WATER CONSERVATION MASTER PLAN

SEPTEMBER, 2004

MISSION SPRINGS WATER DISTRICT
66575 SECOND STREET
DESERT HOT SPRINGS, CALIFORNIA
92240-3711

MSWD WATER CONSERVATION MASTER PLAN

CHAPTER 1.0
INTRODUCTION/OVERVIEW

1.1 Why Water Conservation?

Water throughout many areas in California is a scarce and valuable natural resource. Water availability is affected by a variety of factors such as geography, environment, politics, economics and other issues. Until the early 1960's, California benefited from a well-planned and reliable water supply system. A number of significant legal, institutional, political and climatic milestones have impacted California water policy. In turn, these events have significantly impacted water industry attitudes and public awareness towards water conservation over the last 40 years. A list of these key events is presented in Appendix 4.1.

The high degree of reliability in water supply previously enjoyed statewide no longer exists. According to California Department of Water Resources (DWR) Bulletin No. 160-97, the State Water Project (SWP) which serves 25 million Californians, will be unable to make contracted deliveries in 7 out of 10 years by 2010---without construction of additional facilities. The reliability of California's water supplies has eroded for a wide variety of reasons, including: (1) the increasing competition for water supplies among various users and sectors of the state's economy as growth continues and demands on regional water supplies increase; (2) gradual recognition by the California water industry that water is going to become ever more scarce, valuable and costly; and (3) tough new federal and state water quality regulations combined with the implementation of major environmental legislation affecting future water facilities planning.

Water conservation has long proven to be an essential component of enhancing water supply reliability in several ways: (1) conservation reduces demands on existing facilities, and in the short-term, postpones the need for new and increasingly costly infrastructure; (2) conservation is a vital means of responding to water supply emergencies such as earthquakes, unplanned operational shutdowns, pipeline ruptures or other water system outages; and (3) conservation maximizes limited water resources within a chronically water-short environment.

Conservation alone, however, will not solve long-term water supply reliability issues. It must be considered as only one part of an integrated water resource management process---along with water recycling, reclamation of brackish or highly mineralized water sources, conjunctive use, water transfers and other innovative approaches. These and other options must be considered at all levels to ensure the complete use of water.

Conservation provides an immediate opportunity for an organized public response to deal with the uncertainties of local, regional and/or state water

supply conditions. In short, water conservation must become a way of life for all Californians. Mission Springs Water District (MSWD) is committed to coordinating conservation efforts at all levels. Water conservation decisions made today will have a lasting impact in the years to come on the communities served by the District. The District believes linkage among the different levels will assure complementary efforts.

The MSWD Water Conservation Master Plan (Plan) which follows defines a series of sensible water conservation activities that complement the unique water resource characteristics of the District's service area. The Plan represents a "first tier" qualitative effort at identifying and screening potential conservation initiatives appropriate for implementation in the District's service area [Chapter 2.0 provides specific information about conservation initiatives]. As program implementation proceeds, a "second tier" quantitative evaluation of the costs and effectiveness of each initiative will be completed. This data will help establish the performance benchmark to assist the District in determining which initiatives should be continued to meet long-term conservation objectives.

1.2 Factors Affecting Water Conservation Within MSWD

Following is a "snap-shot" of some of the significant factors in 2004 (e.g., institutional, economic, engineering, etc.) that are impinging upon the District in the development of this Plan:

- Water is a very limited resource within the arid Coachella Valley.
- MSWD is currently 100% dependent on local groundwater supplies.
- Mission Springs has no other sources of potable water available for its daily operations. Two emergency interconnections exist between MSWD and Coachella Valley Water District (CVWD).
- MSWD customers have paid in excess of $20 million dollars in taxes to Desert Water Agency (a wholesaler of State water) to reserve its rights to future use of imported water from the State Water Project.
- The District presently lacks sufficient reservoir storage to meet periods of extended water shortages caused by drought, power outages, earthquakes and/or rupture of key regional conveyance facilities.
- The City of Desert Hot Springs is experiencing significant new residential development.

- The potential exists for the future degradation of the District's groundwater supplies from existing septic tank systems, and also from future commercial and/or industrial development.

- MSWD recognizes that new or supplemental water sources such as recycled water, reclamation of brackish and highly mineralized water, and conjunctive use are available to augment existing groundwater supplies. The development of these sources will be a costly and institutionally complex venture to be addressed by the District's total integrated resource management program.

In addition to the preceding discussion of factors, Section 4.2 of this Plan presents a water use profile summarizing certain characteristics of the District's service area. The profile is based on existing in-house technical data. It is intended to provide a context for understanding the development of the water conservation master plan.

1.3 MSWD Water Conservation Principles

For over 50 years, MSWD has provided its customers with an adequate, dependable supply of water of the highest quality at the lowest possible price, and has prudently managed the District's supplies during periods of shortage. Consistent with this mission, the following principles provide the conceptual framework for guiding, refining and enhancing MSWD's water conservation strategies:

- To clarify and summarize existing District water conservation programs reflecting previous conservation commitments made by MSWD through its Urban Water Management Plan, the 900 Zone Project EIR, and other programs.
- To ensure that the conservation measures adopted by MSWD treat all District customers fairly and equitably.

- To identify and establish measurable conservation targets to be accomplished by MSWD within a reasonable period of time.

- To develop sensible approaches for practical, cost-effective and efficient conservation programs which anticipate and serve the long-term needs of District customers.

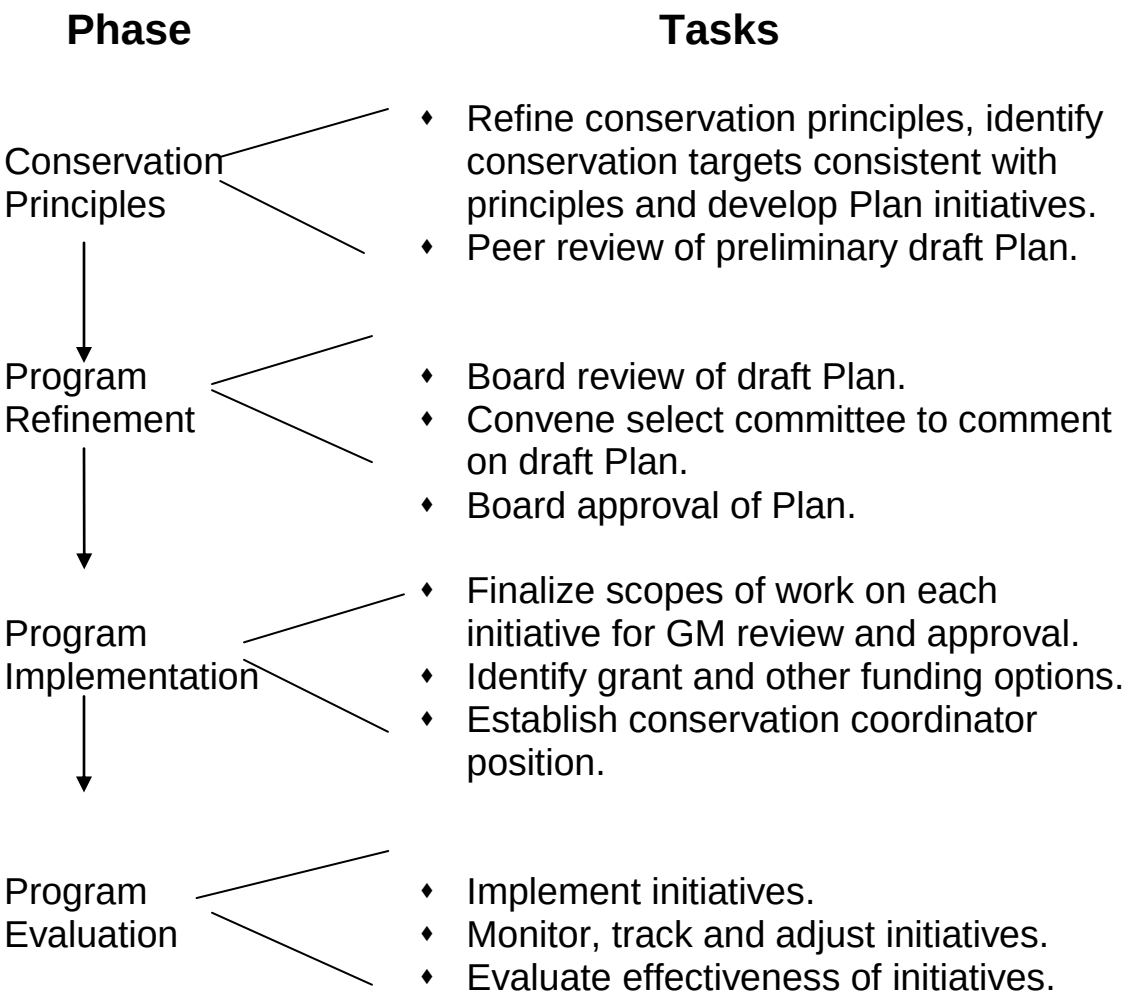
- To facilitate MSWD's ability to provide a dependable, reliable supply of water.

