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DEPARTMENT OF
PUBLIC WORKS

WATER DIVISION

CITY OF SACRAMENTO
CALIFORNIA

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April 16, 1991

Budget and Finance/Transportation and Community
Development Committees
Sacramento, California

Honorable Members in Session:

SUBJECT: **PROPOSED 1991 WATER CONSERVATION PROGRAM**

SUMMARY

California water supplies are once again critical for the fifth consecutive year. Although the recent March rains have brought much needed precipitation, the need to conserve California's water supplies remains paramount. In response to the current state of water supply conditions, the Water Division has developed a plan to reduce water use by City consumers. This report outlines the proposed conservation program aimed at achieving 20 percent summer water savings. To meet this goal and encourage water conservation in the community the following actions are proposed:

- Continue restricting outdoor irrigation to a maximum of three(3) days per week with the Monday prohibition.

- Continue the current restrictions on the use of water for washing down paved surfaces, except to alleviate immediate fire or sanitation hazards.

- Increase the level of public education and conservation awareness.
  - Develop more conservation brochures and handouts.
  - Participate in local television advertising campaign.
  - Increase the number of Water Waste Inspectors.
- Initiate a water audit program for City customers.
- Begin a program of indoor plumbing retrofit for residential and commercial consumers.
- Perform outdoor water conservation audits on large City turf areas.
- Develop a water-efficient landscape ordinance.
- Construct a Xeriscape Demonstration Garden.
- Propose change in metered rate structure during this year's rate hearings.

BACKGROUND

California has had few periods of extended low rainfall or drought conditions. Except for occasional single years with less than average precipitation, California has had only three periods, within recent history, that can be considered droughts: 1928 to 1934, 1976 and 1977, and 1987 to the present. During each of these dry periods, Sacramentans, like other Californians, have had to practice significant water conservation.

Specific water conservation practices which have been, and continue to be, implemented by the City include:

- Adoption of water conservation ordinances.
- Employment of Water Waste Inspectors.
- Public information campaigns.
- Distribution of water conservation kits.
- Commercial water meter retrofit program.
- Participation with other area water purveyors in a regional water conservation program.

In 1990, California was in the midst of its fourth consecutive year of drought, the City's Water Division proposed a mandatory Water Conservation Program to supplement the ongoing voluntary program. The program, adopted by the City Council on May 22, 1990, included the following measures:

1. Prohibit use of City water to wash down sidewalks, driveways, parking lots, or other paved area, except to alleviate immediate fire or sanitation hazards.
2. Prohibit landscape irrigation between the hours of 12 noon and 6 p.m.
3. Initiate odd/even landscaping irrigation. Residences or businesses with odd address numbers will water landscaping only Tuesdays, Thursdays, and Saturdays. Even numbered addresses will water on Wednesdays, Fridays, and Sundays. Watering on Mondays will be prohibited.

As California endures a fifth year of drought, water conservation measures beyond those implemented for previous years are needed.

POTENTIAL WATER CONSERVATION MEASURES

Potential water conservation measures evaluated in this report are discussed in detail in Exhibit A. Measures evaluated include those ideas submitted by City Council members, "Best Management Practices" developed by the Department of Water Resources, and measures proposed by City Staff. These potential measures are:

- Water Audits
- Indoor Plumbing Retrofit
- Low Flow Toilet Rebate Program
- Distribution System Water Audits and Leak Detection
- Water Efficient Landscape Ordinance
- Public Education/Information
- School Education
- Point of Use Hot Water Systems
- Water-Efficient Irrigation Rebate Program
- Xeriscape Demonstration Garden
- Elimination of Declining Block Rate
- Reduction of Water System Operating Pressure
- Use of Grey Water
- Reduced Community Landscape Watering

EVALUATION OF POTENTIAL CONSERVATION MEASURES

The water saving measures listed previously have been evaluated (Exhibit A) as to their cost and resulting benefits. The table below is a result of this analyses and, for the most part, reflects data contained in a preliminary draft report on water conservation being prepared for the City by Brown and Caldwell Consulting Engineers. This report will be prepared in final form during the next few months and provided to Council Members.

