

DATE: September 17, 2014

TO: WSAC and Water Commission

FROM: Rosemary Menard

SUBJECT: Concept paper on Modeling and Forecasting Working Group

It is clear to me from a variety of inputs that there is significant interest on the part of members of the WSAC and possibly their constituents and the Water Commission in issues related to the modeling and forecasting tools that the City uses in water supply planning. The Water Department and its technical contractors have developed a variety of modeling, forecasting and analytical tools that are used in modeling the water system and forecasting its performance and demands under various future scenarios. The tools used by the Water Department that are particularly relevant to water planning include the following:

- Hydrologic model for surface water resources;
- Confluence model for system reliability analyses and system performance forecasting;
- Water demand management Program planning and analytical model; and
- Water demand forecasting model¹.

Due to the importance of the role of these tools in the water planning activities we are currently conducting, I want to create a planned and organized way for interested members of the WSAC, the constituent groups represented by the WSAC and the Water Commission to develop a level of understanding and, ideally, confidence in the modeling, forecasting and analytical tools the City is using.

To work toward the achievement of this outcome, I want to create a working group that includes members of the WSAC and the Water Commission who are interested in learning more about these tools and who are willing to invest the time necessary to do so. I propose to open this working group to public members of WSAC constituency groups so that WSAC members who are participating and have members of their group who want to or need to be included can participate directly with the group. In recommending this expanded participation, I am specifically seeking to avoid placing WSAC or Water Commission members in the position of having to be a go-between between interested individuals and the learning and understanding that it will be the goal of this effort to develop.

In recommending this approach, it is important for everyone to understand that I have no expectation that challenging questions and issues about the models the City uses won't emerge. By recommending that we work with citizens to explore how these models work, what their inputs and outputs are, and

¹ The existing approach to water demand forecasting will be included in the scope of this working group. In addition, I have given direction to our WSAC consulting team to begin work on an econometric demand forecasting model that will be used for future demand forecasting beginning with the work on updating the Urban Water Management Plan next year. An econometric demand forecasting model will give the City an opportunity to include economic factors such as price and income in demand forecasting, which should improve the accuracy of the forecasts. The working group will have an opportunity to provide input to the consultant team on the development of the new econometric demand forecasting model.

the model strengths and weaknesses, which all such tools have, I am implicitly acknowledging that we are open to learning about citizen concerns and issues about the models and analytical tools we use in water planning. I am also acknowledging that we are open to taking steps to address those issues where feasible and necessary. That said, and just to be clear, I am not agreeing that working group members will exercise any final decision-making authority over what models and analytical tools the City uses in water planning or the data inputs that are used in these models. I do not want anyone to view this statement as anything more than a practical limitation that is being openly communicated up front. And I do want people to recognize that by agreeing to form and support such a working group in the first place, I am willingly opening to public scrutiny what many consider to be the mysterious “black boxes” that drive outcomes for water policy.

The timeframe for the performance of this working group is now, with membership defined by the conclusion of the Water Commission meeting on October 6, 2014.

A work plan and schedule for the working group will be developed by City staff in collaboration with relevant members of the consulting team. The timeline for completion of the working group’s activities will be December 19, 2014. This timeline is necessary to allow modeling results to be produced for use by the WSAC during the real deal phase of their work.