

FINAL ENVIRONMENTAL IMPACT REPORT

for the

MODESTO  
SURFACE WATER TREATMENT PLANT

**APPENDIX C**

**CITY OF MODESTO MEMORANDUM  
WATER CONSERVATION REPORT COUNCIL**

CITY OF MODESTO

M E M O R A N D U M

March 13, 1990

TO: City Manager  
FROM: Public Works and Transportation Director  
SUBJECT: **WATER CONSERVATION REPORT TO COUNCIL**

RECOMMENDED COUNCIL ACTION:

Motion directing staff in implementation of water conservation program.

REASON FOR RECOMMENDED ACTION:

Modesto Municipal Code 11-1.14 gives the City Council the authority to restrict water use. The combined impact of drought and water quality concerns make it imperative that we conserve our limited water supply.

IMPACT:

Adoption of a water conservation program will not only reduce water use, it will also help to recharge our existing groundwater supply, and save on the cost of future water requirements.

OTHER AGENCY INVOLVEMENT:

Staff has researched the water conservation programs of several other cities, including cities in the Bay Area which have been significantly impacted by drought.

ALTERNATIVES :

1. The Council may elect to adopt only certain portions of staff's recommendations.
2. The Council may elect not to restrict water use.

BACKGROUND:

In 1977, Modesto responded to drought conditions by adopting the City's first summer water conservation program. Since then, the City Council has reviewed and revised the program annually based on the needs of the community. Current water supply issues make water conservation a more important issue now than ever before.

*David S. Holton*  
for E. J. Walker

## EXECUTIVE SUMMARY

This year's Water Conservation Program is particularly important as we deal with the cumulative effects of drought and water quality concerns. A number of recommendations are made within this report. Briefly, these recommendations are:

1. Approve watering restrictions as follows:

No outdoor water use is permitted between 12-7 p.m., on any day.

Addresses ending in an even number may water outdoors on the even-numbered days of the month, but not during the restricted hours.

Addresses ending in an odd number may water outdoors on the odd-numbered days of the month, but not during the restricted hours.

Ban hosing down driveways, sidewalks, building exteriors, and parking lots without the written consent of the Public Works and Transportation Director. Violations would be treated as water waste.

Include within the definition of water waste using lawn sprinklers when it is raining.

Prohibit restaurants from serving water except upon customer request.

Encourage use of pool covers through rebate program. If approved, this would be developed in conjunction with the Finance Department.

Restrictions take effect May 1, 1990 (or as soon as enforcement personnel can be hired) and remain in effect until such time as modified by the City Council

2. Approve the allocation of two additional Code Enforcement Officer I positions in Fund 510 with appropriate equipment and supplies.
3. Consider revising MMC 11-1.06 to require the installation of water meters on all new single family homes constructed within the City of Modesto on or after some future date, as determined by the City Council,
4. Direct staff to return to Council with the appropriate documentation to implement recommendations.

## CITY OF MODESTO

### WATER CONSERVATION PROGRAM, 1990

#### INTRODUCTION

Some people in California argue that the drought is over, that water is plentiful, that there's no cause for concern. People in the Central Valley know better. After three years of drought conditions and the reality of a fourth looming ever larger, conservation has become a way of life. And so it should be. As our most important renewable resource, it is essential that we protect our perpetual, but limited, water supply. Conservation now will not only reduce water use, it will also help to recharge our existing groundwater supply, and save on the cost of future water requirements.

This report will summarize the status of Modesto's water supply, discuss measures that will mitigate quality and quantity problems, and recommend future actions that will continue to make Modesto the City of Water, Wealth, Contentment, and Health.

#### LOCAL WATER SITUATION

As Modesto continues to grow, so does the demand for water. In 1989, the fifty municipal water wells produced a total of 17.2 billion gallons of water. The average consumer used 300 gallons of water each day except during the summer months when usage peaked at 409 gallons per day. Despite this seven percent reduction in water usage from 1988, **low water pressure continued to plague many areas within the City. In 1989, the pumps at ten municipal wells were lowered. At least ten more are scheduled to be extended during 1990.**

More stringent water quality regulations have magnified the conditions brought on by the drought. Together groundwater contamination and drought have impacted our community's water supply as nothing has before. Static water levels dropped to 63.7 feet in 1989, a drop of over six feet since the drought year of 1977. Currently, seven municipal wells are out of service because of contamination problems. Since those wells are not in service a greater demand is placed on the other wells -- a demand which is more difficult to meet during the warm weather months ahead.

