by DWR, the State Water Resources Control Board, or California Bay-Delta Authority or its successor agency on the following factors: (1) the implementation of water demand management

² The *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU) was adopted in September 1991 by a large number of water suppliers, public advocacy organizations and other interested groups and most recently amended on December 10, 2008. The MOU created the *California Urban Water Conservation Council* and established 16 Best Management Practices (BMPs) for urban water conservation, recently refined to 14 BMPs.

measures, including the extent of compliance with conservation measures described in the previously referenced “*Memorandum of Understanding Regarding Urban Water Conservation in California.*”

- Requires DWR, in consultation with the State Water Resources Control Board and the California Bay-Delta Authority or its successor agency, to develop eligibility requirements to implement the foregoing grant and loan conditions.
- Requires DWR, in consultation with the CUWCC, to convene a technical panel no later than January 1, 2009 to provide information and recommendations to the Department and the Legislature on new demand management measures, technologies and approaches. The panel and DWR must report to the legislature on their findings no later than January 1, 2010 and each five years thereafter.
- SBX3-27 (2009) – Exempts projects funded by the American Recovery and Reinvestment Act of 2009 (ARRA) from the conditions placed on state funding for water management to urban water suppliers regarding implementation of water conservation measures that were implemented under AB 1420.
- SBX7-7 – Repeals the existing grant funding conditions of AB 1420 on July 1, 2016 if they are not extended or altered prior to this date. After July 1, 2016, urban water retail water suppliers are required to be in compliance with the 20 percent by 2020 water use reduction goals to be eligible for state water management grants or loans.

The UWMP also incorporates water use efficiency efforts the District has implemented or is considering implementing pursuant to the previously referenced *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU). The PPHCSD became signatory and adopted the MOU on December 19, 2000.

The sections in this Plan correspond to the outline of the Act, specifically Article 2, Contents of Plans, Sections 10631, 10632, and 10633. The sequence used for the required information, however, differs slightly in order to present information in a manner reflecting the unique characteristics of the District’s water utility.

To assist DWR staff in reviewing this UWMP, a copy of the DWR’s suggested checklist entitled *Urban Water Management Plan Checklist, Organized by Subject*³ is provided in Appendix H. The left hand column of the checklist notes where the applicable information described to the right can be found within the body of this Plan.

Plan Adoption

The 2010 UWMP was adopted by resolution of the Phelan Piñon Hills Community Services District Board on June 22, 2011 following a public hearing. The Plan was

³ Checklist provided in DWR’s Final Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan, March 2011 and available on DWR website at: <http://www.water.ca.gov/urbanwatermanagement/guidebook/>

submitted to the California Department of Water Resources and the State Library and a copy of the Plan was provided to the County of San Bernardino within 30 days of District Board approval. Copies of the Notice of Public Hearing and the Resolution of Plan Adoption are included in Appendix B. Draft copies of the Plan were made available to the public within 30 days following District Board approval.

Agency Coordination

This Plan was developed by the PPHCSD staff, in coordination with the County of San Bernardino for land use information, the Mojave Water Agency (MWA) for population and usage data projections, and with overall coordination and assistance from Psomas staff in coordination with IDModeling staff, who is preparing the District’s Water Master Plan. A summary of the District’s coordination with the appropriate agencies is shown in Table 1.2-1.

The intent of this plan is to focus on specific issues unique to the District’s water service area. While some regional UWMP issues are introduced in this Plan, more comprehensive regional information is presented in MWA’s Regional UWMP.⁴

To assist District staff in preparation of the 2010 UWMP, District staff and/or consultants to the District for preparation of the UWMP attended the following workshops facilitated by DWR:

- **DWR:** Various on-line webinars held on November 30, 2010, December 16, 2010, January 5, 2011 and January 12, 2011.
- **DWR:** 2010 UWMP Workshop at the Irvine Ranch Water District, March 8, 2011.

Table 1.2-1 Coordination with Appropriate Agencies

	Participated in Developing Plan	Commented on Draft Plan	Attended Public Meetings	Was Contacted for Assistance	Was Sent a Copy of Draft Plan	Was Sent Notice of Intention to Adopt¹
PPHCSD	X	X	X	X		
County of San Bernardino[1]	X		X			X
Mojave Water Agency			X	X	X	X
General Public						

[1] Letter mailed on April 15, 2011 to notify County of San Bernardino of June 15, 2011 public hearing and plan to adopt UWMP.

⁴ A copy of the April 2011 Draft of the MWA UWMP is available at:
<http://www.mojavewater.org/home/documents/UWMP2010FINALDRAFT.pdf>

The District is regulated by the Watermaster and MWA through their responsibilities as manager of the groundwater basin and their imported water capacity in the State Water Project, which runs through the District. The groundwater basin was the subject of a court ordered adjudication in 1993, in which the Court appointed MWA as Watermaster of the Mojave Basin Area. All of the District's water supply planning relates to the policies, rules, and regulations of MWA and the adjudication. Development of the District's UWMP was therefore coordinated closely with MWA, who serves as the wholesaler of water received from the SWP and who manages the groundwater basin in accordance with the adjudication.

This UWMP details the specifics as they relate to the Phelan Piñon Hills Community Services District and its service area and will refer to MWA throughout. The UWMP is intended to serve as a general, flexible, and open-ended document that periodically can be updated to reflect changes in the regional water supply trends, and conservation and water use efficiency policies. This Plan, along with the District's Water Master Plan and other District planning documents, will be used by District staff to guide the District's water use and management efforts through the year 2015, when the UWMP is next required to be updated.

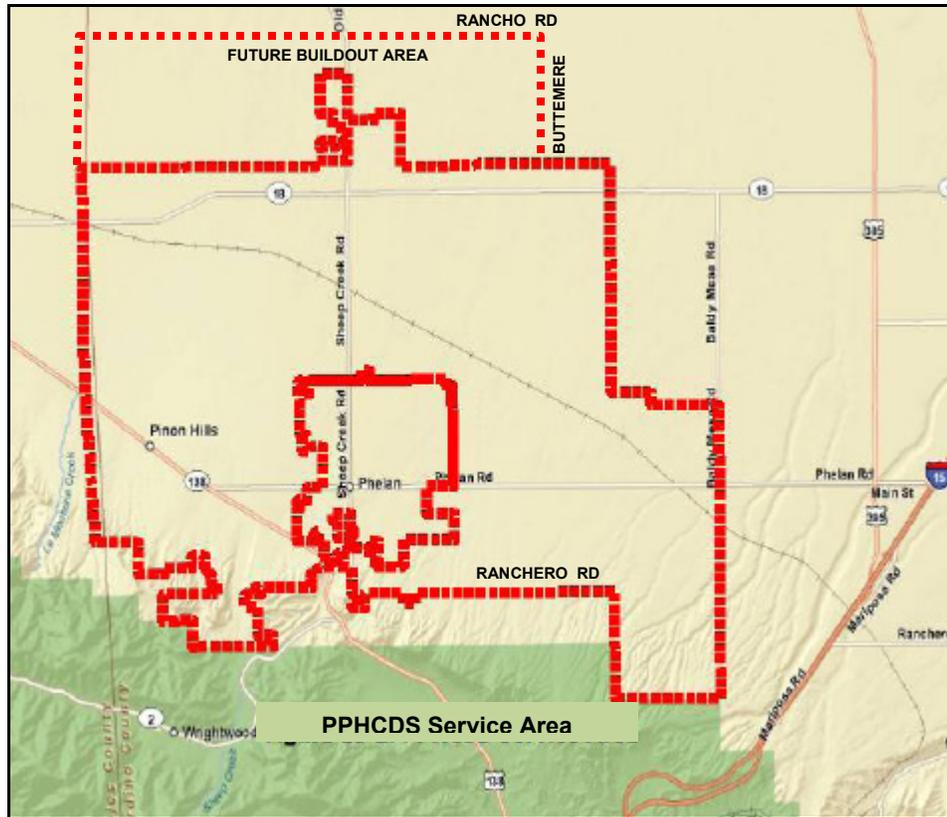
1.3 PPHCSD WATER SERVICE AREA

Location

The PPHCSD is located in the High Desert area of San Bernardino County between Palmdale and Victorville. In general, the area lies north and south of Highway 138 and west of Interstate 15 and the Cajon Pass. The western boundary is the San Bernardino/Los Angeles County line and the eastern boundary is Caughlin Road and Baldy Mesa Road. The area runs north from the Angeles National Forest to just north of Highway 18 as shown in Figure 1-1.

The District's water service area is approximately 118.7 square miles. It is located in the foothills to the north of the San Gabriel Mountains. Elevations in the service area range from approximately 3,200 feet at the northeast side, up to approximately 5,350 feet closer to the mountains on the southwest side. The District's customers are predominately residential, with only approximately 65 commercial and industrial businesses in the service area. An area of about 10 square miles centered at the south end of the District's service area is serviced by the Sheep Creek Mutual Water Company.

**Figure 1-1
PPHCSD Water Service Area**



Climate Characteristics

The Phelan Piñon Hills Community Services District is located in an area known as the Mojave Desert Air Basin (MDAB). The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north. Air masses are pushed on shore in Southern California by differential heating and are channeled through the MDAB. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south.

The average annual temperature varies throughout the Basin, averaging approximately 61 degrees Fahrenheit where the District’s service area is located. January and December are usually the coldest months while July and August are typically the hottest months of the year. Annual average relative humidity is 42 percent. Annual precipitation is typically 5 to 6 inches, occurring mostly between November and April. Average temperature and precipitation information for the District’s area is summarized in Table 1.3-1.

**Table 1.3-1
 PPHCSD Average Temperatures and Rainfall⁵**

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Temp (°F)	Max	58.7	62.1	67	74.1	82.5	91.6	98.3	97.1	91.1	80.2	67.4	59.4	77.5
	Min	29.8	33.1	36.6	41.5	47.7	54.2	60.8	60	53.9	44.3	34.5	29.2	43.8
Rainfall (inches)		0.96	1.06	0.82	0.36	0.13	0.04	0.13	0.20	0.24	0.32	0.50	0.80	5.56
Snowfall (inches)		0.9	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	1.4

Evapotranspiration

Evapotranspiration (ET) is the loss of water to the atmosphere by the combined processes of evaporation (from soil and plant surfaces) and transpiration (from plant tissues). It is an indication of how much water crops, lawn, garden, and trees need for healthy growth and productivity.

For ET to take place, the following conditions have to be met. First, water has to be present at the surface. Second, there must be some form of energy to convert the liquid water into a water vapor. Third, there must be a mechanism to transport the water vapor away from the evaporating surface.

Precipitation and irrigation are the two primary sources of water that plants use. Plant leaves and soil surfaces temporarily retain some part of the water applied to the soil. This part is readily available for evaporation. The remaining part infiltrates into the soil. Plants extract the infiltrated water through their roots and transport it up to their leaves for photosynthesis, a process by which plants produce glucose (sugar).

Many factors affect ET including:

- Weather parameters such as solar radiation, air temperature, relative humidity and wind speed;
- Soil factors such as soil texture, structure, density and chemistry; and
- Plant factors such as plant type, root depth, foliar density, height and stage of growth.

⁵ Data obtained from Western Regional Climate Center (WRCC), Desert Research Institute, Reno, Nevada (<http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9325>); WRCC program administered by the National Oceanic and Atmospheric Administration (NOAA); data extracted from monitoring Station 049325 at Victorville, CA (closest WRCC station to PPHCSD Service Area) covering the period January 1, 1917 through July 31, 2009.

Although ET can be measured using such devices as lysimeters, estimating ET using analytical and empirical equations is a common practice because measurement methods are expensive and time consuming. Most ET equations were developed by correlating measured ET to measured weather parameters that directly or indirectly affect ET. Since there are so many factors affecting ET, it is extremely difficult to formulate an equation that can produce estimates of ET under different sets of conditions. Therefore, the idea of a reference crop evapotranspiration was developed by researchers. Reference ET is the ET rate of a reference crop expressed in inches or millimeters.

Reference crops are either grass or alfalfa surfaces whose biophysical characteristics have been studied extensively. ET from a standardized grass surface is commonly denoted as E_{To} whereas ET from a standardized alfalfa surface is denoted as E_{Tr} . The American Society of Civil Engineers (ASCE) recommends the use of E_{To} s and E_{Tr} s, respectively, where “s” stands for standardized surface conditions. The logic behind the evapotranspiration idea is to set up weather stations on standardized reference surfaces for which most of the biophysical properties used in ET equations are known. ET from such surfaces can then be estimated using these known parameters and measured weather parameters. Then a crop factor, commonly known as the “crop coefficient” of “ K_c ” is used to calculate the actual evapotranspiration (E_{Tc}) for a specific crop in the same microclimate as the weather station site.

The California Irrigation Management Information System (CIMIS), Department of Water Resources, Office of Water Efficiency is using well-watered actively growing closely clipped grass that is completely shading the soil as a reference crop at most of its over 130 weather stations. Therefore, reference evapotranspiration is mostly referred to as E_{To} on the CIMIS website, although there are a few notable exceptions with E_{Tr} . There are many theoretical and empirical equations around the world to estimate E_{To} . The choice of any one method depends on the accuracy of the equation under a given condition and the availability of the required data. For reference surfaces with known biophysical properties, the main factors affecting E_{To} include solar radiation, relative humidity/vapor pressure, air temperature and wind speed. Therefore E_{To} can be estimated quite accurately using a model (a series of mathematical equations).

The monthly average E_{To} data shown in Table 1.3-2 has been extracted from the CIMIS Victorville station (#117), which is the closest station to the PPHCSD service area (located at an elevation of 2,890 feet). This station was activated on February 1, 1994.⁶

⁶ For additional information, refer to the CIMIS website at:
<http://www.cimis.water.ca.gov/cimis/frontStationDetailData.do?stationId=117>

**Table 1.3-2
 Average Evapotranspiration (ETo) Rates for PPHCSD Area**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
ETo (inches)	2.02	2.61	4.55	6.19	7.30	8.85	9.77	8.99	6.52	4.66	2.68	2.05	66.19

Data based on CIMIS station #117 in Victorville, CA, the closest station to PPHCSD water service area; go to this website, establish a password and log into station 117 data:

<http://www.cimis.water.ca.gov/cimis/frontMonthlyEToReport.doc>

Averages are based on the period this station has been in service, i.e., October 1994 through April 2011.

Demographics

The population of the District’s water service area is currently estimated at 20,873 and has experienced very little growth over the last two years, possibly because of the economic downturn. The District provides water to almost 6,800 service connections. The PPHCSD water service area is almost entirely single family residential with approximately 99 percent of water service connections serving single-family residences.

Table 1.3-3 lists the District’s population projections in five-year increments to the year 2035. Population projections are from data prepared by MWA based on service connections and population figures from Census, Department of Finance (DOF), and Southern California Association of Governments (SCAG).

**Table 1.3-3
 PPHCSD Water Service Area Population Projections**

	2010	2015	2020	2025	2030	2035
PPHCSD Population	20,873	23,191	25,509	27,923	30,338	32,753
% Change/Period	-	11.11%	10.00%	9.46%	8.65%	7.96%

Source: Mojave Water Agency (equates to 1.5 to 2.0 percent per year, compounded)

1.4 PPHCSD WATER SYSTEM AND FACILITIES

PPHCSD was established through San Bernardino County LAFCO Reorganization 3070 to include detachment from County Service Area (CSA) 56, and the dissolution of three Special Districts: CSA 9, CSA 56 Improvement Zone F-1, and CSA 70 Improvement Zones L and P-4. The reorganization formed the largest community services district in San Bernardino County with a total land area of 128 square miles and a water service area of 118.7 square miles. Elections were held in February 2008 and the installation

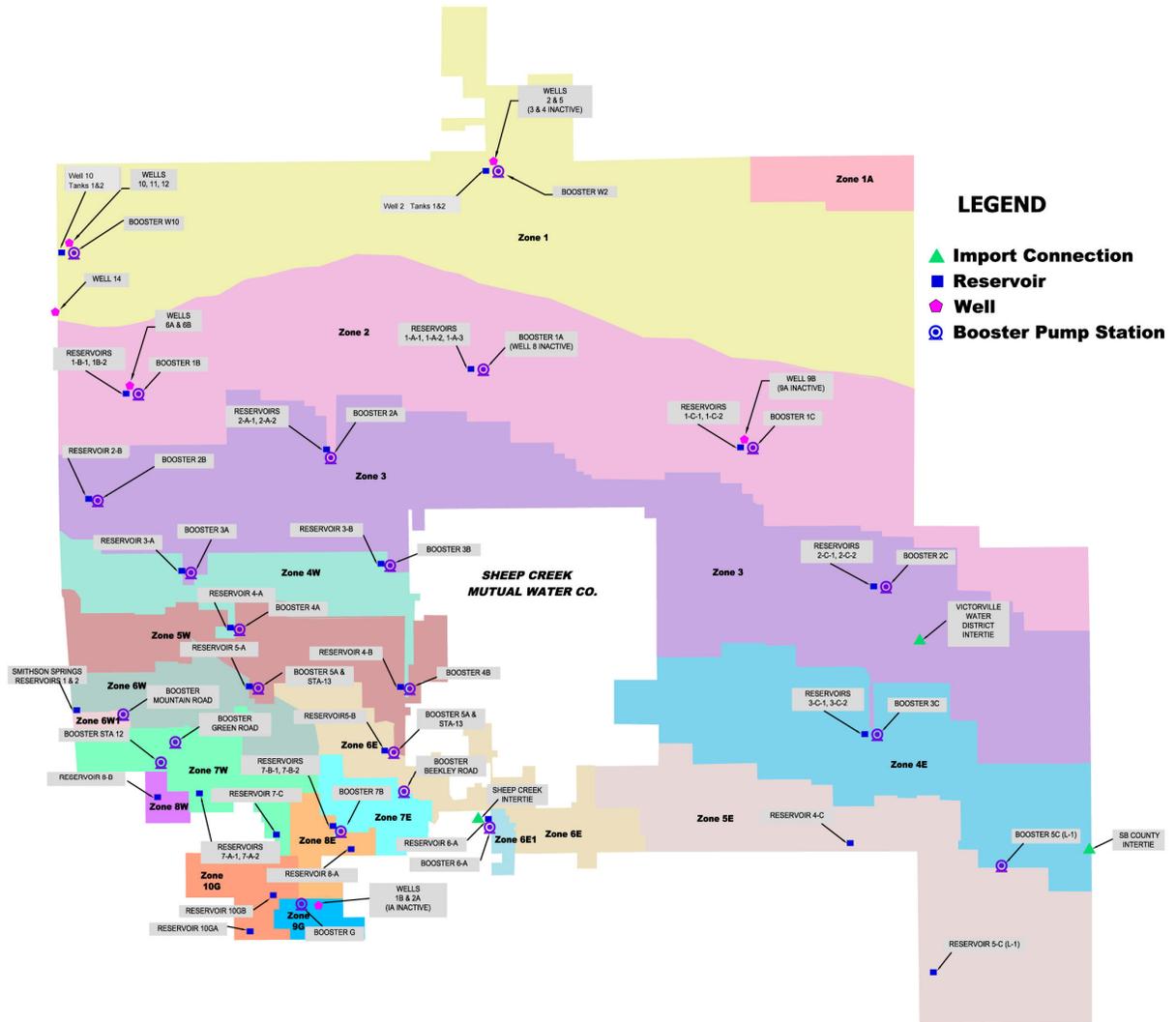
meeting for the purpose of swearing in the Board of Directors of PPHCSD was held on March 19, 2008.

The District's water distribution system consists of approximately 353 miles of pipelines ranging from 4-inch to 16-inch in diameter. The District obtains its water supply from the local groundwater aquifer through the use of 11 active wells that pump directly into the distribution system or into storage reservoirs. The District purchases replacement water from MWA, who replenishes the used groundwater primarily with imported water from the State Water Project (SWP). There are currently five inactive wells within the system. The depth, design flow and production data for the active wells and wells not in use are summarized in Section 2.

The District's system is divided into 16 pressure zones and contains 35 storage reservoirs, 32 pressure reducing stations, and 24 booster pump stations. The District has three interties, one intertie with each the City of Victorville, Sheep Creek Mutual Water Company, and San Bernardino County CSA 70J. These interties are typically only used to allow sharing of supplies during short-term emergencies or during planned shutdowns of a primary source, not during normal operating conditions when regular supplies are available. The District operates and maintains its wells, reservoirs, pump stations, pressure reducing stations, distribution pipelines, fire hydrants, water meters and related infrastructure. They also perform meter reading and billing to their customers. The District's water service area and supply facilities are shown in Figure 1-2.

The District establishes and manages an annual operation budget. Revenues are received from monthly water use and connection fees billed to water customers. The annual budget includes programs for Engineering, Administration, Water Quality, Water Production, Water Maintenance, Water Meters, and Water Billing. Personnel, operating and capital outlay/equipment replacement costs are determined for each program. In addition, a capital projects budget is designed to address primarily replacements and upgrades of various water facilities and pipelines.

**Figure 1-2
PPHCSD Water Service Area and Supply Facilities⁷**



⁷ Map from Phelan Piñon Hills Community Services District 2010 Water Facilities Master Plan, Fig. 2.1.

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2 WATER SOURCES AND SUPPLIES

2.1 WATER SOURCES

The Phelan Piñon Hills Community Services District typically obtains all of its water supply from the local groundwater in the Mojave River Basin. The Mojave Basin Area was the subject of a court ordered adjudication in 1993 due to the rapid growth within the area, increased withdrawals, and lowered groundwater levels. The court's Judgment appointed MWA as Watermaster of the Mojave Basin Area. The District is one of ten major retail purveyors that provide the majority of water in the Mojave Basin Area under MWA's management. For management purposes under the Mojave Basin Judgment, MWA subdivided the Mojave River watershed and associated groundwater basins into five subareas (Alto, Baja, Centro, Este, and Oeste). The District lies within MWA's Alto and Oeste Subareas. PPHCSD and the other purveyors in the area supply water to their customers from local groundwater and MWA replenishes the groundwater supply, primarily with imported water purchased from the SWP.

The court ordered adjudication of the Mojave Basin Area allocates a variable free production allowance (FPA) to each purveyor within the area that supplies more than 10 AFY, this includes the District. Each allocated FPA represents the purveyor's share of the water supply available from the MWA Subarea. FPAs are determined as a percentage of the purveyor's highest verified annual use from 1986 to 1990. If the District, or another purveyor, pumps more than its allotted FPA in any year, then they are required to purchase replacement water equal to the amount of production in excess of the FPA. Replacement obligations can be satisfied by either paying MWA, or by temporarily transferring unused FPA within the subarea from another party. Table 2.1-1 lists the District's Basin Annual Production (BAP) and current allotted FPA from the Oeste and Alto Subareas, in which its service area is located.

**Table 2.1-1
PPHCSD Allotted Free Production Allowance**

MWA Subarea	Base Annual Production (AFY)	Free Production Allowance (AFY)
Oeste	1,416	1,346
Alto	355	213
Total	1,771	1,559

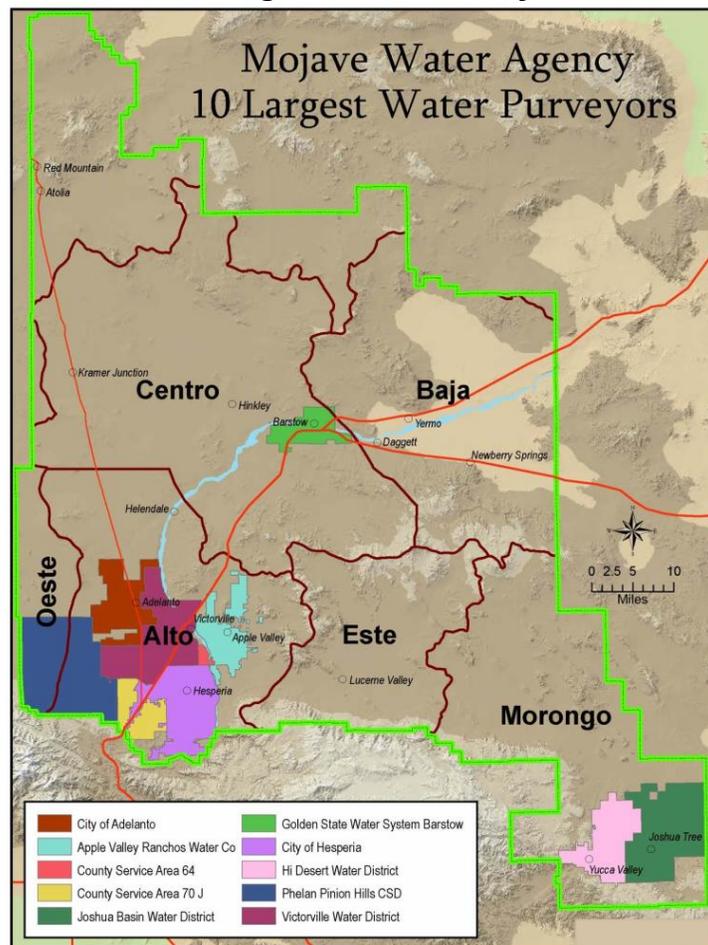
Both Alto and Oeste have an established FPA for agricultural, municipal, and industrial use for the 2010 through 2011 water year that is 80 percent, 60 percent, and 70 percent of BAP, respectively. During normal years, the District typically exceeds MWA's free production allowances from both the Oeste and Alto Subareas and is required to purchase replacement water. The District's Well 14 is located in Los Angeles County and is not a

part of or subject to the MWA adjudication. Production from this well is not reported to MWA and is not associated with the District's FPA.

Mojave Water Agency (MWA)

The Mojave Water Agency was founded July 21, 1960. It was created due to concerns over declining groundwater levels to ensure that sufficient water may be available to the people and land within its jurisdiction. MWA is one of 29 SWP contractors that provide Californians with drinking and irrigation water. MWA serves an area of approximately 4,900 square miles in San Bernardino County. MWA separates its service area into six management areas, including the previously described five subareas of the adjudicated Mojave Basin Area (Alto, Baja, Centro, Este, and Oeste), and the Morongo Basin/Johnson Valley Area. Mojave Water Agency's service area, its subareas, and its water purveyors are shown in Figure 2-1.⁸

**Figure 2-1
 Mojave Water Agency Service Area
 and Largest Water Purveyors**



⁸ Service Area Map from Mojave Water Agency 2010 UWMP.

MWA has five sources of water supply; natural surface water flows, wastewater imports from outside the MWA service area, SWP imports, agricultural depletion from storage, and return flow from pumped groundwater not consumptively used. MWA considers agricultural depletion from storage as a supply to avoid showing demand from agriculture on imported water supplies. Return water includes water pumped from the ground that is returned to the groundwater aquifer, such as water used indoors that returns to the basin either by percolation from septic tanks or treated wastewater effluent, or irrigation water that is unused by plant materials.

2.2 WATER SUPPLY

In the 2010 water year, the District pumped over 99 percent of its water supply from groundwater wells accessing the Mojave River Groundwater Basin. A small portion of its supply was imported from the Victorville Water District. Typically, the District obtains all of its water from groundwater wells. Current and projected water supplies are shown in Table 2.2-1 and described in subsequent sections.

**Table 2.2-1
 PPHCSD Current and Planned Water Supplies in AFY**

Water Supply Sources	2010^[1]	2010^[2]	2015^[3]	2020^[3]	2025^[3]	2030^[3]	2035^[3]
Groundwater Supply Available	3,059	3,303	4,358	4,741	5,019	5,312	5,574
Transfers/ Exchanges In	12	12	0	0	0	0	0
Total Water Supply	3,071	3,315	4,358	4,741	5,019	5,312	5,574

[1] Actual 2010 demand or supply used, refer to Appendix E. Supply assumed equal to demand.

[2] 2010 estimated demand or available supply based on normal year, not drought condition of 2010, assumes GPCD usage equal to 2008 per capita usage. Supply assumed equal to demand.

[3] Supply Available determined from water demand projections for PPHCSD provided by Mojave Water Agency and indicated in Table 5.2-1 of this report times supply/demand ratio (Difference as % of Demand) from Mojave Water Agency 2010 UWMP and indicated in Table 4.2-3 of this report.

During normal years, the PPHCSD obtains all of its water supply from the local groundwater aquifer through its wells. The District does not have any surface water diversion facilities, desalination facilities, or recycled water facilities. Since the District is not located near the ocean, desalination is not a practical or economically feasible source of water. All customers in the District currently discharge their wastewater into septic tanks. There is not a wastewater treatment plant within the District, so recycled water is not an economically feasible source of water for the District in the near future.

The District’s system has three available interties, one with each the Victorville Water District, the Sheep Creek Mutual Water Company (SCMWC), and San Bernardino County CSA 70J. All three interties are metered and allow the District to give or obtain water as required. The intertie with Victorville Water District is located at the intersection

of Yucca Terrace St. and Caughlin Rd. It uses a booster pump onsite to allow the transfer of water. The intertie with SCMWC is located near the District's Reservoir 6-A. The intertie with CSA 70J is located at Mesquite St. and Baldy Mesa Rd. A booster pump is required for the district to obtain water. These interties provide an additional source of water in case of a shortage or emergency. During normal operation of the water system, there are no transfer exchanges of water within the PPHCSD's service area, although the District purchased 15.96 acre-ft of water in 2009 and 12.27 acre-ft of water in 2010 from the Victorville Water District through that intertie.

Storage Tanks

The District maintains 35 storage tanks ranging from 1.0 million gallon (MG) to 0.04 MG with a total capacity of 11.5 MG. The District fills these tanks when demands are low and pumps from the tanks and pressurizes the water system during high demand periods.

Groundwater

Mojave River Groundwater Basin

PPHCSD obtains all of its water from the Mojave River Groundwater Basin. The basin covers an area of approximately 1,400 square miles and has an estimated total water storage capacity of nearly 5 million acre-feet.⁹ The Mojave River Groundwater Basin Area is essentially a closed basin. Very little groundwater enters or exits the basin. But groundwater movement does occur between subareas, groundwater-surface water, and groundwater-atmosphere interchanges. Groundwater is primarily recharged into the basin by infiltration from the Mojave River and storm runoff from San Gabriel and San Bernardino Mountains. The Mojave River provides an estimated average of 65,000 acre-ft per year of recharge to the Mojave River Groundwater Basin.¹⁰ Other sources of recharge include recharge from human activities such as irrigation return flows, wastewater discharge, and enhanced recharge with imported water. Groundwater is primarily discharged from the basin through well pumping, evaporation, transpiration, and seepage into lakes and the Mojave River.

As previously mentioned, the Mojave Basin Area was the subject of a court ordered adjudication, in an interim judgment in 1993. In January of 1996 the Riverside County Superior Court issued a final ruling on the adjudication for the basin in the Mojave Basin Judgment. The Judgment allocated water rights to purveyors with groundwater usage higher than 10 AFY from the Mojave River Groundwater Basin and appointed MWA as Watermaster of the Mojave Basin Area. The Judgment was triggered by the rapid growth within the Mojave Water Agency service area in the early 1990's that led to increased withdrawals and lowered groundwater levels. A copy of the Mojave Basin Area 1996 Adjudication is included in Appendix C.

⁹ Mojave Water Agency – 2010 UWMP

¹⁰ The California Water Plan Update 2009, Volume 3 Regional Update for the South Lahonton Region.

The Mojave River Groundwater Basin combines 31 smaller groundwater basins and sub basins along the Mojave River. The Department of Water Resources' official departmental bulletins, California's Groundwater Bulletin 118 Updated 2003 and Bulletin 160, The California Water Plan Update 2009 states that the Mojave Groundwater Basin has experienced overdraft since the early 1950s.¹¹ In an effort to eliminate long-term overdraft conditions, the Mojave Basin Judgment directed that the MWA must manage conservation and recharge the basin with supplemental water. MWA has reduced allotments to purveyors each year and has recharged the Mojave River Basin in an effort to eliminate overdraft.

Basin Management Strategies

Since the Mojave Basin Judgment, MWA has invested in a groundwater replenishment system (recharge facilities) and groundwater monitoring to effectively manage the basin.

Groundwater Replenishment System – Since 2006, MWA has used the Mojave River Pipeline to recharge water to the Mojave River Basin. The pipeline can deliver up to 45,000 AFY to the Mojave Basin to offset growing depletion of natural supplies. The pipeline runs approximately 76 miles from the California Aqueduct to MWA's four recharge sites.¹² These recharge sites are located at Hodge, Lenwood, Daggett/Yermo, and Newberry Springs. They provide the ability to recharge SWP water into subareas where replacement water is purchased. They also provide MWA the ability to bank excess SWP water.

Treated wastewater imports from outside MWA are also recharged into the Mojave River Groundwater Basin. Wastewater imports from the Crestline Sanitation District and Lake Arrowhead Community Services District are imported to the Alto Subarea, and effluent from the Big Bear Area Regional Wastewater Agency is imported to the Este Subarea. These wastewater imports comprise a relatively small volume in comparison to the total water used within the MWA service area.

Groundwater Monitoring – MWA maintains a comprehensive groundwater monitoring program to track dynamic conditions including groundwater production, storage, elevations, and quality. The program consists of over 900 monitoring wells and tracks water production within each of its five subareas. As stated previously, the Phelan Piñon Community Services District lies within the Alto and Oeste subareas. The Alto subarea is relatively stable and as a whole appears to be in regional balance, although portions of the subarea have shown declining yields. In the Oeste Subarea, hydrographs have indicated a long-term decline in water levels, but declines in most wells appear relatively small.¹³

¹¹ The California Water Plan Update 2009 is available on DWR's website at:
http://www.waterplan.water.ca.gov/docs/cwpu2009/0310final/v3_southlahontan_cwp2009.pdf;

references to groundwater challenges can be found in the Volume 3 Regional Update for the South Lahonton Region

¹² Mojave Water Agency 2010 UWMP.

¹³ Mojave Water Agency 2010 UWMP.

MWA Regional Water Management Plan (RWMP)

To maintain the Mojave Basin Area's water supply, MWA operates under a Regional Water Management Plan (RWMP). The current RWMP defines MWA's overall water management objectives from 2004 to 2020. The plan identifies potential projects and programs that might be developed to balance future water demands with available supplies. The RWMP projected that overdraft, combined with expected growth and increasing water demands will require a substantial recharge requirement by 2020. The RWMP notes that supply enhancement projects and/or additional management actions must be performed in the future to address the problems of groundwater overdraft and future increases in water demands. Future supply enhancement projects may involve additional groundwater recharge or an increase in groundwater efficiency. Management actions may involve additional storage conservation, storage agreements, and/or water transfers and water banking. MWA currently has five supply enhancement projects planned to supplement the existing groundwater recharge programs and facilities operated by MWA. For more information on MWA's planned supply enhancement projects and management actions, refer to MWA's 2010 Urban Water Management Plan.

District Wells

Within the District, groundwater for potable use is currently produced from eleven operating wells, located as shown in Figure 1-2. The District's active wells vary in depth from 257 feet to 1,100 feet, with production varying from 62 gallons per minute (gpm) to 750 gpm with a total estimated system capacity of approximately 4,307 gpm, as shown in Table 2.2-2.

Table 2.2-2 PPHCSD Active Wells^[1]

Well	MWA Subarea	Discharge Location	Well Depth (feet)	Capacity (gpm)
1B	Oeste	Zone G	470	62
2A	Oeste	Zone G	450	72
2	Oeste	Well Tanks 2-1, 2-2	660	180
3 ^[2]	Oeste	Well Tanks 2-1, 2-2	680	-
5	Oeste	Well Tanks 2-1, 2-2	800	359
6A	Oeste	Reservoir 1B	952	292
6B	Oeste	Reservoir 1B	1,080	420
9B	Alto	Reservoir 1C	1,100	263
10	Oeste	Well Tank 10-2	850	676
11	Oeste	Well Tank 10-2	778	200
12	Oeste	Well Tank 10-2	950	750
14 ^[3]	NA	Tanks 2A, 2B, 2C	1,100	707
Total (gpm)	-	-		3,981

[1] Source: PPHCSD 2010 Water Facilities Master Plan, Table 2-2.

[2] Well recently rehabbed and capacity reduced significantly.

[3] Well 14 is located in Los Angeles County and is not a part of the MWA adjudication area.

Table 2.2-3 summarizes the amount of groundwater pumped by each of the District's wells for the last five years.

Table 2.2-3 Amount of Ground Water Pumped (AFY)

Well No.	2006	2007	2008	2009	2010
1B	0	25	16	14	12
2A	52	49	16	17	14
2	278	259	206	208	204
3 ^[1]	266	374	474	415	1
4 ^[1]	208	192	107	0	0
5	651	636	441	264	331
6A	236	275	294	240	121
6B	155	300	115	382	175
9A ^[1]	377	205	70	58	0
9B	177	389	352	278	167
10	250	383	188	171	408
11	103	192	89	111	111
12	584	736	723	566	413
Subtotal^[2]	3,337	4,015	3,091	2,724	1,957
14 ^[3]	171	37	101	421	1,102
Total District	3,508	4,052	3,192	3,145	3,059

[1] Well is inactive.

[2] Subtotal within MWA adjudication area and included in MWA Watermaster Reports.

[3] Well 14 does not lie within the MWA adjudication area and its production is not included in the MWA Watermaster Reports.

Future projections for each of the District’s active wells are listed in Table 2.2-4. Projections were determined using District-wide demand projections provided by MWA, proportioned according to 2010 usage from active wells, up to approximate maximum well production capacity.

Table 2.2-4 Well Production Projections (AFY)

Well No.	2015	2020	2025	2030	2035
1B	16	19	21	24	26
2A	19	22	25	27	30
2	277	317	359	400	441
5	450	515	582	649	716
6A	165	188	213	237	262
6B	238	272	308	343	379
9B	227	260	294	327	361
10	555	633	718	800	883
11	151	173	195	218	240
12	562	642	727	810	893
Subtotal	2,660	3,041	3,438	3,835	4,231
14	1,100	1,100	1,100	1,100	1,100
Total District^[2]	3,760	4,141	4,538	4,935	5,331

[1] Subtotal within MWA adjudication area and included in MWA Watermaster Reports.

[2] Total demand projections from Mojave Water Agency 2010 UWMP, including Well 14, which is not part of MWA adjudication area and its production is not included in MWA Watermaster Reports.

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3 WATER QUALITY

3.1 WATER QUALITY OF EXISTING SOURCES

As required by the Safe Drinking Water Act, which was reauthorized in 1996, the District provides annual Water Quality Reports to its customers; also known as Consumer Confidence Reports (CCR). This mandate is governed by the Environmental Protection Agency (EPA) and the California Department of Public Health (CDPH) to inform customers of their drinking water quality. In accordance with the Safe Drinking Water Act, the District monitors a number of regulated and unregulated compounds in its water supply. The results from this testing were included in the District's 2009 Annual Water Quality Report, which is included in Appendix G.¹⁴ The water quality of the District's groundwater currently meets state and federal standards and treatment is not required. The wells pump directly into the distribution system or into storage tanks. Chlorine is added to the water to disinfect it before it is discharged to the system from all wells, except Well 5, where the water is blended with chlorinated water from Well 2 before entering the system.

3.1.1 IMPORTED WATER

During normal operation of the water system, there are no transfers or exchanges of water within the PPHCSD's service area. The District does not typically import water from the interties with the Victorville Water District, the SCMWC, or San Bernardino County CSA 70J. If the District does import water from one of the interties, the Victorville Water District and San Bernardino County CSA 70J both provide annual Water Quality Reports in accordance with the Safe Drinking Water Act.¹⁵

Although the District does not supply imported water to its customers, if the District exceeds its FPA and purchases replacement water from MWA, then MWA will recharge the basin with imported SWP water and highly treated recycled wastewater. So the District's usage has a direct effect on the volume of water that MWA recharges into the basin. The imported SWP water and recycled wastewater are significant factors in the water quality of the Mojave River Groundwater Basin. Since the Mojave River Basin is essentially a closed basin, the contaminants from imported water will remain in the basin.

3.1.2 GROUNDWATER

The Mojave Water Agency maintains a comprehensive groundwater monitoring program consisting of over 900 monitoring wells in their service area. MWA's 2004 Regional Water Management Plan indicates that there are water quality problems affecting drinking water supplies throughout the Mojave River Basin area. According to MWA's

¹⁴ The PPHCSD 2009 Consumer Confidence Report can also be viewed on the District's website at: <http://www.pphcsd.org/PPHCSD%20CCR%202009%20Final.pdf>

¹⁵ Water Quality Reports for Victorville Water District and SBC CSA 70J can be found at: <http://ci.victorville.ca.us/uploadedFiles/CityDepartments/Water>
<http://www.specialdistricts.org/2/water/services>, respectively

RWMP, key contaminants include (1) salinity, (2) arsenic, (3) chromium, (4) nitrates, (5) methyl tertiary butyl ether (MTBE) (6) manganese, and (7) iron. Each of these contaminants constituents of concern and is addressed in further detail below.

