CONSERVATION SAVINGS: Savings were initially estimated to be about 1300 AFY, but actual results should be greater – unaccounted water losses have been reduced from 12% to about 35% per year.

BUDGET: Proposed annual budget: $6,000.00 (from operations and maintenance budget).

DMM 4 -- Metering with Commodity Rates

IMPLEMENTATION DESCRIPTION: RCSD is fully metered for all customer sectors, including separate meters for single-family residential, commercial, large landscapes, and all institutional/governmental facilities. Since 1990, RCSD policy has been to separately meter each dwelling unit in multi-family complexes. There are approximately 100 multi-family complexes, with over 3300 dwelling units in the District.

A billing unit is one hundred cubic feet (748 gallons), commonly abbreviated HCF or CCF. For rate information, see DMM 11 or Appendix D.

Commercial/industrial/institutional customers are required to have fire sprinkler systems. Since 1991, Kern County requires residential fire sprinklers in all new single and multi-family construction. Separate meters are required on fire sprinkler systems, with associated monthly service charges. RCSD will also install separate meters on all future recycled water services.

IMPLEMENTATION SCHEDULE: RCSD will continue to install and read meters on all new services, and will continue to conduct its meter calibration and replacement program.

METHODS TO EVALUATE EFFECTIVENESS: Periodic review of customer water use, comparing current water use per capita with historic data.

CONSERVATION SAVINGS: Metered accounts may result in a 20% reduction in demand compared to non-metered accounts.

BUDGET: Meter installation costs are part of new service connection fees.

DMM 5 -- Large Landscape Water Audits and Incentives

IMPLEMENTATION DESCRIPTION: Irrigation surveys will be conducted for all of Rosamond's large landscape customers (currently defined as three acres or greater). The RCSD's in-house trained team will conduct the surveys. During the survey, the team calculates a water budget for the site – the amount of water necessary for that site based on the size of the landscape and the climate. The water budget is then used as the water allotment for that site, and any water use which exceeds the water budget is billed at a higher rate. District staff will review landscape customers' water use monthly. If the water budget is exceeded for three consecutive months, the customer is offered technical assistance. On-site follow-up evaluations are recommended for customers whose annual water use exceeds their water budget.

RCSD installed a weather station at its wastewater treatment plant in April 1995. Daily climatological data (temperatures, relative humidity, wind velocity, and precipitation) are recorded. These data are used for short and long term projections of water and wastewater usage.

RCSD will begin an inventory of landscaped areas over one acre, based on the County’s and the California Department of Water Resources' Geographical Information System (GIS). RCSD plans to offer Spanish/English language irrigator training classes. RCSD is considering a financial incentive program to
encourage high water users to convert to more water efficient landscapes. Financial incentives may include: irrigation system conversions, automatic controllers, soil moisture sensors, automated CIMIS scheduling, and plants and other landscape materials. The water department continually works with the parks department and the school district to improve water use efficiency at public landscapes and greenbelts. This sometime includes the redesigning of a landscape. All Rosamond area County parks will eventually have automated CIMIS-based controllers with soil moisture sensors.

IMPLEMENTATION SCHEDULE and METHODS TO EVALUATE EFFECTIVENESS: RCSD plans to complete the few remaining large landscape customers' water use surveys over the next five years. The District will continue to implement this DMM by annual review of customers' water use, and by offering on-site follow-up evaluations to customers whose total water use exceeds their total annual water budget.

CONSERVATION SAVINGS: Landscapes that are upgraded based on survey recommendations could result in a 15% reduction in water demand.

BUDGET: Proposed annual budget: $965.00 for contractual support of the above noted programs, and materials.

DMM 6 -- Landscape Water Conservation Requirements

IMPLEMENTATION DESCRIPTION: In 1992, motivated by the drought, the District established a landscape ordinance. It will now be amended to include firescaping guidelines and to conform to California Water Code Section 65590 et seq. (AB325), which covers new and existing commercial, industrial, institutional/ governmental, and multi-family customers, and includes new single-family homes.

RCSD continues to work in partnership with the local fire department, local nurseries, landscape designers, contractors and the local floriculture growers to help educate landowners in regards to water efficient landscapes (WEL). In cooperation with the Antelope Valley-East Kern Water Agency (AVEK) a proposed information pamphlet will be developed to explain evapotranspiration and procedures involved in developing irrigation schedules. The District will also have a WEL/firescape demonstration garden in its new administration and maintenance office complex by the end of 2001.

The District proposes to use has WEL at all median strips in conjunction with the County and developers. The potential benefits will be: (1) the public can see attractive low-water using landscapes; (2) the District will be demonstrating its commitment to improved efficiencies in public water uses, (3) District public works crews will have improved safety records, because of reduced exposure to injury while maintaining landscaping in the median strips, and (4) there will be cost savings associated with lower water bills, reduced median strip maintenance, and fewer street and gutter repairs as a result of eliminating runoff.

IMPLEMENTATION SCHEDULE: The District will be permanently incorporating this DMM into its ordinances.

METHODS TO EVALUATE EFFECTIVENESS: The District will monitor the cost savings on all District properties, the attendance to the Water Efficient Landscape (WEL) demonstration garden and the number of WEL materials distributed. The RCSD will report annually on the landscape water savings associated with this DMM to the Board of Directors. CONSERVATION SAVINGS: The landscape ordinance may lead to a similar 15% reduction due to landscape surveys and water budget irrigation scheduling.

BUDGET: Proposed annual budget: $5,800.00, for materials and contract money for the WEL information.
DMM 7 -- Public Information

IMPLEMENTATION DESCRIPTION: The District promotes water conservation and other resource efficiencies in coordination with NACWA, NACRSD, and the energy utilities. The District distributes public information through bill inserts, brochures, community speakers, paid advertising, and many special events every year. RCSD water bills were redesigned in 1995 to show gallons used per day for the last billing period compared to the same period the previous year (previously, the bill only indicated total billing period usage in billing units (one hundred cubit feet of water, which is 748 gallons).

RCSD will form a Citizens' Advisory Committee, to assist in developing new ways to communicate with the public and the media about water conservation and other resource issues. Due to arid conditions of the region, it also has become a priority to develop conservation materials focused on the short term residents and visitors though working with restaurants, hotels, and real estate offices. The District is considering establishing a World Wide Web Home Page, which will include information on water conservation, recycling, and other resource issues.

IMPLEMENTATION SCHEDULE: RCSD will continue to provide public information services and materials to remind the public about water and other resource issues.

METHODS TO EVALUATE EFFECTIVENESS: RCSD will track the commentary regarding the information provided.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this DMM but believes that this program is in the public's interest.

BUDGET: Proposed annual budget: $15,000.00, (from public affairs office budget) for staff and materials.

DMM 8 -- School Education

IMPLEMENTATION DESCRIPTION: The District continues to work with NACWA and the local school districts to promote water conservation and other resource efficiencies at school facilities and to educate students about these issues. The District is currently studying the retrofitting of school playground irrigation systems.

RCSD contacts local school boards and principals about implementing DMM 8. The District will provide educational materials for several grade levels, State and County water system maps, posters, workbooks, interactive computer software, videos, tours (for example, Well No. 8, an AVEK turnout, and the surrounding watershed, water and wastewater treatment facilities), and sponsors teachers' Project Water Education for Teachers (WET) training, science fairs, and water conservation contests.

IMPLEMENTATION SCHEDULE: The District will continue to implement this DMM at the levels described.

METHODS TO EVALUATE EFFECTIVENESS: The District will continue to survey the institutions and educators on the number of programs, materials and attendance at water conservation activities.

CONSERVATION SAVINGS: The District has no method to quantify the savings of this DMM but believes that this program is in the public's interest.

BUDGET: Proposed annual budget: $6,700.00 for labor expense and materials.
DMM 9 -- Commercial and Industrial Water Conservation

IMPLEMENTATION DESCRIPTION: For the last several years, the District has provided water use audits to any commercial/industrial/institutional (CII) customer who so requested. The District can complete a computerized analysis of all CII customers by monthly and annual water usage, to identify the top 10% of the commercial customers and the top 20% of the industrial and institutional customers. The District will contact these customers by letter, and follow up with telephone calls, to offer audits.

