



2005 Urban Water Management Plan

Yucca Valley, California

claims including, but not limited to, property damage, personal injury or death arising or alleged to arise out of or connected with HDWD's physical control, carriage, handling, use or distribution of storage water made available by MWA one said water has been delivered to groundwater replenishment facilities or other mutually agreed delivery point, except for the active negligence or willful misconduct of MWA.

Section 13. MWA Indemnification – MWA agrees to indemnify, defend, and hold harmless HDWD, its directors, officers, employees, and agents from any and all claims, whether filed in a court of law or with an administrative agency, arising or alleged to arise out of or connected with the storage program implemented pursuant to this Agreement, including, but not limited to, claims contesting the legal validity of the program, excepting the active or willful negligence of HDWD.

Section 14. Indemnification of WVBW – HDWD and MWA hereby indemnify and hold harmless WVBW, its director, officers, employees, and agents from any and all costs, damages, or liability resulting or alleged to result from this Agreement, and shall share equally in providing WVBW with the defense or costs of the defense of any action brought against WVBW, its directors, officers, employees or agents arising or alleged to arise by reason of this Agreement.

Section 15. Term of Contract – This Agreement shall become effective as of the date first written above, and shall automatically renew annually as of the date of this Agreement unless terminated by one of the Parties pursuant to Sections 16 or 17.

Section 16. Termination by HDWD and WVBW – In the event that both HDWD and WVBW terminate this Agreement, HDWD and WVBW agree to pay MWA for the water in the MWA Storage Water Account, except Provision for Shrinkage Water, at a price equal to the then current price established by MWA for water delivered to

HDWD pursuant to its allotment under the Morongo Basin Pipeline Contract. Such repayments by HDWD and WVBW for termination under this Section are due and payable upon termination. Termination of this Agreement by either HDWD or WVBW shall operate to terminate only the terminating Party's participation in this Agreement. Both HDWD and WVBW must terminate this Agreement in order for termination of the Agreement itself to be effective under this Section.

Section 17. Termination by MWA – In the event that MWA terminates or is unable to fulfill its obligations under this Agreement, water remaining in the MWA Storage Water Account, except Provision for Shrinkage Water, shall be available for use by HDWD or WVBW upon payment to MWA at a price calculated in accordance with Section 11. The remaining balance in the MWA Storage Water Account shall be liquidated in volumetric amounts not to exceed the annual requests made by HDWD, or as otherwise mutually agreed upon by the Parties.

Section 18. Notices – any notice, tender or delivery to be given hereunder by any Party hereto to the others shall be effected by personal delivery in writing or by registered or certified mail, postage prepaid, return receipt requested, and shall be deemed communicated as of mailing or in case of personal delivery, as of actual receipt. Mailed notices shall be addressed as set forth below, but each Party may change its address by written notice in accordance with this section.

To WVBW: Executive Secretary
WARREN VALLEY BASIN WATERMASTER
55439 Twentynine Palms Highway
Yucca Valley, California 92284-2503

To HDWD: General Manager
HI-DESERT WATER DISTRICT
55439 Twentynine Palms Highway
Yucca Valley, California 92284-2503

To MWA: General Manager
 MOJAVE WATER AGENCY
 22450 Headquarters Drive
 Apple Valley, California 92307

Section 19. Dispute Resolution – Any dispute or controversy arising or alleged to arise out of, under, or in connection with, or in relation to the Agreement, and any amendments, thereof, or the breach thereof, shall be submitted to a panel of three arbitrators for arbitration in accordance with the following procedures:

All Parties hereto shall be entitled to receive notice of and participate in any dispute resolution proceedings implemented pursuant to this Section. However, the only two Parties entitled to appoint arbitrators at any given time pursuant to this Section shall be MWA and the other Party entitled to purchase water in the MWA Storage Water Account on the date of initiation of dispute resolution proceedings as set forth in Section 11.

The Party desiring arbitration shall initiate dispute resolution proceedings by giving written notice to the other Parties hereto containing a general description of the controversy to be submitted to arbitration. If the Party initiating arbitration is also entitled to designate an arbitrator, then the written notice shall also designate by name and address, an arbitrator appointed by the Party initiating arbitration who has agreed to act as arbitrator and who has substantial water basin management experience. The other Party entitled to appoint an arbitrator shall notify the Party requesting arbitration in writing within ten (10) business days after written notice by the Party initiating arbitration of an arbitrator and who has substantial water basin management experience. If the Party initiating arbitration is not entitled to appoint an arbitrator, then both of the other Parties hereto shall notify the Party initiating arbitration of their respective appointment

of arbitrators in accordance with the procedure set forth in this Section 20. The two appointed arbitrators shall appoint a third arbitrator who has agreed to act as arbitrator and who has substantial water basin management experience.

The two appointed arbitrators shall promptly give written notice of the arbitration hearing which shall take place within sixty (60) days after the date of the arbitrators' hearing notice. All Parties hereto may participate in the arbitrations hearing.

The arbitration hearing shall take place in San Bernardino County, California.

The cost of the arbitration shall be paid by WVBW, HDWD, and MWA equally. The results of such arbitration may be appealed by any Party hereto to the Court having jurisdiction over the Judgment, and thereafter as provided by law.

Section 20. Attorneys Fees – The Court having jurisdiction over the Judgment, or the panel of arbitrators shall assign and determine which Party, if any, shall pay attorneys fees and costs.

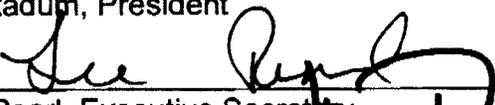
Section 21. Amendments – This is an entire Agreement and supersedes only those prior agreements oral or written between the Parties to this Agreement regarding the subject matter thereto, and cannot be amended unless in writing, with specific reference hereto, and cannot be amended unless in writing, with specific reference hereto by Parties authorized to be charged. Failure by any Party to enforce any provisions shall not constitute a waiver of said Party's right to enforce subsequent violation of the same or any other provisions.

Section 22. Inurement – This Agreement shall not be assigned by any Party without the express written consent of the other Parties hereto. This Agreement shall be binding upon and inure to the benefit of the successors and assigns of the Parties hereto.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed by its authorized officers.

WARREN VALLEY BASIN WATERMASTER

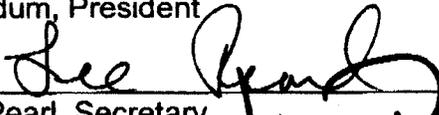
By: 
Bob Stadum, President

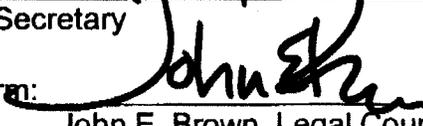
Attest: 
Lee Pearl, Executive Secretary

Approved as to Form: 
John E. Brown, Legal Counsel

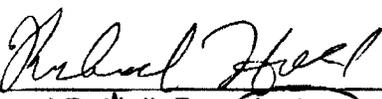
HI-DESERT WATER DISTRICT

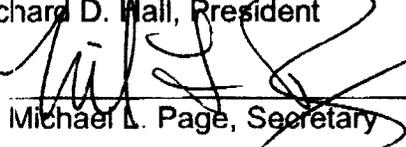
By: 
Bob Stadum, President

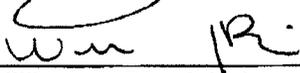
Attest: 
Lee Pearl, Secretary

Approved as to Form: 
John E. Brown, Legal Counsel

MOJAVE WATER AGENCY

By: 
Richard D. Hall, Resident

Attest: 
Michael L. Page, Secretary

Approved as to Form: 
William J. Brunick, Legal Counsel

RESOLUTION NO. 90-4

A RESOLUTION OF THE HI-DESERT WATER DISTRICT
REQUIRING THE INSTALLATION OF ULTRA-LOW FLOW
CONSERVATION FIXTURES IN ALL NEW CONSTRUCTION AND
WHEN REPLACING FIXTURES IN EXISTING STRUCTURES
AND UPON CHANGE OF OWNERSHIP OR USE

WHEREAS, the Warren Valley Basin is in severe overdraft and is continuing to be depleted at a rate far exceeding the ability to keep up with growing demand; and

WHEREAS, the continued rate of growth will speed up the depletion of the Warren Basin; and

WHEREAS, there is a need to reduce the impact that new services will have on our water supply; and

WHEREAS, certain household fixtures designed to reduce water use have been thoroughly tested with adequate national standards applied and are currently available; and

NOW, THEREFORE, for purposes of reducing the impact of new services on future supply, the Board of Directors of the Hi-Desert Water District does hereby ordain as follows:

SECTION 1. Requirements

(A) Prior to the issuance of a Will Serve from the Hi-Desert Water District, for both commercial and residential applicants, applicant must identify types of fixtures to be installed and sign an agreement that affirms that such fixtures will be installed. Upon completion of the project, a representative of the Hi-Desert Water District shall inspect the facilities and certify that the required and designated fixtures have been installed. Service shall be contingent upon such certification and will not be provided until such fixtures are installed and reinspected.

(B) Any building which is being substantially remodeled (i.e., any building where plumbing fixtures are removed and replaced because of structural or cosmetic remodeling; or, any building which makes structural changes other than original construction affecting plumbing) shall replace existing fixtures with Ultra-Low Flow toilets or water closets, and showerheads and faucets.

(C) Prior to transfer of ownership of either commercial or residential property, all existing structures shall be retrofitted, if not already so, with ultra-low flow toilets or water closets, showerheads and faucets that conform to the standards expressed in this ordinance. Prior to transfer of water service, both the transferor and the transferee shall certify in writing that the property has been retrofitted in conformance with this ordinance, and service shall be transferred and continued upon inspection and certification of said property by a representative of the Hi-Desert Water District.

(D) Upon change of user of property, as in rental properties changing tenants, owner shall sign certification that said property has been retrofitted, if not already so, and shall have service transferred and continued upon inspection of said property by a representative of the Hi-Desert Water District.

SECTION 2. Required certification of fixtures

The plumbing fixtures and devices required to be installed pursuant to this Ordinance shall be certified by the International Association of Plumbing and Mechanical Officials and comply with all applicable American-National Standards Institute standards.

SECTION 3. Requirements of water saving fixtures

(A) Toilets, water closets, urinals and flushometer valves designed to use a maximum of one and one-half (1.5) gallons of water per flush shall be utilized only.

(B) Showerheads, except where provided for safety reasons, shall be installed and will not allow a water flow rate in excess of 2.75 gallons per minute. The flow limitation device must be a permanent and integral part of the showerhead and must not be removeable to allow flow rates in excess of 2.75 gallons per minute.

(C) Faucets (general) installed in all lavatory, kitchen and bar sinks shall be equipped with a flow control device or aereator which will not allow a water flow rate in excess of 2.75 gallons per minute.

(D) Faucets (public restrooms) in addition to the general requirements set forth in subsection (C) above, lavatory faucets located in restrooms intended for the use by the general public shall be of the metering or self-closing type.

SECTION 4. Specific requirements for new construction

(A) Hot water recirculating units shall be required in all new construction and they must be equipped either with a timer or a thermostat for energy conservation. And all pipes shall be wrapped and insulated.

(B) All new construction prior to issuance of will serve shall submit plans to the District showing exterior landscape development and are required to comply with the low water use guidelines established by the District.

(C) Water-cooled refrigerating systems must utilize the best available technology for water savings and shall be equipped with one or a combination of the following devices:

1. Cooling tower
2. Evaporative condenser
3. An acceptable water recirculating device

(C1) The provisions of subsection (C) above, shall not apply to systems with an aggregate total of two tons or less or a rating of two horsepower or less and located at one street address. Multiple dwelling unit structures are considered as one street address. However, such systems must be equipped with:

1. Water regulation valves adjusted to use the minimum amount of water
2. Thermostats that will positively stop water flow when off

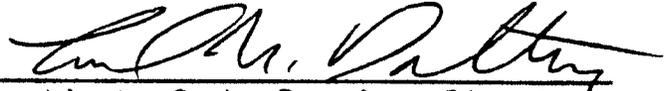
Section 5.

Allowances of variance can be set by the General Manager for a specific amount of time and until the requirement can be met if certain products are not available at the time required. But changes must be made within a 90 day period and are subject to inspection by a representative of the District.

Section 6.

In the event the building inspector finds that the plumbing situation, drainage situation is such that there is not sufficient water to flow the sewage to the septic tank, there will be an allowance made.

PASSED, APPROVED AND ADOPTED this 21st day of March, 1990



President of the Board of Directors
of the Hi-Desert Water District

ATTEST:



Secretary of the Board of Directors
of the Hi-Desert Water District

(SEAL)

Ordinance No. 72
An Ordinance of the Board of Directors of the Hi-Desert Water District
Establishing Conditions, Prohibitions, and Restrictions on
Landscape Irrigation Meters

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE HI-DESERT WATER DISTRICT AS FOLLOWS:

SECTION 1. Authority.

This Ordinance is adopted pursuant to the authority granted by the state legislature pursuant to California Water Code Sections 375 through 377.

SECTION 2. Findings.

- A. Hi-Desert Water District is the only retail supplier of municipal water for the benefit of persons and entities within its service area, including the Town of Yucca Valley and a portion of the County of San Bernardino.
- B. An adequate water supply is necessary to the longevity of the community serviced by Hi-Desert Water District.
- C. The conditions, prohibitions, and restrictions on landscape irrigation meters set forth in this ordinance are necessary to reduce the quantity of water used within Hi-Desert Water District's service area for the purpose of conserving the Hi-Desert Water District's water supplies to meet existing and projected water demands.
- D. This ordinance is hereby found to be a Class 8 Categorical Exemption under the California Environmental Quality Act, California Public Resources Code Section 21000, et seq. (CEQA). Specifically, this ordinance is exempt from CEQA under Title 14 California Code of Regulations Section 15308, which exempts actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment.

SECTION 3. Applicability.

This ordinance applies to all new and rehabilitated landscaping installed after the effective date of this ordinance for public agency projects and private development projects that

are served by a separate irrigation meter, including but not limited to, industrial, commercial, and recreational projects, and developer-installed landscaping in multi-family residential developments, and any other landscaped areas served by a separate irrigation meter.

SECTION 4. Exceptions.

This ordinance shall not apply to:

- (1) Homeowner-installed landscaping at single-family and multi-family projects.
- (2) Cemeteries.
- (3) Registered historical sites.
- (4) Ecological restoration projects and mined-land reclamation projects that do not require a permanent irrigation system.
- (5) Any project with a Landscaped Area less than 500 square feet.

SECTION 5. Definitions.

The words used in this ordinance have the meaning set forth below:

- A. "ALLOWABLE PERCENTAGE" or "ET ADJUSTMENT FACTOR" means a factor of 0.66 that, when applied to Reference Evapotranspiration adjusts for plant factors and Distribution Uniformity (as set forth in Exhibit A), and determines the Maximum Allowable Water Budget for an individually metered Landscaped Area.
- B. "ALLOWABLE PERCENTAGE" or "ET ADJUSTMENT FACTOR" for Recreational Areas, means a factor of 0.85 that, when applied to Reference Evapotranspiration adjusts for plant factors and Distribution Uniformity, and determines the Maximum Allowable Recreation Area Water Budget.
- C. "CROP COEFFICIENT" OR "KC" means a factor, expressed as a decimal, that, when multiplied by Reference Evapotranspiration, estimates the amount of water used by a specific plant. A list of plants and their corresponding KC values is set forth in the Water Use Classification of Landscape Species (WUCOLS) Guide published by the University of California Cooperative Extension. A copy of the WUCOLS Guide will be maintained in the Hi-Desert Water District's headquarters for review and photocopying at the applicant's expense.
- D. "ESTIMATED ANNUAL WATER USE" or "EAWU" means the Estimated Annual Water Use for the Landscaped Area as calculated in the Landscape

Documentation Package pursuant to Section 7 below. It is based upon Reference Evapotranspiration, the Crop Coefficient of the plants involved, and the size of the Landscaped Area. The EAWU for a Landscaped Area equals the sum of the estimated water use of all Hydrozones in the project's Landscaped Areas. The EAWU for the Landscaped Area shall not exceed the Maximum Allowable Water Budget for the Landscaped Area. The method for calculating Estimated Annual Water Use is set forth in Exhibit "A."

