Agenda Report

April 13, 2009

TO: City Council

THROUGH: Municipal Services Committee (April 7, 2009)

FROM: City Manager

SUBJECT: **APPROVE THE COMPREHENSIVE WATER CONSERVATION PLAN; AND REPLACE THE CURRENT WATER SHORTAGE PROCEDURE ORDINANCE, PASADENA MUNICIPAL CODE SECTION 13.10 WITH A NEW WATER WASTE PROHIBITION AND WATER SHORTAGE PLAN ORDINANCE AS DESCRIBED HEREIN**

RECOMMENDATION:

It is recommended that the City Council:

1. Find that the Comprehensive Water Conservation Plan, included as Attachment A, is exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines Section 15262 (Feasibility and Planning Studies); and find that the adoption of the ordinance to replace the current Water Shortage Procedure Ordinance is exempt from CEQA pursuant to State CEQA Guidelines Section 15061 (b) (3) (general rule);
2. Adopt the Comprehensive Water Conservation Plan ("Plan"); and,
3. Direct the City Attorney to draft an ordinance to replace the current Water Shortage Procedure Ordinance, Pasadena Municipal Code Section 13.10 with a new "Water Waste Prohibition and Water Shortage Plan" ordinance within 60 days consistent with the provisions set forth in Attachment B and as described herein.

ENVIRONMENTAL ADVISORY COMMISSION:

On March 17, 2009, the Environmental Advisory Commission ("EAC") unanimously recommended that the City Council adopt the Plan ("Plan") and the recommended "Water Waste Prohibition and Water Shortage Plan" ordinance provisions.

EXECUTIVE SUMMARY:

On September 22, 2008, the City Council directed staff to provide a comprehensive water conservation plan outline with conservation targets of 10%, 20% and 30% within 60 days, a status report on the plan within 120 days, and a complete plan within 180 days. This is the final report on the complete plan.

The Plan includes six water conservation approaches that will be pursued simultaneously to meet the City's water conservation targets:

1. Implement Water Conservation Rate Design:
2. Adopt Sustainable Water Supply Ordinances;

3. Provide Incentives for Use of Water Efficient Technology and Practices;
4. Provide Direct Installation and Distribution of Efficient Technologies;
5. Provide Water Use Audits; and
6. Provide Water Use Information, Education, and Outreach.

While each of these approaches will contribute significantly to long-term and/or short-term water conservation efforts, implementation of the proposed water conservation rate design is critical to the overall success of the Plan. The first phase of the rate redesign is the subject of a separate, contemporaneous agenda report.

Adoption of sustainable water supply ordinances, including the proposed "Water Waste Prohibition and Water Shortage Plan" ordinance as well as new water efficient landscape ordinance later this year, is another essential element of the Plan foundation. Such ordinances clearly establish the need and guidelines for efficient water use. Furthermore, they are a necessary prerequisite to obtain future state grants and MWD funding for water projects and conservation programs that comprise the Plan.

BACKGROUND:

Southern California is semi-arid and subject to recurring drought. While prudent planning by the Pasadena Water and Power Department ("PWP") and Metropolitan Water District ("MWD") can provide reliable supply throughout the duration of most occurrences, extended droughts combined with other supply disruptions can lead to short-term circumstances that demand immediate reductions in water use.

MWD is actively monitoring supply conditions and is likely to reduce water allocations for its member agencies due to continuing dry conditions and restrictions on water deliveries from its own supplies. While the details and timing of any restrictions have not yet been announced, PWP anticipates a 10-15% reduction in its MWD allocation. Based on the MWD Draft Water Supply Allocation Plan, any water supplied by MWD in excess of a member's allocation would cost approximately three to five times the cost of supplies below the allocation limit. Additional and urgent measures may be required if significant restrictions to PWP's water supply from MWD are implemented.

Due to the significance of water supply issues to the Pasadena community, PWP will provide ongoing reporting of supply conditions and program results. Comprehensive annual reports on program results and expenses will be presented to the City Council, and periodic progress reports will be provided to the Municipal Services Committee and Environmental Advisory Commission. Updates on water supply conditions will be provided as conditions warrant and in conjunction with any actions related to the proposed Water Waste Prohibition and Water Shortage Plan ordinance this spring.

Comprehensive Water Conservation Plan

On February 2, 2009, staff presented the 120 day update to Council on the Plan, which was essentially complete, for the purposes of obtaining early review and feedback from City Council and EAC. The February 2, 2009 draft described the goals, approaches and action plans contained in PWP's comprehensive water conservation program.

The attached final draft of the Plan includes additional information and recommendations related to managing short-term water supply shortages, the estimated financial impacts of 10%, 20%, and 30% water sales reductions, some additional detail on plans related to landscape ordinance, gray water and rainwater use, and a summary of impacts on new development.

Whereas PWP's past water conservation programs relied heavily on indoor efficiency, the Plan reflects an emphasis on:

- Using price signals in rate design to encourage conservation;
- Increased emphasis on outdoor water efficiency; and
- Maximizing efficiencies related to new construction.

The Plan includes six water conservation approaches that will be pursued simultaneously to meet the City's water conservation targets:

1. Implement Water Conservation Rate Design:
    - Modified block rate structure with higher cost tiers for high water use
    - Develop a budget-based water rate proposal
2. Adopt Sustainable Water Supply Ordinances:
    - Establish a Permanent Water Waste Prohibition Ordinance
    - Modify existing Water Shortage Ordinance
    - Adopt a Water Efficient Landscape Ordinance
    - Evaluate potential effectiveness of a Fixture Replacement on Resale Ordinance, and adopt, if appropriate
    - Review the Gray Water Systems and Storm Water Capture Ordinances and update or modify, as appropriate
    - Adopt appropriate water use limitations and mitigation measures associated with new development
3. Provide Incentives for Use of Water Efficient Technology and Practices:
    - Indoor fixture incentives
    - Irrigation technology incentives
    - Water-efficient landscape and turf replacement incentives
4. Provide Direct Installation and Distribution of Efficient Technologies
5. Provide Water Use Audits
6. Provide Water Use Information, Education, and Outreach:
    - Usage data on bills
    - Appropriate water use standards or guidelines
    - Efficient indoor and outdoor water use practices

The feasibility and cost impacts of 10%, 20% and 30% water conservation goals will be further evaluated as part of the Water Integrated Resource Plan ("WIRP") study that staff will undertake over the next twelve months. The WIRP will include opportunities for input from policy makers and the public, and it will form the basis of the City's 2010

Urban Water Management Plan. Staff has developed a draft schedule for the WIRP process as follows:

- Three inter-departmental water issue workgroups were formed to develop recommendations related to:
  - Water Conservation Rate Design Alternatives
  - Landscape Water Reduction
  - Building Codes and New Development
- WIRP development and report draft through summer 2009
- Public review through January 2010

Water Waste Prohibitions

Adoption of permanent water waste prohibitions is essential for the City. First, it establishes a clear message that water waste is intolerable, clearly delineates what constitutes water waste, and sets forth penalties for violations. Additionally, it is a necessary prerequisite to obtain future state grants and MWD funding for water projects and conservation programs.

The proposed "Water Waste Prohibition and Water Shortage Plan" ordinance is consistent with the MWD Model Water Waste ordinance and is intended to address the shortcomings identified with the City's current Water Shortage Procedure Ordinance that it will replace. The proposed ordinance includes a number of permanent water waste prohibitions as well as procedures that would be initiated in the event of a water shortage.

The proposed permanent water waste prohibitions include:

- Watering with potable water (i.e., drinking water) is prohibited between the hours of 9:00 a.m. and 6:00 p.m. on any day, except by use of a hand-held container, a hand-held hose equipped with a water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system;
- No watering during periods of rain;
- No excessive water flow or runoff;
- No washing down hard or paved surfaces except were necessary to alleviate safety or sanitary hazards and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a water shut-off nozzle or device, a low-volume, high-pressure cleaning machine equipped to recycle any water used, or a low-volume high-pressure water broom;
- Obligation to fix leaks, breaks or malfunctions when discovered or within seven days of receiving notice from PWP;
- Recirculating water systems are required for fountains and decorative water features;
- Using potable water to wash a vehicle is prohibited, except by use of a hand-held bucket or a hand-held hose equipped with a water shut-off nozzle or device. This subsection does not apply to any commercial car washing facility;
- Drinking water may be served in restaurants only upon request by a customer;

- Restaurants are required to use water conserving dish wash spray valves;
- Commercial lodging establishments must provide guests option to decline daily linen services;
- Installation of single pass cooling systems is prohibited in buildings requesting new water service;
- Installation of non-recirculating water systems is prohibited in new commercial conveyor car wash and new commercial laundry systems; and
- Effective on July 1, 2010, commercial conveyor car wash systems must have installed operational recirculating water systems or secured a waiver of this requirement from the City of Pasadena.

The proposed ordinance establishes the following penalty schedule for violations:

Violation	Meters less than 1-1/2"	Meters 1-1/2" or larger
First	Written Notice	Written Notice
Second	$100	$200
Third	$200	$400
Fourth	$350	$700
Fifth and subsequent	$500	$1,000

The proposed fines are meant to be deterrents rather than revenue sources for PWP. While they are significant from the perspective of a residential customer, customers with larger meters are typically associated with commercial accounts that use a larger amount of water, thus PWP has proposed doubling fines for these customers to maintain their deterrent effect and reflect the greater impact that wasteful use by these customers could have on PWP's overall water conservation effort.

In addition to fines, PWP may install a water flow restrictor device on or after the fifth violation, or disconnect a customer's water service for willful violations of mandatory restrictions.

Water Shortage Plan

In the event that a water shortage threatens PWP's ability to meet its customers' water demand, the City Council would find there is a Water Shortage, establish the appropriate Level of the Water Shortage Plan to invoke, and establishes a target for overall demand reduction ("Water Conservation Goal"). Declaring the Water Shortage Level would determine which set of prohibitions go into effect, and establishing a Water Conservation Goal under the proposed Water Shortage Plan would invoke Water Shortage Rate provisions that are the subject of a concurrent agenda report.

The proposed Water Shortage Plan ordinance includes four progressively restrictive levels of waste prohibitions, but does not include water rationing allocations. Each level of the Water Shortage Plan would include the permanent water waste prohibitions, plus incremental prohibitions from the prior Water Shortage Level.

The key incremental prohibitions with Water Shortage Levels 1 through 4 are as follows:

Level	1	2	3	4
Allowed Watering Days Per Week	3 Summer 1 Winter	2 Summer 1 Winter	1 Summer 1 Winter	No Irrigation
Obligation to Fix Leaks, Breaks or Malfunctions	72 hours after notification	48 hours after notification	36 hours after notification	24 hours after notification
Additional Limitations/ Prohibitions	N/A	Filling ornamental lakes or ponds; washing vehicles		Filling residential pools and spas; no new potable water service

The proposed Water Waste Prohibitions and Water Shortage Plan ordinance includes various general exceptions for the following water uses:

- Water necessary to protect public health and safety or for essential government services, such as police, fire and other similar emergency services;
- The use of recycled water, gray water, and rainwater;
- Use of water by commercial nurseries and commercial growers to sustain plants, trees, shrubs, crops or other vegetation intended for commercial use;
- Maintenance of vegetation including trees and shrubs, or vegetation intended for consumption, that are watered using a hand-held bucket or similar container, hand-held hose equipped with a self-closing shut-off nozzle or device;
- Maintenance of existing landscape necessary for fire protection and soil erosion control;
- Maintenance of plant materials identified to be rare or essential to the well-being of protected species;
- Maintenance of landscape within active public parks and playing fields, school grounds, golf course green and day care centers, provided that such irrigation does not exceed two days per week; and
- Actively irrigated environmental mitigation projects.

