COUNCIL AGENDA: 09-23-08
ITEM: 7.2

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Vilcia Rodriguez

SUBJECT: SEE BELOW

DATE: September 9, 2008

Approved Deanna Santana

Date 9/9/08

SUBJECT: RECOMMENDATION FOR COUNCIL APPROVAL ON THE CITY WATER CONSERVATION PLAN [Transportation and Environment Committee referral 09/08/08 – Item (e)]

On September 8, 2008, staff presented the City Water Conservation Plan to the Transportation and Environment Committee.

Upon the motion by Vice Chair Sam Liccardo, and seconded by Councilmember Judy Chirco, the Transportation and Environment Committee accepted the report and recommended the item be cross-referenced to the September 23rd Council agenda for full Council consideration. Attached is the report that was presented to the T&E Committee.

Vilcia Rodriguez

VILCIA RODRIGUEZ
Senior Executive Analyst

Attachment

T&E AGENDA: 09-08-08
ITEM: e

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: TRANSPORTATION AND ENVIRONMENT COMMITTEE

FROM: John Stufflebean

SUBJECT: **WATER CONSERVATION PLAN**

DATE: 08-25-08

Approved Christine F. Shippey Date 8-28-08

RECOMMENDATION

Recommendation for Transportation and Environment Committee to recommend Council approval of this Water Conservation Plan which will be used by City staff as a guidance document to implement water conservation efforts through FY10-11.

OUTCOME

This Water Conservation Plan will provide City staff the guidance to implement citywide water conservation programs and develop policies needed to put the City on the path of achieving approximately 50,000 acre feet per year (44.6 million gallons per day) of water savings within the City by 2030 (using 1992 as a base year), consistent with the City's Green Vision Goals and two Urban Environmental Accord Actions (Action 19 to conserve water and Action 20 to protect drinking water sources).

BACKGROUND

The projected growth in population and jobs in the City and County has resulted in the Santa Clara Valley Water District (District) forecasting that water demand will exceed supply by 2030 during normal years. In addition, other challenges are redefining what constitutes a normal year. Currently, these challenges include reduced precipitation and reductions in allocation of imported water due to pumping restrictions in the Sacramento-San Joaquin River Delta (Delta). Long term, these challenges include risks to the Delta that impact water supply and quality, rising capital costs to construct and repair infrastructure, mounting regulations, contract negotiations to preserve existing imported water allocations, ecological need to maintain flows for fish and other aquatic species, and adverse impacts from global climate change. These challenges present the need for the City to set an ambitious goal for water conservation and increase its efforts to meet that goal.

Since the mid-1990s the City's water conservation efforts have focused reducing wastewater flows in the San José-Santa Clara Water Pollution Control Plant (Plant) service area. Currently, the City administers two water conservation programs: the Water Efficient Technologies program and the Neighborhood Preservation Water Conservation Program. In addition, the City cost-shares with the District on various indoor, outdoor, residential and commercial programs such as high efficiency toilet rebates. Since 1992, the City's efforts and funding have achieved approximately 8 million gallons per day of wastewater flow reduction in the Plant service area.

ANALYSIS

To help meet the shortfall expected by 2030, the District has set a countywide conservation goal of 100,000 acre feet per year (89.2 million gallons per day), using 1992 as a base-year. Currently, countywide water conservation savings total 41,000 acre-feet per year. By 2030, the District will need to achieve an additional 59,000 acre-feet of savings per year.

Since approximately half of the County's population resides within the City, it is recommended that the City adopt measures to achieve half the additional savings. This translates to a citywide water conservation goal of an additional 29,500 acre-feet per year (26.3 million gallons per day).

Staff has identified opportunities and strategies over the next three years towards achieving this goal, described in the Water Conservation Plan (attached). The Plan describes how the City will expand its water conservation efforts for the next three years towards achieving the targets set for 2030. Most of the programs and strategies described in the Plan fall under three main categories: Planning and Development, Outreach and Cost-Sharing.

The Plan describes planning and development strategies such as enacting or amending the municipal code and ordinances to encourage or require water-efficient improvements and developments. Outdoor conservation offers the most savings potential and the City can play a significant role in achieving this through adoption of policies and ordinances such as updating the City's Landscape Ordinance. The 2040 Envision San José General Plan update is another opportunity for revising guidelines incorporating more water conserving measures.

The Plan also describes strategies for expanding outreach and education, and recommends the continuation of the Cost Sharing Agreement with the District as a cost-effective means to implement water conservation rebate programs to residents and businesses in the Plant Service Area.