Dealing with the water supply problems brought on by drought and contamination is the primary challenge the City faces. Well head treatment techniques are being researched at the same time that we continue to study the possibility of taking water from the Tuolumne River. Obviously these are not "quick fixes", thus water conservation must play an important role in our planning.

## LEGISLATION IMPACTING WATER CONSERVATION

**AB 325 (Clute)** This bill would require each county and city to adopt by January 1, 1991, a water-efficient landscape ordinance for all new developments within the city, county, or city and county which considers specified water conserving elements. Requires Department of Water Resources to provide technical assistance to agencies in developing the appropriate elements of the ordinance.

**AB 1300 (Kelley)** If adopted, this bill would require that a water meter be installed on the water service facilities of any person to whom service is being furnished. Additionally, this bill would require that the installation **costs** be paid by the water customer and provides that the water purveyor may impose and collect fees for those costs.

**AB 2355 (Filante)** This bill was signed by the Governor in September and requires that all new buildings constructed in this state, after January 1, 1932, use water closets and associated flushmeters. The flushmeters are required to use no more than 1.6 gallons per flush; urinals and associated flushmeter valves may not use more than one gallon per flush. In the city of Modesto, building inspectors verify that conservation fixtures are used during the plan check process and again when making onsite inspections.

**SB 1299 (Ayala)** Specifies that certain course instruction in the social sciences for kindergarten and grades one to 12 inclusive, include an element on water resources and their use.

## WATER CONSERVATION--EDUCATION

In 1989, the City Council selected a wonderful new logo/slogan for the conservation program. The slogan, "Water...precious enough to **save a drop at a time**", summarizes the attitude of valley residents and will be used extensively this year as we promote conservation.

**Water Awareness Month in May** provides us with an excellent, opportunity to promote water issues. During May, "Precious, the Water Drop" is scheduled to make several public appearances, including stops at the Stanislaus County Main Library on May 7 and 8, and the Crime Prevention Fair on May 11. We also have planned two landscaping seminars on May 23 and May 30. **Guest speakers** for the landscaping seminars will be Fred Allen, the City Landscape Designer; Allen Lagarbo, City Arborist; and Ed Perry, U.C. Farm Advisor. The landscaping seminars will stress proper irrigation of lawns and how to design a drought tolerant landscape (also known as xeriscape). Water issues will also be the focus of the May edition of the cable show "Cityscape".

School activities are also planned. "Precious" will help distribute conservation activity booklets to teachers in grades K-6. These activity booklets stress not only water conservation, but recycling as well, and meet state science curriculum standards. **We** plan to have these booklets ready for distribution by mid-April, so that they can be used by teachers in discussing "Earth Day" (April 22) activities.

Staff is also preparing for distribution an informational packet on xeriscape that will be distributed to landscape professionals within our area. We also plan, once code enforcement personnel have been hired, to conduct landscape audits. The Water Conservation Program will be actively promoted through articles in the 'Modesto Bee, Public Service Announcements on local radio stations, city's local access cable program, and on Earth Day. We have also made contact, with the weather reporters for KCEA, KXTV, and KOVR, hoping to gain their cooperation in co-sponsoring a water conservation quiz as part of their daily newscast. If they agree, city staff will provide questions and answers for each reporter to use in their weather report.

#### WATER CONSERVATION--ENFORCEMENT

The City Council chose, in 1989, to make several major changes in the Water Conservation Program. Recognizing the need for prompt action as a result of drought conditions, the Council voted to begin watering restrictions in May rather than in June. They also authorized the first odd-even watering schedule for Modesto residents, and hired two conservationists to enforce the restrictions. These changes, aided by below normal temperatures, resulted in a seven percent reduction in water consumption. This was the largest one year drop in consumption since 1982. It is worth noting that the 409 gallon average used by Modesto residents was the lowest average in twelve years (including the drought year of 1977). Clearly, conservation has become a way of life for many Modesto residents. In preparing recommendations for this year, staff reviewed not only our past programs, but the programs of several other cities.

In our discussions with other cities, we found that many depend on the ability to ration water through the use of meters. Most indicated that if a customer exceeded the designated allotment, a fine was assessed on the subsequent utility billing. Other conservation tools frequently cited included banning water service in restaurants except upon request, restricting water use by day or time, and banning the hosing of building exteriors and the like.