In 2001, the District will develop a billing insert which includes water survey information. RCSD will continue to distribute the October 1994 DWR publication Water Efficiency Guide for Business Managers and Facility Engineers. Staff also, will complete a program to identify CII customers by Standard Industrial classification (SIC) codes.

Audits are coordinated and evaluated by staff personnel with a consulting engineering firm (Boyle Engineering Corporation) providing the data evaluation and projections.

IMPLEMENTATION SCHEDULE and CONSERVATION SAVINGS: RCSD will continue to implement this DMM at the annual target rate for at least the next five years. Savings evaluations are provided to the District and the customer by the consultant.

<table>
<thead>
<tr>
<th>Year</th>
<th>Surveys completed CII</th>
<th>Annual Water Savings</th>
<th>Cumulative Water Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1996</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1997</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1998</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1999</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2000</td>
<td>2</td>
<td>0.01e</td>
<td>0.01</td>
</tr>
<tr>
<td>2001</td>
<td>2e</td>
<td>0.01e</td>
<td>0.02</td>
</tr>
<tr>
<td>2002</td>
<td>2e</td>
<td>0.01e</td>
<td>0.03</td>
</tr>
<tr>
<td>2003</td>
<td>2e</td>
<td>0.01e</td>
<td>0.04</td>
</tr>
<tr>
<td>2004</td>
<td>2e</td>
<td>0.01e</td>
<td>0.05</td>
</tr>
<tr>
<td>2005</td>
<td>2e</td>
<td>0.01e</td>
<td>0.06</td>
</tr>
</tbody>
</table>

E = estimate

METHODS TO EVALUATE EFFECTIVENESS: The District will continue to implement this DMM by annual review of customers' water use, and by offering on-site follow-up evaluations to customers whose total water use exceeds their total annual water budget.

BUDGET: Proposed annual budget: $10,680.00, for consultant and staff.

DMM 10 -- New Commercial and Industrial Water Use Review

IMPLEMENTATION DESCRIPTION: The District's building department coordinates the implementation of this DMM with Kern County. The District is working with the Kern County Building and Safety Department.
when it reviews the building plans to determine the water use efficiency before a permit is issued to the new customer.

IMPLEMENTATION SCHEDULE: The District and Kern County will continue to implement this DMM.

METHODS TO EVALUATE EFFECTIVENESS: The consultant reports on all plan improvements and compares it with historical data to determine the increase in water use efficiency.

CONSERVATION SAVINGS: Commercial water reduction achieved from DMMs excluding Ultra Low Flush Toilet Replacement is estimated at 12% to 15% in gallons per employee per day.

BUDGET: Proposed annual budget: $5,720.00 for consultant (building department staff costs are separately budgeted).

DMM 11 -- Conservation Pricing, Water Service and Sewer Service

IMPLEMENTATION DESCRIPTION: RCSD has a flat rate structure for all customer sectors. Usage above the water budget is not currently billed at a higher block rate.

Due to adverse financial impacts during rationing, the rate structure will need to be redesigned in 2001. A rate stabilization fund may be established to provide a buffer in future shortages. The District will conduct its next rate study in 2000. Sewer service is also provided by the RCSD, which has a flat rate for all customer types

METHODS TO EVALUATE EFFECTIVENESS: Monitor the number of violators who use water in excess of their established allotment.

CONSERVATION SAVINGS: The incentive of this DMM is to decrease the customers water costs and water use through price incentives as described above.

BUDGET: Proposed annual budget: $3,380.00 for consultant (building department staff costs are separately budgeted).

DMM 12 -- Landscape Water Conservation for New and Existing Single Family Homes

IMPLEMENTATION DESCRIPTION: As discussed under DMM 6, the District has a landscape ordinance which pertains to new and existing single family homes, and an active landscape conservation program. The District will have a WEL/firescape demonstration garden, and works with Kern County and others to promote efficient landscaping practices. The District is also considering a financial incentive program to help homeowners convert to more water efficient landscapes (which may include landscape materials, irrigation conversions, automatic controllers, soil moisture sensors, gray water, etc.).

IMPLEMENTATION SCHEDULE: The District will permanently incorporate this DMM into its ordinances, and will continue to distribute brochures to all new service connections.

METHODS TO EVALUATE EFFECTIVENESS: Refer to DMM 1 and 6.

CONSERVATION SAVINGS: Refer to DMM 1 and 6.
BUDGET: Proposed annual budget: $45,760.00, for staff and materials.

DMM 13 -- Water Waste Prohibition

IMPLEMENTATION DESCRIPTION: RCSD has enacted a “No-Waste” ordinance. Enforcement includes the “gutter flooder” patrol, to educate customers, and if necessary, issue warnings and citations for violations. See Appendix C for the “No Waste” Ordinance and information on regulations, restrictions and enforcement.

IMPLEMENTATION SCHEDULE: The District has permanently incorporated this DMM into its ordinances.

METHODS TO EVALUATE EFFECTIVENESS: All violations will be reported annually. Through the usage of this DMM the RCSD hopes to see a reduction in the number of violations.

CONSERVATION SAVINGS: The District has no method to quantify the savings of this DMM but believes that this program is in the public’s interest.

BUDGET: Enforcement costs are a part of the water department’s overhead.

DMM 14 -- Water Conservation Coordinator

IMPLEMENTATION DESCRIPTION: RCSD will designate a part-time water conservation coordinator in 2001. In addition, the District currently has one additional staff person (who works 50% on water conservation), and part time staff who coordinates the landscape programs. The District also employs student interns from the local area. Also, the District contracts with consultants to implement a number of DMMs.

IMPLEMENTATION SCHEDULE: The District will continue to implement this DMM.

METHODS TO EVALUATE EFFECTIVENESS: The District will continue to survey the institutions and educators on the number of programs, materials and attendance at water conservation activities.

CONSERVATION SAVINGS: The District has no method to quantify the savings of this DMM but believes that this program is in the public’s interest.

BUDGET: RCSD takes pride in setting new standards for the Water Conservation Coordinator (WCC). The proposed annual budget: is $46,400.00 for water conservation staff costs. The WCC will probably be a long term staff member who understands all aspects of the District’s business.

DMM 15 -- Financial Incentives

IMPLEMENTATION DESCRIPTION: The District and other local government agencies share commercial and industrial audit information, so that commercial/industrial/institutional customers can more fully implement audit recommendations (see DMM 9). The District is also considering establishing incentive programs to encourage customers to convert to more water efficient landscapes (see DMMs 5 and 12).

The District has a very new water-recycling program, which is not expected to be fully operational until the end of 2001.

January 21, 2000
IMPLEMENTATION SCHEDULE: The District anticipates establishing financial incentive programs for this DMM (and water recycling) during 2001-2002.

METHODS TO EVALUATE EFFECTIVENESS: Actual water use will be monitored and compared with the estimated water savings proposed in the project loan/grant applications.

CONSERVATION SAVINGS: Water conservation savings will need to be quantified on a project by project basis. This DMM will not be implemented until 2001. The District projects water savings in excess of YYYY based on the success of the City’s other implemented DMMs.

BUDGET: Proposed annual budget: $12,800.00, for staff and materials. An auxiliary budget request will be submitted if the RCSD Board of Directors approves the financial incentives program.

DMM 16 -- Ultra-low Flush Toilet Replacement

IMPLEMENTATION DESCRIPTION: RCSD will establish a high visibility ultra-low flush toilet replacement program in 2001. Initially, the Board of Directors homes (at Board members own expense) and RCSD offices will be converted to ultra-low flush models, followed by student and faculty toilets (and later urinals) at Rosamond High School. Initially, rebates up to $75 per toilet will be offered.

The District will also help establish the East Kern County recycling policy, which will direct that recycled toilets (and other locally generated waste materials such as sludge from the RCSD treatment plant) should be used by government in its own operations. As an example, recycled toilets can be used as crushed aggregate road base in both the County and as rip-wrap for pond dikes.