Staffing and Resource Needs

PWP will include additional staffing and funding, listed in Attachment C, to support implementation of the Water Waste Prohibition and Water Shortage Plan Ordinance in the fiscal year 2010 budget request. The budget request will include a new Water Conservation Group consisting of five full time staff plus one additional full time staff position to support the Call Center. Pro bono legal services or contract resources would be required to conduct administrative appeals hearings. Additional staffing and budget will be requested at a later date in order to support a change to budget-based water rates.

ENVIRONMENTAL ANALYSIS:

With regard to the Comprehensive Water Conservation Plan, CEQA exempts from its application those projects that involve "only feasibility or planning studies for possible future actions, which the agency, board or commission has not approved, adopted, or funded…" and which do not have a legally binding effect on later activities. (State CEQA Guidelines § 15262). To fall under this exemption, however, the lead agency is required to consider environmental factors.

The Comprehensive Water Conservation Plan and proposed Water Waste Prohibition and Water Shortage Plan ordinance provisions are guidance documents, which do not commit the City to undertaking any particular project. Further, they do not serve as legally binding plans with which subsequent activities must be consistent or adhere.

The Plan and proposed ordinance provisions are drafted, in part, with environmental considerations in mind. The primary objective of these plans is to ensure sufficient and sustainable water supplies are available to meet the needs of water customers in Pasadena and adjacent communities served by PWP. The plans and proposed ordinance take into consideration the short- and long-term uncertainty in water resource availability, the climate and legal factors driving that uncertainty. The plans further consider uncertainty in water demand as a result of population growth, development, and trends in water usage including behavior as well as the implementation of water-efficient landscaping and fixtures. The end goal is to rethink how the City and its residents use water resources and reduce the per-capita consumption of water by 10 to 20 percent.

The proposed Water Shortage Plan ordinance does not prohibit refilling of pools or require draining of pools, thus avoiding associated stagnation, wastewater, and other related health and safety impacts. This ordinance contains general exemptions to mitigate potential health, safety, and environmental impacts.

The policies discussed herein are not intended to lead to large construction projects. While they may lead to retrofitting of some structures, these will generally be very small projects with no significant environmental effects. While the Plan contemplates that the completion of a pipeline project to convey recycled water to Pasadena will contribute to the potable water demand reduction goals, neither this nor any other particular project is being approved herein. In any event, any such project will go through the CEQA process, if and when it goes forward.

With regard to the proposed ordinance, CEQA only applies to projects that have the potential for causing a significant effect on the environment. These code amendments will not be detrimental to the public interest, health, safety, convenience, or general welfare of the City nor do they have the potential for causing a significant effect on the environment, and are therefore exempt from CEQA review pursuant to State CEQA Guidelines Section 15061(b)(3).

FISCAL IMPACT:
Each of the initiatives and policy considerations included in this report has fiscal impacts to the Water Fund and other City operations. Those impacts become more significant as the conservation goals become more aggressive. Revenue requirements of the Water Fund to cover fixed obligations, including debt service, existing contracts and the general fund transfer must be preserved while various options are considered. The cost of staffing and resources necessary to support the Plan and proposed ordinances are estimated at $810,000 for FY2010, which includes approximately $180,000 for equipment and contract resources. Staff is evaluating potential efficiencies and alternatives to reduce the impact of these cost increases. Potential revisions to water rate design must be measured within the requirements of Proposition 218 and the economic impact on various ratepayer categories. Fiscal impacts will be prepared for specific initiatives and policy considerations as directed by City Council.

Respectfully submitted,

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Attachment A

City of Pasadena
Department of Water and Power

DRAFT COMPREHENSIVE WATER CONSERVATION PLAN (FINAL DRAFT)

Pasadena's Roadmap to Reduce Water Consumption by 10%, 20%, or 30%

March 30, 2009

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EXECUTIVE SUMMARY

This report outlines the Pasadena Water and Power (PWP) Comprehensive Water Conservation Plan, which includes six water conservation approaches, listed below, that will be used to meet the City's water conservation targets. Whereas past programs relied primarily on incentives for indoor efficiency, this plan reflects an emphasis on:

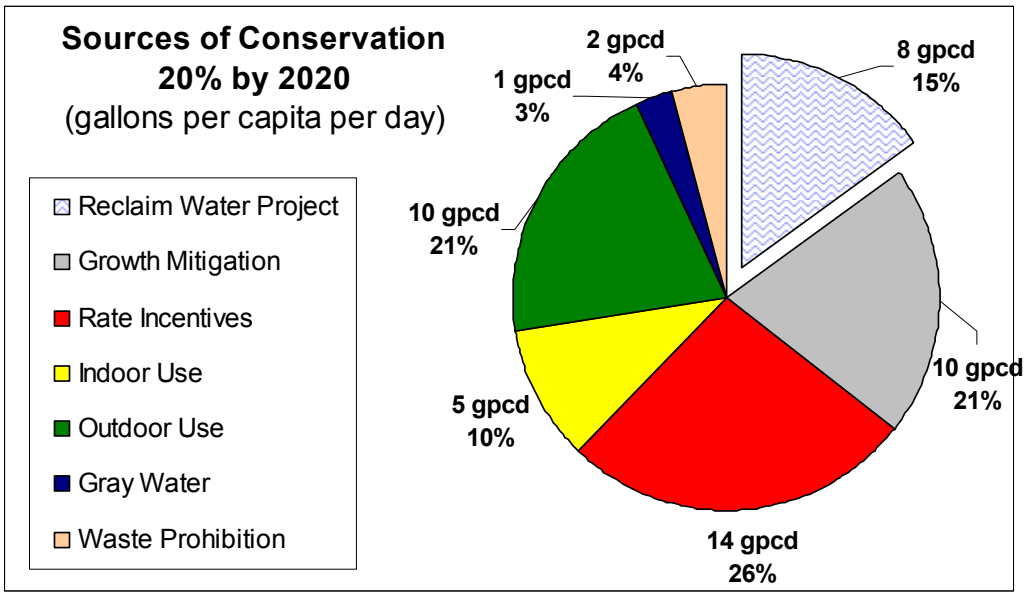
- Using price signals in rate design to encourage conservation;
- Increased emphasis on outdoor water efficiency; and,
- Maximizing efficiencies related to new construction.

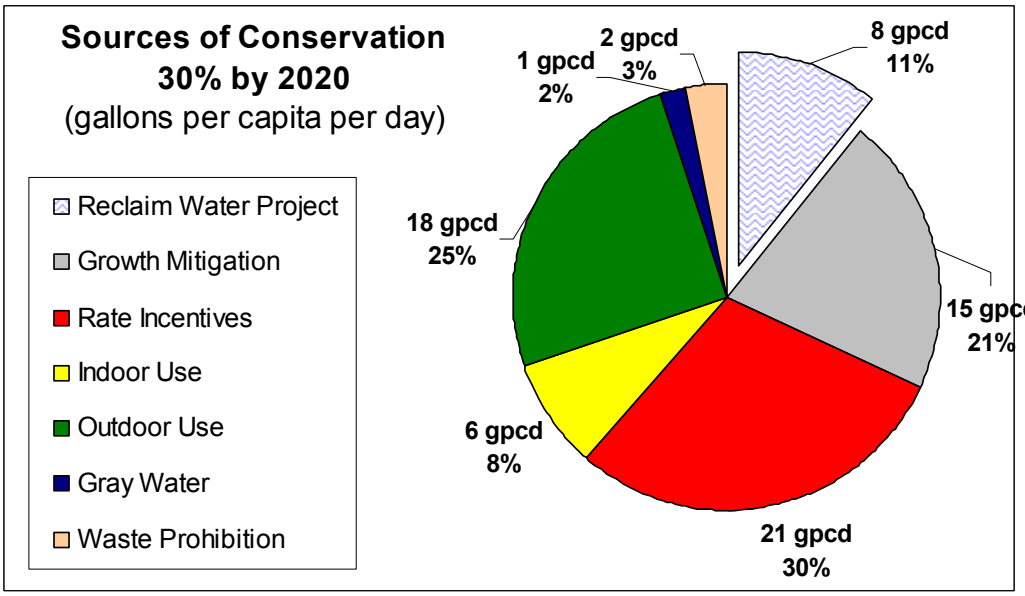
KEY WATER CONSERVATION APPROACHES

1. Implement Water Conservation Rate Design:
    a. Modified block rate structure with higher cost tiers for high water use
    b. Develop a budget-based water rate proposal
2. Adopt Sustainable Water Supply Ordinances:
    a. Establish a Permanent Water Waste Prohibition Ordinance
    b. Modify existing Water Shortage Ordinance
    c. Adopt an Efficient Landscape Ordinance
    d. Evaluate potential effectiveness of a Fixture Replacement on Resale Ordinance, and adopt if appropriate
    e. Review the Gray Water Systems and Storm Water Capture Ordinances and update or modify as appropriate
    f. Adopt appropriate water use limitations and mitigation measures associated with new development
3. Provide Incentives for Use of Water Efficient Technology and Practices:
    a. Indoor fixture incentives
    b. Irrigation technology incentives
    c. Water-efficient landscape and turf replacement incentives
4. Provide Direct Installation and Distribution of Efficient Technologies
5. Provide Water Use Audits
6. Provide Water Use Information, Education, and Outreach:
    a. Usage data on bills
    b. Appropriate water use standards or guidelines
    c. Efficient indoor and outdoor water use practices

As a long-term goal, this plan presupposes an initial target of reducing per-capita potable water consumption 10% by 2015 and 20% by 2020 consistent with state policy objectives and Pasadena's Urban Environmental Accords goals. PWP will further evaluate the feasibility and cost impacts of 10%, 20% and 30% water conservation goals as part of the Water Integrated Resource Plan (WIRP) study that PWP will undertake over the next twelve months. As part of this effort, three interdepartmental Water Issue Work Groups have been formed to evaluate (i) Rate Design; (ii) Landscape Efficiency; and, (iii) Building Codes and New Development. These Work Groups plan to develop recommendations by March 2009.

The following charts depict estimated cumulative sources of water conservation through the year 2020 to reduce the projected 2020 usage of 209 gallons per capita per day (gpcd) to 178 gpcd or 158 gpcd associated with 20% and 30% reductions from the 198 gpcd baseline consumption. The charts reflect staff's view that many approaches will be necessary, and that increased reliance on price signals through rates combined with outdoor conservation and growth mitigation will be of paramount importance as the reduction targets increase. **These water conservation estimates are preliminary in nature**, and will be further evaluated and quantified as part of the Comprehensive Water Conservation Plan and forthcoming WIRP process.





Note that "Growth Mitigation" represents the difference between the forecast demand in 2020 and the current baseline demand. These reductions would result from a number of potential sources and are not limited to contributions from new development.

Managing Drought Conditions

Southern California is semi-arid and subject to recurring drought conditions. Additionally, the majority of water supplies are imported from northern California and the Colorado River. While prudent planning by PWP and the Metropolitan Water District (MWD) can provide reliable supply throughout the duration of most occurrences, extended droughts combined with other supply disruptions can lead to short-term circumstances that demand immediate reductions in water use. The Comprehensive Water Conservation Plan includes two strategies to achieve short-term demand reduction while maintaining the fiscal health of PWP:

- Invoke progressively restrictive limitations in the Water Waste Prohibition ordinance
- Invoke Water Shortage rates that provide price signal to:
    - Incentivize additional conservation; and,
    - Maintain the fiscal health of the Water Fund.