The Water Conservation Plan is a long-term strategy to address current and long-term water supply challenges. For the current statewide drought, the City may need to take additional short-term, immediate actions if the District calls for mandatory rationing. If that happens, City staff will make recommendations to the Council for a drought response plan. This might include

recommendations for the Council to enact water shortage ordinances, water use restrictions, and/or allocations for water use (rationing).

EVALUATION AND FOLLOW UP

In October 2007, staff presented a progress report on the Water Conservation Plan to the Transportation & Environment (T&E) Committee. The committee reviewed the draft Plan and directed staff to finalize the Plan for consideration by Council in summer 2008.

The Water Conservation Plan identifies performance measures and targets for the next three years that would evaluate progress towards achieving the 2030 conservation savings goal. Staff will continue to track wastewater flow reduced in the Plant service area as a performance measure for indoor water conservation. In addition, staff will work with the District and other water retailers in San José to estimate total citywide indoor and outdoor conservation savings through passive and active conservation. In addition, staff will continue to measure outreach effectiveness through public surveys on water conservation knowledge and practices.

PUBLIC OUTREACH

Staff worked with other local water agencies to develop the Water Conservation Plan, including the District, the Bay Area Water Supply and Conservation Agencies, and the two other water retailers serving customers in San José (Great Oaks Water Company and San José Water Company). Staff also presented relevant information from the Water Conservation Plan to developers and distributed the draft Plan for their input. The current version of the Plan incorporates changes in response to comments received from City staff and external parties.

Staff recognizes the importance of public outreach and education as part of implementing the Water Conservation Plan. The Plan describes how the City will expand outreach efforts to achieve the conservation savings goal. This includes increasing participation at City and community events, marketing efforts, and educational programs for teachers and students.

COORDINATION

This water conservation plan has been coordinated with Planning, Building, and Code Enforcement and the City Attorney's Office.

COST SUMMARY/ IMPLICATIONS

At this time, no costs beyond staff time were incurred in the preparation of the Water Conservation Plan. Additional costs will be associated with implementation of proposed conservation activities, if approved. Costs for implementation activities in FY 08-09 are included in the Adopted Budget.

CEQA

Not a project.

JOHN STUFFLEBEAN
Director, Environmental Services

Attachment

For questions, please contact Mansour Nasser, Deputy Director for Water Resources, Environmental Services at 408-277-4218.

Water Conservation Plan

City of San José
Environmental Services Department

August 2008

Table of Contents

1. Introduction and Background

1.1 Purpose of the Water Conservation Plan 1
1.2 City's Drivers and Targets for Water Conservation 1
1.2.1 Wastewater Flow Management 1
1.2.2 Water Supply Challenges 1
1.2.3 Long-term Water Conservation Targets 2

2. Water Supply Overview and Issues

2.1 Sources of Water Supply 2
2.2 Water Supply Issues 3
2.2.1 Delta Pumping Restrictions 3
2.2.2 Global Climate Change 3
2.3 Meeting Future Demand with Increased Water Conservation and Recycling 4

3. Past and Current Water Conservation Programs and Strategies

3.1 Past Conservation Programs 5
3.2 Current Programs and Strategies 5

4. Planned Conservation Strategies to FY 10-11

4.1 Planning and Development Strategies 6
4.2 Outreach and Education 8
4.3 Cost-Sharing with Water District Programs 8
4.3.1 Residential Cost-Shared Programs 9
4.3.2 Commercial, Industrial and Institutional Cost-Shared Programs 9
4.4 Legislative Priorities 9
4.5 Water Shortage Contingency Plan and Drought Plan 9
4.6 Conservation Pricing 10
4.7 Partnerships 10

5. Three-Year Implementation Plan

5.1 Staffing 11
5.2 Budget & Grants 12
5.3 Prioritization of programs 12
5.4 Performance Measures 12

Appendix A Attachment 1
Appendix B Attachment 2

Middle and right photos on cover page are courtesy of the Santa Clara Valley Water District

1. Introduction and Background

1.1. Purpose of the Water Conservation Plan

The purpose of the Water Conservation Plan is to formalize and detail the City's commitment and contribution towards a sustainable water supply for its current and future residents. As population and economic growth increases, water conservation is a key strategy towards the vision of San José as a thriving, environmentally sustainable city. This three-year plan provides City staff the direction to manage this finite resource in a way that maintains the quality of life and economic viability in San José.

1.2. City's Drivers and Targets for Water Conservation

There are multiple drivers for the City to implement water conservation efforts, namely regulatory drivers for wastewater flow management and drivers for water supply reliability and sustainability.