Program	Annual Cost	Benefit Total Cost Savings	Benefit/ Cost Ratio
Home Water Audits	$ 67,100	$ 107,000*	1.6
Indoor Plumbing Retrofit	$ 129,100	$2,140,000*	17.0
Toilet Rebate Program	$ 866,000	$ 10,000	0.01
Distribution System Audits	$ 134,000	$ 133,000	1.0
Landscape Ordinance	$ 134,620	$ 8,000	0.06
Public Education	$ 78,530	$ 200,000	2.5
School Education	$ 80,000	Unknown	Unknown
Point of Use Hot Water	Unknown	Unknown	Unknown
Irrigation Rebate Program	$ 100,000	Unknown	Unknown
Xeriscape Demonstration Garden	$ 25,000	Unknown	Unknown
Elimination of Declining Rate	Unknown	Unknown	Unknown
Reduction of System Pressure	Unknown	Unknown	Unknown

* Includes customer and utility cost savings.

Based on the above table and past experience, the following program is proposed.

PROPOSED PROGRAM FOR 1991

Due to the continuing drought, now in its fifth year, it is critical that all of California's water supplies be conserved in order to insure that adequate water supplies will exist in the event 1992 is also a dry year.

Toward this end, staff has reviewed the costs and benefits of potential water conservation measures and has designed a program to maximize water savings while making efficient use of funding and staff resources. Several of the potential conservation measures considered above, such as the low flow toilet rebate program and point of use hot water system, are simply too costly. And, while the benefit/cost ratio on the indoor plumbing retrofit measure appears to be extremely favorable, the bulk of the cost savings are in energy costs rather than reduced water use. These measures, and others not included in the proposed program for 1991, may be re-evaluated for implementation at the time the City considers the Best Management Practices and reviews the final version of the Brown and Caldwell *Water Conservation Report*.

The proposed Water Conservation Program for 1991, outlined below, is designed to reduce summer water use by 20 percent.

√ Regulations

The existing City Code contains adequate language to prohibit excessive use of water. Current regulations confine outdoor irrigation to an odd/even, three day a week schedule. It is recommended that this mandatory measure, as well as the prohibition on washing down paved surfaces, continue. In the event that City customers do not meet the 20 percent conservation goal during May and June and/or the drought becomes more severe, two day a week outdoor irrigation will be evaluated.

√ Public Education

Sacramento Area Water Works Association. For the past thirty-seven years, the Sacramento Area Water Works Association (SAWWA) consisting of about thirty local water agencies, has financed a conservation program each summer, utilizing television, radio, posters, and newspaper coverage to impress upon the public the need to conserve water.

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The goal of this year's SAWWA program is to curb water waste by providing specific water-saving tips for the consumer and addressing both indoor and outdoor water conservation. Specific public relations strategies include a radio script contest for students, radio public service announcements, graphic displays, exhibits, news releases, informational handouts, and community presentations. SAWWA has already begun this year's program with its radio script contest for area elementary schools.

In addition, the City has joined other local water purveyors, the State of California, and members of the "Green Industry" to fund local television conservation spots that will run all summer long.

City Efforts. In addition to our participation in the SAWWA program, the Water Division has scheduled a series of public information releases. The first of these will be a water conservation brochure which will be mailed to all City utility customers in May. This brochure will offer water saving tips and remind consumers of simple actions they can take to help conserve. In the June utility billing, another conservation reminder focusing on saving water outside the home will be distributed. During Public Works Month, a water conservation display will again be included as part of the two day demonstration at the Downtown Plaza.

The writing, editing, design, layout coordination, and distribution of these water conservation brochures requires a significant commitment of staff time. In addition, production of these informational materials requires expertise in graphic arts and public relations. For these reasons, it is recommended that a person possessing the necessary qualifications be temporarily added to staff. It is proposed that a limited-term (6 months) position of Public Information Coordinator be added to assist Water Division staff in developing these important educational materials.

It is also recommended that $25,000 be provided from the Water Fund Contingency Reserve to help pay for the production of brochures and other educational materials for the remainder of the current fiscal year. Monies have been requested in the proposed 1991-92 FY budget for this purpose.

Since the 1976-77 drought, the Water Division has hired temporary Water Waste Inspectors during the months of May, June, July, August, and September. Last year, six Water Waste Inspectors patrolled the City and responded to citizen water waste complaints.

These inspectors are extremely effective in providing direct contact with our customers, educating them with regard to water conservation. Last year, our inspectors made more than 11,000 customer contacts. This year's program continues our past practice, but has begun earlier and requires an increased Water Waste Inspector work force.

Presently 2.5 FTE Water Waste Inspectors are budgeted. This allows the Division to employ six (6) inspectors during the summer months and one (1) year-around. As part of the proposed 1991 Conservation Program it is recommended that an additional 1.5 FTE Water Waste Inspectors be budgeted. This would provide two (2) Water Waste Inspectors year-around and six (6) Inspectors during the warm summer months.