Milestone Schedule

A milestone schedule for evaluation and/or proposed adoption of these actions will be included as Table ES-1.

Progress Reporting and Monitoring

Due to the significance of water supply issues to the Pasadena community, on-going reporting and monitoring of the water supply situation and Pasadena's progress towards achieving the conservation will be essential. Comprehensive annual reports on program results and expenses will be presented to the City Council, and periodic progress reports will be provided to the Municipal Services Committee and Environmental Advisory Commission.

Table ES-1
Key Milestone Schedule

Conservation Efforts	Date	Supply/IRP Efforts
• Draft Comprehensive Water Conservation Plan ("CWCP") presented • Inter-departmental workgroups formed • Customer water information "welcome package" prepared/published	Jan Feb 2009	• Governor declares statewide water emergency and establishes 20% conservation goal
• Adopt CWCP • Recommend Water Waste Prohibition and Water Shortage Plan Ordinance • Recommend Phase 1 Water Conservation Rate Design	March	• Monk Hill Perchlorate Water Treatment Plant groundbreaking • Windsor Reservoir rehabilitation and seismic retrofit complete
• Gray water & rainwater policy review • Waste Prohibition and Water Shortage Plan Ordinance in Effect • Initiate turf replacement incentives (dependent on MWD funding from State grant)	April May	• MWD announcement on FY2010 supply allocation expected • FY2010 spreading credits known
• Water Waste Prohibition and Water Shortage Plan Ordinance in Effect • Recommend Water Shortage finding, Level, and Water Conservation Goal • Water rate hearings and readings	June	
• Phase 1 Water Conservation Rate Design Effective Date • Begin staffing Water Conservation and Waste Enforcement Group	July	• Reduced local groundwater allocation in effect
• CWCP Status Report • Replace on Resale recommendation	Aug Sept Oct	• Water IRP draft complete • Water IRP public review
• Adopt "Model" Landscape Ordinance, gray water and rainwater provisions	Nov	
• Recommend Phase 2 Water Conservation Rate Design • CWCP Status Report	Dec	• Adopt Water IRP • Complete recycled water project feasibility study
• Phase 2 Water Conservation Rates effective	July 2010	
• Recommend Phase 3 Water Conservation Rate Design if needed	Dec 2010	• Adopt Urban Water Management Plan

INTRODUCTION

On February 2, 2009, staff presented the 120 day update to Council on the Comprehensive Water Supply Plan (Plan), which was essentially complete, for the purposes of obtaining early review and feedback from City Council and Environmental Advisory Commission. The Plan described the goals, approaches and action plans contained in PWP's comprehensive water conservation program.

Pasadena Water and Power (PWP) has prepared this report in response to the City Council's September 22, 2008 directive for staff to provide a comprehensive water conservation plan outline with conservation targets of 10%, 20% and 30% within 60 days, a status report on the plan within 120 days, and a complete plan within 180 days. This report is intended to support the 120 day update requested by City Council for the purposes of obtaining early review and feedback from City Council and Environmental Advisory Commission. For informational purposes, it outlines the goals, approaches and action plans contained in PWP's comprehensive water conservation program.

Summary of Changes from the 120 Day Report Draft

The final draft of the Plan includes:

- A new section on managing short-term water supply shortages through a new Water Shortage Rate and progressively strict water waste prohibitions;
- Financial impacts of near-term 10%, 20%, and 30% water sales reductions;
- Additional detail on plans related to landscape ordinance, gray water and rainwater use; and,
- A brief summary of impacts on new development.

Goals of the Comprehensive Water Conservation Plan

The primary goal of the Plan is to achieve permanent reduction in water demand in Pasadena and to establish mechanisms to effectively manage short-term water supply shortages and emergencies as well. The Plan is designed to support effective short- and long-term water supply planning, assure the reasonable and beneficial use of water, prevent water waste, and maximize the efficient use of water within PWP's service territory.

Program Drivers

The following program drivers have significant influence on the Plan:

- Urban Environmental Accords Goals (10% per capita reduction by 2015)
- Legislative and State Policy Compliance
    - Statewide 20% reduction by 2020 (expected future legislation)
    - MWD Model Conservation Ordinance
    - State Model Water Efficient Landscape Ordinance

- Best Management Practices (BMP) compliance
- Near-Term Water Supply Shortages
- Long-Term Supply Reliability/Sustainability

Background

Pasadena has long enjoyed the reputation among the community of water agencies as being a leader in conservation efforts, and plans to continue to be at the forefront of promoting and incentivizing efficient water use. By providing incentives for new water saving technology and education on efficient water use methods, PWP offers its customers the tools they need to achieve water use reduction and support the citywide goal of sustainability and environmental stewardship.

In 1991 PWP signed the Memorandum of Understanding (MOU) with the State of California, Department of Water Resources agreeing to implement the BMPs and comply with the MOU. Signatories to the MOU submit bi-annual progress reports to the California Urban Water Conservation Council (CUWCC), which reports annually to the State Water Resources Control Board. The CUWCC is a consensus based partnership of agencies and organizations concerned with water supply and conservation of natural resources in California. BMP compliance is one of the key drivers for development of PWP's conservation program.

In June 2007, the Mayor of Pasadena called for a citywide reduction in water use of at least 10% in response to water supply pumping restrictions and chronic drought conditions. As of November 2007 the goal of 10% reduction had not been reached, and on December 17, 2007 the City Council issued a public proclamation that a potential water shortage exists and invoked the City's Water Shortage Ordinance Plan I. As a means of supporting the ordinance, PWP established a dedicated water waste hotline for reporting instances of water waste. To date, PWP has received over 700 reports and has responded with written reminders mailed to customers and in person visits when staff is available. Code Compliance staff is assisting Water and Power in distributing information regarding the current Water Shortage Ordinance during their field inspections.

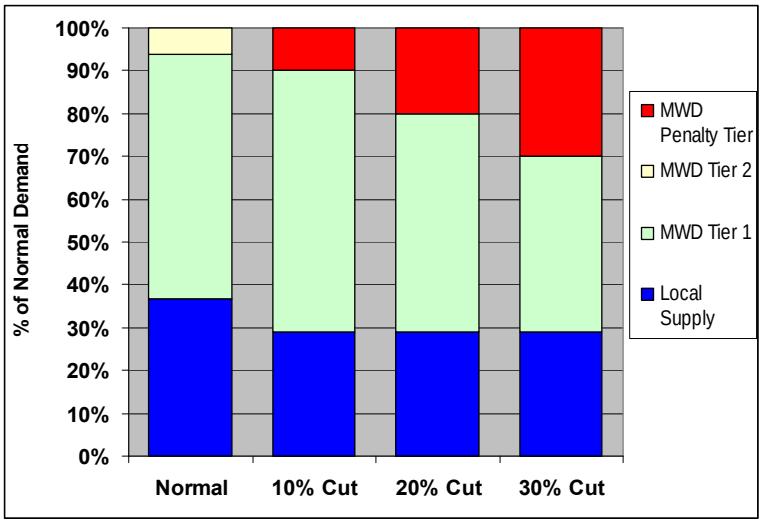
Pasadena's current Water Shortage Procedures Ordinance (Pasadena Municipal Code Section 13.10) consists of three progressively restrictive plans. Plan I prohibits nine specific water waste actions and urges all citizens to adhere to the ordinance. Plan II would make compliance with these water waste prohibitions mandatory and impose penalties for non-compliance. Plan III includes provisions for water rationing.

WATER SHORTAGES AND SHORT-TERM CONSERVATION

Southern California is semi-arid and subject to recurring drought. While prudent planning by PWP and MWD can provide reliable supply throughout the duration of most occurrences, extended droughts combined with other supply disruptions can lead to short-term circumstances that demand immediate reductions in water use.

Water Shortage Scenarios

This report considers three scenarios of potential shortages that result in 10%, 20%, and 30% overall demand reduction requirements. Although PWP does not anticipate water supplies would be physically curtailed by MWD, supplies in excess of the required reductions would incur severe penalty charges. The graph shows PWP's various water sources as a percentage of normal demand, assuming minimal spreading credits and no storage withdrawals in the three "curtailment" scenarios.



Financial Impacts

When a water shortage is declared and consumers immediately begin to reduce consumption, water rate revenues will decline faster than purchased water costs. While customer response to water shortages is difficult to predict and the exact pricing for MWD "penalty" supply is uncertain, the following tables show estimated financial impacts to the Water Fund under the current rate structure (including approved PWAC increase to be effective July 1, 2009).

Fiscal Impacts of Water Conservation ($000)
Current Rate Structure

Conservation Achieved	10%	20%	30%
Revenue Reduction	4,000	7,800	11,500
Cost Reduction	2,500	4,800	7,100
Net Income Change	(1,500)	(3,000)	(4,400)

Under the proposed Water Shortage Pricing Rates, PWP's fiscal health would not be adversely impacted by reduced water sales.

Water Shortage Plan

To achieve short-term demand reduction while maintaining the fiscal health of PWP, progressively restrictive limitations in the proposed Water Waste Prohibition and Water Shortage Plan ordinance will be invoked in tandem with the proposed Water Shortage Rates that provide price signals to reduce consumption. Unlike Pasadena's existing Water Shortage Plan, there would be no physical water rationing.

PWP anticipates Pasadena's new Water Waste Prohibition and Water Shortage Plan ordinance will include progressively restrictive prohibitions in four phases (Level 1 to Level 4), but will not include water rationing allocations. Each level of the Water Shortage Plan would include all permanent water waste prohibitions, plus incremental prohibitions from the prior Water Shortage Level.

In the event of a supply shortage, the City Council would make finding that a Water Shortage exists, establish a percentage target for overall demand reduction ("Water Conservation Goal"), and establishes the appropriate level of the Water Shortage Plan to invoke, with Level 4 considered to be a water supply emergency.

The proposed Water Shortage Plan includes various general exceptions for:

- Water necessary to protect public health and safety or for essential government services, such as police, fire and other similar emergency services;
- The use of non-potable water from gray water or rainwater harvesting systems;
- Use of water by commercial nurseries and commercial growers to sustain plants, trees, shrubs, crops or other vegetation intended for commercial use;
- Maintenance of vegetation including trees, shrubs and vegetation intended for consumption, that are watered using a hand-held bucket or similar container, hand-held hose equipped with a self-closing shut-off nozzle or device;
- Maintenance of existing landscape necessary for fire protection and soil erosion control;
- Maintenance of plant materials identified to be rare or essential to the well-being of protected species;
- Maintenance of landscape within active public parks and playing fields, school grounds, golf course green and day care centers, provided that such irrigation does not exceed two (2) days per week;
- Actively irrigated environmental mitigation projects.

Note that these exceptions would apply to the permanent water waste prohibitions described later as well.

In addition, the limitations on watering days and hours under the Water Shortage Plan do not apply drip irrigation systems or irrigation using a hand-held bucket or similar container, hand-held hose equipped with a self-closing shut-off nozzle or device.

Water Shortage Pricing Ordinance

Staff will propose various amendments to the water rate ordinance, including the addition of two new rate blocks and changing the amount of water allocated to each rate block. Additionally, the proposed rate ordinance will include Water Shortage Rates that are automatically invoked when Council makes a finding there is a Water Shortage and establishes a Water Conservation Goal.