In coordination with the county, the District plans to offer rebates to customers, will establish a referral installation program, and will provide commercial sources for toilets and urinals for installation at public facilities including schools, libraries, and fire department facilities. DMM 16 is also implemented in coordination with DMM 1, DMM 2, and DMM 8.

IMPLEMENTATION SCHEDULE: The District will begin to implement this DMM in 2001 and will continue until the District’s goal is met: at least 80% of all non-conserving and low-flush model toilets in Rosamond will be replaced with ultra-low flush models.
Table 13.
ULFT Retrofit Program

<table>
<thead>
<tr>
<th>Year</th>
<th># of ULFT Retrofits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>240e</td>
</tr>
<tr>
<td>2001</td>
<td>240e</td>
</tr>
<tr>
<td>2002</td>
<td>240e</td>
</tr>
<tr>
<td>2003</td>
<td>240e</td>
</tr>
<tr>
<td>2004</td>
<td>240e</td>
</tr>
<tr>
<td>2005</td>
<td>240e</td>
</tr>
<tr>
<td>2006</td>
<td>240e</td>
</tr>
<tr>
<td>2007</td>
<td>240e</td>
</tr>
<tr>
<td>2008</td>
<td>240e</td>
</tr>
<tr>
<td>2009</td>
<td>240e</td>
</tr>
<tr>
<td>2010</td>
<td>240e</td>
</tr>
</tbody>
</table>

\( e = \text{estimate} \)

Estimated 3000 toilets @ 80% = 2400 toilets/10 years = 240 toilets/year

METHODS TO EVALUATE EFFECTIVENESS: The District will calculate annual ULFT replacement program water savings to confirm the savings are within 10% of calculated retrofit-on-resale water savings, using the CUWCC MOU Exhibit 6 methodology and water savings estimates. Exhibit 6 has become an industry standard for evaluation of ULFT replacement programs.

CONSERVATION SAVINGS: Projected total annual water savings from toilet retrofits at full implementation has yet to be determined.

BUDGET: Proposed annual budget: $33,900.00, for materials, rebates, and administrative costs.

Water Shortage Contingency Plan

Preparation for Catastrophic Water Supply Interruption

Law

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

10632 (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.

Water Shortage Emergency Response

RCSD is discussing plans that contain procedures for the distribution of potable water in a disaster; these procedures will be consistent with guidelines prepared by the California State Office of Emergency Services.

January 21, 2000
RCSD is considering the feasibility of: (1) the purchase of water purification equipment; (2) purchase of standby generators and auxiliary pumps; and (3) construction of emergency water conveyance and supply storage facilities.

Specific water-critical customers (such as hospitals, nursing facilities, schools, and a few individual customers with medical conditions dependent on continuous water availability) have been identified. Likely potable water distribution sites have been identified. Standby procurement documents procedures are being considered for emergency bulk purchase of bottled water. All existing water supply storage, treatment, and distribution, and wastewater treatment facilities are currently inspected monthly.

The District recognizes the importance of the DMMs in reducing water demand and would continue to implement the programs. Also, the District would increase media attention to the water supply situation during a shortage and would step up public water education programs, encourage property owners to apply for a landscape and interior water use survey and continue to advertise the importance of customers to install ULF plumbing fixtures.

During declared shortages, or when a shortage declaration appears imminent, the RCSD General Manager will activate a District water shortage response team. The team includes: water, fire, sewer, street lighting, public affairs, parks and recreation. During a declared water shortage, the District will accept applications for new building permits but will not issue permits until the shortage declaration is rescinded. An appeal process will be established.

Supplemental Water Supplies
To offset future potential water shortages due to drought or disaster, the District is considering the following supplemental water supplies.

Desalination
RCSD has no reason for considering desalination of its source water at the present time.

Water Transfers
See the Transfer or Exchange Opportunities section.

Long Term Additional Water Supply Options
To meet future long-term water demand beyond 2020, the District will be considering drilling additional wells and importing water from outside sources.

The following table summarizes the actions the water agency will take during a water supply catastrophe.

January 21, 2000
Table 14.
Preparation Actions for a Catastrophe

<table>
<thead>
<tr>
<th>Examples of Actions</th>
<th>Check if Discussed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine what constitutes a proclamation of a water shortage.</td>
<td>✓</td>
</tr>
<tr>
<td>Stretch existing water storage.</td>
<td>✓</td>
</tr>
<tr>
<td>Obtain additional water supplies.</td>
<td>✓</td>
</tr>
<tr>
<td>Develop alternative water supplies.</td>
<td>✓</td>
</tr>
<tr>
<td>Determine where the funding will come from.</td>
<td>✓</td>
</tr>
<tr>
<td>Contact and coordinate with other agencies.</td>
<td>✓</td>
</tr>
<tr>
<td>Create an Emergency Response Team/Coordinator.</td>
<td>✓</td>
</tr>
<tr>
<td>Create a catastrophe preparedness plan.</td>
<td>✓</td>
</tr>
<tr>
<td>Put employees/contractors on-call.</td>
<td>✓</td>
</tr>
<tr>
<td>Develop methods to communicate with the public.</td>
<td>✓</td>
</tr>
<tr>
<td>Develop methods to prepare for water quality interruptions.</td>
<td>✓</td>
</tr>
</tbody>
</table>

Water Shortage Contingency Ordinance/Resolution

Law

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

10632 (h) A draft water shortage contingency resolution or ordinance.

RCSD Water Shortage Response

As mentioned earlier, the District adopted a "No-Waste" Ordinance in 2000, and has developed a Resolution to Declare a Water Shortage Emergency. The District will adopt a policy to implement a Moratorium on New Connections during declared water shortages see Appendix C.

Stages of Action

Law

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

10632 (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply and an outline of specific water supply conditions which are applicable to each stage.

Rationing Stages and Reduction Goals

The District has developed a four stage rationing plan (see Table 16) to invoke during declared water shortages. The rationing plan includes voluntary and mandatory rationing, depending on the causes, severity, and anticipated duration of the water supply shortage.
Table 15.
Water Rationing Stages and Reduction Goals

<table>
<thead>
<tr>
<th>Shortage Condition</th>
<th>Stage</th>
<th>Customer Reduction Goal</th>
<th>Type of Rationing Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 15%</td>
<td>I</td>
<td>15%</td>
<td>Voluntary</td>
</tr>
<tr>
<td>15 - 25%</td>
<td>II</td>
<td>25%</td>
<td>Mandatory</td>
</tr>
<tr>
<td>25 - 35%</td>
<td>III</td>
<td>35%</td>
<td>Mandatory</td>
</tr>
<tr>
<td>35 - 50%</td>
<td>IV</td>
<td>50% or &gt;</td>
<td>Mandatory</td>
</tr>
</tbody>
</table>

Priority by Use

Priorities for use of available potable water during shortages were based on input from RCSD's operations personnel, staff statistical analysts, citizen groups, and legal requirements set forth in the California Water Code, Sections 350-358. Water allocations are established for all customers according to the following ranking system:

- Minimum health and safety allocations for interior residential needs (includes single family, multi-family, hospitals and convalescent facilities, retirement and mobile home communities, and student housing, and fire fighting and public safety)
- Commercial, industrial, institutional/governmental operations (where water is used for manufacturing and for minimum health and safety allocations for employees and visitors), to maintain jobs and economic base of the community (not for landscape uses)
- Existing landscaping
- New customers, proposed projects without permits when shortage declared.

Note: It is not expected that any potable water supply reductions would result in recycled water shortages. However, this may change in the future, as more customers use recycled water.

Health and Safety Requirements

Based on commonly accepted estimates of interior residential water use in the United States, Table 17 indicates per capita health and safety water requirements. In Stage I shortages, customers may adjust either interior or outdoor water use (or both), in order to meet the voluntary water reduction goal.

However, under Stage II, Stage III and Stage IV mandatory rationing programs, the District has established a health and safety allotment of 68 gallons per capita-day (gpcd). This translates to 33 hundred cubic feet (HCF) per person per year. Based on previous studies, that amount of water is insufficient for essential interior water with no habit or plumbing fixture change. If customers wish to change water use habits or plumbing fixtures, 68 gpcd is sufficient to provide for limited non-essential (i.e. outdoor) uses.