- E. "ESTABLISHMENT PERIOD" means the first 12 months after installation of the plants in the Landscaped Area.
- F. "EVAPOTRANSPIRATION" means the quantity of water evaporated from adjacent soil surfaces and transpired by plants during a specific time.
- G. "HYDROZONE" means a portion of the Landscaped Area having plants with similar water needs that are served by a valve or a set of valves with the same schedule.
- H. "LANDSCAPE DOCUMENTATION PACKAGE." For projects with a Landscaped Area between 500 and 2,500 square feet, a Landscape Documentation Package means completed worksheets including all information as specified in Exhibits A, B and C to this Ordinance. For projects with a Landscaped Area of 2,500 square feet or greater, a Landscape Documentation Package means a Title Sheet, a Layout, a Planting Plan, an Irrigation Plan, and completed worksheets including all information as specified in Exhibits A, B and C to this Ordinance signed by a California registered landscape architect, if required by the District. For Recreational Areas, a Landscape Documentation Package means a Planting Plan, an Irrigation Plan and completed worksheets including all information specified in Exhibits A, C and D to this Ordinance signed by a California registered landscape architect, if required by the District.
- I. "LANDSCAPED AREA" means
Only that area where landscape material will be planted and served by an individual irrigation meter.
- J. "MAXIMUM ALLOWABLE WATER BUDGET" means the annual maximum allowable water use calculated for the Landscaped Area pursuant to Section 7. It is based upon the Reference Evapotranspiration, the Allowable Percentage, and the size of the Landscaped Area. The method for calculating Maximum Allowable Water Budget is set forth in Exhibit "B."
- K. "MAXIMUM ALLOWABLE RECREATIONAL AREA WATER BUDGET" means the annual maximum allowable water use calculated for the Recreational

Area pursuant to Section 7. It is based upon the Reference Evapotranspiration, the Allowable Percentage defined for the Recreational Area, and the size of the Recreational Area. The method for calculating Maximum Allowable Recreational Area Water Budget is set forth in Exhibit "D."

- L. "MONTHLY ADJUSTMENT FACTOR" or "MAF" means a factor, expressed as a decimal, that, when multiplied by the Maximum Allowable Water Budget for a Landscaped Area, determines the Monthly Maximum Allowable Water Budgets for that project. MAFs are based upon monthly historic average Reference Evapotranspiration for the Victorville California Irrigation Management Information System ("CIMIS") Service Area, Sunset Climate Zone 11, and WULCOS Guide Region No. 5 (High and Intermediate Desert Region). The MAFs for the twelve months of the year are listed in Exhibit "C."
- M. "MONTHLY MAXIMUM ALLOWABLE WATER BUDGETS" means the maximum water use allowable for each calendar month for the Landscaped Area as calculated pursuant to Section 7. The method for calculating Monthly Maximum Allowable Water Budgets is set forth in Exhibit "C."
- N. "RECREATIONAL AREA" means a Landscaped Area intended for use for active play or recreation such as sports fields or school yards.
- O. "REFERENCE EVAPOTRANSPIRATION" means a standard measurement of environmental parameters which affect the water use of plants. Reference Evapotranspiration is given as 74.4 inches of water per year, and represents the annual historic average evapotranspiration of a large field of 4"-6" actively growing cool-season grass that is well watered and located in the area of San Bernardino County. Reference Evapotranspiration is used as the basis of determining the Maximum Allowable Water Budget so that regional differences in climate can be accommodated.
- P. "REHABILITATED LANDSCAPING" means any modifications to an existing Landscaped Area that require a permit and result in a Landscaped Area 500 square feet or larger.
- Q. "VALVE" means a device used to control the flow of water in the irrigation system.

SECTION 6. Condition for Issuance of Landscape Irrigation Meters.

As a condition of the issuance of a landscape irrigation meter, the applicant shall submit plans for the proposed landscaping and irrigation of any project subject to this ordinance to Hi-Desert Water District for review and approval in conformity with the procedure set forth in

Section 7. The plans must conform to the provisions of this ordinance. No landscape irrigation meter will be issued until the Hi-Desert Water District approves the Monthly Maximum Allowable Water Budgets for the Landscaped Area. Any plants may be used in the Landscaped Area, providing the Estimated Annual Water Use for the Landscaped Area does not exceed the Monthly Maximum Allowable Water Budgets for the Landscaped Area.

SECTION 7. Procedures For Issuance of Landscape Irrigation Meters.

- A. When applying to the Hi-Desert Water District for irrigation water service to a project subject to this ordinance, the applicant must provide a completed Landscape Documentation Package for the project as specified in Section 5(H) of this Ordinance. No irrigation water service will be authorized by the Hi-Desert Water District for any project subject to this ordinance until the District reviews and approves the Landscape Documentation Package in accordance with this ordinance.
- B. The applicant must also submit a deposit, as established by the District, to cover all estimated Hi-Desert Water District fees for processing the application.
- C. After receipt of a complete Landscape Documentation Package and payment in full of the District's processing fee, the Hi-Desert Water District will determine the Monthly Maximum Allowable Water Budgets for the Landscaped Area.
- D. If the Hi-Desert Water District determines that the Estimated Annual Water Use for the project does not exceed the Monthly Maximum Allowable Water Budgets for the project, the Hi-Desert Water District will approve the application and execute a Landscape Irrigation Water Agreement for the project substantially in the form attached as Exhibit E to this Ordinance. The executed Landscape Irrigation Water Agreement must be signed by the applicant and returned to Hi-Desert Water District together with payment in full of applicable water service fees in order to be effective. A project that does not exceed its Maximum Allowable Water Budget shall be exempt from the restrictions on irrigation times included in Section 3(D) of Hi-Desert Water District Ordinance No. 68.
- E. If the Hi-Desert Water District determines that the Estimated Annual Water Use for the project exceeds the Monthly Maximum Allowable Water Budgets for the project, then the District will deny the application and provide the applicant with a written confirmation of its determination, including an explanation of the basis for its determination.
- F. Hi-Desert Water District's landscape plan check program is not intended to ensure the adequacy, efficiency, or functional ability of any landscaping or irrigation system. The intent of the landscape plan check is to ensure that all individually-

metered landscape irrigation projects applicable to this ordinance are assigned Monthly Maximum Allowable Water Budgets, and to prohibit use of water for landscape irrigation purposes in excess of such assigned Monthly Maximum Allowable Water Budgets.

SECTION 8. Prohibitions and Restrictions on Landscape Irrigation Meters.

- A. Use of water in excess of the Monthly Maximum Allowable Water Budgets established for an irrigation meter is prohibited and shall be subject to restriction and/or other penalty in accordance with this ordinance.**
- B. After the twelve-month Establishment Period, each Landscaped Area must use water within the limits of the Monthly Maximum Allowable Water Budgets assigned to it pursuant to Section 7.**
- C. Written notice of water use in excess of the applicable Monthly Maximum Allowable Water Budgets will be sent by the Hi-Desert Water District to the billing address for the subject irrigation meter. Upon notification of such excess water use, the customer must take whatever corrective action is necessary within a reasonable period of time to bring the water usage into conformity with the applicable Monthly Maximum Allowable Water Budgets.**
- D. After the Establishment Period, any Landscaped Area that exceeds its Monthly Maximum Allowable Water Budgets for two consecutive months will be subject to one (1) or more of the following penalties, to be imposed by the General Manager of the Hi-Desert Water District with the right of appeal to the Board of Directors of the Hi-Desert Water District:
 - (1) Imposition of a penalty water rate on water usage in excess of the applicable Monthly Maximum Allowable Water Budgets.**
 - (2) Restriction or discontinuance of the irrigation water service until it is demonstrated to the General Manager's satisfaction that the irrigation system and/or landscaping have been corrected to use water in accordance with the Monthly Maximum Allowable Water Budgets. All costs of service termination and reactivation must be paid by the customer.**
 - (3) Commencement of legal proceedings to abate the violation as a waste and unreasonable use of water.****
- E. After the Establishment Period, all Landscaped Areas shall be field audited in accordance with current State of California Department of Water Resources guidelines for water auditing, to determine the "Distribution Uniformity" of the**

irrigation system, as that term is defined in the guidelines. An irrigation system that fails to meet or exceed a Distribution Uniformity of 0.625 shall be modified and re-audited. Landscaped Areas between 500 and 2,500 square feet shall be exempt from the requirement of a field audit unless and until water use after the Establishment Period exceeds the Monthly Maximum Allowable Water Budgets for two consecutive months.

- F. Hi-Desert Water District shall not in any way be held liable or responsible for any claims or losses related to imposition of any penalty under this ordinance.

SECTION 9. Ordinance Controlling.

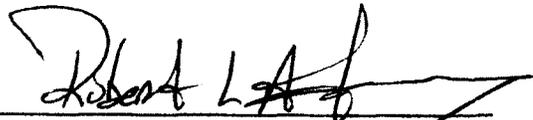
The provisions of this ordinance shall prevail and control in the event of any inconsistency between this ordinance and any other rule, regulation or code of Hi-Desert Water District, except as later amended by resolution or emergency rule.

Ordinance No. 70 is hereby rescinded.

SECTION 10. Effective Date.

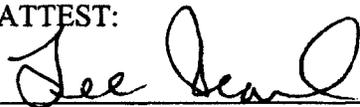
This ordinance shall be effective upon its adoption.

ADOPTED this 18th day of July, 2001.



President of the Hi-Desert Water District
and of the Board of Directors thereof

ATTEST:



Secretary of the Hi-Desert Water District
and of the Board of Directors thereof

(SEAL)

EXHIBIT A
ESTIMATED ANNUAL WATER USE

NOTE: The variables used in the following calculations are defined in Section 5 of Ordinance No. 72.

The estimated annual water use for the entire Landscaped Area per individual irrigation meter shall be determined by following these steps:

- STEP 1 Calculate the estimated annual water use (EAWU) for each hydrozone in the Landscaped Area (per the formula in this exhibit).
- STEP 2 Add the EAWU of all hydrozones in the Landscaped Area.
- STEP 3 Round off the sum of EAWU for all hydrozones to the nearest whole number as follows: if $\geq .5$, round UP; if $\leq .49$, round DOWN.

The estimated annual water use of a hydrozone can be calculated using the following formula:

$$\text{EAWU} = \frac{(74.4) (KC) (HA)}{(DU)(1200)}$$

EAWU = Estimated Annual Water Use in billing units per year (one billing unit = 100 cubic feet = 748 gallons)

74.4 = Reference evapotranspiration in inches of water per year

KC = Crop coefficient (for a specific plant from the Water Use Classification of Landscape Species ("WUCOLS" Guide)

HA = Hydrozone Area in square feet

DU = Distribution Uniformity of the irrigation system expressed as a decimal (found later in this exhibit)

1200 = Conversion factor to produce an answer in billing units (to convert the answer to gallons, multiply the formula by 748)

Typical irrigation system Distribution Uniformity (DU) for the various types of irrigation heads or emitters are expressed in the following decimals:

Standard Spray Sprinkler Head	=	.65
Single Nozzle Rotary Head	=	.75
Multiple Nozzle Rotary Head	=	.85
Micro Spray Sprinkler Head	=	.80
Standard Bubbler Head in Basin	=	.75
Pressure Compensating Bubbler	=	.95
Non-Compensating Drip Emitter	=	.70
Pressure Compensating Drip Emitter	=	.90

EXAMPLE CALCULATION for a small, individually-metered landscape project with two hydrozones and a total Landscaped Area of 8,000 square feet:

EAWU for hydrozone no. 1	=	$\frac{(74.4)(0.5)(3,000)}{(0.9)(1,200)}$	=	103.33 billing units
EAWU for hydrozone no. 2	=	$\frac{(74.4)(0.5)(5,000)}{(0.7)(1,200)}$	=	221.43 billing units
SUBTOTAL	=	103.33 + 221.43	=	324.76 billing units (round off to nearest whole number per previous instructions)
TOTAL EAWU FOR THIS PROJECT	=		=	325 billing units per year

NOTE: The EAWU for the total established Landscaped Area per individual irrigation meter SHALL NOT EXCEED the annual Maximum Allowable Water Budget for that Landscaped Area (refer to EXHIBIT B).

EXHIBIT B
ANNUAL MAXIMUM ALLOWABLE WATER BUDGET

NOTE: The variables used in the following calculations are defined in Section 5 of Ordinance No. 72.

The annual Maximum Allowable Water Budget for the total Landscaped Area per individual irrigation meter shall be determined by following these steps:

STEP 1 Calculate the annual Maximum Allowable Water Budget (AMAWB) (per the formula in this exhibit).

STEP 2 Round off the AMAWB to the nearest whole number as follows: if $\geq .5$, round UP; if $\leq .49$, round DOWN.

The annual Maximum Allowable Water Budget for the total Landscaped Area per individual irrigation meter shall be calculated using the following formula:

$$\text{AMAWB} = \frac{(74.4)(0.66)(\text{TLA})}{1200}$$

AMAWB = Annual Maximum Allowable Water Budget in billing units per year (one billing unit = 100 cubic feet = 748 gallons)

74.4 = Reference evapotranspiration in inches of water per year

0.66 = Allowable percentage

TLA = Total Landscaped Area per meter in square feet

1200 = Conversion factor to produce an answer in billing units (to convert the answer to gallons, multiply the formula by 748)

EXAMPLE CALCULATION for an individually-metered landscape project with a total Landscaped Area of 40,000 square feet:

$$\begin{aligned} \text{AMAWB} &= \frac{(74.4)(0.66)(40,000)}{1200} \\ &= (1636.80 \text{ rounded off to the nearest whole number per previous instructions}) \\ &= 1637 \text{ billing units per year} \end{aligned}$$

**EXHIBIT C
MONTHLY MAXIMUM ALLOWABLE WATER BUDGET**

NOTE: The variables used in the following calculations are defined in Section 5 of Ordinance No. 72.