In lieu of any physical water rationing requirements, the Water Shortage Rates are designed to meet the Water Conservation Goal through price signals as follows:

- Block 1 will be considered an "Essential Use" allocation that will not be affected by rate increases or allocation reductions. The Block 1 allocation will vary by meter size and be at least 8 billing units (5,984 gallons) per month, which is generally considered a sufficient amount of water for a residential family of four's indoor use;
- Reduce water allocations for rate Blocks 2 through 4: The cutoff points for Blocks 2 to 4 will be reduced by the same percentage as the declared Water Conservation Goal, rounded to nearest whole billing unit. This would be expressed as a formula in the rate ordinance as follows: "Shortage Allocation = Regular Allocation x (1-Water Conservation Goal)";
- Increase water commodity rates for Rate Tiers 2 through 5, the Purchased Water Adjustment Charge ("PWAC"), and the Capital Improvement Charge[1] ("CIC") rate to reflect increased water costs and the targeted water use reduction. These rates would be increased by the inverse of the complement of the Water Conservation Goal according to the following formula: "Water Shortage Rate = Regular Rate x 1/(1-Water Conservation Goal)". The following table summarizes the impact for various Water Conservation Goals.

Water Shortage Rate - Commodity Rate Increases (as a % of the Baseline Rate)

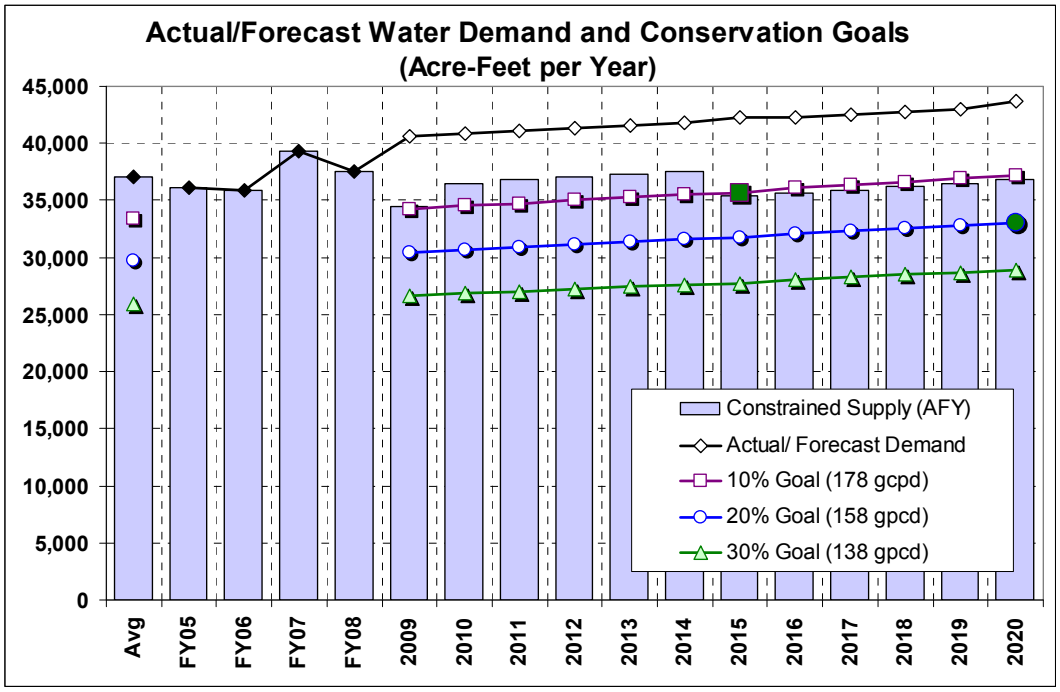
Water Shortage Rate	Block 1	Blocks 2 – 5, PWAC, & CIC
10% Water Conservation Goal	0%	11%
20% Water Conservation Goal	0%	25%
30% Water Conservation Goal	0%	43%

Under the proposed rate structure with Water Shortage Rates, staff estimates that changes in revenue will be in line with changes in costs over a range of possible customer water demand responses to the rate signals. For example, if a 30% reduction is imposed by MWD and the goal is met, revenues and costs will decline by approximately $7 million; at the opposite extreme, in the unlikely event that PWP customers do not respond and there is no change in water demand, revenues and costs would increase by approximately $21-24 million.

[1] The CIC rate increase is intended to yield a fixed amount of revenues, even as usage declines.

LONG TERM WATER DEMAND AND CONSERVATION GOALS

The following chart depicts historical and forecast water consumption, in acre-feet per year (AFY), along with lines depicting the water consumption corresponding to 10%, 20%, and 30% reductions from the City's Urban Environmental Accords (UEA) Base Year consumption of 198 gallons per capita per day (GPCD). The 10% by 2015 and 20% by 2020 targets are highlighted with solid bullets. The corresponding consumption goals are 178, 158, and 138 GPCD. Also, a forecast of "constrained water supply" is shown as vertical bars, reflecting the projected availability of local groundwater and MWD imports under a 10% curtailment requirement. While a 10% curtailment is reasonable for long-term planning purposes, short-term supply shortages could be much more severe. The "Water Shortages and Short Term Conservation" section of this report outlines PWP's plans to deal with such supply shortages.



Source: RMC 2008 Urban Water Management Plan Update and PWP Population growth is estimated at an average 0.8% per year

Water Measurement Conversions:
1 Acre Foot = 435 HCF
Hundred Cubic Feet (HCF) = 1 Billing Unit (BU)
1 HFC = 748 gallons/.00230 Acre Feet
Acre Foot = 325,800 gallons

PWP has proposed an initial long term conservation target of 20% per capita reduction in potable water consumption by 2020, with an interim goal of 10% per capita reduction by 2015 in accordance with UEA Action Plan 21. These goals will be reviewed and refined as part of an integrated resource planning process, and implemented with a multi-faceted conservation approach outlined in this report.

WATER CONSERVATION APPROACHES

Whereas past programs relied primarily on incentives for indoor efficiency, this plan places an increased emphasis on:

- Using price signals in rate design to encourage conservation;
- Outdoor water efficiency; and,
- Maximizing opportunities related to new construction.

PWP has developed a set of six water conservation approaches that will be used to meet the City's water conservation targets as follows:

1. Implement Water Conservation Rate Design
2. Adopt or Modify Sustainable Water Supply Ordinances
3. Provide Incentives for Use of Water Efficient Technology and Practices
4. Provide Direct Installation and Distribution of Efficient Technologies
5. Provide Water Use Audits
6. Provide Water Use Information, Education, and Outreach

These are the key components to a successful conservation program, and each of these elements is crucial to meet the overall conservation goals. The approaches include both existing activities and planned strategies, and strategies are not listed in order of importance. For example, the following table shows illustrative measures that a residential water customer might employ to meet various water conservation targets. These measures could be encouraged through a combination of rate design, rebates, ordinance requirements, and educational awareness.

Residential Conservation Measures
Illustrative Means for Customers to Achieve Goals

Customer	10% Goal	20% Goal	30% Goal
Efficient User <12 Billing Units per Month	Reduce watering by one day per week 30% Outdoor	Re-landscape: Turf Reduction Install WBIC*	Likely not feasible
Typical User 12-36 BU/mo	Reduce watering by two days per week 50% Outdoor	Water 2 day/wk Replace Indoor Fixtures Install WBIC	Re-landscape: Turf Reduction
Large User > 36 BU/mo	Reduce watering by three days per week 70% Outdoor	Water 2 day/wk Replace Indoor Fixtures Install WBIC	Re-landscape: Turf Reduction

**Weather-based irrigation controller*

Conservation Approach 1: Implement Water Conservation Rate Design

A critical element of PWP's water conservation plan will be evaluating and implementing a water rate design that provides financial motivations for customers to conserve water while equitably apportioning costs among customers and maintaining the Water Fund's fiscal health. An equitable water conservation rate design would reward efficient users and those who have invested in conservation fixtures and appliances, while providing appropriate price signals and incentives for others to conserve water. In addition, the costs of procuring incremental water supplies would ideally be borne by those causing the increased demand rather than the entire community. Such rates are intended to help reduce water demands for the entire system and can be designed to reduce demand during peak times or seasons and recover surcharge costs as necessary during periods of shortages and MWD allocations. This enables the utility to manage costs and meet revenue requirements while maintaining pricing equity for all users.

Water Fund Health

Not only are PWP's water rates generally perceived as too low to encourage conservation, the overall revenues are insufficient to support ongoing operations and infrastructure improvements contemplated under the Water System Master Plan. As a result, the financial condition of Pasadena's Water Fund has deteriorated in recent years since rate increases have not kept pace with rising costs. The Water Fund's reserves have been depleted since current revenues are insufficient to meet operating costs and planned capital investment. Based on recent analysis, revenues will need to increase in Fiscal Years 2010 and 2011 to restore the fund's health.

Impacts of 10%, 20%, 30% Conservation and Water Shortage Rates

Achieving the goal of reducing water consumption by 10%, 20%, or 30% will place additional upward pressure on water rates. While long-term sales reductions can be incorporated into the water rate design to fairly and adequately recover all Water Fund revenue requirements, unexpected sales reductions as a result of short-term water conservation needs can result in adverse impacts on the Water Fund health. This is addressed under the "Water Shortages and Short-Term Conservation" section of this report.

During times of severe shortages, PWP may incur additional costs associated with imported water that exceeds Pasadena's allocations from MWD. Also, PWP's revenues will decrease as additional water use restrictions are imposed on its customers. PWP will therefore propose a Water Shortage Rate to pass-through MWD penalty rates and recover revenue loss due to reduced sales volume.

Alternative Rate Design

In March 2009, staff will propose various amendments to the water rate ordinance to address current funding gaps and encourage conservation. This will occur in a phased approach to revising rates. In the initial phase, two new rate blocks that apply to the top ten percent of water users in each meter class will be added, and the amount of water allocated to existing rate blocks will be adjusted as appropriate to reflect reduced local supply and provide additional conservation price signals. In Phase 2, PWP will complete

analyses of current customer data to effectively categorize customers by usage characteristics, including single family residential, multi-family residential, and various commercial classifications, and develop a water budget based rate proposal for the Council's consideration as an alternative to the current tier structure. PWP anticipates recommending a budget-based water rate structure by December 2009.

The evaluation of potential changes to the rate structure will include an analysis of existing capital and service delivery programs to identify options for efficiency improvements. Rate requirements will be based on programs that are prioritized to deliver maximum value to PWP's customers at reasonable costs.

Low Income Assistance

Finally, PWP recognizes that water conservation rate designs may have a significant impact on some customer's water bills. PWP will develop proposals to mitigate impacts of water rate increases on low income customers to the extent feasible and allowed by Proposition 218 restrictions. For example, PWP will study and propose, if feasible, a "Public Benefits Charge" for water that will provide funding for water conservation incentive programs and low income rate assistance programs. However, Proposition 218 expressly provides that water rates are property related and must be designed to recover the cost to provide water service to a parcel. As a result, rate design and potential funding for low income assistance programs must be compliant with Proposition 218 requirements.