1.2.1. Wastewater Flow Management

Previously the primary driver for the City's conservation work has been the goal of reducing wastewater flows from the San Jose/Santa Clara Water Pollution Control Plant (Plant). Because of permit requirements the Plant is under direction to maintain summer flows below a trigger of 120 million gallons per day (mgd) to protect salt marsh habitat and endangered species in San Francisco Bay. Past conservation programs have been successful in maintaining flows below this trigger. Flow reduction remains a driver for water conservation but presently there are additional drivers.

1.2.2. Water Supply Challenges

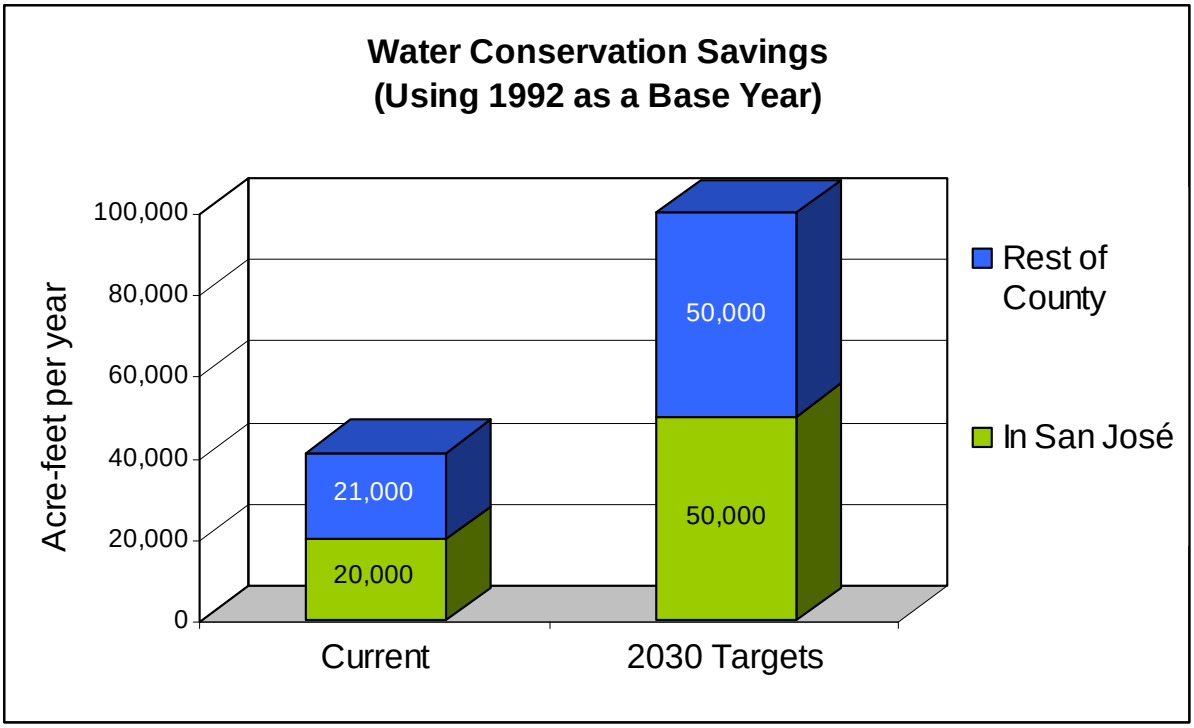
Many factors affect the water supply situation and present challenges to maintaining a sustainable water supply for the City. These factors include precipitation, local water storage, restrictions on water imported from the Sacramento-San Joaquin River Delta, other imported water allocation and management, and long term impacts due to global climate change and aging infrastructure. These water supply challenges present the need for the City to increase its efforts for water conservation.

1.2.3. Long-term Water Conservation Targets

In 2006, the primary wholesale water supply agency for Santa Clara County, the Santa Clara Valley Water District (Water District), established a long-term conservation goal

to achieve roughly 100,000 acre-feet per year of water savings countywide by 2030 (using 1992 as a base-year). An acre-foot is equivalent to almost 326,000 gallons. Currently, water conservation achieves 41,000 acre-feet per year of savings since 1992.

As 50% of the county's population, and as a major partner with the Water District for conservation, the City's goal should be for citywide water savings to be half of the Water District's countywide goal. **This translates to a citywide goal of 50,000 acre-feet per year of water savings by 2030**. The chart below illustrates these targets.



2. Water Supply Overview and Issues

2.1. Sources of Water Supply

More than half of the water supplied in Santa Clara County is imported, coming from Hetch Hetchy reservoir and the Sacramento-San Joaquin River Delta (Delta). The other half is supplied by local surface and ground water and approximately 4% is supplied by recycled water. Water service within San José is provided by three water retailer operations. The city operates the San José Municipal Water System to provide water to almost 26,000 customers, serving approximately 14% of the citywide water demand. The other water retailers are the San Jose Water Company and Great Oaks Water Company.