As you may recall, last year's watering restrictions were based on the days of the week. Many people, while supportive of the program, indicated to staff that they were unable to use their automatic timers because of the watering schedule. Most of these people indicated that their timers could be set for every other day, but not for particular days of the week. Changing the watering restrictions from one based on the days of the week to a schedule based on the days of the month should eliminate this concern.

Therefore, staff's first recommendation is that the City Council adopt watering restrictions based on the day of the month. Under this method, addresses ending in an even number will water on even-numbered days of the month. Those addresses ending in an odd number will water on the odd-numbered days of the month. For those months with 31 days, the 31st day will be an unregulated day (except for peak hours). Staff also suggests that the restricted hours for watering be lengthened from 2-7 p.m. to 12-7 p.m. and that hosing down driveways, sidewalks, building exteriors and parking lots be prohibited without the written approval of the Public Works Director.

As a second recommendation, staff urges support of year-round watering restrictions. Water conservation must become a habit if we are to maintain the lifestyle we now enjoy. Many people comment on the lovely landscapes at both commercial and residential locations in Modesto. These need not be lost in implementing a water conservation plan. Staff recommends that the watering restrictions begin May 1, 1990 (or as soon as enforcement staff can be hired) and continue on a year-round basis. There are, of course, additional costs associated with this recommendation. Primarily those costs are for the hiring of two full-time code enforcement officers and any publicity necessary to promote such a change. (See Attachment A)

Finally, in addition to the recommendations previously discussed, staff makes the following recommendations:

- 1.. Require that restaurants serve water only on request. For every eight ounce glass of water that is served (and frequently not used) another 16 ounces are required for washing and rinsing.
2. Encourage pool owners to use pool covers through the use of a rebate program, and direct staff to begin implementation of this at city-owned locations. According to a recent study conducted by the City of Sacramento and Arcade Water District, the monthly evaporation rate for a quiescent swimming pool (15' x 30') is 11.27 inches or 3,160 gallons. Not only will a pool cover eliminate practically all evaporation it will also benefit the pool owner because the pool will require less chemicals and will retain heat longer. California law already requires that pool builders provide new pool owners with covers.
3. Strict enforcement of water waste rules which prohibit overspray from lawn sprinklers and the use of lawn sprinklers when it is raining.

#### WATER CONSERVATION--METERING

Some conservationists have made the point that city dwellers will never practice meaningful conservation until water meters are required. Staff agrees that metering is a proven conservation tool and, whether out of legal requirement or necessity, is probably inevitable. We also realize that there are a number of other issues involved, not the least of which are the long-range effects on a community which prides itself on an abundance of water.

Flat rate water usage has served Modesto well. Alternatives to metering, such as year-round watering restrictions and educational programs, are things that can be done right now to protect our water supply. Therefore we are not, at this time, recommending any city-wide metering program. We do, however, recommend that the City Council consider requiring the installation of water meters on all new construction within the City, including single family homes at some

To summarize, staff recommendations are:

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Restrictions take effect May 1, 1990 (or as soon as enforcement personnel can be hired) and remain in effect until such time as modified by the City Council

2. Approve the allocation of two additional Code Enforcement Officer I positions in Fund 610 with appropriate equipment and supplies.
3. Consider revising MMC 11-1.06 to require the installation of water meters on all new single family homes constructed within the City of Modesto on or after some future date, as determined by the City Council.
4. Direct staff to return to Council with the appropriate documentation to implement recommendations.

**WATER CONSERVATION CALENDAR**  
**MARCH - MAY**

**MARCH**

Talk show on KASH with Don Langman, March 9  
Landscape seminar planning meeting, March 22  
Water Awareness planning meeting, March 27