Salinity

Because the Mojave River Basin is essentially a closed basin, salinity is a concern because salt contained in imported reclaimed wastewater and SWP supplies remain in the basin. Water from the SWP has a low salinity on average, however, salinity in wastewater imports can be high.

Because SWP water and wastewater imports to the Mojave River Basin will be long term and persistent, MWA and the Lahontan Regional Water Quality Control Board completed a cooperative study in 2007 to address salt balance within the MWA service area. The report basically showed that the importation of SWP water mitigated the long-term effects of increased TDS primarily caused by population increases and the associated larger volumes of wastewater entering into the basins. MWA monitoring from 2005 to 2009 indicated TDS levels of 211.7 mg/L in the Alto Subarea, and 340.0 mg/L in the Oeste subarea.¹⁶

Arsenic

Arsenic, which has been linked to certain cancers and skin conditions, is a naturally occurring element found in rocks, soil, water, and air. Arsenic from these sources can enter the water supply through the natural erosion of rocks, as well as the dissolution of ores and minerals. Arsenic can also be found in wood preservatives, alloying agents, certain agricultural applications, semi-conductors, paints, dyes, and soaps. Agriculture and industrial discharges from these sources can contribute to elevated levels of arsenic in drinking water supplies.

The maximum contaminant level (MCL) for arsenic in domestic water supplies was lowered to 10 µg/L (from 50 µg/L), with an effective date of January 2006 in the federal regulations and an effective date of November 2008 in California's regulations for both groundwater and surface water supplies. In April 2004, based on reported lung and urinary bladder cancer risk data, California's Office of Environmental Health Hazard Assessment (OEHHA) set a public health goal (PHG) for arsenic of 0.004 µg/L.

Monitoring results reported on CDPH's website for the period 2002-2005 showed arsenic is ubiquitous in drinking water sources, reflecting its natural occurrence. Those results also show many sources have arsenic levels above the 10 µg/L MCL (e.g., Southern California drinking water sources containing arsenic concentrations over 10 µg/L include San Bernardino (64 sources), Los Angeles (48 sources), Riverside (26 sources), Orange (4 sources), and San Diego (5 sources)).¹⁷

¹⁶ Per the Mojave Water Agency 2010 UWMP.

¹⁷ Per CDPH website: <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Arsenic.aspx> - note the numbers reported on this site can change as the site is updated.

Although the Mojave Water Agency's 2004 Regional Water Management Plan indicates that arsenic levels above 10 µg/L were detected in the Oeste and Alto Subareas, the arsenic levels recorded within the District's service area between 2002 to 2005 (which was San Bernardino County Service Area 70L at that time) did not exceed 4 µg/L. Recorded arsenic levels at Wells 3, 4, 5 and 12 exceeded the state detection level for purposes of reporting arsenic of 2 µg/L, but these reported levels ranged from 2.3 µg/L to 4 µg/L and were well below the MCL of 10 µg/L.

Chromium

Like arsenic, chromium is a naturally occurring element found in rocks, soil, plants, and animals. Chromium III is typically the form found in soils and is an essential nutrient that helps the body use sugar, protein, and fat. Chromium VI is used in a number of industrial applications including electroplating, stainless steel production, leather tanning, textile manufacturing, dyes and pigments, wood preservation and as an anti-corrosion agent. Chromium occurs naturally in deep aquifers and can also enter drinking water through industrial discharges. In drinking water, chromium VI is very stable and soluble, whereas chromium III is not very soluble. Chromium VI is the more toxic form and is known to cause lung cancer in humans when inhaled, but the human health effects from ingestion are still a subject of conjecture.

There are no current drinking water standards for chromium VI. Total chromium (including chromium III and chromium VI) is regulated in California with an MCL of 50 µg/L. On August 20, 2009, the OEHHA released a draft PHG of 0.06 µg/L for chromium VI in drinking water. The PHG is a health-protective, non-regulatory level that will be used by CDPH in its development of an MCL. CDPH will set the eventual MCL as close to the PHG as technically and economically feasible.

The state detection level for purposes of reporting chromium VI is 1 µg/L. Between 2001 and 2003, levels above this were recorded in the Districts service area (which was San Bernardino County Service Area 70L at that time) at several of the District's wells, but reported levels ranged from 1 µg/L to 21 µg/L and were below the MCL for Chromium.¹⁸

Nitrates

Nitrates are one of the most common and widespread contaminants in groundwater supplies. High nitrate levels in water are typically associated with septic systems, confined animal feeding operations, or fertilizers. Nitrates are also present in treated wastewater. Nitrate (NO₃⁻) is a water-soluble molecule made up of nitrogen and oxygen. It is formed when nitrogen from ammonia or other sources combines with oxygenated water.

Nitrates can interfere with the ability of red blood cells to carry oxygen. Nitrates in drinking water has been known to cause methemoglobinemia, especially in infants. Some

¹⁸ Per CDPH website: <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chromium6timeline.aspx> - note the numbers reported on this site can change as the site is updated.

scientific studies have found evidence suggesting that women who drink nitrate-contaminated water during pregnancy are more likely to have babies with birth defects. Also, some experts believe that long-term ingestion of water high in nitrate may increase the risk of certain types of cancer.

The maximum contaminant level (MCL) for nitrate in domestic water supplies are¹⁹:

- 45 (mg/L) for nitrate as NO₃ (equivalent to 10 mg/L for nitrate as N)
- 10 mg/L for nitrate plus nitrite as N
- 1 mg/L for nitrite as N

Monitoring data sent to CDPH from 2002 to 2005 showed that many sources in California have high nitrate levels above MCLs. Nitrate as NO₃ was detected at least once above its MCL in 731 sources (San Bernardino with 82 sources), nitrate + nitrite as N was detected at least once above its MCL in 169 sources (San Bernardino with 38 sources), and nitrite as N was detected at least once above its MCL in 21 sources. However, MWA sampling data from 2005 to 2009 indicates NO₃ levels of 6.09 mg/L for the Alto Subarea, and 3.23 mg/L for the Oeste Subarea, which are well below the MCL.²⁰ Because all of the District's wastewater is currently treated with septic tanks, nitrates could become an issue in the future as population increases.

Methyl Tertiary-Butyl Ether (MTBE)

MTBE was the primary oxygenate in virtually all the gasoline used in California, prior to discovering it contaminated groundwater supplies and was found in surface water supplies. Following that discovery, MTBE was banned in California as of December 31, 2003 and was subsequently replaced by ethanol which is now the primary oxygenate in use. CDPH has adopted a primary MCL of 13 µg/L for MTBE based on carcinogenicity studies in animals. MTBE has a California secondary MCL of 5 µg/L, which was established based on taste and odor concerns²¹.

MTBE is a serious threat to groundwater because it is very soluble in water and has low affinity for soil particles, so it moves quickly into the groundwater. Unfortunately, MTBE is also resistant to chemical and microbial degradation in water, thereby making treatment more difficult than that employed to remove other gasoline components. However, a combination of an advanced oxidation process (typically ozone and hydrogen peroxide) followed by granular activated carbon has been found to be effective in reducing the levels of these contaminants.

MWA's 2004 Regional Water Management Plan indicates that MTBE is a concern in the southern region of the Oeste Subarea. Improved underground storage tank requirements

¹⁹ Per CDPH website: <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Nitrate.aspx> - note the numbers reported on this site can change as the site is updated.

²⁰ Per MWA 2010 UWMP.

²¹ Per CDPH website: <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/MTBE.aspx> - note the numbers reported on this site can change as the site is updated.

and monitoring procedures, as well as the phase-out of MTBE as a fuel additive, should decrease the likelihood of MTBE groundwater problems in the future.

Manganese

Manganese is a required nutrient. However, manganese at very high levels can pose a neurotoxic risk. Children are considered to be particularly susceptible to possible effects of high levels of manganese exposure because they absorb and/or retain more manganese than adults. Manganese is regulated by a 50 µg/L secondary maximum contaminant level (MCL). Monitoring data sent to CDPH showed that about 20 percent of drinking water sources monitoring for manganese have reported detections greater than the 0.05-mg/L secondary MCL.²² MWA sampling data from 2005 to 2009 indicates Manganese levels of 5.42 µg/L for the Alto Subarea, and 3.23 µg/L for the Oeste Subarea, which are well below the MCL.²³

Iron

Iron in drinking water is typically not considered hazardous to health and is considered a secondary or aesthetic contaminant. The MCL for iron in water is currently 300 µg/L and is based on taste and appearance, rather than detrimental health effects. MWA sampling data from 2005 to 2009 recorded iron levels of 103.89 µg/L for the Alto Subarea, and 100.00 µg/L for the Oeste Subarea, which are well below the MCL.²⁴

Groundwater Quality Protection

In recognition of the serious threat posed by groundwater contamination, MWA implements groundwater protection activities to maintain the groundwater and the aquifer and ensure a reliable high quality supply. These activities include water quality monitoring, managing recharge site activities, hazardous materials response, and education and coordination with local agencies.

3.2 WATER QUALITY EFFECT ON SUPPLY RELIABILITY

The District has not experienced any significant water quality problems in recent years and does not anticipate any significant changes in its available water supply due to water quality issues in the future.

²² Per CDPH website: <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Manganese.aspx>- note the numbers reported on this site can change as the site is updated.

²³ Per MWA 2010 UWMP.

²⁴ Per MWA 2010 UWMP.

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4 WATER RELIABILITY PLANNING

4.1 RELIABILITY OF WATER SUPPLIES

This section provides a description of the efforts of the District to maintain an adequate and reliable water supply and the efforts of MWA in maintaining the groundwater supply in the Mojave Basin Area as a whole. In normal years, the District obtains all of its water supply from local groundwater aquifer. The reliability of the District's water supply (with the exception of Well 14) is entirely dependent on the reliability of the groundwater in the Mojave River Basin, which is managed by MWA.

Almost all of the water use within MWA's service area is supplied by pumped groundwater. To supplement the local groundwater supplies, MWA recharges the groundwater basins with SWP imported water, natural surface water flows, wastewater imports from outside MWA's service area, agricultural depletion from storage, and return flow from pumped groundwater not consumptively used. MWA's sources are only used to recharge the groundwater basins and are not supplied directly to any retailers, with the exception of two power plants, the High Desert Power Project and the LUZ Solar Plant.

MWA is actively operating recharge sites along their Mojave River Pipeline and Morongo Basin Pipelines. Their current recharge sites include Hodge, Lenwood, Daggett, Newberry Springs, and Rock Springs Outlet. These recharge sites provide MWA with the ability to recharge SWP water into subareas where replacement water is purchased, as well as to bank excess SWP water, when available.

4.2 REGIONAL DEMAND AND SUPPLIES COMPARISON

MWA Supplies and Demands

The District currently obtains all of its water supply from the local groundwater aquifer and the reliability of the District's water supply is entirely dependent on the reliability of the groundwater in the Mojave River Basin. Table 4.2-1 shows the historic and projected total retail water demands within MWA's service area. MWA's projections assume moderate conservation and are further explained in MWA's 2010 Urban Water Management Plan.

**Table 4.2-1
Mojave Water Agency Service Area
Projected Water Demand (AFY)**

2005	2010	2015	2020	2025	2030	2035
166,280	151,885	163,161	170,496	181,740	192,969	204,181

Source: MWA 2010 UWMP, Table 2-3.

MWA analyzed water demands in their service area to assess the region’s ability to satisfy demands during an average water year, during a single-dry year, and multiple-dry years, Table 4.2-2 indicates the base years used for this analysis.

**Table 4.2-2
Basis of Water Year Data**

Water Year Type	Base Years	Historical Sequence
Average Water Year	Average	1922 - 2003
Single-Dry Water Year	1977	---
Multiple-Dry Water Year	1931 - 1934	---

Source: Mojave Water Agency 2010 UWMP, Table 6-2.

Table 4.2-3 summarizes MWA’s projections for their total supply and total demand during normal, single-dry year, and multiple dry years through 2035. MWA estimates that the demands will increase by 10 percent during single-dry year and multi-year periods. MWA plans on meeting 100 percent of their service area demands through 2035 in single-dry years and multiple-dry year periods with consistent local sources, SWP banking, and supply enhancement projects.

**Table 4.2-3
MWA Supply/Demand Reliability Projections
for Normal, Single Dry Years, and Multiple Dry Years (AFY)**

Normal Year	2010	2015	2020	2025	2030	2035
Total Estimated Supply	181,674	189,113	195,194	201,001	207,698	213,490
Total Estimated Demand	151,885	163,161	170,496	181,740	192,969	204,181
Difference/Surplus	29,789	25,952	24,698	19,261	14,729	9,309
Difference as a % of Supply	16.4%	13.7%	12.7%	9.6%	7.1%	4.4%
Difference as a % of Demand	19.6%	15.9%	14.5%	10.6%	7.6%	4.6%
Single-Dry Year	2010	2015	2020	2025	2030	2035
Total Estimated Supply	167,074	179,477	187,546	199,914	212,266	224,599
Total Estimated Demand	167,074	179,477	187,546	199,914	212,266	224,599
Multiple-Dry Year	2010	2015	2020	2025	2030	2035
Total Estimated Supply	167,074	179,477	187,546	199,914	212,266	224,599
Total Estimated Demand	167,074	179,477	187,546	199,914	212,266	224,599

Source: Mojave Water Agency 2010 UWMP.

MWA anticipates adequate supplies to meet demand during average, single-dry, and multiple-dry years, and excess supplies in normal years through 2035.

4.3 VULNERABILITY OF WATER SUPPLY TO SEASONAL OR CLIMATIC SHORTAGE

As previously stated, the District obtains its water from the Mojave River Basin and MWA manages the local groundwater supply to ensure its reliability during droughts and shortages. MWA is contracted with the California Department of Water Resources (DWR) for delivery of SWP water, but the variability in SWP supplies affects the ability of MWA to meet the overall recharge water supply needs for their service area. The amount of SWP water actually allocated to MWA each year is dependent on a number of factors, including seasonal or climatic shortages. These factors can cause the amount of available SWP water to vary significantly from year to year. The Department of Water Resources' "State Water Project Delivery Reliability Report 2009" presents a projection of SWP delivery reliability. Although it is very conservative, it assists MWA and other SWP contractors in assessing the reliability of their SWP supplies. The 2009 Report shows that deliveries during multiple-dry year periods could average about 34 to 35 percent of the maximum amount of water that MWA may request and could drop as low as 7 to 11 percent during an unusually single dry year.²⁵

MWA assumes that its local supply sources will remain constant during dry weather years. Since annual fluctuations in natural surface flows do not impact the long-term sustainability of the groundwater basins, MWA assumes that the natural supply is 100 percent available in single-dry year and multiple-dry year conditions. MWA assumes that imported wastewater from agencies inside and outside of their service area, as well as return flow from pumped groundwater that is not consumptively used will remain 100 percent available during dry weather conditions. Both are a direct function of water demands, which typically will increase during periods of dry weather. MWA also assumes that supply of recycled water from wastewater treatment plants within their service area will actually increase during dry weather years, due to increased demand.

The variability in SWP supplies has the largest effect on the reliability of the groundwater supply during seasonal or climatic shortages. MWA anticipates that consistent local supplies, combined with several existing and planned programs and projects will ensure that its purveyors, including the District, will have an adequate and reliable water supply during seasonal or climatic shortages.

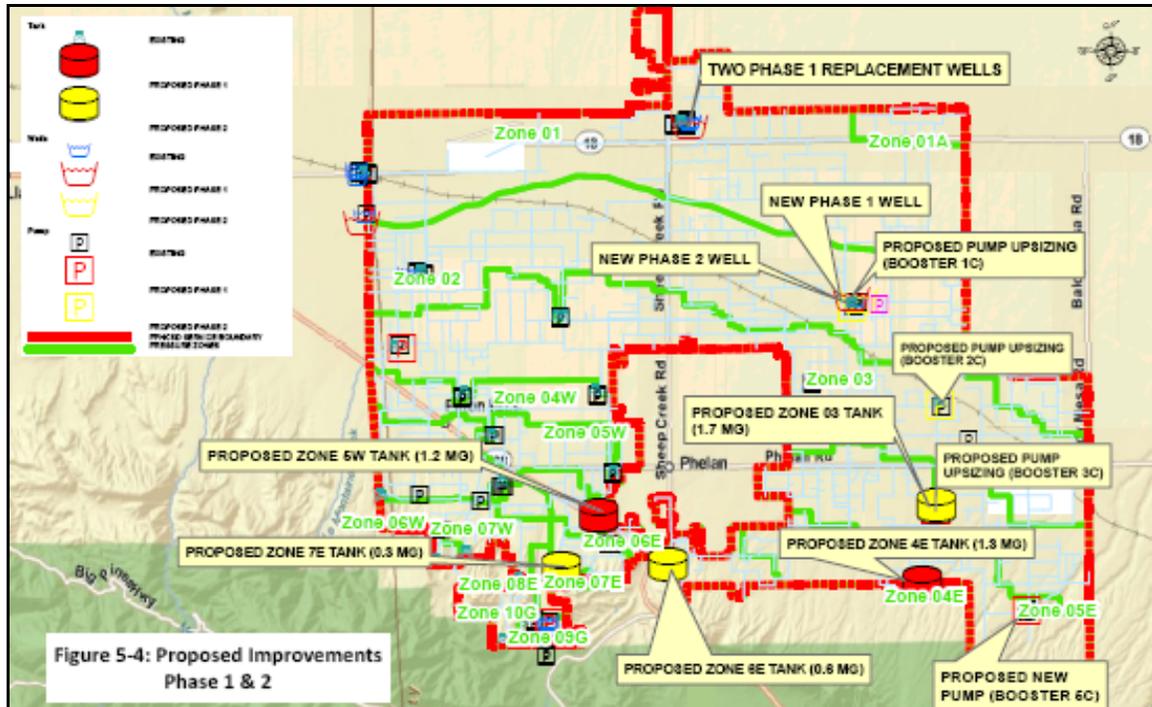
4.4 PLANNED WATER SUPPLY PROJECTS AND PROGRAMS TO MEET PROJECTED WATER USE

The Mojave Water Agency predicts that Phelan Piñon Hills Community Services District's water demands will more than double over the next 25 years. The District will construct new projects and implement programs to adequately supply the increasing

²⁵ From Mojave Water Agency 2010 UWMP.

demands and better manage the Mojave River Basin resource. The District’s 2010 Water Facilities Master Plan, prepared by IDModeling, provides a 10-year Capital Improvement Program for the District. Figure 4-1 shows the Master Plan’s proposed projects to correct deficiencies in the existing system and to ensure reliable and efficient water delivery and distribution with the increasing population through 2020.

Figure 4-1
PPHCSD Proposed 10-Year Capital Improvements²⁶



The District continually reviews practices and constructs projects as required to provide its customers with adequate and reliable supplies. A list of various projects that the District has completed from 2008 to 2010, projects that are underway, and projects that will be completed within a year are provided in Appendix F. Trained staff continue to ensure the water quality is safe and the water supply will meet present and future needs in an environmentally and economically responsible manner. To ensure a reliable supply to its customers, the District fills its tanks when demands are low and pumps from the tanks and pressurizes the water system during high demand periods.

4.4.1 REGIONAL AGENCY PROJECTS AND PROGRAMS

The planned projects and programs implemented by MWA to secure their water supplies and effectively recharge the groundwater supply in the Mojave River Basin directly affect the District’s water supply.

²⁶ From PPHCSD 2010 Water Facilities Master Plan, Fig. 5-4.

To account for the variability of available SWP water and to prevent shortages during dry years, MWA banks SWP storage water when possible. Although there can be a large variability in available SWP supplies, MWA's available SWP supply on average is greater than the demand within their service area. MWA takes advantage of this by storing the excess water in various groundwater basins for future use when SWP supplies are not available. During normal and wet years, MWA recharges SWP water in excess of local demands. They store this excess water as part of a groundwater storage program. During dry years when SWP supplies are limited, MWA uses the banked supply to meet demands. To prioritize where available water should be banked, MWA adopted a Water Banking Policy in 2006. The Policy established banking targets for each groundwater basin based on demands in each Subarea.

In order to enhance the long-term reliability of the water supply, MWA is currently exploring opportunities to purchase water supplies from other water agencies and sources, in addition to SWP water supplies. MWA has made short term transfers with the Metropolitan Water District of Southern California (Metropolitan) and the Sonoma County Water Agency (SCWA). Although these exchange programs were short-term, they represent the types of exchange opportunities that MWA and other SWP contractors have to maximize utilization of available water supplies from the SWP.

The MWA has supply enhancement projects planned to prevent groundwater overdraft in the future and improve supply reliability. Their 2004 Regional Water Management Plan lists several recharge projects that will improve water reliability within the Mojave Basin Area. These projects include: Regional Recharge and Recovery Project (R³ Project), Oro Grande Wash Recharge, Ames Valley Recharge, Joshua Bain Recharge, and Antelope Valley Wash Recharge. The R³ Project and the Oro Grande Wash Recharge Project are currently being advertised for bid, and the feasibility study is being completed for the Ames Valley Recharge Project.

4.5 EXCHANGE OR TRANSFER OPPORTUNITIES

As previously described in Section 2, the District's system has three available interties with the Victorville Water District, the Sheep Creek Mutual Water Company (SCMWC), and San Bernardino County CSA 70J. During normal operation of the water system, there are no transfers or exchanges of water within the PPHCSD's service area. The interties provide an additional source of water in case of a shortage or emergency, but all of these agencies primarily obtain all of their water from the local groundwater supply, and their reliability is directly related to the reliability of the groundwater supply. Because the District is entirely dependent on the local groundwater supply, to improve future reliability the District may look into future projects that would allow for the District to directly purchase wholesale imported water, although no such projects are currently planned.

4.6 DESALINATED WATER OPPORTUNITIES

The District does not have any desalination facilities. Its service area is not located near the ocean, so desalination is not a practical or economically feasible source of water for the District.

4.7 RECYCLED WATER OPPORTUNITIES

The District does not currently supply any recycled water and there are not any recycled water projects planned within the District's service area. Currently, all of the District's customers discharge their wastewater into septic tanks. The District does not have a wastewater collection system or a wastewater treatment plant within its service area, so the wastewater within the District's service area is not available for recycling anytime in the near future. The District does not currently have any plans to construct a wastewater collection system or wastewater treatment plant.

If the District constructs a wastewater collection system and treatment plant in the future, wastewater within the service area could be recycled to offset treated water demand. Table 4.7-1 indicates approximate volumes of recycled water that could be available from the District's service area wastewater, if a collection system and a wastewater treatment plant are constructed. Assuming that 50 percent of the District's water usage will be returned to the sewer and become treated wastewater and that all wastewater will be treated to meet Title 22 of the California Code of Regulations and be suitable for recycled water use, would generate the recycled water volumes shown below in Table 4.7-1.

**Table 4.7-1
Potential Recycled Water (Acre-ft per year)**

Water Supply Sources	2015	2020	2025	2030	2035
Potential Recycled Water	1,880	2,070	2,269	2,470	2,670

[1] Assumes recycled water volume equal to 50 percent of projected water demand, projected water demands per MWA 2010 UWMP

[2] Assumes that 100 percent of wastewater will be treated to meet Title 22 of the California Code of Regulations and will be available for recycled water use.

In the future, the District could purchase and import recycled water from outside of their service area. However, recycled water infrastructure would first need to be constructed to facilitate the importation of recycled water. The District will likely consider constructing facilities that will provide recycled water that is generated within its service area, prior to constructing facilities that will require the District to purchase recycled water from an adjacent agency.

While the District recognizes the potential uses of recycled water in its community, such as landscape irrigation, parks, industrial and other uses, the District does not have the infrastructure at this time to support the use of recycled water and it does not have any

plans to construct recycled water facilities in the near future. However, the District depends on groundwater for all of its water supply and supports the efforts of MWA to utilize recycled water to recharge the Mojave River Basin

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5 WATER SUPPLY BASELINES AND TARGETS AND WATER SUPPLY RELIABILITY COMPARISON TABLES

5.1 WATER BASELINES AND TARGETS

To comply with the SBX7-7 water conservation legislation, water suppliers must first establish a baseline water usage, which is then used to set targets for 2015 and 2020. The SBX7-7 legislation stipulates that targets must be established by using one of four allowable methods briefly defined as follows:

- Method 1: Per capita daily use equals eighty percent of the water supplier's baseline per capita usage;
- Method 2: Per capita daily use is set based on performance standards applied to indoor residential use; landscape area water use, and commercial, industrial and institutional use;
- Method 3: Per capita daily use is set at 95 percent of the applicable State hydrologic region target based on DWR's April 30, 2011 draft 20x2020 Water Conservation Plan (Phelan Piñon Hills Community Services District is in the South Lahonton Region 9); and
- Method 4: Per capita daily use is set based on standards consistent with CUWCC BMPs

Detailed information on the calculation of Phelan Piñon Hills Community Services District's baseline water usage and 2015 and 2020 per capita water conservation targets can be found in Appendix E, a Technical Memorandum dated April 15, 2011, entitled "20x2020 Baseline Calculation & Water Use Target Method Selection".

As noted in Appendix E, the District's per capita usage baseline average, minimum baseline average and SBX7-7 water conservation targets for 2015 and 2020 have been established as follows:

- Baseline Average (based on 10-year data from 1996-2005) = 184.7 gpcd
- Minimum Baseline Average (based on 5-year data from 2004-2008) = 171.0 gpcd
- 2015 Water Conservation Target = 173.1 gpcd
- 2020 Water Conservation Target = 161.5 gpcd

5.2 WATER SUPPLY RELIABILITY COMPARISON TABLES

Tables 5.2-1 through Table 5.2-3 compare the District's anticipated available water supply with expected demands for normal, single dry, and multiple dry years beginning in 2015 and extending through 2035. The normal, single-dry, and multiple-dry year conditions assume conditions from base years shown in Table 4.2-2. The District's projected demands for normal year usage were provided by the Mojave Water Agency. MWA's

demand and population projections estimate that the District’s per capita usage from 2015 through 2035 will be 145 gallons per day. Although this usage is well below the 20x2020 target of 161.5, the District will attempt to meet MWA’s projected demands to ensure a reliable supply. The District’s per capita usage has been less than MWA’s projected 145 gallons per day for the past three years, as shown in Appendix E. If the District’s per capita use returns to the average of the three years prior to 2008, then additional conservation will be needed to match MWA’s demand projections. Other factors could also impact whether or not MWA’s demand projections are met, such as varying population projections.

**Table 5.2-1
PPHCSD Projected Water Supply and Demand
Normal Water Year (AFY)**

Water Sources	2015	2020	2025	2030	2035
Available Supply ¹	4,358	4,741	5,019	5,312	5,574
Demand ²	3,760	4,141	4,538	4,935	5,331
Difference	598	600	481	377	243
Difference as a Percentage of Supply	13.7%	12.7%	9.6%	7.1%	4.4%
Difference as a Percentage of Demand	15.9%	14.5%	10.6%	7.6%	4.6%

[1] Available Supply determined from water demand projections for PPHCSD provided by Mojave Water Agency. Supply/demand ratio assumed to be proportional to Mojave Water Agency’s supply/demand during normal years. Supply/demand ratio determined from Mojave Water Agency 2010 UWMP and indicated in Table 4-3 of this report.

[2] Demand provided by Mojave Water Agency.

**Table 5.2-2
PPHCSD Projected Water Supply and Demand
Single Dry Water Year (AFY)**

Water Sources	2015	2020	2025	2030	2035
Available Supply ¹	4,136	4,555	4,992	5,429	5,864
Demand ²	4,136	4,555	4,992	5,429	5,864
Difference	0	0	0	0	0
Difference as a % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
Difference as a % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%

[1] Available Supply determined from water demand projections for PPHCSD provided by Mojave Water Agency. Supply/demand ratio assumed to be proportional to Mojave Water Agency’s supply/demand during single dry years. Supply/demand ratio determined from Mojave Water Agency 2010 UWMP and indicated in Table 4-3 of this report.

[2] Demand assumed to increase by 10 percent during dry years. Normal year demand volume provided by Mojave Water Agency.

**Table 5.2-3
PPHCSD Projected Water Supply and Demand
Multiple Dry Water Years (AFY)**

		2015	2020	2025	2030	2035
Multiple-dry year first year supply	Available Supply ¹	4,136	4,555	4,992	5,429	5,864
	Demand ²	4,136	4,555	4,992	5,429	5,864
	Difference	0	0	0	0	0
	Difference as a % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as a % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Multiple-dry year second year supply	Available Supply ¹	4,136	4,555	4,992	5,429	5,864
	Demand ²	4,136	4,555	4,992	5,429	5,864
	Difference	0	0	0	0	0
	Difference as a % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as a % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Multiple-dry year third year supply	Available Supply ¹	4,136	4,555	4,992	5,429	5,864
	Demand ²	4,136	4,555	4,992	5,429	5,864
	Difference	0	0	0	0	0
	Difference as a % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as a % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%

[1] Available Supply determined from water demand projections for PPHCSD provided by Mojave Water Agency. Supply/demand ratio assumed to be proportional to Mojave Water Agency's supply/demand during single dry years. Supply/demand ratio determined from Mojave Water Agency 2010 UWMP and [2] Demand assumed to increase by 10 percent during dry years. Normal year demand volume provided by Mojave Water Agency.

According to MWA's 2010 Urban Water Management Plan, MWA anticipates adequate supplies to meet demand during average, single-dry, and multiple-dry years, and excess supplies in normal years through 2035.

5.3 WATER USE REDUCTION PLAN

As demonstrated from the historical water usage data presented in Appendix E, the District has achieved substantial reductions in per capita water usage in recent years. In fact, the District has met its SBX7-7 2020 target the past three years. The 2009 and 2010 water years were well publicized to water customers in Southern California as a drought condition. Therefore, demands for these years should not be considered normal. Although, the daily per capita use average of the three years prior to 2009 (water years 2006-2008) within the District was 155.9 gallons, which is still below the 2020 target.

In order to ensure adequate reliability, the District plans on meeting or exceeding its SBX7-7 target in order to match demand projections estimated by the Mojave Water Agency. MWA's demand and population projections estimate that the District's per capita usage from 2015 through 2035 will be 145 gallons per day, which is well below the 20x2020 target of 161.5 gpd. The District's per capita usage has been less than 145 gallons per day the past three years, but if the District's per capita use returns to the average of the three years prior to 2008 (pre-drought), then additional conservation will be necessary for the District to meet the MWA's demand projections.

The SBX7-7 water conservation targets should be easily obtainable for the District, since it has exceeded this target in recent years, but additional conservation will be required to meet MWA's water demands projections. The District will attempt to meet the additional conservation requirements through a variety of means including:

- Encouraging residents and businesses in the District to conserve water;
- Educating the public through a variety of programs on the need for continued water conservation;
- Continuing to operate and maintain the water distribution system with an eye toward reducing water losses by repairing or eliminating any leaks that may develop as soon as practical;
- Encouraging or requiring new developments to install water conservation fixtures and landscape with low water use plant materials (xeriscape).

5.4 LOW-INCOME PROJECTED WATER DEMANDS

The California Water Code, Division 6, Part 2.6, Section 10631.1²⁷ requires each urban water retailer to include projected water use for single family and multi-family residential housing needed for lower income households as defined in Section 50079.5²⁸ of the Health and Safety Code, as identified in the housing element of the District.

The District's low-income projected water demands were determined from the U.S. Census Bureau data and the Regional Housing Needs Assessment (RHNA) for San Bernardino County. The RHNA is an assessment quantifies the need for housing by income group within various jurisdictions during specific planning periods. The RHNA in San Bernardino County is determined by the Southern California Association of Governments (SCAG). SCAG's most current RHNA planning period is January 1, 2006 to June 30, 2014.

²⁷ All California Law Codes can be accessed at this website: <http://www.leginfo.ca.gov/calaw.html>;
Section 10631.1 of the California Water Code is available at this website:
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&group=10001-11000&file=10630-10634>

²⁸ Section 500.79.5 of the Health and Safety Code is available at this website:
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=50001-51000&file=50050-50106>

Because Census data and RHNA information are not specifically available for the District’s service area, Census and RHNA data for San Bernardino County was used. From the available Census and RHNA data, it appears that low-income data for San Bernardino County as a whole is an accurate representation of the communities adjacent to the District’s service area, which include the City of Hesperia, Mountain View Acres, and the City of Victorville. It was assumed that Census data and the RHNA for San Bernardino County is indicative of the low-income population within the District’s service area.

The District’s 2009 low-income usage was determined as a percentage of its total residential usage recorded in 2009. This percentage was determined from Census data for San Bernardino County collected from 2005 to 2009. Low-income households were considered to be households with incomes less than 80 percent of the County’s median household income. Census data showed that approximately 39.7 percent of the County’s households were low-income housing in 2009. The District’s total residential usage in 2009 (2,490 AFY, as indicated in Table 6.1-1) was multiplied by 39.7 percent to determine the District’s 2009 low-income usage.

Table 5.4-1 lists the District’s low-income projected water demands. Because SCAG’s most recent RHNA for San Bernardino County only projects through 2014, the District’s low-income water demands were only projected through 2014. The RHNA recommends an allocation for 39.5 percent low-income and very low-income housing from 2006 through 2014. To determine the low-income water usage in 2014, the increase in low-income demand from 2009 to 2014 “New Demand” was determined by multiplying 39.5 percent by the increase in total residential demand from 2009 to 2014 (2014 residential demand interpolated from values listed in Table 6.1-1). Low-income demand in 2014 was then determined by adding the “New Demand” to the low-income demand in 2009. Since the estimated demand for low-income households is within the projections utilized for total new demand, water supplies should be available.

Table 5.4-1 Low-Income Water Use Projections (AFY)

Low-Income Water Use	2009	2014
Total	989	1,160
New Demand	-	171

5.5 WATER SHORTAGE CONTINGENCY PLAN

California’s extensive system of water supply infrastructure, its reservoirs, groundwater basins, and inter-regional conveyance facilities, mitigates the effect of short-term dry periods. Defining when a drought begins is a function of drought impacts to water users. Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Droughts occur slowly, over a multiyear period. Drought impacts increase with the length of a drought, as carry-over

supplies in reservoirs are depleted and water levels in groundwater basins decline. To meet short-term water demand deficiencies, and short- or long-term drought requirements, the District is currently developing its own Water Shortage Contingency Plan. As discussed previously, the extensive availability of groundwater storage and MWA’s ability to maintain groundwater levels by recharging these basins in wet years for use in dry years along with the ability to reduce water consumption during dry periods as evidenced over the past few years, provide reliability for the District.

5.6 CATASTROPHIC SUPPLY INTERRUPTION PLAN

Water Shortage Emergency Response

A water shortage emergency could be the result of a catastrophic event such prolonged drought, failures of transmission facilities, a regional power outage, earthquake, flooding, supply contamination from chemical spills, or other adverse conditions. The District maintains and exercises a comprehensive Emergency Management Program for such emergencies including Water Shortage Emergency Response. The plan describes the organizational and operational policies and procedures required to provide sufficient water supply for firefighting operations and safe drinking water, as well as provides a system for organizing and prioritizing water repairs. It also cites authorities and specifies the public and private organizations responsible for providing water service. A copy of the District’s Water Shortage Emergency Response Plan is included in Appendix I.

5.7 ESTIMATED MINIMUM SUPPLY FOR NEXT THREE YEARS

The Mojave Water Agency projects 100 percent reliability for full-service demands through the year 2035. The District anticipates the ability to meet water demand through the next three years based on the driest historic three-years as shown in Table 5.7-1.

**Table 5.7-1
Three Year Estimated Minimum Water Supply
(Based on Driest 3-Year Historic Sequence)
(AFY – All projections rounded to nearest 10 AF)**

Source	Normal			Multiple Dry Years ²		
	2011	2012	2013	2011	2012	2013
Groundwater Supply	4,046	4,126	4,205	3,744	3,842	3,940
Total	4,046	4,126	4,205	3,744	3,842	3,940

[1] Source: Supply determined from water demand projections for PPHCSD provided by Mojave Water Agency. Demand interpolated from values indicated in Table 2-2, assuming normal 2010 usage. Supply/demand ratio interpolated from MWA 2010 UWMP projections, indicated in Table 4-3 of this report.

[2] Multiple dry years based on driest 3-year historic sequence, indicated in Table 4-2. Demand during dry years assumed to increase by 10 percent from normal year demand volume provided by Mojave Water Agency.

The District relies on groundwater wells accessing the Mojave River Basin managed by MWA. MWA is looking into alternate supplies and has supply enhancement projects under construction to prevent groundwater overdraft and improve supply reliability to its purveyors, as discussed in Section 4. Additional actions to manage limited supplies would include both operational and demand management measures, encompassing alternative rate structures, distribution of water use efficiency devices, and enhanced school education and public information. Section 7 and the MWA 2010 UWMP further discusses MWA's programs for the benefit of the region and its member purveyors, including the Phelan Piñon Hills Community Services District.

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6 WATER USE PROVISIONS

6.1 PAST, CURRENT AND PROJECTED WATER USE AMONG SECTORS

From 1996 to 2008 the District’s usage increased at an average rate of approximately two percent per year. The Mojave Water Agency’s demand projections for the District indicate that the District’s total usage will continue to increase at approximately 2 percent on average through 2035. Table 6.1-1 lists the District’s past, current and projected water use between 2004 and 2035.

**Table 6.1-1
 Past, Current and Projected Water Use by Billing Classification (AF)**

District Billing Class	2004	2009	2015	2020	2025	2030	2035
Single Family Residential	2,623	2,486	3,009	3,314	3,632	3,949	4,266
Multi-Family Residential	5	4	4	5	5	6	6
Commercial	167	243	294	323	354	385	416
Industrial	0	0	0	0	0	0	0
Institutional/Governmental	0	0	0	0	0	0	0
Landscape Irrigation	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0
Other - Outside of Billing System	5	1	2	2	2	2	2
Subtotal	2,800	2,734	3,309	3,644	3,993	4,343	4,691
Unaccounted for System Losses ^[2]	798	68	397	497	545	592	640
Total Water Use^[3]	3,598	2,802	3,706	4,141	4,538	4,935	5,331

[1] Source: Year 2004 and 2009 data from PPHCSD for calendar years. All future total demands from Table 5-1; future projections by class are proportionate to class percentages reflected in the year 2009 data.

[2] 2004 and 2009 losses are based on actual data; all other years assume losses of 12 percent, based on average loss percentage from WY 1999 -2009 from PPHCSD 2010 Water Facilities Master Plan.

[3] Total water use per Mojave Water Agency 2010 UWMP.

Unaccounted-for water is the difference between water production and water consumption and represents “lost” water. Unaccounted-for water occurs for a number of reasons:

- Water lost from system leaking, i.e., from pipes, valves, pumps, and other water system appurtenances.
- Customer meter inaccuracies. Meters have an inherent accuracy for a specified flow range. However, flow above or below this range is usually registered at a lower rate. Meters become less accurate with time due to wear.

Unaccounted-for water was 22 percent in 2004 and only 2.4 percent in 2009, but according to the District’s 2010 Water Master Plan, unaccounted losses averaged 12

percent during the ten year period from water years 1999/2000 to 2008/09. Leak detection and water audits may help the District to reduce unaccounted-for water losses in the future.

6.2 WATER SERVICE CONNECTIONS BY SECTOR

Table 6.2-1 shows the current and projected number of water service customers by sector from 2004 through 2035.

**Table 6.2-1
Number of Water Service Connections by Billing Classification**

District Billing Class	2004	2009	2015	2020	2025	2030	2035
Single Family Res.	5,368	6,699	7,433	8,176	8,950	9,724	10,498
Multi-family Res.	5	5	6	6	7	7	8
Commercial	41	60	67	73	80	87	94
Industrial	0	5	6	6	7	7	8
Landscape	0	0	0	0	0	0	0
Agricultural	0	0	0	0	0	0	0
Other	2	5	6	6	7	7	8
Total Connections	5,416	6,774	7,516	8,267	9,050	9,833	10,615

Note: 2004 and 2009 data from PPHCSD; future projections are based on percentages proportionate to 2009 actual data and population projections.