Stage IV mandatory rationing, which is likely to be declared only as the result of a prolonged water shortage or as a result of a disaster, would require that customers make changes in their interior water use habits (for instance, not flushing toilets unless "necessary" or taking less frequent showers).
Table 16.
Per Capita Health and Safety Water Quantity Calculations

<table>
<thead>
<tr>
<th></th>
<th>Non-Conserving Fixtures</th>
<th>Habit Changes</th>
<th>Conserving Fixtures 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toilets</td>
<td>5 flushes x 5.5 gpf</td>
<td>3 flushes x 5.5 gpf</td>
<td>16.5</td>
</tr>
<tr>
<td>Shower</td>
<td>5 min x 4.0 gpm</td>
<td>4 min x 3.0 gpm</td>
<td>12.0</td>
</tr>
<tr>
<td>Washer</td>
<td>12.5 gpcd</td>
<td>11.5 gpcd</td>
<td>11.5</td>
</tr>
<tr>
<td>Kitchen</td>
<td>4 gpcd</td>
<td>4 gpcd</td>
<td>4.0</td>
</tr>
<tr>
<td>other</td>
<td>4 gpcd</td>
<td>4 gpcd</td>
<td>4.0</td>
</tr>
<tr>
<td>Total (gpcd)</td>
<td>68.0</td>
<td>48.0</td>
<td>37.5</td>
</tr>
<tr>
<td>HCF per capita per year</td>
<td>33.0</td>
<td>23.0</td>
<td>18.0</td>
</tr>
</tbody>
</table>

1 Reduced shower use results from shorter and reduced flow. Reduced washer use results from fuller loads.
2 Fixtures include ULF 1.6 gpf toilets, 2.0 gpm showerheads and efficient clothes washers.

Water Shortage Stages and Triggering Mechanisms

As the water purveyor, RCSD must provide the minimum health and safety water needs of the community at all times. The water shortage response is designed to provide a minimum of 50% of normal supply during a severe or extended water shortage. The rationing program triggering levels shown below were established to ensure that this goal is met.

Rationing stages may be triggered by a shortage in one water source or a combination of sources. Although an actual shortage may occur at any time during the year, a shortage (if one occurs) is usually forecasted by the AVEK on or about April 1 each year. If it appears that it may be a dry year, the District advises all of its customers in April or May so that they can minimize potential financial impacts.

The District’s potable water sources are groundwater, and imported surface water. Rationing stages may be triggered by a supply shortage or by contamination in one source or a combination of sources. Because shortages overlap stages, triggers automatically implement the more restrictive Stage. Specific criteria for triggering the City’s rationing stages are shown in Table 17.
## Table 17.
Water Shortage Stages and Triggering Mechanisms

<table>
<thead>
<tr>
<th>Percent Reduction of Supply</th>
<th>Stage I Up to 15%</th>
<th>Stage II 15 - 25%</th>
<th>Stage III 25 - 35%</th>
<th>Stage IV 35 - 50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Supply</td>
<td>Total supply is 85 – 90% of &quot;normal.&quot; And Below &quot;normal&quot; year is declared. Or</td>
<td>Total supply is 75 – 85% of &quot;normal.&quot; Or Below &quot;normal&quot; year is declared. Or</td>
<td>Total supply is 65 – 75% of &quot;normal.&quot; Or Fourth consecutive below &quot;normal&quot; year is declared. Or</td>
<td>Total supply is less than 65% of &quot;normal.&quot; Or Fifth consecutive below &quot;normal&quot; year is declared. Or</td>
</tr>
<tr>
<td>Future Supply</td>
<td>Projected supply insufficient to provide 80% of &quot;normal&quot; deliveries for the next two years. Or</td>
<td>Projected supply insufficient to provide 75% of &quot;normal&quot; deliveries for the next two years. Or</td>
<td>Projected supply insufficient to provide 65% of &quot;normal&quot; deliveries for the next two years. Or</td>
<td>Projected supply insufficient to provide 50% of &quot;normal&quot; deliveries for the next two years. Or</td>
</tr>
<tr>
<td>Groundwater</td>
<td>No excess groundwater pumping undertaken. Or</td>
<td>First year of excess groundwater pumping taken, must be &quot;replaced&quot; within four years. Or</td>
<td>Second year of excess groundwater pumping taken, must be &quot;replaced&quot; within four years. Or</td>
<td>No excess groundwater pumping available. Or Reduced groundwater pumping due to replenishment of previously pumped groundwater. Or</td>
</tr>
<tr>
<td>Water Quality</td>
<td>Contamination of 10% of water supply (exceeds primary drinking water standards) Or</td>
<td>Contamination of 20% of water supply (exceeds primary drinking water standards) Or</td>
<td>Contamination of 30% of water supply (exceeds primary drinking water standards) Or</td>
<td>Disaster Loss</td>
</tr>
<tr>
<td>Disaster Loss</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

January 21, 2000
Water Allotment Methods

The District plans to establish the following allocation method for each customer type. See Appendix C for sample water shortage rationing allocation method.

<table>
<thead>
<tr>
<th>Category</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family</td>
<td>Hybrid of Per-capita and Percentage Reduction</td>
</tr>
<tr>
<td>Multifamily</td>
<td>Hybrid of Per-capita and Percentage Reduction</td>
</tr>
<tr>
<td>Commercial</td>
<td>Percentage Reduction</td>
</tr>
<tr>
<td>Industrial</td>
<td>Percentage Reduction</td>
</tr>
<tr>
<td>Gvt/institutional</td>
<td>Percentage Reduction</td>
</tr>
<tr>
<td>Agricultural-Permanent</td>
<td>Percentage Reduction - vary by efficiency</td>
</tr>
<tr>
<td>Agricultural-Annual</td>
<td>Percentage Reduction - vary by efficiency</td>
</tr>
<tr>
<td>Recreational</td>
<td>Percentage Reduction - vary by efficiency</td>
</tr>
<tr>
<td>New Customers</td>
<td>Per-capita (no allocation for new landscaping during a declared water shortage.)</td>
</tr>
</tbody>
</table>

Based on current and projected customer demand, Appendix C indicates the water allocated to each customer type by priority and rationing stage during a declared water shortage.

Individual customer allotments are based on a five-year period. This gives the District a more accurate view of the usual water needs of each customer and provides additional flexibility in determining allotments and reviewing appeals. However, no allotment may be greater than the amount used in the most recent year of the five-year base period.

The General Manager's staff shall classify each customer and calculate each customer's allotment according to the Sample Water Rationing Allocation Method. The allotment shall reflect seasonal patterns. Each customer shall be notified of their classification and allotment by mail before the effective date of the Water Shortage Emergency. New customers will be notified at the time the application for service is made. In a disaster, prior notice of allotment may not be possible; notice will be provided by other means. Any customer may appeal the General Manager's classification on the basis of use or the allotment on the basis of incorrect calculation.

Prohibitions, Consumption Reduction Methods and Penalties

Law

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

10632 (d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

10632 (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

10632 (f) Penalties or charges for excessive use, where applicable.
Mandatory Prohibitions on Water Wasting

The RCSD "No Waste" Ordinance (see Appendix C) includes prohibitions on various wasteful water uses such as lawn watering during mid-day hours, washing sidewalks and driveways with potable water, and allowing plumbing leaks to go uncorrected more than 24 hours after customer notification.

The following table is a list of consumption reduction methods that could be implemented at the various water shortage stages. The BOD has not decided which, if any of these measures shall be incorporated into the Ordinance at a future date.

