



# City of Santa Barbara California

## PLANNING COMMISSION STAFF REPORT

**REPORT DATE:** October 8, 2020  
**AGENDA DATE:** October 15, 2020  
**SUBJECT:** Enhanced Urban Water Management Plan Update  
**TO:** Planning Commission  
**FROM:** Water Resources Division, Public Works Department

### **I. RECOMMENDATION**

Staff recommends the Planning Commission receive a presentation on the City's Enhanced Urban Water Management Plan.

### **II. BACKGROUND**

For over 25 years, the City's primary water supply management tool has been its Long Term Water Supply Plan (LTWSP). The goal of the LTWSP is to evaluate the adequacy and reliability of the City's water supply and provide a long-term view of how the City's water supplies would be managed. Since the last LTWSP update in 2011, several key changes have arisen that have the potential to affect the availability of the City's current water supplies into the future. These changes include:

- changes to Lake Cachuma and Gibraltar supplies and operations,
- the role of desalination,
- groundwater management,
- expanded use of recycled water, and
- the impacts of climate change, which include the need to define a new critical drought period and average annual rainfall.

City staff, in partnership with the firm Water Systems Consulting (WSC), have begun the process of reassessing the adequacy, reliability, and cost of the City's water supplies with respect to these issues.

In the past, the City also developed and submitted an Urban Water Management Plan (UWMP) to the California Department of Water Resources (DWR) every five years, as required by the California Water Code, with the basis of supply planning for the UWMP being the LTWSP. Over time, UWMP-mandated requirements have increased, which has increased the importance of having only one water supply planning tool to reference for City-wide planning efforts. Therefore, the City is working to meld the supply planning efforts of the LTWSP into the development of its 2020 UWMP. The result will be an Enhanced Urban Water Management Plan (EUWMP). WSC's agreement for the development of the EUWMP was approved by Council on February 11, 2020. A Council-adopted EUWMP is due to the DWR by July 1, 2021.

Development of the EUWMP includes a highly technical analysis of the ability of the City's current water supply portfolio, or collection of available water supplies, to meet future City water demands under changing conditions. In addition, a triple-bottom line analysis that evaluates the social, economic, and environmental strengths and weaknesses of potential new future water supply portfolios will be performed to create an optimized water supply portfolio that will meet the City's future water demands moving forward. This is different from past water supply planning efforts, which only evaluated potential supply options based on cost. Once an optimal portfolio is defined, a detailed implementation plan, including significant trigger points for action, will be developed for inclusion in the EUWMP.

The EUWMP project has been designed to be a stakeholder-driven process with significant opportunities for public engagement, including a broad-based community stakeholder group, branded "Water Vision Santa Barbara," and "Water Vision Month" for the general public, along with periodic Water Commission and City Council meetings. The stakeholder engagement component will provide opportunities for the community to provide input on plan objectives, conservation options, potential supply portfolios, implementation strategies, and the varied needs of the City's water customers.

### **III. DISCUSSION**

At the time of writing this report, the project team has updated the City's water demands through the year 2050, completed evaluation of the City's current water supply portfolio under changing future conditions, and is in the middle of evaluating potential future water supply portfolios that will help the City meet water demands into the future. In addition, the team has facilitated four Water Vision Santa Barbara stakeholder workshops and is currently promoting Water Vision Month, which will engage the public in the planning processes throughout the month of October.

#### **Future Water Demand Envelope**

The City's most recent water demand forecast was prepared in support of its 2015 Urban Water Management Plan, based on data from the City's 2011 LTWSP, 2011 General Plan, and the Council-adopted water conservation program developed in 2010 by Maddaus Water Management (MWM). This demand projection needed to be updated for the EUWMP because: the City is emerging from an unprecedented drought (in both duration and severity) that exceeded the "design drought" considered in the previous demand forecast; there are imminent impacts from the State's new water-use efficiency requirements (SB 606 and AB 1668) that must be addressed; and the City's Community Development Department is updating their growth forecasts in response to the State's updated long-term housing goals.

An update to the City's Water Conservation Strategic Plan (Plan) by MWM is underway concurrent with the EUWMP project. The Plan was presented to Water Commission at their regular September meeting. For the Plan, MWM developed a new baseline water demand projection with support and data from Community Development and Water Supply staff. The new demand projection includes assumptions that account for multiple variables, including:

- Population growth projections are based on Regional Growth Forecast 2050 Santa Barbara County (SBCAG, January 2019).