1.4 MSWD Conservation Planning: The Conceptual Framework

Figure 1-1 below conceptually illustrates the proposed conservation planning process for MSWD's service area. Four phases are envisioned as part of this process. They include the formulation of conservation principles, program refinement, program implementation and program evaluation.

Several clarifying points about the process should be noted: (1) the program refinement phase envisions soliciting comments on the draft action plan from a small committee of WISG alumni, Directors and staff; and (2) in the program implementation phase, each individual initiative comprising the action plan will require a scope of work, a timeline, implementation guidelines and a cost estimate. It is envisioned that the General Manager will review and approve the materials developed for each initiative prior to its implementation.

Figure 1-1
MSWD Conservation Planning: The Conceptual Framework



Source: MSWD, 2004.

CHAPTER 2.0
CONSERVATION ACTION PLAN

2.1 Water Conservation: A Dual Approach

Water conservation measures can be classified as either regulatory or management practices. Regulatory practices include all measures taken in response to specific state or local legislation. Examples of regulatory measures include the 1994 State legislation mandating the installation of low-flow toilets in all new homes built in California. Generally, any regulations or restrictions that carry penalties for non-compliance are included under regulatory practices. An example of this would be water rationing during droughts or emergencies.

Management practices are those actions taken by water agencies resulting in beneficial reductions in water use or water losses. This category of water conservation measures can include retrofitting with water efficient devices, leak detection and repair, conservation (tiered) pricing, recycling, and others. Management practices also include educational efforts with customers to cultivate a conservation mindset. Collectively, both practices provide the institutional and policy mechanisms needed to achieve the District's conservation targets outlined below.

2.2 Establishing Measurable Conservation Targets

Establishing measurable conservation targets is an integral part of the conservation planning process. The three distinct components of this process involve the establishment of measurable targets, identifying worthwhile conservation measures, and evaluating the effect(s) of conservation activities and attainment of goals. Targeting water conservation measures that are recognized to save water versus those that do not is also important to understand. Evaluating the effectiveness of specific conservation activities ensures that the District's resources will be focused in the most timely and efficient manner possible.

A detailed study completed in 1999 by American Water Works Association (AWWA) Research Foundation looked at how selected U.S. families use water around the house. The report, titled *Residential End Uses of Water*, found that 42% of annual water use occurs indoors, while 58% is for outdoor purposes. The mix of indoor and outdoor usage was strongly influenced by annual weather patterns. Cities like Phoenix and Scottsdale had a higher percentage of outdoor use (59%-67%), compared to metropolitan areas like Seattle or Tampa (22%-38%). The AWWA study found that in addition to climate, the amount of water used outdoors is also tied to parcel size and the area devoted to landscaping.

Based on AWWA's recent study, outdoor water use invites significant investigation for realizing improved water use efficiency within MSWD's service area. There are several reasons: (1) the District's arid climate and geography are virtually identical to that of Scottsdale and Phoenix; (2) current data indicates that landscape irrigation constitutes approximately two-thirds of the water used by residential customers within the District's service area; and (3) the City of Desert Hot Springs anticipates significant residential development within its sphere of influence over the next five years. The District should focus a major part of its conservation activities with programs tailored to help new development improve its water use efficiency outdoors.

In concert with the Valley-Wide Conservation Ordinance (please refer to Section 2.3 below), MSWD will be targeting at least a 25% reduction in water used for all future landscaping by new developments---compared to historical consumption levels of existing residential and business customers. A 25% reduction would translate into about 2,100 acre-feet of potential water savings annually for the District's service area. The 25% goal is consistent with the Valley-Wide Landscape Conservation Ordinance, to better reflect the arid climate of the Coachella Valley. This Ordinance was a local response to the 1990 California Legislature's mandate to improve landscape water use efficiency statewide.

Initially, a higher water use coefficient factor of 0.8 was utilized in the water use equation defined in the State legislation for determining optimum landscape water efficiency. In the Coachella Valley, however, a committee of local water agencies, valley cities, landscape architects and the building industry association determined that the coefficient factor should instead be 0.6---which amounted to a 25% reduction. This value would better reflect the constraints of the Valley's arid desert environment, and encourage the use of native water thrifty landscaping and climate-sensitive irrigation systems. Section 2.3.1 below outlines the specific landscape initiatives to accomplish this objective.

MSWD's conservation efforts should also address water usage of existing customers, and establishing a target of at least 5% reduction in the total water use of existing customers. This use reduction would amount to approximately 450 acre-feet of potential water savings per year within the District's service area. This proposed goal is based on the 1999 AWWA study noted above in which toilet flushing, clothes washers and showers/baths, respectively, account for about two-thirds of all water used indoors. Accomplishing this objective will require surveys evaluating specific end-uses of indoor water use within the District's service area to fine-tune conservation efforts. Data points that might be considered, for example, could include historical consumption levels, type of business or residence, age of structures, existing water use practices, number of employees and other similar characteristics.

2.3 Action Plan Initiatives

Sections 2.3.1 through 2.3.4 below describe the proposed initiatives aimed at accomplishing the above conservation targets, and enhancing the District's existing conservation activities. They include a variety of activities such as native desert landscaping for new developments, landscape water audits, retrofits of older homes and businesses with water efficient fixtures, and enhanced public outreach activities. Other programs will involve coordinating conservation efforts with other water districts in the Valley, exploring potential new source water opportunities to stretch the District's potable water supplies, customer incentives for installing water efficient fixture retrofits and updating allowable water use requirements during droughts and other emergencies.

The cost of some of the initiatives below may affect the timing and scope of their implementation. Therefore, creative approaches to minimizing activity costs and developing funding options will be very important. In this regard, the District should seek out grants and other sources of federal or state dollars to fund some, most or all of the conservation initiatives. The District should also examine the feasibility of establishing a "conservation reserve". The goal of the reserve would be to fund part or all of the expense of an initiative, including customer rebates for conserved water. Potential sources of dollars to fund such a reserve might come from District fines imposed on water wasters. Another approach might include a conservation surcharge on new development projects. For example, conversations with representatives from the City of Phoenix and Scottsdale determined that these cities adopted a water resource acquisition fee to fund future conservation activities geared to new developments.

An assessment of public acceptability of these initiatives should be conducted by the District. The goal of this assessment process would be to ascertain the probable response of various sectors of the community to each of the proposed initiatives. This could be accomplished by establishing a small committee of Water Information Study Group (WISG) program alumni, Board members and key staff serving as a focus group. The committee's input from these workshops would be useful in refining the scope and increasing customer acceptability of the conservation initiatives proposed by the District.

Upon completion of the assessment of public acceptability, each initiative would require the development of a detailed work plan outlining its implementation process. The work plan document is envisioned to include but not be limited to a description of proposed participants, implementation guidelines, customer contact methods, scheduling, costs and evaluation approach. The scope of work would be reviewed and approved by the General Manager prior to the implementation of each initiative. An evaluation of the effectiveness of each initiative would be performed by the District's conservation coordinator (please refer to Section 3.1).