✓ Water Saving Devices

The most widely publicized water-saving devices are shower flow restrictor inserts and toilet tank displacement devices. The former reduce shower flow rates by about 50%, and the latter reduce toilet tank capacity by about 10 - 15%. In addition, pistol-grip water shut-off nozzles are popular water savers. While very little data is available on the effectiveness of these devices studies have shown that the public is willing to use the devices when they are provided.

This year, the Water Division proposes to make these devices available free of charge as part of our water conservation kits. We recommend that $5,000 be added to our budget in order to purchase these items. Funds for this purpose will also be requested in the upcoming 1991-92 FY budget proposal.

✓ Water Efficient Landscape Ordinance

Staff has already begun development of a water efficient landscape ordinance, as required by State law. A Task Force consisting of representatives of the City Manager's Office, City Attorney's Office, Public Works Department, Parks and Community Services Department, and Planning and Development Department have been meeting to draft an ordinance for consideration by the City Council in late Spring. Sacramento County adopted a water conserving landscape ordinance last October, and staff intends to devise a City ordinance similar to the County law.

Staff estimates that at least one additional position will be required in order to enforce and monitor the new ordinance. No funds are requested at this time, however. Specific staffing and funding recommendations will be included when the proposed ordinance is presented for adoption.

✓ Xeriscape Demonstration Garden

As indicated above, plans are underway to develop a Xeriscape Demonstration Garden on the K Street Mall. The cost of designing and constructing this educational landscape is estimated at $150,000. The Parks and Community Services Department will also incur an annual maintenance expense of approximately $5,000. Once the construction cost estimates and funding strategy are refined, staff will prepare a report to the City Council requesting approval and funding of the project.

✓ Home Water Audits

It is proposed that the City initiate a program offering a free water audit to single and multi-family customers. These audits would involve a household leak check, installation of a retrofit kit, and an outside audit which would include a development of a turf irrigation schedule.

One additional position (Utility Services Representative) will be required to perform these audits in addition to a 0.5 FTE clerical position. It is estimated that 650 audits per year will be completed.

✓ Indoor Plumbing Retrofit

It is further proposed that the City begin a distribution of retrofit kits (showerheads, toilet dams, etc.) similar to those installed in the home audit. These kits would be distributed utilizing volunteer groups such as the Boy Scouts, Girl Scouts, Senior Citizens, etc. to approximately 7,800 residences per year. Homes constructed prior to 1980 would be targeted.

It is proposed that one(1) additional Utility Services Representative and 0.5 FTE Typist Clerk II be budgeted to begin this program.

✓ Elimination of Declining Block Metered Water Rated

It will be recommended during the Water Rate Hearings that the City's current declining block water rate structure undergo gradual modifications over the next four(4) years that would result in a constant block rate for the City's metered commercial accounts.

FINANCIAL

Program Cost. The major part of the cost of implementing this year's conservation program of $197,000 will be absorbed within the Water Division's existing operating budget. Exceptions to this are the following program augmentations described previously. These are:

PROGRAM	FY 90-91 COST	FY 91-92 COST
Public Education:		
♦ 0.5 FTE Public Information Coordinator	$ 7,553.00	$22,660.00
♦ 1.5 FTE Water Waste Inspectors	2,874.00	25,870.00
♦ Production of Educational Materials	0.00	50,000.00
♦ Purchase of Water Saving Devices	0.00	10,000.00
TOTAL:	$10,427.00	$108,530.00
Water Audits:		
♦ 1.0 FTE Utility Services Inspector	$ 6,133.00	$36,800.00
♦ 0.5 FTE Typist Clerk II	2,800.00	16,800.00
♦ Vehicle, Furniture, Computer, etc.	00.00	450.00
♦ Water Saving Devices	00.00	4,000.00
♦ Misc. Operating Expenses	00.00	3,450.00
TOTAL:	$8,933.00	$61,500.00

PROGRAM	FY 90-91 COST	FY 91-92 COST
Indoor Plumbing Retrofit:		
♦ 1.0 FTE Utility Services Inspector	$ 6,133.00	$36,800.00
♦ 0.5 FTE Typist Clerk II	2,800.00	16,800.00
♦ Vehicle	00.00	350.00
♦ Water Saving Devices	00.00	66,300.00
♦ Misc. Operating Expenses	00.00	3,350.00
TOTAL:	$8,933.00	$123,600.00

Projected Savings. Roughly 35 billion gallons of water were supplied to City of Sacramento customers in FY 1989-90. Summer usage amounted to more than 12 billion gallons. If the goal of 20 percent is reached, the annual savings could be as much as $200,000.00 These savings are only part of the total picture in that they do not include costs related to pumping and treatment of wastewater, including surface drainage and sanitary waste or customer savings of gas and electrical energy. As a result of this projected savings, the net rate impact from the addition of these new programs will be only 0.3%.