The schedule of Monthly Maximum Allowable Water Budgets for the total Landscaped Area per individual irrigation meter shall be determined by following these steps:

STEP 1 Calculate the Monthly Maximum Allowable Water Budget (MMAWB) for each month of the year (per the formula in this exhibit)

STEP 2 Round off each MMAWB to the nearest whole number as follows: if $\geq .5$, round UP; if $\leq .49$, round DOWN

Each Monthly Maximum Allowable Water Budget for the total Landscaped Area per individual irrigation meter shall be calculated using the following formula:

- MMAWB** = **(AMAWB)(MAF)**
- MMAWB** = **Monthly Maximum Allowable Water Budget in billing units per the month chosen to be calculated**
- AMAWB** = **Annual Maximum Allowable Water Budget in billing units per year (rounded off to the nearest whole number and calculated per instructions in EXHIBIT B or EXHIBIT D for Recreational Areas)**
- MAF** = **Monthly Adjustment Factor for the month chosen to be calculated and taken from the following table:**

Jan	0.031	May	0.125	Sep	0.100
Feb	0.042	Jun	0.134	Oct	0.079
Mar	0.066	Jul	0.151	Nov	0.038
Apr	0.090	Aug	0.132	Dec	0.024

EXAMPLE CALCULATION for the MMAWB for the month of August for an individually-metered landscape project with a total Landscaped Area of 40,000 square feet and an AMAWB of 1637 billing units per year:

$$\begin{aligned} \text{MMAWB} &= (1637)(0.132) \\ &= (216.08 \text{ rounded off to the nearest whole number per previous instructions}) \\ &= 216 \text{ billing units for the month of August} \end{aligned}$$

EXHIBIT D
MAXIMUM ALLOWABLE RECREATIONAL AREA WATER BUDGET

NOTE: The variables used in the following calculations are defined in Section 5 of Ordinance No. 72.

The annual Maximum Allowable Water Budget for the total Recreational Area Landscaped Area per individual irrigation meter (or combined with the meter for other Landscape Areas on the same site/project), shall be determined by following these steps:

- STEP 1** Calculate the annual Maximum Allowable Recreational Area Water Budget (AMARAWB) (per the formula in this exhibit)
- STEP 2** Combine the AMARAWB with the AMAWB when one exists
- STEP 3** Round off the AMARAWB (or the combined number) to the nearest whole number if $\geq .5$, round UP; if $\leq .49$, round DOWN.

The annual Maximum Allowable Water Budget for the total Recreational Area Landscape Area per individual irrigation meter (or combined with the meter for other Landscape Areas on the same site/project), shall be calculated using the following formula.

$$\text{AMARAWB} = \frac{(74.4)(0.85)(\text{TLA})}{1200}$$

AMARAWB = Annual Maximum Allowable Recreational Area Water Budget in billing units per year (one billing unit = 100 cubic feet = 748 gallons)

74.4 = Reference evapotranspiration in inches of water per year

0.85 = Allowable percentage

TLA = Total Landscape Area per meter in square feet

1200 = Conversion factor to produce an answer in billing units (to convert the answer to gallons, multiply the formula by 748)

EXAMPLE CALCULATIONS for an individually-metered landscape project with a total Recreational Area Landscape Area of 43,560 square feet:

$$\begin{aligned} \text{AMARAWB} &= \frac{(74.4)(0.85)(43,560)}{1200} \\ &= (2295.61 \text{ rounded off to the nearest whole number per previous instructions}) \\ &= 2296 \text{ billing units per year} \end{aligned}$$

**EXHIBIT E
LANDSCAPE IRRIGATION WATER AGREEMENT**

Applicant: _____

Legal Description: Section __, Lot __, APN

Application has been made and all fees paid to Hi-Desert Water District for landscape irrigation water service to the above described parcel. Upon request of the Applicant within 12 months after this date, an irrigation meter will be installed and irrigation water service shall be served upon demand. Otherwise this letter shall be null and void, and the Hi-Desert Water District shall have no obligation to serve.

Irrigation service is conditioned upon Applicant's compliance with the terms and conditions included in the District's Ordinance No. 72. The Monthly Maximum Allowable Water Budgets established for the above-described parcel pursuant to Ordinance No. 72 are as follows:

January	_____	May	_____	September	_____
February	_____	June	_____	October	_____
March	_____	July	_____	November	_____
April	_____	August	_____	December	_____

Use of water in excess of the Monthly Maximum Allowable Water Budgets is prohibited and shall be subject to restriction and/or other penalty in accordance with Ordinance No. 72. In determining whether a Monthly Maximum Allowable Water Budget has been exceeded, adjustments will be made as appropriate to accommodate extraordinary fluctuations in the actual evapotranspiration rate.

Sincerely,

HI-DESERT WATER DISTRICT

General Manager

I understand, agree to, and accept the above described conditions of irrigation water service by the Hi-Desert Water District. I represent that I am authorized by the Applicant to execute this agreement.

Applicant: _____ Date: _____

AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE
HI-DESERT WATER DISTRICT, SAN BERNARDINO CALIFORNIA,
ESTABLISHING PROHIBITIONS AND RESTRICTIONS ON THE
USE OF WATER AND RESCINDING ORDINANCE NO. 67

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE HI-DESERT
WATER DISTRICT AS FOLLOWS:

SECTION 1. Recision The Board of Directors of the Hi-Desert
Water District hereby rescinds Ordinance No. 67 in its entirety.

SECTION 2. Findings

- A. A water shortage condition continues to exist within the Hi-Desert Water District due to the continuing overdraft of the Warren Valley Basin; and
- B. An adequate water supply is important to the longevity of the community served by Hi-Desert Water District, and all water consumers should know and act with this knowledge in regard to the use of water; and
- C. The water uses prohibited and restricted by this Ordinance are hereby determined to be non-essential.

SECTION 3. Prohibitions and Restrictions on the Use of
Water

- A. No hose washing of sidewalks, walkways, driveways, parking areas, patios, porches or verandas, or any hardscape, unless required by a regulatory agency for health or safety reasons;
- B. No water shall be used to clean, fill, operate or maintain levels in decorative fountains, unless such water is part of a recycling system;
- C. No person shall knowingly permit water to leak from any facility within his/her premises;
- D. No use of potable water is permitted to irrigate, water or sprinkle grass, lawns, groundcover, shrubbery, crops, vegetation and trees between the hours of 9:00 a.m. and 5:00 p.m. during the high use season which begins June 1 and terminates September 30 of each year. During this season, watering shall

be permitted on any three(3) days of the week, of the customer's choice, but shall not exceed three(3) days of any week.

In the low season beginning October 1 and ending May 31, watering is permitted at the discretion of the individual customer according to the weather conditions taking into account temperature and wind factors. During this season, watering shall be permitted on any three(3) days of the week, of the customer's choice, but shall not exceed three(3) days of any week.

- E. Water shall be allowed for construction purposes, including but not limited to debrushing of vacant land, compaction of fills and pads, trench backfill and other construction uses, but shall be used in an efficient manner and not result in run-off. A representative of the owner or builder shall be on site during such water use. The use of "rainbird" type sprinklers is not recommended.
- F. Potable water from within the District shall not be used to maintain dirt roads without application to the District.
- G. Restaurants shall provide water to customers only upon request.
- H. Non-commercial washing of privately owned vehicles, trailers, motor homes, busses or boats will not be permitted except from a bucket and a hose equipped with an automatic shut-off nozzle which may be used for a quick rinse.
- I. No use of water for any purpose, except as provided herein, which results in flooding or run-off onto hardscape, driveways, streets, adjacent lands or into gutters shall be permitted.

SECTION 4. Penalty for Violation The penalties for violating the prohibitions and restrictions set forth in Section 3 of this subject Ordinance are as follow:

- A. First Violation - Warning notice
- B. Second Violation - Written notice of second violation, and a warning of flow restriction device or possible shutoff upon a Third Violation. In addition, upon a commercial or multi-family service receiving the subject Second Violation, the District

may install an irrigation meter. Within twenty(20) days of such installation, the commercial or multi-family service must have undertaken to install all the necessary connections to the irrigation meter.

- C. Third Violation - The General Manager may direct the installation of a flow restriction device or shut-off of service for a period of no less than 48 hours.

SECTION 5. Appeal

- A. Any person wishing to appeal parts of this Ordinance shall do so in writing to the District.
- B. The Conservation Coordinator shall review and make decisions on the granting of the appeal and the issuance of a variance.
- C. If an applicant for appeal disagrees with the decision, the request may be appealed to the General Manager.
- D. If the General Manager and the applicant are unable to reach an accord, then the request for appeal shall be heard by the Conservation Committee of the Board of Directors who shall then refer it to the Board of Directors at a regularly scheduled meeting with a recommendation for approval or denial.
- E. All appeals shall be reported monthly to the Board of Directors as part of the Manager's Report.

SECTION 6. Future Restrictions

All users of water within the District's service area are hereby put on notice that further prohibitions and restrictions may hereafter become necessary, and that such users shall be subject to all further prohibitions, restrictions, rules and regulations as may be imposed.

Such changes may be instituted by resolution and shall not require the rescinding of this Ordinance as a whole but shall allow the change, through resolution, of parts.

Subsequent Emergency Orders shall supersede parts of this Ordinance when there is a conflict.

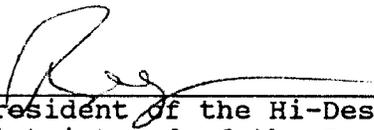
SECTION 7. Definitions The terms user, consumer and customer used herein shall apply to every person, firm, partnership, association, corporation, county, state or local agency, political subdivisions, district or entity of every kind within the District service area except the Hi-Desert Water District.

SECTION 8. Purpose and Intent It is the purpose and intent of this Ordinance to limit the use of water to beneficial purposes only and to prohibit and restrict the unnecessary and wasteful use of water except to the extent expressly authorized by the terms of this Ordinance.

SECTION 9. Ordinance Controlling The provisions of this Ordinance shall prevail and control in the event of any inconsistency between this Ordinance and any other rule, regulation or code of this District, except as later amended by resolution or emergency rule.

SECTION 10. Effective Date This Ordinance shall be effective upon its adoption.

ADOPTED this 17th day of June, 1992



President of the Hi-Desert Water District and of the Board of Directors thereof.

ATTEST:



Secretary of the Hi-Desert Water District and of the Board of Directors thereof.

(SEAL)



Subject	Policy Number	Date Adopted
Issuing "Will Serve" Commitment Letters and the Installation of New Water Services and Rescinding Policy 23-03.	26-04	03-24-04
<p>Background:</p> <p>In December, 2002, Policy 23-02 was adopted by the Board due to the District's recharge activities since 1995, the potential for new growth in the community, and the adoption of SB 221 by the California State Legislature. This policy rescinded Policy No. 3-90.</p> <p>SB 221 became effective in October, 2001. This bill requires developers constructing 500 dwelling units or more to file with the Department of Real Estate evidence supporting the existence of sufficient water supplies for their subdivision over the next 20 years. Upon request from the appropriate party and within 90 days, the District will be required to provide this information, i.e. Urban Water Shortage Contingency Plan, Warren Valley Basin Management Plan, Water Supply Master Plan, etc.</p> <p>In December, 2003, the Court for the Watermaster approved an alternate proposal for allocating water meters. The 2% method was replaced with a program that bases growth according to water recharged in the Warren Valley Basin. Under the 2% growth scenario, the limitation was directly placed on water demand from year to year. In essence, water demand for each consecutive year could only increase by 2%. In order to effectively administer this program, the water demand allotted for any given year would require a conversion to water meters. In the event the allotted water meters were sold, no more would be available until the following year when a new allotment was calculated. However, unsold water meters could be rolled over to the following year less the previous 5th year - that would in essence create a reserve of water meters.</p> <p>The primary difference between the 2% growth scenario and the alternative approved by the Court is the direct relationship between groundwater in reserves and actual growth. The alternative removes all restrictions on growth, unless certain water reserves in the groundwater basin reach a predetermined level.</p> <p>Policy:</p> <p>It is the Policy of the Board of Directors of the Hi-Desert Water District that water meters issued shall be in accordance with the following staged conditions which shall be reviewed and updated every fiscal year (see Exhibit 'A'):</p>		

Stage 1 Condition – A 2% growth limitation would be implemented in the event water reserves in the Warren Valley Basin are equal to or fall below 5 years (500%) of water demand for that particular year. Attachment 4-1

Stage 2 Condition – A 1% growth limitation would be implemented in the event water reserves in the Warren Valley Basin are equal to or fall below 4 years (400%) of water demand for that particular year.

Stage 3 Condition – A 0% growth rate would be implemented in the event water reserves in the Warren Valley Basin are equal to or fall below 3 years (300%) of water demand for that particular year.

The procedure for issuing new water meters is the following:

Non-Subdivision Developments

1. The issuance of new meters is subject to limitation pursuant to the previously mentioned staged conditions.
2. Upon payment of the Acquisition of Service fee (pre-paid meters excluded) and a completed application, the meter will be installed within 5 calendar days for installation levels 1 and 2. For installation levels of 3 and 4, the meter will be installed within 10 calendar days. If the meter cannot be installed within the prescribed time frame, the customer will be notified of an installation date.
3. The actual installation cost (pre-paid meters excluded) will be billed to the applicant and shall be due and payable within 30 days.
4. Meters will be installed within 12 months after payment of the Acquisition of Service fee. In the event the applicant seeks an extension beyond the 12 month period, a written request may be submitted to the District requesting additional time. Each request will be considered on a case by case basis.
5. In the event the water meter (pre-paid meters excluded) is not installed within the 12 month period, the District shall refund the Acquisition of Service fee and applicable installation charges, less an administrative fee, to the applicant.

Subdivision Developments (5 units or greater)

1. The issuance of new meters is subject to limitation pursuant to the previously mentioned staged conditions.
2. The District will comply with SB 221 (if applicable) by providing the necessary documentation by the time prescribed.
3. Will Serve commitment agreements will be consistent with information provided

pursuant to SB 221 (if applicable) and additionally contain any necessary conditions for providing future water service, i.e. infrastructure improvements.

Attachment 4-1

4. Upon payment of the Acquisition of Service fee, the meter will be installed within 5 calendar days for installation level 1. For installation levels of 2, 3 and 4, the meter will be installed within 10 calendar days.
5. The actual installation cost will be billed to the applicant and shall be due and payable within 30 days.
6. Meters will be installed within 12 months after payment of the Acquisition of Service fee. In the event the applicant seeks an extension beyond the 12 month period, a written request may be submitted to the District requesting additional time. Each request will be considered on a case by case basis.
7. In the event the water meter is not installed within the 12 month period, the District shall refund the Acquisition of Service fee and applicable installation charges, less an administrative fee, to the applicant.

Water Reserve Levels (Acre Feet)

F/Y	+ SWP Water Recharged	+ Natural Recharge	+ Septic Return	+ Irrigation Return	- BSCC, IMP, M.P. (1)	- HDWD WVB Demand	= Net Recharge	Cumulative Recharge	Reserve (Years)
1994/95	1,340	42	325	84	175	604	1,012	1,012	1.3
1995/96	3,586	83	650	167	330	1,440	2,716	3,728	2.1
1996/97	4,776	83	650	167	424	1,955	3,297	7,025	3.0
1997/98	3,962	83	650	167	353	1,786	2,723	9,748	4.6
1998/99	2,211	83	650	167	342	1,840	929	10,677	4.9
1999/00	3,633	83	650	167	258	2,248	2,027	12,704	5.1
2000/01	3,891	83	650	167	330	2,168	2,293	14,997	6.0
2001/02	2,361	83	650	167	503	2,034	724	15,721	6.2
2002/03	2,987	83	650	167	256	2,721	910	16,631	5.6
2003/04	2,859	83	650	167	240	2,372	1,147	17,778	6.8
2004/05	3,996	83	650	167	206	2,350	2,340	20,118	7.9
(1) BSCC (Blue Skies Country Club) = actual usage									
IMP (Institute of Mental Physics) = 14 AF									
M.P. (Minimal Producers) = 16 AF									

RESOLUTION NO. 90-3

**A RESOLUTION OF THE HI-DESERT WATER DISTRICT
ESTABLISHED AS AN EMERGENCY AND DROUGHT MEASURE
THAT IS RESPONSIVE TO DISTRICT PRODUCTION CAPABILITIES
IN ORDER TO MAINTAIN THE ABILITY TO PROVIDE FOR BASIC
DOMESTIC, HEALTH AND FIRE PROTECTION NEEDS**

WHEREAS, the Hi-Desert Water District describes as its priority of service to provide for the basic domestic, health and fire protection needs of the people within its service area,

WHEREAS, there are times when production system capabilities are inadequate to provide for these needs due to the increased demands placed upon the system by unnecessary uses of water,

WHEREAS, the definitions of what is considered to be unnecessary are: ornamental and recreational landscape, carwashing, filling of swimming pools and fountains, construction uses as defined below, wasteful practices as defined in Conservation Ordinance No. 61 and any other uses of water that may be liberally construed to be wasteful,

THE BOARD OF DIRECTORS hereby establish this resolution to insure that the District can continue to supply the basic needs of the community without threat to the production system, which is enacted as follows:

SECTION 1. Conditions of response

(A) On a daily basis, the General Manager shall receive a report concerning the supply system capacity. This report is based upon total system production capabilities in relation to the actual runtime of the system.