<table>
<thead>
<tr>
<th>Examples of Consumption Reduction Methods</th>
<th>Stage When Method Takes Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand reduction program</td>
<td>All stages</td>
</tr>
<tr>
<td>Reduce pressure in water lines</td>
<td></td>
</tr>
<tr>
<td>Flow restriction</td>
<td>IV</td>
</tr>
<tr>
<td>Restrict building permits</td>
<td>II, III, IV</td>
</tr>
<tr>
<td>Restrict for only priority uses</td>
<td></td>
</tr>
<tr>
<td>Use prohibitions</td>
<td>All stages</td>
</tr>
<tr>
<td>Water shortage pricing</td>
<td>All stages</td>
</tr>
<tr>
<td>Per capita allotment by customer type</td>
<td>IV</td>
</tr>
<tr>
<td>Plumbing fixture replacement</td>
<td></td>
</tr>
<tr>
<td>Voluntary rationing</td>
<td>I</td>
</tr>
<tr>
<td>Mandatory rationing</td>
<td>II, III, IV</td>
</tr>
<tr>
<td>Incentives to reduce water consumption</td>
<td></td>
</tr>
<tr>
<td>Education Program</td>
<td>All Stages</td>
</tr>
<tr>
<td>Percentage reduction by customer type</td>
<td>II, III, IV</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

See Appendix C, the "No Waste" Ordinance and Moratorium on New Connections - which details the reduction methods - regarding Table 18.

Excessive Use Penalties

The BOD has decided upon the penalties as stated in the "No Waste" Ordinance. See Appendix C.

Revenue and Expenditure Impacts and Measures to Overcome Impacts

Law

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

10632 (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier...
10632 (g) [An analysis of the impacts of each of the] proposed measures to overcome those [revenue and expenditure] impacts, such as the development of reserves and rate adjustments.

RCSD has begun the process of evaluating rate changes based on projected wastewater handling expenses, water equipment expenses and projected expenses for additional purchased surface water. See Appendix D for the District's efforts to establish an Emergency Fund and a Rate Stabilization Fund.

**Reduction Measuring Mechanism**

**Law**

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

10632 (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

**Mechanism to Determine Reductions in Water Use**

Under normal water supply conditions, potable water production figures are recorded daily. Totals are reported weekly to the Water Treatment Facility Supervisor. Totals are reported monthly to the General Manager and incorporated into the water supply report.

During a Stage I or Stage II water shortage, daily production figures are reported to the General Manager. The General Manager compares the weekly production to the target weekly production to verify that the reduction goal is being met. Weekly reports are forwarded to the Chairman of the Board of Directors (BOD) and the Water Shortage Response Team. Monthly reports are sent to the BOD as well. If reduction goals are not met, the Manager will notify the BOD so that corrective action can be taken.

During a Stage III or Stage IV water shortage, the procedure listed above will be followed, with the addition of a daily production report to the General Manager.

During emergency shortages, production figures are reported to the Field Supervisor hourly and to the General Manager and the Water Shortage Response Team daily. Daily reports will also be provided to the BOD and the Kern County Office of Emergency Services.
**Water Recycling**

**Wastewater System Description**

**Law**

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

10633 (a) A description of the wastewater collection and treatment systems in the supplier's service area...

**Participation in a Regional Recycled Water Planning**

The District does not have the facilities or the capability to participate in a regional recycled water program.

**WateReuse Association Membership**

The District is a member of the WaterReuse Association.

**Wastewater Collection and Treatment in Rosamond**

Rosamond Community Services District manages wastewater collection and treatment for Rosamond. All of the serviced area wastewater is collected in the District's laterals and mains and flows to the District's Wastewater Treatment Plant (WTR). Excluding storm water run-off, and is then treated. Although the District's sewer mains are not separately metered, an exact inflow quantity entering the WTR is monitored and known. About 1.5 million gallons per day (MGD) inflow is metered from with the District.

The District plans to distribute about 0.5 mgd of recycled water within the available pipeline system. (Wastewater treated to "disinfected Secondary 2.2 means that the maximum coliform level is 2.2 organisms per milliliters.) It is likely that a new wastewater treatment facility (adjacent to the WTR) will be built within the next two years. It will produce recycled water at tertiary treatment levels. There appear to be more than enough potential users and customers for all tertiary water that will be produced. The new plant is planned to expand incrementally to increase production as customer demand increases in the next twenty years.

RCSD hired a consultant to analyze current treatment processes at the WTR, recommend the best tertiary treatment alternatives and analyze the economics and water quality requirements of potential customers. Added tertiary treatment plant facilities concept and initial design approval receipt from the State is pending. The tertiary plant is anticipated to begin production by the year 2001. The District will distribute recycled water within the District's service area, which will help offset the need for additional potable water supplies.

January 21, 2000
Wastewater Treatment Processes

A schematic diagram showing wastewater treatment, is attached (Appendix E). Current wastewater treatment at the WTP includes the following processes:

1) Primary Sedimentation
2) Chlorination/Dechlorination or Ozonation
3) Wastewater Quality
4) Wastewater Disposal
5) Wastewater Disposal

Wastewater Generation, Collection & Treatment

Law

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

10633 (a) A [...] quantification of the amount of wastewater collected and treated...

Regional Sanitary Treatment Plant (RTP)

The WTP was upgraded in 1995 to an undisinfected Secondary level, with a treatment capacity of 4 mgd.

<table>
<thead>
<tr>
<th>Table 19. Wastewater Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>RTP</td>
</tr>
</tbody>
</table>

Wastewater Disposal and Recycled Water Uses

Law

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

10633 (a) A description of the [...] methods of wastewater disposal.
10633 (b) A description of the recycled water currently being used in the supplier's service area, including but not limited to, the type, place and quantity of use.

10633 (c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

10633 (d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years.

**Recycled Water Currently Being Used**

The District provided recycled water for uses in and around the WTR. Recycled water is not currently sold to outside customers.

**Potential Uses of Recycled Water**

A Kern County map will be used to locate current and potential recycled water users, measure their distance from the proposed tertiary RTP, and locate current and additional pipelines and rights-of-way. A market study and a comprehensive field survey will then be conducted to identify the use characteristics of potential tertiary recycled water customers.

After locating clusters of potential users, and considering current and additional pipelines, the highest potential new sites will be determined. All of these will be within five miles of the tertiary RTP, and all are within a quarter-mile of existing or additional pipelines.
Encouraging Recycled Water Use

Law

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

10633 (e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

RCSD's Technical and Economic Feasibility Philosophy

Both economic and financial analyses will be conducted for each potential customer/use. Data are common to both analyses; however, they will be used for different purposes. An economic analysis considers all monetary costs and benefits to society, regardless of who pays the costs or receives the benefits. A financial analysis demonstrates financial feasibility of a project by evaluating who could pay or share the costs, and who receives or shares the benefits. Economic and financial feasibility do not always exist together for the same project — for instance, a project may be economically feasible from the broad regional or statewide perspective, yet financially infeasible from the local perspective.

Environmental impacts also have economic costs and benefits. The impacts should be identified and included in an environmental mitigation plan. Even though monetary estimates of environmental benefits
and costs are difficult to make, these should be included, especially in cases where environmental enhancement and/or recreational opportunities play a major role in the justification of the project.

Marketing Strategy

Rosamond and RCSD and others recognize that broad public acceptance of recycled water requires education and public involvement. In order to develop community support and willingness to fund the tertiary plant proposal, the following marketing strategy will be considered:

- Staff will interview potential users by telephone to obtain preliminary screening information, and then some sites may be visited to determine:
  - Potential uses for tertiary recycled water
  - Present and future water quantity and quality requirements
  - Timing of water use (daily and seasonal)
  - Water reliability requirements
  - On-site plumbing or other modifications to accommodate recycled water (for example, cooling towers may require site-specific additional treatment to avoid algae bloom or scaling; school grounds and public parks may require drinking fountain shields to prevent contact from overspray).
- Economic and financial analyses will be conducted for each potential customer/use.
- Health officials will be contacted for health requirement considerations of backflow prevention, inspection and recycled water use requirements.
- The Committee will stay in contact with all future customers, until and after recycled water is provided, and will be available to provide technical assistance as necessary.

Proposed Actions to Encourage Use of Recycled Water

To encourage customers to convert to recycled water, the District will consider the following incentives:

- The District could offer typical designs of customer retrofits.
- The District could establish a 0% interest loan program for retrofits.
- The customer could pay for on-site retrofits, and the District could pay for the distribution main, service connection, water meters, signage and the labels at the controllers.
- The District could continue to offer new used the 20% rate discount rates for three years.
- The District could continue to provide on-going technical assistance to recycled water customers for no charge.
- The District could “guarantee” recycled water supply reliability even during shortages (excluding disaster conditions).
- The District and County could continue to be proactive in public education regarding the safety and reliability of recycled water.