Because these savings are not expected to be realized immediately, an appropriation from contingency of $28,293 is needed to fund the FY 1990-91 costs of the program. The Water Fund Contingency (413-710-7012-4999) had a balance of $6,302,000 at midyear.

POLICY CONSIDERATIONS

In May of 1988, the City Council passed a resolution promoting year-round water conservation.

On May 22, 1990, the City Council passed a resolution prohibiting certain uses of water such as pavement washing and requiring odd/even landscape irrigation.

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MBE/WBE EFFORTS

Minority and women owned firms will be considered for any printing and design jobs required to implement the public education program.

RECOMMENDATION

It is recommended that the Joint Committee forward to the City Council for adoption the attached resolution adopting the 1991 Water Conservation Program and appropriating funds and authorizing the addition of a 0.5 FTE Public Information Coordinator, 1.5 FTE Water Waste Inspectors, 2.0 FTE Utility Service Inspectors, 1.0 FTE Typist Clerk II and related materials and supplies.

Respectfully submitted,

Jim Sequeira
Water Division Manager

RECOMMENDATION APPROVED:

Jack R Crist
Deputy City Manager

APPROVED:

Melvin H. Johnson
Director of Public Works

April 16, 1991
All Districts

Contact Person:
Jim Sequeira, Water Division Manger
449-1291

RESOLUTION NO.

ADOPTED BY THE SACRAMENTO CITY COUNCIL

ON DATE OF _____

A RESOLUTION AMENDING THE OPERATING BUDGETOF THE WATER DIVISION ADDING POSITIONS AND APPROPRIATING FUNDS

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF SACRAMENTO THAT:

1. The following positions be added to the Water Division.

   Water Administration (Organization 3151)

Code	Position	FTE
17022	Public Information Coordinator	0.5
09060	Water Waste Inspector	1.5
16099	Utility Service Inspector	2.0
16095	Typist Clerk II	1.0

2. Funds in the amount totaling $28,293 be transferred from the Water Fund Contingency Reserve (4-13-710-7012-4999) to the Water Division administration budget.

413-310-3151-4101	$155,730.00
413-310-3151-4199	- 127,437.00
TOTAL	$ 28,293.00

_____
MAYOR

ATTEST:

_____
CITY CLERK

FOR CITY CLERK USE ONLY

RESOLUTION NO.: _____

DATE ADOPTED: _____

EXHIBIT A
POTENTIAL WATER CONSERVATION MEASURES

Water conservation measures which were considered in implementing this year's program are discussed in the paragraphs below. Most of these measures are also being developed by the State of California as "Best Management Practices" (BMPs) for water conservation. This list of BMPs is still in the draft phase and is being formulated by an Urban Water Conservation subcommittee of which the City is a member. This work is in conjunction with the State Water Resources Control Board's Bay-Delta Hearings.

In addition, City Council members at the February 26th Council meeting requested analysis of several additional water conservation measures. These are also included in this attachment.

Much of the data listed in this exhibit has its source in a recent draft report of *Water Conservation Study* dated March 1991 by Brown and Caldwell Consultants. Staffing requirements indicate additional positions required to initiate that program.

Water Audits (Single and Multi-Family)

A residential water audit is an evaluation of a homeowner's indoor and outdoor water use. These audits are designed to educate customers on water conservation practices and encourage water use reductions. This audit would include both indoor and outdoor customer water use. The auditor would recommend water-saving measures to the customers and install (with their permission) appropriate water conservation devices. Water-saving showerheads and toilet tank displacement devices are examples of devices typically installed in conjunction with home water audits.

Implementation. Implementing a home water audit program would include the following steps:

1. Establish a database including names, addresses and telephone numbers of prospective candidates. Specific customers could be targeted based on service line size and size of irrigated landscape area.
2. Mail letter offering audits to all potential candidates.
3. Hire and train auditor.
4. Contact customer, and, if desired by customer, schedule site visit.
5. Conduct audit.
6. Conduct evaluation as needed.