2.3.1 Landscape Initiatives

- **Initiative No. 1:** Since 2002, MSWD has actively worked with local water districts and other organizations to develop a valley-wide landscape ordinance. This ordinance would apply to new and rehabilitated landscape installations. The ordinance is intended to: (1) establish a plant water use coefficient appropriate to the arid desert climate of the region; and (2) ensure consistency of landscape water efficiency standards throughout the Valley. **Action:** Finalize review of the MSWD Landscape Guidelines for approval by the Board of Directors. **Task**: Coordinate with City of Desert Hot Springs to ensure concurrent adoption of MSWD's Landscape Guidelines.

- **Initiative No. 2:** Significant new development is expected by the City of Desert Hot Springs (DHS) to occur over the next several years----the majority of which will be within MSWD's service area. If it occurs, this development will create additional demands upon the District's water distribution system that will need to be managed, in part, through conservation. **Action**: Require water efficient practices in landscape plans and irrigation systems of all new residential and commercial development projects. **Tasks:** Develop a marketing strategy incorporating water efficient principles and practices that addresses local homebuilders, new home buyers, local nurseries and landscape contractors. Identify local builder willing to partner with MSWD to establish water thrifty model landscapes for prospective homebuyers. Prepare education materials for developer sales-staff and new home buyers. Coordinate with appropriate DHS City staff.

- **Initiative No. 3:** The District maintains an 8,000 square foot demonstration garden which provides educational benefits for schools, community organizations and the public at large. The garden contains a variety of water-thrifty plants native to the region. A brochure has been prepared explaining each plant within the garden and is designed for self-guided tours. **Action:** Establish a landscape conservation center at the District's existing demonstration garden. **Task:** Survey customers to determine types of workshops to be offered at the education center which promote wise water use. Examples could include a "master gardener" program focusing on water efficient gardening and irrigation techniques geared to homeowners, seminars for landscape contractors and/or nurseries, and outdoor audits performed by the Coachella Resource Conservation District. Create educational materials on low-water using plants to be offered to future homebuyers at participating local nurseries.

- **Initiative No. 4**: With the development of its landscape guidelines, MSWD should explore offering interested existing customers a

financial incentive for using water efficient irrigation technology (e.g., drip irrigation, evapotranspiration irrigation controllers, etc.) **Action:** Develop water efficient irrigation technology rebates program. **Tasks:** Contact appropriate districts with existing rebate program models. Identify costs and ascertain if cost-effective for MSWD to create its own similar rebate program.

2.3.2 Public Education/Outreach Initiatives

- **Initiative No. 1:** The District has a school education program. The program includes in-class presentations to fifth and sixth grade students about drinking water, and works with students on water-related science fair exhibits via the Natural Sciences Education Connection Program. Recently, MSWD approved financial support for the Natural Science Museum and Educational Center for the upcoming school year. **Action:** Continue to seek out opportunities to expand the District's school education program, and support teaching staff when needed. **Task**: Coordinate community and valley-wide resources to integrate existing school programs and develop new ones as needed.

- **Initiative No. 2:** Keeping customers informed in a timely manner about their water service is an important District function. A District website is under construction, and will feature a wide range of information about MSWD's services and programs. **Action:** Include appropriate conservation related information on MSWD website as appropriate. **Task:** Identify conservation topics suitable for inclusion on the new MSWD website.

- **Initiative No. 3:** Getting customer involvement in conservation activities is crucial to their acceptance and support. One approach is for MSWD to sponsor an annual conservation event to showcase various conservation activities and enhance customer water awareness. **Action:** Establish a water conservation fair in conjunction with the annual Desert Hot Springs Chamber of Commerce Festival of Waters. **Tasks:** Develop a theme for the conservation event to underscore its importance. Advertise via public service announcements and ads in local papers. Invite speakers to address conservation topics that are timely and useful to water consumers. Organize specific activities, contests and/or exhibits that enhance customer awareness of conservation.

- **Initiative No. 4**: As discussed in Section 1.1, the District is committed to proactively coordinating with other organizations on appropriate conservation programs. Such a process can help focus limited staffing and budgetary resources, reduce program implementation costs, and

result in enhanced public awareness of the importance of conservation for the Coachella Valley. **Action:** Contact local districts. **Tasks:** Identify opportunities for collaborating on specific conservation programs of mutual benefit to each agency. Develop plans and schedules to implement specific conservation programs.

2.3.3 Targeted Conservation Initiatives

- **Initiative No. 1:** Tiered or conservation pricing can serve as strong incentive for consumers to carefully consider their daily water use. This type of pricing encourages conservation on a 24/7/365 basis. **Action:** The District should review possible changes to its existing rate structure and develop tiered pricing options-----with a particular focus on new development and those customers that plan to use more water in the future. **Tasks:** Determine revenue requirements to meet water system O & M expenses. Review connection fees and related charges to ensure full cost-recovery of all water system upgrade, operation and maintenance expenses. Allocate costs equitably among different uses and users. Evaluate whether rates provide adequate incentives for consumers to conserve.

- **Initiative No. 2:** MSWD has a water shortage contingency ordinance to restrict unnecessary water usage during threatened and/or extended water shortages, an unexpected emergency condition, or true drought conditions. This ordinance is out of date, and needs to be updated to facilitate quick implementation on an as needed basis. This will be particularly important as regional water supplies for California and the southwestern U.S. deteriorate due to continuing drought conditions. **Action:** Update water shortage ordinance. **Tasks:** Review ordinances of selected agencies, along with pertinent drought contingency planning information from DWR. Develop a revised ordinance for adoption by the MSWD Board of Directors.

- **Initiative No. 3:** Water audits are an effective way to improve irrigation efficiency for high-volume residential and commercial water users such as homeowner associations and golf courses. Audits evaluate delivery effectiveness and environmental factors such as soil type, salinity levels and weather conditions. The data obtained from such audits can be used by the District in the development of a tiered conservation rate structure. **Action:** Establish water conservation audit programs targeting the District's largest water users. **Task:** Contact Coachella Resource Conservation District to determine steps, timeframe and cost to sponsor audits targeting the top 10 - 20 high water users within the District's service area.

- **Initiative No. 4**: The City of Desert Hot Springs and the County of Riverside are responsible for ensuring the public's compliance with plumbing fixture efficiency standards, and enforcing ultra-low flush toilet (ULFT) replacements. **Action:** Evaluate feasibility of establishing a water efficient fixture rebate program to encourage commercial customers (i.e., hotels and spa resorts) to replace high water consumptive toilets, high flow showerheads and clogged faucet aerators. For residential customers, analyze District sponsored recirculation pump retrofit incentive program. **Tasks:** Pattern MSWD's program after similar regional and local rebate programs which take advantage of work already completed in this area. Research hot water recirculation systems on the market appropriate for homeowners that can reduce water waste. Analyze available historical use patterns and other appropriate District data to determine if projected water savings justify the establishment of such a program. Determine level of rebates to be offered by the District.

2.3.4 System Reliability Initiatives

- **Initiative No. 1**: Ensuring infrastructure reliability is a top priority for MSWD. Current programs include leak detection and repair, metering, meter replacement, system flushing, reservoir cleaning and maintenance, valve maintenance and mapping. **Action**: Review distribution system operational procedures and maintenance practices. **Tasks**: Evaluate existing program with appropriate field and administrative staff. Review the scope and timing of the hydrant flushing program and determine how much water is lost during flushing. Look at unaccounted-for-water within system to see if MSWD is within acceptable AWWA/industry standards. Determine whether other process changes are warranted in the District's preventative and appurtenance upgrade program.

- **Initiative No. 2:**. Total management of water resources for MSWD's service area should ultimately include developing recycled water for appropriate beneficial uses such as golf courses, parks, school playing fields, and other public grounds. **Action:** Explore feasibility of a recycled water program. **Tasks:** Identify types and numbers of potential recycled water users to determine if a sufficient market exists to establish a cost-effective recycling program. Determine all costs and facilities needed to establish recycled water distribution system. If appropriate, evaluate future timing for expanding Horton WWTP capability to tertiary treatment. Research opportunities available to MSWD to fund future plant upgrade.