2.2. Water Supply Issues

Future water demand is expected to increase given the projected increase in population and jobs in the City. At the same time, several factors are redefining water supply reliability in current and future years. These factors include Delta pumping restrictions, global climate change, potential catastrophes (earthquakes, levee failures, or infrastructure failures), aging infrastructure and reduced precipitation or the possibility of multi-year drought events.

2.2.1. Delta Pumping Restrictions

The Delta is a sensitive environment, and the amount of water that can be pumped from the Delta is heavily influenced by hydrological, environmental and legal factors and competition. In 2007, a federal court ruling imposed limits on pumping from the Delta to protect the Delta Smelt, a federally listed threatened species. Further restrictions may be imposed in light of recent findings that populations of other fish species, the Longfin Smelt and Chinook salmon, have fallen sharply. In the event of a long-term decrease in imported water availability and with the prolonged use of reserve supplies to make up for the decrease in Delta water, the amount of water available to supply the County may drastically decrease.

2.2.2. Global Climate Change

There is growing acknowledgement of the potential risks that climate change presents to California's water supply. Projections by the Intergovernmental Panel on Climate Change indicate that regional climate change associated with global warming could significantly alter California's hydrologic cycles and water supply.[1] Precipitation is expected to increase as snowfall decreases over the Sierra Nevada and Cascades mountain ranges. The shift in the nature and timing of precipitation and snowmelt in California will affect the state's procurement of water. The San Francisco Public Utilities Commission projects that as temperatures increase, snow level will rise in elevation as well, from 6000 feet in 2000 to 7500 feet by 2075. Between now and 2050, snow pack is predicted to decrease from 87% to 76% of normal and precipitation runoff will occur earlier in the spring, impacting snowmelt-fed reservoirs such as Hetch-Hetchy and the rivers that flow to the Delta.

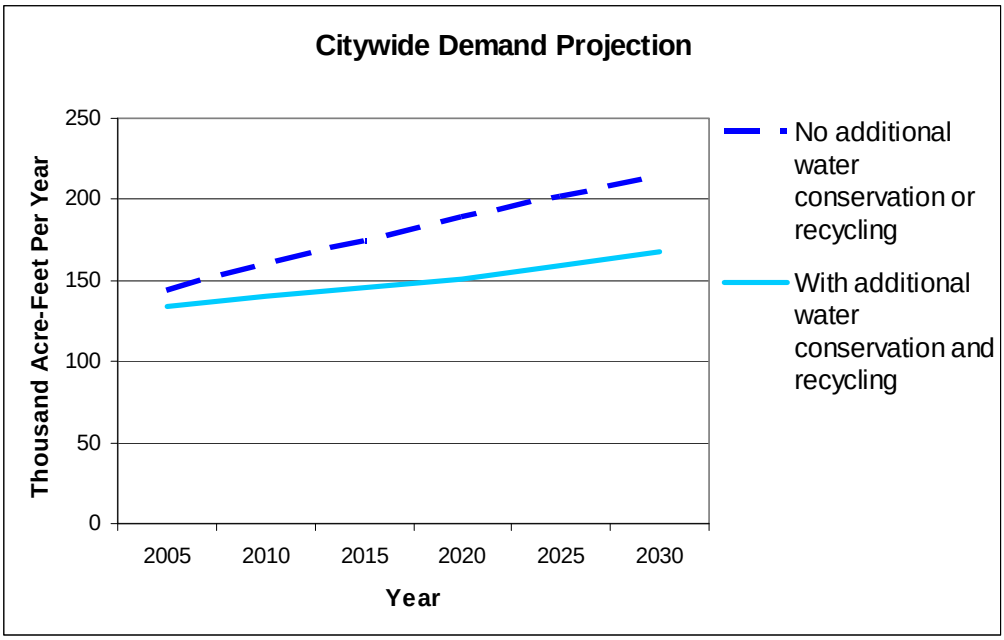
Salinity levels in the San Francisco Bay estuary and the Delta may also increase, affecting water quality and the existing flora and fauna which inhabit these

[1] Landers, J. (2002). Climate change to alter California's water supplies, study says. Civil Engineering 72(8): 16-17.

environments.[2] Reduced spring snowmelt will also decrease hydropower generation.[3] These issues could have implications for California's approach to its water storage needs.[4] Another possible effect of global warming is increased temperatures, which may lead to increased landscape water demands.

2.3. Meeting Future Demand with Increased Water Conservation and Recycling

Increasing our water conservation and recycling efforts can reduce the projected increase in demand. The chart below illustrates the projected increase in total citywide water demand from 2005 to 2030, compared to the citywide demand including recycled water and additional conservation.



