



Agenda Report

June 13, 2016

To: Honorable Mayor and City Council
Through: Municipal Services Committee (May 10, 2016)
From: Water and Power Department
Subject: **ADOPTION OF THE 2015 URBAN WATER MANAGEMENT PLAN**

RECOMMENDATION:

It is recommended that the City Council:

1. Find that the 2015 Urban Water Management Plan ("UWMP") is exempt from the California Environmental Quality Act pursuant to State CEQA Guidelines Section 15282(v), which exempts from CEQA the preparation and adoption of urban water management plans pursuant to the Water Code; and
2. Adopt a resolution approving the 2015 UWMP immediately following the public hearing and incorporating any changes the Council deems necessary.

MUNICIPAL SERVICES COMMITTEE RECOMMENDATION:

On May 10, 2016, the Municipal Services Committee ("MSC") recommended that the City Council adopt a resolution approving the 2015 UWMP.

ENVIRONMENTAL ADVISORY COMMISSION RECOMMENDATION:

On May 10, 2016, the Environmental Advisory Commission ("EAC") recommended that the City Council adopt a resolution approving the 2015 UWMP.

EXECUTIVE SUMMARY:

As an urban water supplier, Pasadena Water and Power ("PWP") has prepared the 2015 UWMP to comply with the requirements of the California Water Code and demonstrate its long-term water supply and resource planning. The 2015 UWMP

complies with applicable California Law and must be adopted by the City of Pasadena and submitted to the State Department of Water Resources by July 1, 2016.

The 2015 UWMP includes an analysis of PWP's long-term supply and demand planning under three categories of hydrologic conditions. The reliability assessment demonstrates that with supplies from 1) groundwater based on PWP's decreed rights from the Raymond Basin, 2) imported water as made available by the Metropolitan Water District, and 3) the phased implementation of the Pasadena Non-Potable Water Project, there will be no shortage of supplies to meet PWP's projected demands. Furthermore, PWP will continue implementing its comprehensive water conservation program, which includes active conservation, to reduce water demands thus increasing supply reliability.

Additionally, Pasadena's "Water Waste Prohibitions and Water Supply Shortage Plans" (Pasadena Municipal Code Chapter 13.10) establishes four levels of increasing restrictions in response to water supply shortages and provides an additional means of maintaining an adequate water supply to protect public health and safety.

BACKGROUND:

Regulatory Requirements

To ensure adequate water supply planning, the Urban Water Management Planning Act (California Water Code, Sections 10610 through 10656) requires that every urban water supplier that provides water to more than 3,000 customers or supplies more than 3,000 acre-feet ("AF") of water annually shall prepare and adopt an UWMP every five years. After adoption, the UWMP must then be submitted to the State Department of Water Resources ("DWR").

The California Water Code ("CWC") specifies the elements that must be addressed in the UWMP, and requires that urban water suppliers make the UWMP available for public inspection and hold a public hearing prior to its adoption.

In addition, the State Legislature passed the Water Conservation Act of 2009 as part of the Seventh Extraordinary Session, referred to as Senate Bill X7-7 ("SB X7-7"). This Act requires each urban retail water supplier to establish a water use target that would result in statewide per capita savings of 20% by the year 2020, and an interim 10% reduction in daily per capita water use by the year 2015. Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SBX7-7 in order to be eligible for State water grants and loans. Compliance is verified by DWR's review of the SB X7-7 Verification Form submitted with an agency's 2015 UWMP after adoption.

2015 UWMP Overview

In 2015, PWP supplied 27,326 AF of water to serve its 37,355 customers, qualifying PWP as an "urban water supplier" under the definition of the Urban Water Management

Planning Act. PWP last fulfilled the requirement for an UWMP with the City Council's adoption of the 2010 UWMP on June 6, 2011. PWP has now prepared its 2015 UWMP to be adopted by City Council after conducting a public hearing and incorporating into the plan any changes the City Council deems necessary.