- **Initiative No. 3**: Some portions of the groundwater resources available to the District contain minerals and salts (reflected by moderately high TDS values) which exceed the maximum contaminant levels (MCL's) for potable water. Specific areas include the Desert Hot Springs basin, which generally underlies the City north of the Mission Creek Fault. Additionally, the MCGS increases in total dissolved solids (TDS) east of Palm Drive, presumably due to the influence of recharge from the Long Canyon Wash. **Action:** Determine feasibility of reclaiming highly mineralized groundwater for future beneficial uses within the District's service area. **Tasks:** Conduct a pilot study of highly mineralized waters sites within MSWD's service area. Identify opportunities for partial or full federal grant funding of pilot study. Contact Metropolitan to ascertain if any aspect of its current DRIPP (Desalination Research and Innovation Partnership Program) might apply to the District's study.

CHAPTER 3.0
ENSURING EFFECTIVENESS OF MSWD CONSERVATION EFFORTS

3.1 Establish Water Efficiency Coordinator Position

Given the number and scope of conservation activities envisioned by this plan, strong consideration should be given to establishing a full-time conservation coordinator position. This position will be responsible for analyzing, developing, promoting, monitoring and evaluating all MSWD conservation-related activities. Proactively cultivating positive customer attitudes on how reasonable and permanent changes in water use habits can be achieved will be an important aspect of this position. Appendix 4.3 provides additional details regarding the responsibilities envisioned for this position.

3.2 Evaluate Conservation Action Plan

The District's water efficiency coordinator will be responsible for evaluating the District's conservation action plan. The Coordinator will need to prepare an evaluation plan outlining the methodologies to be used in analyzing each initiative's effectiveness. The plan should reflect the major components typically associated with analyzing a program, including process evaluation, impact evaluation, and monitoring. Briefly, process evaluation will need to look at the effectiveness of initiative implementation methods and overall benefits. In turn, the impact evaluation phase must focus on obtaining accurate measurements of changes in customer water use clearly attributable to a particular conservation initiative. Finally, monitoring will need to assess specific progress toward reaching a conservation target.

It is also recommended that the coordinator undertake an interim evaluation of each initiative following its initial implementation. Feedback from such a "mid-course adjustment" will be very useful in: (1) making any additions, deletions or other changes to a given initiative so that the coordinator ensures that its meets MSWD objectives; and (2) allowing the coordinator to provide timely feedback to the General Manager [and other affected key staff] about the progress of specific conservation activities. To facilitate the coordinator's evaluation of each conservation initiative, several sources can be contacted for "state-of-the-art" information in this endeavor. They include the AWWA Research Foundation (AWWARF) in Denver, Colorado. AWWA provides many useful studies and technical "how-to" manuals outlining a range of procedures for evaluating conservation measures; (2) the California Urban Water Conservation Council (CUWCC) in Sacramento, California. This organization's staff is a good source of specific information about conservation programs in California. They also offer for

sale reference materials and recent technical studies funded by the CUWCC; and (3) the U.S. Environmental Protection Agency's Water Efficiency Program. This federal agency provides a website with detailed conservation information about various municipal and industrial water uses. Of particular value are specific guidelines with suggested strategies for evaluating and implementing conservation measures.

3.3 Assess Financial Impacts

The financial impacts of the conservation initiatives proposed in Section 2.3 of this Plan will need to be assessed by MSWD.

Of particular importance to the District will be clearly understanding the long-term effect(s) of implementing a tiered conservation rate structure on its operations. Generally, the primary role of a water rate structure is to generate income to meet a utility's revenue requirements. Ideally, a water rate structure will also equitably allocate costs among different types of uses and users. The structure should also provide appropriate incentives as pricing signals to help consumers make intelligent decisions about their water consumption.

From an organizational perspective, the important financial issues for MSWD to consider in developing a conservation rate structure should include: (1) knowing whether the rate structure fully compensates the District so that its revenue requirements are met; (2) will the rate structure allow the District to earn a fair return on its investment? and (3) is the rate structure strategically sound for long-term capital improvement planning purposes? From a customer's perspective, the key issues of interest will be: (1) is the rate making process and rate structure equitable and understandable? and (2) are the rates perceived as affordable?

CHAPTER 4.0
APPENDICES

APPENDIX 4.1
MSWD WATER CONSERVATION MASTER PLAN

4.1 Summary of California Water Policy Milestones

The following list supplements the discussion in Section 1.1 of this report titled "*Why Conservation?"* It is intended to be a non-exhaustive list of just some of the key legal, institutional, demographic and political actions that have impacted California water policy---and public attitudes towards water issues like conservation----over the last 40 years:

- The 1964 U.S. Supreme Court decision in the case of California vs. Arizona.
- The completion of the State Water Project (SWP) in 1972, conveying water from northern to southern California.
- The 1976-77 drought (with 1977 being the driest year of record).
- The 1982 defeat of Proposition 9, also known as the Peripheral Canal Initiative.
- The completion of the first phase of the Central Arizona Project in 1985.
- The 1987-1993 drought (with 1991 being the third driest year of record).
- The creation of CALFED in 1994 to address environmental and water supply issues affecting the San Francisco Bay-San Joaquin Delta.
- The Quantification Settlement Agreement (QSA) regarding the use of Colorado River Water in California---a key element being the proposed San Diego-Imperial Irrigation District Transfer.
- Continuing growth statewide.

APPENDIX 4.2
MSWD WATER CONSERVATION MASTER PLAN

4.2 MSWD Water Use Profile

The first step in the water conservation planning process is to develop an understanding of the District's service area, its present circumstances and the customers it serves. This water use profile provides the context for formulating a water conservation program that complements the District's long-term water resource management objectives. The following summary provides an overview of key MSWD service area characteristics, including climate and rainfall, local and imported water supply sources, water demands and variations in its demands, and indoor versus outdoor water use trends. It is based on existing data, much of which will need to be updated in the near term assuming Board approval of the water efficiency coordinator position proposed in Section 3.1

4.2.1 Service Area Characteristics

MSWD's service area covers 135 square miles of hilly and flat terrain. The District is bounded on the north by the Riverside/San Bernardino County line, the Morongo Indian Reservation to the west, Interstate 10 to the south and Longhill Canyon/Corkhill Roads to the east. Included within this area are the communities of Desert Hot Springs, North Palm Springs, West Garnet, Desert City, Painted Hills, Mission Lakes CC, Desert Crest CC, Dillion Mobile Home Park, Holmes Trailer Park, Caliente Springs RV Resort, Sands Mobile Home Park, Palm Springs Crest and West Palm Springs Village.

MSWD currently has approximately 9,800 water service connections serving a population of approximately 24,000 residents. Two separate water distribution systems convey water to customers within the District's expansive service area. The main system is referred to as the Desert Hot Springs system. The District's primary distribution system consists of 235 miles of main, seven (7) wells, twenty (20) reservoirs and twenty-two (22) booster pump stations. Total reservoir storage capacity is about 18.3 MG.

4.2.2 Climate and Rainfall

MSWD's service area is characterized by an arid desert climate, featuring long, hot, and dry summers and relatively short, cool winters. Average temperature is about 89 degrees (F), with average minimum temperatures at 57 degrees (F). Since the late 1940's, rainfall in this area has averaged between 5.5 and 6 inches.

4.2.3 MSWD Local Water Supply

The Desert Hot Springs water system is currently served by the Mission Creek Groundwater subbasin (MCGS). This subbasin was formed as a result of the Mission Creek fault to the north, the Banning (or Garnet) fault to the south, and the San Bernardino Mountains to the west. In the westerly portion of the District's service area off the I-10 Freeway, the Palm Springs Crest and the West Palm Springs water distribution systems are each supplied by a single District well which draws water from the San Gorgonio Pass Subbasin. Figure 2-1 illustrates the geologic boundaries of the District's existing sources of water supply.

About 8,400 acre-feet per year of drinking water is currently supplied by MSWD to its customers. A total of seven actively producing wells located within the MCGS provide the majority of the District's water supply. In addition, the District has two emergency connections with the Coachella Valley Water District (CVWD). Based on several different water quality constituents (i.e. total dissolved solids, hardness, pH, and others), the quality of the groundwater within the basin has traditionally been excellent. The level of quality has been recognized nationally at several water tasting competitions over the last decade.