Actions Taken

During District sponsored parties and open houses held earlier this year, a small water recycling plant constructed by one of the BOD members was demonstrated and well received by guests. While additional discussions and planning sessions are on hold until the State can approve the funds for the WTP's tertiary plant expansion, community interest in utilizing reclaimed water is growing. Once a firm plan for the construction and operation of the new tertiary treatment plant section has been established, efforts to put into place the following items can be set.
Projected Results
As of this date, the District has not considered the various process components to mobilize the usage of recycled water. The following table lists various topical areas that have been discussed in the past and will probably be considered in the immediate future.

<table>
<thead>
<tr>
<th>Methods</th>
<th>Methods Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsidized costs</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Grants</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Dual Plumbing Standards</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Regulatory Relief</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Regional Planning</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Incentive Program</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Long-Term Contracts (Price/Reliability)</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Rate Discounts</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Prohibit specific fresh water uses</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Low interest loans</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Public education</td>
<td>Not implemented yet</td>
</tr>
<tr>
<td>Other (“guarantee” recycled water supply reliability)</td>
<td>Not implemented yet</td>
</tr>
</tbody>
</table>

Recycled Water Optimization Plan

Law

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

10633 (f) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems and to promote recirculating uses.

Plan for Optimizing the Use of Recycled Water

Once the Reclaimed Water Committee and consultants have completed the marketing survey and technical analysis of the treatment options, and developed a phased approach to implement, funding and current and potential customers will be considered. An early question will be “which customers will we serve first with recycled water?“

To optimize the use of recycled water, cost/benefit analysis must be conducted for each project component. Components are then ranked from highest to lowest net benefit so that the most balanced options can be implemented first. For example, the size and location of the distribution lines depends on

January 21, 2000
costs compared to the immediate benefits associated with customers served. There appear to be more than enough potential uses and customers for all tertiary water that could be produced. The tertiary plant will be enlarged to increase treatment capacity in stages as customer demand increases in the next twenty years. See Appendix E for further information.
APPENDIX A

List Of Groups Who Participated In The Development Of This Plan

District board members and staff
General Manager and staff
Water Conservation Staff
Person(s) responsible for developing and implementing this Plan
Consultants
Antelope Valley East Kern Water Agency
Members of the public, advisory groups and so on.
RESOLUTION TO ADOPT THE URBAN WATER MANAGEMENT PLAN

RESOLUTION NO. 2001-09

RESOLUTION OF THE BOARD OF DIRECTORS
OF THE ROSAMOND COMMUNITY SERVICES DISTRICT,
KERN COUNTY, CALIFORNIA
ADOPTING THE URBAN WATER MANAGEMENT PLAN

WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq., known as the Urban Water Management Planning Act) during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan (the “Plan”), the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, the District is an urban supplier of water providing water to a population over 3,000 services; and

WHEREAS, the Plan must be adopted by December 31, 2000, after public review and hearing, and filed with the California Department of Water Resources within thirty (30) days of adoption; and

WHEREAS, the District has therefore prepared and circulated for public review a draft Urban Water Management Plan and a properly noticed public hearing regarding said Plan was held by the Board of Directors on November 22, 2000; and

WHEREAS, the District did prepare and shall file said Plan with the California Department of Water Resources by December 31, 2000.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Rosamond Community Services District as follows:

Section 1. The 2000 Urban Water Management Plan is hereby adopted and ordered filed with the Kern County Clerk. The General Manager is hereby authorized and directed to file the 2000 Urban Water Management Plan with the California Department of Water Resources within thirty (30) days after this date.

Section 2. The General Manager is hereby authorized and directed to implement the Water
Conservation Programs as set forth in the 2000 Urban Water Management Plan which includes water shortage contingency analysis and recommendations to the Board of Directors regarding necessary procedures, rules and regulations to carry out effective and equitable water conservation and water recycling programs.

**Section 3.** In a water shortage, the General Manager is hereby authorized to declare a Water Shortage Emergency according to the Water Shortage Stages and Triggers indicated in the Plan and implement necessary elements of the Plan.

**Section 4.** The General Manager shall recommend to the Board of Directors additional regulations to carry out effective and equitable allocation of water resources; and

**Section 5.** The attached budget is approved and authorized for implementation.

ADOPTED THIS 22nd day of November 2000.

Tommy L. Loomis, President
Rosamond Community Services District

ATTEST

Sharon L. Welker, Secretary/Treasurer
Rosamond Community Services District

January 21, 2000
APPENDIX C

RCSD's WATER SHORTAGE INFORMATION

No-Waste Ordinance
Resolution to Declare a Water Shortage Emergency
Moratorium on New Connections During a Declared Water Shortage
Water Shortage Rationing Allocation Method
ORDINANCE NO. 2001-01

(NO WASTE ORDINANCE)

ORDINANCE OF THE BOARD OF DIRECTORS OF THE
ROSAMOND COMMUNITY SERVICES DISTRICT AMENDING
ORDINANCE NO. 92-6 ENTITLED "AN ORDINANCE
ESTABLISHING RULES AND REGULATIONS FOR THE UTILITY
SYSTEM OF ROSAMOND COMMUNITY SERVICES DISTRICT BEING
THE WATER SYSTEM AND SEWER SYSTEM THEREOF;
PRESCRIBING RATES AND CHARGES FOR WATER SERVICE
AND SEWER SERVICE; AMENDING, ADJUSTING AND RESTATING
SUCH RATES AND CHARGES THERETOFORE FIXED FOR SUCH
SERVICE; REPEALING ALL ORDINANCES IN CONFLICT
HEREWITH AND MAKING CERTAIN FINDINGS AND
DETERMINATIONS IN CONNECTION THEREWITH"

WHEREAS, the Board of Directors of the Rosamond Community Services District ("Board" and "District", respectively) in accordance with the Community Services District Law, Sections 61,000 and following of the Government Code of California has duly adopted its Ordinance No. 92-6, entitled "An Ordinance establishing rules and regulations for the utility system of the Rosamond Community Services District being the water system and sewer system thereof, prescribing rates and charges for the water service and sewer service; amending, adjusting and restating such rules and regulations theretofore fixed for such service, repealing all ordinances in conflict herewith; and making certain findings and determinations in connection therewith" hereby amends its Ordinance 92-6 by amending Title IX, Article 31 as follows:

Section 1. RULES AND REGULATIONS ON WATER USE.

It is hereby resolved by the Board of Directors that in order to conserve the District's water supply for the greatest public benefit and to reduce the quantity of water used by the District's customers, that wasteful use of water should be eliminated. Customers of the District shall observe the following regulations and restrictions on water use.

a. No customer shall waste water. As used herein, the term "waste" means:

(1) Use of potable water to irrigate in such a manner as to result in runoff for more than five (5) minutes.

(2) Use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground or other hard surfaced areas except where necessary for public health or safety.

(3) Allowing potable water to escape from breaks within the customer's plumbing system for more than twenty-four (24) hours after the customer is notified or discovers the break;

(4) Washing cars, boats, trailers, aircraft or other vehicles by hose without a shutoff nozzle and bucket except to wash such vehicles at commercial or fleet vehicle washing facilities using water recycling equipment.

January 21, 2000
(5) Use of potable water to clean, fill or maintain decorative fountains, lakes or ponds unless such item is re-circulating.

b. The following restrictions are effective during a declared Water-Shortage Emergency.

(1) No restaurant, hotel, café, cafeteria or other public place where food is sold, served or offered for sale, shall serve drinking water to any customer unless expressly requested.

(2) Use of potable water for construction, compaction, dust control, street or parking lot sweeping or building washdown where non-potable water is sufficient.

(3) Use of potable water for sewer system maintenance or fire protection training without prior approval by the General Manager.

(4) Use of potable water for any purpose in excess of the amounts allocated or each class of service.

c. Other restrictions may be necessary during a declared Water Shortage Emergency to safeguard the adequacy of the water supply for domestic, sanitation, fire protection and environmental requirements.

Section 2. Enforcement.