7 WATER DEMAND MANAGEMENT MEASURES

7.1 INTRODUCTION

The Phelan Piñon Hills Community Services District is a water purveyor of MWA. MWA is a member of the California Urban Water Conservation Council (CUWCC) and submits annual reports to that council in accordance with the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU) from 2006. MWA implements many of the urban water conservation Demand Management Measures (DMMs) on behalf of its purveyors, including the Phelan Piñon Hills Community Services District.

The District is not a member of the CUWCC and does not submit a Retail Water Agency Annual Report to the CUWCC. A summary of all current Demand Management Measures being implemented within the District's water service area by either the District or MWA is provided herein. MWA's 2010 Urban Water Management Plan should be referred to for a detailed discussion of the regional best management practices (BMPs) program and each individual BMP.

As Signatory to the MOU, MWA has committed to a good faith effort in implementing the 14 cost-effective BMPs. "Implementation" means achieving and maintaining the staffing, funding, and in general, the priority levels necessary to achieve the level of activity called for in each BMP's definition, and to satisfy the commitment by the signatories to use good faith efforts to optimize savings from implementing BMPs as described in the MOU. A BMP as defined in the MOU is a "practice for which sufficient data are available from existing water conservation practices to indicate that significant conservation or conservation related benefits can be achieved; that the practice is technically and economically reasonable and not environmentally or socially unacceptable; and that the practice is not otherwise unreasonable for most water agencies to carry out."

The 14 BMPs include technologies and methodologies that have been sufficiently documented in multiple demonstration projects that result in more efficient water use and conservation. Many of the BMPs are implemented by the MWA in coordination with the District. Specifically, the 14 BMPs include:

1. Water survey programs for single-family residential and multifamily residential customers
2. Residential plumbing retrofit
3. System water audits, leak detection, and repair
4. Metering with commodity rates for all new connections and retrofit of existing connections
5. Large landscape conservation programs and incentives
6. High-efficiency washing machine rebate programs

7. Public information programs
8. School education programs
9. Conservation programs for commercial, industrial, and institutional accounts
10. Wholesale agency programs
11. Conservation pricing
12. Water conservation coordinator
13. Water waste prohibition
14. Residential ultra-low-flush toilet replacement programs

As signatory to the MOU, MWA is responsible for completing and submitting BMP Activity Reports to the CUWCC every two years for each year prior. The BMP Activity Report is a comprehensive document that shows implementation of each BMP.

7.2 BMP 1 - WATER SURVEY PROGRAMS FOR SINGLE FAMILY AND MULTI-FAMILY RESIDENTIAL CUSTOMERS

Definition

Implementation methods shall be at least as effective as identifying the top 20 percent of water users in each sector, directly contacting them (e.g., by mail and/or telephone) and offering the service on a repeating cycle; providing incentives sufficient to achieve customer implementation (e.g., free shower heads, hose and sprinkler timers, etc.). (Water Code Section 10631(f), 1-A)

MWA currently provides free low-flow shower heads, faucet aerators, and leak detection dye tablets to the District's customers.

7.3 BMP 2 - RESIDENTIAL PLUMBING RETROFIT

Definition

2c. PLUMBING RETROFIT

Implementation methods shall be at least as effective as delivering retrofit kits including high quality low-flow shower heads to pre-1980 homes that do not have them and toilet displacement devices or other devices to reduce flush volume for each home that does not already have ULF toilets, offering to install the devices; and following up at least three times. (Water Code Section 10631(f), 1-B)

The District, along with MWA, emphasizes High-Efficiency toilets (1.28 gallons per flush) that are EPA WaterSense certified. In addition, MWA provides free low-flow shower heads, faucet aerators, and leak detection dye tablets at their facilities.

7.4 BMP 3 - SYSTEM WATER AUDITS, LEAK DETECTION AND REPAIR

Definition

Implementation methods shall be at least as effective as at least once every three years completing a water audit of the water supplier's distribution system using methodology such as that described in the American Water Works Association's "Manual of Water Supply Practices, Water Audits and Leak Detection;" advising customers whenever it appears possible that leaks exist on the customer's side of the meter, and performing distribution system leak detection and repair whenever the audit reveals that it would be cost effective. (Water Code Section 10631(f), 1-C)

MWA is currently developing a program to provide technical support to its retailers for addressing the new American Water Works Association (AWWA) requirements for System Water Audit implementation. The methodology presented in the American Water Works Association's "Manual of Water Supply Practices, Water Audits and Leak Detection" (AWWA M36) is desirable in reducing water lost to leaks.

Many of the recommendations noted in the manual are currently integrated into the District's regular operations and maintenance procedures. From recent metered sales totals and groundwater production records, the District is able to approximate loss of water in the system due to leaks. During 2009, the volume of unaccounted for water losses within the District's water distribution system was estimated to be 2.4%. This was determined by the difference between the metered customer usage and groundwater production. Over the approximately 353 miles of distribution system piping, this loss is well within industry standards for a well-operated system. Therefore, a full-scale system audit is not necessary at this time. However, since MWA is the signatory of the MOU, and is the water supplier for the District, they are required to complete a system water audit for the Treated Water Service Area once every three years.

7.5 BMP 4 - METERING WITH COMMODITY RATES FOR ALL NEW CONNECTIONS AND RETROFIT OF EXISTING CONNECTIONS

Definition

Implementation methods shall be requiring meters for all new connections and billing by volume of use; and establishing a program for retrofitting any existing unmetered connections and billing by volume of use; for example, through a requirement that all connections be retrofitted at or within six months of resale of the property or retrofitted by neighborhood. (Water Code Section 10631(f), 1-D)

All service connections within the District's water service area are provided with water meters. There are no unmetered water service connections within the service area. The District's meters are classified into six sectors including single family residential, multi-family residential, commercial/institutional, industrial, landscape irrigation, and agricultural irrigation. The District bills each customer based on the volume of water used. Billing is based on a three-tiered water rate structure. Further details on the rate structure are listed under BMP 11.

7.6 BMP 5 - LARGE LANDSCAPE CONSERVATION PROGRAMS AND INCENTIVES

Definition

Implementation methods shall be at least as effective as identifying all irrigators of large (at least 3 acres) landscapes (e.g., golf courses, green belts, common areas, multi-family housing landscapes, schools, business parks, cemeteries, parks and publicly owned landscapes on or adjacent to road rights-of-way); contacting them directly (by mail and/or telephone); offering landscape audits using methodology such as that described in the Landscape Water Management Handbook prepared for the California Department of Water Resources; and cost-effective incentives sufficient to achieve customer implementation; providing follow-up audits at least once every five years; and providing multi-lingual training and information necessary for implementation. In addition, enacting and implementing landscape water conservation ordinances, or if the supplier does not have the authority to enact ordinances, cooperating with cities, counties and the green industry in the service area to develop and implement landscape water conservation ordinances pursuant to the 'Water Conservation in Landscaping Act' (Government Code 65591 et. seq.). (Water Code Section 10631(f), 1-E)

The Mojave Water Agency assists several of the agencies within its service area to develop landscape programs and assist customers in water conservation. MWA also currently provides small to large landscape rebates of \$0.50 per square foot of turf converted to desert adaptive landscaping with 25 percent canopy coverage. PPHCSD supplements this incentive with an additional \$0.50 per square foot, in combination with BMPs 6 and 14 up to a maximum of \$25,000 per year.

7.7 BMP 6 - HIGH EFFICIENCY WASHING MACHINE REBATE PROGRAMS

Definition

Implementation methods shall be enacted to provide incentives for replacement of older less efficient washing machines with newer, high-efficiency models. (Water Code Section 10631(f), 1-F)

The MWA program offers rebates of \$175 to residential customers who purchase washing machines with a minimum water use efficiency, or water factor. PPHCSD supplements this incentive with an additional \$25 per washer, in combination with BMPs 5 and 14 up to a maximum of \$25,000 per year.

7.8 BMP 7 - PUBLIC INFORMATION PROGRAMS

Definition

Implementation methods shall be at least as effective as ongoing programs promoting water conservation and conservation related benefits including providing speakers to community groups and the media; using paid and public service advertising; using bill inserts; providing information on customer's bills showing use in gallons per day for the last billing period compared to the same period the year before; providing public information to promote other water conservation practices; and coordinating with other governmental agencies, industry groups and public interest groups. (Water Code Section 10631(f), 1-G)

MWA promotes water conservation through several public information programs. MWA provides outreach, educational, informational materials and literature, public service announcements, and paid advertisements promoting water conservation to the public. MWA also provides flyers and bill inserts, which the District provides to its customers. The District also holds workshops at the Community Center on water efficient landscaping and water efficient irrigation systems including the use of smart irrigation controllers at least twice a year.

7.9 BMP 8 - SCHOOL EDUCATION PROGRAMS

Definition

Implementation methods shall be at least as effective as ongoing programs promoting water conservation and conservation related benefits including working with the school districts in the water supplier's service area to provide educational materials and instructional assistance. (Water Code Section 10631(f), 1-H)

The District runs school water conservation education programs in cooperation with MWA and the Mojave Environmental Education Consortium (MEEC). MWA provides literature and staff support to the District for teacher training workshops known as "Project Wet". The District is included and participates with AWAC via MWA.

7.10 BMP 9 - CONSERVATION PROGRAMS FOR COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL (CII) ACCOUNTS

Definition

Implementation methods shall be at least as effective as identifying and contacting the top 10 percent of the industrial and commercial customers directly (by mail and/or telephone); offering audits and incentives sufficient to achieve customer implementation; and providing follow-up audits at least once every five years if necessary. (Water Code Section 10631(f), 1-I)

BMP 9 is implemented by MWA. Rebates are offered as an incentive to upgrade to more efficient equipment. This BMP does not have a large affect the District's water service area, since less than 5 percent of the District's water usage currently is supplied to commercial usage and there are currently no industrial or institutional accounts within the District's service area.

7.11 BMP 10 - WHOLESALE AGENCY PROGRAMS

Definition

Implementation shall consist of at least the following actions: Wholesale Water Agency shall provide conservation-related technical support and information; financial incentives, or equivalent resources; and, when mutually agreeable and beneficial, operate all or any part of the conservation-related activities which a given retail supplier is obligated to implement under the BMP's cost-effectiveness test. (Water Code Section 10631(f), 1-J)

The District is not a wholesale water agency and therefore does not implement this BMP.

7.12 BMP 11 - CONSERVATION PRICING

Definition

Implementation methods shall be at least as effective as eliminating nonconserving pricing and adopting conserving pricing. For signatories supplying both water and sewer, this BMP applies to pricing of both water and sewer service. Signatories that supply water but not sewer service shall make a good faith effort to work with sewer agencies so that those sewer agencies adopt conservation pricing for sewer service. (Water Code Section 10631(f), 1-K)

The District has a three-tiered rate structure for water service within its service area. The first tier is currently set at \$1.81 per hundred cubic feet (hcf) for 0 to 14 hcf with the next tier at \$2.01 per hcf for up to 80 hcf and the third tier set at \$2.08 above 80 hcf. Additionally, each customer with a standard ¾-inch meter pays a flat rate of \$13.01 per month. All of the District's customers are currently served by septic systems. This tiered rate encourages conservation as the higher the use, the higher the commodity charge per unit of water.

7.13 BMP 12 - CONSERVATION COORDINATOR

Definition

Implementation methods shall be at least as effective as designating a water conservation coordinator responsible for preparing the conservation plan, managing its implementation, and evaluating the results. For very small water suppliers, this might be a part-time responsibility. For larger suppliers this would be a full-time responsibility with additional staff as appropriate. This work should be coordinated with the supplier's operations and planning staff. (Water Code Section 10631(f), 1-L)

The District has designated staff responsible for water conservation coordination. Since many of the BMPs are implemented by MWA, the District's staff does not spend a large amount of time dedicated to water conservation programs. The District continues to be involved in AWAC water conservation programs implemented by MWA.

7.14 BMP 13 - WATER WASTE PROHIBITION

Definition

Implementation methods shall be enacting and enforcing measures prohibiting gutter flooding, sales of automatic (self regenerating) water softeners, single pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash and commercial laundry systems and non-cycling decorative water fountains. (Water Code Section 10631(f), 1-M)

The District is currently developing a Water Shortage Contingency plan in which measures will be developed to prohibit activities such as; gutter flooding, non-recirculating fountains, non-commercial washing of motor vehicles, boats and trailers, filling of swimming pools, and use of water from a water hydrant during water shortages. Also, San Bernardino County Special Districts Ordinance No. SD 90-11 prohibits excessive use of water and provides guidelines to reduce water usage. The District's

service area is included in this ordinance. A copy of Ordinance No. SD 90-11 is included in Appendix D.

7.15 BMP 14 - RESIDENTIAL High-Efficiency Toilet Rebate program

Definition

An Implementation program for replacement of existing high-water-using toilets with ultra-low-flush toilets (1.6 gallons or less) in residential, commercial and industrial buildings shall be enacted. Such programs would be at least as effective as offering rebates of up to \$100 for each replacement that would not have occurred without the rebate, or requiring the replacement at time of resale, or requiring the replacement at the time of change of service. (Water Code Section 10631(f), 1-N)

MWA offers rebates of \$165 for each high efficiency toilet installed to both single family and multi-family residential customers to encourage them to replace older, high volume toilets with new, high-efficiency models. PPHCSD supplements this incentive with an additional \$25 per toilet, in combination with BMPs 5 and 6 up to a maximum of \$25,000 per year.

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APPENDICES

Appendix A

Urban Water Management Plan Act as Amended

CALIFORNIA WATER CODE DIVISION 6

PART 2.6. URBAN WATER MANAGEMENT PLANNING

All California Codes have been updated to include the 2010 Statutes.

CHAPTER 1.	GENERAL DECLARATION AND POLICY	10610-10610.4
CHAPTER 2.	DEFINITIONS	10611-10617
CHAPTER 3.	URBAN WATER MANAGEMENT PLANS	
Article 1.	General Provisions	10620-10621
Article 2.	Contents of Plans	10630-10634
Article 2.5.	Water Service Reliability	10635
Article 3.	Adoption and Implementation of Plans	10640-10645
CHAPTER 4.	MISCELLANEOUS PROVISIONS	10650-10656

WATER CODE

SECTION 10610-10610.4

10610. This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2. (a) The Legislature finds and declares all of the following:

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.
- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
- (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
- (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
- (9) The quality of source supplies can have a significant impact

on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

10610.4. The Legislature finds and declares that it is the policy of the state as follows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

WATER CODE

SECTION 10611-10617

10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

10611.5. "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

10616. "Public agency" means any board, commission, county, city

and county, city, regional agency, district, or other public entity.

10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

WATER CODE

SECTION 10620-10621

10620. (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

10621. (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero.

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water

supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

(c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

WATER CODE

SECTION 10630-10634

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

10631. A plan shall be adopted in accordance with this chapter that shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

- (A) An average water year.
- (B) A single dry water year.
- (C) Multiple dry water years.

(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial.
- (D) Industrial.
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.
- (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

- (A) Water survey programs for single-family residential and multifamily residential customers.
- (B) Residential plumbing retrofit.
- (C) System water audits, leak detection, and repair.
- (D) Metering with commodity rates for all new connections and retrofit of existing connections.
- (E) Large landscape conservation programs and incentives.
- (F) High-efficiency washing machine rebate programs.
- (G) Public information programs.
- (H) School education programs.
- (I) Conservation programs for commercial, industrial, and institutional accounts.

- (J) Wholesale agency programs.
- (K) Conservation pricing.
- (L) Water conservation coordinator.
- (M) Water waste prohibition.
- (N) Residential ultra-low-flush toilet replacement programs.

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.

(2) Include a cost-benefit analysis, identifying total benefits and total costs.

(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

(j) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivisions (f) and (g) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California,"

dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

(k) Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

10631.1. (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

10631.5. (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall

determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

(i) Compliance on an individual basis.

(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.

(B) The department may require additional information for any determination pursuant to this section.

(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of

the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).

(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.

(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

10631.7. The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

10632. (a) The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:

(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions that are applicable to each stage.

(2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic

sequence for the agency's water supply.

(3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.

(4) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

(6) Penalties or charges for excessive use, where applicable.

(7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

(8) A draft water shortage contingency resolution or ordinance.

(9) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

(b) Commencing with the urban water management plan update due December 31, 2015, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's

service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

WATER CODE

SECTION 10635

10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

WATER CODE

SECTION 10640-10645

10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630).

The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

10641. An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

10644. (a) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report those water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section

10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

(2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

(3) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

WATER CODE

SECTION 10650-10656

10650. Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the

"Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

Appendix B

Notice of Public Hearing and Resolution of Adoption

PROOF OF PUBLICATION

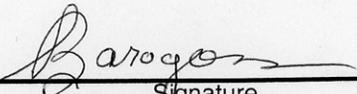
(20155C.C.)

STATE OF CALIFORNIA, } ss.
COUNTY OF SAN BERNARDINO

I am a Citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer of the Mountaineer-Progress, a newspaper of general circulation, printed and published weekly on Thursday in the Community of Wrightwood, County of San Bernardino, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of San Bernardino, State of California, Decree No. 112502, that the notice of which the annexed is a printed copy, has been published in each regular and entire issue of said Mountaineer-Progress and not in any supplement thereof the following dates, to-wit:

May 26, June 2, 2011

I certify (or declare) under penalty of perjury that the foregoing is true and correct.


Signature

Date June 2, 2011 at Wrightwood, CA

The

MOUNTAINEER PROGRESS

Newspaper

A continuation of the Wrightwood Mountaineer
Published Weekly

3407 State Highway 2

P.O. Box 248, Wrightwood, CA 92397

(760) 249-3245

The Newspaper of General Circulation for Wrightwood, Phelan,
Pinon Hills, Baldy Mesa, West Cajon Valley, El Mirage

Proof of Publication

NOTICE OF PUBLIC HEARING BY THE BOARD OF PHELAN PINON HILLS COMMUNITY SERVICES DISTRICT TO RECEIVE PUBLIC INPUT ON THE DRAFT YEAR 2010 URBAN WATER MANAGEMENT PLAN

NOTICE IS HEREBY GIVEN that the Board of Phelan Piñon Hills Community Services District will conduct a public hearing to receive input on the Draft Year 2010 Urban Water Management Plan at its regularly scheduled Board meeting on Wednesday, June 15th, 2011, at 7:00 p.m. at the Phelan Community Center located at 4128 Warbler Road, Unit #B, Phelan.

NOTICE IS FURTHER GIVEN that all interested persons are invited to attend the public hearing and provide comments regarding the Urban Water Management Plan. Verbal statements will be heard, but for the accuracy of the record, all important testimony should be submitted in writing.

NOTICE IS FURTHER GIVEN that a copy of the Draft Year 2010 Urban Water Management Plan can be reviewed Monday through Friday from 8 a.m. to 5 p.m. at the District's office located at 4176 Warbler Road, Phelan. For additional information, questions, or comments regarding the Urban Water Management Plan, please contact George Cardenas at 760-868-1212, extension 311.

RESOLUTION #2011-10

A RESOLUTION OF BOARD OF DIRECTORS OF THE PHELAN PIÑON HILLS COMMUNITY SERVICES DISTRICT, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ADOPTING THE PHELAN PIÑON HILLS COMMUNITY SERVICES DISTRICT'S 2010 URBAN WATER MANAGEMENT PLAN

WHEREAS, The California Water Management Planning Act 1983 (Act), as amended, requires urban water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, prepare an Urban Water Management Plan (UWMP), the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, Phelan Piñon Hills Community Services District is an urban supplier of retail water services, to a population of over 21,000; and

WHEREAS, the Plan shall be periodically reviewed at least once every five years, and that the District shall make any amendments or changes to its UWMP which are indicated in the review; and

WHEREAS, the UWMP must be adopted by July 1, 2011, after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption; and

WHEREAS, the District has therefore prepared and circulated for public review a draft Urban Water Management Plan, and a properly noticed public hearing regarding said UWMP was held by the Board of Directors on June 15, 2011; and

WHEREAS, the District did prepare, and shall file, said UWMP with the California Department of Water Resources; and

WHEREAS, the UWMP is a general information document and compliments the regional UWMP of Mojave Water Agency (MWA).

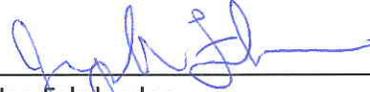
NOW, THEREFORE BE IT RESOLVED, the Board of Directors of the Phelan Piñon Hills Community Services District does hereby, by this Resolution, authorize the adoption of its 2010 Urban Water Management Plan and orders the filing of the Plan with the California Department of Water Resources.

The Board of Directors is further authorized to implement the Water Conservation Programs as set forth in the 2010 Urban Water Management Plan, which includes water shortage contingency analysis and recommendations regarding necessary procedures, rules, and regulations to carry out effective and equitable water conservation.

Approved and adopted the 22nd day of June, 2011.

I, the undersigned, hereby certify that the foregoing Resolution Number 2011-10 was duly adopted by the Board of Directors following a roll call vote:

Ayes: Fahrlender, Roberts, Anderson, Morrissette
Noes: None
Absent: Johnson



Joe Fahrlender
President, Board of Directors
Phelan Piñon Hills Community Services District

ATTEST:



Debbie Bishop
Secretary, Board of Directors
Phelan Piñon Hills Community Services District

Appendix C

**Mojave Basin Area Adjudication
January 10, 1996**

JUDGMENT AFTER TRIAL

JANUARY 10, 1996

**MOJAVE BASIN AREA ADJUDICATION
CITY OF BARSTOW, ET AL V. CITY OF ADELANTO, ET AL
RIVERSIDE COUNTY SUPERIOR COURT CASE NO. 208568**



CHAMBERS OF
VICTOR MICELI
JUDGE OF THE SUPERIOR COURT

Superior Court
STATE OF CALIFORNIA
COUNTY OF RIVERSIDE

COURTHOUSE
4050 MAIN STREET
RIVERSIDE, CALIFORNIA 92501

January 10, 1996

TO: ALL PARTIES LISTED ON THE ATTACHED MAILING LIST
FROM: E. MICHAEL KAISER, JUDGE *by ss*
SUBJECT: CITY OF BARSTOW VS CITY OF ADELANTO, Case No.: 208568

The Judgment in the above-entitled case was signed on January 10, 1996. Please find attached the amended two pages of Exhibit B, Table B-1.

Please find attached two amended pages of Exhibit B, Table B-1.

~~12/10/92~~
~~01/20/93~~
~~02/02/93~~
~~04/18/93~~
~~04/28/93~~
09/25/95

EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL ¹	BASE ANNUAL ²	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
	PRODUCTION (ACRE-FEET)	PRODUCTION RIGHT (PERCENT)	FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
SAN BERNARDINO CO SERVICE AREA 70J	1,005	0.8213	1,005	954	904	854	804
SAN BERNARDINO CO SERVICE AREA 70L	355	0.2901	355	337	319	301	284
SAN FILIPPO, JOSEPH & SHELLEY	35	0.0286	35	33	31	29	28
SILVER LAKES ASSOCIATION	3,987	3.2583	3,987	3,787	3,588	3,388	3,189
SOUTHDOWN, INC	1,519	1.2414	1,519	1,443	1,367	1,291	1,215
SOUTHERN CALIFORNIA WATER COMPANY	940	0.7682	940	893	846	799	752
SPRING VALLEY LAKE ASSOCIATION	3,056	2.4974	3,056	2,903	2,750	2,597	2,444
SPRING VALLEY LAKE COUNTRY CLUB	977	0.7984	977	928	879	830	781
STORM, RANDALL	62	0.0507	62	58	55	52	49
SUDMEIER, GLENN W	121	0.0989	121	114	108	102	96
SUMMIT VALLEY RANCH	452	0.3694	452	429	406	384	361
TATRO, RICHARD K & SANDRA A	280	0.2288	280	266	252	238	224
TATUM, JAMES B	829	0.6775	829	787	746	704	663
TAYLOR, ALLEN C / HAYMAKER RANCH	456	0.3727	456	433	410	387	364
THOMAS, S DALE	440	0.3596	440	418	396	374	352
THOMAS, WALTER	36	0.0294	36	34	32	30	28
THOMPSON, JAMES A	418	0.3416	418	397	376	355	334
THOMPSON, RODGER	76	0.0621	76	72	68	64	60
THRASHER, GARY	373	0.3048	373	354	335	317	298
THUNDERBIRD COUNTY WATER DISTRICT	118	0.0964	118	112	106	100	94
TURNER, ROBERT	70	0.0572	70	66	63	59	56
VAIL, JOSEPH B & PAULA E	126	0.1030	126	119	113	107	100
* VAN BURGER, CARL	710	0.5802	710	674	639	603	568
VAN LEEUWEN FAMILY TRUST	341	0.2787	341	323	306	289	272

* Durston Well, location 06N/04W-18F, APN 468-151-11 - water production right of 357 acre/feet, claimed by Durston/Van Burger/CVB Investments and Industrial Asphalt. Product right to be determined in a subsequent severed proceeding, jurisdiction reserved.

~~12/10/92~~
~~01/20/93~~
~~02/02/93~~
~~01/10/93~~
~~01/28/92~~
09/25/95

EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA PRODUCER	BASE ANNUAL ¹	BASE ANNUAL ²	FREE PRODUCTION ALLOWANCES (ACRE-FBET)				
	PRODUCTION (ACRE-FBET)	PRODUCTION RIGHT (PERCENT)	FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
AGCON, INC	0	0.0000	0	0	0	0	0
AGUAYO, JEANETTE L	212	0.3742	212	201	190	180	169
ATCHISON, TOPEKA, SANTA FE RAILWAY CO	120	0.2118	120	114	108	102	96
AVDEEF, THOMAS	34	0.0600	34	32	30	28	27
AZTEC FARM DEVELOPMENT COMPANY (Now, Virgil Gorman)	220	0.3883	220	209	198	187	176
BARNES, PAY - EXECUTOR OF ESTATE OF WAYNE BARNES	243	0.4289	243	230	218	206	194
BROMMER, MARVIN	361	0.6372	361	342	324	306	288
BURNS, RITA J & PAMELA E	16	0.0282	16	15	14	13	12
CHAPA, LARRY R	96	0.1694	96	91	86	81	76
CHOI, YONG IL & JOUNG AE	38	0.0671	38	36	34	32	30
CHRISTISON, JOEL	75	0.1324	75	71	67	63	60
COOK, KWON W	169	0.2983	169	160	152	143	135
DE VRIES, NEIL	3,800	6.7070	3,800	3,610	3,420	3,230	3,040
DESERT COMMUNITY BANK	156	0.2753	156	148	140	132	124
DURAN, FRANK T	50	0.0883	50	47	45	42	40
GAINES, JACK	117	0.2065	117	111	105	99	93
GESIRIECH, WAYNE	121	0.2136	121	114	108	102	96
GORMAN, VIRGIL	138	0.2436	138	131	124	117	110
GRIEDER, RAYMOND H & DORISANNE	30	0.0530	30	28	27	25	24
GRILL, NICHOLAS P & MILLIE D	21	0.0371	21	19	18	17	16
GROEN, CORNELIS	1,043	1.8409	1,043	990	938	886	834
HANIFY, DBA - WHITE BEAR RANCH	152	0.2683	152	144	136	129	121
HARMSBN, JAMES & RUTH ANN	1,522	2.6863	1,522	1,445	1,369	1,293	1,217
HARPER LAKE COMPANY	1,433	2.5293	1,433	1,361	1,289	1,218	1,146

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7
8 SUPERIOR COURT OF THE STATE OF CALIFORNIA
9 IN AND FOR THE COUNTY OF RIVERSIDE

10
11 CITY OF BARSTOW, et al,

12 Plaintiff,

13 v.

14 CITY OF ADELANTO, et al,

15 Defendant.

16
17 MOJAVE WATER AGENCY,

18 Cross-complainant,

19 v.

20 ANDERSON, RONALD H. et al,

21 Cross-defendants.

) CASE NO. 208568

)
) ASSIGNED TO JUDGE KAISER
) DEPT. 4 FOR ALL PURPOSES

) JUDGMENT AFTER TRIAL

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Exhibit "A" - Map entitled, "Map showing Mojave Water Agency, Mojave River, Mojave Basin Area and Hydrologic Subareas and Limits of Adjudicated Area Together with Geologic and Other Pertinent Features."

Exhibit "B" - Tables entitled, "Table B-1: Table Showing Base Annual Production, Base Annual Production Right of Each Producer Within Each Subarea, and Free Production Allowance for Subareas for First Five Years of the Judgment" and "Table B-2: Table Showing Total Water Production for Aquaculture and Recreational Lake Purposes."

- Exhibit "C" - Engineering Appendix.
- Exhibit "D" - Time Schedules.
- Exhibit "E" - List of Producers and Their Designees.
- Exhibit "F" - Transfers of Base Annual Production Rights.
- Exhibit "G" - Subarea Obligations.
- Exhibit "H" - Biological Resource Mitigation.
- Exhibit "I" - Map Showing Potential Groundwater Recharge Areas

1 I. INTRODUCTION

2 A. The Complaint. The original complaint herein was filed
3 by the City of Barstow and Southern California Water Company
4 (collectively "Plaintiffs") in San Bernardino Superior Court, North
5 Desert District, on May 30, 1990 as Case No. BCV6672, and
6 transferred to Riverside County Superior Court on November 27,
7 1990. Plaintiffs allege that the cumulative water Production
8 upstream of the City of Barstow Overdrafted the Mojave River
9 system, and request an average Annual flow of 30,000 acre-feet of
10 surface water to the City of Barstow area. The complaint also
11 includes a request for a writ of mandate to require the Mojave
12 Water Agency ("MWA") to act pursuant to its statutory authority to
13 obtain and provide Supplemental Water for use within the Mojave
14 Basin Area.

15 B. The MWA Cross-Complaint. On July 26, 1991, the MWA filed
16 its first amended cross-complaint in this case. The MWA first
17 amended cross-complaint and its ROE amendments name Producers who
18 collectively claim substantially all rights of water use within the
19 Mojave Basin Area, including Parties downstream of the City of
20 Barstow. The MWA cross-complaint, as currently amended, requests
21 a declaration that the available native water supply to the Mojave
22 Basin Area (not including water imported from the California State
23 Water Project) is inadequate to meet the demands of the combined
24 Parties and requests a determination of the water rights of
25 whatever nature within the MWA boundaries and the Mojave Basin
26 Area. The MWA has named as Parties several hundred Producers
27 within the Basin Area.

28 ///

1 C. The Arc Las Flores Cross-Complaint. On July 3, 1991, Arc
2 Las Flores filed a cross-complaint for declaratory relief seeking
3 a declaration of water rights of certain named cross-defendants and
4 a declaration that the appropriative, overlying and riparian rights
5 of Arc Las Flores be determined to be prior and paramount to any
6 rights of the Plaintiffs and other appropriators.

7 D. Stipulation and Trial. On October 16, 1991, the Court
8 ordered a litigation standstill. The purpose of the standstill was
9 to give the parties time to negotiate a settlement and develop a
10 solution to the overdraft existing in the Mojave River Basin.

11 A committee of engineers and attorneys, representing a variety
12 of water users and interests throughout the Mojave River Basin, was
13 created to develop a physical solution to the water shortage
14 problem. The work of the committee resulted in a stipulated
15 interlocutory order and judgment, which was entered by the court on
16 September 23, 1993.

17 Several non-stipulating parties requested a trial. On April
18 20, 1994, the Court issued a memorandum setting forth the trial
19 issues. This cause came on regularly for trial on February 6,
20 1995, and was tried in Department 4 of the above-entitled Court,
21 the Honorable E. Michael Kaiser, Judge, Presiding, without a jury.
22 Oral and documentary evidence was introduced on behalf of the
23 respective parties and the cause was argued and submitted for
24 decision.

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1 II. DECREE

2 NOW, THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED:

3 A. JURISDICTION, PARTIES, DEFINITIONS.

4 1. Jurisdiction and Parties.

5 a. Jurisdiction. This Court has jurisdiction to
6 enter Judgment declaring and adjudicating the rights to reasonable
7 and beneficial use of water by the Parties in the Mojave Basin Area
8 pursuant to Article X, Section 2 of the California Constitution.
9 This Judgment constitutes an adjudication of water rights of the
10 Mojave Basin Area pursuant to Section 37 of Chapter 2146 of
11 Statutes of 1959 ("the MWA Act").

12 b. Parties. All Parties to the MWA cross-
13 complaint are included in this Judgment. The MWA has notified
14 those Persons claiming any right, title or interest to the natural
15 waters within the Mojave Basin Area to make claims. Such notice
16 has been given: 1) in conformity with the notice requirements of
17 Water Code §§ 2500 et seq.; 2) pursuant to Section 37 of the MWA
18 Act; and 3) pursuant to order of this Court. Subsequently, all
19 Producers making claims have been or will be included as Parties.
20 The defaults of certain Parties have been entered, and certain
21 named cross-defendants to the MWA cross-complaint who are not
22 Producers have been dismissed. All named Parties who have not been
23 dismissed have appeared herein or have been given adequate
24 opportunity to appear herein. The Court has jurisdiction of the
25 subject matter of this action and of the Parties hereto.

26 c. Minimal Producers. There are numerous Minimal
27 Producers in the Basin Area and their number is expected to
28 increase in the future. In order to minimize the cost of

1 administering this Judgment and to assure that every Person
2 producing water in the Basin Area participates fairly in the
3 Physical Solution, MWA shall:

4 i. within one Year following entry of this
5 Judgment, prepare a report to the Court: 1) setting forth the
6 identity and verified Base Annual Production of each Minimal
7 Producer in each Subarea of the Basin Area; and 2)
8 recommending a proposed system of Minimal Producer
9 Assessments. The system of Minimal Producer Assessments shall
10 achieve an equitable allocation of the costs of the Physical
11 Solution that are attributable to Production of verified Base
12 Annual Production amounts by Minimal Producers in each Subarea
13 to and among such Minimal Producers. Minimal Producer
14 Assessments need not be the same for existing Minimal
15 Producers as for future Minimal Producers.

16 ii. within one Year following entry of this
17 Judgment, prepare a report to the Court setting forth a
18 proposed program to be undertaken by MWA, pursuant to its
19 statutory authority, to implement the proposed system of
20 Minimal Producer Assessments. The Court may order MWA to
21 implement the proposed program or, if MWA's statutory
22 authority is inadequate to enable implementation, or if either
23 the proposed program or the proposed system of Minimal
24 Producer Assessments is unacceptable to the Court, the Court
25 may then order MWA either to implement an alternative program
26 or system, or in the alternative, to name all Minimal
27 Producers as Parties to this litigation and to serve them for
28 the purpose of adjudicating their water rights.

1 Any Minimal Producer whose Annual Production exceeds ten (10) acre-
2 feet in any Year following the date of entry of Judgment shall be
3 made a Party pursuant to Paragraph 12 and shall be subject to
4 Administrative, Replacement Water, Makeup Water and Biological
5 Resources Assessments. Any Minimal Producer who produced during
6 the 1986-1990 period may become a Party pursuant to Paragraph 40
7 with a Base Annual Production Right based on such Minimal
8 Producer's verified Base Annual Production. To account properly
9 for aggregate Production by Minimal Producers in each Subarea,
10 Table B-1 of Exhibit B shall include an estimated aggregate amount
11 of Base Annual Production by all Minimal Producers in each Subarea.
12 The Base Annual Production of any Minimal Producer who becomes a
13 Party shall be deducted from the aggregate amount and assigned to
14 such Minimal Producer.

15 2. Physical and Legal Complexity. The physical and
16 legal issues of the case as framed by the complaint and cross-
17 complaints are extremely complex. Production of more than 1,000
18 Persons producing water in the Basin Area has been ascertained. In
19 excess of 1,000 Persons have been served. The water supply and
20 water rights of the entire Mojave Basin Area and its hydrologic
21 Subareas extending over 4000 square miles have been brought into
22 issue. Most types and natures of water right known to California
23 law are at issue in the case. Engineering studies by the Parties,
24 jointly and severally, leading toward adjudication of these rights
25 and a Physical Solution, have required the expenditure of over two
26 Years' time and hundreds of thousands of dollars.

27 3. Need for a Declaration of Rights and Obligations and
28 for Physical Solution. A Physical Solution for the Mojave Basin

1 Area based upon a declaration of water rights and a formula for
2 Intra- and Inter-Subarea allocation of rights and obligations is
3 necessary to implement the mandate of Article X, Section 2 of the
4 California Constitution and California water policy. Such Physical
5 Solution requires the definition of the individual rights of all
6 Producers within the Basin Area in a manner which will equitably
7 allocate the natural water supplies and which will provide for
8 equitable sharing of costs for Supplemental Water. Nontributary
9 supplemental sources of water are or will be available in amounts,
10 which when combined with water conservation, water reclamation,
11 water transfers, and improved conveyance and distribution methods
12 within the Basin Area, will be sufficient in quantity and quality
13 to assure implementation of a Physical Solution. Sufficient
14 information and data are known to formulate a reasonable and just
15 allocation of existing water supplies as between the hydrologic
16 Subareas within the Basin Area and as among the water users within
17 each Subarea. Such Physical Solution will allow the public water
18 supply agencies and individual water users within each hydrologic
19 Subarea to proceed with orderly water resource planning and
20 development. It will be necessary for MWA to construct conveyance
21 facilities to implement the Physical Solution. Absent the
22 construction of conveyance facilities, some Subareas may be
23 deprived of an equitable share of the benefits made possible by the
24 Physical Solution. Accordingly, this Physical Solution mandates
25 the acquisition or construction of conveyance facilities for
26 importation and equitable distribution of Supplemental Water to the
27 respective Subareas. Such construction is dependent on the
28 availability of appropriate financing, and any such financing

1 assessed to the Parties will be based upon benefit to the Parties
2 in accordance with the MWA Act.

3 4. Definitions. As used in this judgment, the
4 following terms shall have the meanings herein set forth:

5 a. Afton - The United States Geological Survey gauging
6 station "Mojave River at Afton, CA."

7 b. Annual or Year - As used in this Judgment refers to
8 the Annual period beginning October 1 and ending
9 September 30 of the following Year.

10 c. Aquaculture Water - Water so identified in Exhibit
11 "B". Such water may be used only for fish breeding
12 and rearing. The Annual Consumptive Use of such
13 water in acre-feet is equal to the water surface
14 area, in acres, of the fish rearing facilities
15 multiplied by seven (feet).

16 d. Assessments - Those Assessments levied and
17 collected pursuant to this judgment including
18 Replacement Water, Makeup Water, Administrative and
19 Biological Resource Assessments.

20 e. Barstow - The United States Geological Survey
21 Gauging Station "Mojave River at Barstow, CA."

22 f. Base Annual Production - The verified maximum Year
23 Production, in acre-feet, for each Producer for the
24 five Year Period 1986-1990 as set forth in Table
25 B-1 of Exhibit "B", except where otherwise noted
26 therein. The maximum Year Production for each
27 Producer was verified based on one or more of the
28 following: flow meter readings, electrical power

1 or diesel usage records or estimated applied water
2 duty. The Base Annual Production for recreational
3 lakes in the Baja Subarea and for Aquaculture shall
4 be equal either to the area of water surface
5 multiplied by seven feet or to verified Production,
6 whichever is less. The five Year period 1986-1990
7 shall also be the time period for which Base Annual
8 Production for Minimal Producers shall be
9 calculated.

10 g. Base Annual Production Right - The relative Annual
11 right of each Producer to the Free Production
12 Allowance within a given Subarea, expressed as a
13 percentage of the aggregate of all Producers' Base
14 Annual Production in the Subarea. The percentage
15 for each Producer is calculated by multiplying that
16 Producer's Base Annual Production in a Subarea
17 times one hundred (100) and dividing the result by
18 the aggregate Base Annual Production for all
19 Producers in the Subarea. The percentage shall be
20 rounded off to the nearest one ten-thousandth of
21 one per cent.

22 h. Base Flow - That portion of the total surface flow
23 measured Annually at Lower Narrows which remains
24 after subtracting Storm Flow.

25 i. Carry Over Right - The right of a Producer to delay
26 and accumulate the Production of such Producer's
27 share of a Subarea Free Production Allowance until
28

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1 and only until the following Year free of any
2 Replacement Water Assessment.

3 j. Consumption or Consumptive Use - The permanent
4 removal of water from the Mojave Basin Area through
5 evaporation or evapo-transpiration. The
6 Consumptive Use rates resulting from particular
7 types of water use are identified in Paragraph 2 of
8 Exhibit "F".

9 k. Free Production Allowance - The total amount of
10 water, and any Producer's share thereof, that may
11 be Produced from a Subarea each Year free of any
12 Replacement Obligation.