In addition to MSWD's wells, there are numerous privately owned water wells within the Desert Hot Springs area. These wells are generally shallow, ranging from 100 to less than 400 feet, and produce small quantities of water. It is worth noting that a number of local spas and resort hotels are among the group of private well operators. The actual number and annual extraction volumes associated with these private wells is unknown at the present time.

The District commissioned a hydrogeologic assessment of the MCGS basin that was completed in May 2000. The study estimated that there is in excess of about 1.3 million acre-feet of groundwater within the basin. The study also noted that extractions from the basin have generally increased over time, resulting in increasing decline in water levels and loss of storage due to subsidence. Projections of changes in water levels over a 50-year time frame indicate an overall rate of decline between 2 to 3 feet per year.

The District has commissioned additional geophysical and water resource studies by several engineering consultants that will expand upon technical research conducted in previous basin assessments. These studies will provide the basis for its integrated resource basin management plan. MSWD is developing basin management plan which contemplates a diverse portfolio of local and regional resource initiatives that will: (1) facilitate the comprehensive management of its precious groundwater sources; (2) meet the District's long-term water supply demands of its service area; and (3) comply with state mandated public health and safety obligations.

4.2.4. MSWD Imported Water Supply Options

MSWD currently receives no imported water supplies into its service area. The most easily accessible source of imported water in the near term would likely be water from the Colorado River Aqueduct (CRA). This open conveyance facility is owned and operated by the Metropolitan Water District of Southern California Metropolitan). Portions of the CRA border the District's northeasterly and westerly portions of its service area boundaries.

Some years ago, at the insistence of MSWD, DWA negotiated with Metropolitan for the design and construction of a 48-inch connection to the CRA. Subsequently, a series of spreading basins were designed and constructed in close proximity to the turnout by DWA in 2001. The basins are located in the northwest portion of the District's service area and are capable of receiving and recharging imported water into the MCGS. About 4,700 AF of "ceremonial" CRA water was percolated into the MCGS as a demonstration project in 2001. The recharge ponds are estimated to have the capability of percolating about 5,000 to 15,000 AF per year.

Access to CRA water would require the cooperation of the District's wholesaler, Desert Water Agency (DWA). Presently, there are unresolved institutional, legal and financial differences of opinion between MSWD and DWA. These differences involve the management of the MCGS which would affect the long-term use of CRA and other imported water(s). Additionally, there are a number of additional approvals that would be required from the Coachella Valley Water District (CVWD), Metropolitan, the Regional Water Quality Control Board (Colorado Region) and likely other regional or state entities.

Another potential option for imported water could be water from the State Water Project (SWP). The SWP is an extremely complex water and power conveyance system, providing water supplies for millions of Californians statewide. The planning, design, construction, operation and maintenance of the SWP are the responsibility of the State Department of Water Resources. The SWP ultimately terminates at Perris Reservoir in Riverside County. Local agencies in the Coachella Valley with entitlements to SWP water include the CVWD and DWA. Since there are currently no facilities to deliver SWP water to the Valley, both CVWD and DWA exchange "bucket for bucket" for Colorado River water from Metropolitan.

Bringing state project water to San Bernardino and Riverside Counties was accomplished in 2002 with the completion of the first phase of the East Branch Extension (EBX) of the California Aqueduct. Recent interest has been expressed by both CVWD and DWA in amending the scope of the reconnaissance level studies to include an EBX extension. The proposal would be to analyze the feasibility of extending the EBX approximately 20 miles from Beaumont to the Coachella Valley. Conceptually, the request by CVWD and DWA to bring state

water to the Coachella Valley is not new. The idea has been the subject of previous technical studies completed by DWR and others between 1963 and 1980.

A desert extension to the State Water Project would help diversify the Coachella Valley's imported water supplies, and potentially help local water agencies like MSWD to make better use of underground storage opportunities among the various groundwater basins. Imported state water would also help address salinity issues in various areas of the Coachella Valley. If found feasible, the project would likely require at least 10 years to complete at an estimated cost of $500 million.

4.2.5 Historic vs. Projected Water Demands

Water demands within MSWD's service area can be categorized as consisting of municipal and industrial uses (M &I). M & I or domestic demands for water include residential, commercial/industrial, institutional, irrigation and other. Residential water demands currently account for 75.5% of domestic water use. Commercial/industrial demands account for about 8.9% of the domestic use. Remaining uses represent 15.6% of overall water use. Table 4-1 below summarizes the historic M&I water usage within MSWD's service area.

TABLE 4-1
MSWD HISTORIC M & I WATER USAGE (AF)[1]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Residential	**4,436**	**4,998**	**4,911**	**5,220**	**5,127**	**4,782**	**5,067**	**5,446**	**5,503**	**5,597**
Commercial	**476**	**571**	**584**	**631**	**674**	**596**	**643**	**684**	**670**	**660**
Institutional	**267**	**294**	**264**	**219**	**210**	**208**	**210**	**173**	**189**	**197**
Irrigation	**414**	**525**	**480**	**591**	**655**	**597**	**843**	**882**	**820**	**880**
Other	**234**	**129**	**90**	**92**	**80**	**153**	**111**	**84**	**112**	**76**
Total	**5,827**	**6,518**	**6,329**	**6,753**	**6,751**	**6,337**	**6,875**	**7,270**	**7,294**	**7,410**

NOTE: [1]The historic M&I water usage values shown in Table 4-1 are presented on a fiscal year basis.

The number of District water service connections by customer type is summarized below in Table 4-2.

TABLE 4-2
SUMMARY OF MSWD WATER SERVICE CONNECTIONS[1]

Customer Type	1995	1996	1997	1998	1999	2000	2001	2002
Residential	7,314	7,364	7,410	7,428	7,448	7,503	7,555	7,723
Commercial	269	272	275	279	286	288	294	296
Irrigation	62	65	68	75	80	86	92	92
Institutional	52	54	54	58	60	61	61	61
Other	58	64	57	50	64	65	58	58
Totals	7,755	7,819	7,864	7,890	7,938	8,003	8,060	8,230

NOTE: [1]The water service connections listed in Table 4-2 are presented on a fiscal year basis.

_____

4.2.6 Variations In Water Demand

Water demand is typically a function of population, population densities, climate factors and variations based on characteristic behavior of the public. Generally, the average daily per capita M & I demand is helpful in evaluating the historic water demands of an area. It can also be used for projecting future water demands---in conjunction with population and planning projections---to identify future facility needs within a water agency's service area. The per capita consumption figure represents an overall average of water use. Normally included within this figure for a typical water distribution system are residential, commercial/industrial, institutional, irrigation uses plus unaccounted-for-water loss. Table 4-3 below lists the annual residential usage within MSWD's service area. Also shown is the annual per capita consumption.

TABLE 4-3
TOTAL MSWD REPORTED AND PROJECTED
RESIDENTIAL DEMAND PER CAPITA
WATER CONSUMPTION SUMMARY

Fiscal Year	Water Usage[1] (AF)	Population[2]	Residential (GPCD)
1995	4,911	21,947	200
2000	5,446	22,683	214
2005	6,154	24,384	225
2010	6,954	26,213	237
2015	7,858	28,179	249
2020	8,880	30,292	262
2025	10,034	32,564	275

NOTES: [1]Residential water use projections for the period 2005-2025 are based on a factor of 13% increase for each five year period.

[2]The population values for MSWD's service area are based on State of California Department of Finance's annual population report for the City of Desert Hot Springs, plus the total "out-of-city" residential service connections, multiplied by a factor of 2.4 persons per household.

The residential per capita consumption values for MSWD's service area can be viewed within a regional context, by comparing them with residential per capita consumption values calculated by the Metropolitan Water District of Southern California (Metropolitan) for Riverside County. This information, presented below

in Table 4-4, was developed as part of Metropolitan's update of its 2000 Regional Urban Water Management Plan.