Sources: Santa Clara Valley Water District, San Jose Water Company

Through administration and management of the South Bay Water Recycling Program, the City is a major supplier of recycled water in the County and one of the City's Green Vision goals sets targets for increasing recycled water. This Plan presents strategies for increasing water conservation as described in the next section. In

[2] Knowles, N. and Cayan, D. (2002). Potential effects of global warming on the Sacramento/San Joaquin watershed and the San Francisco estuary. Geophysical Research Letters 29(18): 1891.
[3] Kim, J. et al (2002). Impacts of Increased Atmospheric CO2 on the Hydroclimate of the Western United States. Journal of Climate 15(14): 1926-1942.
[4] Landers, J. (2002). Climate change to alter California's water supplies, study says. Civil Engineering 72(8): 16-17.

addition to reducing water demand, water conservation has multiple benefits, which are discussed in Appendix A.

3. Past and Current Water Conservation Programs and Strategies

3.1 Past Conservation Programs

Prior to the mid-1990s, the City conducted indoor and outdoor water conservation programs, primarily in response to the drought of 1987 – 1992 and flow reduction requirements in the wastewater discharge permit for the Plant. Conservation measures included rebates for Ultra Low Flush Toilets and front-loading washing machines. Since the mid-1990s, the City's water conservation efforts focused on wastewater flow reduction, namely conservation strategies such as toilet retrofits, washing machine rebates, water use audits, and other residential and commercial conservation programs to reduce indoor water use.

3.2 Current Programs and Strategies

Since 1998 the City and Water District have signed a **cost sharing agreement** in which the two agencies financially support each other's water conservation programs. In recent years, the cost sharing agreement has reduced the required number of City FTEs devoted to conservation and allowed the City to capitalize on large-scale program efficiencies at the County and state levels. The City cost-shares in programs administered by the Water District that result in wastewater flow reductions in the Plant Service Area, and receives funding from the District for programs the City administers. City staff administers the Water Efficient Technologies (WET) rebate program for businesses in the Plant Service Area and the Neighborhood Preservation Water Conservation program for residents in San José. The latter program is for low-income residents who have been issued an enforcement notice under the City's Neighborhood Preservation Ordinance, offering financial assistance to upgrade their properties in water conserving ways.

Another conservation strategy has been the implementation of **Best Management Practice** measures for water conservation (BMPs) as defined by the California Urban Water Council, of which the City is a signatory member. These BMPs are listed in Appendix B. Implementation of these BMPs is now a requirement for agencies applying for grant funds from the Department of Water Resources.

City staff also **reviews development plans** that come through the City's Planning Department for water conservation opportunities. However, identified conservation

opportunities, such as water-efficient landscape practices or design modifications beyond current standards, are not mandatory.

The City has also enacted **ordinances for periods of water shortages**. Chapter 15 of the City's Municipal Code includes short-term measures to be implemented (for water use reductions of 10% to 40%) if a water shortage is declared by the City Council. Measures include, but are not limited to, landscape irrigation restrictions, public noticing and outreach, and restrictions on filling of pools, spas and fountains. These measures supplement ongoing water conservation programs and water waste prevention ordinances.

4. Planned Conservation Strategies to FY 10-11

In response to the many challenges for water supply reliability and sustainability, it is time for the City to play a more active role in water conservation. About half of the targeted water conservation savings will result from "passive" conservation such as plumbing code changes and building guidelines. The other half will result from "active" conservation, such as continued implementation of water conservation BMPs and emerging conservation technologies. The following strategies and program elements are proposed to expand our efforts between now and FY10-11.

4.1. Planning and Development Strategies

The City's General Plan includes the following statement in the Natural Resources Section: "The City should encourage more efficient use of water by promoting water conservation and the use of water saving devices." San José can achieve considerable water conservation savings with the following strategies:

a. **Developer Plans**: Continue to review developer plans to recommend water conservation and other environmental improvements.

b. **Municipal Code**: Review the municipal code to identify potential areas which can be strengthened for water conservation. Amend the City's **landscape ordinance** to be in compliance with AB 1881 (requiring municipalities to adopt a landscape ordinance by 2010 similar to the State's Updated Model Landscape Ordinance).

c. **Envision San José 2040 General Plan Update**: Work with the Planning Department to identify **visionary strategies and guidelines for land use decisions and city services** that result in increased water efficiency.

d. **Pilot Programs for Water Conserving Fixtures**: In collaboration with the Water District, conduct a pilot program to offer incentives that encourage developers to **design and construct water efficient homes and buildings** with water conserving fixtures, irrigation systems and landscapes. Such new developments can have tremendous water conserving potential and a pilot program is currently being designed at the State level. The Metropolitan Water District began its "California Friendly Homes" program in 2001 and estimates savings at 50,000 gallons per year per single family home. This effort would be in conjunction with **developing citywide green building policies and standards**.