13 l. Groundwater - Water beneath the surface of the
14 ground and within the zone of saturation; i.e.,
15 below the existing water table, whether or not
16 flowing through known and definite channels.

17 m. Harper Lake Basin - That portion of the Centro
18 Subarea identified as such on Exhibit "A".

19 n. Lower Narrows - The United States Geological Survey
20 gauging station "Mojave River near Victorville,
21 CA."

22 o. Makeup Water - Water needed to satisfy a Minimum
23 Subarea Obligation.

24 p. Makeup Obligation - The obligation of a Subarea to
25 pay for Makeup Water to satisfy its Subarea
26 Obligation.

27 q. Minimal Producer - Any Person whose Base Annual
28 Production, as verified by MWA is not greater than

1 ten (10) acre-feet. A Person designated as a
2 Minimal Producer whose Annual Production exceeds
3 ten (10) acre-feet in any Year following the date
4 of entry of Judgment is no longer a Minimal
5 Producer.

6 r. Minimum Subarea Obligation - The minimum Annual
7 amount of water a Subarea is obligated to provide
8 to an adjoining downstream Subarea or the
9 Transition Zone or, in the case of the Baja
10 Subarea, the minimum Annual Subsurface Flow at the
11 MWA eastern boundary toward Afton in any Year, as
12 set forth in Exhibit "G".

13 s. Mojave Basin Area or Basin Area - The area shown on
14 Exhibit "A" that lies within the boundaries of the
15 line labelled "Limits of Adjudicated Area" which
16 generally includes the area tributary to the Mojave
17 River and its tributaries except for such area not
18 included within the Mojave Water Agency's
19 jurisdiction.

20 t. MWA - Cross complainant Mojave Water Agency.

21 u. Overdraft - A condition wherein the current total
22 Annual Consumptive Use of water in the Mojave Basin
23 Area or any of its Subareas exceeds the long term
24 average Annual natural water supply to the Basin
25 Area or Subarea.

26 v. Party (Parties) - Any Person(s) named in this
27 action who has intervened in this case or has

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1 become subject to this Judgment either through
2 stipulation, default, trial or otherwise.

3 w. Person(s) - Any natural person, firm, association,
4 organization, joint venture, partnership, business,
5 trust, corporation, or public entity.

6 x. Produce - To pump or divert water.

7 y. Producer(s) - A Person, other than a Minimal
8 Producer, who Produces water.

9 z. Production - Annual amount of water produced,
10 stated in acre-feet of water.

11 aa. Production Safe Yield - The highest average Annual
12 Amount of water that can be produced from a
13 Subarea: (1) over a sequence of years that is
14 representative of long-term average annual natural
15 water supply to the Subarea net of long-term
16 average annual natural outflow from the Subarea,
17 (2) under given patterns of Production, applied
18 water, return flows and Consumptive Use, and (3)
19 without resulting in a long-term net reduction of
20 groundwater in storage in the Subarea.

21 bb. Purpose of Use - The broad category of type of
22 water use including but not limited to municipal,
23 irrigation, industrial, aquaculture, and lakes
24 purposes. A change in Purpose of Use includes any
25 reallocation of water among mixed or sequential
26 uses, excluding direct reuse of municipal
27 wastewater.

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cc. Recirculated Water - Water that is Produced but not consumed by the Parties listed in Table B-2 of Exhibit "B" and then returned either to the Mojave River or to the Groundwater basin underlying the place of use.

dd. Replacement Obligation - The obligation of a Producer to pay for Replacement Water for Production from a Subarea in any Year in excess of the sum of such Producer's share of that Year's Free Production Allowance for the Subarea plus any Production pursuant to a Carry Over Right.

ee. Replacement Water - Water purchased by Watermaster or otherwise provided to satisfy a Replacement Obligation.

ff. Responsible Party - The Person designated by a Party as the Person responsible for purposes of filing reports and receiving notices pursuant to the provisions of this Judgment.

gg. Stored Water - Water held in storage pursuant to a Storage Agreement with Watermaster.

hh. Storm Flow - That portion of the total surface flow originating from precipitation and runoff without having first percolated to Groundwater storage in the zone of saturation and passing a particular point of reckoning, as determined annually by the Watermaster.

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1 ii. Subareas - The five Subareas of the Mojave Basin
2 Area -- Este, Oeste, Alto, Centro and Baja -- as
3 shown on Exhibit "A".

4 jj. Subarea Obligation - The average Annual amount of
5 water that a Subarea is obligated to provide to an
6 adjoining downstream Subarea or the Transition Zone
7 or, in the case of the Baja Subarea, the average
8 Annual Subsurface Flow toward Afton at the MWA
9 eastern boundary as set forth in Exhibit "G".

10 kk. Subsurface Flow - Groundwater which flows beneath
11 the earth's surface.

12 ll. Supplemental Water - Water imported to the Basin
13 Area from outside the Basin Area, water that would
14 otherwise be lost from the Basin Area but which is
15 captured and made available for use in the Basin
16 Area, or any Producer's share of Free Production
17 Allowance that is not Produced and is acquired by
18 Watermaster pursuant to this Judgment.

19 mm. Transition Zone - The portion of the Alto Subarea,
20 shown on Exhibit "A", that lies generally between
21 the Lower Narrows and the Helendale Fault.

22 nn. Watermaster - The Person(s) appointed by the Court
23 to administer the provisions of this Judgment.

24 5. Exhibits. The following exhibits are attached to this
25 Judgment and made a part hereof.

26 Exhibit "A" - Map entitled, "Map showing Mojave Water
27 Agency, Mojave River, Mojave Basin Area and Hydrologic Subareas and
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1 Limits of Adjudicated Area Together with Geologic and Other
2 Pertinent Features."

3 Exhibit "B" - Table entitled, "Table B-1: Table Showing
4 Base Annual Production and Base Annual Production Right of Each
5 Producer Within Each Subarea, and Free Production Allowances for
6 Subareas for First Five Years after entry of the Interlocutory
7 Judgment" and "Table B-2: Table Showing Total Water Production for
8 Aquaculture and Recreational Lake Purposes."

9 Exhibit "C" - Engineering Appendix.

10 Exhibit "D" - Time Schedules.

11 Exhibit "E" - List of Producers and Their Designees.

12 Exhibit "F" - Transfers of Base Annual Production Rights.

13 Exhibit "G" - Subarea Obligations.

14 Exhibit "H" - Biological Resource Mitigation.

15 Exhibit "I" - Map Showing Potential Groundwater Recharge
16 Areas

17 B. DECLARATION OF HYDROLOGIC CONDITIONS.

18 6. Mojave Basin Area as Common Source of Supply. The
19 area shown on Exhibit "A" as the Mojave Basin Area is comprised of
20 five Subareas. The waters derived from the Mojave River and its
21 tributaries constitute a common source of supply of the five
22 Subareas and of the Persons producing therefrom.

23 7. Existence of Overdraft. In each and every Year, for
24 a period in excess of five (5) years prior to the May 30, 1990
25 filing date of Plaintiffs' Complaint, the Mojave Basin Area and
26 each of its respective Subareas have been and are in a state of
27 Overdraft, and it is hereby found that there is no water available

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1 for Production from the Basin Area or any Subarea therein except
2 pursuant to this Judgment.

3 C. DECLARATION OF RIGHTS AND OBLIGATIONS.

4 8. Production Rights of the Parties. The Base Annual
5 Production and Base Annual Production Right of each Party are
6 declared as set forth in Table B-1 of Exhibit "B". Certain Parties
7 also have the right to continue to Produce Recirculated Water in
8 the amounts set forth in Table B-2 of Exhibit "B", subject to the
9 following:

10 a. Aquaculture. Two of the Producers listed in
11 Table B-2 of Exhibit "B", California Department of Fish and Game
12 Mojave River Fish Hatchery (Hatchery) and Jess Ranch Water Company
13 (Jess), Produce Recirculated Water for Aquaculture. The Hatchery
14 and Jess or their successors or assignees shall have the right to
15 continue to Produce up to the amounts listed in Table B-2 of
16 Exhibit "B" as Recirculated Water for Aquaculture on the property
17 where it was used in the Year for which Base Annual Production was
18 verified. Production of such amount of Recirculated water by Jess
19 shall be free of any Replacement Water Assessments, Makeup Water
20 Assessments or Administrative Assessments but shall be subject to
21 Biological Resources Assessments and each Jess well producing
22 Recirculated Water shall be subject to an Annual administrative fee
23 equal to the lowest Annual fee paid to MWA by a Minimal Producer.
24 Neither the Hatchery nor Jess Recirculated Water may be transferred
25 or used for any other purpose or transferred for use on any other
26 property, except as provided in Paragraph 7 of Exhibit "F" for the
27 Hatchery. Any Production of Recirculated Water by Jess in excess
28 of the amount shown in Table B-2 shall be subject to all

1 Assessments. Production of Recirculated Water by the Hatchery will
2 be subject to the rules set forth in Paragraph 7 of Exhibit "F".
3 All Jess Aquaculture Recirculated Water shall be discharged
4 immediately and directly to the Mojave River.

5 b. Camp Cady. One Producer listed in Table B-2 of
6 Exhibit "B", California Department of Fish and Game-Camp Cady (Camp
7 Cady), Produces Recirculated Water for Lakes containing Tui Chub,
8 an endangered species of fish. Camp Cady or its successors or
9 assignees shall have the right to continue to Produce up to the
10 amount listed in Table-B-2 of Exhibit "B" as Recirculated Water at
11 Camp Cady. Production of each amount of Recirculated water shall
12 be free of any Assessments. Camp Cady Recirculated Water may not
13 be transferred or used for any other purpose or transferred for use
14 on any other property. Any Production of Recirculated Water by
15 Camp Cady in excess of the amount shown in Table B-2 of Exhibit "B"
16 shall be subject to all Assessments except Biological Resource
17 Assessments. All Camp Cady Recirculated Water shall be allowed to
18 percolate immediately and directly to the Groundwater basin
19 underlying Camp Cady.

20 c. Recreational Lakes in Baja Subarea. All
21 Producers listed in Table B-2 of Exhibit "B" except the Hatchery,
22 Jess and Camp Cady Produce Recirculated Water for recreational
23 lakes in the Baja Subarea. Such Producers or their successors or
24 assignees shall have the right to continue to Produce up to the
25 amounts identified in Table B-2 of Exhibit "B" as Recirculated
26 Water for use in recreational lakes on the property where it was
27 used in the Year for which Base Annual Production was verified,
28 free of any Replacement Water Assessments, Makeup Water

1 Assessments, or Administrative Assessments, but such Production
2 shall be subject to any Biological Resource Assessment. Each well
3 producing such Recirculated Water shall be subject to an Annual
4 administrative fee equal to the lowest Annual fee paid by a Minimal
5 Producer. Recirculated Water cannot be transferred or used for any
6 other purpose. All recreational lake Recirculated Water shall be
7 allowed to percolate immediately and directly to the Groundwater
8 basin underlying the recreational lake.

9 9. MWA Obligations. The Physical Solution is intended
10 to provide for delivery and equitable distribution to the
11 respective Subareas by MWA of the best quality of Supplemental
12 Water reasonably available. MWA shall develop conveyance or other
13 facilities to deliver this Supplemental Water to the areas depicted
14 in Exhibit "I," unless prevented by forces outside its reasonable
15 control such as an inability to secure financing consistent with
16 sound municipal financing practices and standards.

17 a. Secure Supplemental Water. MWA, separate and
18 apart from its duties as the initial Watermaster designated under
19 this Judgment, shall exercise its authority under Sections 1.5 and
20 15 of the MWA Act to pursue promptly, continuously and diligently
21 all reasonable sources to secure Supplemental Water as necessary to
22 fully implement the provisions of this Judgment.

23 b. Supplemental Water Prices. The MWA shall
24 establish fair and equitable prices for Supplemental Water
25 delivered to the Watermaster under this Judgment.

26 c. Supplemental Water Delivery Plan. Not later
27 than September 30, 1996, MWA shall prepare a report on potential
28 alternative facilities or methods to deliver Supplemental Water to

1 the areas shown on Exhibit "I." The report shall include, for each
2 alternative, a development time schedule, a summary of cost
3 estimates, an analysis of the relative benefits to Producers in
4 each Subarea and an analysis of alternative methods of financing
5 and cost allocation, including any state or federal sources of
6 funding that may be available.

7 d. Water Delivery Cost Allocation. The report
8 required by subdivision (c) above shall recommend methods of
9 financing and cost allocation that are based on benefits to be
10 received. MWA's cost allocation plan shall be subject to Court
11 review as provided in subdivision (f) below to verify that costs
12 are allocated fairly and according to benefits to be received. The
13 MWA financing and cost allocation plan may include a mix of revenue
14 sources including the following:

15 (1) Developer or connection fees to the
16 extent MWA can demonstrate a nexus, as
17 required by law, between the fees and the
18 impact of the development upon the water
19 resources of the Mojave Basin Area and
20 each subarea thereof;

21 (2) Other methods of financing available to
22 MWA, including but not limited to
23 property based taxes, assessments or
24 standby charges;

25 (3) Water sales revenues, but only to the
26 extent other sources are not available or
27 appropriate, and in no event shall the
28 water sales price to cover facility

1 capital costs exceed a rate equal to
2 fifty percent of the variable cost rate
3 charged to MWA under its contract for
4 water delivery from the California State
5 Water Project;

6 e. Legislative Changes. MWA shall seek promptly
7 to have enacted amendments to the MWA Act (Water Code Appendix,
8 Part 97) that allow MWA to implement any methods of governmental
9 financing available to any public entity in California.

10 f. Court Review and Determination of Benefit. Not
11 later than September 30, 1996, MWA shall submit its report to the
12 Court in a noticed motion pursuant to Paragraph 36. The report
13 shall set forth MWA's recommendations as to the following: (1)
14 which alternatives should be implemented; (2) methods of cost
15 allocation for the recommended alternatives; (3) financing for the
16 recommended alternatives; and (4) a time schedule to complete the
17 recommended alternatives. The Court may approve or reject the
18 recommendations. The Court may further order the use of
19 alternatives and time schedules or it may order additional studies
20 and resubmittals, as it may deem proper.

21 10. Priority and Determination of Production Rights.
22 The water rights involved herein are of differing types and
23 commenced at different times. Many of the rights involved are
24 devoted to public uses. The Declaration of Water Rights that is
25 part of the judgment and the Physical Solution decreed herein takes
26 into consideration the competing priorities which have been
27 asserted in addition to the equitable principles applicable to
28 apportionment of water in this situation. The following factors

1 have been considered in the formulation of each Producer's Base
2 Annual Production Right:

3 a. The Mojave Basin Area and each of its hydrologic
4 Subareas have continuously for many Years been in a state of
5 system-wide Overdraft;

6 b. All Producers have contributed to the Overdraft;

7 c. None of the priorities asserted by any of the
8 Producers is without dispute;

9 d. Under the complex scheme of California water
10 law, the allocation of water and rights mechanically based upon the
11 asserted priorities would be extremely difficult, if not
12 impossible, and would not result in the most equitable
13 apportionment of water;

14 e. Such mechanical allocation would, in fact,
15 impose undue hardship on many Parties;

16 f. There is a need for conserving and making
17 maximum beneficial use of the water resources of the State;

18 g. The economy of the Mojave Basin Area has to a
19 great extent been established on the basis of the existing
20 Production;

21 h. The Judgment and Physical Solution take into
22 consideration the unique physical and climatic conditions of the
23 Mojave Basin Area, the Consumptive Use of water in the several
24 sections of the Basin, the character and rate of return flows, the
25 extent of established uses, the availability of storage water, the
26 relative benefits and detriments between upstream areas and
27 downstream areas if a limitation is imposed on one and not the

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1 other, and the need to protect public interest and public trust
2 concerns.

3 In consideration of the foregoing factors, and in
4 accordance with the terms and conditions of this Judgment, the
5 Parties are estopped and barred from asserting special priorities
6 or preferences.

7 11. Exercise of Carry Over Rights. The first water
8 Produced by a Producer during any Year shall be deemed to be an
9 exercise of any Carry Over Right. Such Carry Over Right may be
10 transferred in accordance with Exhibit "F".

11 12. Production Only Pursuant to Judgment. This
12 Judgment, and the Physical Solution decreed herein, addresses all
13 Production within the Mojave Basin Area. Because of the existence
14 of Overdraft, any Production outside the framework of this Judgment
15 and Physical Solution will contribute to an increased Overdraft,
16 potentially damage the Mojave Basin Area and public interests in
17 the Basin Area, injure the rights of all Parties, and interfere
18 with the Physical Solution. Watermaster shall bring an action or
19 a motion to enjoin any Production that is not pursuant to the terms
20 of this Judgment.

21 13. Declaration of Subarea Rights and Obligations. In
22 the aggregate, Producers within certain Subareas have rights, as
23 against those in adjoining upstream Subareas, to receive average
24 Annual water supplies and, in any one Year, to receive minimum
25 Annual water supplies equal to the amounts set forth in Exhibit
26 "G", in addition to any Storm Flows. In turn, in the aggregate,
27 Producers within certain Subareas have an obligation to provide to
28 adjoining downstream Subareas such average Annual water supplies in

1 the amounts and in the manner set forth in Exhibit "G". In any one
2 Year, Producers within certain Subareas have an obligation to
3 provide to adjoining downstream Subareas such minimum Annual water
4 supplies in the amounts and in the manner set forth in Exhibit "G".
5 The Producers in the Baja Subarea have an obligation to provide
6 average and minimum Subsurface Flows toward Afton at the MWA
7 eastern boundary equal to the amounts shown in Exhibit "G".
8 Producers in each of the Subareas have rights in the aggregate, as
9 against each adjoining downstream Subarea or, in the case of the
10 Baja Subarea, as against flows at the MWA eastern boundary toward
11 Afton, to divert, pump, extract, conserve, and use all surface
12 water and Groundwater supplies originating therein or accruing
13 thereto, and so long as the adjoining downstream Subarea
14 Obligations are satisfied under this Judgment and there is
15 compliance with all of its provisions. Watermaster shall maintain
16 a continuing account of the status of each Subarea's compliance
17 with its Subarea Obligation, including any cumulative credits or
18 debits and any requirement for providing Makeup Water. The
19 accounting and determinations relative to Subarea Obligations shall
20 be made in accordance with procedures set forth in Exhibit "G".

21
22 **III. INJUNCTION**

23 14. Injunction Against Unauthorized Production. Each
24 and every Party, its officers, agents, employees, successors, and
25 assigns, is ENJOINED AND RESTRAINED from Producing water from the
26 Basin Area except pursuant to the provisions of the Physical
27 Solution in this Judgment.

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1 15. Injunction Re Change in Purpose of Use Without
2 Notice Thereof to Watermaster. Each and every Party, its officers,
3 agents, employees, successors, and assigns, is ENJOINED AND
4 RESTRAINED from changing its Purpose of Use at any time without
5 first notifying Watermaster of the intended change.

6 16. Injunction Against Unauthorized Recharge. Each and
7 every Party, its officers, agents, employees, successors and
8 assigns, is ENJOINED AND RESTRAINED from claiming any right to
9 recapture Water that has been recharged in the Basin Area except
10 pursuant to a Storage Agreement with Watermaster. This provision
11 does not prohibit Parties from importing Supplemental Water into
12 the Basin Area for direct use.

13 17. Injunction Against Transportation from Mojave Basin
14 Area. Except upon further order of the Court, each and every
15 Party, its officers, agents, employees, successors and assigns, is
16 ENJOINED AND RESTRAINED from transporting water hereafter Produced
17 from the Basin Area to areas outside the Basin Area.

18 18. Injunction Against Diverting Storm Flows. No Party
19 may undertake or cause the construction of any project that will
20 directly reduce the amount of Storm Flow that would otherwise go
21 through the naturally occurring hydrologic regime to a downstream
22 Subarea or that will reduce the surface area over which Storm Flow
23 currently occurs by alteration to the bed of the Mojave River.
24 This paragraph shall not prevent any flood control agency or
25 municipality from taking such emergency action as may be necessary
26 to protect the physical safety of its residents and its structures
27 from flooding. Any such action shall be done in a manner that will
28 minimize any reduction in the quantity of Storm Flows.

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IV. CONTINUING JURISDICTION

19. Jurisdiction Reserved. Full jurisdiction, power and authority are retained by and reserved to the Court for purposes of enabling the Court upon the application of any Party, by a motion noticed in accordance with the notice procedures of Paragraph 36 hereof, to make such further or supplemental order or directions as may be necessary or appropriate for interim operation before the Physical Solution is fully operative, or for interpretation, enforcement or carrying out of this Judgment, and to modify, amend or amplify any of the provisions of this Judgment or to add to the provisions thereof consistent with the rights herein decreed; provided, that nothing in this paragraph shall authorize either a reduction of the Base Annual Production Right of any Party, except in accordance with the rules set forth in Exhibit "F", or a reduction of the Base Flow portion of any Subarea Obligation.

V. Physical Solution

A. GENERAL

20. Purpose and Objective. The Court hereby declares and decrees that the Physical Solution herein contained: 1) is a fair and equitable basis for satisfaction of all water rights in the Mojave Basin Area; 2) is in furtherance of the mandate of the State Constitution and the water policy of the State of California; and 3) takes into account applicable public trust interests; and therefore adopts and orders the Parties to comply with the Physical Solution. As noted in Paragraph 3 of this Judgment, the declaration of rights and obligations of the Parties and Subareas is a necessary component of this Physical Solution. The purpose of

1 the Physical Solution is to establish a legal and practical means
2 for making the maximum reasonable beneficial use of the waters of
3 the Basin Area by providing for the long-term conjunctive
4 utilization of all water available thereto to meet the reasonable
5 beneficial use requirements of water users therein.

6 21. Need for Flexibility. It is essential that this
7 Physical Solution provide maximum flexibility and adaptability in
8 order that the Court may be free to use existing and future
9 technological, social, institutional and economic options in order
10 to maximize reasonable beneficial use of the waters of the Basin
11 Area. To that end, the Court's retained jurisdiction may be
12 utilized where appropriate, to supplement the Physical Solution.

13 22. General Pattern of Operations. The Producers will
14 be divided into five Subareas for purposes of administration. The
15 Subarea rights and obligations are herein decreed. A fundamental
16 premise of the Physical Solution is that all Parties will be
17 allowed, subject to this Judgment, to Produce sufficient water to
18 meet their reasonable beneficial use requirements. To the extent
19 that Production by a Producer in any Subarea exceeds such
20 Producer's share of the Free Production Allowance of that Subarea,
21 Watermaster will provide Replacement Water to replace such excess
22 Production according to the methods set forth herein. To the
23 extent that any Subarea incurs a Makeup Obligation, Watermaster
24 will provide Supplemental Water to satisfy such Makeup Obligation
25 according to the methods set forth herein. For the initial five
26 (5) full Years after entry of this Judgment (including any
27 interlocutory Judgment), the Free Production Allowance for each
28 Subarea shall be set as the amount of water equal to the following

1 percentages of the aggregate Base Annual Production for that
2 Subarea:

	<u>Judgment Year</u>	<u>Percentage</u>	
3			
4	1993-1994	First Full Year	100
5	1994-1995	Second Full Year	95
6	1995-1996	Third Full Year	90
7	1996-1997	Fourth Full Year	85
8	1997-1998	Fifth Full Year	80

9 The extent of Overdraft now varies between Subareas and the
10 reasonableness of any physical solution as applied to each Producer
11 depends in part upon such Producer's foreseeable needs and the
12 present and future availability of water within the Subarea in
13 which each Producer is located. The Physical Solution described in
14 this Judgment in part generally contemplates (i) initially allowing
15 significant unassessed production on a substantially uniform basis
16 for all Producers and Subareas and (ii) a phasing in of the
17 monetary obligations necessary to obtain Supplemental Water. The
18 above two provisions will affect each Subarea differently, may not
19 be sufficient to ultimately eliminate the condition of Overdraft in
20 each Subarea and could result in increased Overdraft within a
21 Subarea. Any adverse impact to any Subarea caused by the
22 implementation of the provisions shall be the responsibility of the
23 Producers in each such Subarea.

24 B. ADMINISTRATION.

25 23. Administration by Watermaster. Watermaster shall
26 administer and enforce the provisions of the Judgment and any
27 subsequent instructions or orders of this Court.

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1 (a) Standard of Performance. Watermaster shall, in
2 carrying out its duties, powers and responsibilities herein, act in
3 an impartial manner without favor or prejudice to any Subarea,
4 Producer, Party or Purpose of Use.

5 (b) Removal of Watermaster. Full jurisdiction, power
6 and authority are retained and reserved by the Court for the
7 purpose of enabling the Court on its own motion, or upon
8 application of any Party, and upon notice in accordance with the
9 notice procedures of paragraph 36 hereof, and after hearing
10 thereon, to remove any appointed Watermaster and substitute a new
11 Watermaster in its place. The Court shall find good cause for the
12 removal of Watermaster upon a showing that Watermaster has failed
13 to perform its duties, powers and responsibilities in an impartial
14 manner, or has otherwise failed to act in the manner consistent
15 with the provisions set forth in this Judgment or subsequent order
16 of the Court.

17 (c) MWA Appointed as Initial Watermaster. The MWA is
18 hereby appointed, until further order of the Court, as Watermaster
19 to administer and enforce the provisions of this Judgment and any
20 subsequent orders of this Court issued in the performance of its
21 continuing jurisdiction. In carrying out this appointment, MWA
22 shall segregate and separately exercise in all respects the
23 Watermaster powers delegated by the Court under this Judgment from
24 MWA's statutory powers. All funds received, held, and disbursed by
25 MWA as Watermaster shall be by way of separate Watermaster
26 accounts, subject to separate accounting and auditing. Meetings
27 and hearings held by the MWA Board of Directors when acting as
28 Watermaster shall be noticed and conducted separately from MWA

1 meetings. All Watermaster staff and consultant functions shall be
2 separate and distinct from MWA staff and consultant functions;
3 provided, however, that pursuant to duly adopted Watermaster rules,
4 which shall be subject to review according to Paragraph 36 hereof,
5 Watermaster staff and consultant functions may be accomplished by
6 MWA staff and consultants, subject to strict time and cost
7 accounting principles so that Watermaster functions, and the
8 Assessments provided under this Judgment, do not subsidize, and are
9 not subsidized by, MWA functions. Subject to these principles, MWA
10 shall implement practicable cost efficiencies through consolidation
11 of Watermaster and MWA staff and consultant functions.

12 24. Powers and Duties. Subject to the continuing
13 supervision and control of the Court, Watermaster shall have and
14 may exercise the following express powers, and shall perform the
15 following duties, together with any specific powers, authority and
16 duties granted or imposed elsewhere in this Judgment or hereafter
17 ordered or authorized by the Court in the exercise of its
18 continuing jurisdiction:

19 a. Rules and Regulations. To adopt any and all
20 appropriate rules and regulations for conduct pursuant to this
21 Judgment after public hearing. Notice of hearing and a copy of the
22 proposed rules and regulations, and any amendments thereof, shall
23 be mailed to all Parties thirty days prior to the date of the
24 hearing thereon.

25 b. Employment of Experts and Agents. To employ
26 such administrative personnel, engineering, legal, accounting, or
27 other specialty services and consulting assistants as may be deemed
28 appropriate in carrying out the terms of this Judgment.

1 c. Makeup and Replacement Obligations. To
2 determine the Makeup Obligations for each Subarea and Replacement
3 Obligations for each Producer and each Subarea, pursuant to the
4 terms of the Judgment.

5 d. Measuring Devices, etc. To adopt rules and
6 regulations regarding determination of amounts of Production and
7 installation of individual water meters. The rules and regulations
8 shall provide for approved devices or methods to measure or
9 estimate Production. Producers who meter Production on the date of
10 entry of this Judgment shall continue to meter Production.
11 Thereafter, Producers who do not meter Production on the effective
12 date of entry of this Judgment may be required by Watermaster rules
13 and regulations to install water meters upon a showing that then
14 employed measurement devices or methods do not accurately determine
15 actual Production. The rules and regulations shall require that
16 within three Years after the date of entry of this Judgment, any
17 Producer who provides piped water for human Consumption to more
18 than five service connections shall have installed an individual
19 water meter on each service connection.

20 e. Hydrologic Data Collection. To install, operate
21 and maintain such wells, measuring devices and/or meters necessary
22 to monitor stream flow, precipitation and groundwater levels and to
23 obtain such other data as may be necessary to carry out the
24 provisions of this Judgment, including a study of the Basin Area
25 phreatophyte consumptive use.

26 f. Assessments. To set, levy and collect all
27 Assessments specified herein.

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1 g. Purchase of and Recharge with Supplemental
2 Water. In accordance with Paragraph 27, to the extent Supplemental
3 Water is available and is reasonably needed for Replacement Water
4 or Makeup Water, to use Replacement Water Assessment proceeds to
5 purchase Replacement Water, and to use Makeup Water Assessment
6 proceeds to purchase Makeup Water and to have such Replacement
7 Water and Makeup Water provided to the appropriate Subarea as soon
8 as practicable. Watermaster may prepurchase Supplemental Water and
9 apply subsequent Assessments towards the costs of such
10 prepurchases.

11 h. Water Quality. To take all reasonable steps to
12 assist and encourage appropriate regulatory agencies to enforce
13 reasonable water quality regulations affecting the Basin Area,
14 including regulation of solid and liquid waste disposal.

15 i. Notice List. To maintain a current list of
16 Responsible Parties to receive notice hereunder.

17 j. Annual Administrative Budget. To prepare a
18 proposed administrative budget for each Year, hold hearings
19 thereon, and adopt an administrative budget according to the time
20 schedule set forth in Exhibit "D". The administrative budget shall
21 set forth budgeted items and Administrative Assessments in
22 sufficient detail to show the allocation of the expense among the
23 Producers. Following the adoption of the budget, expenditures
24 within budgeted items may thereafter be made by Watermaster in the
25 exercise of powers herein granted, as a matter of course.

26 k. Annual Report to Court.

27 (1) To file an Annual report with this Court
28 not later than April 1 of each Year beginning April 1 following the

1 first full Year after entry of Judgment. Prior to filing the
2 Annual report with the Court, Watermaster shall notify all Parties
3 that a draft of the report is available for review and shall
4 provide notice of a hearing to receive comments and recommendations
5 for changes in the report. The public hearing shall be conducted
6 on the same date and at the same place as the hearings required by
7 Paragraphs 3 and 4 of Exhibit "D". The notice of hearing may
8 include such summary of the draft report as Watermaster may deem
9 appropriate. Watermaster shall also distribute the report to the
10 Parties requesting copies.

11 (2) The Annual report shall include an Annual
12 fiscal report of the preceding Year's operation and shall include
13 details as to operation of each of the Subareas and an audit of all
14 Assessments and expenditures pursuant to this Physical Solution and
15 a review of Watermaster activities pursuant to this Judgment. The
16 Annual report shall include a compilation of at least the
17 following:

18 Determinations and data required by:

- 19 i) Paragraph 24(c) (Makeup and Replacement Obligations)
20 ii) Paragraph 24(e) (Hydrologic Data Collection)
21 iii) Paragraph 24(g) (Purchase of and Recharge with
22 Supplemental Water)
23 iv) Paragraph 24(i) (Notice List)

24 Rules and regulations adopted pursuant to:

- 25 v) Paragraph 24(a) (Rules and Regulations)
26 vi) Paragraph 24(d) (Measuring Devices, etc.)
27 vii) Paragraph 24(s) (Storage Agreements)

28 Reports required by:

- 1 viii) Paragraph 24(j) (Annual Administrative Budget)
2 ix) Paragraph 24(n) (Transfers)
3 x) Paragraph 24(o) (Free Production Allowance)
4 xi) Paragraph 24(p) (Production Reports)
5 xii) Exhibit "D" (Prior Year Report)
6 xiii) Exhibit "F" (Transfers of Base Annual Production
7 Rights)
8 xiv) Exhibit "G" (Status of Subarea Obligation)
9 xv) Exhibit "H" (Biological Resource Mitigation)

10 1. Investment of Funds. To hold and invest any
11 funds in investments authorized from time to time for public
12 agencies in the State of California.

13 m. Borrowing. To borrow in anticipation of receipt
14 of Assessment proceeds in an amount not to exceed the Annual amount
15 of Assessments levied but uncollected.

16 n. Transfers. To prepare on an Annual basis and
17 maintain a report or record of any transfer of Base Annual
18 Production Rights. Such report or record shall be available for
19 inspection by any Party upon reasonable notice to the Watermaster.

20 o. Free Production Allowance. Not later than the
21 end of the 1997-1998 Water Year, and Annually thereafter, to
22 recommend in the Watermaster Annual Report an adjustment, if
23 needed, to the Free Production Allowance for any Subarea. In
24 making its recommendation, Watermaster shall be guided by the
25 factors set forth in Exhibit "C", including but not limited to an
26 annual calculation of the change of water in storage. The Annual
27 report shall include all assumptions and calculations relied upon
28 in making its recommendations. Following the 1997-1998 Water Year,

1 or any time thereafter, Watermaster shall obtain prior Court
2 approval for any increase or reduction of any Subarea's Free
3 Production Allowance. In no event shall a reduction in any Year
4 for a Subarea exceed five percent of the aggregate Base Annual
5 Production of that Subarea. In the event Watermaster recommends in
6 its report to the Court that the Free Production Allowance for any
7 Subarea may need to be increased or reduced, the Court shall
8 conduct a hearing, after notice given by Watermaster according to
9 paragraph 36, upon Watermaster's recommendations and may order such
10 changes in Subarea Free Production Allowance. The most recent
11 Subarea Free Production Allowances shall remain in effect until
12 revised according to this Paragraph 24(o).

13 p. Production Reports. To require each Producer to
14 file with Watermaster, pursuant to procedures and time schedules to
15 be established by Watermaster, a report on a form to be prescribed
16 by Watermaster showing the total Production of such Party for each
17 reporting period rounded off to the nearest tenth of an acre foot,
18 and such additional information and supporting documentation as
19 Watermaster may require.

20 q. Production Adjustment for Change in Purpose of
21 Use. If Watermaster determines, using the Consumptive Use rates
22 set forth in Exhibit "F", that a new Purpose of Use of any
23 Producer's Production for any Year has resulted in a higher rate of
24 Consumption than the rate applicable to the original Purpose of Use
25 of that Producer's Production in the Year for which Base Annual
26 Production was determined, Watermaster shall use a multiplier (1)
27 to adjust upward such Production for the purpose of determining the
28 Producer's Replacement Water Assessment and, (2) to adjust upward

1 the Free Production Allowance portion of such Production for the
2 purpose of determining the Producer's Makeup Water Assessment. The
3 multiplier shall be determined by dividing the number of acre feet
4 of Consumption that occurred under the new Purpose of Use by the
5 number of acre feet of Consumption that would have occurred under
6 the original Purpose of Use for the same Production.

7 r. Reallocation of Base Annual Production Rights.

8 To reallocate annually the Base Annual Production Rights in each
9 Subarea to reflect any permanent transfers of such Rights among
10 Parties.

11 s. Storage Agreements. To enter into Storage
12 Agreements with any Party in order to accommodate the acquisition
13 of Supplemental Water. Watermaster may not enter into Storage
14 Agreements with non-Parties unless such non-Parties become subject
15 to the provisions of this Judgment and the jurisdiction of the
16 Court. Such Storage Agreements shall by their terms preclude
17 operations which will have a substantial adverse impact on any
18 Producer. If a Party pursuant to a Storage Agreement has provided
19 for predelivery or postdelivery of Replacement Water for the
20 Party's use, Watermaster shall at the Party's request credit such
21 water to the Party's Replacement Obligation. Watermaster shall
22 adopt uniformly applicable rules for Storage Agreements.
23 Watermaster shall calculate additions, extractions and losses of
24 water stored under Storage Agreements and maintain an Annual
25 account of all such water.

26 t. Subarea Advisory Committee Meetings. To meet on
27 a regular basis and at least semi-annually with the Subarea
28 Advisory Committees to review Watermaster activities pursuant to

1 this Judgment and to receive advisory recommendations from the
2 Subarea Advisory Committees.

3 u. Unauthorized Production. To bring such action
4 or motion as is necessary to enjoin unauthorized Production as
5 provided in Paragraph 12 hereinabove.

6 v. Meetings and Records. To ensure that all
7 meetings and hearings by Watermaster shall be noticed and conducted
8 according to then current requirements of the Ralph M. Brown Act,
9 Government Code Sections 54950, et seq. Watermaster files and
10 records shall be available to any person according to the
11 provisions of the Public Records Act, Government Code §§ 6200 et
12 seq.

13 w. Data, Estimates and Procedures. To rely on and
14 use the best available records and data to support the
15 implementation of this Judgment. Where actual records of data are
16 not available, Watermaster shall rely on and use sound scientific
17 and engineering estimates. Watermaster may use preliminary records
18 of measurements, and, if revisions are subsequently made,
19 Watermaster may reflect such revisions in subsequent accounting.
20 Exhibit "C" sets forth methods and procedures for determining
21 surface flow components. Watermaster shall use either the same
22 procedures or procedures that will yield results of equal or
23 greater accuracy.

24 x. Biological Resource Mitigation. To implement
25 the Biological Resource Mitigation measures set forth in Exhibit
26 "H" herein.

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1 C. ASSESSMENTS

2 25. Purpose. Watermaster shall levy and collect
3 Assessments from the Parties based upon Production in accordance
4 with the time schedules set forth in Exhibit "D". Watermaster
5 shall levy and collect such Assessments as follows:

6 a. Administrative Assessments. Administrative
7 Assessments to fund the Administrative Budget adopted by the
8 Watermaster pursuant to Paragraph 24(j) shall be levied uniformly
9 against each acre foot of Production. A Producer who does not
10 Produce in a given Year shall pay an Administrative Assessment in
11 amount equal to the lowest MWA assessment for Minimal Producers for
12 that Year.

13 b. Replacement Water Assessments. Replacement
14 Water Assessments shall be levied against each Producer on account
15 of such Producer's Production, after any adjustment pursuant to
16 Paragraph 24(q), in excess of such Producer's share of the Free
17 Production Allowance in each Subarea during the prior Year.

18 c. Makeup Water Assessments. Makeup Water
19 Assessments shall be levied against each Producer in each Subarea
20 on account of each acre-foot of Production therein which does not
21 bear a Replacement Assessment hereunder, after any adjustment
22 pursuant to Paragraph 24(q), to pay all necessary costs of
23 satisfying the Makeup Obligation, if any, of that Subarea.

24 d. Biological Resource Assessment. To establish
25 and, to the extent needed, to maintain the Biological Resource
26 Trust Fund balance at one million dollars (in 1993 dollars)
27 pursuant to Paragraph 24(x) and Exhibit "H", a Biological Resource
28 Assessment in an amount not to exceed fifty cents (in 1993 dollars)

1 for each acre-feet of Production shall be levied uniformly against
2 each producer except the California Department of Fish and Game.

3 e. MWA Assessment of Minimal Producers. The MWA
4 shall identify and assess Minimal Producers through its own
5 administrative procedures, and not acting as Watermaster.

6 26. Procedure. Each Party hereto is ordered to pay the
7 Assessments herein provided for, which shall be levied and
8 collected in accordance with the procedures and schedules set forth
9 in Exhibit "D". Any Assessment which becomes delinquent, as
10 defined in Paragraph 7 of Exhibit "D", shall bear interest at the
11 then current San Bernardino County property tax delinquency rate
12 Said interest rate shall be applicable to any said delinquent
13 Assessment from the due date thereof until paid. Such delinquent
14 Assessment, together with interest thereon, costs of suit,
15 attorneys fees and reasonable costs of collection, may be collected
16 pursuant to motion giving notice to the delinquent Party only, or
17 Order to Show Cause proceeding, or such other lawful proceeding as
18 may be instituted by the Watermaster; and shall, if provided for in
19 the MWA Act, constitute a lien on the property of the Party as of
20 the same time and in the same manner as does the tax lien securing
21 County property taxes. The Watermaster shall Annually certify a
22 list of all such unpaid delinquent Assessments to the MWA (in
23 accordance with applicable provisions of the MWA Act). The MWA (in
24 accordance with applicable provisions of the MWA Act) shall include
25 the names of those Parties and the amounts of the liens in its list
26 to the County Assessor's Office in the same manner and at the same
27 time as it does its administrative assessments. MWA shall account
28 for receipt of all collections of Assessments collected pursuant to

1 this Judgment, and shall pay such amounts collected pursuant to
2 this Judgment to the Watermaster. The Watermaster shall also have
3 the ability to enjoin production of those Persons who do not pay
4 Assessments pursuant to this Judgment.