TABLE 4-4
TOTAL METROPOLITAN REPORTED AND PROJECTED RESIDENTIAL DEMAND PER CAPITA
WATER CONSUMPTION SUMMARY

Year[1]	Total Residential (AF)	Population[2]	Residential GPCD
1990	189,000	821,400	205
1997	219,100	1,013,200	193
2000	228,700	1,095,400	186
2005	280,700	1,356,600	185
2010	335,600	1,617,900	185
2015	374,600	1,805,000	185
2020	422,100	2,000,300	188

Notes:
[1]Per Metropolitan, water use for both 1990 and 1997 are model estimates.

[2]Per Metropolitan, population projections were based on Southern California Association of Governments (SCAG) 1998 Regional Transportation Plan.

_____

In comparing Table 4-3 with Table 4-4, it should be noted that MSWD's per capita figures are based on historic population and water use trends. These values are conservative and may not be a precise indicator of actual future per capita demands within the District's service area. In addition, certain factors affecting per capita water use in the future which the District has no direct control over will be difficult to assess (e.g., droughts, changes in demographics, climatic shifts, etc.). When evaluating future per capita demands for long-range planning purposes, it is believed that these demands will realistically be somewhere between the District's and Metropolitan's projected values shown in Tables 4-3 and 4-4.

Table 4-5 below provides a still broader perspective for evaluating per capita demands, comparing total M & I per capita demand for Riverside County to the rest of Metropolitan's service area. From 2000 forward, Metropolitan expects per capita consumption to increase slightly after decreasing in the 1990's, following

the conclusion of the 1986-1993 drought. Conversations with Metropolitan staff in 2003 indicated that this projected increase appears to be the result of certain per capita demand factors counter-acting each other.

TABLE 4-5
MUNICIPAL AND INDUSTRIAL PER CAPITA WATER USE
FOR METROPOLITAN SERVICE AREA

County	Reported				Projected			
		1990	1995	2000	2005	2010	2015	2020
Los Angeles		188	164	167	167	168	169	171
Riverside		275	261	255	251	249	249	254
San Bernardino		281	221	249	250	252	256	261
Orange		233	196	206	202	200	205	210
San Diego		209	164	183	177	176	175	176
Ventura		228	179	213	218	225	229	234
Total Metropolitan (Weighted)		210	176	186	186	187	189	192

Metropolitan's projections in Table 4-5 reflect savings that included plumbing codes, active conservation, and increased water rates with conservation oriented rate structures. According to Met staff, counter-acting these gains is disproportionate growth in the hotter and drier inland areas with high per capita use, rising regional household income and more employees per business------- leading to higher non-residential water use per capita. Metropolitan notes that these projected trends could change within the next decade as new, more water efficient technologies are adopted, and as updated or revised demographic and employment data are considered by Metropolitan in its future demand models.

4.2.7 Indoor vs. Outdoor Water Usage

Based on current available data, a look at residential domestic water demands for MSWD service area shows that approximately 33% is for interior use, while 67% goes towards landscape irrigation and other outside uses. By comparison regionally, 30% to 70% of residential water consumed within Metropolitan's service area (depending upon the location) goes outside for landscaping and other purposes. An additional nationwide comparison cites a recent study by AWWA of 14 major cities across the United States. The study found that 58% of annual water use was for outdoor purposes, with the balance of 42% for indoor uses. No information is presently available within the District's customer service

records regarding the distribution of indoor water use for a “typical” residence within MSWD’s service area. As a point of reference, the AWWA study notes that the major water use areas within the home generally include toilets (27%), clothes washers (22%), showers (17%), faucets (16%), leaks (14%), baths (2%), dishwashers (1%) and other domestic uses (1%).

APPENDIX 4.3
MSWD WATER CONSERVATION MASTER PLAN

4.3 Water Efficiency Coordinator Position

Listed below are a few of the general responsibilities envisioned for the Water Efficiency Coordinator position discussed in Section 3.1 of this Plan. A more specific job description will be developed.

The need for this position was identified during the preparation of the District's Water Conservation Master Plan. The position contemplates a senior level individual having a minimum of 10 years of professional experience in conservation, engineering, or other closely related water industry field along with a university degree. Ideally this person would exhibit a balance of technical knowledge, analytical skills, administrative and communication abilities. Organizationally, it would be responsible for organizing, planning, coordinating, implementing, monitoring and evaluating the effectiveness of all elements of MSWD's Plan and to do all things necessary to execute the Plan.

The position would conduct original research relating to conservation policy and water use issues, prepare technical reports, implement and evaluate water use efficiency management measures, ensure compliance with state conservation legislation, recommend program schedules and adjustments as required. In addition, the position would serve as the District conservation liaison with various public and private stakeholders, and work closely with the Public Information Officer on public education and outreach related to water use efficiency programs.

Several important responsibilities of this position will include (but not be limited to): (1) coordination and alignment of conservation efforts with the District's public information activities, since many conservation initiatives will involve frequent contact with customers, neighboring agencies, and the media; (2) developing an indoor / outdoor water use audit program; (3) developing the District's statistical database to obtain accurate profiles of various residential "end-uses" which are presently not documented; and (4) identifying and measuring water conservation program targets which complement the District's long-range water supply planning and resource management programs.

APPENDIX 4.4
MSWD WATER CONSERVATION MASTER PLAN

4.4 Individuals Contacted

The following individuals provided guidance, information, suggestions, and/or inspiration in the development of this Plan. Their assistance is gratefully acknowledged:

Don Ackley, Coachella Valley WD
John Amodeo, Vista ID
Tom Babcock, City of Phoenix Water Conservation Office
Kathy Blakely, Rincon Del Diablo MWD
Ed Blundon, City of Phoenix Water Services Dept.
Joe Bocanegra, Mission Springs Water District
Barbara Carr, Mission Springs Water District
Bill Davis, Planning Management Consultants, Ltd., Inc.
David Inouye, California DWR
Bill Jacoby, San Diego CWA
Nielle McCammon, Arizona State University---Morrison Institute
Marilyn McKay, Mission Springs Water District
Leslie Naritelli, Olivenhain MWD
Kent Newland, City of Phoenix Water Conservation Office
Wayne Nielson, Mission Springs Water District
Eva Opitz, Planning Management Consultants Ltd., Inc.
Charlie Pike, RWA
Marsha Prilliwitz, California DWR
Allie Song, MWD of Southern California
Liang Sun, MWD of Southern California
Warren Teitz, MWD of Southern California
Dave Todd, California DWR
Heather, Riverside County Environmental Health Dept.

APPENDIX 4.5
MSWD WATER CONSERVATION MASTER PLAN

4.5 Revised Draft MSWD Water Shortage Ordinance

Following is a draft water shortage ordinance that is proposed to replace the District's existing Ordinance No. 93.3:

DRAFT
ORDINANCE NO. 2004-02

ORDINANCE OF THE MISSION SPRINGS WATER DISTRICT FINDING A THREATENED EMERGENCY AND THREATENED WATER SHORTAGE, FINDING NECESSITY FOR, AND PRESCRIBING AND DEFINING, RESTRICTIONS, PROHIBITIONS AND EXCLUSIONS REGARDING USE OF DISTRICT WATER, PROVIDING FOR NOTICE AND PENALTIES, AND REPEALING ORDINANCE NO. 93.3

BE IT ORDAINED by the Board of Directors of the Mission Springs Water District as follows:

Section 1. Enabling Acts.
This Ordinance is enacted pursuant to Sections 375, 376, and 71640 through 71644 of the California Water Code and of the applicable provisions of the County Water District Code, Constitution and other laws of the State of California.

Section 2. Threatened Emergency and Shortage.
The Board of Directors finds that, within the Mission Springs Water District, there is a threatened emergency and a threatened water shortage which require enactment and enforcement of this Ordinance.

Section 3. Public Necessity.

The Board further finds that the following restrictions upon the use of District water are necessary to conserve the District's water supply for the greatest public benefit, with particular regard to domestic use, sanitation, and fire protection.