e. **Pilot Programs for New Technologies**: Conduct pilots on creative and innovative water conserving and reuse technologies. These technologies can be coupled with other green building designs. The pilots would **identify hurdles and opportunities related to the installation and use of technologies** such as graywater systems, rainwater collection systems, water cycling systems in commercial or manufacturing applications.

f. **Feasibility of new ordinances**: Research the feasibility and efficacy of establishing a "**retrofit on resale**" code requiring the installation of water conserving fixtures when properties change hands (both residential and commercial). Santa Cruz has enacted such an ordinance and estimates 28 million gallons in cumulative savings since 2003. Research new ordinances other cities have adopted for water efficiency, such as **requiring new developments to mitigate their water demand** by funding or conducting retrofits that save water elsewhere.

g. **Design Guidelines**: Revise the City's Guidelines for **Residential, Commercial and Industrial Buildings** to more fully address water conservation elements such as landscape requirements. Enforce compliance with the guidelines. Such a review would be an opportunity to review the guidelines for other potential environmental elements as well.

h. **Specific Plans**: work to ensure that water conservation (and other environmental considerations) is fully incorporated into future Specific Plans.

i. **Water supply assessments**: review water supply assessments associated with developments over 499 units to ensure that they are as water-conserving as possible. Train Planning staff to ensure that they are conversant in water conservation requirements and guidelines for development.

4.2. Outreach and Education

The results of the City's 2006 public survey for water conservation and recycling show that conservation knowledge and practices are increasing. Staff currently conducts conservation outreach and education through direct marketing, tabling at community events, and developing and delivering educational programs for teachers and students. The City's current annual outreach budget for indoor conservation messages is $150,000.

With the need for an increase in conservation savings, the City needs to increase its outreach efforts. The following programs and strategies will enable the City to be more effective in outreach. More specific strategies will be identified and implemented after the Water District completes it Water Conservation Marketing Plan, which will analyze issues and recommend specific campaigns, messages and strategies.

a. **Campaigns**: Conduct conservation campaigns in conjunction with the Water District, water retailers, San Francisco Public Utilities Commission, and/or Bay Area Water Supply and Conservation Agency. An example is the regional "Be a Water Saving Hero" campaign currently underway. When appropriate, collaborate to ensure complimentary messages are delivered, such as conservation and pollution prevention messages. Provide customers with usage info so they can compare their water usage to previous years and/or track current usage. Partner with other agencies and organizations to host/co-sponsor speaker events/workshops, produce joint messages or press releases and/or to fund a joint campaign.

b. **Messages**: Tie conservation messages to saving money, an incentive for residents and businesses. Promote residential and commercial water audits as gateways to other conservation programs as, currently, awareness of these programs is low. Promote conservation behaviors such as watering before dawn, planting drought-tolerant plants, sweeping instead of hosing off sidewalks, and fixing leaks promptly. Promote incentives for retrofits such as high efficient toilets and clothes washers. Create and disseminate general messages about the water supply situation and the potential effects of climate change on water supply.

c. **Outreach Strategies**: Increase outreach through such strategies as media advertising (television, radio and newspapers), bill inserts, bus advertising, educational programs, and public relations mechanisms. Increase support for local water conservation programs for schools. Increase outreach to City employees, through brown bag events, tabling at citywide information fairs, and/or existing newsletters. Continue supporting water education programs for teachers and students.

4.3. Cost-Sharing with Water District Programs

For the next three years, it is recommended that the Water District maintain the role of implementing the majority of local conservation programs, with the City cost sharing to support these programs. Cost Sharing has proven to be a cost-effective way for the City to fund water conservation, allowing us to capitalize on large-scale program efficiencies at the County and state levels. It is recommended that the City continue to cost-share with the Water District on the following programs.

4.3.1. Residential Cost-Shared Programs

1) Continue to support (financially and with outreach) water use audits and utilize them as a gateway to other conservation opportunities
2) High Efficiency Toilet (HET) rebates
3) High efficiency clothes washer rebates
4) Landscape and irrigation incentives for water-wise landscaping, hardware, and evapo-transpiration (ET) controllers
5) Neighborhood Preservation Water Conservation Program.

4.3.2. Commercial, Industrial and Institutional Cost-Shared Programs

1) Commercial water conservation audits that identify conservation opportunities
2) Cooling Tower Connectivity Controller rebates
3) Continue the WET rebate for both indoor and outdoor retrofits
4) High Efficiency Toilet replacements
5) Commercial washing machine rebates
6) Commercial landscape programs such as landscape audits, and financial assistance for water-wise landscape and hardware upgrades.

