



# CITY OF SANTA BARBARA

## COUNCIL AGENDA REPORT

**AGENDA DATE:** November 10, 2015

**TO:** Mayor and Councilmembers

**FROM:** Water Resources Division, Public Works Department

**SUBJECT:** Contract Amendment With USGS For Groundwater Modeling In Support Of Studying The Feasibility Of Alternatives To Screened Ocean Intake For Desalination

### RECOMMENDATION:

That Council authorize the Public Works Director to execute an Amendment to the Joint Funding Agreement with the United States Geological Survey (USGS) for groundwater modeling services in the amount of \$66,400, and approve expenditures of up to \$15,000 for extra services that may result from unforeseen changes in the scope of work, raising the City's portion of cost in the Joint Funding Agreement to \$488,325.

### DISCUSSION:

As directed by Council and required by the City's amended National Pollutant Discharge Elimination System (NPDES) permit, staff is currently working with Carollo Engineers to evaluate the feasibility of alternatives to the screened ocean intake for the Desalination Plant. In order to understand the effects on the groundwater basin from subsurface intake or injection of recycled water into the aquifer, it is necessary to use a model of the City's groundwater basins that was developed by the USGS.

The City has an existing agreement with the USGS for the development of the groundwater basin model. Staff has negotiated an acceptable proposal with the USGS to perform the proposed additional modeling work in the amount of \$66,400. Staff recommends that Council authorize the Public Works Director to amend the Joint Funding Agreement with USGS by increasing the total project amount by \$66,400, and the City's portion of total costs to \$473,325; and approve expenditures of up to \$15,000 for extra services for unforeseen changes in the scope of work, for a total City project cost of \$488,325.

USGS can complete the additional modeling work and incorporate its findings into the technical evaluation and initial screening of the potable reuse options by summer 2016. This will meet the required timeline set forth by the RWCQB in the City's NPDES Permit. The revised schedule does not result in a change in the original Study scope or budget.

## **BACKGROUND**

The City has a long-standing partnership with United States Geological Survey (USGS) in an effort to better understand the City groundwater basins. In 2009, the City and USGS entered into a Joint Funding Agreement for a Cooperative Water Resources Program to update and enhance groundwater models, evaluate the sustainable yield of the City's groundwater resources, and develop decision rules for use in managing supplies from groundwater. The work effort included updating and calibrating the existing MODFLOW-2000 groundwater flow model to SEAWAT-2000, which models seawater intrusion. On April 28, 2015, Council approved an amended agreement totaling \$586,055, which is shared between USGS and the City. The City's portion of the cost is \$406,925. The amendment was for additional modeling scenarios requested by the City to better understand the estimated sustainable yield of the basin. USGS has finished calibrating and running the updated model and is currently drafting the final technical report. The high resolution groundwater model is an appropriate and valuable tool in evaluating management strategies of our groundwater basin, including effects of groundwater replenishment with recycled water and subsurface intake alternatives.

## **BUDGET/FINANCIAL INFORMATION:**

Staff successfully secured a \$55 million State Revolving Fund loan for the Desalination Project and related work. The \$55 million in appropriations included the cost of the SSI and Potable Reuse Feasibility Studies, with sufficient contingency funds to cover the cost of the proposed additional USGS modeling work. Therefore, no additional appropriation authority is needed.

**PREPARED BY:** Joshua Haggmark, Water Resources Manager/KD/mh

**SUBMITTED BY:** Rebecca J. Bjork, Public Works Director

**APPROVED BY:** City Administrator's Office