(B) Stage 1 responses will be placed in effect when the production capacity is at 80 percent for three (3) consecutive days, only one of which will include a weekend day. Stage 1 is then in effect for 15 days and is then subject to Board review to determine whether to remove or continue or increase restrictions.

(C) Stage 2 response is put in place when the production capacity reaches 90 percent and is in place until demand is reduced to less than 85 percent and the General Manager determines that it is prudent to reduce restrictions.

(D) Stage 3 automatically goes into effect in the event that any portion of the production and booster system fails resulting in a loss or reduction of service. Stage 3 also will be put in place in the event that all efforts to prevent the production capacity from reaching 100 percent fails. Stage 3 is reduced when full service is restored and production capacity is reduced to safe levels as determined by the General Manager.

SECTION 2. Restrictions regarding Stage Response

(A) Stage 1 restrictions:

1. Irrigation limited to one (1) day per week according to the odd or even designation of the last number of the street address.
 - a. Odd numbered addresses would be allowed to water once a week on Tuesdays following the same hour designations as allowed in Ordinance No. 61.
 - b. Even numbered addresses would be allowed to water once a week on Thursdays following the same hour designations as allowed in Ordinance No. 61.
2. No washing of privately owned vehicles, trailers, motorhomes, busses, or boats from a private facility. (This does not effect commercial carwashing but it is discouraged.)
3. No filling of pools or other unnecessary waste of water in accordance with Ordinance No. 61.
4. No water used for construction, including but not limited to debrushing of vacant land, compaction of fills and pads, trench, backfill and other uses, unless water is brought in from outside of the Warren Valley Basin.

(B) Stage 2 restrictions:

1. No irrigation.
2. No carwashing except approved commercial.
3. No construction water in accordance to part A4 above.
4. Requested voluntary reduction in home water use.

(C) Stage 3 restrictions:

1. All Stage 2 responses in effect.
2. Request community to reduce usage by 50 percent

SECTION 3. Enforcement

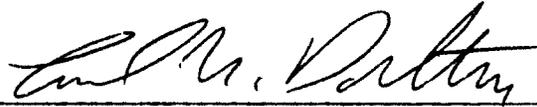
(A) Enforcement will be the same as in Ordinance No. 61. All previous notifications of violations of No. 61.

SECTION 4. Allowances of Variances

(A) Allowances of variances will be determined by the General Manager and be set within a specific time frame. Variances should be confined to requests concerning undue hardships or economic loss.

(B) Nurseries are not covered by this resolution but are requested to water only as absolutely needed.

PASSED, APPROVED AND ADOPTED this 21st day of March, 1990



President of the Board of Directors of
the Hi-Desert Water District

ATTEST:



Secretary of the Board of Directors
of the Hi-Desert Water District

(SEAL)

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Executive Summary

This document has been developed to comply with the provisions of the 2003 Urban Water Management Plan. The California Urban Water Management Planning Act requires a water supplier with over 3,000 customers or that supplies over 3,000 acre-feet of water per year to prepare an Urban Water Management Plan (UWMP).

An UWMP requires an update every five years. In 2000, Hi-Desert Water District (District) submitted the Warren Valley Basin Management Plan along with an addendum to comply with the Urban Water Management Plan provisions at that time. With the 2003 changes of the Urban Water Management Planning Act, the District has opted to compile a stand-alone document to serve as the UWMP.

This document has been developed utilizing a template guideline entitled “Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan” written by the California Department of Water Resources. Wherever possible, this document will be labeled and formatted as suggested by the guidebook.

Section 1 – Agency Coordination

The District provides water service to areas within the Town of Yucca Valley and portions of the unincorporated area within the County of San Bernardino. Both of these entities have received draft copies of the UWMP and have been provided the opportunity to comment.

Section 2 – Step 1: Appropriate level of planning for size of agency

The District was formed in 1962 through the combination of multiple water agencies that were formed during development of the Yucca Valley area. With a service area of approximately 50 square miles, the District serves approximately 25,000 people with just under 10,000 service connections.

The majority of the water supplied is derived from a groundwater basin known as the Warren Valley Basin. This basin provides 80% of the water source while a secondary groundwater basin known as the Means Valley Basin, provides the remaining 20% of the water source.

The District also purchases State Water Project water from the Mojave Water Agency, which is a State Water Project participant. Beginning in 1995, the water purchased from Mojave Water Agency has been used to recharge the Warren Valley Basin after many years of overdraft.

The Warren Valley Basin is a basin that was adjudicated in 1977 due to the continuous overdraft of this groundwater basin. Adjudication resulted in the following:

- Laid the foundation for the construction of the 71-mile Morongo Basin Pipeline from the State Water Project aqueduct in Hesperia, California to Yucca Valley.
- Development of the Warren Valley Basin Management Plan—initially developed in 1991. This document has served as a planning foundation for the District for many years.
- Allocated pumping restrictions for all wells located in the Warren Valley Basin.

Section 2 – Step 2: Service area information with 20-year projections

Population

For planning purposes, the District uses a growth rate of 23% of yearly water demand to estimate future population. For example, in 2005, the water demand, less water loss, was 2,669 AF. It is assumed that a typical household uses .28 AF per year. By dividing .28 AF into 2,669 AF, this would indicate there are approximately 9,532 active households within the District. Inactive services amounts to 7% or 667 for 2005. The population is derived by multiplying the number of households by 2.55 (10,199 x 2.55). The following table depicts current population and estimated population through the year 2030.

Population – Current and Projected (Table 1)

	2005	2010	2015	2020	2025	2030
Service Area Population	26,007	30,676	35,207	38,218	41,239	44,260

Climate

The following table provides the area’s climate information:

Climate (Table 2)

	Average Precipitation (in.)	Average Temperature (degF)
Jan	0.49	49.3
Feb	0.40	53.4
Mar	0.36	58.6
Apr	0.13	65.7
May	0.09	74.0
Jun	0.01	82.8
Jul	0.57	88.5
Aug	0.76	86.9
Sep	0.47	80.5
Oct	0.23	69.3
Nov	0.26	56.6
Dec	0.40	49.3
Totals	4.18	67.9

Section 2 – Step 3: Water sources

Currently, there are three sources of water for the Yucca Valley area; the Warren Valley Groundwater Basin, the Means Valley Groundwater Basin, and State Water Project water through the Morongo Basin Pipeline.

Warren Valley Groundwater Basin

Since the 1950's, the Warren Valley Basin appears to have been in an overdraft condition. As significant growth occurred in the Yucca Valley area, this overdraft condition worsened and groundwater levels declined at an accelerating rate. This overdraft problem has been known for many years. In its 1972 open-file report on the groundwater resources in the Yucca area, USGS estimated that the groundwater would be depleted by the year 2000.

Recognizing the severity and inevitability of the problem, as well as the need to create the institutional framework to address the problem, the District filed an adjudication complaint against the Yucca Water Company. In 1977, a Judgment (**Attachment 2-1**) was rendered by the Superior Court for the County of San Bernardino. In the judgment, the Court established water rights to the Basin groundwater. These rights were established at extraction levels above the safe yield of the Basin so that economic development could occur. This economic base could then be utilized to support the cost of a physical solution to the overdraft problem. The Court appointed

the Hi-Desert Water District as the Watermaster for the Basin and directed the Watermaster to develop a physical solution to the problem. The following groundwater pumping rights were established within the adjudication:

Groundwater Pumping Rights in AF (Table 3)

Party to the Adjudication	Pumping Right (AF/Yr)
Hi-Desert Water District	896
Yucca Water Company*	726
Blue Skies Country Club	585
Institute of Mentalphysics	80
16 Minimal producers	16

* The District acquired Yucca Water Company in 1990.

Over the following 28 years, several studies related to Basin hydrology and the importation of supplemental water from the State Water Project were developed.

As directed by the Court, the Watermaster had authorized the preparation of a basin management plan along with the administration and implementation. A viable plan to address the groundwater overdraft problems of the Warren Valley Basin was based on clear management objectives. These objectives were a guide for the Watermaster in delineating the appropriate activities of Watermaster as distinct from those of the District or other Basin water users.

The Warren Valley Groundwater Basin has an average safe yield of approximately 900 acre-feet per year. The apparent source of the Basin recharge is precipitation on the Basin and runoff from its limited watershed in addition to irrigation and septic return flows. Prior to the importation of State Water Project water, the Basin was seriously overdrafted and groundwater levels recently declined as much as 20 to 40 feet per year.

In 1983, Harding Lawson Associates performed a geophysical study in order to determine the configuration and prospective capacity of the Warren Valley Basin. Interpretations by the Consulting Groundwater Geologist for the Watermaster resulted in estimates that the Basin contained 45,000 to 59,000 acre-feet of remaining extractable water. Using a depth of 200 feet to the top of the aquifer, the total usable storage capacity of the Basin was estimated to be 160,000 acre feet. A depth of 200 feet was used since that was the depth to the groundwater table when data collection began, and a 200-foot depth avoids potential contamination from septic effluent and other contaminants.

Means Valley Groundwater Basin

In 1987, the District contracted with the Mainstream Water Development Company to locate and develop a well outside the Warren Valley Basin that is capable of producing 1,500 AFY (acre feet/year). Subsequently, the proposed well site was placed within the sphere of influence of the Desert View Water Agency, one of the predecessor agencies to the Bighorn-Desert View Water Agency (BDVWA). This well was successfully drilled on Bureau of Land Management property. The well can produce up to 2,100 AFY from the Means Valley Groundwater Basin, which much of District's Mesa area overlies. Prior to this water source, the Mesa area utilized approximately 800 AFY from the Warren Valley Basin. In 1989, the environmental issues related to this well

resulted in complex litigation with the BDVWA. This litigation prevented the production of water from the well. However, after prolonged negotiations with BDVWA, a settlement agreement, allowing the extraction of 800 AFY as well as 0.5 AFY for each new residential meter, was executed by both parties in January 1991. The well was put into operation in 1993.

State Water Project

State Water Project (SWP) water is the third water source for the Yucca Valley area. The District is located within Division 2 of the Mojave Water Agency (MWA), which currently has an entitlement of 75,800 AFY through the State Project Water system. Division 2 (Improvement District M) has entitlement to 7,257 AFY of State Project water. The District has a contractual entitlement of 4,282 AFY. At the time, the Morongo Basin Pipeline agreement was executed among the participants and MWA in 1990, MWA’s entitlement was 50,800 AFY. Subsequently, MWA has acquired an additional entitlement of 25,000 AF per year. Ongoing discussion continues as to whether the District and others within Improvement District M are entitled to a proportionate share of the additional 25,000 AF. Once resolved, the District’s yearly entitlement could potentially be 6,390 AF.

In June 1990, the voters approved the financing plan for the Morongo Basin Pipeline by more than a two-thirds vote. State Project water is brought to the area via the Morongo Basin Pipeline, a \$54 million project consisting of a 71-mile pipeline beginning at the California Aqueduct in Hesperia. The capacity of the pipeline provides for the delivery of excess water when available.

State water entitlements are susceptible to delivery reductions during drought years and, thus, are not completely reliable sources. During drought years when reductions are necessary, all State Water contractors are affected in the same manner since the reductions are spread evenly among them. Since execution of the Morongo Basin Pipeline agreement in 1995, reductions to HDWD have not been necessary due to the low overall demand for SWP supplies within the MWA service area.

The following is a table of current and planned water supplies in acre feet:

Current and Planned Water Supplies in AF (Table 4)

Water Supply Sources	2005	2010	2015	2020	2025	2030
Wholesale water provider (MWA)	3,460	4,920	4,920	4,442	4,442	4,442
Groundwater (Warren Valley)	2,388	2,856	3,373	3,718	4,063	4,408
Groundwater (Means Valley)	587	650	650	650	650	650
Conjunctive use	0	2,150*	0	0	0	0

*It is anticipated the District will receive 12,900 AF of conjunctive use water from 2006 through 2012

Actual and Projected Water Supply and Demand

Every year, the District revises its Water Policy, which contains a table projecting water supplies and demands through 2046.

Actual & Projected Water Supply and Demand in AF (Table 5)