The UWMP contains information describing the supply service area, water supplies and demands, demand management measures, water supply reliability, water shortage contingency plan, and climate change impacts over a twenty-year planning horizon. DWR has provided guidance on the framework of the UWMP for addressing California Water Code requirements, including a checklist, with the publication of the "2015 UWMP Guidebook for Urban Water Suppliers." PWP retained a consultant, RMC Water and Environment, for assistance in preparing the UWMP, and the 2015 UWMP closely follows the recommended organization outlined in the Guidebook to ensure full compliance with the law.

Water supply planning is one of PWP's essential functions. The preparation of the UWMP, therefore, not only fulfills a regulatory obligation, but also allows PWP to inform the public of the long-term water supply and resource planning that is conducted to ensure adequate water supplies for the demands of an area encompassing over 23 square miles and a population of over 160,000.

Water Integrated Resource Plan

In 2011, PWP took a proactive approach to addressing critical water supply challenges and completed the Water Integrated Resources Plan ("WIRP"). The WIRP provides a long-term water resource strategy through the year 2035 and was developed using a participatory planning process with input from a dedicated Stakeholder Advisory Committee and the public at large. It recommended a portfolio of supply and conservation options that was determined to be the best strategy for meeting current and future water needs.

The WIRP served as the primary source document for preparation of the 2010 UWMP, and continues to provide policy guidance laying the basic foundation for the 2015 UWMP. Its recommendations for a water resource portfolio provide a sustainable balance between environmental benefits, reliability, affordability, efficiency of water use, and maintaining Pasadena's quality of life. The objectives, strategies, and recommended projects in the WIRP remain relevant even as PWP faces the ongoing challenges of a persistent drought.

The 2011 WIRP prioritized projects with the most benefit at the lowest cost for the near-term. Some of the major elements of the recommended strategy are currently being developed and implemented. The WIRP also recognized that as a long-term plan, unforeseen circumstances may unfold that would affect the assumptions used for prioritizing future projects. Therefore, PWP anticipates updating the WIRP to address changes to the original planning criteria. Similar to the process for the 2010 UWMP, the update would be of most benefit if prepared preceding PWP's 2020 UWMP so the results could be used to inform the analysis included in the UWMP.

Water Supply Reliability

Among the subjects discussed in the 2015 UWMP are Pasadena's water demands and supplies, both current and projected. PWP's historical water demands have varied from year to year mainly attributed to annual variations in weather, and also to changes in economic activity and short-term behavioral changes in response to periodic droughts. Projections for future water use were developed through land use-based methods with data from the Pasadena General Plan, instead of per capita (i.e. population-based) methods, meaning that water demands were determined by categories of single-family, multi-family, commercial/industrial, and institutional/governmental customers. It should be noted that only passive conservation, i.e. water savings resulting from adopted codes, standards, and ordinances, was included in the water use projection methodology. Additional water demand reductions associated with meeting the WIRP's aggressive water conservation goals were not factored in the demand forecast. As a result, projections for water demand are conservatively high for the purpose of ensuring supply reliability.

To meet its water demands, PWP currently relies on a supply that consists of approximately 40% of local groundwater from the Raymond Basin and 60% from the purchase of imported water from Metropolitan Water District of Southern California ("MWD"). MWD is the regional water wholesaler to 26 member agencies, including Pasadena. MWD's primary sources of water are from the State Water Project and the Colorado River Aqueduct, both of which have become less reliable in the face of droughts, water rights issues, and environmental restrictions.

PWP is currently working towards the implementation of two water resource projects consistent with the WIRP to increase local supply reliability and offset demands for imported water: the Non-Potable Water Project and the Arroyo Seco Canyon Project. These projects will allow PWP to beneficially reuse local wastewater for irrigation and industrial application purposes, and to increase diversion of stream water for groundwater augmentation. Projected supplies from the Non-Potable Water Project are included with the planned water supplies and are compared to the projected water demands for the 2015 UWMP supply reliability analysis.