Water Conservation Rate Development Action Plan

Short Term Activities (to be completed by July 1, 2009)

- Propose overall rate revenue increase to maintain fund health
- Propose modified rate block structure to encourage conservation through pricing
- Propose Water Shortage Rate structure to pass through MWD penalty rates or surcharges and recover revenue loss due to reduced sales volume
- Improve water usage data on bills, potentially including historic usage data, graphs, baseline computations and water budget and allocation data
- Complete classification of water customers (business, residential)

Mid Term Activities (within 18 months)

- Propose additional revenue increase
- Evaluate impact and effectiveness of initial rate modifications
- Develop proposal for water budget-based rate alternatives by December 2009
- Propose Water Public Benefits Charge (if allowed under Proposition 218 restrictions)
- Implement budget-based rates, if approved by City Council

Conservation Approach 2: Adopt Sustainable Water Supply Ordinances

This section consists of required or potential changes to several sections of the Pasadena Municipal Code, potentially including any or all of the following areas:

- Establish Permanent Water Waste Prohibitions, modeled after the Metropolitan Water District (MWD) model ordinance and coordinated with other local cities
- Adopt a Water Efficient Landscape Ordinance, consistent with the State Model Water Efficient Landscape Ordinance
- Evaluate potential effectiveness of a Fixture Replacement on Resale Ordinance and adopt if appropriate
- Adopt or modify ordinances as necessary and appropriate to facilitate gray water and rainwater capture and use
- Adopt appropriate water use limitations and mitigation measures associated with new development

Water Waste Prohibition Ordinance

Staff has developed a proposal for a new Water Waste Prohibition and Shortage Plan Ordinance to replace the existing Water Shortage Procedures Ordinance that was adopted in 1992. The proposed new ordinance includes year-round water waste prohibitions as well as additional prohibitions during times of supply shortages. Violations are to be enforced with defined penalties, up to and including discontinuation of service for repeat offenders.

Adoption of the proposed Water Waste Prohibition and Water Shortage Plan Ordinance is critical. BMP 13 requires that agencies adopt a permanent and year-round set of water waste prohibitions. In addition, MWD will require adoption of the MWD Model Water Waste Ordinance, or similar ordinance provisions, as a prerequisite to participating in MWD's public sector, turf removal, and enhanced conservation programs.

The proposed Water Waste Prohibition and Water Shortage Plan Ordinance is consistent with the MWD Model Water Waste ordinance and is intended to address the shortcomings identified with Pasadena's current Water Shortage Procedure Ordinance that it will replace. It includes a number of permanent water waste prohibitions as well as procedures that would be initiated in the event of a water shortage. It also includes a number of important exemptions that are described under the *Water Shortage Plan* section of this report. As suggested in the MWD Model Water Waste Ordinance, PWP will propose that water shortage rates be implemented during water shortages as part of the March-June 2009 water rate ordinance amendments.

Pasadena, Burbank & Glendale have formed a Water Shortage Task Force in order to explore common challenges and to work toward developing and adopting similar water restrictions and ordinance provisions. The proposed ordinance includes many common provisions, including specifics on watering days and timelines.

The proposed Water Waste Prohibition and Water Shortage Plan Ordinance is designed to fairly allocate the obligation to reduce consumption without being punitive. Usage thresholds for applicability of prohibitions, consideration of special circumstances, and an appeals process will be incorporated in the ordinance. Nothing in the ordinance would be intended to apply to situations where water is required to eliminate conditions that threaten public health, safety, or welfare.

Changing habits in this area will not impact indoor household consumption or basic hygiene, but rather, it focuses on eliminating wasteful practices. All customers and property owners would be charged with the task of reducing water waste by adopting the water conservation measures within the ordinance.

Water Efficient Landscape Ordinance

In accordance Assembly Bill 1881 (2006), Pasadena must adopt the State Model Water Efficient Landscape Ordinance no later than December 2009. The State Model Water Efficient Landscape Ordinance was adopted by the State in January 2009 and Pasadena's adoption will become mandatory by January 1, 2010. It applies to all new construction landscape projects and renovations of landscape areas equal to or greater than 2,500 square feet, and requires a permitting process, plan check and design review to ensure that projects comply with the mandated efficiency standards as prescribed by the State of California Department of Water Resources.

Key impacts of State Model Water Efficient Landscape Ordinance:

- Commercial, public agency projects, developer-installed single and multi-family projects, both new construction and/or renovated landscapes **≥2,500 square feet** require:
    - Permit from local authority
    - Plan check/design review – irrigation operating system, and design, plant materials, hardscape and watering schedule, must meet standards as prescribed in state ordinance
    - Site audit performed by a certified landscape irrigation auditor
    - Assignment of a Maximum Applied Water Allowance (MAWA) water budget
- Single and Multi-family new construction and/or renovated landscapes ≥5,000 square feet which are homeowner-provided or homeowner-hired landscaping projects are subject to the requirements listed above.
- Existing landscapes ≥ one acre are subject to irrigation audits and will be assigned a Maximum Applied Water Allowance (MAWA).
- All cities must establish and enforce a water waste prevention prohibition.

Fixture Replacement on Resale

In accordance with Action 1 of the Urban Environmental Accords, the Planning and Development Department and PWP are conducting a pilot field study to determine the current inventory of pre-1992 toilets. Reports on PWP's fixture replacement programs conducted since 1991 suggest that the City has achieved a saturation rate of approximately 90% for toilet and showerhead replacement. To validate the saturation rates, staff has initiated a field inventory of fixtures through existing Occupancy

Inspection (for sale houses) and Quadrennial Inspection (multi-family units) programs for a period of six months. During this time it is estimated that 800 single family homes and 2,500 multi-family units will be inspected.

The following is a list of action items to be initiated or completed by July 2009:

1. Planning and Development Department staff will initiate an inventory of residential water fixtures in residential units through the existing Occupancy Inspection Program and Quadrennial Inspection Program for a period of six months, and will forward the inspection results to PWP.
2. PWP will perform a cost/effectiveness analysis of the inventory findings to be incorporated in the updated Water Integrated Resource Plan.
3. If PWP determines substantial water savings can be achieved through a cost effective mandatory fixture replacement program, Planning and Development staff will partner with PWP in crafting the program requirements.
4. PWP will perform a cost/effectiveness analysis to determine if the existing residential water and energy audit programs can be expanded and identify the best approach for targeting high water and energy using customers.
5. PWP will enhance the water rebate programs to include fixtures that exceed code requirements, budget permitting.
6. PWP will develop a packet on water and energy conservation programs, rebate information, and educational materials for distribution to new residents and business customers at application of utility service.
7. PWP and Planning and Development will develop a strategy for reducing landscape related water usage for existing residential properties.

Based on preliminary results thus far from the inspection program, PWP anticipates supporting a Replacement on Resale ordinance as a cost-effective means to eliminate outstanding inventory of inefficient fixtures.

Gray Water and Rainwater Capture

Senate Bill 1258 (July 2008) directs the Department of Housing and Community Development to develop a more wide-ranging set of standards for gray water systems for both indoor and outdoor uses. These new standards will then be recommended to the California Building Standards Commission for adoption, likely in the 2010 timeframe.

Pasadena supports and encourages the safe use of gray water and rainwater recovery systems by PWP's customers for irrigation and appropriate indoor purposes. Specific requirements are under review by a cross-departmental working group that is expected to establish clear guidelines, permitting requirements, and propose any necessary ordinance changes by October 1, 2009. Similarly, PWP will evaluate potential demand reduction and appropriate cash incentives as part of this year's WIRP process. Delays in development and adoption of statewide gray water standards may adversely impact Pasadena's progress in this area.

New Development

Various elements of the Sustainable Water Supply Ordinances described above, as well as the water rate design, can have direct and indirect impacts on new development and redevelopment. For example, under the proposed Water Waste Prohibitions there will be new requirements for car washes, laundry facilities, restaurants, etc. Under the proposed Water Shortage Plan, no new permits would be issued during a Level 4 "Water Emergency." The new Landscape Ordinance will have various new requirements. An interdepartmental team is working on issues related to development, including:

- Review of Pasadena's General Plan (Land Use Element update, Open Space & Conservation Element) for consistency with the water conservation goals and the overall sustainability and Urban Environmental Accords goals;
- Developing recommendations for new and redevelopment requirements and contribution to water conservation goals;
- Review of project entitlement process (e.g., CEQA, master plans) to determine baseline water usage and recommendations for strengthening water conservation;
- Determine project thresholds for triggering water conservation practices; and
- Review applicable existing City codes for possible amendments.

The working group is expected to develop various recommendations between May and November 2009.

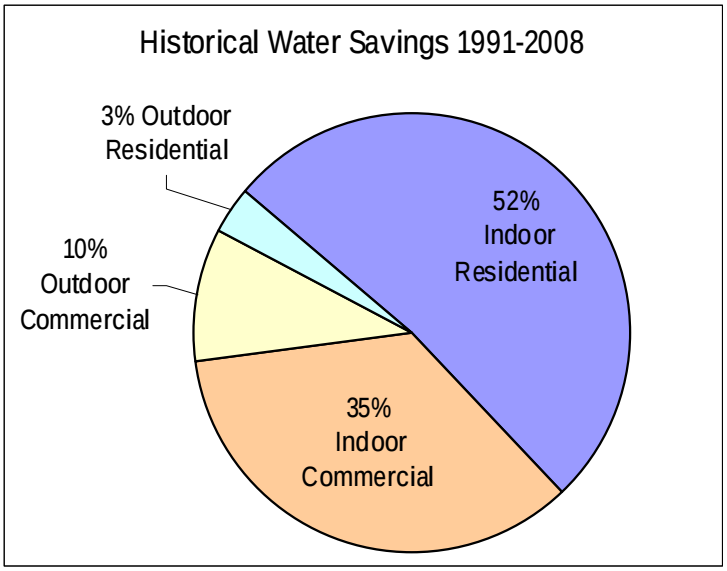
Conservation Approach 3: Incentives for Efficient Technology and Practices

PWP has provided a successful water conservation program for the past decade. The result of PWP's aggressive conservation efforts is an estimated aggregate water savings of 59,620 acre feet (program to date) as reported to the CUWCC and the Department of Water Resources.

Research and experience prove that cash incentives are an extremely effective means to encourage changes in customer's technology selections and behavior. PWP is one of the few utilities of its size that supplements MWD's rebates. PWP's high participation rate in rebate programs is a direct result of enhanced rebates.

PWP's targets for supplementing rebates are; new technologies, fixtures that exceed existing efficiency code requirements and devices that historically have not had a high level of participation.

The figure on the right depicts PWP's historical sources of water savings.



With PWP's focus now shifted to outdoor water use, a much higher percentage of future water savings is expected to result from irrigation and landscaping retrofits.

During the period of July 2008 through December 2008, PWP has saved an additional estimated 274 acre-feet as a result of the following rebate activity:

Residential Rebates		Commercial and Multi-Family Rebates	
438	High Efficiency Toilets	118	High Efficiency Toilets
219	High Efficiency Washers	21	High Efficiency Washers
4	Weather Based Irrigation Controllers	5	Weather Based Irrigation Controllers
10	Rotating Nozzles	263	Rotating Nozzles
		10	Zero Water Urinals
		303	Ultra Low Flow Toilets
		1	Pre-rinse Spray Head
		3	Cooling Tower Conductivity Controllers
		1	Waterbroom
		1	Synthetic Turf

All water use reduction estimates are based upon industry standards set for each measure. The State Department of Water Resources and Metropolitan Water District use these standards for calculating estimated water savings.

Pasadena's current water conservation programs include incentives for the above-listed fixtures, and will include turf reduction incentives when funding is available from MWD, Funding for the turf replacement program is part of a Prop 50 state grant and is currently frozen due to budget conditions.