WATER YEAR	Supplies						Demands					SUPPLY LESS DEMAND	BASIN RESERVE	
	NATURAL RECHARGE	SWF(1)	MVR	INTERTIE	S.R./R/L W.W.(2)	C.U. WATER	TOTAL SUPPLY	HOWD(3)	BSCC	IMP	MIN. PROD.			TOTAL DEMAND
1986	50	0	0	0	626	0	906	3071	250	14	16	3451	-445	
1989	50	0	0	0	815	0	895	3039	250	14	16	3519	-249	
1990	50	0	0	0	772	0	852	2906	250	14	16	3188	-236	
1991	50	0	0	0	694	0	974	3379	250	14	16	3559	-585	
1992	50	0	0	77	600	0	977	2938	250	14	16	3275	-238	
1993	50	0	0	69	699	0	1712	3223	250	14	16	3505	-791	
1994	50	0	464	570	649	0	1763	2999	250	14	16	3279	-166	
1995	50	1608	616	395	461	340	3600	2724	300	14	16	3078	526	326
1996	50	3919	881	659	447	0	5366	2606	300	14	16	3296	2060	3296
1997	50	4848	509	0	428	328	6278	2741	304	14	16	3166	3113	6389
1998	50	2895	851	0	317	322	4466	2528	328	14	16	2881	1584	7073
1999	50	1918	774	0	392	216	3390	2457	312	14	16	2999	391	8154
2000	50	3631	601	0	657	267	5136	2614	228	14	16	3072	2064	10418
2001	50	3831	656	0	494	0	5001	2623	300	14	16	3153	1909	12327
2002	50	3566	798	0	474	0	3996	2101	473	14	16	2694	292	12598
2003	50	2681	573	0	611	0	4095	3126	326	14	16	3392	623	13211
2004	50	3786	810	0	646	0	5236	3188	177	14	16	3392	1841	15052
2005	50	2468	587	0	634	0	4761	2875	200	14	16	3275	1486	15998
2006	50	4000	650	0	560	1075	6374	3744	300	14	16	4374	2000	13008
2007	50	4920	650	0	625	2150	8425	3715	300	14	16	4345	4080	24489
2008	50	4920	650	0	651	2150	8451	3938	300	14	16	4628	4829	28317
2009	50	4920	650	0	497	2150	8397	3455	285	14	16	4020	4377	33904
2010	50	4920	650	0	530	2150	8320	3506	285	14	16	4121	4229	37933
2011	50	4920	650	0	567	2150	8367	3618	285	14	16	4223	4134	41968
2012	50	4920	650	0	604	1675	7429	3490	285	14	16	4346	2884	44222
2013	50	4920	650	0	641	0	6201	3842	285	14	16	4457	1834	46576
2014	50	4920	650	0	678	0	6228	2954	285	14	16	4560	1659	48515
2015	50	4920	650	0	701	0	6351	4023	285	14	16	4628	1713	50229
2016	50	4920	650	0	724	0	6374	4082	285	14	16	4707	1627	51995
2017	50	4920	650	0	747	0	6397	4161	285	14	16	4786	1621	53518
2018	50	4920	650	0	769	0	6419	4220	285	14	16	4845	1674	55059
2019	50	4920	650	0	792	0	6442	4269	285	14	16	4914	1626	56310
2020	50	4442	650	0	815	0	6467	4366	282	14	16	4965	1004	57922
2021	50	4442	650	0	838	0	6490	4427	285	14	16	5052	666	59580
2022	50	4442	650	0	860	0	6512	4506	285	14	16	5121	311	61191
2023	50	4442	650	0	883	0	6536	4575	285	14	16	5190	265	62857
2024	50	4442	650	0	906	0	6559	4644	285	14	16	5259	319	64528
2025	50	4442	650	0	929	0	6581	4713	285	14	16	5328	773	66200
2026	50	4442	650	0	952	0	6604	4782	285	14	16	5397	727	67875
2027	50	4442	650	0	974	0	6626	4851	285	14	16	5466	680	69555
2028	50	4442	650	0	997	0	6649	4920	285	14	16	5535	634	71239
2029	50	4442	650	0	1020	0	6672	4989	284	14	16	5604	588	72927
2030	50	4442	650	0	1043	0	6695	5058	285	14	16	5673	542	74619
2031	50	4442	650	0	1066	0	6717	5127	285	14	16	5742	496	76314
2032	50	4442	650	0	1088	0	6740	5196	285	14	16	5811	449	78013
2033	50	4442	650	0	1111	0	6763	5265	285	14	16	5880	403	79716
2034	50	4442	650	0	1134	0	6786	5334	285	14	16	5949	357	81423
2035	50	4442	650	0	1156	0	6808	5403	285	14	16	6018	310	83133
2036	50	4442	650	0	1179	0	6831	5472	282	14	16	6087	264	84847
2037	50	4442	650	0	1202	0	6854	5541	285	14	16	6156	218	86565
2038	50	4442	650	0	1225	0	6877	5610	285	14	16	6225	172	88287
2039	50	4442	650	0	1248	0	6900	5679	285	14	16	6294	126	89912
2040	50	4442	650	0	1270	0	6923	5748	285	14	16	6363	79	91542
2041	50	4442	650	0	1293	0	6946	5817	285	14	16	6432	33	93175
2042	50	4442	650	0	1316	0	6969	5886	285	14	16	6501	-13	94812
2043	50	4442	650	0	1339	0	6992	5955	285	14	16	6570	-69	96452
2044	50	4442	650	0	1361	0	7015	6024	285	14	16	6639	-126	98097
2045	50	4442	650	0	1384	0	7038	6093	285	14	16	6708	-152	99745
2046	50	4442	650	0	1407	0	7061	6162	285	14	16	6777	-198	101407

(1) (a) 0.5% rates of CMP infiltration a long term average of 77%
 (b) HOWD has specific allotment of 6,500 AF with MVA's occupation of the (Basin) to make 25,000 AF allocation
 (c) The 4,920 AF amount is derived from 77% of the 6,500 AF
 (d) The 4,442 is derived from the 4,920 AF less complex use water deduction

(2) Consideration of howd return, migration return, and wastewater return flows

(3) Century items included from 2007-2014. Remaining years, demand is increased by 2.5%

Section 2 – Step 4: Reliability of Supply

Groundwater

Water provided to customers within the service area of the District is groundwater. As a result, there are no inconsistent water sources that cause reduced deliveries to users within the service area. A potential exception may be the use of a well with water quality issues that may prohibit the pumping of that particular well. Currently, the District has in place a nitrate removal facility to treat two wells that were previously high in nitrate levels at the time.

Imported Water

Current imported supplies are available to the District from MWA through the Morongo Basin pipeline. While the District's current entitlement is 6,390 AF per year, actual deliveries could vary depending on seasonal climatic changes. The Department of Water Resources estimates that State Water Project reliability could range from 69 percent under 2005 demands to 77 percent under 2025 conditions. For planning purposes, the District estimates a long-term average delivery of 77%.

While imported supplies are subject to variation, the District continues to store as much water as possible in the groundwater basin. By continuing to recharge the basin, this provides reserve capacity during those times when State Water Project water is not available.

Section 2 – Step 5: Transfer and Exchange Opportunities

In 1994, the District executed a conjunctive use agreement with MWA. This agreement provided the opportunity to import additional State Water Project water through the Morongo Basin Pipeline for recharge into the Warren Valley Basin. Although MWA stored this water into the basin, HDWD was able to purchase this water directly. In 2001, the District paid for nearly 1,500 AF of conjunctive use water.

In 2004, the District and MWA re-negotiated the Conjunctive Use Agreement (**Attachment 2-2**) to provide more flexibility for both agencies. Additionally, MWA had recently negotiated a water trade agreement with Metropolitan Water District. As a result, MWA was in need of storage facilities for this water. Highlights of the revised agreement included the following:

- No agreement expiration – agreement would renew every year unless either party desires to terminate agreement with 6 months written notice.
- There would be no limit as to the amount of water stored in the basin, so long as the basin is able to accept the water and there are no adverse effects.
- MWA would be responsible for all costs associated in transporting the water from the turnout to the recharge basins, including the cost of the water.
- Withdrawals from the banked water could only begin after the initial storage requirement of 2,500 AF is fulfilled.
- Once a withdrawal is requested by MWA, HDWD would provide this water through its State Water Project allocation.

It is the goal of both agencies to store approximately 12,900 AF of conjunctive use water into the Warren Valley Basin during the period from 2006 through 2012.

Section 2 – Step 6: Water use by customer type – Past, Current & Future

The following table provides water usage for single family, multi-family, and irrigation customers. Since the District’s utility billing software does not distinguish between commercial, industrial, and single-family accounts, these three classes of service are combined into the single family category. Additionally, every water service within the District’s boundary is metered and therefore information for un-metered services is not provided.

Past, Current and Projected Water Consumption in AF (Table 6)

Year		Single Family	Multi-Family	Irrigation	Total
2000	# of Accts	8,185	256	85	8,526
	Usage (AF)	2,296	235	78	2,609
2005	# of Accts	9,566	299	100	9,965
	Usage (AF)	2,349	240	80	2,669
2010	# of Accts	9,979	316	105	10,400
	Usage (AF)	2,794	265	89	3,148
2015	# of Accts	11,507	349	116	11,972
	Usage (AF)	3,222	293	98	3,613
2020	# of Accts	12,468	385	128	12,981
	Usage (AF)	3,491	323	108	3,922
2025	# of Accts	13,414	425	142	13,981
	Usage (AF)	3,756	357	119	4,232
2030	# of Accts	14,343	469	157	14,969
	Usage (AF)	4,016	394	132	4,542

Sales to Other Agencies

The District does not anticipate water sales to other agencies. Previously, the District has transferred water to neighboring agencies for emergency purposes that were system related incidents on the part of the other agencies. The transfer was very short-term and the quantity was negligible. Should an emergency arise requiring the District’s assistance in transferring water once again, the District would assist accordingly, however projecting this amount would not be feasible.

Additional Water Uses and Losses

The following table indicates additional water uses and losses. The column entitled “Unaccounted-for system losses” includes fire protection water, leaks in the transmission and distribution system, and customer meter losses.

Additional Water Uses and Losses in AF (Table 7)

	2000	2005	2010	2015	2020	2025	2030
Construction water	19	21	23	25	28	31	34
Unaccounted-for system losses	186	285	335	385	418	450	482
Total	205	306	358	410	446	481	516

Total Water Use in AF (Table 8)

Water Use	2000	2005	2010	2015	2020	2025	2030
Sum - Tables 6 & 7	2,814	2,975	3,506	4,023	4,368	4,713	5,058

Section 2 – Step 7: Demand Management Measures

Since 1990, the District began implementing various water conservation measures by the adoption of various resolutions and ordinances. The following provides an overview of the various programs in effect, and those that were in effect at some time and discontinued:

(A) Water survey programs for single-family residential and multifamily residential customers:

The District currently conducts water surveys for both of these classes on a voluntary basis. The program began in 1990 and is free for customers who call the District and make an appointment.

The survey is completed by a District representative who arrives with a checklist of tasks to perform. These tasks includes the following:

- Checking for leaks, including toilets, faucets and use of the meter to check for leaks.
- Checking showerheads and toilets for low flow efficiency.
- Checking irrigation systems and timers for proper functionality.
- During the winter months, checking for properly wrapped water pipes including swamp cooler lines.
- Educate the customer on checking for leaks.
- Educate the customer of the advantages of low-flow toilets and showerheads if non-existent.
- Review the District’s seasonal watering hours with the customer.

Since the District representative is usually a subcontractor, this person is compensated on a per-survey cost. Currently this cost is \$13.50 per survey.

The following table provides data on the quantity of survey performed for 2001 through 2005. Both single-family and multifamily survey quantities have been combined into one since the data that separates these two classes is not readily available. Additionally, determining water savings from this program is not provided since the District has many programs in effect to conserve water and isolating this particular program would not be feasible.

Water Surveys Performed (Table 9)

Actual	2001	2002	2003	2004	2005
# of Surveys	204	180	219	242	202
Expenditures - \$	\$2,754	\$2,430	\$2,957	\$3,267	\$2,727

(B) Residential plumbing retrofit.

In 1990, the District implemented a residential and commercial plumbing retrofit program through Resolution No. 90-4 (**Attachment 2-3**). The program requires that all fixtures be replaced with low-flow fixtures whenever a structure is sold or rented to a new tenant. Those fixtures include toilets to ultra-low-flush, showerheads, and the new installation of flow restrictors. The District does not currently provide the low-flow fixtures to customers.

To date, it is estimated that approximately 65% of the District has been completed. It is estimated that the water savings from one retrofitted home is approximately 9,700 gallons per year. This savings will of course increase as the remaining homes throughout the District are retrofitted. Compliance with the retrofit requirement is completed by a District representative who is a subcontractor. This individual is compensated \$6.00 per inspection.

The following table provides data on the quantity of retrofit inspections completed since 1992. Both single-family and multifamily classes are combined into one.

Plumbing retrofit inspections performed (Table 10)

Actual	1992-2001	2002	2003	2004	2005
# of inspections	3,441	491	716	557	678
Expenditures - \$	\$20,646	\$2,946	\$4,296	\$3,342	\$4,068

(C) System water audits, leak detection and repair.

The District does not conduct system water audits or leak detection at this time. The District is undergoing an aggressive pipeline replacement program targeting undersized and aging transmission and distribution pipelines. Due to the condition of the existing pipelines, the District has been experiencing a high volume of leaks on a yearly basis. Because of the soil conditions in the Yucca Valley area, the vast majority of leaks are visible on the surface. The quantity of leaks

and amount of lost water in any given area, determines the priority of which pipes need replacing.

The pipeline replacement program began in 1995 and the District budgets \$800,000 - \$1,000,000 per year. The District utilizes an in-house crew as opposed to the bid and contract process for replacing the lines. This method has provided the opportunity to install more quantity of pipeline than otherwise could be installed.

Unaccounted water for the District can be attributed by many factors such as:

- Main line leaks
- Slow registering water meters
- Use of water through fire hydrants for fire fighting purposes

Upon the near completion of the pipelines targeted for replacement, it is anticipated a reduction of main line leaks will occur.

In addition to a pipeline replacement program, the District began a water meter replacement program for those meters that have recorded an excess of 2,500 units or 1.8 million gallons of water. Replacing these meters assures that all of the water flowing through those meters are accounted for.

The following table provides data of unaccounted water within the District’s service area:

Unaccounted water (Table 11)

Actual	2001	2002	2003	2004	2005
Water Produced (AF)	2,823	3,101	3,126	3,188	2,975
Water Billed (AF)	2,633	2,804	2,772	2,832	2,764
% of unaccounted water	6.7%	9.6%	11.3%	11.2%	7.1%

(D) Metering with commodity rates for all new connections and retrofit of existing connections.

Every water account provided by the District is metered and a monthly consumption charge applies according to water usage. The District’s water rate structure consists of five tiers—initially developed to encourage conservation.

While every water service is metered, there are various classes of service to which the monthly fees are charged. One class of service billed differently is a multi-family account. These particular accounts typically contain one water meter to serve water to multiple units. As a result, an equation exists that applies to the monthly fixed fees and consumption charges. For example, multi-family services are considered 2/3 of one unit and calculated accordingly while a mobile home park is considered 3/4 of one unit.

Currently, there is a policy in effect that requires individual water meters be installed for all new multi-family structures constructed. For those existing multi-family environments, there is no intention to require conversion to single meters per unit because of the method the water lines were installed for these services. Conversion would be cost prohibitive for the majority of the multi-family accounts.

(E) Large landscape conservation programs and incentives.

In 1995, The District adopted a landscape Ordinance No. 72 (**Attachment 2-4**), which applies to all new and rehabilitated landscape areas greater than 500 square feet for industrial, commercial, recreational projects, and developer installed landscaping. The ordinance establishes water budgets and requires water audits to ensure that the irrigation system is operating efficiently. The water budget is allotted based on water tolerant plants and turf. If the budget is exceeded by 10% in any given year, then a penalty water rate is applied. However, if the water consumer uses less than the budgeted amount by 10%, then a bonus rate is applicable. Water usage that neither exceeds nor is below the budget by 10% is calculated at the base rate. The irrigation rate is based on the price of State Project water the District pays to Mojave Water Agency.

While there are currently 46 irrigation accounts, eight of those are assigned annual water budgets—subject to the bonus, base, and penalty rate.

(F) High-efficiency washing machine rebate program

Currently, the District does not provide rebates for the purchase and installation of high-efficiency washing machines. This type of rebate program may be considered in the future. However, the District has developed a phased approach for water conservation rebate programs. In the forefront is a gray water rebate pilot program. Upon completion of this pilot program, other rebate programs may be considered for those installing hot water re-circulating systems, high efficient washing machines, and other water conserving appliances.

(G) Public information programs

The District has an ongoing public information program. Every year, approximately \$30,000 is budgeted for public information activities. The following is a summary of the activities performed on an ongoing basis:

- Internet service provides information about the District to computer users all around the world.
- Bill inserts provide relevant information on water conservation or other messages.
- District Board meetings are aired on local television.
- Messages-on-hold are provided to customers that telephone the District.
- Newspaper and radio public service announcements and paid advertisements.
- Landscape demonstration garden at the District's administration facility.
- Speaker's bureau on water conservation and other District subjects.

(H) School education programs

The District provides education programs as requested by the local schools but does not solicit these programs on an ongoing basis. Mojave Water Agency, which is the local State Water contractor, has assumed responsibility for school education programs within the Morongo Basin area. MWA officials work directly with the local college regarding water conservation and provide the necessary funding to accomplish this task.