Following the required framework for the reliability analysis, the supply-demand balance was analyzed under three hydrologic conditions: normal, single dry-year, and multiple (three consecutive) dry-years. The single and multiple dry years were selected to be consistent with MWD's UWMP since the agency did extensive hydrological modeling and Pasadena is dependent on MWD for imported water supplies. The analysis demonstrated that with the implementation of additional supplies from planned projects, there will be sufficient water to meet Pasadena's demands under the studied scenarios. Table 1 is representative of the water supply reliability assessment for each of the years shown as if that were a single dry year, i.e. the year with the lowest available supply from MWD. The supply and demand values for multiple dry years are the same as those shown in Table 1.

Table 1- Single/Multiple Dry-Year Supply and Demand Comparison (AFY)

	2020	2025	2030	2035	2040
Groundwater for Pumping ¹	10,964	10,964	10,964	10,964	10,964
Imported Water ²	20,922	19,367	18,545	18,327	18,046
Non-Potable Water	700	2,280	3,210	3,600	3,990
Supply Totals	32,586	32,611	32,719	32,891	33,000
Demand Totals³	32,586	32,611	32,719	32,891	33,000
Imported Water Available⁴	20,934	20,986	21,237	21,529	21,617

- ¹ Projected dry-year groundwater supplies are equal to decreed pumping rights plus 660 AFY of spreading credits. In a normal year, PWP is projected to have 12,684 AFY of groundwater supply which includes 2,380 AFY of spreading credits.
- ² Projected supplies are equal to projected demands for imported water and do not exceed supplies available from MWD. See Note 3.
- ³ Demand Totals are not reduced to reflect additional planned water savings from PWP's aggressive conservation programs
- ⁴ Supply available to PWP from MWD as represented in the MWD IRP

The imported water supplies included in the analysis are consistent with MWD projections. However, if water purchases are curtailed in the future, additional active conservation and demand management could be factored in to reduce demands and ensure adequate supply given unforeseen or non-analyzed scenarios. As stated previously, only passive conservation was included in the water use projections.

Additionally, Pasadena's "Water Waste Prohibitions and Water Supply Shortage Plans" located in Pasadena Municipal Code Chapter 13.10 establishes four levels of increasing restrictions in response to water supply shortages and provides an additional means of maintaining an adequate water supply to protect public health and safety.

Conservation and Demand Management Measures

Consistent with the WIRP goal of ensuring a reliable water supply, PWP will continue implementing its comprehensive water conservation program, which includes active conservation. In the past five years, the program has resulted in cumulative annual water savings for PWP of 780 AF which will continue into the future. Also, PWP continuously evaluates potential new conservation programs, and is currently considering measures that include a sub-metering rebate program, an expanded greywater direct install program, and a spray-to-drip irrigation retrofit incentive program. More information is included in both the UWMP and the WIRP. The WIRP estimated that even moderate levels of conservation have the potential to save over 5,000 acre-feet per year ("AFY") by the year 2035.

Section 8, Water Demand Management Measures, describes PWP's compliance with the seven Demand Management Measures required to be reported as part of the UWMP and in compliance with the California Urban Water Conservation Council. These include PWP's full implementation of water waste prevention ordinances,

metering, conservation pricing, public education and outreach, programs to assess and manage water system losses, and water conservation program coordination.

SBX 7-7

In compliance with SBX7-7, the 2010 UWMP developed baseline daily per capita water use and target water use in terms of gallons per capita per day (“GPCD”). The 2015 UWMP includes a recalculation of the 2010 baseline (utilizing updated population and demand data) and targets. As summarized in Table 2, Pasadena has significantly exceeded its interim water use reduction goal by achieving 2015 water use of 148 GPCD, which is about 30% less than the updated 211 GPCD baseline, and is also on track to meet its 2020 target. Assuming the WIRP goals for water conservation and the non-potable sales targets are met, PWP’s 2020 potable water demand is projected to be 137 GPCD, or about 35% less than baseline.