4.4. Legislative Priorities

City staff will continue to evaluate legislation that impacts or encourages water use efficiency and to recommend priorities for legislative actions as needed. One proposed legislation that will impact the City's conservation goals and efforts is AB 2175 (Laird), which sets targets for statewide per capita water use to be reduced by 20% by 2020, and also mandates specific targets for urban water retailers including the City's San José Municipal Water System.

4.5. Water Shortage Contingency Plan and Drought Plan

City staff will evaluate and update the current Water Shortage Contingency Plan, and clarify enforcement responsibilities and coordinate with other water agencies within

the City. In addition, the City's Water Waste Prevention and Water Shortage ordinances may need to be updated.

If water supply wholesalers for the City (the Water District and San Francisco Public Utilities Commission) declare a water shortage and call for mandatory rationing, the City will need to adopt a Drought Plan for the San José Municipal Water System (Muni Water). This includes identifying alternative water supply options, short-term rationing measures and mandatory water allocations for customers in the Muni Water service area. Staff has started the analysis and process for preparing a Drought Plan and will continue while coordinating with other water agencies to be ready to prepare and implement a Drought Plan if needed.

4.6. Conservation Pricing

Water rates based on a tiered structure can be an incentive to users to conserve while potentially providing funding for conservation programs. Increased conservation can cause a decrease in revenue to a water utility, so increasing water rates may be necessary to encourage conservation and cover fixed operating and maintenance costs. The City's Municipal Water System uses a tiered rate structure. San Jose Water Company has submitted to the California Public Utilities Commission its application for a tiered rate structure and the Commission's decision is pending. The City will continue to implement a pricing structure that best supports conservation. One possible strategy is to work with the Water District and other retailers to develop budget-based tiered rates for dedicated landscape irrigation meters.

4.7. Partnerships

The City intends to work more closely with the other water retailers in San José to identify how they can more directly support conservation efforts. San Jose Water Company currently achieves water conservation through customer education and outreach events, plumbing fixture distribution and water use audits. Some examples for partnerships include joint proposals for grant funds, co-sponsorship of outreach events, and development of budget-based rates for irrigation.

5. Three-Year Implementation Plan

The table below lists the tasks and timeline for the City's water conservation efforts, starting with FY 08-09 as Year 1 and ending with FY 10-11 as Year 3. Additional tasks may be identified and implemented as needed during this period.

Task	Year 1	Year 2	Year 3
Administer current Cost Sharing Agreement with the Water District	✓	✓	✓
Adopt future Cost Sharing Agreement with the Water District	✓	✓	✓
Administer the Water Efficient Technologies rebate program in the Plant Service Area	✓	✓	✓
Administer the Neighborhood Preservation Water Conservation Program	✓	✓	✓
Develop a Water Conservation Communication Plan to strategize for outreach and education	✓		
Deliver outreach and education through identified campaigns, messages and strategies	✓	✓	✓
Recommend visionary water conservation guidelines for the Envision San José 2040 General Plan update	✓		
Develop a citywide green building policy with strong water efficiency standards	✓		
Amend the City's Landscape Ordinance to be comparable to the State's Revised Model Landscape Ordinance	✓	✓	
Revise Residential and Commercial Building Guidelines to incorporate water conservation improvements.	✓	✓	✓
Work with other water agencies to develop a pilot model development program	✓	✓	✓
Research feasibility of new ordinances such as "Retrofit on Resale" or requiring mitigation of increased water demand	✓	✓	
Based on feasibility analysis of new ordinances, enact and enforce new ordinances		✓	✓
Begin efforts to quantify savings potential for specific conservation strategies and technologies	✓	✓	✓
Determine investment proposals including potential funding opportunities for outdoor water conservation	✓	✓	✓
Continue legislative analysis to advocate for state and federal legislation that supports increased water efficiency	✓	✓	✓
Evaluate progress and strategize for future conservation efforts		✓	✓

5.1. Staffing

In 1999, the City employed 7 full time staff and several interns to implement flow reduction programs. Since that time, staff levels have been reduced to a maximum two FTEs. Currently, staffing is approximately 1.5 FTEs. With expanded

conservation efforts, an increase in staffing resources will be needed and the FY 08-09 budget proposal includes one new FTE position to support water conservation.

5.2. Budget & Grants

In FY 07-08, the budget for the WEP is $1.5 million funded from Sewer Service and Use Charges and $150,000 in outreach funds. In order to fund outdoor conservation, where the majority of future savings will be achieved, non-513 funding would need to be appropriated. The City supports the Water District's efforts to secure grant money for countywide conservation programs. In the future, the City will evaluate the benefits of securing its own grant funds for outdoor conservation programs.