PWP is investigating the potential to promote and incentivize additional innovative water efficient devices including:

- Rain Harvesting systems
- Rain shut-off controls for existing irrigation systems
- Drip irrigation systems
- Soil moisture sensors
- Flow restrictors – indoor faucets – (PWP is currently sponsoring a pilot program at Huntington Memorial Hospital)
- Pool covers – to avoid excess evaporation
- Packaged Gray Water systems

As MWD researches and adds new products to their rebate menu annually, PWP will participate and consider adding funding to encourage participation where cost effective and appropriate.

Conservation Approach 4: Direct Installation and Distribution

PWP targets specific market sectors for direct install and distribution programs, which overcome economic obstacles for market sectors such as small businesses and low income housing by providing retrofits at little or no cost to the customer. This approach facilitates retrofit activity in market sectors where there is historically a low participation rate in rebate programs. Distribution of low flow showerheads, aerators and leak detection tablets at community events is an effective method to achieve a wide scale placement of efficient devices throughout PWP's service territory and comply with BMP 2. Direct installation and distribution by PWP includes:

- Commercial, Industrial, Institutional (CII)
    - Waterbrooms
    - Rotating Sprinkler Nozzles
    - Pre-rinse spray heads
    - Leak detection tablets
    - Table Cards – Food Service
    - Linen Cards – Hospitality
- Residential & Multi-family
    - Ultra low flow showerheads - 2.0 gpm (current plumbing standard is 2.5 gpm)
    - Aerators

- Shower timers
- Leak detection tablets
- Hose shut off devices
- Soil Probes

As with the cash incentive programs, PWP will continue to review new technologies as potential candidates for including in the direct install program.

Conservation Approach 5: Water Use Audits

PWP will seek funding to expand its use of audits to identify cost-effective water conservation technologies and practices at customer facilities. Audits consist of the following activities:

- Assessment of current irrigation system
- Alternative irrigation methods i.e. drip
- Alternative plant palettes recommended
- Optimum watering schedule
- Water budget provided
- Leak detection
- Retrofit recommendations with water savings and payback analysis
- Summary of potential rebate information

In May 2008, PWP launched a pilot landscaping audit program. Two certified landscape professionals were hired to conduct outdoor water audits at no cost to the customer. The first phase of the program targeted the top 100 largest water commercial consumers. Of the 40 commercial properties and 3 residential customers contacted as of December 2008, 36 surveys have been completed. Recommended efficiency measures were implemented or are in progress at 29 of the participating sites. Water savings to date are estimated to be in the range of 245 – 255 acre feet annually. Multi-family and large residential properties over 1 acre are targeted in phase 2 of the program, an invitation to participate in the program was mailed to 250 property managers and homeowners associations during the week of January 17, 2009.

Residential audits, which currently focus primarily on indoor use, are provided upon request or due to a high bill complaint. These audits consist of:

- Assessment/inventory of fixtures/appliances
- Leak detection
- Showerhead and aerator distribution as budget permits
- Summary of potential rebate information

PWP will evaluate the potential expansion of residential audits and the feasibility of including landscaping review and/or information.

Conservation Approach 6: Water Use Information, Education & Outreach

Provide Water Usage Data

PWP recognizes that providing customers with meaningful and timely information about their water usage can lead to more efficient water usage. While PWP is currently working to provide improved water usage history on customers' bills, additional information about efficient water use for a given customer's particular circumstances is needed. Due to challenges of billing multiple services and desire to provide more timely information to customers, PWP will evaluate potential alternatives, such as web-based systems, to provide water usage graphs, baseline computations, and usage comparisons to customers. In addition to historical water consumption, water use targets by customer class will be provided with appropriate levels of use indicated in gallons, with suggested methods to conserve and use water efficiently.

Additional Education

PWP hired an irrigation professional to develop and conduct a series of bi-monthly efficient landscaping workshops for residential customers and professional landscapers. The workshops were launched in July 2008. The workshops are innovative in that they are not the typical PowerPoint presentations, they offer hands on demonstrations that include displays, irrigation equipment such as weather based irrigation controllers, drip irrigation and the latest technology in sprinkler heads. These innovative workshops are well attended and are now being replicated in Burbank and Glendale. Two new workshops are currently being developed; low water using trees and shrubs beginning March 2009 and alternatives to turf beginning in June 2009. Spanish translation is available and provided upon request. The workshops will be video taped and made available for viewing on PWP's website, and possibly KPAS, in spring 2009.

In addition to irrigation classes, PWP has continued to offer California Friendly Landscaping classes sponsored by MWD, co-sponsored (with Burbank and Glendale) a landscaping workshop for Homeowners Associations and Property Managers and hosted a Native Plants seminar conducted by a renowned horticulturist. PWP has offered 17 landscaping classes since December 2007, a total of 520 PWP customers have participated in the workshops. PWP partnered with a local landscaping supply house to host a workshop for landscapers that was conducted in English and Spanish. Fifty six landscapers attended which exceeded the goal of forty five attendees.

PWP proposes that the City adopt a certification program that would encourage participation in efficiency training courses for professional landscapers and plumbers. The Green Plumbers Organization and EPA Watersense both offer certification programs in which Pasadena can participate and promote.

Outreach Plan

PWP has aggressively pursued a broad range of approaches to build awareness, change behaviors and guide customers to practice water efficiency and conservation. For change to occur, PWP recognizes that all facets of its population must be educated about the importance of adapting water usage to scarcity conditions by adopting new behavioral practices. PWP intends to reinforce the message that there will be an

adequate water supply if all citizens make a few simple and necessary changes in their use of water.

PWP's next advertising campaign will be guided and driven by the conservation goals and ordinances adopted by the City Council, strategies or restrictions adopted by MWD, evolving water supply conditions, and input from various stakeholders, all in coordination with other local utilities. PWP anticipates that the key messages will continue to revolve around the following themes:

- Water waste is intolerable
- Water Shortage is imminent
- Proper irrigation drastically reduces waste
- Make habit changes now – lifelong changes are critical
- Alerts as changes are projected: water supply issues, ordinances, restrictions, rates
- Promote rebate programs, events & work shops

Before launching the next advertising campaign, PWP will form a focus group in March 2009 to obtain feedback from the community regarding effective messaging, attitudes about water conservation and determine levels of awareness regarding the water shortage. The Pasadena, Burbank & Glendale Water Shortage Task Force is working to create consistent regional messages and water use guidelines or restrictions. PWP is currently leading the development of a joint ad campaign with Burbank and Glendale that will carry a strong message against over-watering. The intention is not for this campaign to replace other outreach, but rather to supplement to a broader public education campaign strategy that will address both near term critical water shortage issues and the long term behaviors.

Beginning in April 2009, PWP will be stepping up its customer recognition efforts. PWP currently publishes a customer spotlight in a monthly business newsletter called "The Conduit" that features companies that have taken significant steps to make their businesses more water and energy efficient. In order to enhance customer recognition, PWP plans to honor commercial customers that are implementing significant water efficiency measures at their facilities with a water efficiency award. PWP will be soliciting nominations for honorees in the monthly newsletter. The awards will be presented at a public ceremony and listed on the PWP website and in local newspapers.

An interdepartmental team is discussing the development of a city-wide "Green Award" that acknowledges customer achievements water and energy conservation and waste reduction.

Likewise, the residential recognition program will be stepped up with a focus on outdoor water use. The program will include depictions of residential customer's attractive, water-efficient landscape projects and offer awards to customers that transform their yards from high water using plants and lawns into California Friendly landscaping. Award recipients will be recognized publicly as "Water Heroes". Recognition will include

a public award ceremony, a feature in the monthly newsletter In Focus and signage for their newly transformed yard.

During the period between November 2007 and January 2009, PWP participated in 71 outreach events. The range of outreach varies widely and includes large city-sponsored community events, business forums, town hall meetings, presentations to homeowners associations and other organizations. PWP sponsored two major water events for students between the ages of 5-11: “World Water Day” and “Water Awareness Day”. Both events utilized interactive displays depicting ways to save water. Educational materials relating to water conservation and the Water Shortage Ordinance are provided at all events and meetings.

The following is an outline of PWP’s varied strategies and methodology:

- Identify and Target Audiences
    - Rate Payers
        - Residential Customers
        - Commercial, Institutional & Multi-family Customers
    - Stakeholders
        - Business Districts & Associations
        - Neighborhood Associations
        - Homeowners Associations
        - Service & Non-Profit Organizations
        - Retailers
        - Professional Landscapers
        - Industry Organizations i.e. Green Plumbers, EPS Watersense
    - Influencers
        - City Council and other elected officials
        - Commissions
        - Environmental Organizations
        - News Media
        - Other utilities & local cities

In December 2007, PWP developed a website dedicated to water conservation and efficiency www.PasadenaSavesWater.com. The website offers visitors an opportunity to report water waste and get information about rebate programs, water conservation tips, an indoor water use survey and a customized watering schedule for irrigation. Other methods of messaging include:

- Bill inserts and direct mail
- Press releases
- Monthly Newsletters –
    - In Focus (Residential)
    - The Conduit (Business)
    - Currents (PWP employees)
- Welcome kits for new customers – distribution began in February 2009

- Focus group(s) – Form first group in March 2009
    - Ascertain level of awareness with community regarding water issues
    - Feedback to create effective messaging campaign(s)
    - Obtain input on proposed rebate programs
- Follow up messaging – "How are we doing?" feedback on conservation efforts
- Presentations & demonstrations provided for:
    - Community Events
    - Business Forums
    - Neighborhood Association Meetings
    - Homeowners Association Meetings
    - Town Hall Meetings
    - Non-profit & Service Organizations
    - Schools K-12
- Newspapers – Local daily and weekly editions
- Magazines
- Local access television
- Radio Spots - KPCC
- Video monitors – Permit Center
- Collaboration with landscaping professionals, retailers and organizations such as Green Plumbers, EPA Watersense and California Landscape Contractors Association (CLCA)

Attachment B

WATER WASTE PROHIBITION AND WATER SHORTAGE PLAN
PROPOSED ORDINANCE PROVISIONS

Section I. Title:

This chapter will be known as the City of Pasadena Water Waste Prohibition and Water Shortage Plan

Section II. Findings:

a. A reliable minimum supply of potable water is essential to the public health, safety and welfare of the people and economy of Pasadena and the southern California region.

b. Southern California is a semi-arid region and is largely dependent upon imported water supplies. A growing population, climate change, environmental concerns and other factors in other parts of the state and western United States make the region highly susceptible to water supply reliability issues.

c. Careful water management that includes active water conservation measure not only in times of drought, but at all times, is essential to ensure a reliable minimum supply of water to meet current and future water supply needs.

d. Article X, Section 2 of the California Constitution declares that the general welfare requires that water resources be put to beneficial use, waste or unreasonable use or unreasonable method of use of water be prevented and conservation of water be fully exercised with a view to the reasonable and beneficial use thereof.

e. Article XI, Section 7 of the California Constitution declares that a city or county may make and enforce within its limits all local, police, sanitary and other ordinances and regulations not in conflict with general laws.

f. California Water Code Section 375 authorizes water suppliers to adopt and enforce a comprehensive water conservation program to reduce water consumption and conserve supplies.

g. The adoption and enforcement of a water conservation and supply shortage program is necessary to manage the City of Pasadena's potable water supply in the short and long-term and to avoid or minimize the effects of drought and shortage within the City of Pasadena and its service territory. Such program is essential to ensure a reliable and sustainable minimum supply of water for the public health, safety and welfare.