5 27. Availability of Supplemental Water. All
6 Replacement and Makeup Water Assessments collected by the
7 Watermaster shall be used to acquire Supplemental Water from MWA.
8 Watermaster shall determine when to request Supplemental Water from
9 MWA and shall determine the amount of Supplemental Water to be
10 requested. MWA shall use its best efforts to acquire as much
11 Supplemental Water as possible in a timely manner. If MWA
12 encounters delays in the acquisition of Supplemental Water which,
13 due to cost increases, results in collected assessment proceeds
14 being insufficient to purchase all Supplemental Water for which the
15 Assessments were made, MWA shall purchase as much water as the
16 proceeds will allow when the water becomes available. If available
17 Supplemental Water is insufficient to meet all Makeup and
18 Replacement Water obligations, Watermaster shall allocate the
19 Supplemental Water for delivery to the Subareas on an equitable and
20 practicable basis pursuant to duly adopted Watermaster rules and
21 regulations, giving preference to: First, Transition Zone
22 Replacement Water Obligations as set forth in Exhibit "G"; Second,
23 Makeup Water Obligations; and Third, other Replacement Water
24 Obligations. MWA may acquire Supplemental Water at any time. MWA
25 shall be entitled to enter into a Storage Agreement with
26 Watermaster to store water MWA acquires prior to being paid to do
27 so by Watermaster. Such water, including such water acquired and
28 stored prior to the date of this Judgment or prior to the entry of

1 a Storage Agreement, may later be used to satisfy MWA's duty under
2 this paragraph.

3 28. Use of Replacement Water Assessment Proceeds and
4 Makeup Water Assessment Proceeds. The Proceeds of Replacement
5 Water Assessments and any interest accrued thereon shall only be
6 used for the purchase of Replacement Water for that Subarea from
7 which they were collected. In addition, the proceeds of
8 Replacement Water Assessments collected on account of Production in
9 the Transition Zone, except as provided in Exhibit "G", shall only
10 be used for the purchase of Replacement Water for the Transition
11 Zone, and the proceeds of Replacement Water Assessments collected
12 on account of Production in that portion of the Baja Subarea
13 downstream of the Calico-Newberry fault shall only be used for the
14 purchase of Replacement Water for that portion of the Baja Subarea
15 downstream of the Calico-Newberry fault. The proceeds of Makeup
16 Water Assessments and any interest accrued thereon shall only be
17 used for the purchase of Makeup Water to satisfy the Makeup
18 Obligation for which they are collected.

19 29. MWA Annual Report to the Watermaster. MWA shall
20 Produce and deliver to Watermaster an Annual written report
21 regarding actions of MWA required by the terms of this Judgment.
22 The report shall contain: 1) a summary of the actions taken by MWA
23 in identifying and assessing Minimal Producers, including a report
24 of Assessments made and collected; 2) a summary of other MWA
25 activities in collecting Assessment on behalf of Watermaster; 3) a
26 report of water purchases and water distribution for the previous
27 Year; 4) actions taken to implement its Regional Water Management
28 Plan, including actions relating to conveyance facilities referred

1 to in this Judgment. The MWA report will be provided to
2 Watermaster not less than 30 days prior to the Annual Watermaster
3 report to the Court required by this Judgment.

4 D. SUBAREA ADVISORY COMMITTEES.

5 30. Authorization. The Producers in each of the five
6 Subareas are hereby authorized and directed to cause committees of
7 Producer representatives to be organized and to act as Subarea
8 Advisory Committees.

9 31. Composition and Election. Each Subarea Advisory
10 Committee shall consist of five (5) Persons who shall be called
11 advisors. In the election of advisors, every Party shall be
12 entitled to one vote for every acre-foot of Base Annual Production
13 for that Party in that particular Subarea. Parties may cumulate
14 their votes and give one candidate a number of votes equal to the
15 number of advisors to be elected multiplied by the number of votes
16 to which the Party is normally entitled, or distribute the Party's
17 votes on the same principle among as many candidates as the Party
18 thinks fit. In any election of advisors, the candidates receiving
19 the highest number of affirmative votes of the Parties are elected.
20 Elections shall be held upon entry of this Judgment and thereafter
21 every third year. In the event a vacancy arises, a temporary
22 advisor shall be appointed by unanimous decision of the other four
23 advisors to continue in office until the next scheduled election.
24 The California Department of Fish and Game shall serve as a
25 permanent ex-officio member of the Alto and Baja Subarea Advisory
26 Committees. Rules and regulations regarding organization, meetings
27 and other activities shall be at the discretion of the individual

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1 Subarea Advisory Committees, except that all meetings of the
2 committees shall be open to the public.

3 32. Compensation. The Subarea Advisory Committee
4 members shall serve without compensation.

5 33. Powers and Functions. The Subarea Advisory
6 Committee for each Subarea shall act in an advisory capacity only
7 and shall have the duty to study, review and make recommendations
8 on all discretionary determinations made or to be made hereunder by
9 Watermaster which may affect that Subarea.

10 E. TRANSFERABILITY.

11 34. Assignment, Transfer, etc. of Rights. In order to
12 further the purposes of this Judgment and Physical Solution, any
13 Base Annual Production Right, or any portion thereof, may be sold,
14 assigned, transferred, licensed or leased pursuant to the rules and
15 procedures set forth in Exhibit "F".

16 F. MISCELLANEOUS PROVISIONS.

17 35. Water Quality. Nothing in this Judgment shall be
18 interpreted as relieving any Party of its responsibilities to
19 comply with state or federal laws for the protection of water
20 quality or the provisions of any permits, standards, requirements,
21 or orders promulgated thereunder.

22 36. Review Procedures. Any action, decision, rule or
23 procedure of Watermaster pursuant to this Judgment shall be subject
24 to review by the Court on its own motion or on timely motion by any
25 Party, as follows:

26 a. Effective Date of Watermaster Action. Any
27 order, decision or action of Watermaster pursuant to this Judgment
28 on noticed specific agenda items shall be deemed to have occurred

1 on the date of the order, decision or action.

2 b. Notice of Motion. Any Party, may, by a
3 regularly noticed motion, petition the Court for review of
4 Watermaster's action or decision pursuant to this Judgment. The
5 motion shall be deemed to be filed when a copy, conformed as filed
6 with the Court, has been delivered to Watermaster together with the
7 service fee established by Watermaster sufficient to cover the cost
8 to photocopy and mail the motion to each Party. Watermaster shall
9 prepare copies and mail a copy of the motion to each Party or its
10 designee according to the official service list which shall be
11 maintained by Watermaster according to Paragraph 37. A Party's
12 obligation to serve notice of a motion upon the Parties is deemed
13 to be satisfied by filing the motion as provided herein. Unless
14 ordered by the Court, any such petition shall not operate to stay
15 the effect of any Watermaster action or decision which is
16 challenged.

17 c. Time for Motion. A motion to review any
18 Watermaster action or decision shall be filed within ninety (90)
19 days after such Watermaster action or decision, except that motions
20 to review Watermaster Assessments hereunder shall be filed within
21 thirty (30) days of mailing of notice of the Assessment.

22 d. De Novo Nature of Proceeding. Upon filing of a
23 petition to review Watermaster action, the Watermaster shall notify
24 the Parties of a date when the Court will take evidence and hear
25 argument. The Court's review shall be de novo and the Watermaster
26 decision or action shall have no evidentiary weight in such
27 proceeding.

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1 e. Decision. The decision of the Court in such
2 proceeding shall be an appealable Supplemental Order in this case.
3 When the same is final, it shall be binding upon Watermaster and
4 the Parties.

5 f. Payment of Assessments. Payment of Assessments
6 levied by Watermaster hereunder shall be made pursuant to the time
7 schedule in Exhibit "D"; notwithstanding any motion for review of
8 Watermaster actions, decisions, rules or procedures, including
9 review of Watermaster Assessments.

10 37. Designation of Address for Notice and Service. Each
11 Party shall designate the name and address to be used for purposes
12 of all subsequent notices and service herein, either by its
13 endorsement on the Stipulation for Judgment or by a separate
14 designation to be filed within thirty (30) days after Judgment has
15 been entered. Said designation may be changed from time to time by
16 filing a written notice of such change with Watermaster. Any Party
17 desiring to be relieved of receiving notices of Watermaster
18 activity may file a waiver of notice on a form to be provided by
19 Watermaster. Watermaster shall maintain at all times a current
20 list of Parties to whom notices are to be sent and their addresses
21 for purposes of service. Watermaster shall also maintain a full
22 current list of names and addresses of all Parties or their
23 successors, as filed herein. Copies of such lists shall be
24 available to any Person. If no designation is made, a Party's
25 designee shall be deemed to be, in order of priority: i) the
26 Party's attorney of record; ii) if the Party does not have an
27 attorney of record, the Party itself at the address on the
28 Watermaster list.

1 38. Service of Documents. Delivery to or service upon
2 any Party by Watermaster, by any other Party, or by the Court, of
3 any document required to be served upon or delivered to a Party
4 under or pursuant to the Judgment shall be deemed made if made by
5 Deposit thereof (or by copy thereof) in the mail, first class,
6 postage prepaid, addressed to the designee of the Party and at the
7 address shown in the latest designation filed by that Party.

8 39. No Abandonment of Rights. It is in the interest of
9 reasonable beneficial use of the Basin Area and its water supply
10 that no Party be encouraged to take and use more water in any Year
11 than is actually required. Failure to Produce all of the water to
12 which a Party is entitled hereunder shall not, in and of itself, be
13 deemed or constitute an abandonment of such Party's right, in whole
14 or in part.

15 40. Intervention After Judgment. Any person who is not
16 a Party or successor to a Party and who proposes to Produce water
17 from the Basin Area may seek to become a Party to this Judgment
18 through a Stipulation for Intervention entered into with
19 Watermaster. Watermaster may execute said Stipulation on behalf of
20 the other Parties herein but such Stipulation shall not preclude a
21 Party from opposing such Intervention at the time of the Court
22 hearing thereon. Said Stipulation for Intervention must thereupon
23 be filed with the Court, which will consider an order confirming
24 said intervention following thirty (30) days' notice to the
25 Parties. Thereafter, if approved by the Court, such intervenor
26 shall be a Party bound by this Judgment and entitled to the rights
27 and privileges accorded under the Physical Solution herein.

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1 41. Recordation of Notice. MWA shall within sixty (60)
2 days following entry of this Judgment record in the Office of the
3 County Recorder of the County of San Bernardino a notice
4 substantially complying with the notice content requirements set
5 forth in Section 2529 of the California Water Code.

6 42. Judgment Binding on Successors, etc. Subject to
7 specific provisions hereinbefore contained, this Judgment and all
8 provisions thereof are applicable to and binding upon and inure to
9 the benefit of not only the Parties to this action, but as well to
10 their respective heirs, executors, administrators, successors,
11 assigns, lessees, licensees and to the agents, employees and
12 attorneys in fact of any such Persons.

13 43. Costs. No Party stipulating to this Judgment shall
14 recover any costs or attorneys fees in this proceeding from another
15 stipulating Party.

16 44. Entry of Judgment. The Clerk shall enter this
17 Judgment.

18 Dated: **JAN 10** 1996

19
20 **E. MICHAEL KAISER**

21 E. Michael Kaiser, Judge
22 Superior Court of the State
23 of California for the
24 County of Riverside
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EXHIBIT A

MAP OF MOJAVE BASIN AREA

[INDEX MAP AND DETAIL SHEET CONSISTING OF 42
1" = 4,000' SCALE MAPS COVERING THE BASIN
AREA; THE MAP IS ON DISPLAY AT THE OFFICE OF
THE MOJAVE WATER AGENCY, 22450 HEADQUARTERS,
APPLE VALLEY, CA 92307 AND ON FILE WITH THE
COURT]

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EXHIBIT B

PRODUCTION TABLES

CONTENTS

TABLE B-1: TABLE SHOWING BASE ANNUAL PRODUCTION AND BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN EACH SUBAREA AND FREE PRODUCTION ALLOWANCES FOR EACH SUBAREA FOR THE FIRST FIVE YEARS AFTER ENTRY OF THE INTERLOCUTORY JUDGMENT

TABLE B-2: TABLE SHOWING TOTAL VERIFIED PRODUCTION, BASE ANNUAL PRODUCTION AND RECIRCULATED WATER PRODUCTION FOR AQUACULTURE AND FOR RECREATIONAL LAKES

~~12/30/92~~
~~01/30/93~~
~~02/28/93~~
~~04/10/93~~
~~04/30/93~~
09/25/95

EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
ABSHIRE, DAVID V	24	0.1093	24	22	21	20	19
ANDERSON, ROSS C & BETTY J	34	0.1548	34	32	30	28	27
BAR H MUTUAL WATER COMPANY	53	0.2414	53	50	47	45	42
BELL, CHUCK	494	2.2497	494	469	444	419	395
BURNS, BOBBY J & EVELYN J	1,300	5.9204	1,300	1,235	1,170	1,105	1,040
CASA COLINA FOUNDATION	90	0.4099	90	85	81	76	72
CENTER WATER CO	40	0.1822	40	38	36	34	32
CLUB VIEW PARTNERS	1,276	5.8111	1,276	1,212	1,148	1,084	1,020
CROSS, LAWRENCE E	23	0.1047	23	21	20	19	18
CRYSTAL HILLS WATER COMPANY	194	0.8835	194	184	174	164	155
DAHLQUIST, GEORGE R	594	2.7052	594	564	534	504	475
DELPERDANG, ROBERT H	56	0.2550	56	53	50	47	44
DESERT DAWN MUTUAL WATER COMPANY	15	0.0683	15	14	13	12	12
GABTA, TRINIDAD	512	2.3317	512	486	460	435	409
GAYJIKIAN, SAMUEL & HAZEL	102	0.4645	102	96	91	86	81
GRACETOWN INVESTMENT CO - JETCO PROP FUND	752	3.4247	752	714	676	639	601
GUBLER, HANS	30	0.1366	30	28	27	25	24
HAL-DOR LTD	23	0.1047	23	21	20	19	18
HANDLEY, DON R & MARY ANN	73	0.3325	73	69	65	62	58
HART, MERRILL W	473	2.1541	473	449	425	402	378
HERT, SCOTT	276	1.2569	276	262	248	234	220
HI-GRADE MATERIALS	442	2.0129	442	419	397	375	353
HITCHIN LUCERNE, INC	16	0.0729	16	15	14	13	12
JAMS RANCH	28	0.1275	28	26	25	23	22

~~10/10/92~~
~~01/20/93~~
~~02/02/93~~
~~04/10/93~~
~~04/28/93~~
09/25/95

EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBARBA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
JUBILEE MUTUAL WATER COMPANY	142	0.6467	142	134	127	120	113
JUNIPER RIVIERA COUNTY WATER DISTRICT	37	0.1685	37	35	33	31	29
LEE, DOO HWAN	78	0.3552	78	74	70	66	62
LOPEZ, BALTAZAR	385	1.7533	385	365	346	327	308
LUA, ANTONIO	348	1.5848	348	330	313	295	278
LUCERNE VALLEY MUTUAL WATER COMPANY	54	0.2459	54	51	48	45	43
LUCERNE VALLEY PARTNERS	1,213	5.5242	1,213	1,152	1,091	1,031	970
LUCERNE VISTA WATER CO	21	0.0956	21	19	18	17	16
MITSUBISHI CEMENT CORPORATION	1,299	5.9158	1,299	1,234	1,169	1,104	1,039
MONACO INVESTMENT COMPANY	70	0.3188	70	66	63	59	56
MOSS, LAWRENCE W & HELEN J	43	0.1958	43	40	38	36	34
PARK, CHANHO	597	2.7188	597	567	537	507	477
PARK, JEONG, IL & HEA JA	96	0.4372	96	91	86	81	76
PEREZ, EVA	247	1.1249	247	234	222	209	197
PETTIGREW, DAN	1,422	6.4760	1,422	1,350	1,279	1,208	1,137
PETTIGREW, HOWARD L	1,500	6.8312	1,500	1,425	1,350	1,275	1,200
PLUESS-STAUFER CALIFORNIA INC	23	0.1047	23	21	20	19	18
REED, MIKE	58	0.2641	58	55	52	49	46
ROGERS, ROY	1,449	6.5990	1,449	1,376	1,304	1,231	1,159
SAN BERNARDINO CO SERVICE AREA 29	21	0.0956	21	19	18	17	16
SEALS, LAWRENCE	113	0.5146	113	107	101	96	90
SON'S RANCH	140	0.6376	140	133	126	119	112
SOUTHERN CALIFORNIA WATER COMPANY	178	0.8106	178	169	160	151	142
SPECIALTY MINERALS, INC	42	0.1913	42	39	37	35	33

~~10/10/02~~
~~01/00/02~~
~~03/00/02~~
~~04/10/02~~
~~04/20/02~~
09/25/95

EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
SPILLMAN, JAMES R & NANCY J	23	0.1047	23	21	20	19	18
STEWART WATER COMPANY	54	0.2459	54	51	48	45	43
STRINGER, W EDWARD	573	2.6095	573	544	515	487	458
THE CUSHENBURY TRUST, C/O SPECIALTY MINERALS, INC	10	0.0455	10	9	9	8	8
TURNER, LOYD & CAROL	77	0.3507	77	73	69	65	61
VISOSKY, JOSEPH F JR	1,120	5.1006	1,120	1,064	1,008	952	896
WEISER, SIDNEY & RAQUEL	90	0.4099	90	85	81	76	72
WILLOW WELLS MUTUAL WATER COMPANY	30	0.1366	30	28	27	25	24

~~10/10/82~~
~~01/20/83~~
~~02/02/83~~
~~04/20/83~~
~~04/20/83~~
09/25/95

EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
MINIMAL PRODUCER POOL	2,000	9.1083	2,000	1,900	1,800	1,700	1,600
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	1,485	6.7629					
ESTE SUBAREA TOTALS =	21,958	100					

- 1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.
- 2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.
- 3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

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EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN OESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

OESTE SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
AEROCHEM, INC	660	5.3645	660	627	594	561	528
BROWN, DOUG & SUB	46	0.3739	46	43	41	39	36
CHAMISAL MUTUAL	96	0.7803	96	91	86	81	76
DAVIS, PAUL	19	0.1544	19	18	17	16	15
DOSSEY, D A	14	0.1138	14	13	12	11	11
MEADOWBROOK DAIRY	2,335	18.9791	2,335	2,218	2,101	1,984	1,868
RESSEGUE, JOHN & BILL	259	2.1052	259	246	233	220	207
SAN BERNARDINO CO SERVICE AREA 70G	110	0.8941	110	104	99	93	88
SAN BERNARDINO CO SERVICE AREA 70L	1,306	10.6153	1,306	1,240	1,175	1,110	1,044
THORESON, ROBERT F & A KATHLEEN	40	0.3251	40	38	36	34	32
TROGER, RICHARD H	112	0.9103	112	106	100	95	89
VAN DAM BROTHERS	1,860	15.1183	1,860	1,767	1,674	1,581	1,488

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EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN OESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

OESTE SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
MINIMAL PRODUCER POOL	1,500	12.1921	1,500	1,425	1,350	1,275	1,200
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	3,946	32.0735					
OESTE SUBAREA TOTALS =	12,303	100					

- 1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.
- 2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.
- 3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

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EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBARRA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
ABBOND, EDWARD & GRACE	28	0.0229	28	26	25	23	22
ABBOTT, LEONARD C	284	0.2321	284	269	255	241	227
ADELANTO, CITY OF	1,573	1.2855	1,573	1,494	1,415	1,337	1,258
ADELANTO, CITY OF - GEORGE A F B	3,433	2.8055	3,433	3,261	3,089	2,918	2,746
AGCON, INC	384	0.3138	384	364	345	326	307
APPLE VALLEY COUNTRY CLUB	709	0.5794	709	673	638	602	567
APPLE VALLEY DEVELOPMENT	724	0.5917	724	687	651	615	579
APPLE VALLEY FOOTHILL CO WATER DISTRICT	167	0.1365	167	158	150	141	133
APPLE VALLEY HEIGHTS COUNTY WATER DISTRICT	125	0.1022	125	118	112	106	100
APPLE VALLEY RANCHOS WATER COMPANY	13,022	10.6419	13,022	12,370	11,719	11,068	10,417
APPLE VALLEY RECREATION & PARKS	45	0.0368	45	42	40	38	36
APPLE VALLEY VIEW MUTUAL WATER CO	36	0.0294	36	34	32	30	28
APPLE VALLEY, TOWN OF	298	0.2435	298	283	268	253	238
ARC LAS FLORES	6,331	5.1739	6,331	6,014	5,697	5,381	5,064
BACA, ENRIQUE	74	0.0605	74	70	66	62	59
BALDY MESA WATER DISTRICT	1,495	1.2218	1,495	1,420	1,345	1,270	1,196
BASS, NEWTON T	514	0.4201	514	488	462	436	411
BASTIANON, REMO	77	0.0629	77	73	69	65	61
BASURA, STEVE	25	0.0204	25	23	22	21	20
BEINSCHROTH, A J	90	0.0736	90	85	81	76	72
BOYCE, KENNETH & WILLA	102	0.0834	102	96	91	86	81
BROWN, BOBBY G & VALERIA R	42	0.0343	42	39	37	35	33
BURNS, ULYSSES & ANNIE L	164	0.1340	164	155	147	139	131
CARDOZO, MANUEL & MARIA	909	0.7429	909	863	818	772	727

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EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
CDFG - MOJAVE NARROWS REGIONAL PARK	2,107	1.7219	2,107	2,001	1,896	1,790	1,685
CDFG - MOJAVE RIVER FISH HATCHERY	20	0.0163	20	19	18	17	16
CLARK, KENNETH R	223	0.1822	223	211	200	189	178
CLEAR VIEW FARMS	501	0.4094	501	475	450	425	400
COPELAND, ET AL (C/O DON W. LITTLE)	175	0.1430	175	166	157	148	140
CRAMER, MARGARET MUIR	280	0.2288	280	266	252	238	224
CUNNINGHAM, WILLIAM	29	0.0237	29	27	26	24	23
DEXTER, CLAIR F	175	0.1430	175	166	157	148	140
DEXTER, J P	515	0.4209	515	489	463	437	412
DIBERNARDO, JOHN	203	0.1659	203	192	182	172	162
DOLCH, ROBERT & JUDY	426	0.3481	426	404	383	362	340
DOMBROWSKI, MICHAEL W & SUSAN M	19	0.0155	19	18	17	16	15
DOWSE, PHILIP	20	0.0163	20	19	18	17	16
EVENSON, EDWIN H & JOYCELAINE	70	0.0572	70	66	63	59	56
FISHER, DOLORES DR	48	0.0392	48	45	43	40	38
FISHER, JEROME	633	0.5173	633	601	569	538	506
FITZWATER, R E	291	0.2378	291	276	261	247	232
GARCIA, SONIA L	288	0.2354	288	273	259	244	230
GOMBZ, CIRIL - LIVING TRUST	330	0.2697	330	313	297	280	264
GREEN ACRES ESTATES	25	0.0204	25	23	22	21	20
GULBRANSON, MERLIN	163	0.1332	163	154	146	138	130
HELENDALE SCHOOL DISTRICT	18	0.0147	18	17	16	15	14
HESPERIA GOLF AND COUNTRY CLUB	678	0.5541	678	644	610	576	542
HESPERIA WATER DISTRICT	12,213	9.9808	12,213	11,602	10,991	10,381	9,770

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TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE- FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
HI-GRADE MATERIALS	149	0.1218	149	141	134	126	119
HODGE, STANLEY W	67	0.0548	67	63	60	56	53
HOLWAY, ROBERT	88	0.0719	88	83	79	74	70
HRUBIK, THOMAS A	3,862	3.1561	3,862	3,668	3,475	3,282	3,089
INDUSTRIAL ASPHALT	109	0.0891	109	103	98	92	87
JESS RANCH WATER COMPANY	7,480	6.1129	7,480	7,106	6,732	6,358	5,984
JOHNSON, LARRY & CARLEAN	82	0.0670	82	77	73	69	65
JOHNSON, RONALD	31	0.0253	31	29	27	26	24
JOHNSTON, HARRIET AND LARRY W	127	0.1038	127	120	114	107	101
KEMPER CAMPBELL RANCH	473	0.3865	473	449	425	402	378
LAKE ARROWHEAD COMMUNITY SERVICES DISTRICT	658	0.5377	658	625	592	559	526
LAWSON, ERNEST & BARBARA	15	0.0123	15	14	13	12	12
LENHERT, RONALD & TONI	37	0.0302	37	35	33	31	29
LEWIS HOMES OF CALIFORNIA	1,693	1.3836	1,693	1,608	1,523	1,439	1,354
LONGMAN, JACK	115	0.0940	115	109	103	97	92
LOUNSBURY, J PETER & CAROLYN	208	0.1700	208	197	187	176	166
LOW, ROBERT	399	0.3261	399	379	359	339	319
LUCKEY, MANLEY J	800	0.6538	800	760	720	680	640
LUTH, KEN	27	0.0221	27	25	24	22	21
MARIANA RANCHOS COUNTY WATER DISTRICT	245	0.2002	245	232	220	208	196
MCCALL, REX	44	0.0360	44	41	39	37	35
MCINNIS, WILLIAM S	30	0.0245	30	28	27	25	24
MITCHELL, ROBIN & JUDITH	36	0.0294	36	34	32	30	28
MURPHY, BERNARD H	25	0.0204	25	23	22	21	20

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TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
MURPHY, BERNARD TRUST	162	0.1324	162	153	145	137	129
MURPHY, KENNETH	42	0.0343	42	39	37	35	33
MUTUAL FUNDING CORP	101	0.0825	101	95	90	85	80
NAVAJO MUTUAL WATER CO	88	0.0719	88	83	79	74	70
NUNN, DONALD & PEARL	66	0.0539	66	62	59	56	52
O'BRYANT, ROBERT C & BARBARA	107	0.0874	107	101	96	90	85
ORMSBY, HARRY G	386	0.3154	386	366	347	328	308
PALISADES RANCH	824	0.6734	824	782	741	700	659
PARKER, DAVID E	37	0.0302	37	35	33	31	29
PEARL, ALICE	147	0.1201	147	139	132	124	117
PEARSON, DERYL B	22	0.0180	22	20	19	18	17
PERRY, THOMAS A	35	0.0286	35	33	31	29	28
PETTIS TRUST	126	0.1030	126	119	113	107	100
PHENIX PROPERTIES LTD	652	0.5328	652	619	586	554	521
PITTMAN, LEROY W	148	0.1209	148	140	133	125	118
POLICH, LEE & DONNA	65	0.0531	65	61	58	55	52
RANCHERITOS MUTUAL WATER CO	169	0.1381	169	160	152	143	135
RIVERSIDE CEMENT CO - ORO GRANDE PLANT	3,452	2.8211	3,452	3,279	3,106	2,934	2,761
ROGERS, ROY (ORO GRANDE RANCH)	115	0.0940	115	109	103	97	92
RUDMAN, ROBERT T	300	0.2452	300	285	270	255	240
RUE RANCH	30	0.0245	30	28	27	25	24
SAN BERNARDINO CO SERVICE AREA 42	465	0.3800	465	441	418	395	372
SAN BERNARDINO CO SERVICE AREA 64	3,822	3.1234	3,822	3,630	3,439	3,248	3,057
SAN BERNARDINO CO SERVICE AREA 70C	2,346	1.9172	2,346	2,228	2,111	1,994	1,876

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TABLE B-1
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BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
SAN BERNARDINO CO SERVICE AREA 70J	1,005	0.8213	1,005	954	904	854	804
SAN BERNARDINO CO SERVICE AREA 70L	355	0.2901	355	337	319	301	284
SAN FILIPPO, JOSEPH & SHELLEY	35	0.0286	35	33	31	29	28
SILVER LAKES ASSOCIATION	3,987	3.2583	3,987	3,787	3,588	3,388	3,189
SOUTHDOWN, INC	1,519	1.2414	1,519	1,443	1,367	1,291	1,215
SOUTHERN CALIFORNIA WATER COMPANY	940	0.7682	940	893	846	799	752
SPRING VALLEY LAKE ASSOCIATION	3,056	2.4974	3,056	2,903	2,750	2,597	2,444
SPRING VALLEY LAKE COUNTRY CLUB	977	0.7984	977	928	879	830	781
STORM, RANDALL	62	0.0507	62	58	55	52	49
SUDMEYER, GLENN W	121	0.0989	121	114	108	102	96
SUMMIT VALLEY RANCH	452	0.3694	452	429	406	384	361
TATRO, RICHARD K & SANDRA A	280	0.2288	280	266	252	238	224
TATUM, JAMES B	829	0.6775	829	787	746	704	663
TAYLOR, ALLEN C / HAYMAKER RANCH	456	0.3727	456	433	410	387	364
THOMAS, S DALE	440	0.3596	440	418	396	374	352
THOMAS, WALTER	36	0.0294	36	34	32	30	28
THOMPSON, JAMES A	418	0.3416	418	397	376	355	334
THOMPSON, RODGER	76	0.0621	76	72	68	64	60
THRASHER, GARY	373	0.3048	373	354	335	317	298
THUNDERBIRD COUNTY WATER DISTRICT	118	0.0964	118	112	106	100	94
TURNER, ROBERT	70	0.0572	70	66	63	59	56
VAIL, JOSEPH B & PAULA B	126	0.1030	126	119	113	107	100
VAN BURGER, CARL	710	0.5802	710	674	639	603	568
VAN LEEUWEN FAMILY TRUST	341	0.2787	341	323	306	289	272

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BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
VANNI, MIKE	54	0.0441	54	51	48	45	43
VICTOR VALLEY COMMUNITY COLLEGE DIST	240	0.1961	240	228	216	204	192
VICTOR VALLEY WATER DISTRICT	13,354	10.9133	13,354	12,686	12,018	11,350	10,683
VICTORVILLE, CITY OF	12	0.0098	12	11	10	10	9
VOGLER, ALBERT H	132	0.1079	132	125	118	112	105
WACKERN, CAESAR	1,635	1.3362	1,635	1,553	1,471	1,389	1,308
WAKULA, JOHN	291	0.2378	291	276	261	247	232
WARD, KEN & BARBARA	65	0.0531	65	61	58	55	52
WEBER, DAVE	80	0.0654	80	76	72	68	64
WEST, CAROLYN & SMITH, RICHARD	24	0.0196	24	22	21	20	19
WEST, HOWARD & SUZY	72	0.0588	72	68	64	61	57
WHITTINGHAM, RICHARD V	15	0.0123	15	14	13	12	12
YEAGER, E L - CONSTRUCTION COMPANY INC	34	0.0278	34	32	30	28	27

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TABLE B-1
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BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
MINIMAL PRODUCER POOL	4,000	3.2689	4,000	3,800	3,600	3,400	3,200
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	4,967	4.0592					
ALTO SUBAREA TOTALS =	122,365	100					

- 1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.
- 2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.
- 3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

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EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST ³ YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
AGCON, INC	0	0.0000	0	0	0	0	0
AGUAYO, JEANETTE L	212	0.3742	212	201	190	180	169
ATCHISON, TOPEKA, SANTA FE RAILWAY CO	120	0.2118	120	114	108	102	96
AVDEEF, THOMAS	34	0.0600	34	32	30	28	27
AZTEC FARM DEVELOPMENT COMPANY	220	0.3883	220	209	198	187	176
BARNES, FAY - EXECUTOR OF ESTATE OF WAYNE BARNES	243	0.4289	243	230	218	206	194
BROMMER, HARVIN	361	0.6372	361	342	324	306	288
BURNS, RITA J & PAMELA E	16	0.0282	16	15	14	13	12
CHAFI, LARRY R	96	0.1694	96	91	86	81	76
CHOI, YONG IL & JOUNG AE	38	0.0671	38	36	34	32	30
CHRISTISON, JOEL	75	0.1324	75	71	67	63	60
COOK, KWON W	169	0.2983	169	160	152	143	135
DE VRIES, NEIL	3,800	6.7070	3,800	3,610	3,420	3,230	3,040
DESERT COMMUNITY BANK	156	0.2753	156	148	140	132	124
DURAN, FRANK T	50	0.0883	50	47	45	42	40
GAINES, JACK	117	0.2065	117	111	105	99	93
GBSIRIECH, WAYNE	121	0.2136	121	114	108	102	96
GORMAN, VIRGIL	138	0.2436	138	131	124	117	110
GRIEDER, RAYMOND H & DORISANNE	30	0.0530	30	28	27	25	24
GRILL, NICHOLAS P & MILLIE D	21	0.0371	21	19	18	17	16
GROEN, CORNELIS	1,043	1.8409	1,043	990	938	886	834
HANIFY, DBA - WHITE BEAR RANCH	152	0.2683	152	144	136	129	121
HARMSEN, JAMES & RUTH ANN	1,522	2.6863	1,522	1,445	1,369	1,293	1,217
HARPER LAKE COMPANY	1,433	2.5293	1,433	1,361	1,289	1,218	1,146

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TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
HI DESERT MUTUAL WATER CO	34	0.0600	34	32	30	28	27
HILEMAN, KATHERINE	19	0.0335	19	18	17	16	15
HILL, MELVIN	2,335	4.1213	2,335	2,218	2,101	1,984	1,868
HOY, MIKE	632	1.1155	632	600	568	537	505
JORDAN, RAYMOND	460	0.8119	460	437	414	391	368
JUSTICE, CHRIS	421	0.7431	421	399	378	357	336
KING, GENEVIEVE E	69	0.1218	69	65	62	58	55
LEE, SEPOONG ETAL & WOO POONG	77	0.1359	77	73	69	65	61
LEYERLY, GENEVA	65	0.1147	65	61	58	55	52
LEYERLY, RICHARD	862	1.5214	862	818	775	732	689
LUDINGTON, JAMES E & JO ANN	58	0.1024	58	55	52	49	46
LYON, LOUIS & BRIKA	130	0.2295	130	123	117	110	104
MARTIN, LENDELL	14	0.0247	14	13	12	11	11
MCCOLLUM, CHARLES L	347	0.6125	347	329	312	294	277
MEAD, G C	90	0.1589	90	85	81	76	72
MEYERS, LONNIE	27	0.0477	27	25	24	22	21
MITCHELL, CHARLES A	201	0.3548	201	190	180	170	160
MOFFITT, THOMAS R & EDITH I	62	0.1094	62	58	55	52	49
MOST, MILTON W	9,660	17.0500	9,660	9,177	8,694	8,211	7,728
NELSON, MILDRED L	52	0.0918	52	49	46	44	41
NEWBERRY SPRINGS COMPANY, INC	2,489	4.3931	2,489	2,364	2,240	2,115	1,991
OHAI, REYNOLDS & DOROTHY	137	0.2418	137	130	123	116	109
OROPEZA, JOSE M	190	0.3354	190	180	171	161	152
OSTERKAMP, GEROLD	260	0.4589	260	247	234	221	208

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TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
OWL ROCK PRODUCTS COMPANY	466	0.8225	466	442	419	396	372
PG & B	1,657	2.9246	1,657	1,574	1,491	1,408	1,325
REDDY, BOMMI V & KARUNA V	24	0.0424	24	22	21	20	19
ROWLAND, JAMES & HELEN	22	0.0388	22	20	19	18	17
RUISCH, DALE W	650	1.1473	650	617	585	552	520
SHIRKEY, ALAN G & MARY E	35	0.0618	35	33	31	29	28
SMITH, ROBERT A	43	0.0759	43	40	38	36	34
SOPPELAND, WAYNE	783	1.3820	783	743	704	665	626
SOUTHERN CALIFORNIA WATER COMPANY	11,309	19.9605	11,309	10,743	10,178	9,612	9,047
SPINK, WALTHALL	44	0.0777	44	41	39	37	35
ST CHARLES, DONALD B	609	1.0749	609	578	548	517	487
SUN 'N SKY COUNTRY CLUB	337	0.5948	337	320	303	286	269
TALLAKSON, WILLIAM V	17	0.0300	17	16	15	14	13
TILLEMA, HAROLD	874	1.5426	874	830	786	742	699
VAN DAM, ELBERT & SUSAN	722	1.2743	722	685	649	613	577
VAN LEEUWEN, JOHN	1,922	3.3923	1,922	1,825	1,729	1,633	1,537
VAN VLIET, HENDRIKA	820	1.4473	820	779	738	697	656
VANHOF, LUTHER C	23	0.0406	23	21	20	19	18
VERNOLA, PAT	3,116	5.4998	3,116	2,960	2,804	2,648	2,492
VISSER, ANNIE	91	0.1606	91	86	81	77	72
YANG, YOUNG MO	371	0.6548	371	352	333	315	296
YKEMA HARMSSEN DAIRY	1,000	1.7650	1,000	950	900	850	800

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TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
MINIMAL PRODUCER POOL	2,000	3.5300	2,000	1,900	1,800	1,700	1,600
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	864	1.5250					
CENTRO SUBAREA TOTALS =	56,657	100					

- 1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.
- 2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.
- 3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

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TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
AKE, CHARLES J & MARJORIE M	23	0.0333	23	21	20	19	18
ANGERSR, ROBERT J & PEGGY	24	0.0347	24	22	21	20	19
ANTELOPE VALLEY DAIRY	5,430	7.8597	5,430	5,158	4,887	4,615	4,344
ARGUELLES, ALFREDO	1,047	1.5155	1,047	994	942	889	837
ATCHISON, TOPEKA, SANTA FE RAILWAY CO	80	0.1158	80	76	72	68	64
BAGLEY, ROY	20	0.0289	20	19	18	17	16
BALDERRAMA, ALFRED & LINDA	250	0.3619	250	237	225	212	200
BALL, DAVID P	81	0.1172	81	76	72	68	64
BARAK, RICHARD	132	0.1911	132	125	118	112	105
BARBER, JAMES B	167	0.2417	167	158	150	141	133
BARSTOW CALICO K O A	24	0.0347	24	22	21	20	19
BAUR, KARL & RITA	26	0.0376	26	24	23	22	20
BEDINGFIELD, LYNDLELL & CHARLENE	56	0.0811	56	53	50	47	44
BENTON, PHILIP G	35	0.0507	35	33	31	29	28
BORGOGNO, STEVEN & LILLIAN B	1,844	2.6691	1,844	1,751	1,659	1,567	1,475
BOWMAN, EDWIN L	31	0.0449	31	29	27	26	24
BROWN, RONALD A	1,080	1.5632	1,080	1,026	972	918	864
BROWY, ORVILLE & LOUISE	33	0.0478	33	31	29	28	26
BRUINS, NICHOLAS	29	0.0420	29	27	26	24	23
CALICO LAKES HOMEOWNERS ASSOCIATION	1,031	1.4923	1,031	979	927	876	824
CALIF DEPT OF TRANSPORTATION	71	0.1028	71	67	63	60	56
CAMPBELL, M A & DIANNE	22	0.0318	22	20	19	18	17
CARTER, JOHN THOMAS	746	1.0798	746	708	671	634	596
CDFG - CAMP CADY	14	0.0203	14	13	12	11	11

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TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
CHANG, TIMOTHY & JANE	18	0.0261	18	17	16	15	14
CHASTAIN, W C	100	0.1447	100	95	90	85	80
CHEYENNE LAKE, INC	122	0.1766	122	115	109	103	97
CHIAO MEI DEVELOPMENT	451	0.6528	451	428	405	383	360
CHO BROTHERS RANCH	758	1.0972	758	720	682	644	606
CHUANG, MARSHAL	70	0.1013	70	66	63	59	56
CONNER, WILLIAM H	25	0.0362	25	23	22	21	20
COOL WATER RANCH	76	0.1100	76	72	68	64	60
CRYSTAL LAKES PROPERTY OWNERS ASSOCIATION	447	0.6470	447	424	402	379	357
DAGGETT COMMUNITY SERVICES DISTRICT	235	0.3402	235	223	211	199	188
DALJO CORPORATION	31	0.0449	31	29	27	26	24
DAVIS, RONALD & DONNA	53	0.0767	53	50	47	45	42
DE JONG, ALAN L	1,648	2.3854	1,648	1,565	1,483	1,400	1,318
DENNISON, QUENTIN D	29	0.0420	29	27	26	24	23
DESERT LAKES CORPORATION - (LAKE DOLORES)	483	0.6991	483	458	434	410	386
DOCIMO, DONALD P & PATRICIA J	23	0.0333	23	21	20	19	18
DONALDSON, JERRY & BEVERLY	90	0.1303	90	85	81	76	72
ELLISON, SUSAN	15	0.0217	15	14	13	12	12
EVKHANIAN, JAMES H	110	0.1592	110	104	99	93	88
FAWCETT, EDWARD C	20	0.0289	20	19	18	17	16
FELIX, ALAN E & CAROL L	36	0.0521	36	34	32	30	28
PERRO, DENNIS & NORMA	32	0.0463	32	30	28	27	25
FRIEND, JOSEPH & DEBORAH	60	0.0868	60	57	54	51	48
FUNDAMENTAL CHRISTIAN ENDRAVOR	285	0.4125	285	270	256	242	228