Estimated Annual Cost: $ 67,100
Estimated FTE Required: 1.5

Indoor Plumbing Retrofit

Retrofit of indoor plumbing with water saving devices can reduce residential and commercial use. In 1979, California enacted a law changing the building code to require low water-use fixtures in new construction. Hence, any retrofit program should target customers whose structures were constructed prior to 1980. This program would essentially provide customers with devices that save water in the bathroom. A water conservation kit would generally contain the following: toilet-tank displacement device, low flow showerheads, dye tablets that aid in identifying toilet leaks, and instructions for installation and use.

This program would also be applicable to large water users such as hotels and motels. Water saving devices such as those listed above could be provided for installation in each room along with signs reminding guests of the need to conserve.

Implementation. Necessary requirements for implementing the distribution of these kits are described below.

1. Determine City areas to be retrofit.
2. Develop a mailing list and database for determining delivery routes.
3. Purchase conservation kits.
4. Conduct training program for personnel distributing kits.
5. Notify customers of the retrofit program.
6. Provide door-to-door delivery of kits.
7. Provide follow-up to each customer offering installation assistance.
8. Conduct evaluation as needed.

Estimated annual cost: $129,100.
Estimated FTE Required: 1.5

Low Flow Toilet Rebate Program

Offering low-flow toilet rebates is another type of retrofit program. This program, applicable to both residential and commercial customers, promotes the installation of ultra low-flow toilet fixtures (1.6 gallons per flush). This program would offer a rebate (for example, $100) to those customers who purchase and install ultra low-flow toilets. This is designed to create economic incentives to replace older style toilets that use between 3 and 5 gallons per flush.

Implementation. The toilet rebate program would be implemented as described below:

1. Develop a marketing plan customized to target both residential customer and plumbing retailers and suppliers.
2. Establish a database of eligible customers.
3. Hire and train inspectors.
4. Implement the marketing plan.
5. Track installation rate and verify.
6. Conduct evaluation as needed.

Estimated Annual Cost: $866,000.
Estimated FTE Required: 1.5

Distribution System Water Audits and Leak Detection

The distribution system water audit quantifies total water flowing into the distribution system, water sales, water losses, and recoverable leakage. In addition, a leak detection and repair plan is prepared which outlines the required equipment, method of surveying and pinpointing leaks and estimated costs involved.

Implementation.

1. Prepare specifications for consultant services.
2. Determine area of City for survey.
3. Select consultant for leak detection survey.
4. Conduct survey.
5. Repair leaks found.
6. Conduct analysis as necessary.

Estimated Annual Cost: $134,000.
Estimated FTE Required: 1.0

Water Efficient Landscape Ordinance

Water conservation-oriented landscape requirements are those designed to promote the use of low-water use plants and irrigation systems instead of turfed landscapes. The ordinance would regulate the amount of turf, type of plants in non-turf areas, types of irrigation control systems, and methods of irrigation. State law requires all local jurisdictions to adopt water efficient landscape ordinances by January 1, 1993.

Implementation. Implementation of a water efficient landscape ordinance would require the following:

1. Preparation by staff from several City Departments of proposed ordinance for consideration by the City Council.
2. Incorporate review comments received from local businesses, the building, environmental groups industry and other interested parties.
3. Adopt ordinance and incorporate into building permit process.

Estimated Annual Cost: $134,620
Estimated FTE Required: 1.0

Public Education/Information

Water conservation efforts that fall under the category of public information cover a broad range of programs which are aimed at educating our customers about the importance of conserving water. Public information programs would include:

1. **Brochures.** The Water Division prints several water conservation brochures covering a range of topics from practical water conservation tips to effective lawn watering.

2. **Utility Bill Inserts.** Water conservation tips and information are included in customer bills.

3. **Exhibits.** Water Division staff participate in a number of community events to promote conservation, including Water Awareness and Public Works Month activities. Water conservation exhibits are set-up and staffed by Division personnel, who are available to respond to questions and explain public information materials.

4. **Speakers Bureau.** The Water Division provides speakers from its staff to give water conservation presentations to various service organizations and schools.

5. **Media Promotions.** The City is participating in two media programs that will promote the water conservation ethic. A local television station has expressed interest in preparing a number of water conservation spots to be aired during the summer months. The City, along with other water purveyors, will participate in scripting and funding the public service announcement. In addition, water conservation kits provided by the City are being distributed by a local radio station.