Table 2- SBX7-7 Water Use Targets

	Target Reduction from Baseline	Target Average Water Use (GPCD)	Current/Projected Water Use (GPCD)	Reduction from Baseline
Baseline		211		
2015	10%	190	148	~30%
2020	20%	169	137 ¹	~35%

¹ Assumes non-potable water use met by non-potable supply.

Climate Change Impacts

The 2015 UWMP describes relevant elements related to climate change for PWP’s supply planning. For example, there is a high degree of agreement from the scientific community that State Water Project and Colorado River Aqueduct supplies are highly susceptible to climate change and are anticipated to decrease significantly as a result. Since these supplies represent the largest sources for MWD, PWP’s purchase of imported water would be affected. The framework and assumptions for modeling climate change impacts on a local level are not as consistent. Although there is a high level of agreement on the projected significant rise in temperature by mid-century, the projections for precipitation are less consistent. Considering the great variability of results and the importance of having a clearer picture of potential climate change effects for different regions, DWR has recently released specific guidance for future analysis. This will allow PWP to meaningfully consider impacts to its supply-demand balance for future studies. For now, the report suggests that one way to become less vulnerable to the potential effects of climate change is to reduce outdoor water use as a component of total demand.

Public Notice, Review, and Hearing

The California Water Code requirements for the UWMP adoption, submittal and implementation include holding a public hearing. Affected cities and Los Angeles County were notified that a Public Draft 2015 UWMP was made available for review

and that PWP would consider amendments or changes to the plan up to the public hearing.

PWP has executed the following milestone activities leading to the public hearing which has allowed for a participatory process while also fulfilling statutory requirements.

- February 23, 2016 – MSC informational meeting
- April 12, 2016 – Presentation to EAC of Public Draft
- April 14, 2016 – 60-day notification letters to affected cities/LA County
- April 26, 2016 – Informational memo and Public Draft provided to the MSC
- April 22, 2016 – Published Public Draft 2015 UWMP
- April 22 and 29 – Published Public Hearing Notifications
- May 2, 2016 – Set public hearing date
- May 10, 2016 – MSC and EAC recommend City Council adoption of 2015 UWMP
- May 23, 2016 – Deadline to receive comments for incorporation in Draft 2015 UWMP before Public Hearing
- June 13, 2016 – Public Hearing

Copies of the draft plan were made available for public inspection online at www.pwpweb.com/UWMP since April 22, 2016. An Executive Summary of the UWMP is included as Attachment A. Notice of the time and place of the June 13, 2016 public hearing was published in the Pasadena Star News on April 22, 2016, and April 29, 2016.

A summary of public comments received by May 23, 2016 is included as Attachment B.

COUNCIL POLICY CONSIDERATION:

The proposed resolution is consistent with the City's Urban Accords goals with respect to adequate access to safe drinking water, reduction in consumption by 10 percent by 2015, and ecological integrity of Pasadena's primary drinking water sources. It is also consistent with the General Plan Land Use Element and the City Council's Strategic Planning Goals. It will provide a mechanism to help PWP achieve regulatory compliance as well as City Council goals in a cost-effective manner.

ENVIRONMENTAL ANALYSIS:

State CEQA Guidelines Section 15282(v) sets forth a statutory exemption that specifically exempts from environmental review "the preparation and adoption of urban water management plans pursuant to the provisions of Section 10652 of the Water Code." In turn, section 10652 of the Water Code refers back to urban water management plans prepared pursuant to section 10632 of the Water Code. The UWMP is prepared pursuant to these sections of the Water Code, and therefore falls under this exemption.

FISCAL IMPACT:

Approval of the UWMP will have no incremental fiscal impact on the Water Fund beyond those contemplated under the Council-approved WIRP.

Respectfully submitted,



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Attachments

- Attachment A – Urban Water Management Plan – Executive Summary
- Attachment B – Comments Received on the Public Draft 2015 UWMP