(I) Conservation programs for commercial, industrial, and institutional accounts

Conservation programs for these particular classes is provided through the same programs as provided for single-family residential as previously discussed.

(J) Wholesale agency programs

This is non-applicable since the District is a water retail provider as opposed to a water wholesale agency. The District purchases its supplemental water from the Mojave Water Agency who is the wholesaler in this case.

(K) Conservation pricing

The District's water consumption rate is a tiered structure and has been since the late 1980's. While the structures and the tier amounts have been modified through the years, the concept of encouraging water conservation through the elevated tiered structure remains an active program.

Currently, there is a 5-tier rate structure in place. The District does not provide sewer service, therefore sewer rates are not an option at this time. All water accounts are billed according to this rate structure, with the exception of multi-family units, which are calculated with an additional factor (Please see (D) above). The following table is the District's current water rate structure:

Water rate tiered structure (Table 12)

Units (100/cu ft)	\$ per 100/cu ft
0 - 4	\$2.80
5 - 10	\$4.35
11 - 28	\$5.25
29 - 53	\$6.80
54 - over	\$7.60

(L) Water conservation coordinator

The District does not employ an in-house full-time water conservation coordinator. As previously described, the District employs a contractor to perform the retrofit compliance inspections and voluntary water surveys. This, in addition to the public information program,

previously described, has resulted in meeting the conservation goals of the District. There are no immediate plans to recruit a full-time conservation coordinator at this time.

(M) Water waste prohibitions

In 1992, a revised water use prohibitions ordinance was adopted, Ordinance No. 68 (**Attachment 2-5**). Within the ordinance are certain restrictions for water usage within the District's service boundaries, including the establishment of seasonal landscape watering hours. The ordinance established penalties for violations and opportunity for appeal. The following are highlights of the water waste prohibitions within ordinance:

- No hose washing of sidewalks, walkways, driveways, parking areas, etc., unless required by a regulatory agency for health or safety reasons;
- No water shall be used to clean, fill, operate or maintain levels in decorative fountains, unless such water is part of a recycling system;
- No person shall knowingly permit water to leak from any facility within the premises;
- No use of potable water is permitted to irrigate, water or sprinkle grass, lawns, etc. between the hours of 9:00 a.m. and 5:00 p.m. during the high use season which begins June 1 and terminates September 30 of each year. During this season, watering shall be permitted on any three (3) days of the week, of the customer's choice, but shall not exceed three (3) days of any week.
- In the low season beginning October 1st and ending May 31, watering is permitted at the discretion of the individual customer according to the weather conditions taking into account temperature and wind factors. During this season, watering shall be permitted on any three (3) days of the week, of the customer's choice, but shall not exceed three (3) days of any week.
- Water shall be allowed for construction purposes, including but not limited to de-brushing of vacant land, compaction of fills and pads, trench backfill and other construction uses, but shall be used in an efficient manner and not result in runoff.
- Potable water from within the District shall not be used to maintain dirt roads without application to the District.
- Restaurants shall provide water to customers only upon request.
- Non-commercial washing of privately owned vehicles, trailers, motor homes, busses or boats will not be permitted except from a bucket and a hose equipped with an automatic shut-off nozzle.

- No use of water for any purpose, except as provided herein, which results in flooding or run-off onto hardscape, driveways, streets, adjacent lands or into gutters shall be permitted.

(N) Residential ultra-low-flush toilet replacement programs.

This topic was previously discussed. Please see (B) Residential plumbing retrofit.

Section 2 – Step 8: Evaluation of DMM’s not implemented

Of the DMM’s previously described, the one not currently being implemented by the District is ***(F) High-efficiency washing machine rebate program.*** The following is a cost benefit analysis of implementing this program:

Assumptions:

- High efficiency washing machines average \$800 compared to a typical machine at \$400.
- A \$200 rebate could be offered to all participants.
- 200 households will participate in the rebate program in the first year.
- A high efficiency washing machine saves 5,000 gallons (.015 AF) per year per household.
- The District’s cost to purchase supplemental water is \$250 per AF.
- The life span of a high efficiency washing machine is 14 years.
- The discount rate is 3%.

Cost effectiveness summary (Table 13)

Total Costs (Year 1)	\$ 40,000 (200 rebates x \$200 ea)
Total Benefits	\$ 750 (.015 AF x 200 x \$250/AF)
Discount Rate	3%
Time Horizon	14 years
Cost of Water (\$ per AF)	\$250
Water Savings (AF/Yr)	3

Section 2 – Step 9: Planned water supply projects and programs

The District is currently evaluating the construction of a wastewater treatment facility and sewer collection system to provide an additional source of supply.

In November 1992, Hi-Desert Water District's Board of Directors commissioned an engineering firm to complete a wastewater feasibility study. The study was completed and received by the Board in May 1993. The next step was a wastewater master plan. The Board did not immediately authorize a master plan. Committee meetings and presentations to the full Board occurred over the next several years before authorizing a master plan. In January 1998 the Board received the wastewater master plan. In September 1998, the engineering firm began to design and provide plans and specifications for a wastewater treatment facility. From 1998 to present, numerous tasks have been undertaken, e.g. seismic studies, location of the facility, California Environmental Quality Act (CEQA), and the National Environmental Policy Act (NEPA), to move this project forward.

As early as February 1996, District staff was developing funding sources for the treatment facilities. In September 1996, Congress passed legislation, which included the District's wastewater facilities for up to 25% of the project's construction cost. In FY 1997 and FY 1998, two grants--\$800,000 (FY 97) and \$500,000 (FY 98)—were written in the EPA budget by Congress. Those grant funds were utilized for engineering, seismic, CEQA, purchase of property, and other pre-construction costs. Staff met with Bureau of Reclamation representatives, Department of Water Resources staff, and others in an attempt to secure additional project funding. With Federal and State funding programs available for these types of projects, the District continues to actively explore every possibility. In FY 2005/06, the District received an additional grant in the amount of \$350,000 for continued master planning and engineering for the project.

In addition to controlling nitrate contamination resulting from septic systems, the sewer system would also provide the opportunity to recharge treated wastewater into the Warren Valley Basin through percolation basins. In the first year of operation, it is estimated that nearly 100 acre feet per year could be recharged into the Warren Valley Basin and continue increasing as more customers connect to the system.

Potentially, a 1 MGD wastewater facility could be operational by 2008 with a second MGD added in the year 2019.

Section 2 – Step 10: Development of desalinated water

The Yucca Valley area is located approximately 100 miles from the nearest ocean water supply. It is not anticipated that desalinated water will become a viable source in the near future. Because of the distance to the nearest salt water supply, constructing a transmission pipeline would not be feasible due to cost. A potential alternative could exist through the Mojave Water Agency (MWA). Since MWA manages the Morongo Basin Pipeline that provides State Project water to the Yucca Valley area, there may exist future opportunity to increase SWP supplies by

developing desalination facilities with other coastal SWP contractors thus creating exchange opportunities. Currently, MWA is evaluating this concept.

Section 2 – Step 11: Current or projected supply includes wholesale water

The District has a projected water supply and demand table that Mojave Water Agency has been provided with. Mojave Water Agency is the District's wholesale water supplier. This table was previously provided and is referred to as Table 5.

Section 3 – Determination of DMM implementation

As previously stated, all DMM's, with the exception of the high-efficiency washing machine rebate program, is currently being implemented by the District. Plans for the implementation of this rebate program was previously discussed in Section 2, Step 7, (F).

Section 4 – Water Shortage Contingency Plan

Step One – Stages of Action

Step Two – Estimate of Minimum Supply for Next Three Years

Step Three – Catastrophic Supply Interruption Plan

Step Four – Prohibitions, Penalties & Consumption Reduction Methods

The District has in effect two distinct plans for addressing water shortage emergencies. One plan becomes effective should the groundwater basin reserve levels drop to a pre-determined amount. The second plan becomes effective should a portion of the District's production capacity become limited due to a natural disaster or other event that prevents the District from providing water service to customers on a short-term basis. Each one of those plans is further described:

Basin reserves reach a pre-determined level

In 2004, the District Board adopted Policy No. 26-04 (**Attachment 4-1**) to address situations where the reserves in the groundwater basin drop to a certain level. Prior to 1995, the Warren Valley Groundwater Basin had been an overdraft condition. Upon completion of the Morongo Basin Pipeline in 1995, it was the goal of the District to replenish the basin and establish sufficient reserves in the event of high growth peaks and droughts that occur on a cyclical basis. Policy No. 26-04 establishes growth restrictions under certain criteria:

- *Stage 1 Condition* – Under this condition, a growth restriction of 2% is implemented. This becomes effective when basin reserves equal or fall below 5 years of water demand for that particular year.
- *Stage 2 Condition* – Under this condition, a growth restriction of 1% is implemented. This becomes effective when basin reserves equal or fall below 4 years of water demand for that particular year.
- *Stage 3 Condition* - Under this condition, a 0% growth rate is implemented. This becomes effective when basin reserves equal or fall below 3 years of water demand for that particular year.

By placing these restrictions, this provides opportunity to once again replenish the reserves within the basin. Once reserves exceed five years of demand all growth restrictions are lifted.

Production capacity becomes limited

In the event the production capacity becomes limited due to a natural disaster or other catastrophe that impairs the District's ability to produce water, Resolution No. 90-3 (**Attachment 4-2**) is in effect which was adopted by the Board in 1990. This resolution provides various response stages in this event. The various response stages include the following:

- *Stage 1 Response* – This becomes effective when the production capacity is at 80% for three(3) consecutive days. This stage is in effect for 15 days and then subject to Board review. Restrictions include the following:
 - Irrigation is limited to one day per week according to the odd or even designation of the last number of the street address.
 - No washing of privately owned vehicles, trailers, motor homes, busses, or boats from a private facility is permitted.
 - No filling of pools is permitted.
 - Construction water usage is not permitted.
- *Stage 2 Response* – This becomes effective when production capacity reaches 90% and is in place until demand is reduced to less than 85% and the General Manager determines it is prudent to reduce restrictions. Restrictions include the following:
 - No irrigation
 - No car washing with the exception of approved commercial
 - No construction water is available
 - Request voluntary reduction in home water use
- *Stage 3 Response* – This becomes effective when system failures result in the District's ability to provide water service. Stage 3 also will be effective in the event all efforts to prevent the production capacity from reaching 100% fails. This stage is reduced when full service is restored and production capacity is reduced to safe levels as determined by the General Manager. Restrictions include the following:
 - All Stage 2 restrictions are in effect
 - The community is requested to reduce usage by 50%

Penalty for Violation

The penalties for violating the restrictions previously mentioned are outlined in Ordinance No. 68. The penalties include the following:

- *First Violation* – A warning notice is provided.
- *Second violation* – A written notice with a warning of a flow restrictor or possible shut-off is provided.
- *Third Violation* – The General Manager may require the installation of a flow restrictor or shut-off of water service.

Step Five – Analysis of Revenue Impacts of Reduced Sales During Shortages

Currently, the District has a reserve fund allocated for the purchase of supplemental water. The availability of these funds creates flexibility for purchasing water other than State Project water, especially during times when SWP water is unavailable due to drought or other factors beyond the District's control. Should this be the case, revenues and expenditures of the District would remain unchanged. However, in the event the District experiences temporary system inadequacies, e.g. loss of production capacity, emergency measures would be implemented mandating an immediate reduction of water use by the customers. Depending on duration of the emergency, revenues could ultimately be impacted during this scenario. In this case, the District may be required to utilize discretionary reserve funds to supplement the shortfall and re-evaluate consumption rates during the yearly rate review.

Step Six – Draft Ordinance and Use Monitoring Procedure

Resolution No. 90-3 outlines the restrictions to be implemented in the event of a short-term water production shortage.

The monitoring procedure is accomplished by daily production reports that are generated on a daily basis. The report provides a breakdown of each production well along with the quantity produced for the previous day. Based on these production readings, the District is able to determine whether reductions in consumption are occurring per the water shortage restrictions outlined in Resolution 90-3.

Section 5 – Recycled Water Plan

Currently the District does not generate recycled water, however, plans are in progress to construct a wastewater treatment facility. Upon completion, recycled water will be available for uses such as groundwater percolation, landscape irrigation, etc. At this time, however, the exact details and design are preliminary and have not been implemented.

Section 6 – Water Quality Impacts on Reliability

The groundwater in the Warren Valley Basin is reported as having excellent characteristics. The groundwater has been characterized as calcium-magnesium bicarbonate. The total dissolved solids (TDS) range from 129-269 mg/l. The nitrate concentration is approximately 26 mg/L, and fluoride is approximately 1 mg/L. In late 1997, Hi-Desert Water District began noticing an increase of nitrate levels in a localized area within the Warren Valley Basin. To mitigate the situation, the District constructed a nitrate removal facility to treat the water. This facility serves as a conduit between production wells and the distribution system, which serves the residents of Yucca Valley.

The ranges of general chemical parameters in the water from the California Aqueduct are also established. It is estimated that the TDS range is 124 to 421 mg/L. The water has a pH of 8.2 and a hardness of 86.2 mg/L. The use of this water for drinking purposes would require treatment only for turbidity and organisms (a basic requirement by California Department of Health Services). Treatment of the water for recharge would not be necessary to protect the existing quality of the groundwater.

The chemistry of the groundwater and State Water Project water is generally similar. Therefore, the proposed use of State Project water for recharge purposes is not anticipated to adversely affect the ground-water quality within the basin, nor its reliability. The mixing of recharge water and groundwater is not expected, nor likely to cause precipitation of solids, stimulation of biological growth, or dissolution of cementing agents within the aquifer. Clogging by fine particles and algae could occur during water infiltration into the soils underlying the recharge ponds, but the potential adverse impact on recharge efficiency will be significantly mitigated through pond maintenance operations (such as periodic drying and scarification).

Section 7 – Water Service Reliability

The water service reliability is dependent on current and future water sources the District expects to receive. While drought cycles will reduce the amount of State Project water the District will receive in a given year or multiple years, these variables have been accounted for in the District's "Actual & Projected Water Supply and Demand" (**Table 5**) previously discussed in Section 2, Step 3 (Water Sources). Taking into account drought cycles, historically, State Project water supplies have averaged 77% since the California aqueduct went into operation. To prepare for extended drought cycles, the District has begun recharging additional water into the basin, above and beyond the yearly allocation, through a conjunctive use program. In times when Mojave Water Agency is not able to provide State Project water in any given year, supplies will be derived from the conjunctive use water previously stored. Conjunctive use estimates are also provided within the water supply and demand table, previously mentioned.

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SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE COUNTY OF SAN BERNARDINO

HI-DESERT COUNTY WATER)
DISTRICT,)
)
Plaintiff,)
)
v.)
)
YUCCA WATER COMPANY, LTD.,)
et al.,)
)
Defendants.)

No. 172103
JUDGMENT

I. INTRODUCTION

1. Pleadings, Parties and Jurisdiction. The complaint herein was filed on July 1, 1976, seeking an adjudication of all or substantially all water rights within Warren Valley Basin. Substantially all defendants have appeared herein, the defaults of certain defendants have been entered, and certain other defendants dismissed. By answers and order of this Court, the issues have been made those of a full inter se adjudication of water rights in and to the waters of Warren Valley Basin. This Court has jurisdiction of the subject matter of this action and of the parties.

2. Stipulation for Judgment. Stipulation for entry of

APPENDIX "A"

1 judgment has been filed by and on behalf of a majority of the
2 parties, representing a majority of the quantitative rights herein
3 adjudicated.