- Employment projections are from the California Employment Development Department (EDD) for the Santa Maria-Santa Barbara Metropolitan Statistical Area.
- Post-drought demands will “rebound” to 90 percent of 2008-2013 average demands. The rebound is assumed to take seven years.
- Includes estimated water savings from an updated plumbing code.
- Incorporates the City’s existing water conservation program, along with additional cost-effective measures suggested by MWM’s modeling work.

There are uncertainties associated with these assumptions and demand projections in general, which resulted in WSC working with MWM to develop a “demand envelope” to explore a range of potential future demand scenarios that account for the uncertainties with the largest potential impact to the projections. Specifically, uncertainties around population projections, employment projections, and post-drought demand rebound were analyzed.

Results of the demand analysis indicate that the post-drought demand-rebound variable has the largest impact of demand projections. This variable is dependent on the water use behavior of existing customers. Human behavior is notoriously difficult to predict, and some people made permanent water-saving changes in response to the drought. Water Supply staff will continue to monitor water use to update demand projections and adjust water supply strategies as part of the City’s adaptive management approach. The EUWMP will consider this demand uncertainty when developing, analyzing, and recommending future supply portfolios and developing the implementation plan.

#### Current Water Supply Portfolio Evaluation

The City’s current water supply portfolio was modeled using historical Santa Ynez River hydrology from 1942-2019. The modeling effort also considered existing regulatory constraints and a ten year design drought. Future supply projections were then modified based on uncertainties, including climate change, potential future regulatory action, and increasing sedimentation in Gibraltar Reservoir. Results of the modeling were compared against the future water demand envelope to identify any gaps the City’s current water supply portfolio may have meeting future demands.

Results from the modeling effort indicate the following findings:

- The City’s biggest water supply challenge is providing sufficient supplies to meet demands in drought years. Desalination, groundwater, and State Water Project supplies are essential to meeting demands during a drought without drastic mandatory conservation. Desalination also provides supply flexibility benefits when prioritized as an annual baseline supply.
- The City’s biggest water supply opportunity is the potential to capitalize on surplus water supply assets during normal and wet periods, while also always preparing for future drought conditions.

Several potential future supply portfolio themes emerge from the deficiencies of the existing portfolio, such as maximizing reliability or minimizing environmental impact. Currently the project team is working to develop and evaluate a variety of themed portfolios, and subsequent iterations, to ultimately define an optimal water supply portfolio for the City.

### Stakeholder Engagement – Water Vision Santa Barbara

The project team has held four Water Vision Santa Barbara stakeholder workshops.

1. The first web-based workshop, entitled “Water Management 101” provided an overview of the planning process and was designed to give participants a baseline understanding of key concepts, goals, and challenges so that they could participate thoroughly in future workshops.
2. The second workshop, entitled “Community Values and Needs,” included two interactive small group activities using Zoom webinar technology, to elicit participants’ top issues, concerns, challenges, and values related to issues such as water security, affordability, quality, environmental health and resilience, among other topics.
3. In the third workshop, “Future Supply Considerations,” the group dug into topics that warranted deeper stakeholder insight around better utilization of our existing water supplies, optimization of conservation efforts, and meeting the needs of vulnerable populations.
4. Finally, in the fourth workshop, “Group Check-in and Future Portfolio Options” the stakeholder group learned about additional opportunities for participation through Water Vision month, as well as some of the considerations and tradeoffs going into the future water supply portfolio analysis.

Detailed feedback from the stakeholder group has been compiled in a stakeholder perception map. The information will be shared with Water Commission and City Council, and will directly influence future portfolio analyses. The City is maintaining a detailed project website where stakeholder meeting materials and the perception map can be found. The website can be accessed at [www.SantaBarbaraCA.gov/watervision](http://www.SantaBarbaraCA.gov/watervision).

#### **IV. NEXT STEPS**

The project team is currently scheduled to present to Water Commission on November 19, 2020, and City Council December 8, 2020. The goal of these presentations will be to receive feedback on the future water supply portfolio analyses in order to begin preparing the implementation plan. The project team will then return to Water Commission and Council in January and February, respectively, to discuss the implementation plan. Finally, the Public Draft EUWMP will be presented to Council in May 2021, with adoption of the EUWMP scheduled for the end of June 2021.

Exhibit: Draft Water Conservation Strategic Plan:

<https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=230311>