



WATER DEPARTMENT MEMORANDUM

DATE: September 4, 2015

TO: Water Supply Advisory Committee

FROM: Toby Goddard, Administrative Services/Conservation Manager

SUBJECT: Addressing Demand Management Programs in Committee Recommendations

BACKGROUND: At its July 24, 2015 meeting, the Water Supply Advisory Committee received a report from the Water Director outlining several options for addressing demand management programs in the Committee's recommendations and/or agreements. The Committee discussed these options and expressed its preference for an approach consisting of both:

- a package of demand management programs (Option 2), and
- a results-oriented policy level direction with guidance about key criteria (Option 3).

The Committee also received information at this meeting from staff and from its working group on recommendations for reducing peak season water demand.

DISCUSSION: The purpose of this memo is to help further guide the Committee in structuring its recommendations regarding demand management. One of the challenges — especially given the available time left to craft recommendations — is to balance the Committee's strong interest in pursuing conservation with the uncertainties regarding costs and water savings associated with the package of measures outlined by the working group.

Staff since met with two members of the working group to brainstorm about this matter. The results of that discussion are summarized as follows for the full Committee's consideration:

1. **Expressly acknowledge the conservation savings that has been embedded into the new econometric demand forecast.** The econometric forecast carefully factored in different estimates of conservation savings that together amount to over 700 million

gallons of water per year saved by 2035. These include the savings representing the passive effects of plumbing codes (278 mgy), active water savings associated with measures currently being implemented, (also referred to “Program A”, 170 mgy), and the peak season savings that is related to economic effects over the 20-year planning horizon (274 mgy). These three elements play a large role in keeping water use relatively constant over the next 20 years, and represent a combined 17 percent savings that should be communicated and highlighted as a key part of the overall solution to balancing the City’s future water supply and demand.

2. **Set a goal, expressed as a range, between 200 and 250 million gallons per year of additional water savings, with emphasis on implementing measures that focus on peak season demand reduction.** Although the exact number is yet to be finalized and needs to be revisited, modeling performed by Maddaus indicates another 168 mgy of water savings is potentially attainable by 2035 through new or expanded conservation measures (referred to as “Program C”). It is also likely that more savings is possible by incorporating the working group’s recommendations into the City’s Water Conservation Master Plan. Various estimates have been put forward about the savings of its recommendations, ranging from 81 to 183 mgy. While staff is in agreement that more savings is attainable, the additional amount is uncertain for two reasons. First, there is the risk of double counting savings given the varying overlap between the ideas put forth by the working group and the measures outlined in Program C. Considerable effort was taken to ensure savings were not counted twice in the work leading up to the econometric forecast. Second, until the working group’s ideas have been subjected to a similar standard of modeling, analysis, and review that all the other conservation measures have undergone up to this date, there is not yet the same degree of confidence in the estimated water savings. The language proposed above increases the goal for water savings beyond the amount suggested by the Water Director in July, effectively recognizing and agreeing with the working group that more water savings is possible, especially in the peak season, but expresses it as a range to reflect the uncertainty involved at this time.
3. **Identify the water conservation measures listed in Program C and in the working group’s report as the demand management package the Committee recommends.** Providing a list such as the one presented in Table 1 would fulfill the Committee’s desire to articulate a recommended suite of demand management measures, as outlined in the Water Director’s July 15 report under Option 2.
4. **Acknowledge that a final estimate of conservation savings is subject to change pending completion of the Master Plan.** A contract amendment for a second phase of work on this project will be presented to City Council for its approval at its September 8, 2015 meeting. Work is scheduled to resume this fall and will include

coordinating the consultant's DSS model with the latest demand forecast, adjusting model parameters based on input received from Committee members and the Water Commission, incorporating new measures with greater emphasis on peak season savings forwarded by the working group, and rerunning modeling scenarios. This will ensure consistency in how water savings and costs are estimated and help avoid speculation and/or double counting. In addition, staff has identified the need to revisit the sequencing and scheduling of measures listed in the latest version of Program C, and this will affect estimated savings. The final plan will, of course, be subject to public review and stakeholder input prior to its final adoption by City Council.

As mentioned above, the four elements discussed above were identified through discussion between staff and members of the peak season working group. It is presented to the Water Supply Advisory Committee in the spirit of embodying some of the values, policy direction, and specific content that Committee members have previously expressed regarding demand management, and is meant as a springboard for further discussion and deliberation as the WSAC process comes to its conclusions and recommendations.

Table 1. Recommended Water Conservation Measures

No.	Water Conservation Measure	Included in Working Group Recommendation	Comments
Program C:			
1	System Water Loss Reduction		Project Initiated July 2015
2	Advanced Metering Infrastructure		
3	Large Landscape Budget-Based Water Rates	Yes	Identified in Peak Season Report as "Shifting Landscape Budgets Toward Climate Appropriate Irrigation Levels"; lower water budgets over time
4	General Public Information		
5	Public Information (Home Water Use Report)	Yes	Assume 3-5% savings
6	Residential Leak Assistance		
7	Single Family Residential Surveys	Yes	Identified in Peak Season Report as "Personalized Outreach to Highest Users and Generic Landscape Budgets"; combine with water budgets
8	Plumbing Fixture Giveaway/Opt		
9	Residential UHET Rebates		
10	High Efficiency Clothes Washer Rebates B	Yes	Alternative delivery/financing mechanisms
11	High Efficiency Clothes Washer - New Development		
12	Hot Water On Demand - New Development		
13	Toilet Retrofit at Time of Sale		
14	CII MF Common Laundry Room High Efficiency Clothes Washer		
15	CII Incentives	Partially	
16	Pre-Rinse Spray Nozzle Installation		Project Completed 2014
17	CII Surveys		
18	HEU Program		
19	Public Restroom Faucet Retrofit - MUN		
20	Public Restroom Faucet Retrofit - COM		
21	School Retrofit		
22	Water Efficient Landscape Ordinance		State mandated update due by end of 2015
23	Single Family Residential Turf Removal A	Yes, as part of "Climate Appropriate Landscaping and Rainwater infiltration	Recommend B (increased rebate amount)
24	Multifamily Residential/CII Turf Removal A		Recommend B (increased rebate amount)
25	Expand Large Landscape Survey/Water Budgets	Yes	
26	Sprinkler Nozzle Rebates		
27	Gray Water Retrofit		
28	Residential Rain Barrels		
Additional Ideas Recommended By Working Group Not Included in Program C-Rec			
29	Climate Appropriate Landscaping and Rainwater Infiltration		Includes requirement to convert spray to drip for shrub irrigation, prohibit spray irrigation in narrow areas. Rainwater infiltration component to be led by other City Department or agency
30	Conservation Pricing - Water and Sewer		Water rate project underway through separate contract with Raftelis Financial Consultants; conservation pricing for sewer service
31	Dishwashers		Not recommended by staff
32	Hot Water Recirculation Systems		Not included in Program C but worth reconsideration
33	Rewarding Businesses For Adopting Best Practices		Hotel laundry recycling one example; reduced curtailment level as reward
34	Additional Building Code Requirements for New Development		Some requirements already in place; urinals, dishwashers, graywater, pre-rinse spray nozzles
35	Innovation Incubator Program		Capitalize on local programs to support research and continue role as conservation innovators