4 3. Findings and Conclusions. Trial was had on _____,
5 1977, as to the non-stipulating parties, and findings of fact and
6 conclusions of law have been entered.

7 4. Exhibits. The following exhibits are attached to this
8 Judgment and made a part hereof:

9 "A" -- "General Location Map of Warren Valley Basin"
10 showing relevant geographic, hydrologic and geologic features.

11 "B" -- "Well Location Map" showing the location and
12 ownership of all wells in Warren Valley Basin, and related
13 geographic and political features.

14 5. Definitions. As used in this Judgment, the following
15 terms shall have the following meanings:

16 (a) Annual or Year -- A calendar year, unless the
17 context shall indicate a contrary meaning.

18 (b) Blue Skies -- Blue Skies Country Club.

19 (c) District -- Hi-Desert County Water District.

20 (d) Ground Water -- Water beneath the surface of the
21 ground and within the zone of saturation, i.e., below the
22 existing water table.

23 (e) Ground Water Basin -- An area underlain by one or
24 more permeable formations capable of furnishing substantial
25 water storage.

26 (f) Minimal Pumper -- Any pumper whose right and pro-
27 duction do not exceed one acre-foot per year.

28 (g) Native Safe Yield -- The long-term average annual

1 net native supply of water to the Basin under cultural
2 conditions of a particular year.

3 (h) Overdraft -- A condition wherein the total annual
4 production from the Basin exceeds the native safe yield
5 thereof.

6 (i) Produce or Producing -- The extraction of ground
7 water by pumping or any other method.

8 (j) Producer -- Any person who pumps water from Warren
9 Valley Basin.

10 (k) Production -- Annual quantity of water pumped by a
11 producer, stated in acre feet.

12 (l) Supplemental Water -- Water imported from outside
13 the watershed of Warren Valley Basin.

14 (m) Utility -- Yucca Water Company, Ltd.

15 (n) Warren Valley Basin or Basin -- The ground water
16 basin underlying the area shown as such on Exhibits "A"
17 and "B".

18 II. DECLARATION

19 A. HYDROLOGIC CIRCUMSTANCES

20 6. Warren Valley Basin. Warren Valley Basin is a small
21 desert ground water basin bounded on the north by the San
22 Bernardino Mountains and the Pinto Mountain Fault, on the east by
23 the Yucca Barrier, on the south by the Little San Bernardino
24 Mountains and on the west by a natural topographic and ground
25 water divide. The Basin contains a substantial quantity of ground
26 water in storage. Average annual recharge and replenishment does
27 not exceed 200 acre feet per year from precipitation on the Basin
28

1 and runoff from the limited watershed surrounding. The surface
2 area of Warren Valley Basin is approximately 6,400 acres.

3 7. Common Source of Supply. Warren Valley Basin constitutes
4 a common source of supply of water for lands overlying said Basin.
5 With the exception of irrigation use on its golf course by Blue
6 Skies, all use of water from the Basin is for domestic and municipi-
7 pal purposes. There is no commercial agricultural or industrial
8 use of water from the Basin.

9 8. Native Safe Yield and Overdraft. The native safe yield
10 of Warren Valley Basin is approximately 200 acre feet per year.
11 Present net consumptive use of Basin waters exceed substantially
12 said Native Safe Yield. The basin is, and has been for more than
13 five years in a condition of overdraft. It is presently estimated
14 that ground water supplies of the Basin will supply the needs of
15 its projected population only until about the year 1985. Supple-
16 mental water will, accordingly, be required to meet water demands
17 of the Basin in future years.

18 9. Prescription. The taking of water by the parties hereto
19 has been open, notorious, continuous and under claim of right for
20 more than five years. Said condition of overdraft of Warren
21 Valley Basin has been a matter of common knowledge and all parties
22 and overlying property owners have had notice of said condition
23 during said period of years.

24 B. WATER RIGHTS

25 10. Overlying Rights. The following parties own lands
26 overlying Warren Valley Basin, and by reason of production of
27 water from the Basin during the period 1970-1975, each said party
28 has preserved by self help the overlying right to produce up to

1 the quantity of water herein set forth:

2	<u>Name</u>	<u>Overlying Right</u>	<u>Nature of Use</u>
3	Blue Skies	585 acre feet/year	Golf Course
4	Angelina Boveri	1 acre foot/year	Domestic - Minimal
5	John Boveri	1 acre foot/year	Domestic - Minimal
6	Judith G. Buchanan	1 acre foot/year	Domestic - Minimal
7	Elmer F. Cloe	1 acre foot/year	Domestic - Minimal
8	Marjorie L. Cloe	1 acre foot/year	Domestic - Minimal
9	Emma L. Ford	1 acre foot/year	Domestic - Minimal
10	Raymond M. Ford	1 acre foot/year	Domestic - Minimal
11	Robert S. Forsyth	1 acre foot/year	Domestic - Minimal
12	Kate Hamilton	1 acre foot/year	Domestic - Minimal
13	Howard Heard	1 acre foot/year	Domestic - Minimal
14	Agnes Lasley	1 acre foot/year	Domestic - Minimal
15	Albert B. Machado	1 acre foot/year	Domestic - Minimal
16	Alma Nuckolls	1 acre foot/year	Domestic - Minimal
17	Albert Paiso	1 acre foot/year	Domestic - Minimal
18	Mary Jane Puzey	1 acre foot/year	Domestic - Minimal
19	Warren Stoker	1 acre foot/year	Domestic - Minimal
20	Patricia Tripp	1 acre foot/year	Domestic - Minimal

21 (a) Self Help. By reason of the prescriptive cir-
 22 cumstances found in Paragraph 9 hereof, said overlying rights
 23 have been prescribed except to the extent of such maximum
 24 annual self help by production during the prescriptive
 25 period. Said right remains overlying in character, and as
 26 such may only be exercised for uses on the above-described
 27 overlying lands.

28 (b) Prescription Against Unused Overlying Rights. By

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reason of said prescriptive circumstances, all unexercised
overlying rights have been lost and extinguished so long as
Warren Valley Basin remains in a state of overdraft.

11. Appropriative Rights. Appropriative rights to the
waters of Warren Valley Basin have been perfected by District and
Utility. By stipulation of said parties, said appropriative
rights shall be deemed, and are hereby decreed, to be of equal
priority. Said appropriative rights are exempt from prescription
by reason of Section 1007 of the California Civil Code. The
respective quantities of said rights are as follows:

<u>Name</u>	<u>Appropriative Right</u>
District	896 acre feet/year
Utility	726 acre feet/year

III. INJUNCTION

12. Injunction Against Unauthorized Production. Effective
July 1, 1974, each party, to whom rights to waters of Warren
Valley Basin have been declared and decreed herein, together with
its officers, agents, employees, successors and assigns, is
ENJOINED AND RESTRAINED from producing water therefrom for direct
use except pursuant to the rights herein decreed or pursuant to
the provisions of the Physical Solution in this Judgment.

IV. CONTINUING JURISDICTION

13. Jurisdiction Reserved. Full jurisdiction, power and
authority are retained and reserved to the Court for the purpose
of enabling the Court upon application of any party or of the
Watermaster, by motion and upon at least 30 days' notice thereof,

1 and after hearing thereon, to make such further or supplemental
2 orders or directions as may be necessary or appropriate for inter-
3 pretation, enforcement or carrying out of this Judgment, and to
4 modify, amend or amplify any of the provisions of this Judgment
5 whenever substantial changes or developments affecting the phys-
6 ical, hydrologic or other conditions dealt with herein may, in the
7 Court's opinion, justify or require such modification, amendment
8 or amplification.

9
10 V. WATERMASTER

11 14. Watermaster Appointment. Hi-Desert County Water Dis-
12 trict, acting by and through its board of directors, is hereby
13 appointed Watermaster, to administer and enforce the provisions of
14 this Judgment and any subsequent instructions or orders of the
15 Court hereunder.

16
17 VI. PHYSICAL SOLUTION

18 15. Need For Physical Solution. In order that the Court may
19 assure maximum beneficial use of the water resources of Warren
20 Valley Basin in accordance with Section 3 of Article XIV of the
21 California Constitution, it is necessary that a physical solution
22 be developed and implemented under the continuing jurisdiction
23 heretofore reserved. Said physical solution is required because:

24 (a) Safe Yield Operations Are Inappropriate. Warren
25 Valley Basin is a desert ground water basin. It has only a
26 nominal annual replenishment. To restrict production of the
27 basin to its native safe yield would frustrate all develop-
28 ment and use of its resources. The Basin contains substantial

1 supplies of ground water as a result of recharge over geo-
2 logic time. The overlying economy is dependent upon con-
3 trolled overdraft of such water in storage.

4 (b) Supplemental Water. In the ultimate development of
5 the lands overlying Warren Valley Basin, supplemental water
6 supplies will be required. To that end, the lands overlying
7 the Basin were included within Mojave Water Agency, which
8 has a contractual right to purchase supplemental water from
9 the State Water Resources System.

10 (c) Need for Funding. Supplemental water, although
11 legally available to the Basin as aforesaid, is not physi-
12 cally or economically available at present. Delivery facil-
13 ities will require extensive engineering studies, negotiations
14 with other interested agencies, and--most of all--financial
15 arrangements within the capacity of the landowners and water
16 users of Warren Valley Basin. The economy which is built
17 during the period of controlled overdraft of said basin must
18 ultimately be committed to payment of such supplemental water
19 costs.

20 16. Watermaster to Formulate Proposal. Watermaster is
21 hereby authorized and instructed to formulate and submit to the
22 Court and the parties on or before December 31, 1977, a plan and
23 program for a physical solution herein, together with appropriate
24 provisions for Watermaster administration thereof. Provided,
25 that the Court hereby finds that it is inappropriate to burden
26 minimal producers with administrative costs, report requirements
27 or assessments so long as the production of any such party is for
28 domestic use and in annual quantities of less than one acre foot

1 (325,851 U.S. gallons). The Court will then, upon notice and
2 after hearing, adopt a physical solution in the exercise of its
3 continuing jurisdiction herein.
4

5 VII. MISCELLANEOUS PROVISIONS

6 17. Service Upon and Delivery to Parties of Various Papers.

7 Service of the Judgment on those parties who have executed the
8 Stipulation for Judgment shall be made by first class United
9 States mail, postage prepaid, addressed to the designee and at the
10 address designated for that purpose in the executed and filed
11 Counterpart of the Stipulation for Judgment, or in any substitute
12 designation filed with the Court.

13 Each party who has not heretofore made such a designation
14 shall, within thirty (30) days after the Judgment shall have been
15 served upon that party, file with the Court, with proof of service
16 of a copy upon the Watermaster, a written designation of the
17 person to whom and the address at which all future notices,
18 determinations, requests, demands, objections, reports and other
19 papers and processes to be served upon that party or delivered to
20 that party are to be so served or delivered.

21 A later substitute designation filed and served in the same
22 manner by any party shall be effective from the date of filing as
23 to then future notices, determinations, requests, demands, objec-
24 tions, reports and other papers and process to be served upon or
25 delivered to that party.

26 Delivery to or service upon any party by the Watermaster, by
27 any other party, or by the Court, of any item required to be
28 served upon or delivered to a party under or pursuant to the

1 Judgment may be by deposit in the United States mail, first class,
2 postage prepaid, addressed to the designee and at the address in
3 the latest designation filed by that party.

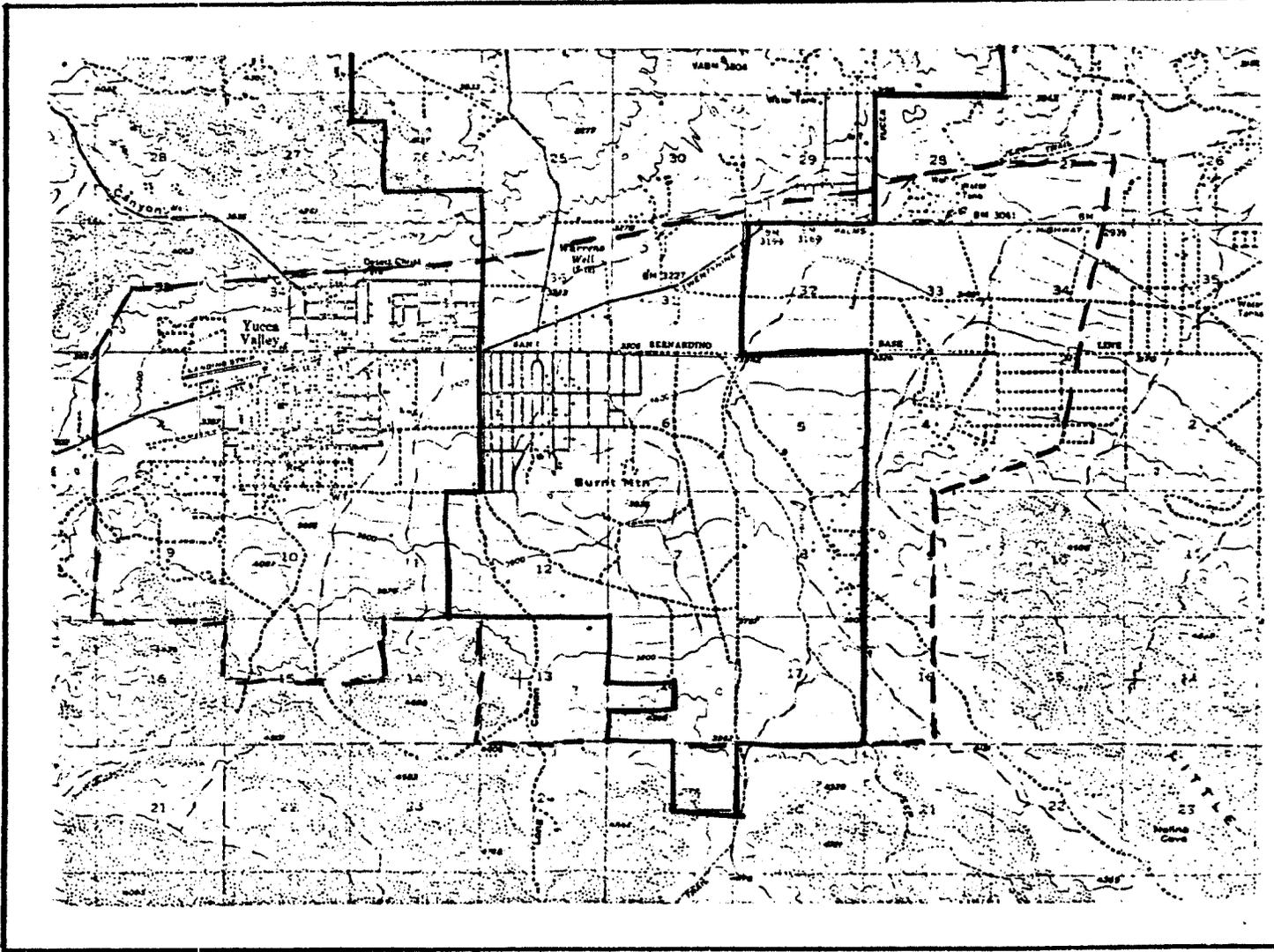
4 18. Judgment Binding on Successors. This Judgment and all
5 provisions hereof are applicable to and binding upon not only the
6 parties to this action, but also upon their respective heirs,
7 executors, administrators, successors, assigns, lessees and licen-
8 sees and upon the agents, employees and attorneys in fact of all
9 such persons.

10 19. Costs. No party shall recover any costs in this pro-
11 ceeding from any other party.