Section 4. Application.
The provisions of this Ordinance shall apply to all persons, customers, and property served by the District wherever situated, and for all types of water being provided by the District. This Ordinance shall not apply when an alternate source of water is used. An "alternate source of water" shall not include water which is provided by an agency pursuant to an agreement with the District, or a source which is replenished from time to time by District or other agency water.

Section 5. Authorization.
The District's General Manager, or designated representative, is hereby authorized and directed to implement the provisions of this Ordinance. Guidelines regarding implementation procedures may be adopted and/or modified from time- to-time by resolution duly adopted by the Board of Directors.

Section 6. Water Conservation Stages.
No customer of the District shall knowingly make, cause, use or permit the use of water supplied from the District for residential, commercial, industrial, agricultural, governmental or any other purpose in a manner contrary to any provisions of, or in an amount in excess of the amounts authorized by, or during any period of time other than the periods of time specified in, the following water conservation stages which are in effect pursuant to this Ordinance:

A. **Stage 1.Normal Water Use.** Stage I applies during normal periods to encourage conservation by the reasonable use of water. During Stage 1, all customers shall comply with the following water conservation measures:

1. Water shall not be allowed to leave the customer's property by drainage onto adjacent properties or public or private roadways or streets due to excessive irrigation and/or neglect.

2. Customers shall repair all leaks in a timely manner.
3. Water shall not be used to wash down sidewalks, driveways, parking areas, tennis courts, patios or other paved areas, except to alleviate safety or sanitation hazards.

B. <u>Stage 2 - Mandatory Compliance - Water Watch.</u>

Stage 2 applies during periods when either the possibility exists that the District will not be able to meet all of the water demands of its customers. All stage I water use provisions shall remain in effect. Each class of customers will be asked to reduce water use to an allotted amount as determined by the General Manager at the time of the Stage 2 declaration. Notice of the amount of the reduction required shall be promptly given by the means deemed most effective by the General Manager. Failure to stay within the reduced allotment shall constitute a violation of this ordinance. During Stage 2, the following water conservation measures shall apply except when non-District domestic water is used:

1. Lawn watering and landscape irrigation, including construction meter irrigation, is permitted only between the hours of 5:00 P.M. Pacific Daylight Savings Time (PDST), or 4:00 p.m. Pacific Standard Time (PST) and 8:00 a.m. Watering is permitted at any time if a hand-held hose equipped with a positive shut-off nozzle is used, a container, or a drip irrigation system. Upon written request, watering may be permitted to establish new landscaping (not to exceed 45 days). The District reserves the right to modify this schedule to ensure the efficient use of water.
2. Agricultural users and commercial nurseries as defined in the District's Code are exempt from Stage 2 irrigation restrictions, but will be required to curtail all non-essential water use. The watering of livestock and irrigation of propagation beds is permitted at any time.

3. Washing of autos, trucks, trailers, boats, airplanes and other types of mobile equipment shall be done with a hand-held bucket or a hand-held hose equipped with a positive shut-off nozzle for quick rinses. Washing is permitted at any time on the immediate premises of a commercial car wash. Further, such washings are exempted from these regulations where the health, safety and welfare of the public is contingent upon frequent vehicle cleaning such as garbage trucks and vehicles used to transport food and perishables.
4. The over-filling of swimming pools, spas, ornamental ponds, and artificial lakes is prohibited.
5. Irrigation of golf courses, parks, school grounds and recreational fields is permitted only between the hours of 5:00 p.m. PDST (4:00 p.m. PST) and 8:00 a.m., except golf course greens.
6. The use of water from fire hydrants shall be limited to fire fighting and related activities, for construction activities or other activities necessary to maintain the health, safety and welfare of the public.
7. Construction operations receiving water from a construction meter or water truck shall not use
8. Restaurants shall not serve water to their customers except when specifically requested.
9. The operation of any non-recirculating ornamental fountain or similar structure is prohibited.

C. **Stage 3 - Mandatory Compliance - Water Alert**. Stage 3 applies during periods when either the probability exists that the District will not be able to meet all of the water demands of its customers. When a Stage 3 is declared, all Stage I and Stage 2 use provisions shall remain in effect. Each class of customers will be asked to reduce water use to an allotted amount as determined by the General Manager at the time of the Stage 3 declaration. Notice of the amount of the reduction required shall be

promptly given by the means deemed most effective by the General - Manager. Financial penalties shall be imposed by the District as set by the Board of Directors. Failure to stay within the reduced shall constitute a violation of this ordinance

D. **Stage 4 - Mandatory Compliance - Water Warning.**
Stage 4 applies during periods when the District is not likely to meet all of the water demands of its customers. When a Stage 4 is declared all Stage I through Stage 3 use provisions, except as noted below, shall remain in effect. Each class of customers will be asked to reduce water use to an allotted amount as determined by the General Manager at the time of the Stage 4 declaration. Notice of the amount of the reduction required shall be promptly given by the means deemed most effective by the General Manager. Financial penalties shall be imposed by the District as set by the Board of Directors. Failure to stay within the reduced allotment shall constitute a violation of this ordinance. The following water conservation measures shall apply except when non District domestic water is used:

1. The use of all construction meters shall be reviewed by the General Manager.
2. Applications for new service connections may be denied.

E. **Stage 5 - Mandatory Compliance - Water Restriction.**
Stage 5 applies when the District is unable to meet all of the water demands of its customers. When a Stage 5 is declared, all Stage 1 through Stage 4 use provisions shall remain in effect except as noted below. Each class of customers will be asked to reduce water use to an allotted amount as determined by the General Manager at the time of the Stage 5 declaration. Notice of the amount of the reduction required shall be, promptly given by the means deemed most effective by the General Manager. Financial penalties will be imposed by the District as set

by the Board of Directors. Failure to stay within the reduced allotment shall constitute a violation of this ordinance. The following water conservation measures shall apply except when non District domestic water is used:

1. Washing of autos, trucks, trailers, boats, airplanes and other types of mobile equipment shall be done with a hand-held bucket or a hand-held hose equipped with a positive shut-off nozzle for quick rinses. Washing is permitted at any time on the immediate premises of a commercial car wash. Further, such washings are exempted from these regulations where the health, safety and welfare of the public is contingent upon frequent vehicle cleaning such as garbage trucks and vehicles used to transport food and perishables.
2. Operators of hotel, motels, and other commercial establishments offering lodging shall post in each room a Notice of Drought Condition as approved by the General Manager.
3. All restaurants that provide service shall post in a conspicuous place a Notice of Drought Condition as approved by the General Manager.

F. **Stage 6 - Mandatory Compliance - Water Crisis**. Stage 6 applies when the District is unable to meet all of the water demands of its customers. When a Stage 6 is declared, all Stage 1 through Stage 5 use provisions shall remain in effect except as noted below. Each class of customers will be asked to reduce water use to an allotted amount as determined by the General Manager at the time of the Stage 6 declaration. Notice of the amount of the reduction required shall be promptly given by the means deemed most effective by the General Manager. Financial penalties will be imposed by the District as set by the Board of Directors. Failure to stay within the reduced allotment shall constitute a violation of this ordinance. The following water conservation measures

shall apply except when non District domestic water is used:

1. Use of sprinkler systems to irrigate landscaping is prohibited. Watering of all landscaping with District domestic water is permitted during designated hours using either a hand-held hose equipped with a positive shut-off nozzle, a container, or a drip irrigation system.
2. The "topping-off" of swimming pools and spas is prohibited unless the pool or spa is equipped with a cover.
3. The introduction of District domestic water into ponds, artificial lakes, or other bodies of water is prohibited.
4. No new construction meters shall be issued. Use of existing construction water shall be monitored by the General Manager, or his designee.
5. Use of District domestic water for construction is prohibited except to maintain the health, safety and welfare of the public.

Section 7. Mandatory Conservation Phase Implementation.
The District shall monitor the projected supply and demand for water by its customers on a daily basis. The General Manager shall determine the extent of the conservation required through the implementation and/or termination of particular conservation stages in order for the District to prudently plan for and supply water to its customers. Thereafter, the General Manager may order that the appropriate stage of water conservation be implemented or terminated in accordance with the applicable provision of this Ordinance. The declaration of any stage beyond Stage I shall be made by public announcement and notice shall be published once in a local newspaper of general circulation. The stage designated shall become effective immediately upon announcement. The declaration of any stage beyond Stage I shall be reported to the Board at its next regular meeting. The Board shall thereupon ratify the declaration, rescind the declaration, or direct the declaration of a different stage.