Section III. Declaration of Purpose and Intent:

a. The purpose of this chapter is to establish a water conservation and supply shortage program that will reduce water consumption within the City of Pasadena

and its service territory through conservation, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water and maximize the efficient use of water within the City of Pasadena and its service territory to avoid and minimize the effect and hardship of water shortage to the greatest possible extent.

b. This chapter establishes permanent water waste conservation standards intended to alter behavior related to waste use efficiency at all times and further establishes four levels of water supply shortage response actions to be implemented during times of declared water shortage or declared water shortage emergency, with increasing restrictions on water use in response to worsening drought or emergency conditions and decreasing supplies.

Section IV. Definitions:

a. The following words and phrases whenever used in this chapter have meaning defined in this section:

1. “Person” means any individual person or persons, corporation, public or private entity, governmental agency or institution, including all agencies and departments of the City of Pasadena, or any other user of water provided by the department.

2. “Department” means the City of Pasadena Water and Power Department.

3. “Landscape irrigation system” means an irrigation system with pipes, hoses, spray heads, or sprinkling devices that are operated by hand or through an automated system.

4. “Large landscape areas” means a lawn, landscape, or other vegetated area, or combination thereof, equal to or greater than one (1) acre of irrigable land.

5. “Single pass cooling systems” means equipment where water is circulated only once to cool equipment before being disposed.

6. “Potable water” means water which is suitable for drinking.

7. “Recycled water” means the reclamation and reuse of non-potable water for beneficial use as defined in Title 22 of the California Code of Regulations.

8. “Billing unit” means the unit of water used to apply water rates for purposes of calculating water charges for a person’s water usage and equals one hundred cubic feet (HCF) or 748 gallons.

WATER WASTE PROHIBITION AND WATER SHORTAGE PLAN
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Section V. Application:

a. The provisions of this chapter apply to any person in the use of any potable water provided by the Department.

b. The provisions of this chapter do not apply to uses of water necessary to protect public health and safety or for essential government services, such as police, fire and other similar emergency services.

c. The provisions of this chapter do not apply to the use of recycled water.

d. The provisions of this chapter do not apply to the use of water by commercial nurseries and commercial growers to sustain plants, trees, shrubs, crops or other vegetation intended for commercial use.

e. This chapter is intended solely to further the conservation and efficient use of water. It is not intended to implement any provision of federal, state or local statues, ordinances or regulations relating to protection of water quality or control of drainage or runoff. Refer to the local jurisdiction or Regional Water Quality Control Board for information on any storm water ordinances and storm water management plans.

Section VI. Permanent Water Conservation Requirements – Prohibition against Waste:

The following water conservation requirements are effective at all times and are permanent. Violations of this section will be considered waste and an unreasonable use of water.

a. **Limits on Watering Hours:** Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited between the hours of 9:00 a.m. and 6:00 p.m. on any day, except by use of a hand-held bucket or similar container, a hand-held hose equipped with a water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system.

b. **No Watering during Periods of Rain:** Watering or irrigating of lawn, landscape or other vegetated area during periods of rain is prohibited.

c. **No Excessive Water Flow or Runoff :** Watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter or ditch is prohibited.

d. **No Washing Down Hard or Paved Surfaces:** Washing down hard or paved surfaces, including but not limited to sidewalks, walkways, driveways, parking areas, tennis courts, patios or alleys, is prohibited except were necessary to alleviate safety or sanitary hazards and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a water shut-off nozzle or device, a low-volume,

high-pressure cleaning machine equipped to recycle any water used, or a low-volume high-pressure water broom.

e. **Obligation to Fix Leaks, Breaks or Malfunctions:** Excessive use, loss or escape of water through breaks, leaks or other malfunctions in the water user's plumbing, or distribution system for any period of time after such escape of water should have reasonably been discovered and corrected and in no event more than seven (7) day of receiving notice from the Department, is prohibited.

f. **Re-circulating Water Required for Water Fountains and Decorative Water Features:** Operating a water fountain or other decorative water feature that does not use re-circulated water is prohibited.

g. **Limits on Washing Vehicles:** Using potable water to wash a vehicle, including but not limited to any automobile, truck, van, bus, motorcycle, boat or trailer, whether motorized or not is prohibited, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a water shut-off nozzle or device. This subsection does not apply to any commercial car washing facility.

h. **Drinking Water Served Upon Request Only:** Eating or drinking establishments, including but not limited to a restaurant, hotel, café, cafeteria, bar or other public place where food and drinks are sold, served or offered for sale, are prohibited from providing drinking water to any person unless expressly requested.

i. **Restaurants Required to Use Water Conserving Dish Wash Spray Valves**: Food preparation establishments, such as restaurants, cafes and cafeterias, are prohibited from using non-water conserving dish wash spray valves.

j. **Commercial Lodging Establishments Must Provide Guests Option to Decline Daily Linen Services:** Hotels, motels and other commercial lodging establishments must provide customers the option of not having towels and linens laundered daily. Commercial lodging establishment must prominently display notice of this option in each bathroom using clear and easily understood language.

k. **No Installation of Single Pass Cooling Systems:** Installation of single pass cooling systems is prohibited in buildings requesting new water service.

l. **No Installation of Non-recirculating equipment in Commercial Car Wash and Laundry Systems:** Installation of non-recirculating water systems is prohibited in new commercial conveyor car wash and new commercial laundry systems.

m. **Commercial Car Wash Systems:** Effective on July 1, 2011, all commercial conveyor car wash systems must have installed operational re-circulating water systems or must have secured a waiver of this requirement from the City of Pasadena.

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Section VII. Water Shortage Plan Implementation:

The Department shall monitor and evaluate the projected supply and demand for water by its customers. In the event of a water shortage, the Department shall recommend to the City Council such water shortage plan or plans as provided in this chapter which permit the Department to prudently plan for and supply water to its customers. Prior to implementation of a water shortage plan as provided in this chapter, the City Council shall hold a public hearing for the purposes of determining: (i) whether a water shortage exists; (ii) the Water Conservation Target that will be used for the purposes of calculating Water Shortage Rates; and, (iii) which Level of Water Supply Shortage as provided in this chapter which it deems appropriate to address the water shortage. Notice of the time and place of said public hearing shall be published not less than 10 days before the hearing in a newspaper of general circulation within the city. The City Council may, upon finding that a water shortage exists, order implementation of such water shortage plan or plans as provided in this chapter which it deems appropriate to address the water shortage. Said order shall be made by public proclamation and shall become effective immediately upon such publication. At any time during the water shortage period, the city council may discontinue any plan or may implement another plan as provided in this chapter. Upon a finding by the City Council that a water shortage no longer exists, any water shortage plan then in effect shall terminate.

Section VIII. Level 1 Water Supply Shortage:

a. A level 1 Water Supply Shortage exists when the City Council determines in its sole discretion, that due to drought or other water supply conditions, a water supply shortage or threatened shortage exists and a consumer demand reduction is necessary to make more efficient use of water and appropriately respond to existing water conditions. Upon the declaration by the City Council of a Level 1 Water Supply Shortage condition, the Department will implement the mandatory Level 1 conservation measures identified in this section.

b. **Additional Water Conservation Measures:** In addition to the prohibited uses of water identified in Section VI, the following water conservation requirements apply during a declared Level 1 Water Supply Shortage:

    1. **Limits on Watering Days:** Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to three (3) days per week from April 1 through October 31, and no more than one (1) day per week from November 1 through March 31, on a schedule established and posted by the Department. This provision does not apply to landscape irrigation zones that exclusively use very low flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour. This provision also does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a

water shut-off nozzle or device or for very short periods of time for the express purpose of adjusting or repairing an irrigation system.

2. **Obligation to Fix Leaks, Breaks or Malfunctions:** All leaks, breaks or other malfunctions in the water user's plumbing or distribution system must be repaired within seventy-two (72) hours of notification by the Department, unless other arrangements are made with the Department.

Section IX. Level 2 Water Supply Shortage:

a. A level 2 Water Supply Shortage exists when the City Council determines in its sole discretion, that due to drought or other water supply conditions, a water supply shortage or threatened shortage exists and a consumer demand reduction is necessary to make more efficient use of water and appropriately respond to existing water conditions. Upon the declaration by the City Council of a Level 2 Water Supply Shortage condition, the Department will implement the mandatory Level 2 conservation measures identified in this section.

b. **Additional Water Conservation Measures:** In addition to the prohibited uses of water identified in Section VI and VII, the following water conservation requirements apply during a declared Level 2 Water Supply Shortage:

1. **Limits on Watering Days:** Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to two (2) days per week from April 1 through October 31, and no more than one (1) day per week from November 1 through March 31, on a schedule established and posted by the Department This provision does not apply to landscape irrigation zones that exclusively use very low flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour. This provision also does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a water shut-off nozzle or device or for very short periods of time for the express purpose of adjusting or repairing an irrigation system.

2. **Obligation to Fix Leaks, Breaks or Malfunctions:** All leaks, breaks or other malfunctions in the water user's plumbing or distribution system must be repaired within forty-eight (48) hours of notification by the Department unless other arrangements are made with the Department.

3. **Limits on Filling Ornamental Lakes or Ponds:** Filling or re-filling ornamental lakes or ponds is prohibited, except to the extent needed to sustain aquatic life, provided that the animals have been actively managed within the water feature prior to declaration of a supply shortage level under this ordinance.

4. **Limits on Washing Vehicles:** Using potable water to wash or clean a vehicle, including but not limited to; any automobile, truck, van, bus, motorcycle, boat or trailer, whether motorized or not, is prohibited except by use of a hand-held hose equipped with a self-closing water shut-off nozzle or device, by high pressure/low volume wash systems, or at a commercial car washing facility that utilizes a re-circulating water system to recapture or reuse water.

Section X. Level 3 Water Supply Shortage:

a. A level 3 Water Supply Shortage exists when the City Council determines in its sole discretion, that due to drought or other water supply conditions, a water supply shortage or threatened shortage exists and a consumer demand reduction is necessary to make more efficient use of water and appropriately respond to existing water conditions. Upon the declaration by the City Council of a Level 3 Water Supply Shortage condition, the Department will implement the mandatory Level 3 conservation measures identified in this section.

b. **Additional Water Conservation Measures:** In addition to the prohibited uses of water identified in Section VI, VIII and IX, the following water conservation requirements apply during a declared Level 3 Water Supply Shortage:

    1. **Limits on Watering Days:** Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to one (1) day per week on a schedule established and posted by the Department. This provision does not apply to landscape irrigation zones that exclusively use very low flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour. This provision also does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a water shut-off nozzle or device or for very short periods of time for the express purpose of adjusting or repairing an irrigation system.

    2. **Obligation to Fix Leaks, Breaks or Malfunctions:** All leaks, breaks or other malfunctions in the water user's plumbing or distribution system must be repaired within thirty-six (36) hours of notification by the Department, unless other arrangements are made with the Department.