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 TABLE B-1
 TABLE SHOWING BASE ANNUAL PRODUCTION AND
 BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
 TOGETHER WITH FREE PRODUCTION ALLOWANCES
 FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
GARCIA, DANIEL	23	0.0333	23	21	20	19	18
GOLD, HAROLD	249	0.3604	249	236	224	211	199
GRAVES, CHESTER B	32	0.0463	32	30	28	27	25
HAIGH, WHILLYN & MARGARET	32	0.0463	32	30	28	27	25
HALL, LARRY	23	0.0333	23	21	20	19	18
HARALIK, BESS & ROBERT	27	0.0391	27	25	24	22	21
HARDESTY, LESLIE E & BECKY J	47	0.0680	47	44	42	39	37
HARSON, NICHOLAS & MARY	30	0.0434	30	28	27	25	24
HARTER FARMS	1,083	1.5676	1,083	1,028	974	920	866
HARTER, JOE & SUE	738	1.0682	738	701	664	627	590
HARTLEY, LONNIE	19	0.0275	19	18	17	16	15
HARVEY, FRANK	38	0.0550	38	36	34	32	30
HENDLEY, RICK & BARBARA	48	0.0695	48	45	43	40	38
HIETT, PATRICIA J	16	0.0232	16	15	14	13	12
HILARIDES, FRANK	1,210	1.7514	1,210	1,149	1,089	1,028	968
HOLLISTER, ROBERT H & RUTH M	44	0.0637	44	41	39	37	35
HONG, PAUL B & MAY	95	0.1375	95	90	85	80	76
HORTON'S CHILDREN'S TRUST	106	0.1534	106	100	95	90	84
HORTON, JOHN MD	183	0.2649	183	173	164	155	146
HOSKING, JOHN W & JEAN	94	0.1361	94	89	84	79	75
HUBBARD, ESTER & MIZUNO, ARLEAN	28	0.0405	28	26	25	23	22
HUNT, RALPH M & LILLIAN F	31	0.0449	31	29	27	26	24
HUTCHISON, WILLIAM O	901	1.3042	901	855	810	765	720
HYATT, JAMES & BRENDA	210	0.3040	210	199	189	178	168

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TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBARRA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBARRA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
IRVIN, BERTRAND W	29	0.0420	29	27	26	24	23
J V A AIR INC	54	0.0782	54	51	48	45	43
JACKSON, RAY	20	0.0289	20	19	18	17	16
JOHNSON, JAMES R	247	0.3575	247	234	222	209	197
JUSTICE, CHRIS	6	0.0087	6	5	5	5	4
KAPLAN, ABRAHAM M	76	0.1100	76	72	68	64	60
KASNER, ROBERT	1,001	1.4489	1,001	950	900	850	800
KATCHER, AUGUST M & MARCELYNE	23	0.0333	23	21	20	19	18
KEMP, ROBERT & ROSE	32	0.0463	32	30	28	27	25
KIEL, MARY	34	0.0492	34	32	30	28	27
KIM, JOON HO	764	1.1059	764	725	687	649	611
KOSHAREK, JOHN & JOANNE	54	0.0782	54	51	48	45	43
LAKE JODIE PROPERTY OWNERS ASSOCIATION	254	0.3677	254	241	228	215	203
LAKE WAIKIKI	98	0.1419	98	93	88	83	78
LAKE WAINANI OWNERS ASSOCIATION	202	0.2924	202	191	181	171	161
LANGLEY, MICHAEL R	20	0.0289	20	19	18	17	16
LAWRENCE, WILLIAM W	45	0.0651	45	42	40	38	36
LBE, MOON & OKBEA	49	0.0709	49	46	44	41	39
LBE, VIN JANG T	630	0.9119	630	598	567	535	504
LESHIN, CONNIE & SOL	1,416	2.0496	1,416	1,345	1,274	1,203	1,132
LESHIN, SOL	1,997	2.8906	1,997	1,897	1,797	1,697	1,597
LEVINE, DR LESLIE	1,637	2.3695	1,637	1,555	1,473	1,391	1,309
LONG, BALLARD	35	0.0507	35	33	31	29	28
M BIRD CONSTRUCTION	41	0.0593	41	38	36	34	32

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TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
MAHJOUBI, APSAR S	63	0.0912	63	59	56	53	50
MALIN, LILY	54	0.0782	54	51	48	45	43
MALONEY, JANICE	36	0.0521	36	34	32	30	28
MARCROFT, JAMES A & JOAN	38	0.0550	38	36	34	32	30
MARSHALL, CHARLES	20	0.0289	20	19	18	17	16
MAYBERRY, DONALD J	41	0.0593	41	38	36	34	32
MILBRAT, IRVING	73	0.1057	73	69	65	62	58
MITCHELL, CHARLOTTE	115	0.1665	115	109	103	97	92
MITCHELL, JAMES L & CHERYL A	155	0.2244	155	147	139	131	124
MOORE, WAYNE G & JULIA H	103	0.1491	103	97	92	87	82
MORRIS, KARL	304	0.4400	304	288	273	258	243
MULLIGAN, ROBERT & INEZ	35	0.0507	35	33	31	29	28
NEWBERRY COMMUNITY SERVICE DIST	23	0.0333	23	21	20	19	18
NU VIEW DEVELOPMENT, INC	2,899	4.1962	2,899	2,754	2,609	2,464	2,319
O P D L INC	109	0.1578	109	103	98	92	87
O'KEEFE, SARAH-LEE & JOKE E	50	0.0724	50	47	45	42	40
P & H ENGINEERING & DEV CORP	667	0.9654	667	633	600	566	533
PARKER, GEORGE R	144	0.2084	144	136	129	122	115
PATHFINDER INVESTORS	472	0.6832	472	448	424	401	377
PAYAN, PAUL	32	0.0463	32	30	28	27	25
PERKO, BERT K	132	0.1911	132	125	118	112	105
PITTS, JOE	30	0.0434	30	28	27	25	24
POHL, ANDREAS & CATHLYN	17	0.0246	17	16	15	14	13
POLAND, JOHN R & SANDRA M	92	0.1332	92	87	82	78	73

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TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
PRICE, ALAN E	37	0.0536	37	35	33	31	29
PRICE, DONALD	42	0.0608	42	39	37	35	33
PUCKHABER, WILLIAM F TRUST	63	0.0912	63	59	56	53	50
PURCIO, THOMAS F & PATRICIA A	80	0.1158	80	76	72	68	64
RANDOLPH, JOAN E	24	0.0347	24	22	21	20	19
REEVES, RICHARD	230	0.3329	230	218	207	195	184
RICE, DANIEL & MARY	121	0.1751	121	114	108	102	96
RICE, HENRY C & DIANA	24	0.0347	24	22	21	20	19
RIBGER, WALTER M	62	0.0897	62	58	55	52	49
RIKUO CORPORATION	1,517	2.1958	1,517	1,441	1,365	1,289	1,213
ROSSI, JAMES L & NAOMI I	614	0.8887	614	583	552	521	491
ROTEX CONSTRUCTION COMPANY	2,529	3.6606	2,529	2,402	2,276	2,149	2,023
SAN BERNARDINO COUNTY BARSTOW - DAGGETT AIRPORT	168	0.2432	168	159	151	142	134
SANTUCCI, ANTONIO & WILSA	30	0.0434	30	28	27	25	24
SCOGGINS, JERRY	105	0.1520	105	99	94	89	84
SHEPPARD, THOMAS & GLORIA	217	0.3141	217	206	195	184	173
SHORT, CHARLES & MARGARET	54	0.0782	54	51	48	45	43
SHORT, JEFF	30	0.0434	30	28	27	25	24
SILVER VALLEY RANCH, INC	109	0.1578	109	103	98	92	87
SMITH, WILLIAM E	19	0.0275	19	18	17	16	15
SNYDER, KRYL K & ROUTH, RICHARD J	64	0.0926	64	60	57	54	51
SOUTHERN CALIFORNIA EDISON CO - AGRICULTURE	5,858	8.4792	5,858	5,565	5,272	4,979	4,686
SOUTHERN CALIFORNIA EDISON CO - INDUSTRIAL	4,565	6.6076	4,565	4,336	4,108	3,880	3,652
SOUTHERN CALIFORNIA GAS COMPANY	98	0.1419	98	93	88	83	78

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TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBARBA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBARBA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
ST ANTONY COPTIC ORTHODOX MONASTERY	130	0.1882	130	123	117	110	104
STEWART, STANLEY & PATRICIA	27	0.0391	27	25	24	22	21
SUGA, TAKRAKI	154	0.2229	154	146	138	130	123
SUNDOWN LAKES, INC	168	0.2432	168	159	151	142	134
SWARTZ, ROBERT & IRENE	50	0.0724	50	47	45	42	40
TAPIE, RAYMOND & MURIEL	18	0.0261	18	17	16	15	14
TAYLOR, TOM	503	0.7281	503	477	452	427	402
THAYER, SHARON	58	0.0840	58	55	52	49	46
THE 160 NEWBERRY RANCH CALIFORNIA, LTD	1,033	1.4952	1,033	981	929	878	826
TRIPLE H PARTNERSHIP	993	1.4373	993	943	893	844	794
UNION PACIFIC RAILROAD COMPANY	249	0.3604	249	236	224	211	199
VAN BASTELAAR, ALPHONSE	78	0.1129	78	74	70	66	62
VAN DIEST, CORNELIUS	934	1.3519	934	887	840	793	747
VAN LEEUWEN, JOHN	1,084	1.5690	1,084	1,029	975	921	867
VANDER DUSSEN, AGNES	1,792	2.5938	1,792	1,702	1,612	1,523	1,433
VAUGHT, ROBERT E & KAREN M	43	0.0622	43	40	38	36	34
VERNOLA, PAT	1,310	1.8962	1,310	1,244	1,179	1,113	1,048
WARD, ERNEST & LAURA	38	0.0550	38	36	34	32	30
WARD, RONNY H	130	0.1882	130	123	117	110	104
WEBER, F R & JUNELL	96	0.1390	96	91	86	81	76
WEBSTER, THOMAS M & PATRICIA J	24	0.0347	24	22	21	20	19
WEIDKNECHT, ARTHUR J & PEGGY A	79	0.1143	79	75	71	67	63
WESTERN HORIZON ASSOCIATES INC	1,188	1.7196	1,188	1,128	1,069	1,009	950
WESTERN ROCK PRODUCTS	31	0.0449	31	29	27	26	24

~~12/10/02~~
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09/25/95

EXHIBIT B
TABLE B-1
TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL ¹ PRODUCTION (ACRE-FEET)	BASE ANNUAL ² PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND ³ YEAR	THIRD ³ YEAR	FOURTH ³ YEAR	FIFTH ³ YEAR
WET SET, INC	129	0.1867	129	122	116	109	103
WITTE, E DANIEL	27	0.0391	27	25	24	22	21
WLSR INC	133	0.1925	133	126	119	113	106
WORSEY, REVAE	29	0.0420	29	27	26	24	23
YARD, BETTY	26	0.0376	26	24	23	22	20
YERMO WATER COMPANY	453	0.6557	453	430	407	385	362
YOUNG, KRITH O - (DESERT TURF)	312	0.4516	312	296	280	265	249
MINIMAL PRODUCER POOL	3,500	5.0661	3,500	3,325	3,150	2,975	2,800
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	320	0.4632					
BAJA SUBAREA TOTALS =	69,087	100					

- 1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.
- 2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.
- 3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

EXHIBIT B
TABLE B-2
TABLE SHOWING TOTAL WATER PRODUCTION
FOR AQUACULTURE AND RECREATIONAL LAKE PURPOSES
ALTO SUBAREA

PRODUCER	TOTAL WATER ¹ PRODUCTION	BASE ANNUAL ² PRODUCTION	RECIRCULATED ³ WATER
	(ACRE-FEET)		
CDFG - MOJAVE RIVER FISH HATCHERY	10,678	20	10,658
JESS RANCH WATER COMPANY	18,625	7,480	11,145
ALTO SUBAREA TOTALS =	29,303	7,500	21,803

Total Water Production is the reported maximum year production for each producer for the five year period 1986-1990.

These values reflect the maximum production determined by one or more of the following: Southern California Edison records; James C. Hanson site inspection; land use estimates from 1989 aerial photography; responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production as shown on Table B-1.

3 Amount shown is the difference between the Total Water Production and the Base Annual Production.

EXHIBIT B
TABLE B-2
TABLE SHOWING TOTAL WATER PRODUCTION
FOR AQUACULTURE AND RECREATIONAL LAKE PURPOSES
BAJA SUBAREA

PRODUCER	TOTAL WATER ¹ PRODUCTION	BASE ANNUAL ² PRODUCTION	RECIRCULATED ³ WATER
	(ACRE-FEET)		
BROWY, ORVILLE & LOUISE	210	33	177
CALICO LAKES HOMEOWNERS ASSOCIATION	2,513	1,031	1,482
CDFG - CAMP CADY	102	14	88
CHEYENNE LAKE, INC	638	122	516
CRYSTAL LAKES PROPERTY OWNERS ASSOCIATION	6,575	447	6,128
DESERT LAKES CORPORATION - (LAKE DOLORES)	928	483	445
FUNDAMENTAL CHRISTIAN ENDEAVOR	440	285	155
HORTON'S CHILDREN'S TRUST	1,291	106	1,185
HORTON, JOHN MD	672	183	489
KIEL, MARY	188	34	154
LAKE JODIE PROPERTY OWNERS ASSOCIATION	2,805	254	2,551
LAKE WAIKIKI	400	98	302
LAKE WAINANI OWNERS ASSOCIATION	1,420	202	1,218
LEE, MOON & OKBEA	171	49	122
O F D L INC	434	109	325
RICE, DANIEL & MARY	614	121	493
SCOGGINS, JERRY	922	105	817
SILVER VALLEY RANCH, INC	455	109	346
SMITH, WILLIAM E	153	19	134
SUNDOWN LAKES, INC	1,109	168	941
TAPIE, RAYMOND & MURIEL	108	18	90
THAYER, SHARON	159	58	101
WET SET, INC	441	129	312
WLSR INC	678	133	545

EXHIBIT B
TABLE B-2
TABLE SHOWING TOTAL WATER PRODUCTION
FOR AQUACULTURE AND RECREATIONAL LAKE PURPOSES
BAJA SUBAREA

PRODUCER	TOTAL WATER ¹ PRODUCTION	BASE ANNUAL ² PRODUCTION	RECIRCULATED ³ WATER
(ACRE-FEET)			
BAJA SUBAREA TOTALS =	23,426	4,310	19,116

- 1 Total Water Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records; James C. Hanson site inspection; land use estimates from 1989 aerial photography; responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.
- 2 Base Annual Production as shown on Table B-1.
- 3 Amount shown is the difference between the Total Water Production and the Base Annual Production.

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EXHIBIT C

ENGINEERING APPENDIX

CONTENTS

- A. ADJUSTMENT OF FREE PRODUCTION ALLOWANCES
- B. DETERMINATION OF SURFACE FLOW COMPONENTS

TABLE C-1: MOJAVE BASIN AREA ADJUDICATION SUBAREA HYDROLOGICAL INVENTORY BASED ON LONG-TERM AVERAGE NATURAL WATER SUPPLY AND OUTFLOW AND CURRENT YEAR IMPORTS AND CONSUMPTIVE USE

1 total measured surface flow at Lower Narrows was Storm Flow and
2 what portion was Base Flow.

3 The Parties in reaching the physical solution provided for in
4 the Judgment, used certain procedures to separate the Storm Flow
5 and Base Flow components of the total measured surface flow at
6 Lower Narrows. Hydrographs of the mean daily discharge at Lower
7 Narrows were plotted for the Year under consideration together with
8 corresponding rainfall data obtained from the National Oceanic and
9 Atmospheric Administration (NOAA) for Lake Arrowhead. Hydrographs
10 were also plotted for the combined flow of West Fork Mojave River
11 and Deep Creek which together with the Lake Arrowhead precipitation
12 data served as a guide for interpreting those periods during which
13 Storm Flow was likely to have occurred at Lower Narrows.

14 Other factors considered included:

15 * Occurrences of Storm Flow at Barstow and Afton Canyon,
16 * Precipitation at Victorville and Barstow,
17 * Consideration of the time of Year and temperature, &
18 * Shape of hydrographs for Years having similar Base Flow
19 characteristics.

20 Based on interpretation of all of the foregoing information,
21 the flows occurring on those days during which Storm Flow most
22 likely occurred were "scalped" by projecting an estimated Base Flow
23 Curve through the Storm Flow Period. The Base Flow component of
24 the total monthly flow was then determined as follows:

25 a. For those periods during which there was obviously no
26 Storm Flow, the entire recorded mean daily flows were assumed to be
27 Base Flow.
28

1 b. For the remaining Storm Flow periods, the Base Flow
2 component was taken as the area under the Base Flow Curve, except
3 that for those days within the Storm Flow period when the actual
4 mean daily discharge is less than the amount indicated by the Base
5 Flow Scalping Curves, then the actual recorded amount is used.

6 2. Determination of Surface Flow Components at Waterman
7 Fault. The total amount of surface flow passing the Waterman Fault
8 (under current riverbed conditions) is considered to be Storm Flow
9 and can be estimated from the Storm Flow passing the USGS gauging
10 station Mojave River at Barstow. The following table was developed
11 to provide a method for estimating flow at Waterman Fault:

12	Storm Flow At Barstow Gage ¹ 13 <u>(Acre-Feet)</u>	Estimated Surface Flow at Waterman Fault 14 <u>(Acre-Feet)</u>
14	2,000	0
15	10,000	6,200
16	20,000	14,300
17	30,000	22,600
18	40,000	31,400
19	50,000	40,500
20	60,000	49,200
21	70,000	58,400
22	80,000	67,800
23	90,000	76,800
24	100,000	85,400

25
26
27 ¹From Recorded Flow at USGS Gaging Station Mojave River at
28 Barstow. Relationship is based on single storm events. More than
one storm event separated by more than five day of zero flow will
be considered as separate storms.

1 3. Determination of Surface Flow Components at Afton.

2 Records available for the discharge of the Mojave River at Afton,
3 California, provide data on the total amount of surface flow and
4 since storm runoff occurs during and immediately following a major
5 storm event in the watershed area tributary to the Baja Basin below
6 Barstow or in the event of large Storm Flows at Barstow which reach
7 Afton, it was necessary to determine what portion of the total
8 measured surface flow at Afton is Storm Flow and what portion of
9 Base Flow.

10 The Parties, in reaching the physical solution provided for in
11 the Judgment, used certain procedures to separate the Storm Flow
12 and Base Flow components of the total measured surface flow at
13 Afton. Hydrographs of the mean daily discharge at Afton were
14 plotted for the water Year under consideration. In the absence of
15 Storm Flow, the Base Flow curve at Afton was generally a relatively
16 constant amount. Storm Flows were evidenced by sharp spikes or
17 abrupt departures from the antecedent Base Flow and a fairly rapid
18 return to pre-storm Base Flow Condition. The hydrograph of flows
19 at Barstow served as a guide for identifying those periods during
20 which Storm Flow was likely to have occurred at Afton.

21 Based on interpretation of all of the foregoing information,
22 the flows occurring on those days during which Storm Flow most
23 likely occurred were "scalped" by projecting an estimated Base Flow
24 Curve through the Storm Flow Period. The Base Flow component of
25 the total monthly flow was then determined as follows:

26 a. For those periods during which there is obviously no
27 Storm Flow, the entire recorded mean daily flows were assumed to be
28 Base Flow.

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b. For the remaining Storm Flow periods, the Base Flow component was taken as the area under the Base Flow Curve except that for those days within the Storm Flow period when the actual mean daily discharge was less than the amount indicated by the Base Flow Scalping Curves, then the actual recorded amount was used.

4. Engineers' Work Papers. These procedures are reflected in the Work Papers of the Engineers, copies of which are filed with the Watermaster.

TABLE C-1
Mojave Basin Area Adjudication
Subarea Hydrological Inventory Based On
Long-Term Average Natural Water Supply and Outflow
and Current Year Imports and Consumptive Use
(All Amounts in Acre-Feet)

WATER SUPPLY	Este	Oeste	Alto	Centro	Baja	Basin Totals
Surface Water Inflow						
Gaged	0	0	65,000	0	0	65,000 ¹
Ungaged	1,700	1,500	3,000	37,300 ¹	14,300 ²	6,500 ³
Subsurface Inflow	0	0	1,000	2,000	1,200	0 ⁴
Deep Percolation of Precipitation	0	0	3,500	0	100	3,600
Imports						
Lake Arrowhead CSD	0	0	1,500	0	0	1,500
Big Bear ARWWA	2,000	0	0	0	0	2,000
TOTAL	3,700	1,500	74,000	39,300	15,600	78,600
CONSUMPTIVE USE AND OUTFLOW						
Surface Water Outflow						
Gaged	0	0	0	0	8,200	8,200
Ungaged	0	0	37,300 ¹	14,000 ⁵	0	0
Subsurface Outflow	200	800	2,000	1,200	0	0
Consumptive Use						
Agriculture	6,800	2,900	16,300	20,300	30,200	76,500
Urban	1,900	1,200	36,300	9,500	9,700	58,600 ⁶
Phreatophytes	0	0	5,100	900	1,500	7,500
Exports	0	0	0	0	0	0
TOTAL	8,900	4,900	97,000	45,900	49,600	150,800
Surplus / (Deficit)	(5,200)	(3,400)	(23,000)	(6,600)	(34,000)	(72,200)
Total Estimated Production (Current Year) ⁷	15,700	7,600	98,900	46,500	54,300	223,000
PRODUCTION SAFE YIELD (Current Year)⁷	10,500	4,200	75,900	39,900	20,300	150,800

¹ Estimated from reported flows at USGS gaging station, Mojave River at Victorville Narrows.

² Includes 14,000 acre-feet of Mojave River surface flow across the Waterman Fault estimated from reported flows at USGS gaging station, Mojave River at Barstow, and 300 acre-feet of local surface inflow from Kane Wash.

³ Represents the sum of Este (1,700 af), Oeste (1,500 af), Alto (3,000 af) and Baja (300 af from Kane Wash).

⁴ Inter subarea subsurface flows do not accrue to the total basin water supply.

⁵ Estimated from reported flows at USGS gaging station, Mojave River at Barstow.

⁶ Estimated by Bookman-Edmonston.

⁷ For purposes of this Table, the current year is 1990.

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EXHIBIT D

TIME SCHEDULES

1 Production Allowance, Watermaster shall notify all Parties as to
2 its recommendation not later than February 1, shall hold a public
3 hearing thereon not later than March 1, and shall submit any such
4 recommendation, which may be revised pursuant to the public
5 hearing, to the Court not later than April 1.

6 5. Payment of Administrative Assessments and Biological
7 Resource Assessments. Each Producer shall submit quarterly along
8 with the Production report required by Paragraph 24 (p) an
9 Administrative Assessment payment in an amount equal to the current
10 Year Administrative Assessment Rate multiplied times the acre-feet
11 of water Produced during the quarter and a Biological Resource
12 Assessment payment in an amount equal to the current Year
13 Biological Resource Assessment Rate multiplied times the acre-feet
14 of water Produced during the quarter.

15 6. Payment of Replacement Water Assessments and Makeup Water
16 Assessments. Replacement Water Assessments and Makeup Water
17 Assessments for the prior Year shall be due and payable on July 1.

18 7. Delinquency of Assessments. Any assessment payable
19 pursuant to this Judgment shall be deemed delinquent: i) if paid in
20 Person, if not paid within five (5) days of the date due; ii) if
21 paid by electronic funds transfer, if not paid within three (3)
22 banking days of the date due; or iii) if paid by any other means,
23 if not paid within ten (10) days of the date due. "Payment" shall
24 occur when good and sufficient funds have been received by the
25 Watermaster. Any assessment shall also be deemed delinquent in the
26 event that any attempted payment is by funds that are not good and
27 sufficient.

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EXHIBIT E

LIST OF PRODUCERS AND THEIR DESIGNEES

EXHIBIT E

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JESS RANCH WATER COMPANY
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JOHNSON, RONALD
JOHNSTON, HARRIET AND LARRY W
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Jim Anders
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PRODUCER

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KIM, JOON HO	Same
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EXHIBIT F
TRANSFERS OF BASE ANNUAL PRODUCTION RIGHTS.

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EXHIBIT F
TRANSFERS OF
BASE ANNUAL PRODUCTION RIGHTS

1. Transferability. Any Base Annual Production Right, including any Carryover Right (Right) or any portion thereof may be sold, assigned, transferred, licensed or leased subject to the rules set forth in this Exhibit "F".

2. Consumptive Use Adjustments. A transferred Right shall be adjusted so as not to cause an increased Consumptive Use of water. For either inter Subarea or intra Subarea transfers, if the transferee's Consumptive Use of water Produced under the transferred Right would be at a higher rate than that of transferor, the transferred Right shall be reduced by Watermaster to a level that equalizes the Consumptive Use to that of transferor. Any such adjustments by Watermaster shall be made using the following Consumptive Use rates. If a transfer would cause the same or a decreased Consumptive Use, no adjustment shall be made.

Type of Water Use	Consumptive Use Rate
Municipal	50%
Irrigation	50%
Industrial	case by case
Lakes or Aquaculture	surface acres x 7 ft.

For mixed or sequential uses of water excluding direct reuse of municipal wastewater, the total acre-feet of Consumptive Use shall be the sum of Consumptive Uses for each use.

1 3. Notice to Watermaster. No transfer shall become operable
2 until the Parties to the transfer have jointly notified Watermaster
3 of the terms and conditions of the transfer, the price to be paid
4 by the transferee, the name of the Responsible Party and the name
5 of the Person who will pay any applicable Assessments. Intra-
6 Subarea transfers shall not require Watermaster authorization after
7 giving notice. No inter-Subarea transfer shall become operable
8 until authorized by Watermaster after giving notice. Watermaster
9 shall authorize such transfers in the order of the date of notice,
10 provided that funds are available as set forth in Paragraph 4 of
11 this Exhibit "F".

12 4. Inter Subarea Transfers of Rights. A Party's Right in a
13 (Source) Subarea may be transferred (by lease only) to a Party in
14 another (Use) Subarea provided that in any Year the resulting
15 unconsumed water in the Source Subarea due to all such transfers
16 shall not be greater than the Replacement Water requirement of the
17 Source Subarea in the preceding Year. Watermaster shall replace
18 the resulting Consumptive Use in the Use Subarea that is
19 attributable to the transfer, utilizing Replacement Water
20 Assessments from the Source Subarea.

21 5. Transfers to Meet Replacement Water or Makeup Water
22 Obligations. Watermaster may use Assessment proceeds to purchase
23 or lease Rights in a Subarea in order to obtain water to meet an
24 Obligation. The water so obtained shall be equal to the
25 Consumptive Use portion of the transferred and unproduced Rights.
26 No such purchases of leases of Rights in the Harper Lake Basin may
27 be used to satisfy Obligations in other parts of the Centro
28 Subarea.

1 6. Inter Subarea Transfers of Water. Water Produced in one
2 (source) Subarea and exported to another Subarea for use or
3 disposal shall bear a Replacement Water Obligation equal to the sum
4 of the Production in excess of the Producer's share of the Free
5 Production Allowance in the source Subarea plus the amount of water
6 exported that would normally have been returned to the source
7 Subarea. Such exported water shall be credited to the appropriate
8 Subarea Obligation unless it has been purchased or leased as
9 Replacement Water pursuant to a transfer agreement.

10 7. Verde Ranch Producers. Together the Spring Valley Lake
11 Country Club ("the Country Club"), the Spring Valley Lake
12 Association ("the Association"), the California Department of Fish
13 and Game (DFG) Mojave Narrows Regional Park ("the Park") the Kemper
14 Campbell Ranch ("the Ranch") comprise a group herein called the
15 Verde Ranch Producers. Each Verde Ranch Producer has the ability
16 physically both to Produce Groundwater and to Produce water that
17 originated as tailwater flowing from the DFG Mojave River Fish
18 Hatchery. DFG Producer Groundwater to supply the Hatchery, and
19 Hatchery tailwater can be discharged in part or entirely to the
20 Mojave River or in part or entirely to a lined channel that conveys
21 tailwater to points where the Verde Ranch Producers can Produce it.
22 The present flow regimen is as follows: Hatchery Production flows
23 through the Hatchery and is then discharged to the River and/or the
24 lined channel. Water discharged to the lined channel flows to a
25 Country Club lake. The Country Club Produces Groundwater that is
26 discharged to the Country Club lake. The Country Club property is
27 irrigated by pumping from the Country Club lake. Water overflowing
28 from the Country Club lake flows through a lined channel and

1 through other Country Club lakes, and finally is discharged to
2 Spring Valley Lake. The Association Produces Groundwater that is
3 discharged to Spring Valley Lake. Water overflowing from Spring
4 Valley Lake flows to lakes in the Park. The Park Produces
5 Groundwater that is discharged to the lakes in the Park. The Park
6 also Produces Groundwater that is used directly for irrigation of
7 the Park. The Park is also irrigated by pumping from the lakes in
8 the Park. Water overflowing from the lakes in the Park is
9 discharged to the Mojave River. Some water from the lakes in the
10 Park also flows to a lake on the Ranch. The Ranch also Produces
11 Groundwater. The Ranch is irrigated from the lake on the Ranch.
12 No water flows on the surface from the Ranch property to the Mojave
13 River.

14 In order to continue the present arrangements among the
15 Hatchery and the Verde Ranch Producers while assuring that they
16 participate fairly in the Physical Solution the following rules
17 shall apply:

18 a. Total Production by the Country Club will be
19 calculated as the sum of Country Club Groundwater Production plus
20 inflow of Hatchery tailwater minus outflow to Spring Valley Lake.
21 The Country Club shall monitor and report to Watermaster the
22 amounts of such Groundwater Production, inflow and outflow.

23 b. Total Production by the Association will be
24 calculated as the sum of Association Groundwater Production plus
25 inflow from the Country Club minus outflow to the Park. The
26 Association shall monitor and report to Watermaster the amounts of
27 such Groundwater Production, inflow and outflow.

28

1 c. Total Production by the Park will be calculated as
2 the sum of Park Groundwater Production plus inflow from the
3 Association minus outflow to the Ranch minus outflow to the Mojave
4 River. The Park shall monitor and report to Watermaster as to such
5 Groundwater Production, inflow and outflows.

6 d. Total Production by the Ranch will be calculated as
7 the sum of Ranch Groundwater Production plus inflow from the Park.
8 The Ranch shall monitor and report to Watermaster the amounts of
9 such Groundwater Production and inflow.

10 e. Hatchery Production up to 10,678 acre-feet per Year
11 will be permitted free of any Assessments against the Hatchery.
12 The Hatchery shall monitor and report to Watermaster its
13 Groundwater Production and the amounts of tailwater discharged to
14 the River and to the artificial channel. In any Year the Hatchery
15 may Produce more than 10,678 acre-feet free of any Assessments
16 against the Hatchery, provided such Production in excess of 10,678
17 acre-feet is reported as Groundwater Production by one or more of
18 the Verde Ranch Producers in the same Year pursuant to operating
19 agreements by and between the Hatchery and such Producer(s) filed
20 with the Watermaster. The operating agreement shall specify the
21 responsibility for payment of assessments. In the operating
22 agreement, the Verde Ranch Producers may elect to have assessments
23 be based on the aggregate Production of the Verde Ranch Producers,
24 and may freely transfer Base Annual Production Rights internally,
25 provided that the aggregate consumptive use of the Verde Ranch
26 Producers shall not be increased. In the absence of such operating
27 agreements, or if the operating agreements do not otherwise
28 allocate responsibility for payment of Assessments, the Hatchery

1 shall be liable for Administrative, Replacement Water and
2 Biological Resource Assessments on the amount of water Produced by
3 the Hatchery in excess of 10,678 acre-feet in any Year. In the
4 event that Verde Ranch Producer who is allocated responsibility for
5 payment of Assessments pursuant to an operating agreement is
6 delinquent in making any such payment, the Hatchery shall not be
7 liable therefor.

8 f. In any Year, if the total discharge to the River
9 from the Hatchery and the Verde Ranch Producers exceeds the
10 Groundwater Production by the Hatchery, such excess discharge shall
11 be subject to Administrative, Replacement Water and, except for the
12 Park, Biological Resource Assessments. Such Assessments shall be
13 levied against individual Verde Ranch Producers in proportion to
14 the extent that outflow from each Producer exceeds inflow to that
15 Producer.

16 g. The Hatchery and the Verde Ranch Producers shall
17 install all stage recorders, meters or other measuring devices
18 necessary to determine inflows, outflows and Production that they
19 are responsible for monitoring and reporting to Watermaster. Such
20 stage recorders, meters or other measuring devices shall be
21 installed, calibrated and operated in manner satisfactory to
22 Watermaster.

23 h. Any change in the flow regimen described above will
24 be subject to the same general rules set forth in this Paragraph 7.
25 Any such change shall be reported to Watermaster in advance.

26 8. Harper Lake Basin. No Producer in the Harper Lake Basin
27 may transfer any Base Annual Production Right or any portion
28 thereof to Producers outside of Harper Lake Basin except by

1 physically conveying the water in compliance with the rules set
2 forth in this Exhibit "F".

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EXHIBIT G

SUBAREA OBLIGATIONS

1 e. Alto Subarea Producers--an average Annual combined
2 Subsurface Flow and Base Flow of 23,000 acre-feet per Year to the
3 Transition Zone. For the purposes of Paragraph 6 of this Exhibit
4 G, the Subsurface Flow component shall be deemed to be 2,000 acre-
5 feet per Year. In any Year Alto Subarea Producers shall have an
6 obligation to provide to the Transition Zone a minimum combined
7 Subsurface Flow and Base Flow as follows:

8 i. If the accounting pursuant to Paragraph 5, below,
9 reflects a net cumulative credit at the beginning of the Year,
10 the combined minimum flow obligation shall be 18,400 acre-feet
11 minus any net cumulative credit, but shall be not less than
12 15,000 acre-feet.

13 ii. If the accounting pursuant to Paragraph 5, below,
14 does not reflect a net cumulative credit at the beginning of
15 the Year, the combined minimum flow obligation shall be 18,400
16 acre-feet plus one-third of any net cumulative debit plus any
17 additional amount of water required to reduce the net
18 cumulative debit to 23,000 acre-feet.

19 2. Obligation for Transition Zone Replacement Water.

20 a. Until the Court approves Groundwater levels to be
21 established and maintained pursuant to Subparagraph 2b of this
22 Exhibit, Watermaster shall provide Replacement Water in the
23 Transition Zone equal to Production in the Transition Zone that is
24 in excess of the Transition Zone Producers' share of the Alto
25 Subarea Free Production Allowance for that Year. All such
26 Replacement Water shall be provided as soon as practicable during
27 the next ensuing Year.
28

1 b. As soon as is practicable, the MWA shall establish
2 key wells to be used to monitor Groundwater levels in the
3 Transition Zone and, subject to approval by the Court, Watermaster
4 shall establish minimum water levels to be maintained in the key
5 wells.

6 c. After water level elevations have been established
7 pursuant to Subparagraph 2b of this Exhibit, Watermaster shall
8 provide Replacement Water in the Transition Zone as necessary to
9 maintain the minimum water levels. Water purchased with
10 Replacement Water Assessments paid by Producers in the Transition
11 Zone in excess of the quantity of water needed to maintain said
12 water levels shall be provided elsewhere in the Alto Subarea.

13 3. Other Water. "Other Water" that may be credited to a
14 Subarea Obligation may include water conveyed and discharged across
15 a boundary or Free Production Allowance water that is not Produced.
16 Water other than Base Flow, Subsurface Flow or Storm Flow that is
17 conveyed and discharged across a boundary between Subareas other
18 than pursuant to a transfer agreement, shall be credited or
19 debited, as appropriate, to the pertinent Subarea Obligation during
20 the Year in which it is so conveyed and discharged. Any portion of
21 the Subarea's Free Production Allowance that is allowed to remain
22 unproduced in a Subarea pursuant to transfer agreements in order to
23 satisfy a Subarea Obligation shall be credited to the pertinent
24 Subarea Obligation in accordance with the terms of the transfer
25 agreements.

26 4. Makeup Water. Assessments for Makeup Water shall be paid
27 in accordance with the time schedule set forth in Exhibit D.
28

1 Makeup Water shall be credited to the Subarea Obligation at the end
2 of the Year in which the Makeup Water Assessment is paid.

3 5. Accounting. Watermaster shall Annually not later than
4 February 1 cause to be prepared a report of the status of each
5 Subarea Obligation as of the end of the prior Year. The report
6 shall set forth at least the following information for each Subarea
7 Obligation:

8 a. The cumulative total of the average Annual Subarea
9 Obligations since the Judgment was entered as of the beginning of
10 the prior Year;

11 b. The cumulative total of all water credited to the
12 Subarea Obligation since the Judgment was entered as of the
13 beginning of the prior Year;

14 c. The net cumulative credit or debit [the difference
15 between (a) and (b)] as of the beginning of the prior Year;

16 d. The amounts of water credited to the Subarea
17 Obligation during the prior Year including, as appropriate, Base
18 Flow, Subsurface Flow, Other Water and Makeup Water;

19 e. The cumulative total of the average Annual Subarea
20 Obligations as of the end of the prior Year;

21 f. The cumulative total of all water credited to the
22 Subarea Obligation as of the end of the prior Year;

23 g. The net cumulative credit or debit as of the end of
24 the prior Year;

25 h. Any Makeup Water Obligation;

26 i. The Minimum Subarea Obligation for the current Year.

27 6. Subsurface Flow Assumptions. Some Subarea Obligations
28 are expressed as average Annual or minimum Annual Subsurface Flow.

1 In all cases the Subsurface Flow obligations have been established
2 initially at amounts equal to the estimated historical average
3 Subsurface Flow across Subarea boundaries. Not later than two
4 Years following entry of this Judgment MWA shall begin to install
5 monitoring wells to be used to obtain data to enable improved
6 estimates of Subsurface Flow at each Subarea boundary where there
7 is a Subsurface Flow obligation and to develop methodology for
8 future determinations of actual Subsurface Flow. Not later than
9 ten years following entry of this Judgment Watermaster shall
10 prepare a report setting forth the results of the monitoring
11 program and the future methodology. Following opportunity for
12 review of Watermaster's report by all Parties, Watermaster shall
13 prepare a recommendation to the Court as to the likely accuracy of
14 the estimated historical Subsurface Flows and any revision of
15 Subarea Obligations that may be indicated. Pending Watermaster's
16 report to the Court, Subsurface Flows shall be assumed to be equal
17 to the Subsurface Flow obligations for purposed of accounting for
18 compliance therewith.