Any customer violating the regulations and restrictions on water use set forth in this Article shall receive a written warning for the first such violation. Upon a second violation, the customer shall receive a written warning and the district may cause a flow-restrictor to be installed in the service. If a flow-restrictor is placed, the cost of installation and removal shall be paid by the violator. Any willful violation occurring subsequent to the issuance of the second written warning shall constitute a misdemeanor and may be referred to the County District Attorney’s Office for prosecution. Under a declared Water Shortage Emergency, the District may also disconnect the water service. If water service is disconnected, it shall be restored only upon payment of the turn-on charge fixed by the Board of Directors.

Section 3. Penalty for violations.

Except as provided in the enforcement section for the first and second violation, any person, firm, partnership, association, corporation or political entity violating or causing or permitting the violation of any of the provisions of this section or providing false information to the district in response to district’s requests for information needed by the district to calculate consumer water allotments shall be guilty of a misdemeanor punishable by imprisonment in the county jail for not more than thirty (30) days or by a fine not exceeding one thousand ($1,000) dollars or both. Each separate day or portion thereof in which any violation occurs or continues without a good faith effort by the responsible party to correct the violation shall constitute a separate offense and upon conviction thereof, shall be separately punishable.

Section 4. Appeals

Variances from the requirements of this Section may be granted by the Board of Directors only after denial of a variance request by the General Manager. Appeals of variance request denials shall be made in writing to the secretary of the Board at least two (2) weeks prior to the meeting at which they will be heard. Upon granting any appeal, the Board of Directors may impose any conditions it determines to be just and proper. Variances granted by the Board shall be prepared in writing, then furnished to the applicant. The Board of Directors may require it to be recorded at the applicant’s expense.
Section 5. Remedies/Cumulative

The remedies available to the district to enforce this ordinance are in addition to any other remedies available under the District's code or any state statutes or regulations and do not replace or supplant any other remedy, but are cumulative.

Section 6. That this Ordinance shall be published once in the Rosamond News, a newspaper of general circulation in the District.

Section 7. That the effective date of the Ordinance shall be thirty (30) days from the date of adoption by the Board of Directors.

PASSED AND ADOPTED THIS 22nd day of November 2000.

Tommy L. Loomis, President

ATTEST

Sharon L. Welker, Secretary/Treasurer

January 21, 2000
Resolution To Declare A Water Shortage Emergency

ROSAMOND COMMUNITY SERVICES DISTRICT
KERN COUNTY, CALIFORNIA
Date

The Board of Directors of the Rosamond Community Services District ("RCSD") does hereby resolve as follows:

PURSUANT to California Water Code Section 350 et seq., the Board of Directors has conducted duly noticed public hearings to establish the criteria under which a water shortage emergency may be declared.

WHEREAS, the Board of Directors finds, determines and declares as follows:

(a) The District is the water purveyor for the property owners and inhabitants of Rosamond;
(b) The demand for water service is not expected to lessen.
(c) When the combined total amount of water supply available to the District from all sources falls at or below the Stage II triggering levels described in the 2000 Urban Water Management Plan, the District will declare a water shortage emergency. The water supply would not be adequate to meet the ordinary demands and requirements of water consumers without depleting the District's water supply to the extent that there may be insufficient water for human consumption, sanitation, fire protections, and environmental requirements. This condition is likely to exist until precipitation and inflow dramatically increases or until water system damage resulting from a disaster are repaired and normal water service is restored.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Rosamond Community Services District hereby directs the District's General Manager to find, determine, declare and conclude that a water shortage emergency condition exists that threatens the adequacy of water supply, until the District's water supply is deemed adequate. After the declaration of a water shortage emergency, the Board of Directors is directed to determine the appropriate Rationing Stage and implement the District's Water Shortage Emergency Response.

FURTHERMORE, the Board of Directors shall periodically conduct proceedings to determine additional restrictions and regulations which may be necessary to safeguard the adequacy of the water supply for domestic, sanitation, fire protection and environmental requirements.

ADOPTED this ___ day of __________, 2000.

______________________________
President, Board of Directors

ATTEST

______________________________
Secretary/Treasurer of the Board of Directors

January 21, 2000
Moratorium On New Connections During A Water Shortage

ROSAMOND COMMUNITY SERVICES DISTRICT
ROSAMOND, CALIFORNIA
Date

The Board of Directors of the Rosamond Community Services District does hereby resolve as follows:

The Operations Code of Rosamond Community Services District is hereby amended to read as follows:

XX-1 MORATORIUM ON SERVICE COMMITMENTS AND CONNECTIONS

1 When the District declares a water shortage emergency, the following regulations shall become effective immediately and shall continue in full force and effect to prohibit the following while it remains in full force and effect:
   a. The District shall not issue oral or written commitments to provide new or expanded water service, including will-serve letters.
   b. The District shall not sell meters for water service connections, despite the prior issuance of will-serve letters or other oral or written service commitments, unless building permits have been issued.
   c. The District shall not provide new or expanded water service connections, despite the prior issuance of will-serve letters or other oral or written service commitments and meters, unless building permits have been issued.
   d. The District shall not provide water for use on any new plantings installed after the declaration of a Water Shortage Emergency.
   e. The District shall not annex territory located outside the District's service boundary.

2. The following uses are exempt from the moratorium and upon application to the District shall receive necessary water service commitments and connections to receive water from the District:
   a. Uses, including but not limited to, commercial, industrial, single and multifamily residential, for which a building permit has been issued by the County on or before the declaration of a Water Shortage Emergency.
   b. Uses, including but not limited to, commercial, industrial, single and multifamily residential, for which a retail meter had been purchased from the District before the declaration of a Water Shortage Emergency, as evidenced by a written receipt and for which a building permit has been issued and remains in full force and effect.
   c. Publicly owned and operated facilities, including but not limited to schools, fire stations, police stations, and hospitals and other facilities as necessary to protect the public health, safety and welfare.

January 21, 2000
Water Shortage Rationing Allocation Method

(TO BE ADDED TO SAMPLE PLAN AT A LATER TIME)
APPENDIX D

Rate Stabilization Fund Discussion
Establishment of a Rate Stabilization Fund

In order to mitigate the financial impacts of a water shortage, the District is establishing an Emergency Fund. The goal is to maintain the fund at 75% of normal water department revenue. This fund will be used to stabilize rates during periods of water shortage or disasters affecting the water supply. The District will not have to increase rates as much or as often during a prolonged or severe shortage.

However, even with the emergency fund, rate increases will be necessary during a prolonged water shortage. As described in this Plan, a Stage II shortage will be accompanied by a 15 – 25% reduction in water deliveries while a Stage III will be accompanied by a 25 – 35% reduction. The experiences of California water purveyors during the 1990-91 drought shortage demonstrated that actual water use reductions by customers are usually considerably larger than those requested by the supplier. During the 1990-91 drought shortage it was also politically difficult for many agencies to adopt the rate increases necessitated by a 20% to 50% reduction in sales. When a Water Shortage Emergency is declared, the supply shortage will trigger the appropriate Rationing Stage and rate increase.

Water rates increase by the following percentages when the indicated Stages are implemented:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Rate Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>No rate increase</td>
</tr>
<tr>
<td>Stage II</td>
<td>25% increase over pre-shortage rates</td>
</tr>
<tr>
<td>Stage III</td>
<td>50% increase over pre-shortage rates</td>
</tr>
<tr>
<td>Stage IV</td>
<td>100% increase over pre-shortage rates</td>
</tr>
<tr>
<td>End of the Water Shortage Emergency</td>
<td>15% increase over pre-shortage rates (This rate increase should be re-evaluated every two years)</td>
</tr>
</tbody>
</table>

Most California water agencies, which experienced water shortages, have found that customer gpcd has not nor is it expected to return to pre-shortage levels. After a shortage, water department expenses are expected to drop below pre-shortage levels but water sales are not expected to rebound. In anticipation of reduced sales, after a declared shortage ends, the District's rates will be set for one year at 115% of the pre-shortage rates. Any excess revenues collected as a result of this rate adjustment will be used to re-establish the Rate Stabilization Fund.
APPENDIX E

WATER RECYCLING INFORMATION

Wastewater Treatment Processes
Water Recycling Planning Outline
Points to Include in a Recycled Water Use Ordinance
Map of the District’s Current and Proposed Recycled Water Distribution System
Wastewater Treatment Processes

The existing facilities consist of a 15-pond system that provides treatment, storage and disposal. At some point in the system, the wastewater has been treated to such a level that allows for disposal without violating discharge requirements. Downstream of that point, the ability to fluctuate water levels provides storage. The only disposal mechanism in the system is through evaporation. Evaporation occurs over the entire wetted area of the ponds. Thus, the total amount disposed can be increased by maintaining water in all ponds.