Section XI. Level 4 Water Supply Shortage – Emergency Condition:

a. A level 4 Water Supply Shortage condition is also referred to as an "Emergency" condition. A Level 4 condition exists when the City Council declares a water shortage emergency and notifies its residents and businesses that a significant reduction in consumer demand is necessary to maintain sufficient water supplies for public health and safety. Upon the declaration by the City Council of a Level 4 Water

Supply Shortage condition, the Department will implement the mandatory Level 4 conservation measures identified in this section.

b. **Additional Water Conservation Measures:** In addition to the prohibited uses of water identified in Section VI, VIII, IX and X, the following water conservation requirements apply during a declared Level 4 Water Supply Shortage Emergency:

1. **No Watering or Irrigating:** Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited. This restriction does not apply to the following categories of use, unless the Department has determined that recycled water is available and may be applied to the use:

   i. Maintenance of vegetation including trees and shrubs, or vegetation intended for consumption, that are watered using a hand-held bucket or similar container, hand-held hose equipped with a self-closing shut-off nozzle or device;

   ii. Maintenance of existing landscape necessary for fire protection;

   iii. Maintenance of existing landscape for soil erosion control;

   iv. Maintenance of plant materials identified to be rare or essential to the well-being of protected species;

   v. Maintenance of landscape within active public parks and playing fields, school grounds, golf course green and day care centers, provided that such irrigation does not exceed two (2) days per week according to the schedule established in Section VIII(b)(1).

   vi. Actively irrigated environmental mitigation projects.

2. **Obligation to Fix Leaks, Breaks or Malfunctions:** All leaks, breaks or other malfunctions in the water user's plumbing or distribution system must be repaired within twenty-four (24) hours of notification by the Department, unless other arrangements are made with the Department.

3. **Limits on Filling Residential Swimming Pools & Spas:** Refilling of more than one foot and initial filling of residential swimming pools or outdoor spas with potable water is prohibited.

4. **No New Potable Water Service:** Upon declaration of a Level 4 Water Supply Shortage Emergency condition, no new potable water service will be provided, no new temporary meters or permanent meters will be provided and no statements of immediate ability to serve or provide potable water service (such

as; will-serve letters, certificates or letters of availability) will be issued, except under the following circumstances:

i. A valid, unexpired building permit has been issue for the project; or
ii. The project is necessary to protect the public health, safety and welfare; or
iii. The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the Department.

This provision does not preclude the resetting or turn-on of meters to provide continuation of water service or the restoration of service that has been interrupted for a period of one year or less.

5. **Discontinue Service:** The Department, in its sole discretion, may discontinue service to consumers who willfully violate provisions of this section.

6. **No New Annexations:** Upon the declaration of a Level 4 Water Supply Shortage Emergency condition, the City Council will suspend consideration of annexations to its service area. This subsection does not apply to boundary corrections and annexations that will not result in any increased use of water.

Section XII. Customer Water Conservation Reports:

The Department may, by written request, require all customers using 25,000 billing units per calendar year or more to submit a water conservation plan and to submit quarterly progress reports on such plan. The conservation plan must include recommendations for increased water savings and the reports must include progress to date on implementation of such recommendations.

Section XIII. Hardship Waiver

a. Undue and Disproportionate Hardship: If, due to unique circumstances, a specific requirement of this chapter would result in undue hardship to a person using water or to property upon which water is used, this disproportionate to the impacts to water users generally or to similar property or classes of water users, then the person may apply for a waiver to the requirements as provided in this section.

b. Written Finding: The waiver may be granted or conditionally granted only upon a written finding of the existence of facts demonstrating an undue hardship to a person using water or to property upon which water is used, this is disproportionate to the impacts to water users generally or to similar property or classes of water use due to specific and unique circumstances of the user or the user's property.

1. **Application for Waiver:** Application for a waiver from provisions described in Sections VI, VIII, IX, X and XI, must be filed in accordance with procedures set by the Department deemed necessary to resolve such application for waiver. In

determining whether to grant a waiver and the nature of that waiver, all factors relevant to the customer's water usage will be taken into consideration. A processing fee for such applications may be established offset process costs incurred by the Department and to discourage frivolous or unwarranted applications.

2. **Supporting Documentation:** The application must be accompanied by photographs, maps, drawings and any other relevant information, including a written statement of the applicant.

3. **Required Findings for Waiver:** An application for a waiver will be denied unless the Department or its Agent finds, based on the information provided in the application, supporting documents, or such additional information as may be requested and on water use information for the property as shown by the records of the Department, all of the following:

    i. That the waiver does not constitute a grant of special privilege inconsistent with the limitations upon other residents and businesses;

    ii. That because of special circumstances applicable to the property or its use, the strict application of this chapter would have a disproportionate impact on the property or use that exceeds the impacts to residents and businesses generally;

    iii. That the authorizing of such waiver will not be of substantial detriment to adjacent properties and will not materially affect the ability of the City of Pasadena to effectuate the purpose of this chapter and will not be detrimental to the public interest; and

    iv. That the condition or situation of the subject property or the intended use of the property for the waiver is sought is not common, recurrent or general in nature.

4. **Approval Authority:** The General Manager (*or designee)* of the Department must act upon any completed application no later than ten (10) days after submittal and may approve, conditionally approve or deny the waiver. The applicant requesting the waiver must be promptly notified in writing of any action taken. Unless specified otherwise at the time a waiver is approved, the waiver will apply to the subject property during the period of the mandatory water supply shortage condition. The decision of the General Manager *(or designee)* will be final.

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Section XIV. Violations and Penalties – water meters less than 1-1/2":

a. **Violation:** It shall be a violation to fail to comply with any of the provisions of the ordinance

b. **Penalties:** Monetary penalties imposed under this section shall be collected by adding the same to the customer's water bill and shall be payable at the same time and in the same manners as such bills or by such other method of collection and payment as established by the Department. Penalties for failure to comply are as follows:

    1. **First Violation:** The Department will issue a written notice of violation and deliver a copy of this ordinance by mail. Said notice shall contain, in addition to the facts of the violation, a statement of the possible penalties for each violation and a statement informing the customer of his right to a hearing on the merits of the alleged violation. Notice of violation shall be sent through regular mail to the address at which the customer is billed by the Department.

    2. **Second Violation:** A second violation within the preceding twelve (12) calendar months is punishable by a fine not to exceed one hundred dollars ($100).

    3. **Third Violation:** A third violation within the preceding twelve (12) calendar months is punishable by a fine not to exceed two hundred dollars ($200).

    4. **Fourth Violation:** A fourth violation within the preceding twelve (12) calendar months is punishable by a fine not to exceed three hundred, fifty dollars ($350).

    5. **Fifth and Subsequent Violations:** A fifth and any subsequent violation is punishable by a fine not to exceed five hundred ($500).

        i. **Water Flow Restrictor:** In addition to any fines, the Department may install a water flow restrictor device of approximately one gallon per minute capacity for services up to one and one-half meter size and comparably sized restrictors for larger services after written notice of intent to install a flow restrictor for a minimum of forty eight (48) hours.

    6. **Discontinuing Service:** In addition to any fines and the installation of a water flow restrictor, the Department may disconnect a customer's water service for willful violations of mandatory restrictions in this chapter.

Section XV. Violations and Penalties – water meters 1-1/2" or larger:

a. **Violation:** It shall be a violation to fail to comply with any of the provisions of the ordinance.

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b. **Penalties:** Monetary penalties imposed under this section shall be collected by adding the same to the customer's water bill and shall be payable at the same time and in the same manners as such bills or by such other method of collection and payment as established by the Department. Penalties for failure to comply are as follows:

1. **First Violation:** The Department will issue a written notice of violation and deliver a copy of this ordinance by mail. Said notice shall contain, in addition to the facts of the violation, a statement of the possible penalties for each violation and a statement informing the customer of his right to a hearing on the merits of the alleged violation. Notice of violation shall be sent through regular mail to the address at which the customer is billed by the Department.

2. **Second Violation:** A second violation within the preceding twelve (12) calendar months is punishable by a fine not to exceed two hundred dollars ($200).

3. **Third Violation:** A third violation within the preceding twelve (12) calendar months is punishable by a fine not to exceed four hundred dollars ($400).

4. **Fourth Violation:** A fourth violation within the preceding twelve (12) calendar months is punishable by a fine not to exceed seven hundred dollars ($700).

5. **Fifth and Subsequent Violations:** A fifth and any subsequent violation is punishable by a fine not to exceed one thousand ($1,000).

    i. **Water Flow Restrictor:** In addition to any fines, the Department may install a water flow restrictor device of approximately one gallon per minute capacity for services up to one and one-half meter size and comparably sized restrictors for larger services after written notice of intent to install a flow restrictor for a minimum of forty eight (48) hours.

6. **Discontinuing Service:** In addition to any fines and the installation of a water flow restrictor, the Department may disconnect a customer's water service for willful violations of mandatory restrictions in this chapter.

Section XVI. Cost of Flow Restrictor and Disconnecting Service:

A person or entity that violates this ordinance is responsible for payment of the Department's charges for installing and/or removing any flow restricting device and for disconnecting and/or reconnecting service per the Department's schedule of charges in effect. The charge for installing and/or removing any flow restricting device must be paid to the Department before the device is removed. Nonpayment will be subject to the

same remedies as nonpayment of basic water service billing. This applies to both Section XIV and Section XV.

Section XVII. Notice and Hearing:

a. The Department will issue a Notice of Violation by mail or personal delivery at least ten (10) days before taking enforcement action. Such notice must describe and provide evidence of the violation and the date by which corrective action must be taken. A customer may appeal the Notice of Violation by filing a written notice of appeal with the Department no later than the close of business on the day before the date scheduled for enforcement action. Any Notice of Violation not appealed within the allotted time period will be final. Upon receipt of a timely appeal, a hearing on the appeal will be scheduled and the Department will mail written notice of the hearing date to the customer at least ten (10) days before the date of the hearing.

b. Pending a receipt of a written appeal or pending a hearing pursuant to an appeal, the Department may take appropriate steps to prevent the unauthorized use of water as appropriate to the nature and extent of the violations and the current declared water Level condition.

Section XVIII. Severability:

If any section, subsection, sentence, clause or phrase in this chapter is for any reason held invalid, the validity of the remainder of the chapter will not be affected. The City Council hereby declares it would have passed this chapter and each section, subsection, sentence, clause or phrase thereof irrespective of the fact that one or more sections, subsections, sentences, clauses or phrases or is declared invalid.

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Proposed Water Conservation Group Staffing

Water Conservation Program Manager (MA V level) – Overall program management, internal & MWD interface, PR, interdepartmental coordination, manage contractors

Water Conservation Program Analyst (MA II or Program Coordinator III) Usage/customer analysis; conservation program design, development, and implementation; water audit coordination/analysis; IRP/UWMP support (demand-side water supply and conservation), etc.

Water Conservation Program Support 1 FTE (SA II/III or Program Coordinator I) - Reporting, data management, rebate coordination, events, classes, enforcement processing and activities, phone support, water waste hotline support

Field Enforcement 2-3 FTE's permanent and/or limited-duration FTE's for water waste enforcement. If permanent, these could be trained to perform simple water and power audits and other program assistance

Potential alternative field enforcement resources:

- Meter Services – Field Crews
- Code compliance (*note: 2 positions have been defunded for FY2010 – we could fund these*)
- Parking enforcement

Additional PWP Staffing Requirements

Billing Department: Add (1) CSRI FTE – phone support for influx of calls due to rate changes, water restrictions and processing of violation notices.

Additional Resources

Arbitrator: Independent party(s) appointed to hear and rule on water waste violation appeals – contract resource or volunteer position

Other associated program/enforcement costs include:

- 2 New Vehicles for field support
- Digital Cameras for field staff
- Outreach, advertising, events
- Printing/mailing – water shortage and water waste prohibition notification, violation notices