19 7. Example Calculation. Table G-1 sets forth an example of
20 Subarea Obligation accounting procedures using hypothetical flows.
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TABLE G-1
 HYPOTHETICAL EXAMPLE
 ACCOUNTING FOR COMPLIANCE WITH SUBAREA OBLIGATIONS

OBLIGATION OF SUBAREA A TO SUBAREA B

AVERAGE ANNUAL: 23,000 AFA (21,000 AFA BASEFLOW + 2,000 AFA SUBSURFACE FLOW)

MINIMUM ANNUAL: 18,400 AFA + 1/3 OF ANY NET CUMULATIVE DEBIT; OR 18,400 AFA - ANY NET CUMULATIVE CREDIT, BUT NOT LESS THAN 15,000 AFA

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF
STATUS AT BEGINNING OF YEAR										
CUMULATIVE OBLIGATION	0	23,000	46,000	69,000	92,000	115,000	138,000	161,000	184,000	207,000
CUMULATIVE FLOW	0	17,000	32,600	50,000	69,067	87,067	107,111	139,978	168,378	198,978
NET CUMULATIVE CREDIT (DEBIT)										
	0	(6,000)	(13,400)	(18,200)	(22,933)	(27,933)	(30,889)	(21,022)	(15,622)	(8,022)
FLOW DURING THE YEAR (HYPOTHETICAL)										
BASE FLOW	8,000	5,000	4,000	4,000	2,000	2,000	15,000	18,000	20,000	23,000
SUBSURFACE FLOW	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
OTHER WATER	7,000	7,200	7,400	7,600	7800	8,000	8,200	8,400	8,600	8800
MAKEUP WATER PURCHASED	0	1,400	4,800	4,667	6,200	8,044	7,667	0	0	0
TOTAL FLOW										
	17,000	15,600	18,200	18,267	18,000	20,044	32,867	28,400	30,600	33,800
MINIMUM OBLIGATION DURING THE YEAR										
	18,400	20,400	22,867	24,467	26,044	27,711	28,696	25,407	23,607	21,074
MAKEUP OBLIGATION INCURRED										
	1,400	4,800	4,667	6,200	8,044	7,667	0	0	0	0
STATUS AT END OF YEAR										
CUMULATIVE OBLIGATION	23,000	46,000	69,000	92,000	115,000	138,000	161,000	184,000	207,000	230,000
CUMULATIVE FLOW	17,000	32,600	50,000	69,067	87,067	107,111	139,978	168,378	198,978	232,778
NET CUMULATIVE CREDIT (DEBIT)										
	(6,000)	(13,400)	(18,200)	(22,933)	(27,933)	(30,889)	(21,022)	(15,622)	(8,022)	2,778
FOLLOWING YEAR MINIMUM OBLIGATION										
18,400 + 1/3 OF NET CUM. DEBIT	20,400	22,867	24,467	26,044	27,711	28,696	25,407	23,607	21,074	0
ADDITIONAL TO REDUCE DEBIT TO 23,000	0	0	0	0	0	0	0	0	0	0
18,400 - CUM. CREDIT, BUT NOT 15,000	0	0	0	0	0	0	0	0	0	15,622
MINIMUM OBLIGATION										
	20,400	22,867	24,467	26,044	27,711	28,696	25,407	23,607	21,074	15,622

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EXHIBIT H

BIOLOGICAL RESOURCE MITIGATION

1 Allowance, shall compare the Free Production Allowance with the
2 estimated Production Safe Yield. In the event the Free Production
3 Allowance exceeds the estimated Production Safe Yield by five
4 percent or more, Watermaster shall recommend a reduction of the
5 Free Production Allowance equal to a full five percent of the
6 aggregate Subarea Base Annual Production. In considering whether
7 to increase or decrease the Free Production Allowance in a Subarea,
8 Watermaster shall, among other factors, take into consideration for
9 the areas shown on Figure H-1 the Consumptive Use of water by
10 riparian habitat, the protection of public trust resources,
11 including the species listed in Table H-1 and the riparian habitat
12 areas shown on Figure H-1, and whether an increase would be
13 detrimental to the protection of public trust resources.

14 b. If, pursuant to Paragraph 27, Watermaster buys or
15 leases Free Production Allowance in the Baja Subarea below the
16 Calico-Newberry Fault to satisfy the need for Replacement Water,
17 priority shall be given to purchases or leases that will result in
18 reducing Production in or near the area described in Subparagraph
19 1(c) of this Exhibit.

20 c. Pursuant to Paragraph 2 of Exhibit "G", Watermaster
21 shall purchase Replacement Water to maintain Groundwater levels in
22 the Transition Zone.

23 3. Additional Protection Pursuant to Trust Fund Established
24 by Watermaster Using the Proceeds of Biological Resource
25 Assessments.

26 a. Watermaster shall establish a Biological Resources
27 Trust Fund account for the benefit of the riparian habitat areas
28 shown on Figure H-1 and the species listed on Table H-1. To

1 establish and maintain the Trust Fund Watermaster shall levy
2 against each acre-foot of Production within the Basin Area, other
3 than Production by the California Department of Fish and Game
4 (DFG), a Biological Resource Assessment of fifty cents (\$0.50)
5 (1993 dollars) to be collected at the same time and in the same
6 manner as the Administrative Assessment, except that no Biological
7 Resources Assessment shall be levied whenever the Trust Fund
8 account balance exceeds \$1,000,000 (1993 dollars).

9 b. Watermaster shall make funds held in the Biological
10 Resources Trust Fund available to DFG only in the event that
11 Groundwater levels are not maintained as set forth in Table H-2.
12 Watermaster shall take action to acknowledge any proposed
13 expenditure from the Biological Resources Trust Fund by DFG. Such
14 Watermaster action shall be subject to the review procedures set
15 forth in Paragraph 36 of the Judgment, provided that any motion
16 made pursuant thereto and any Court disapproval of such Watermaster
17 action and proposed DFG expenditure may be based only: 1) on the
18 ground that the Groundwater levels set forth in Table H-2 are being
19 maintained; and/or 2) the ground that the proposed expenditure is
20 not for any of the purposes set forth in Subparagraphs 3.b.(i),
21 (ii), or (iii) below in this Exhibit. The Biological Resources
22 Trust Fund may be used only for the following purposes and only in
23 the three areas identified on Figure H-1:

24 i. not to exceed \$100,000 for the preparation by DFG of
25 a DFG habitat water supply management plan, which plan shall
26 include the water needs of the species listed in Table H-1 and
27 the riparian habitat areas shown on Figure H-1.
28

1 ii. the purchase or lease by DFG of Supplemental Water
2 or the lease or purchase of DFG of Base Annual Production
3 Rights to be used to meet riparian habitat water needs of the
4 species listed in Table H-1 and the riparian habitat areas
5 shown on Figure H-1.

6 iii. the construction, repair and replacement of wells or
7 other facilities identified in the plan prepared pursuant to
8 Subparagraph (i), above, and/or any other measures necessary
9 to implement the plan.

10 DFG shall not prepare or make any expenditure from the trust fund
11 for the payment of administrative overhead or staff of DFG.

12 4. DFG agrees that absent substantial changed circumstances,
13 DFG shall not seek to modify the provisions of this Judgment in any
14 way to add to or change the above-stated measures to protect the
15 referenced species or habitat. Nothing stated in this Judgment or
16 in this Exhibit "H" is intended nor shall be deemed to relieve any
17 Party hereto from any obligation or obligations not specifically
18 referenced in this Exhibit H. Nothing in this Judgment or in this
19 Exhibit H is intended or shall be construed to be a waiver by the
20 State or any of its departments or agencies, including DFG, of its
21 rights and obligations under the common law, the public trust
22 doctrine, the constitution, statutes and regulations to preserve,
23 protect or enhance the natural resources of the State including
24 rare, threatened or endangered species or species of concern.

TABLE H-1

LIST OF SPECIES
(CONT'D)

SPECIES	ALTO			CENTRO		BAJA		
	Forks Dam to Upper Narrows	Upper Narrows to Lower Narrows	Lower Narrows to Helendale	Helendale to Hodge	Hodge to Barstow	Barstow to Harvard Road	Harvard Road to Mannix Wash	Afton Canyon
Yellow Warbler	9							
Yellow-breasted Chat	8	8			8	8		
Summer Tanager	8	8						8
Pale Big Eared Bat	8							
Mohave Ground Squirrel	4, 6		4, 6	4, 6				
Mohave Vole			6	6				
Nelson's Bighorn Sheep					10	10		10
TOTAL NUMBER OF SPECIES = 30								
TOTAL NUMBER OF SPECIES IN EACH AREA:	25	11	7	8	7	8	3	5

- 1 = Federally Endangered
- 2 = Federally Threatened
- 3 = State Endangered
- 4 = State Threatened
- 5 = Federal Category: 1
- 6 = Federal Category: 2
- 7 = Federal Category: 3b
- 8 = State: Special Concern
- 9 = State: Sensitive
- 10 = State: Fully Protected

TABLE H-2

**RIPARIAN HABITAT MONITORING WELL
WATER LEVEL CRITERIA**

ZONE	WELL NUMBER	MAXIMUM DEPTH BELOW GROUND
Victorville/Alto	H1-1	Seven (7) Feet
Victorville/Alto	H1-2	Seven (7) Feet
Lower Narrows/Transition	H2-1	Ten (10) Feet
Harvard/Eastern Baja Riparian Forest Habitat	H3-1	Seven (7) Feet
Harvard/Eastern Baja Surface Water Habitat	H3-2	Plus One (1) Foot (1705 Ft msl)*

- * Surface Water Habitat water surface elevation of 1705 ft. msl is approximate pending ground elevation survey.

FIGURE H-1 VICTORVILLE - ALTO RIPARIAN ZONE

LEGEND



Water Table Monitoring well

H-2



Riparian Forest Habitat Area

SCALE



FIGURE H-1: LOWER NARROWS TRANSITION RIPARIAN ZONE

LEGEND



Water Table Monitoring well

H1-1



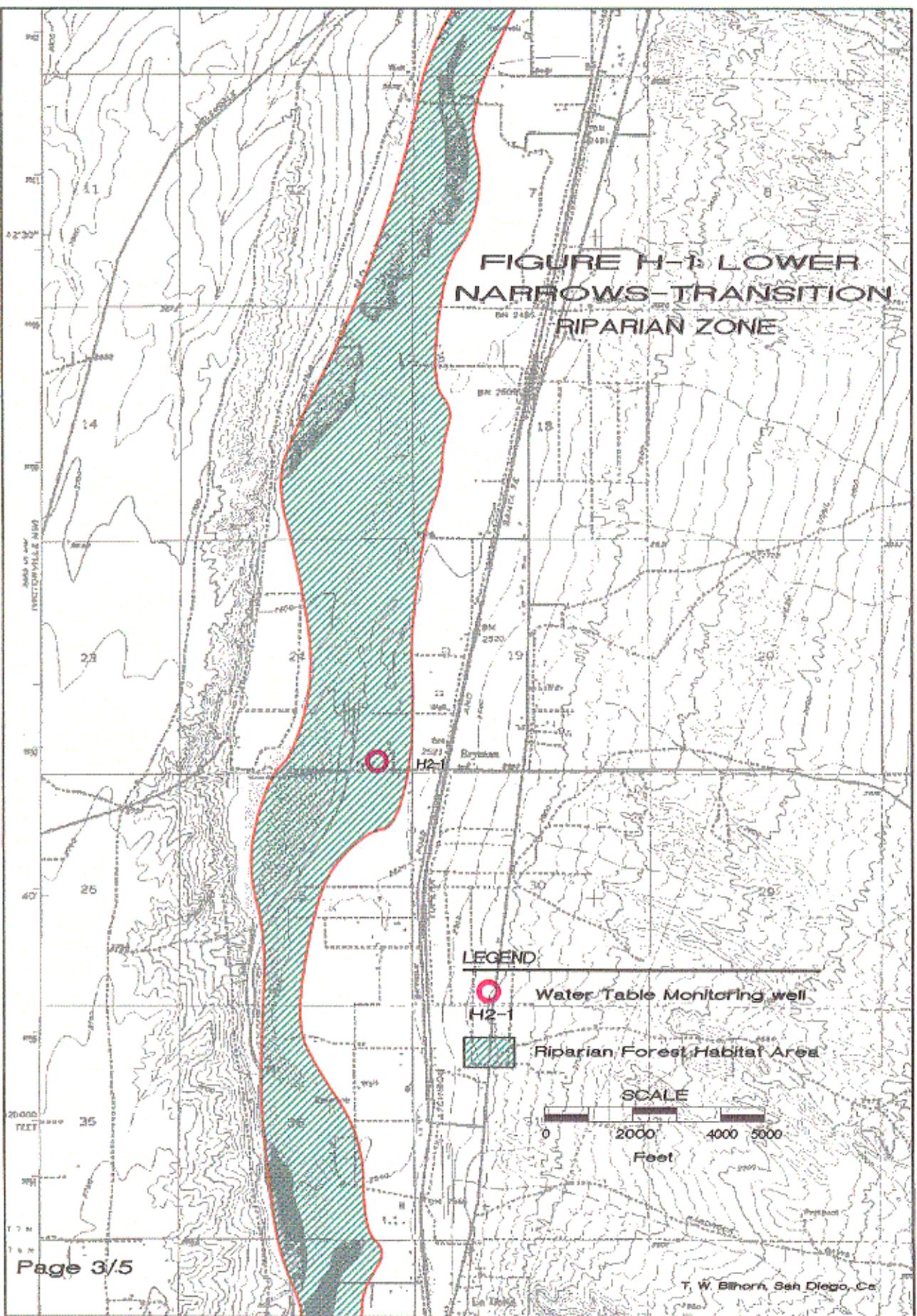
Riparian Forest Habitat Area

SCALE



Feet

**FIGURE H-1: LOWER
NARROWS-TRANSITION
RIPARIAN ZONE**



LEGEND

-  Water Table Monitoring well
H2-1
-  Riparian Forest Habitat Area

SCALE



FIGURE HI TRANSITION RIPARIAN ZONE

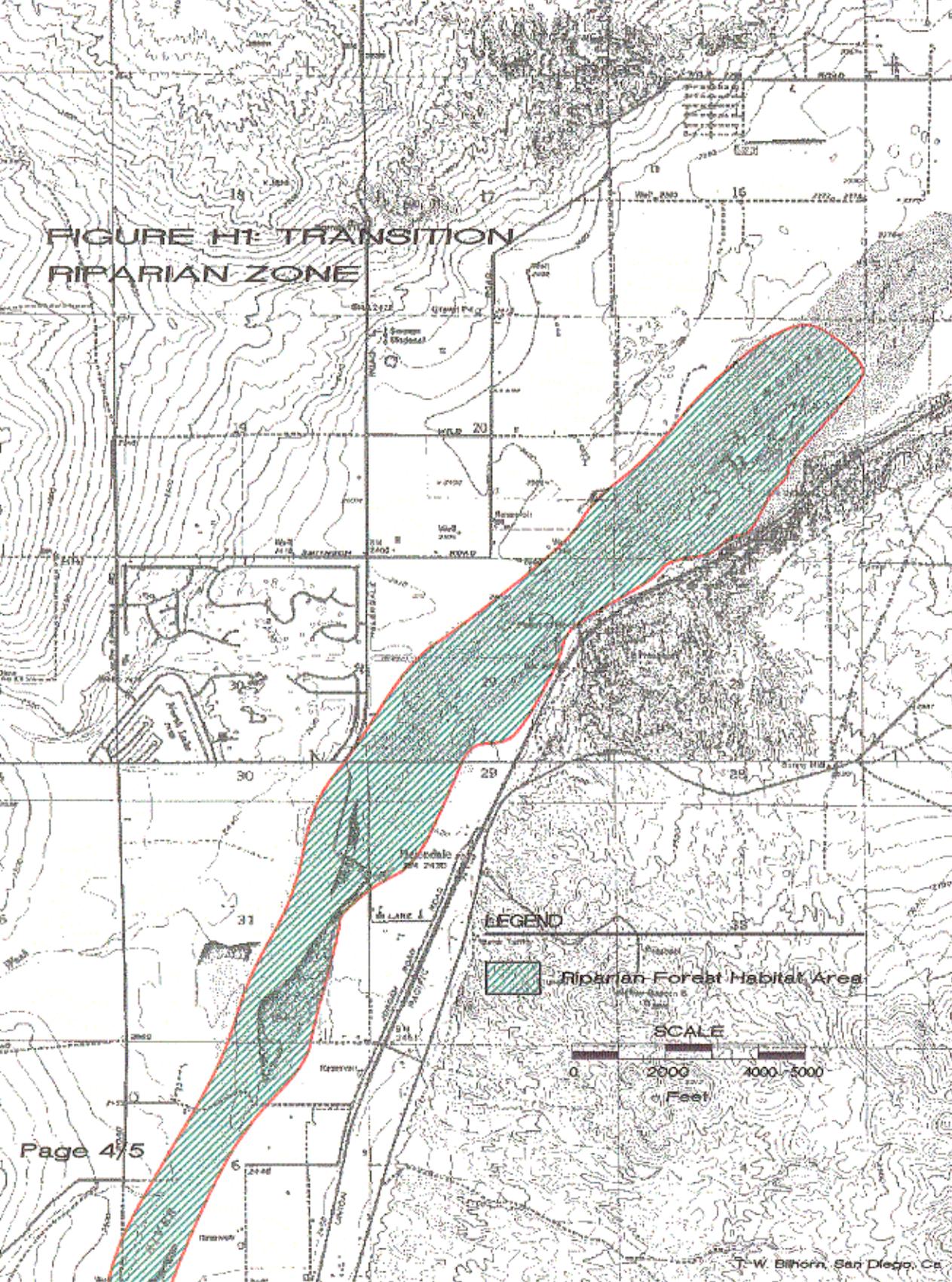
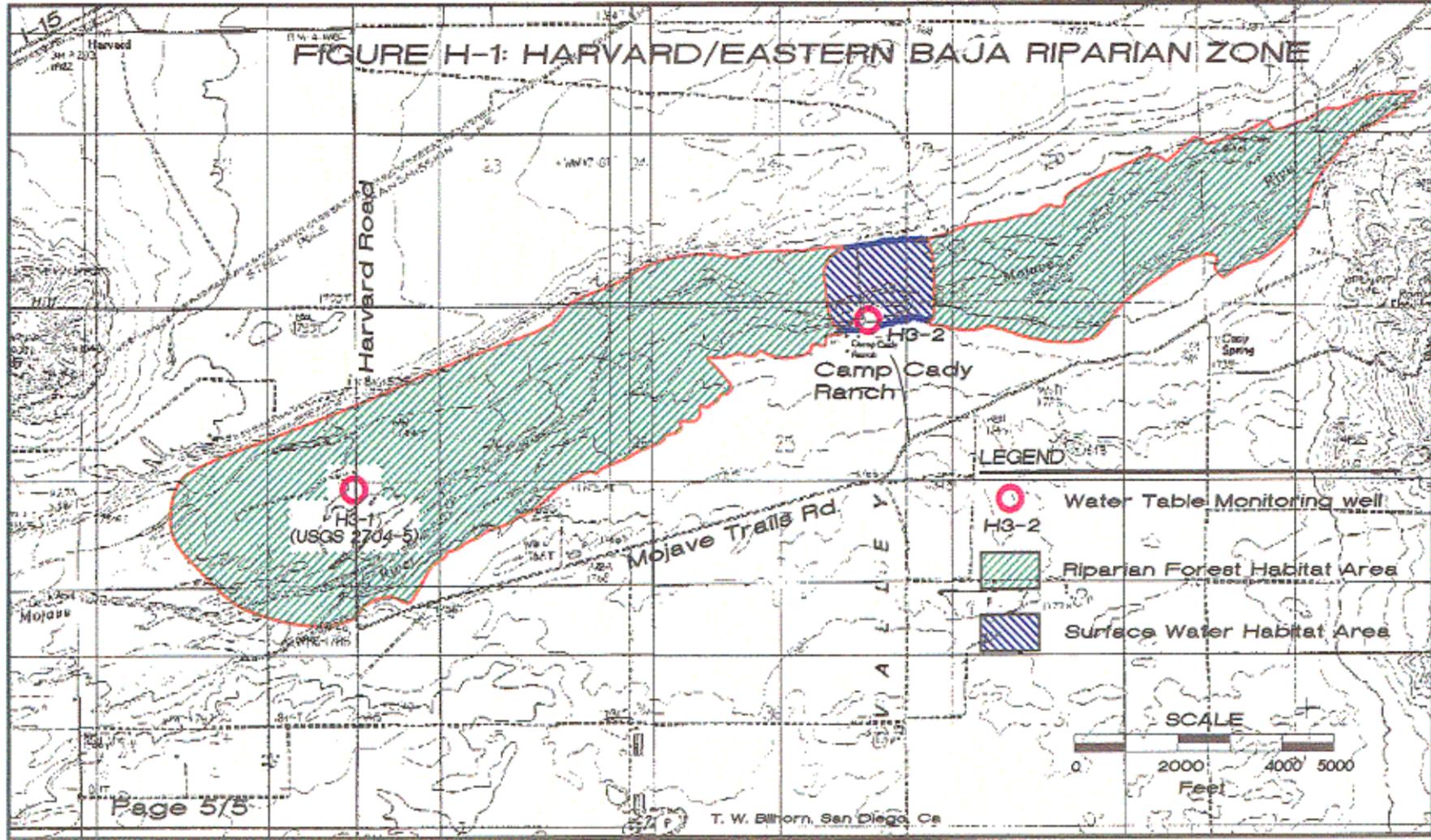


FIGURE H-1: HARVARD/EASTERN BAJA RIPARIAN ZONE



LEGEND

- STATE BOUNDARY
- COUNTY BOUNDARY
- DISTRICT BOUNDARY
- WATER RIGHT
- POTENTIAL RECHARGE AREA

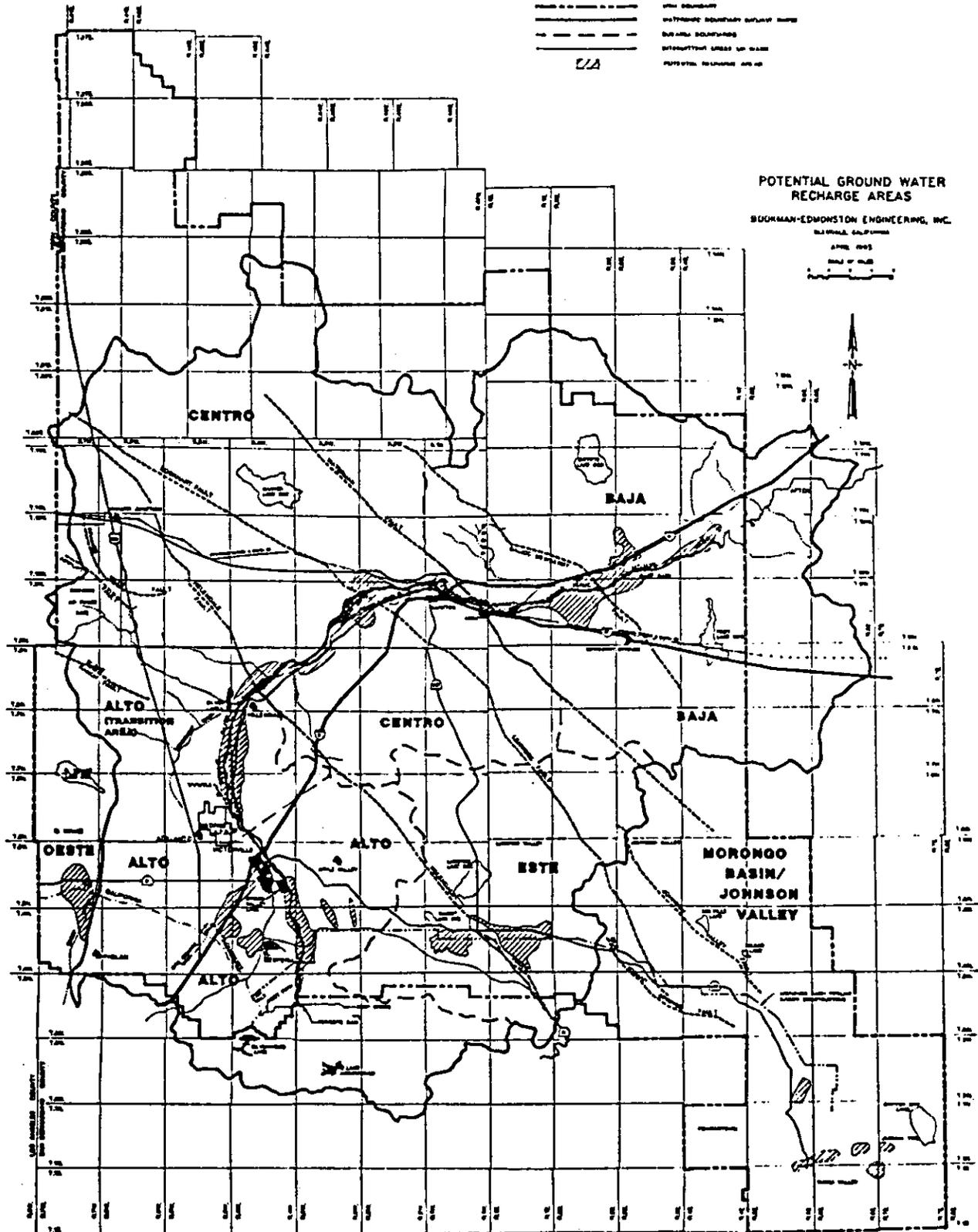
POTENTIAL GROUND WATER RECHARGE AREAS

BOOKMAN-EDMONSTON ENGINEERING, INC.

NATIONAL CAPITAL

APRIL 1995

SCALE OF 1:50,000



MOJAVE WATER AGENCY

REGIONAL WATER MANAGEMENT PLAN

Appendix D

**San Bernardino County Ordinance No. SD 90-11
Establishing Water Conservation Measures**

ORDINANCE NO. SD 90-11

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACTING IN ITS CAPACITY AS THE GOVERNING BODY OF NAMED COUNTY SERVICE AREAS AND IMPROVEMENT ZONES THEREOF, ESTABLISHING WATER CONSERVATION MEASURES

The Board of Supervisors of the County of San Bernardino, State of California, acting in its capacity as the governing body of the county service areas and improvement zones named in Section 1 (a) of this ordinance, ordains as follows:

SECTION 1. The Board of Supervisors of the County of San Bernardino hereby finds and determines:

(a) That from and after the effective date of this ordinance, it shall be in full force and effect within the following county service areas and improvement zones:

- County Service Area 42
- County Service Area 64
- County Service Area 70
- Improvement Zone C
- Improvement Zone F
- Improvement Zone G
- Improvement Zone J
- Improvement Zone L
- Improvement Zone W-1
- Improvement Zone W-3
- Improvement Zone W-4

(b) That a drought condition has existed within the above-named county service areas and improvement zones ("Districts", or individually, the "District") during the past four years and such condition poses a substantial, current threat to the water supply within these areas;

(c) That it is necessary to preserve the water supply for the greatest public benefit within these Districts;

(d) That in order to preserve the health and safety of the people within these Districts, water conservation measures are necessary;

(e) That all water users in these Districts shall be subject to the water conservation measures and related provisions established herein;

(f) That in order to conserve the water supply for the greatest public benefit, with particular regard to domestic use, sanitation and fire protection of consumers, it is necessary to restrict the use of water within each District's service area.

SECTION 2. In order to conserve the water supply within these Districts and pursuant to Water Code Sections 375-377, the following water conservation measures are hereby established:

(a) Lawns, trees, shrubs, and other landscaping shall not be excessively watered at any time, and water shall not be permitted to run off private property onto streets or adjacent lands.

(b) Sidewalks, walkways, driveways, parking areas, patios, porches or verandas shall not be washed off with hoses. The exception to this shall be flammable or other similar dangerous substances that require direct hose flushing.

(c) Watering, sprinkling, aerial watering or irrigating of any landscaped or vegetated areas, including lawns, trees, shrubs, grass, ground cover, plants, vine gardens, vegetables, flowers, or other landscaping shall not occur between the hours of 6:00 a.m. and 9:00 p.m. during the high use season (April 1 through October 31 of each year). In the low use season (November 1 through March 31), such watering shall not occur between the hours of 1:00 p.m. and 8:00 a.m. These restrictions shall not apply to hand-held hose or drip irrigation systems.

(d) Noncommercial washing of privately owned vehicles, trailers, motor homes, buses, boats and mobile homes is prohibited except from bucket and except that a hose equipped with a shut-off nozzle may be used for a quick rinse.

(e) Water shall not be used to clean, fill, operate or maintain levels in decorative fountains, unless such water is part of a recycling system.

(f) Water shall not be permitted to leak from any water line, faucet or other facility on any premises. Any leak shall be repaired in a timely manner.

(g) Restaurants or other public places where food is served shall not routinely provide glasses of drinking water to customers unless specifically requested.

(h) Water for construction purposes, including but not limited to debrushing of vacant land, compaction of fills and pads, trench backfill and other construction uses, shall be used in an efficient manner. The use of "rainbird" type sprinklers is not recommended between the hours of 6:00 a.m. and 6:00 p.m.

(i) The use of water for any purpose shall not result in flooding or runoff onto gutters, driveways, streets or adjacent lands.

(j) All new construction, including residential, commercial and industrial, shall be equipped with low flow toilets with a maximum tank size or flush capacity of 3 gallons, and showerheads with a maximum flow capacity of 2 gallons per minute.

(k) All new model homes and commercial and industrial development, when landscaped, shall include low water use, drought-tolerant or native plant material, and matched precipitation rate, low-gallage sprinkler heads, bubblers, drip irrigation and timing devices. Timing devices should include soil moisture sensors. Before any permit may be issued for new construction, the applicant shall submit a landscape plan for review and approval by the Director of San Bernardino County's Department of Land Management.

(l) Water used for cooling systems must be recycled to the extent possible.

(m) Evaporation resistant covers are required for all new swimming pools and hot tubs and are encouraged for existing pools. Safety covers required by this ordinance shall, at the time of purchase, installation and all subsequent maintenance, meet or exceed current standards and specifications for swimming pool, spa and hot tub covers adopted by the American Society for Testing and Materials (ASTM).

(n) Hotels/motels are required to post notices urging guests to conserve water.

(o) All current water customers are encouraged to install flow reducers and faucet aerators.

(p) Parks, golf courses, cemeteries, and school grounds which use water provided by the Districts, shall irrigate between the hours of 9:00 p.m. and 3:00 a.m.

SECTION 3. The following provisions shall pertain to the enforcement of this ordinance, violations of the measures established herein and the penalties for such violations:

(a) Violations unlawful. It is unlawful for any person within the District to violate the water conservation measures and provisions established in this ordinance and such violation shall be subject to the penalties hereinafter set forth and as may be otherwise provided by law.

(b) Violations. Any person found to be violating any provision of this ordinance or any rule or regulation of the District shall be served by the District with written notice stating the nature of the violation and providing a reasonable time limit for the correction thereof. Such notice may be personally served or may be given by certified mail. The person shall, within the time limit stated in the notice, cease all violations.

(c) Civil Enforcement. For second violations or continuing violations, as additional methods of civil enforcement of this ordinance, the District may install a flow restrictor device at the user's water meter or may disconnect the user from the District's water system, following notice of intent to disconnect. All costs of installing/removing the flow restrictor or of disconnection/reconnection shall be paid by the owner of the property.

(d) Suspension or Modification. When any person, by reason of special circumstances, believes that a suspension or modification of a provision of this ordinance is necessary to avoid substantial detriment to the person's property or facilities, that person may file a written application with the District Manager and with the Special Districts Department, stating the special circumstances, citing the provision involved and requesting suspension or modification of that provision. The Director of the Special Districts Department may suspend or modify the provision for a specified period of time or during the period of the special circumstances upon finding that the enforcement of the provision will cause substantial detriment to the person and that the suspension or modification of the provision will not unreasonably jeopardize the District's water supply.

(e) General Penalty. Pursuant to Water Code Section 377, any person violating any of the provisions of this ordinance and failing to correct such violation within the time provided shall be guilty of a misdemeanor. Such misdemeanor shall be punishable in accordance with the provisions of State law.

SECTION 4. This ordinance and the various parts, sentences, paragraphs, sections and clauses are hereby declared to be severable. If any such part, sentence, paragraph, section or clause is adjudged unconstitutional or invalid, the remainder of this ordinance shall not be affected. The Board hereby declares that it would have passed the ordinance and each part thereof regardless of the fact that one or more parts might be declared unconstitutional or invalid.

SECTION 5. Ordinance No. 90-7 is hereby repealed.

SECTION 6. Pursuant to Water Code Section 376, this ordinance is effective upon adoption.

Appendix E

Technical Memorandum on Calculation of SB7x7 Baseline 2020 Targets for Water Conservation Per Capita Use

TECHNICAL MEMORANDUM

To: George Cardenas

From: Mike Swan

Date: April 15, 2011

Subject: 20x2020 Baseline Calculation & Water Use Target Method Selection

According to the Department of Water Resources (DWR), a water supplier must define a continuous 10 or 15 year base period (baseline) for water use ending no earlier than December 31, 2004 and no later than December 31, 2010 that will be used to develop their per capita water use target for the year 2020 and an interim target for 2015. A water supplier who met at least 10 percent of its 2008 measured retail water demand through recycled water may use a 15-year baseline period; otherwise a supplier must use a 10-year baseline. Phelan Piñon Hills Community Services District (District) does not supply recycled water and as a result must use a 10-year baseline.

Table 1 shows the gross water use, the population, and the per capita water use of the District's water service area from water years (WY) 1996 through WY 2010. The District does not have any recycled or agricultural water use, thus the gross water use is equal to the supply produced from the District's groundwater wells. The historical data for the groundwater production comes from the Mojave Water Agency (MWA) Watermaster reports plus District-supplied pumping reports for Well 14, which is in Los Angeles County and not a part of the MWA adjudication therefore not reported to MWA or included in the Watermaster reports. Population data used herein from 2000 to 2009 is from the data prepared by MWA based on service connections and population figures from Census and Department of Finance (DOF). Population estimates prior to 2000 were not available and were estimated assuming a growth rate of 4.11 percent from 1996 to 2000, which is equal to the population growth rate from 2000 to 2008. The population in 2010 was estimated based on the 2009 population from the MWA, the number of residential service connections added in the District's water service area in 2010, and the average persons per service connection determined from MWA population and service connection data. Since water use has been trending downward recently even with increasing population, per capita use has been dropping. The most advantageous period for the District to use is the one generating the highest per capita use, making subsequent conservation easier to achieve. Therefore, the 10-year period from WY 1996 thru WY 2005 was determined to be the most advantageous and was used to calculate a baseline per capita water use average of 184.7 GPCD as shown in *Table 1*.

**Table 1
Phelan Piñon Community Services District Base Daily Per Capita Use**

Water Year	Gross Water Use ^[1] (AFY)	Gross Water Use (gal/day)	Water Service Area Population ^[2]	Annual /Capita Use (GPCD)
1996	2,832	2,528,074	12,866	196.5
1997	2,741	2,446,840	13,396	182.7
1998	2,464	2,199,568	13,947	157.7
1999	3,044	2,717,323	14,521	187.1
2000	3,292	2,938,708	15,118	194.4
2001	3,024	2,699,469	13,895	194.3
2002	3,306	2,951,206	16,202	182.2
2003	3,271	2,919,962	15,474	188.7
2004	3,649	3,257,395	16,692	195.1
2005	3,355	2,994,947	17,832	168.0
2006	3,515	3,137,776	19,263	162.9
2007	4,072	3,635,000	19,403	187.3
2008	3,308	2,952,991	20,873	141.5
2009	3,250	2,901,215	20,901	138.8
2010	3,059	2,730,713	20,913	130.6
10 Year Baseline (Average WY 1996-2005)				184.7
5 Year Baseline (Average WY 2004-2008)				171.0

[1] Usage determined from Mojave Water Agency (MWA) historical production data and LA County Well 14 production data. LA County Well 14 provides water within the Phelan Piñon water service area outside of MWA adjudication.

[2] Population estimates for years 2000 to 2009 from MWA. Population estimates for years 1996 to 1999 assume constant growth rate of 4.1145% (growth rate equal to population growth rate from 2000 to 2008). 2010 population estimate determined from 2009 population estimate and residential service connections added in 2010 (3 persons per added residential service connection was assumed, based on MWA population and service connection data).

A water supplier must set a 2020 water use target and a 2015 interim target using one of the following four methods as defined further in Section 10608.20 of Senate Bill No. 7 (SB7x7):

- Method 1: Eighty percent of the water supplier’s baseline per capita water use
- Method 2: Per capita daily water use estimated using the sum of performance standards applied to indoor residential use; landscape area water use; and commercial, industrial, and institutional uses
- Method 3: Ninety-five percent of the applicable state hydrologic region target as stated in the State’s April 30, 2009, draft 20x2020 Water Conservations Plan
- Method 4: A BMP Option based on standards that are consistent with the California Urban Water Conservation Council’s (CUWCC) best management practices (BMPs).

Calculation of Minimum Targets

If the average base daily per capita water use is greater than 100 GPCD for a defined 5-year baseline period, the legislation's minimum water use reduction requirement must also be met as set in Section 10608.22 of Senate Bill No. 7 SB7x7.

Per SB7x7, the minimum water use reduction baseline period must end no earlier than December 31, 2007 and no later than December 31, 2010 and the minimum reduction shall be no less than 5 percent of this 5-year base daily per capita water use. A minimum water use reduction baseline period between WY 2004 through 2008 was selected to calculate the most advantageous 5-year minimum water use reduction target. As shown in *Table 1*, the minimum baseline water use averages 171.0 GPCD. The minimum per capita water use target for 2020 must therefore be 162.5 GPCD (95% of 171.0).

Calculation of Targets Using Methods 1 – 4

Method 1: Using a baseline per capita average of 184.7 GPCD (shown in Table 1) the Phelan Piñon Hills Community Services District 2020 target would be 147.8 GPCD (80% of 184.7). Since the target water use for Method 1 is less than the one found using the legislation's minimum requirement criteria (162.5), no further adjustments to this water use target would be required, if this method is selected.

Method 2: The Phelan Piñon Hills Community Services District does not currently maintain records of lot size, irrigated landscaped area for each parcel, reference evapotranspiration for each parcel, etc. to split its residential, commercial, industrial, or institutional uses into inside and outside (landscape irrigation) uses. The use of Method 2 to calculate conservation targets is therefore not feasible.

Method 3: The Phelan Piñon Hills Community Services District falls within the South Lahontan Hydrologic Region (Hydrologic Region 9). According to the State's April 30, 2009 draft 20x2020 Water Conservation Plan, the 2020 Target for Hydrologic Region 9 is 170 GPCD. Using Method 3, the Phelan Piñon Hills Community Services District's 2020 water use target would be 161.5 GPCD (95% of 170). Since the target water use for Method 3 is less than the one found using the legislation's minimum requirement criteria (162.5), no further adjustments to this water use target would be required, if this method is selected.

Method 4: DWR recently released this method and a calculator for agencies wishing to use this BMP-based method. A default indoor residential water savings of 15 GPCD was assumed and the San Bernardino County Service Area 70L (Phelan Pinion Hills Community Services District's predecessor) 2005 Urban Water Management Plan was referenced to obtain the Commercial, Industrial and Institutional (CII) water use consumption (94 AF). Using the midpoint of the baseline period (year 2000) and DWR's "SB7x7 Provisional Method 4 Target Calculator" resulted in a 2020 water use target of 145.6 GPCD.

Conclusion

The discussion and calculations above are summarized in *Table 2*.

Table 2
Phelan Piñon Hills Community Services District
Water Use Target Summary (GPCD)

Method	2020
1	147.8
2	Not Applicable
3	161.5
4	145.6

As shown in *Table 2*, Method 3 results in the most favorable water use target level for the Phelan Piñon Hills Community Services District. The 2015 interim target would then be 173.1 GPCD (mid-point between 184.7 GPCD baseline and 161.5 GPCD 2020 target). It should be noted that the District has met this 2020 target the past three years. However, WY 2009 and 2010 were well publicized to water customers in Southern California as a drought condition. Therefore, demands for these years should not be considered normal. If per capita use returns to the average of the three years prior to 2008 (WY 2005-2007) of 172.7 gallons, then the District would be just below the 2015 interim target and there would still be some additional conservation needed to reach the 2020 target.

Appendix F

**Phelan Piñon Hills Community Services District
Current and Planned Projects**

Projects Completed

○ Well Rehabs

- Well 11 -completed May 09
- Well 14 -completed June 09
- Well 10 -completed Aug 09
- Well 12 -completed Nov 09
- Well 5 -completed May 10
- Well 9B -completed Nov 10
- Well 2-in the works Nov 10

○ Booster Rehabs

- Site 1B booster "A" -completed Dec 08
- Site 3B booster "B" -completed Jan 09
- Site 1A booster "A" -completed May 09
- Site 7B booster "B" -completed Apr 09
- Site MRV booster "B" -completed May 09
- Site BRV booster "A" -completed May 09
- Site 3A booster "A" -completed Jul 09
- Site 2B booster "A" -completed Nov 09
- Site MRV booster "A" -completed Dec 09
- Site 2C booster "C" -completed May 10
- Site 5B booster "B" -completed Aug 10
- Site 3A booster "C" -completed Nov 10
- Upgrades on SCADA system Aug 08 to date
- Built new tank in zone "G" -completed Nov 08
- Rehabbed and added rings to 3 new tanks at sites 1B, 1C and 2C -completed Dec 08
- Installed new Inter-tie to Sheepcreek Water -completed Dec 08
- Installed 9 new tab Chlorinating machines -completed Jun 09
- Cross district pipeline (Del Rosa) -completed Jun 09
- Rebuilt all PRV stations (37) -completed Sept 09
- Rebuilt all Pump Control Valves (54) -completed Jul 09
- Rebuilt all Level Control Valves (13) -completed May 09
- Dive inspected all 35 tanks -completed Nov 09
- Installed new well covers on 5 wells -completed Nov 09
- Loaded and hauled off approx 90 tons of AC pipe at various locations -completed Feb 10
- Installed new booster "C" at site 5B -completed Aug 10
- Tank rehabilitations 15 tanks, tank maintenance program on all 35 tanks Nov-10

○ **Projects in the works**

- Well 2 rehab
- Site 1B, boosters A, B & C rehabs
- Rebuild 54 Pump Control Valves
- Rebuild 13 Level Control Valves
- Rebuild 37 PRV Stations
- Rehab 15 tanks in the next 2 years, 10 year maintenance program on all 35 tanks

○ **Projects to be completed this year**

- Install emergency power plugs at 4 new sites
- Rehab wells 6A and 6B
- Rebuild emergency by-pass PRV stations
- Upgrade SCADA at 6 more sites

Appendix G

**Phelan Piñon Hills Community Services District
2009 Consumer Confidence Report**



Phelan Piñon Hills Community Services District 2009 Consumer Confidence Report

PUBLISHED JUNE 2010

MISSION STATEMENT

The Mission of the Phelan Piñon Hills Community Services District is to provide all authorized services reliably and economically for the promotion of community development and to utilize all available resources for the maximum beneficial use.