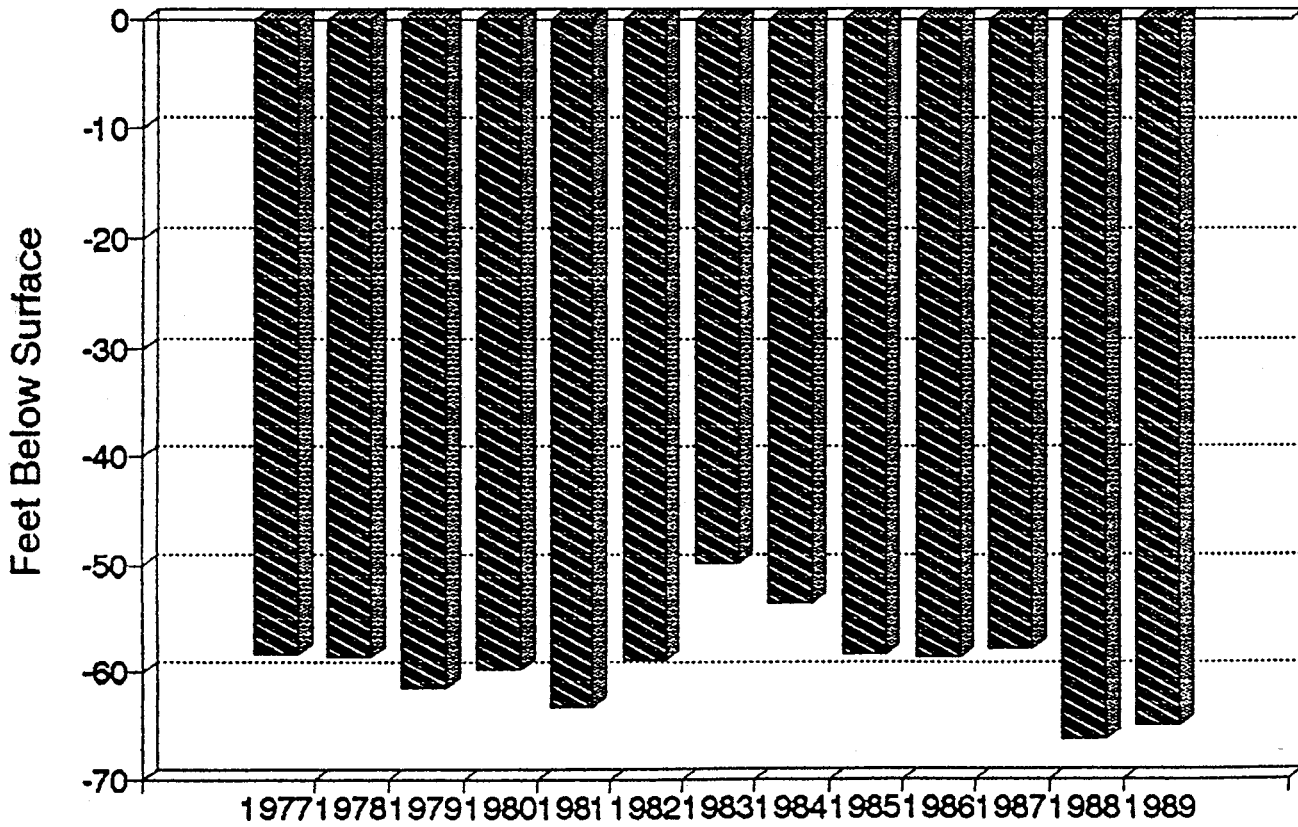
**APRIL**

Activity Booklets distributed to schools, April 16  
Earth Day celebration at Graceada Park, April 22  
with special appearance by "Precious"  
Resolutions to Council for Water Awareness Month  
and National Drinking Water Week