12 Dated: _____, 1977.

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Judge



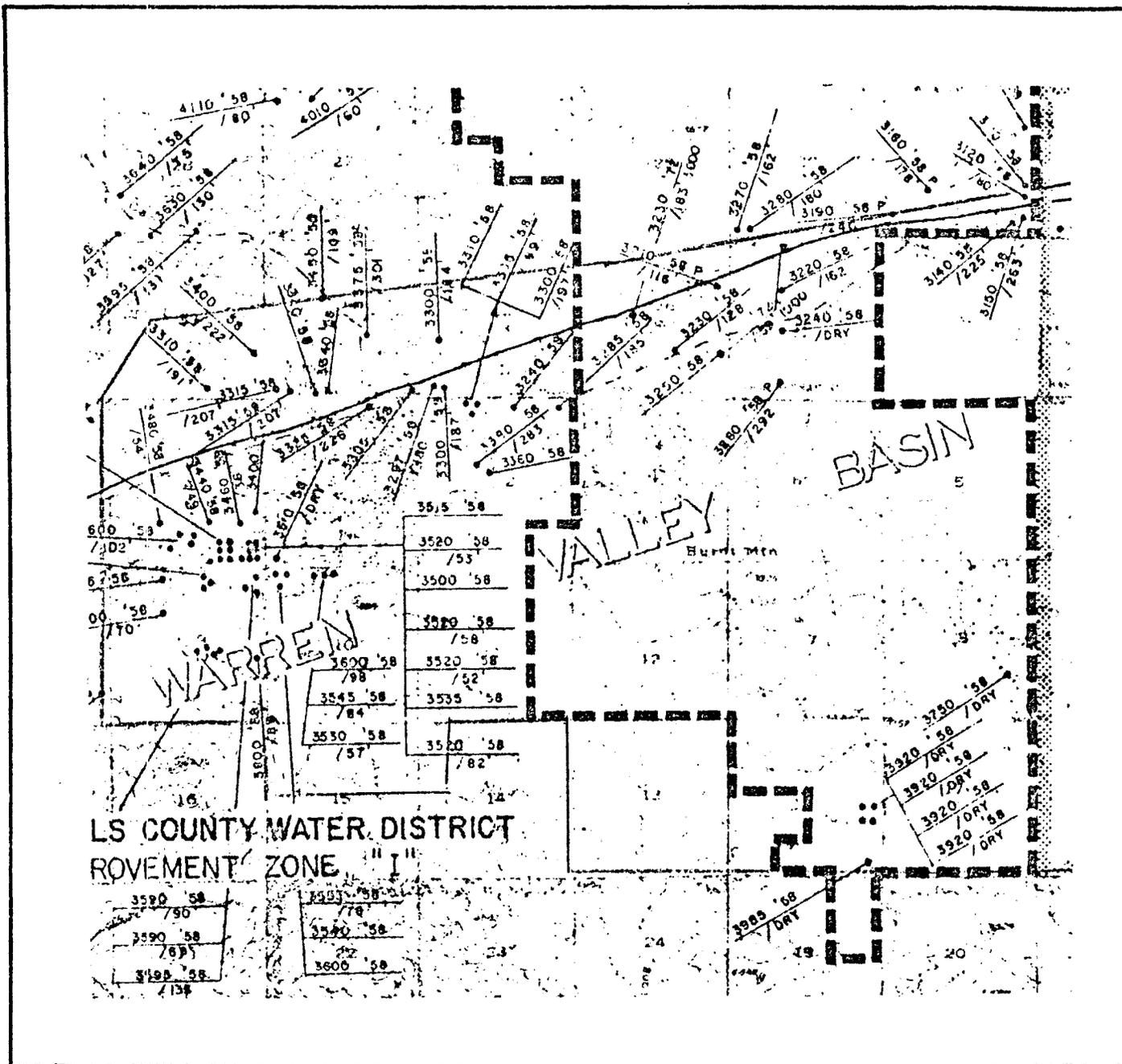
GENERAL LOCATION MAP

WARREN VALLEY BASIN

- Basin Boundary
- District Boundary

Hi-Desert CWD v. Yucca W Co.
July 1, 1976

EXHIBIT "A"



WELL LOCATION MAP

WARREN VALLEY BASIN

Hi-Desert CWD v. Yucca W. Co.

EXHIBIT "B"

**WARREN VALLEY BASIN CONJUNCTIVE USE AGREEMENT
BETWEEN
MOJAVE WATER AGENCY,
HI-DESERT WATER DISTRICT
AND
WARREN VALLEY BASIN WATERMASTER**

This AGREEMENT is made this 28th day of October, 2004, by and between the Mojave Water Agency (hereinafter "MWA"), the Hi-Desert Water District (hereinafter "HDWD"), and the Warren Valley Basin Watermaster (hereinafter "WVBW").

RECITALS

A. WVBW is the entity established by San Bernardino Superior Court pursuant to the Judgment filed by the Superior Court on September 16, 1977, in the case entitled Hi-Desert County Water District v. Yucca Water Company, LTD., et al. (hereinafter "Judgment") to administer and enforce the provisions of the Judgment and any subsequent instructions or orders of the Superior Court under the Judgment.

B. HDWD is a County Water District organized and operating pursuant to California Water Code section 30000, et seq.

C. MWA is organized and operating according to special legislative act under the California Water Code, Appendix 97.

D. MWA has a Contract with the California Department of Water Resources to obtain up to 50,800 acre-feet of water annually from the State Water Project. MWA is obligated to make available to the Project Participants in the Morongo Basin Pipeline Contract up to one-seventh of its annual allotment from the State Water Project, subject to the terms of the Agreement for Construction, Operation and Financing of the Morongo Basin Pipeline Project (hereinafter "Morongo Basin Pipeline Contract").

E. HDWD is a party to the Judgment and a Project Participant in the Morongo Pipeline Contract. HDWD is allotted 59 percent or up to 4,282 acre-feet per year of State Water Project water, subject to the provisions of the Morongo Basin

Pipeline Contract. This Agreement is intended to allow additional State Water Project water, in excess of HDWD'S allotment pursuant to the Morongo Basin Pipeline Contract, to be stored in the Warren Valley Groundwater Basin for later extraction and use exclusively by HDWD or by the other parties to the Judgment, through the WVBW, in accordance with the WVBW Rules and Regulations, the Judgment, the Physical Solution, and any subsequent instructions or orders of the Superior Court under the Judgment.

F. The primary purposes of this Agreement are to more efficiently use the water supplies available to the MWA and the HDWD, and to make supplemental water supplies available to the WVBW in the event the Safe Yield of the Basin falls below the combined Adjudicated Water Rights in the Basin of the parties to the Judgment besides HDWD. State Water Project water delivered to the Basin pursuant to this Agreement shall be credited to a "MWA Storage Water Account."

G. The State Water Project water storage operations provided for in this Agreement were analyzed pursuant to the California Environmental Quality Act (Public Resources Code Section 21000, et seq.) ("CEQA"). A mitigated negative declaration was prepared by MWA (State Clearinghouse No. 93052082), and a Notice of Determination was filed in 1993.

H. The terms of this Agreement are intended to result in an equitable sharing of costs between MWA, HDWD, and WVBW.

DEFINITIONS

Adjudicated Water Rights – Water rights established by the Judgment

Basin – Warren Valley Basin

Conjunctive Use – The storage of imported water in the Basin for later extraction and use

HDWD – Hi-Desert Water District

HDWD Spreading Basins – The HDWD groundwater recharge area adjacent to the terminus of the Hi-Desert Pipeline and future extensions thereof

Initial Storage Requirement – Water to be stored in the Basin and credited to the MWA Storage Water Account, in the amount of 2,500 acre-feet exclusive of Provision for Shrinkage Water, before withdrawals can be made by HDWD or WVBW

Judgment – The Judgment of the Superior Court of the State of California for the County of San Bernardino filed on September 16, 1977, in the case entitled Hi-Desert County Water District v. Yucca Valley Water Company, Ltd., et al., Case No. 172103

Mitigation Measures – The mitigation measures set forth at Section 4 of the Initial Study dated Ma 1993 prepared by Dodson & Associates for the Morongo Basin Pipeline Extension Proposed by MWA

Morongoc Basin Pipeline Contract – The Agreement for Construction, Operation and Financing of the Morongoc Basin Pipeline Project dated as of December 1, 1990

MWA - Mojave Water Agency

MWA Storage Water – Water delivered to the Point of Delivery by MWA in excess of water delivered by MWA pursuant to and required by the Morongoc Basin Pipeline Contract

MWA Storage Water Account – An accounting of the total amount of MWA Storage Water

Physical Solution – The Warren Valley Basin Management Plan dated May 1, 1991 prepared by Kennedy/Jenks/Chilton for the MVBW

Point of Delivery – The location at which MWA Storage Water is delivered and measured, as established pursuant to Section 9 of this Agreement

Provision for Shrinkage Water – The amount of water in the MWA Storage Water Account necessary to account for potential permanent losses of MWA Storage Water due to evaporation from the HDWD Spreading Basins and from the aquifers within the Basin, pursuant to Section 6 of this Agreement. The Provision for Shrinkage Water delivered to the Basin pursuant to Section 6 of this Agreement is considered not reclaimable.

WVBW -- Warren Valley Basin Watermaster

AGREEMENT

In consideration of the foregoing recitals and the covenants contained herein the Parties to this Agreement hereby agree as follows:

Section 1. Delivery, Amount, and Ownership of Stored Water – MWA may, subject to the conditions of this Agreement, deliver State Water Project water which will be stored in the Basin until such time as needed exclusively by HDWD or WVBW. The amount of water to be stored in the Basin for MWA hereunder shall not be limited provided, however, that the Basin does not experience adverse effects pursuant to Section 3. In the event of an adverse condition, the Parties shall meet and confer pursuant to Section 3. Except for water delivered to the Basin as Provision for Shrinkage Water under the provisions of Section 6 of this Agreement, title to State Water Project water delivered by MWA pursuant to this Agreement shall remain vested in MWA until transferred to HDWD or WVBW pursuant to Section 11 of this Agreement.

Section 2. Conformity with the Judgment and Physical Solution - The Judgment contemplates the delivery of State Water Project water by MWA to HDWD as supplemental water to reverse a long-term trend of groundwater overdraft in the Basin.

- (a) WVBW has caused an engineering study to be conducted which describes the “Physical Solution” for the Basin. The Physical Solution likewise contemplates delivery of State Water Project water by MWA to HDWD to reverse the overdraft condition of the Basin, and also contemplates the conjunctive use of the Basin to store imported water supplies. This Agreement is intended to be in conformity with both the Judgment and the Physical Solution.

Section 3. Implementation of Agreement –Notwithstanding any other provisions of this Agreement, the Parties hereto recognize that implementation of this

Agreement may be restricted if it is determined that conjunctive use operations authorized under this Agreement would adversely affect the Basin. Adverse effects include, but are not limited to, subsidence or permanent loss of storage capacity due to compaction of water-bearing soils, or due to a continuous decline of Basin water levels. If any of the Parties hereto is informed or believes that implementation of this Agreement or any part hereof may adversely affect the Basin, that Party ("First Party") shall give notice to the other Parties hereto containing a general description of the First party's information or belief. All Parties hereto shall meet and confer within ten (10) business days after written notice by the First Party. If the Parties hereto are unable to resolve the matter after meeting and conferring, then the First Party shall commence dispute resolution proceedings in accordance with Section 20 of this Agreement.

Section 4. MWA Storage Water – From time to time, MWA may have opportunity to receive water from the State Water Project in excess of HDWD's annual request for any given year. MWA, in conjunction with HDWD and the WVBW, will store this excess water in the Basin in accordance with this Agreement. All costs associated with delivering the water to the HDWD Spreading Basins shall be borne by MWA, including the cost of the water at the State Water Project turnout, if applicable. MWA shall notify HDWD at least thirty (30) days in advance of intent to deliver MWA Storage Water Account to the Basin. MWA and HDWD shall mutually agree on storage water delivery schedules. The MWA Storage Water Account deliveries shall not interfere with delivery of HDWD's water pursuant to HDWD's allotment under the Morongo Basin Pipeline Contract. All State Water Project water, less aquifer losses pursuant to Section 6, provided by MWA and delivered to HDWD or WVBW for storage in the Basin will be credited to the MWA Storage Water Account.

Section 5. Protection of Other MWA Water Users – It is the objective of MWA, HDWD, and WVBW that this Agreement shall not adversely affect the rights of parties to the Judgment or other water users within MWA as they are defined in the Judgment and/or in the Morongo Basin Pipeline Contract.

Section 6. Aquifer Losses – MWA agrees to pre-deliver 1,935 acre-feet of MWA Storage Water from the aquifer within the basin as the Provision for Shrinkage Water losses. The initial 1,935 acre-feet is based on a 15% loss factor on the delivery of 12,900 acre-feet (initial storage goal for MWA based upon a three-year Contractual demand from HDWD). Cumulative deliveries exceeding the initial goal of 12,900 acre-feet shall be reduced by a 15% loss factor on a per acre-foot basis and shall be debited from the MWA Storage Account.

Section 7. Water Available to MWA – Except for aquifer losses, transportation losses, and evaporative losses from spreading basins, MWA Storage Water shall be available to MWA in cumulative amount equal to the amount of water credited to the MWA Storage Water Account, minus the Provision for Shrinkage Water amount. MWA Storage Water available to MWA is to be stored for the exclusive benefit of HDWD and the other parties to the Judgment, through WVBW.

Section 8. Initial Storage Requirement – MWA agrees that at least 2,500 acre-feet, excluding the Provision for Shrinkage Water, must be credited to the MWA Storage Water Account before withdrawals can be made pursuant to Section 11.

Section 9. Point of Delivery – MWA Storage Water shall be delivered to and measured at the HDWD Spreading Basins, or at any other mutually-agreed-upon Point of Delivery.

Section 10. Conditions of Service – The extraction of MWA Storage Water from the Basin shall conform to the Rules and Regulations of MWA with regard to the sale of supplemental water within the jurisdiction of MWA, and to the WVBW Rules and Regulations.

Section 11. MWA Storage Water Account Withdrawals – Withdrawals from the MWA Storage Account shall be determined by MWA providing, however, that the Initial Storage Requirement is fulfilled pursuant to Section 8. At the discretion of MWA, MWA's Contractual delivery requirements to HDWD, as requested by HDWD through its water order, may be met in total or part by allocating a portion of the water stored in the MWA Storage Account providing, however, that an adverse condition of the Basin does not exist as provided for in Section 3. As a result of the sale of stored water to HDWD, MWA's account shall be debited by an equal amount. In the event of an adverse condition the Parties shall meet and confer pursuant to Section 3. Water in the MWA Storage Water Account shall be deemed to be transferred to HDWD or WVBW upon MWA's written notification to HDWD of the transfer and payment to MWA at a price equal to the current purchase price established by MWA for water delivered to HDWD pursuant to the water rates set annually in accordance with the Morongo Basin Pipeline Contract. It is hereby agreed that there is no charge, rent, assessment or expense incurred by MWA by reasons of HDWD spreading and storing the MWA Storage Water Account pursuant to this Agreement. No easement, license, or other right is granted by this Agreement for the use of pipelines, wells, flood control channels, spreading basins, or any other physical facilities or land.

Section 12. HDWD Indemnification – HDWD agrees to indemnify, defend and hold harmless MWA, its directors, officers, employees, and agents from any and all