VISION STATEMENT

To develop a Community Services District that enhances the living experience for all people within the District.

ANNUAL CONSUMER CONFIDENCE REPORT

The Phelan Piñon Hills Community Services District proudly presents our annual Consumer Confidence Report. This report contains water quality information, as required by the California Department of Health (CDPH).

The District's water supply is over 2,000 years old according to a report from United States Geological Survey (USGS). Our water supply is primarily from the Oeste aquifer, and partially from the Alto aquifer. The water is supplied to the District's distribution system through eleven groundwater wells which have an average depth of approximately 1,000 feet. The District's water system also consists of 34 reservoirs with a combined capacity of approximately 12,000,000 gallons, 35 pressure reducing stations in 15 pressure zones, 63 booster pumps, and approximately 285 miles of water line. We currently serve approximately 6,750 metered accounts.

The District's goal is to provide safe, good tasting drinking water to our customers. We are currently at the forefront of new technologies to meet higher health standards and the demands of a growing area. With ongoing testing and the installation of the new state of the art chlorination tab equipment, the District plans to meet the toughest drinking water standards.

Phelan Piñon Hills

Community Services District

Monday through Friday 8:00 a.m. to 5:00 p.m.

Charlie Johnson, President

Joe Fahrlender, Vice President

Ken Anderson, Director

Al Morrissette, Director

Mark Roberts, Director

Don Bartz, General Manager

The Board of Directors hold public meetings on the 1st and 3rd Wednesdays of each month at 7:00 p.m. in the Phelan Community Center: 4128 Warbler Road, Phelan, CA 92371.

Visit us online at www.pphcsd.org

Special information available

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons – such as persons with cancer who are undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons and infants – can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. Environmental Protection Agency and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the **United States Environmental Protection Agency's (USEPA) Safe Drinking Water Hotline: 800-426-4791.**

If you have any questions about this report please contact: Chris Bishop, Operations Manager, (760) 868-1212.

How Pure should our water be?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.

The presence of contaminants does not necessarily indicate that the water poses a health risk.



More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline: 800-426-4791

**¿No habla inglés?
Este informe contiene información muy importante sobre su agua potable. Tradúscalo ó hable con alguien que lo entienda bien. Llame 760.868.1212**

POSSIBLE CONTAMINANTS

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA and the California DHS prescribe regulations that limit the amount of certain contaminants in the water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

An explanation of units of measure used in this report:

- ND** = Non Detectable
ppm = parts per million or milligrams per liter (mg/L)
ppb = parts per billion or micrograms per liter (ug/L)
ppt = parts per trillion or nanograms per liter (ng/L)
ppq = parts per quadrillion, or pictogram per liter (pg/L)
pCi/L = Picocuries per liter (a measure of radioactivity)

DEFINITIONS

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S Environmental Protection Agency.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MFRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standard (PDWS): MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standard (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Variations and Exemptions: The department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

2009 Drinking Water Consumer Confidence Report

THE PHELAN PIÑON HILLS COMMUNITY SERVICES DISTRICT, IN COMPLIANCE WITH THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH TITLE 22, SECTION 64480, HAS COMPLETED THE REQUIREMENTS TO ISSUE A CONSUMER CONFIDENCE REPORT TO ALL RESIDENTS AND PERSONS OWNING PROPERTY WITHIN ITS SERVICE AREA.

The District tests for hundreds of substances, however, only the substances that were detected in our water as of 2009 are shown in the table below. The District is not required to sample all contaminants annually, therefore the following results reflect some analysis prior to 2009.

CONTAMINANT	No. of Samples Collected	90th Percentile	No. sites exceeding AL	Action Level (AL)	PHG	Typical Source of Contaminant
Tap Monitoring Lead & Cooper						
Lead	33 (2009)	ND	No sites exceed AL	15 ug/L	2	Corrosion of household plumbing, erosion of natural deposits.
Cooper	33 (2009)	.22	No sites exceed AL	1.3 ug/L	.17	Corrosion of household plumbing, erosion of natural deposits.
CONTAMINANT	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Additional Parameters: Sodium and Hardness						
Sodium (ppm)	2008	45 ppm	18-72	None	None	Generally found in ground & surface water.
Hardness (ppm)	2008	288 ppm	66-510	None	None	Generally found in ground & surface water.
CONTAMINANT	Sample Date	Level Detected	Range of Detections	MCL (MRDL)	PHG (MCLG) (MRDLG)	Typical Source of Contaminant
Inorganic Chemicals—Required every 3 years: PRIMARY Drinking Water Standards						
Fluoride	2009	250	240-260	2000 ppb	1000 ppb	Erosion of natural deposits, water additive which promotes strong teeth: discharge from fertilizer and aluminum factories.
Chromium	2009	13	13	50 ppb	100 ppb	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits.
Nitrate + Nitrite as Nitrogen (N)	2009	505	450-560	10000 ppb	N/A	N/A
Nitrate (as NO3)	2009	5.63	2.2-19	45 ppm	45 ppm	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
TTHMs (Total Trihalometanes)	2009	1.26	0-3.8	80 ppb	N/A	By-product of drinking water chlorination.
CONTAMINANT	Sample Date	Level Detected	Range of Detections	MCL	PHG or (MCLG)	Typical Source of Contaminant
Regulated Contaminants: SECONDARY Drinking Water Standards - No Health Effects						
Turbidity	2009	.3	.1-2.5	5 units	.1 units	Soil runoff.
Color	2009	3.85	3-12.5	15 units	3.0 units	Natural-occurring organic materials.
Odor	2009	1	0-1	3.0 units	N/A	Naturally-occurring organic materials.
Sulfate	2008	185	170-200	500 ppm	N/A	Runoff/leaching from natural deposits; industrial wastes.
Total Dissolved Solids	2008	495	340-650	1,000 ppm	N/A	Runoff/leaching from natural deposits.
Specific Conductance	2008	720	490-950	1,600 uS/cm	N/A	Substances that form ions when in water; seawater influence.
Chloride	2008	12	3-21	500 ppm	N/A	Substances that form ions when in water; seawater influence.
Copper	2009	58.4	0-360	1000 ppb	N/A	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
<i>*Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.</i>						
CONTAMINANT	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language	
Unregulated Contaminants						
Vanadium	2009	11 ppb	6-18 ppb	50 ppb	The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.	

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2009.

A source water assessment was performed for each of the District's wells. The assessment was completed on December 16, 2002. Vulnerability included the possibility of Nitrates associated with Septic Systems and Low Density at Wells 2, 3, 4, 5, 9A, 9B, 11 and 12. A copy of the complete assessment may be viewed at the Phelan Piñon Hills Community Services District Office or at the CDPH San Bernardino District Office, 464 West 4th Street, Suite 437, San Bernardino, CA 92401. You may request a summary of the assessment be sent to you by contacting CDPH District Engineering at (909) 383-4328.

The District obtained water from: The City of Victorville, during the months of April through August 2009. The City's CCR can be found on line at www.ci.victorville.ca.us; County of San Bernardino during August 2009, www.SpecialDistricts.org; And Sheepcreek in August 2009, 760-868-3755.

Update...

The District continues to be faced with many challenges including creation and implementation of policies and procedures, infrastructure upgrades, and maintenance. The improvements that have been completed are resulting in a significant savings to the operations budget, and enabling the District to continue holding the line for expenses.

Some of the most significant improvements have been:

- Upgrade of three wells to improve efficiencies, enabling us to keep expenses down.
- Implement development of the Master plan, which will provide a realistic picture of the District, enabling us to plan for future development while identifying and maintaining efficiencies throughout the District.
- Installation of new meters throughout the District, enabling us to provide accurate reads and more clearly identify water demands, trends, and conservation opportunities.
- Improved technology by upgrading the SCADA system.
- Upgraded several Booster Pumps improving efficiencies.
- Tank inspections and evaluation.
- Purchase of 135 acres of land for future parks.
- Purchase of land for future administration building and recreation facility.



Summer Movie Night 2010

The District has partnered with the Tri-Community Kiwanis to bring you Friday Night Movies at the Phelan Community Center: 4128 Warbler Road, Phelan, CA 92371

FREE MOVIE - FREE REFRESHMENTS!!

Every Friday from June 4 thru August 6, 2010

Kids Movie 5:30pm Teen Movie 7:30pm

For more information please visit: www.pphcsd.org or www.TCKiwanis.com/movies



PHELAN PIÑON HILLS COMMUNITY SERVICES DISTRICT

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Appendix H

DWR Checklist

Table I-2 Urban Water Management Plan checklist, organized by subject

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
PLAN PREPARATION				
4	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	10620(d)(2)		Section 1.2
6	Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments.	10621(b)		Section 1.2
7	Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et seq.	10621(c)		Section 1.2
54	Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water, no later than 60 days after the submission of this urban water management plan.	10635(b)		Section 1.2
55	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	10642		Appendix B
56	Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies, the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	10642		Appendix B
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642		Appendix B
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Section 1

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
59	Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to the California State Library and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. This also includes amendments or changes.	10644(a)		Section 1.2
60	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours	10645		Section 1.2
SYSTEM DESCRIPTION				
8	Describe the water supplier service area.	10631(a)		Section 1.3
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Section 1.3
10	Indicate the current population of the service area	10631(a)	Provide the most recent population data possible. Use the method described in "Baseline Daily Per Capita Water Use." See Section M.	Section 1.3
11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Table 1.3-3
12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		Section 1.3
SYSTEM DEMANDS				
1	Provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	10608.20(e)		Section 5.1 and Appendix E
2	<i>Wholesalers:</i> Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. <i>Retailers:</i> Conduct at least one public hearing that includes general discussion of the urban retail water supplier's implementation plan for complying with the Water Conservation Bill of 2009.	10608.36 10608.26(a)	Retailers and wholesalers have slightly different requirements	Appendix B

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
3	Report progress in meeting urban water use targets using the standardized form.	10608.40		Section 5.3
25	Quantify past, current, and projected water use, identifying the uses among water use sectors, for the following: (A) single-family residential, (B) multifamily, (C) commercial, (D) industrial, (E) institutional and governmental, (F) landscape, (G) sales to other agencies, (H) saline water intrusion barriers, groundwater recharge, conjunctive use, and (I) agriculture.	10631(e)(1)	Consider 'past' to be 2005, present to be 2010, and projected to be 2015, 2020, 2025, and 2030. Provide numbers for each category for each of these years.	Section 6.1
33	Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types	10631(k)	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030.	Section 4.2
34	Include projected water use for single-family and multifamily residential housing needed for lower income households, as identified in the housing element of any city, county, or city and county in the service area of the supplier.	10631.1(a)		Section 5.4
SYSTEM SUPPLIES				
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided.	Section 2.2
14	Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP Checklist. If no, then indicate "not applicable" in lines 15 through 21 under the UWMP location column.	10631(b)	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other.	Section 2.2
15	Indicate whether a groundwater management plan been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)	Mojave Water Agency Regional Water Management Plan available online, link provided.	Section 2.2
16	Describe the groundwater basin.	10631(b)(2)		Section 2
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		Section 2 and Appendix C

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
18	Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated, indicate “not applicable” in the UWMP location column.	10631(b)(2)		Section 2.1
19	For groundwater basins that are not adjudicated, provide information as to whether DWR has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition. If the basin is adjudicated, indicate “not applicable” in the UWMP location column.	10631(b)(2)		Not Applicable
20	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	10631(b)(3)		Table 2.2-3
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)	Provide projections for 2015, 2020, 2025, and 2030.	Table 2.2-4
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		Section 4.5
30	Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demand management programs addressed in (f)(1). Include specific projects, describe water supply impacts, and provide a timeline for each project.	10631(h)		Section 4.4 and Appendix F
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		Section 4.6
44	Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633		Section 4.7
45	Describe the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	10633(a)		Section 4.7

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
46	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	10633(b)		Section 4.7
47	Describe the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.	10633(c)		Section 4.7
48	Describe and quantify the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	10633(d)		Section 4.7
49	The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	10633(e)		Section 4.7
50	Describe the actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.	10633(f)		Not applicable at this time, see Section 4.7
51	Provide a plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.	10633(g)		Not applicable at this time, see Section 4.7
WATER SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING ^b				
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)		Section 4.4 and Section 7
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year, and (C) multiple dry water years.	10631(c)(1)		Sections 4.2, 4.3 and 5.2
23	For any water source that may not be available at a consistent level of use - given specific legal, environmental, water quality, or climatic factors - describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.	10631(c)(2)		Section 4.4.1
35	Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of specific water supply conditions at each stage	10632(a)	PPHCSD is currently developing a Water Shortage Contingency Plan.	Not available at this time

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
36	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.	10632(b)		Section 5.7
37	Identify actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.	10632(c)		Section 5.6 and Appendix I
38	Identify additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.	10632(d)	PPHCSD is currently developing a Water Shortage Contingency Plan.	Not available at this time
39	Specify consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.	10632(e)	PPHCSD is currently developing a Water Shortage Contingency Plan.	Not available at this time
40	Indicated penalties or charges for excessive use, where applicable.	10632(f)	PPHCSD is currently developing a Water Shortage Contingency Plan.	Not available at this time
41	Provide an analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.	10632(g)	PPHCSD is currently developing a Water Shortage Contingency Plan.	Not available at this time
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)	PPHCSD is currently developing a Water Shortage Contingency Plan.	Not available at this time
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)	PPHCSD is currently developing a Water Shortage Contingency Plan.	Not available at this time
52	Provide information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability	10634	For years 2010, 2015, 2020, 2025, and 2030	Section 3 and Appendix G

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
53	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. Base the assessment on the information compiled under Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.	10635(a)		Section 4.3 and Section 5.2
DEMAND MANAGEMENT MEASURES				
26	Describe how each water demand management measures is being implemented or scheduled for implementation. Use the list provided.	10631(f)(1)	Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.	Section 7
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		Section 7
28	Provide an estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the ability to further reduce demand.	10631(f)(4)		Not available at this time
29	Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work.	10631(g)	See 10631(g) for additional wording.	Not applicable, all BMPs/DMMs implemented
32	Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	10631(j)	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	PPHCSD is not a member of CUWCC.

a The UWMP Requirement descriptions are general summaries of what is provided in the legislation. Urban water suppliers should review the exact legislative wording prior to submitting its UWMP.

b The Subject classification is provided for clarification only. It is aligned with the organization presented in Part I of this guidebook. A water supplier is free to address the UWMP Requirement anywhere with its UWMP, but is urged to provide clarification to DWR to facilitate review.

Appendix I

Phelan Piñon Hills Community Services District
Disaster Emergency Response Program

I. PURPOSE

The Phelan Piñon Hills Community Services District's Disaster Emergency Response Program is a planned response to extraordinary emergency situations resulting from natural disasters, system failures, and other unforeseen circumstances beyond the District's control. This program is an effort on the part of the District to be as prepared for an emergency as it possibly can be. Basic responsibilities are assigned to specific personnel so that maximum coordination can be achieved during a response. Our goal will be to restore dependable water service to our customers as soon as possible, and to protect the District's water system from the possibility of contamination. The District will do its best to respond in a timely and coordinated manner when and if an emergency situation presents itself.

II. STRATEGY and ORGANIZATION

The District's response to an emergency which poses any threat to the integrity of its water system will be directed by the General Manager or his designee. This individual will be known as and assume the responsibilities of the Incident Commander. A complete organizational chart is on page 15 of this plan.

During the initial emergency response and damage assessment phase, all staff members will be directed by normal duty personnel as normally assigned. The department heads will report all status information to the Incident Commander and during the recovery phase, all appropriate staff will be under the direction of the Incident Commander.

The general response by District personnel to an emergency situation should be as follows:

- Secure their family situation first
- Contact the District Command Center as soon as possible for direction
- Personnel assigned inspection duties should proceed immediately
- Immediately report life threatening situations

For District-wide emergencies, the Incident Commander will be responsible for the following:

- Evaluating the risk potential
- Determining source and possible effect
- Delegating responsibility and authority
- Assessing priorities in terms of manpower, materials and equipment
- Mobilizing the proper response effort, both internally and externally

The emergency response team may include any or all of the District's staff, Board of Directors, members of the community, and the District's consultants (i.e., legal, engineering, financial). Depending upon the severity and nature of the emergency, the Incident Commander may

activate one or all of the members of the emergency response team. During an emergency the Incident Commander has full authority to make decisions on behalf of the District which will aid in the repair and recovery from the effects of the emergency. The Incident Commander will be the liaison between the emergency response team, the Board of Directors, the community, the news media, and any other governmental entities that may be involved.

In an effort to ensure the availability of outside assistance in the event of an emergency, the Agency is developing mutual aid agreements with other public utilities in our local area.

III. EVALUATION of EMERGENCY

The District's initial response in the event of an emergency will be to inspect the impacted area of the District and to attempt to ascertain the level of severity of any damage. Personnel with initial inspection duties shall move quickly and make note of areas where major damage has occurred or where potential damage is apparent. The purpose of these inspections is to develop an overview of the situation in an effort to better prioritize mobilization.

Federal, State, and many other governmental agencies have adopted policies which classify emergencies into one of three levels of severity: Minor (Level I), Major (Level II), and/or Catastrophic (Level III). The purpose of this rating system is to provide a universal standard for determining the level of response that should be activated in an emergency.

In the case of earthquakes, the "Richter" scale of magnitude and the "Modified Mercalli" scale of intensity will be used to define the various levels of emergency (see Table 1). For any other emergencies that might arise, the level of severity will be determined in a subjective manner.

The following descriptions define the three levels of severity which are universally accepted by most governmental entities and this District.

LEVEL I: MINOR EMERGENCY

A minor to moderate incident for which local resources are available and adequate to repair and/or recover from the emergency.

Level I examples:

- Local flooding
- Short-term power failure over a large portion of the
- Agency's service area
- Minor earthquakes

Level I earthquakes are those which:

- Are felt by sensitive people
- Feel like vibrations due to a passing truck
- Are felt by some people while walking
- Wake up some sleepers
- Cause trees to sway and most suspended objects to swing

Level I earthquakes generally have a Richter Magnitude of less than 5.5 and a Mercalli Intensity of I to VI. However, when evaluating the potential impact of an earthquake, the epicenter location must be a prime consideration. For example, a level I earthquake with an epicenter located near one of the Agency's major facilities could conceivably have the same damage effect as a Level II earthquake with an epicenter located some distance away. The 1989 Malibu, the 1989 Newport, and the 1988 Pasadena earthquakes are examples of Level I earthquakes. Depending upon the level of local damage, the Emergency Operations Center may or may not be activated.

LEVEL II: MAJOR EMERGENCY

A moderate to severe emergency for which local resources may not be adequate or available and mutual aid may be required on a local, regional, or State-wide basis.

Level II examples:

- Regional flooding
- Power failure throughout the entire Agency service area
- Strong to very strong earthquakes

Level II earthquakes are those that:

- Are felt by moving people and drivers of cars
- Awaken most sleepers
- Cause major power outages
- Cause major cracks in walls and destroy some buildings
- Sever utilities and pipelines in some areas
- Cause some telephone outages
- Vibrate some structures off of their supports

Level II earthquakes generally have Richter Magnitudes of 5.5 to 6.1 and Mercalli Intensity levels of VI to VIII. The 1987 Westmoreland and the 1987 Whittier earthquakes have been classified in this category.

LEVEL III: CATASTROPHIC EMERGENCY

A major disastrous emergency for which resources in or near the Agency are rendered useless and extensive Federal and/or State resources will be required for repair and recovery.

Level III examples:

- Catastrophic earthquakes

Level III earthquakes are those that:

- Cause regional power outages
- Destroy and damage many buildings
- Sever pipelines in many areas
- Cause widespread telephone outages
- Create various fires and chemical explosions

The Richter Magnitude for Level III earthquakes ranges from 6.1 to greater than 8.0 and from VIII to XII on the Mercalli Intensity scale. the 1985 Mexico City, 1988 Armenia, 1989 Loma Prieta, and the 1992 Landers earthquakes have been classified in this category. While the District has experienced a Level III emergency in the past, the infrequent occurrence of these events makes it difficult to project the amount of damage which could occur locally or even regionally. However, a Level III emergency is expected to result in widespread and extensive damage within the District's boundaries.

IV. REPORTING PROCEDURES

Field personnel are, from time to time, confronted with situations which could be classified as reportable incidents or emergencies but are not considered to be immediately life threatening. In most cases, contact with their supervisor or a call to "911" is all that is required to resolve the problem. For the purposes of this Disaster Emergency Response Program it shall be presumed that either a level I, II, or III emergency has occurred or the following reporting procedures shall be used by all Inspectors/Patrollers as they proceed along their assigned route.

- Observe the damage from a safe distance.
- Quickly assess the extent of the damage being as complete as possible.
- Report by two-way radio to the Dispatcher including time and location.

V. MOBILIZATION

When the emergency evaluation is complete and the event has been assigned an emergency level, the Incident Commander shall order and direct the appropriate mobilization level that will restore reliable water service to the District's customers as quickly as possible.

Mobilization levels are generally defined as follows:

Level I Emergency - Limited Mobilization

The Inspectors/Patrollers and any other designated emergency personnel will proceed with their assigned emergency inspection duties. The Inspectors/Patrollers will, as they encounter it, report any damage to the Dispatcher on the District's two-way radio system in the vehicles.

The Dispatcher will forward any damage reports to the Incident Commander who will analyze and prioritize them. The Incident Commander may then direct additional personnel to be mobilized to the areas of reported damage.

Level II Emergency - Moderate Mobilization

The Inspectors/Patrollers and any other designated emergency personnel will proceed with their assigned emergency inspection duties. The Emergency Organization Committee, led by the Incident Commander, shall report to the Command Post for emergency response duty. Emergency communications shall be established between the Command Post and the District's mobile vehicles as soon as possible.

Level III - Full Mobilization

The Inspectors/Patrollers and any other designated emergency personnel will proceed with their assigned emergency inspection duties. This level of emergency requires the full response and mobilization of all District employees and resources. In the event of a Level III emergency which affects a majority or all of the District's service area, the District would require assistance in the form of manpower, equipment, and materials from outside entities.

VI. REPAIR and RECOVERY

Once the level of emergency has been determined and the appropriate mobilization has been ordered, it shall be the objective of the District to repair as quickly as possible any and all damage suffered by the Agency as a result of the emergency event. While full and complete recovery is our final objective, service restoration is our primary and immediate concern. Full recovery from emergency events may take many months, and sometimes even years.

VII. COMMUNICATION

Good reliable communication is an absolute must in an emergency situation. Whether it is the dissemination of factual information to the public or direction for emergency response teams, communication is a vital link in a successful response to an emergency by the District.

RESPONSE TEAM COMMUNICATIONS

The District vehicles are equipped with two-way radios which operate on a frequency designated specifically for the District's use. Channel one (1) is the channel that will be used by the District in the event of an emergency. Each radio has the capability of two (2) channels and other entities can be reached with Agency radios if necessary. The District also owns portable cell telephones which can be used as well for communication during an emergency.

PUBLIC COMMUNICATIONS

The District will report factual, reliable information to the public as quickly as possible. The local media will receive updated information as soon as it becomes available. All local and remote radio, television, and newspaper entities will be apprised of any current events as they happen. The Incident Commander will be the sole source for the public release of all official information regarding the emergency, whether to the media or others. All media inquiries shall be directed to the Incident Commander and responses shall be documented. All meetings with citizens groups or speaking engagements shall be documented and kept on file.

In cases where District personnel other than the Incident Commander must provide information to the public without the ability to coordinate with the Incident Commander, said personnel shall advise the Incident Commander as soon as possible about the nature of the information and to whom it was given.

While pertinent emergency information will be released as it becomes available, regular public news releases will be issued according to the following schedule:

- 8:00 a.m. for all media
- 4:00 p.m. for all media
- 9:00 p.m. for all media

In the interest of providing the most accurate and timely information to the people most affected by the emergency incident, news media releases will be prioritized as follows:

- Local area radio stations
- Cable TV serving the local area
- Major network TV stations on location
- The Mountaineer newspaper

- Press Enterprise
- Los Angeles Times

GOVERNMENT LIAISON

The Government Liaison shall be the General Manager of the District or their designee. It is the responsibility of the Government Liaison to establish a dialogue with the local, State, and Federal agencies which may be requested/required to aid the District with its response to an emergency incident. The Government Liaison, through the Incident Commander, will coordinate the obtaining of materials, equipment, and personnel from other governmental entities.

VIII. DOCUMENTATION

The documentation of an emergency incident from beginning to end is of the utmost importance. The use of still and video cameras to record all phases of the emergency incident, as well as written reports by key personnel is required by District. This information will be used to maintain a permanent record of what took place and how the District responded. This information will also be used to document any claims filed for financial relief due the Agency from any of the appropriate State and Federal entities.

IX. WATER QUALITY

The quality of the water in the District's distribution system will be one of the District's highest priorities. As soon as possible the distribution system will be sampled and bacteriologically tested for potability. Samples will be taken by pressure zones and analyzed using the fastest method possible (24 hour turn around time). Test results will be reviewed and bacteriologically safe water quality will be established. The Incident Commander shall keep the State Department of Health Services informed at all times of the District's water quality situation.

X. EMERGENCY PURCHASING PROCEDURES

All purchasing for emergency materials and/or equipment shall be approved by the Incident Commander. All requisitions, purchase orders, invoices and receiving slips shall be identified as emergency purchases by the letters "DE" (Declared Emergency) and kept in a separate filing system for documentation purposes. These financial records will be of great importance when attempting to quantify the cost of any emergency incident.

Emergency Telephone Numbers

Command Center/ Agency Office-

Public Line	760-868-1212	Private Line	760-868-6464
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Management Staff-

	<u>Home</u>	<u>Personal Cell</u>	<u>Business Cell</u>
Don Bartz General Manager	760-949-2639	760-403-6232	

Operations Staff-

	<u>Home</u>	<u>Personal Cell</u>	<u>Agency Cell</u>
Derrick Sandwick- Director of Operations	760-244-5313	760-403-5099	
Bill Clark- Field Supervisor	760-961-1416	760-403-5103	
Chris Bishop	760-955-9974	760-217-1669	
Robb Perry	760-241-8380	760-241-8380	

Office Support Staff-

	<u>Home</u>	<u>Personal Cell</u>	<u>Agency Cell</u>
Debbie Bishop	760-955-9974	760-217-4277	
Allyson Beran	760-951-2742	760-617-5329	
Ray Ruppel	760-366-9043	760-333-8411	

Local Emergency Services Telephone Numbers

General:

California State Office of Emergency Services		916-845-8500 916-845-8510 fax 916-845-8511
San Bernardino County Sheriff	Phelan	760-249-3212 760-245-4211 911
California Highway Patrol	Victorville	760-760-241-1186
San Bernardino County Building & Safety	Victorville	760-241-7691 Fax 760-843-4315
Ambulance Service		
American Medical Response	Victorville	760-245-7051
Desert Star Medical Transportation	Victorville	760-617-6501
Victory Medical Transportation	Apple Valley	617-467-0253
Fire Department- CDF Phelan	Phelan	760-868-3555

Hospitals:

St. Mary's Medical Center	Apple Valley	760-242-2311
Desert Valley Hospital	Victorville	760-241-8000
Victor Valley Community Hospital	Victorville	760-245-8691

Public Communication:

Y 102 107.7 FM Radio		760-241-1313
Mountaineer Progress		760-249-3245
Victor Valley Daily Press		760-241-7744

Other Emergency Phone Numbers

Dig Alert		800-422-4133 800-227-2600 811
Inland County Emergency Medical Agency Disaster Clerk		909-388-5823
California Department of Public Health		909-383-4308 fax 909-383-4745
Andres Aguirre, Sanitary Engineer		
California Department of Public Health Dept. of Drinking Water and Environmental Mgmt. Field Office 1836 Commerce Center Circle, Suite B San Bernardino, CA 92408		916-449-5577 fax 916-449-5575
Sean McCarthy, Senior Sanitary Engineer	office home	909-388-2602 909-598-4211
Jaydeb Das, Associate Sanitary Engineer	office home	909-383-4320 909-598-4211
San Bernardino County Health Department Communications Center		909-356-3805
National Response Center For the reporting of chemical spills, oil spills or biological terrorism		800-424-8802

Equipment Rental

Apex Rentals 760-244-9349
9262 C Ave.
Hesperia, CA 92345

Andersons True Value Hardware 760-868-3335
3936 Phelan Road, Phelan CA, 92329
Ken Anderson, Owner

Gold Star Equipment Rentals 760-247-3687
21834 Bear Valley Road fax 760-247-0189
Apple Valley, CA 92308

Tops In Barricades 760-949-5991
10968 I Ave, #E
Hesperia, CA 92394
Troy, Owner

Services

Engineering

Merrill Johnson Engineering
12138 Industrial Blvd, Ste 240
Victorville, CA 92395

760-241-6146
fax 760-241-0566

Water Treatment

Waterline Technologies
620 N. Santiago Street
Santa Ana, CA 92701

714-564-9100
fax 714-564-9300
fax 714-564-9700

Wells, Pumps

Tri-County Pump Company
241 South Arrowhead
San Bernardino, Ca. 92408

909-888-7706
fax 909-888-3653

Layne Christensen
P.O. Box 1249
Barstow, Ca.92312

760-254-3351
fax 760-254-3069

So Cal Pump
1610 Palmyrita Avenue
Riverside, CA 92507
Dave Haven, Customer Service

909-341-5025
909-341-5031

Communications

Apple Valley Communications
PO Box 787
Apple Valley, CA 92307

760-247-2668
Fax 760-247-0087
After hrs 760-961-6076

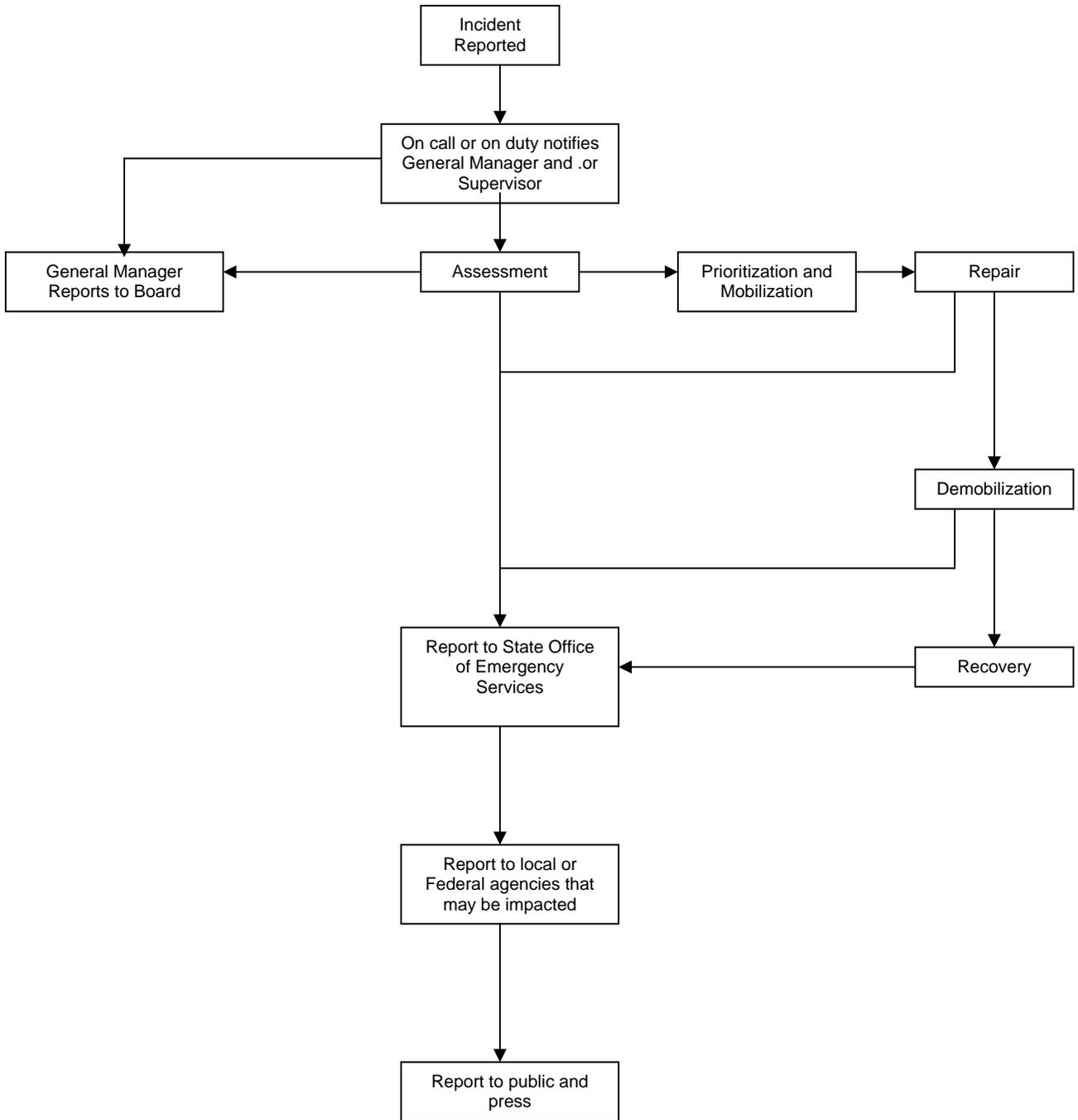
Repair Material Suppliers

Inland Water Works 2468 North Mira Monte Drive San Bernardino, CA 92405	fax	800-794-3121 909-883-8941 909-881-4041
Ferguson 15220 Anacapa Rd Victorville, CA 92392	fax	760-241-7966 760-241-8763

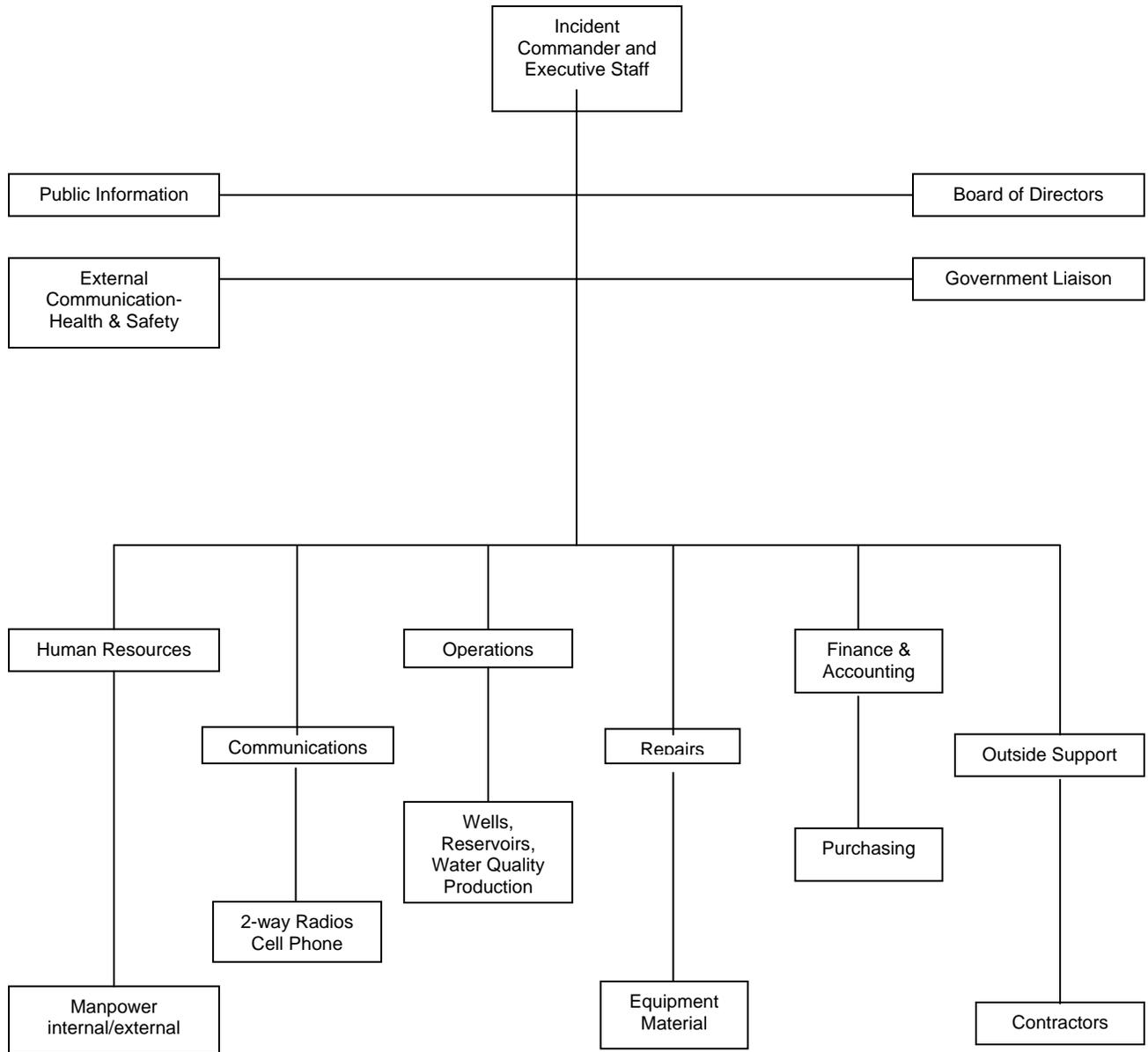
Emergency Contractors

High Desert Underground 12443 Wild Rose Ct. Oak Hills, CA 92344	fax	760-244-5313 760-244-6873
Kelly's General Engineering Apple Valley, CA 92307		760-247-6537

EMERGENCY ORGANIZATIONAL PROCESS



EMERGENCY ORGANIZATION CHART



Declared Emergency Damage Repair Report

It is imperative that all Declared Emergency damage is adequately documented by paperwork and photographs for the purposes of applying for emergency funding. If you are unable in the event of the emergency to adequately document damages please radio base or call base by cellular phone and the information will be recorded by office staff.

Type and Location of Repair:

Damage Description:

Personnel:

Name:	Hrs:	Name:	Hrs:
<hr/>			
Name:	Hrs:	Name:	Hrs:
<hr/>			

Equipment:

Item:	Hrs:	Item::	Hrs:
<hr/>			
Item:	Hrs:	Item::	Hrs:
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Materials:

Repair Description: Temporary Permanent

Date of Report:

By:

If utilizing volunteers then prepare a sign in sheet. List names, occupation and special areas of skill and experience. Volunteers report to the Incident Commander.

Purchase a rubber self inking stamp titled DECLARED EMERGENCY.

Purchase clip boards

In the event of a hazardous materials spill or propane line break call the HazMat team for safe clean up. Do not put yourself into danger.

Additional copies of facilities maps are located at 4037 Phelan Rd. Ste. C-1, Phelan, CA 92371

After a significant earthquake do a sampling for Bac T's

Assess damages, shut down water lines to Agency facilities or buildings if necessary

Shut down propane lines or propane tanks if necessary.

Purchase generator for main office.

If roads are down can goods and services be flown into or out of the airport? Plane courier services for water testing?

PHELAN PIÑON HILLS COMMUNITY SERVICES DISTRICT

4176 Warbler Road
Phelan, CA 92371