



**Date:** January 17, 2017  
**TO:** LOCSD Board of Directors  
**FROM:** Rob Miller, District Engineer  
**SUBJECT:** **Agenda Item 11G – Board Meeting Date: February 2, 2017**  
Project Update and Approval of Construction Change Order for 8<sup>th</sup> Street Upper Aquifer Well Drilling

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### DESCRIPTION

The Board previously awarded the construction contract for drilling of the 8<sup>th</sup> Street Upper Aquifer Well to North State Drilling on 09/15/2016. This project only includes drilling the well, as opposed to installing pumping equipment and pipeline connections to the water system. The drilling of the well has now been completed. The Agenda item includes an update on the water quality and quantity, approval of one change order; and authorization to file a Notice of Completion for the project.

### SUMMARY OF STAFF RECOMMENDATION

This item will be approved along with the Consent Calendar unless it is pulled by a Director for separate consideration. If so, Staff recommends that the Board adopt the following motion:

***Motion: I move that the Board approve Change Order No. 1 in the amount of \$23,055 and authorize staff to file a Notice of Completion for the project.***

### DISCUSSION

Construction of the drilling phase for the 8<sup>th</sup> Street Upper Aquifer well was completed on December 21, 2016. The 8<sup>th</sup> Street Upper Aquifer Well was designed to optimize Los Osos Groundwater Basin yield and reduce extractions from the lower aquifer as part of infrastructure Program A of the Los Osos Groundwater Basin Plan (ISJ, 2015). Drilling, construction, and aquifer testing were performed by North State Drilling (Chico, California). Drilling technical specifications were prepared by Cleath Harris Geologists (CHG).

Well construction occurred between December 8<sup>th</sup> and December 21<sup>st</sup>, 2016. CHG supervised the construction and testing of the new Upper Aquifer water supply well for the District. North State filed for Well Completion with the State and received the Certificate on January 10, 2017. Well completion was filed with the County as well, and approval is pending.

A water sample from the new upper aquifer well was collected by CHG during the constant discharge test on December 21, 2016. The water sample was analyzed by FGL Environmental (San Luis Obispo) for California Title 22 constituents (Appendix C). The produced water meets California drinking water standards for all the constituents tested except for hexavalent chromium (chromium VI), which was reported at 14.9 micrograms per liter ( $\mu\text{g/L}$ ). The Maximum Contaminant Level for hexavalent chromium in drinking water is 10  $\mu\text{g/L}$ . The water from this well will be blended with the existing lower aquifer well to yield levels within the normal drinking water limits.

The results of the well construction are favorable and the quality is sufficient for blending without nitrate removal treatment. Nitrate levels may change over time as the well is pumped. The new well is approximately 137 feet deep, and it is estimated that the pumping capacity will be 100 gallons per minute (100 AFY). This capacity compares favorably with the other two upper aquifer wells owned by the District, which both produce approximately 70 gallons per minute. In a future project scheduled for 2017, staff will propose that the well be equipped, enclosed, and tied into the existing water distribution system.

The approved contract with North State Drilling was based on unit prices for various items of work, and the final price was to be based on the actual quantities used or installed. Due to field conditions during drilling, two quantities exceeded the estimated values in the original contract as follows:

1. Additional gravel pack was installed in the amount of \$2,200.00.
2. Given the subsurface conditions encountered at the time of drilling, the volume of development water encountered was significantly higher than the bid quantity, which required additional storage and hauling effort. Rain and other field conditions also precluded daily hauling. After negotiating with North State, it was decided that the actual hauling and storage invoices issued by North State's subcontractor would be provided to the District, and that the District would pay the incremental cost without markup. The cost increase associated with this unforeseen condition was \$20,855.00.

The above referenced costs have been reviewed and approved by Cleath Harris Geologists. The revised total contract amount, including Change Order No. 1, totals \$141,915.

### **FINANCIAL IMPACT**

Funding for this Phase 1 project will be coded to the Capital Outlay Expense for Infrastructure and Improvements general ledger code 9006, fund 500 water. This project was budgeted for in the FY 2015/2106 budget and not used. Necessary funding transfers will come from the General Contingency Reserve at year-end.

Attachment