Section 8. Violations. Enforcement, and Appeals.

8.1 Misdemeanor. Any violation of this ordinance is a misdemeanor punishable as set forth in Water Code Sections 377, 71644 and other applicable sections of the County Water District Law.

8.2 Violations for Failure to Stay Within Reduced Allotment

A. Procedures. In addition to the remedy of criminal prosecution available to the District as described above, violation of this ordinance may result in the imposition of surcharges and restriction and/or termination of water service as set forth below:

1) First Violation - Customers who exceed their applicable allotment for a given water conservation stage shall be notified in writing. Said written notice shall include a copy of this Ordinance and conservation information to assist the customer in reducing water usage. A customer who reduces their usage to the allotted amount on an average daily basis within a five (5) day period will not be fined. The District reserves the right to periodically monitor said customer for the duration of the billing cycle to insure full compliance with the required usage reduction. If at the end of the billing period said customer has not complied, then subsequent violations shall apply

2) Second Violation (within one year) - If a customer does not reduce their usage to the allotted amount on an average daily basis within five (5) days of receiving their notice, a $250.00 surcharge shall be applied to the customers next bill.

3) Third violation (within one year) - If a customer's usage is not reduced after an additional five (5) days, then a $750.00 surcharge will be applied to said next bill. In addition, a flow restriction device shall be installed in the customer's meter for a minimum of 96 hours. Said restricted flow shall meet minimum County Health Department standards, if any have been established. If said 96

hour period ends on a weekend or holiday, full service will be restored during the next business day.

4) Fourth Violation (within one year) - If a customer continues to exceed their allotment, following the third violation, a $1,500.00 surcharge shall be applied to said next bill. Said surcharges shall be cumulative and the larger surcharge shall be in addition to the earlier surcharges imposed. In addition, customer service shall be terminated for such period of time as the Board of Directors deems appropriate following a hearing regarding said issue. Written notice of the hearing shall be mailed to the customer at least five (5) working days before the hearing.

Sections 8.3(B) and (C) shall also apply with respect to any additional charges incurred by the District, as well as non-liability for damages due to the installation of a flow restriction device.

Appeals procedures shall be as set forth in Section 8.3(E).

8.3 Enforcement for Other Violations of this Ordinance.

A. Procedures. In addition to the remedy of criminal prosecution available to the District as described above, violation of this ordinance may result in the imposition of surcharges and restriction and/or termination of water service as set forth below:

1) First Violation - Written warning accompanied by a copy of this ordinance and a District conservation information packet will either be delivered or mailed to customer at the customer's last known address. Where conditions warrant, or in emergencies, the District may resort to notification by any practical means available.

2) Second Violation (within one year) $250.00 surcharge.

3) Third Violation (within one year of the first violation) - $750.00 surcharge and installation of a flow restricting device in the meter for a minimum of 96 hours. Said restricted flow shall meet minimum County Health Departments standards, if any have been established. If said 96 hour period ends on a weekend or holiday, full service will be restored during the next business day.

4) Fourth Violation (within one year of the first violation) - $1,500.00 surcharge and termination of service for such period as the Board of Directors determines to be appropriate under the circumstances, following a hearing regarding said issue. Written notice of the hearing shall be mailed to the customer at least five (5) working days before the hearing.

B. Surcharges. Additional Charges. Any surcharge hereunder shall be in addition to the basic water rates and other charges of the District for the account and shall appear on and be payable with the billing statement for the period during which the violation occurred; nonpayment shall be subject to the same remedies available to the District as for nonpayment of basic water rates.

In addition to any surcharge, a customer violating this ordinance shall be responsible for payment of the District's charges for installing and/or removing any flow restricting device and for disconnecting and/or reconnecting service per the District's Schedule of Charges then in effect. Such charges shall be billed along with the next water bill; nonpayment shall be subject to the same remedies as nonpayment of basic water rates.

C. Non-liability for Damage. The customer who violates this ordinance thereby assumes responsibility for injury to the customer and/or other residents/occupants receiving service, including emotional distress and/or

damage to the customer's private water system and/or to other real or personal property owned by the customer or by a third party resulting from the installation and operation of a flow restricting device or from termination of service; said customer shall thereby be deemed to have (1) waived any claim for injury or for damage to the customer's property which the customer may otherwise have against the District; and (2) agreed to indemnify, defend and hold the District harmless from claims by third parties for injury or property damage arising or claimed to arise out of the District's installation and/or operation of a flow restricting device or termination of water service.

D. Exemptions. No exemption shall be granted to any person for any reason in the absence of a showing by said person that he/she has achieved the maximum practical reduction in water consumption in his/her residential, commercial, industrial or governmental water consumption as the case may be.

The General Manager, or his designee, may grant exemptions ("exceptions" to this Ordinance) for uses of water otherwise prohibited by the regulations. Water customers who feel that they need an adjustment in the prohibitions as they relate to him/her will fill out an application form for an exemption stating the justification and circumstances. If the exemption is not granted, customer may appeal in writing as stated in Section 8.3(E).

E. Appeals

1. Procedures. The General Manager or his designated Enforcement Officer shall determine when violations have occurred and shall issue to the customer a Notice of Violation by mailing same and/or hanging same on the customer's door at least five (5) days before taking enforcement action. Said notice shall describe the action to be taken.

   A customer may appeal the Notice of Violation by filing a written notice of appeal with the District no

later than the close of business on the day before the date scheduled for enforcement action. Any Notice of Violation not timely appealed shall be final.

Written appeals received by the District shall be scheduled for hearing before the District's Appeals Board as soon as possible, i.e., within five (5) working days if reasonably possible. The District shall mail written notice of the hearing to the customer at least three (3) working days before the date of said hearing. The Appeals Board shall consist of a Director (appointed by the Board President), the General Manager and the Finance Manager.

The Appeals Board shall determine whether or not the proposed action shall be taken, or should be modified in light of mitigating circumstances. All decisions by the Appeals Board shall be final. A monthly written summary of all such actions by the Appeals Board shall be presented to the Board of Directors by the General Manager at their first regularly scheduled meeting of the month.

2. Interim Measures. Pending receipt of a written appeal or pending a hearing pursuant to an appeal, the General Manager or the Enforcement Officer, if one has been designated, may take appropriate steps to prevent the unauthorized use of water as appropriate to the nature and extent of the violation and the current declared water condition.

Section 9. CEQA Exemption.

The adoption of this Ordinance, and the actions taken hereunder, are exempt from the provisions of the California Environmental Quality Act of 1970 in that they constitute a project undertaken as immediate action necessary to prevent or mitigate an emergency pursuant to Section 15071 of the State EIR Guidelines.

Section 10. Duration of Ordinance.
This Ordinance shall remain in effect until the Board of Directors finds that the threatened emergency and threatened water shortage no longer exists. The provisions of this ordinance shall prevail and control in the event of any inconsistency with any other rules and regulations of the District.

Section 11. Severability.
If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of this Ordinance. The Board of Directors hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause, or phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases may be unconstitutional or invalid.

Section 12. Ordinance No. 101 Repealed.
Ordinance No. 93-3, Section 15 of the District is hereby repealed.

Section 13. **Effective Date; Publishing and Posting.**
This ordinance shall be effective immediately upon adoption. Within (10) days of adoption, a copy of this ordinance shall be published once in a local newspaper of general circulation and posted in a public place within the District.

BE IT FURTHER ORDAINED that the effective date of this ordinance shall be _____, _____.

PASSED, ADOPTED AND APPROVED this 16th day of September 2004 by the following roll call vote:

AYES
NOES
ABSENT
ABSTAIN

_____
President Mission Springs Water District
and its Board of Directors

ATTEST:

_____
Secretary Mission Springs Water District
and its Board of Directors

APPROVED AS TO FORM:

_____
Legal Counsel