5.3. Prioritization of programs

To strategize for future priorities, staff will develop or use externally-developed criteria to evaluate priorities and develop goals and strategies past FY 10-11. This process will be similar to prioritization methods performed by other water agencies such as the CUWCC and/or the Water District.

5.4 Performance Measures

Currently the City tracks wastewater flow reduction and knowledge of water conservation issues and practices (from public survey results) as performance measures for water conservation. The table below shows the performance measures targeted for the next three years. The targets for flow reduction below reflect the 2.43% annual increase in conservation savings that is needed to reach the 2030 goal of 50,000 acre-feet (16.2 billion gallons) per year of water savings citywide.

Measure	**FY 08-09 Target**	**FY 09-10 Target**	**FY 10-11 Target**
% of residents demonstrating water conservation knowledge	35	37	39
% of residents with water conserving fixtures or appliances	52	55	57
Gallons per day of flow reduced in Plant Service Area	200,000	204,860	209,838
Cumulative millions of gallons per day of flow reduced in Plant Service Area since 1992	8.5	8.7	8.9

In addition, for future strategies, the benefits and cost effectiveness of specific conservation programs or technologies will be evaluated using metrics and analysis methods developed by the CUWCC and other industry standards. This would allow the City to do an evaluation and prioritization of water conservation measures for future or continued implementation.

City of San José Water Conservation Plan
Appendix A
Benefits of Water Conservation

Water conservation programs provide a myriad of benefits – to the water utility that provides them to benefits, to the private citizen or business that partakes of them, and to the environment. Considerable research has been done to quantify these benefits. The Status Report and Assessment of the Revised South Bay Action Plan Programs (2001) included a benefit cost analysis of its various flow reduction programs such as stream flow augmentation, conservation, and recycled water. Water conservation programs had a favorable benefit cost ratio of 8.63 compared to recycled water at 2.7 and stream flow augmentation at 1.47. Below is a summary of the benefits of water conservation programs.

Benefits to Utilities*

- Increases water supply reliability
- Reduced need to secure additional water supplies
- Reduced operations and maintenance costs
- Deferred, downsized or eliminated need for new facilities
- Image enhancement as responsible environmental steward
- Less competition among utilities for water supplies
- Additional supply available for growth and environmental needs
- Wastewater treatment plant benefits related to reduced operations, maintenance and capital costs; the Plant estimates a cost of $890/mgd of wastewater treated
- Helps meet short-term demands associated with dry periods and long-term demands.

* It should be noted that decreased water demand from conservation programs can result in decreased revenues to water retailers and wholesalers. For some utilities, this issue can be addressed by implementing tiered rate structures for water rates.

Benefits to Customers

- Lower water, sewer and energy bills
- Reduced landscape and property maintenance costs and services
- Improved quality of life through preservation of the environment and community for future generations.

Environmental benefits and energy savings

- Water freed up for environmental uses such as maintaining stream flows for aquatic species such as the Delta Smelt
- Significant energy savings due to water conveyance, treatment and uses being California's single biggest energy user
- Reduced greenhouse gas emissions. The Water District estimates that, between the District's baseline conservation year of FY 92-93 and FY 06-07, countywide water conservation and recycling achieved 1.62 billion kilowatt-hours in savings and avoided the emission of 381 million kilograms of carbon dioxide.
- Less risk of overdrafting groundwater
- Preservation of the habitats such as South Bay and Delta and their associated species.

City of San José Water Conservation Plan
Appendix B
List of Best Management Practices of the California Urban Water Conservation Council (CUWCC)

The City of San José, as a signatory to the CUWCC Memorandum of Understanding (MOU), has committed to the implementation of the Best Management Practices (BMPs) listed below. "Implementation" means achieving and maintaining the staffing, funding, and in general, the priority levels necessary to achieve the level of activity called for in each BMP, and to satisfy the commitment to use good faith efforts to optimize water savings as described the MOU.

1. Water survey programs for single-family residential and multi-family residential customers
2. Residential plumbing retrofit
3. System water audits, leak detection and repair
4. Metering with commodity rates for all new connections and retrofit of existing connections
5. Large landscape conservation programs and incentives
6. High-efficiency clothes washing machine financial incentive programs
7. Public information programs
8. School education programs
9. Conservation programs for commercial, industrial, and institutional (CII) accounts
10. Wholesale agency assistance programs
11. Conservation pricing
12. Conservation coordinator
13. Water waste prohibition
14. Residential ULFT replacement programs

The CUWCC is undergoing a process to revise and update these BMPs with input from signatory members, with the aim of completing this process by 2009.