**MAY**

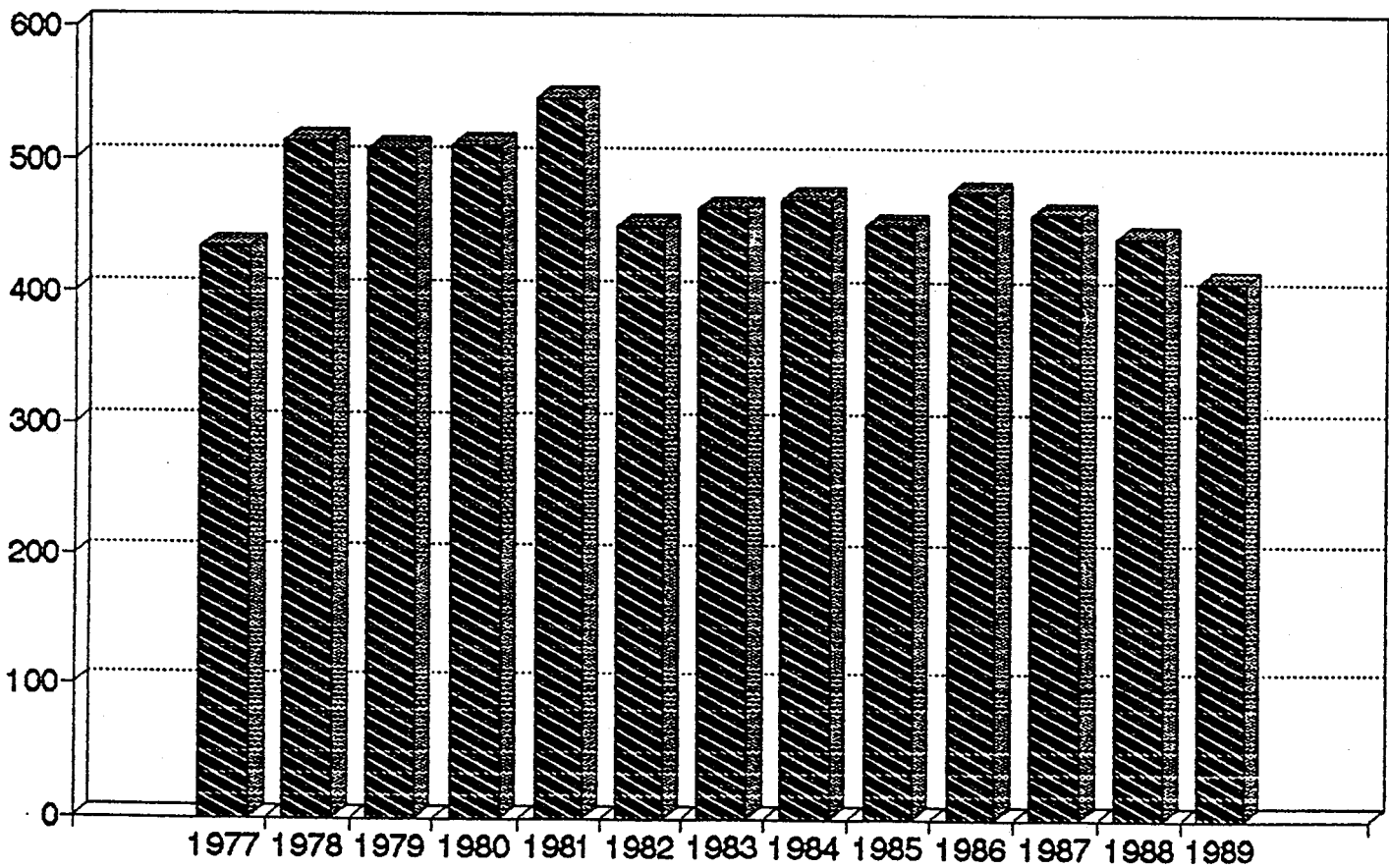
Water Awareness Month begins  
Special Water Awareness issue of utility bill  
insert distributed  
Special Appearance by "Precious", Main Library on  
May 7 and 8  
Special Appearance by "Precious", Crime Prevention  
Fair, May 11  
Landscape Seminars, May 23 and 30  
"Cityscape" airs Water Awareness Program, dates not  
yet available

# Average Static Water Levels For Peak Summer Months



# Average Daily Water Consumption

## Peak Summer Months



Months Included: 1977-1986, June - August; 1987-1988, June - September; 1989, May - September

**CITIES SURVEYED**

CONSERVATION MEASURE	SAN JOSE	EAST BAY MUNI. UTIL. DIST.	FRESNO	CERES	TURLOCK
WATER RATIONING	X	X			
FINES	X	X	X	X	
RESTAURANTS - WATER ONLY ON REQUEST	X	X	X		
DAY/TIME RESTRICTIONS			X	X	X
RESTRICTED HOSING OF BUILDING EXTERIORS, etc.	X	X		X	

**NOTES :**

EBMUD serves numerous Bay Area communities including Hayward, Alameda, Pleasanton, Walnut Creek, Concord, San Leandro and Alamo.

City of Turlock adopted a year-round water conservation program on 3/13/90.

ATTACHMENT A

Funding required for two Code Enforcement Officers I:

Salary:

Range 112 (B):	\$ 46,576
Benefits	13,879

Associated costs:

Four door Sedans	26,000
Equipment Fool Rental	4,752
Mobile Radios	1,808
Office Supplies	60

TOTAL:	\$ 93,075
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