6. **Water-Conservation Give-aways.** In the past, Water Division personnel have distributed more than 7,000 water conservation kits to the community free of charge. Other items that could be distributed include: low-flow showerheads, shut-off nozzles for hoses, and water constrictors for toilets. The Division has already purchased shut-off nozzles and is currently obtaining prices on low-flow showerheads to handout to our customers.

Estimated Annual Cost: $78,530
Additional FTE Required: 2.0

School Education

School programs are very popular. Water agencies can encourage teachers to include curricula on water subjects during the school year. The Sacramento Water Works Association has promoted school eduction over past years using radio script writing and poster contests and exhibits at Sacramento Science and Junior Museum. Increased program possibilities might include:

- Providing educational packets to schools to be used as part of teacher curriculum.
- Schedule "water saver day" at selected schools to encourage students to save water.
- Provide classroom speakers.

Estimated Annual Cost: $80,000
Estimated FTE Required: 1.0

Point of Use Hot Water Systems

Normal use of hot water in commercial and residential units involves an initial waste of water until the desired temperature is reached. To reduce this waste, hot water should be available at the turn of the tap. Unfortunately, systems that provide instantaneous hot water at the point of use are expensive.

Costs for a single point-of-use system range from $70 to $500 plus installation fees. House size units for existing dwellings may require re-sizing of gas pipes within the structure as well as feeder lines to the unit.

Large commercial establishments such as hotels and large office buildings generally have incorporated some form of an instantaneous hot water system in their original construction. Recirculating hot water systems or heat-taped water pipes are commonly used.

The City's plumbing code could be amended to require installation of such units in residential dwellings. At the present time, there is no such requirement for either commercial or residential development included in our plumbing code.

Estimated Annual Cost: Unknown
Estimated FTE Required: Unknown

Water-Efficient Irrigation Rebate Program

Almost all local governments that provide water service charge a fee to connect new homes and businesses to the system. To provide an incentive for water-efficient irrigation systems, local government can offer technical assistance and a rebate or credit toward the connection fee if customers comply with water conserving irrigation guidelines.

For existing water service customers, technical assistance in the form of outdoor audits coupled with rebates or low interest loans could provide an incentive for replacing existing high water use landscapes with water efficient alternatives.

There is, however, a possible legal constraint on such a program resulting from the City's water bond covenants. Further legal definition and clarification would be required from the City Attorney and bond counsel.

Estimated Annual Cost: $100,000
Estimated FTE Required: 1.0

Xeriscape Demonstration Garden

Demonstration gardens that use low-water plants and water conserving irrigation methods are an efficient and effective way to educate the public about water-conservation methods. These gardens show citizens how to use plants to their best benefit while using water efficiently. They also demonstrate how attractive and pleasant a water efficient landscape can be.

The Department of Public Works, in conjunction with the Department of Parks and Community Services, is in the process of planning a xeriscape demonstration garden on the K Street Mall. This garden will provide an excellent opportunity for the City to display to the public the positive attributes of a water conserving landscape.

Estimated Construction Cost: $150,000
Estimated Annual Cost: $5,000

Elimination of Declining Block Rate for Metered Accounts

Currently the City's water fees utilize what the industry calls a "declining block" rate for those commercial accounts that are metered. This type of rate structure that results in lower unit water costs for high volume users does not encourage water conservation. As a result, the water industry has been eliminating declining block rate structures in favor of single or inverted block rates.

For single block rate payers the unit cost for water is the same no matter how much water is used. The inverted rate results in an increased unit cost for customers who use large amounts of water.

Estimated Annual Cost: Unknown
Estimated FTE Required: 0.0

Reduction of Water System Operating Pressure

Pressures found in the City's water distribution system generally range between 40 to 45 pounds per square inch (psi). If this operating pressure was reduced to a lower minimum, say 35 psi, less water per unit time would flow from customers faucets, sprinklers, hoses, and showers. Thus the overall system demand would be reduced and water conserved.

The downside to this measure is the concern of the Fire Department over reduced water system pressures. Most automatic sprinkler systems, for example, were designed to operate in the 40-45 psi range. A lowering of the system pressure to 35 psi would result in the reduced fire protection.

Estimated Cost: Unknown
Estimated FTE Required: 0.0

Use of Grey Water

Grey water use, the process of drawing used water from washers, showers, tubs, and sinks and applying it to landscaping, is illegal in Sacramento County.