The WTR current service areas includes only its own WTR yard decorative agricultural uses. Once the tertiary plant is operational, there are at least three commercial entities waiting to use the reclaimed water.

Wastewater Disposal – Treated effluent from the RTP either is used around the WTR or allowed to evaporate.
Water Recycling Planning Outline

Market Assessment and Survey

This phase is concerned with the gathering of preliminary information needed to do an initial analysis of reclamation and data regarding the potential market for reclaimed water.

A. Survey Potential Uses in the Study Area

1. List potential users, crops, and use applications of reclaimed water.
2. Consult with state and local health agencies on water quality and application requirements (backflow prevention, irrigation methods, levels of treatment, etc.) for each type of application.
3. Consult with Regional Water Quality Control Board on water quality and application requirements for each application and any restrictions in the area for protection of groundwater or surface water.
4. Develop estimate of future fresh water supply costs to users.

Information Needed from Potential Users

1. Specific potential uses of reclaimed water.
2. Present and future quantity and quality needs.
3. Timing of needs.
4. Reliability requirements of supply and quality of reclaimed water.
5. Disposal needs of used reclaimed water.

Feasibility Study

After doing a preliminary market assessment, especially of larger potential users, a preliminary design of potential facilities is developed and analyzed for engineering, economic and financial feasibility.

Facilities Plan/Project Report

This phase represents the final planning effort needed prior to proceeding with design. Environmental review should be completed during this phase. Institutional and user agreements should be completed before commencing with design.

Maps and Diagrams

1. Detailed map of project area with boundaries.
2. Wastewater agency boundaries within and adjacent to study area.
3. Existing reclaimed water distribution pipelines, storage and customers.
4. Groundwater basin boundaries, major streams and waste discharges.
5. Present and projected land use (to coincide with Master Plan).
6. Alternative reclaimed water facilities (including recommended project) showing locations of potential customers and approximate pipeline design.
7. Wastewater treatment schematic - existing and proposed.

Study Area Characteristics

1. Hydrologic features.
2. Water Quality - groundwater and surface water.
3. Population projections of project area.

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4. Beneficial uses of receiving waters and degree of use, portion of flow that is effluent. Coordinate with Regional Water Quality Control Boards (determine downstream uses).

Water Supply Characteristics and Facilities

1. Description of all wholesale and retail water suppliers.
2. All sources of water for project area and major facilities, their costs (costs should be separated into fixed and variable), subsidies, and customer prices.
3. Capacities of present facilities, existing flows and estimated years when capacities to be reached for major components (water treatment plants, major transmissions and storage facilities).
5. Water use trends and future demands, prices and costs.

Wastewater Characteristics and Facilities

1. Description of major facilities, including capacities, present flows, plans for new facilities, description of treatment processes and design criteria.
2. Water quality of effluent and any seasonal variation.
3. Additional facilities needed to comply with waste discharge requirements.
4. Sources of industrial or other problem constituents and control measures.
5. Existing reclamation, including users, quantities, contractual and pricing arrangements.
6. Existing rights to use of treated effluent after discharge.
7. Wastewater flow variations, daily and seasonal.

Treatment Requirements for Discharge and Reuse

1. Required water qualities for potential uses.
2. Required health-related water qualities or treatment requirements for potential uses, and operational and on-site requirements (such as back flow prevention, buffer zones).
3. Waste water discharge requirements and anticipated changes in requirements.

Reclaimed Water Market

1. Description of market assessment procedures.
2. Descriptions of all users or categories of potential users, including type of use, expected annual reclaimed water use, peak use, estimated internal capital investment required (on-site conversion costs), needed water cost savings, desire to use reclaimed water, date of possible initial use of reclaimed water, present and future source of water and quantity of use, quality and reliability needs, and wastewater disposal methods.
3. Summary tables of potential users and related data.
4. Definition of logical service area based on results of market assessment.

Project Alternative Analysis

1. Planning and design assumptions:
   a. Delivery and system pressure criteria.
   b. Peak delivery criteria.
   c. Storage criteria.
   d. Cost basis: cost index, discount rate, useful lives, etc.
   e. Planning period.
2. Water reclamation alternatives to be evaluated:
   a. Alternative levels of treatment.
   b. Pipeline route alternatives.
   c. Alternative markets.
i. Based on different levels of treatment.
ii. Geographical areas.
d. Alternative storage locations.
e. Marginal analysis of selected alternative for certain categories of users or certain geographic areas.

   a. Analysis.
b. Impact on reclamation, if any.
c. Recommendation.
d. Implementation.

4. Pollution control alternatives (if applicable) needed to comply with waste discharge requirements, and possible allocation of costs between reclamation and pollution control.

5. Impacts of project alternative.

6. Information supplied for each alternative to include, but not be limited to:
   a. Cost tables for each alternative with breakdown of costs by total capital (without grants), operation & maintenance, unit processes, and with equivalent annual cost and per acre-foot cost.
   b. Lists of potential users assumed for each alternative.
   c. Economic analysis.

7. Water quality impacts.

Recommended Plan

1. Description of all proposed facilities and basis for selection.
2. Preliminary design criteria and refined pipeline routes.
3. Cost estimate based on time of construction.
4. List of all potential users, quantity of reclaimed water use, peak demand, and commitments obtained.
5. Reliability of facilities as compared to user requirements.
6. Implementation plan.
7. Operation and maintenance plan.

Construction Financing Plan and Revenue Program

1. Sources and timing of funds for design and construction.
2. Pricing policy for reclaimed water.
3. Annual projection of:
   a. Fresh water prices for each user or category of users.
   b. Reclaimed water used by each user.
   c. Annual costs (required revenue) of reclamation project.
   d. Allocation of costs to users.
   e. Unit costs to serve each user or category of users.

Design

During this phase, assistance should be provided to users in the plumbing design of onsite conversion to reclaimed water.

Construction

It is important to continue to work with the users during and after construction to ensure that their facilities comply with the requirements of the state and local health agencies and that they make the reclaimed water plumbing conversion.

January 21, 2000
Points To Include In A Recycled Water Use Ordinance

California law mandates the use of recycled water (if available) for approved uses, so local jurisdictions do not need a specific ordinance. However, a number of California communities have developed ordinances to involve and gain acceptance from the public and potential customers, and to declare policy intent. If the agency implementing a recycled water project does not have the legal authority to establish or enforce an ordinance (for example, a sewer agency or a special district), the ordinance must be coordinated with the appropriate cities and/or counties.

Ordinances must conform to wastewater treatment levels and approved uses as defined by the California Department of Health Services under California Administrative Code, Title 22, Division 4. The WaterReuse Association has developed two sample ordinances, available upon request from DWR, Division of Planning and Local Assistance, Local Planning Support Unit, Post Office Box 942836, Sacramento, California 94236-0001, telephone (916) 327-1666.

Major points to consider include the following:

- Specify the types of water use for which recycled water must be used.
- Specify the conditions under which recycled water must be used or new development must be plumbed for future recycled water use.
- Procedure for determining which water users are required to either convert to recycled water service or be plumbed to accept recycled water upon new water service.
- Procedure to provide notice to potential users that they are subject to the ordinance and specification that the notice include information about the project, the responsibilities of the users under the ordinance, the price of the recycled water and description of the on site retrofit facilities requirements.
- Procedure for request by the users for a waiver.
- A penalty for noncompliance with the ordinance. Minimum acceptable penalties are discontinuance of potable water service, or a potable water rate surcharge (for instance, 50% of the potable rate), or equivalent penalty. When a customer corrects the violation, the ordinance must include a method to enable reconnection.