

**COUNTY OF SAN LUIS OBISPO BOARD OF SUPERVISORS  
AGENDA ITEM TRANSMITTAL**

(1) DEPARTMENT Public Health	(2) MEETING DATE 3/8/2016	(3) CONTACT/PHONE Penny Borenstein / 781-5519	
(4) SUBJECT Update on deep water well construction occurring within the Paso Robles Groundwater Basin. All Districts.			
(5) RECOMMENDED ACTION It is recommended that the Board receive and file this update on deep water well construction occurring within the Paso Robles Groundwater Basin.			
(6) FUNDING SOURCE(S) N/A	(7) CURRENT YEAR FINANCIAL IMPACT \$0.00	(8) ANNUAL FINANCIAL IMPACT \$0.00	(9) BUDGETED? N/A
(10) AGENDA PLACEMENT <input type="checkbox"/> Consent <input type="checkbox"/> Presentation <input type="checkbox"/> Hearing (Time Est. ___) <input checked="" type="checkbox"/> Board Business (Time Est. <u>25 minutes</u> )			
(11) EXECUTED DOCUMENTS <input type="checkbox"/> Resolutions <input type="checkbox"/> Contracts <input type="checkbox"/> Ordinances <input checked="" type="checkbox"/> N/A			
(12) OUTLINE AGREEMENT REQUISITION NUMBER (OAR) N/A		(13) BUDGET ADJUSTMENT REQUIRED? BAR ID Number: N/A <input type="checkbox"/> 4/5 Vote Required <input checked="" type="checkbox"/> N/A	
(14) LOCATION MAP N/A	(15) BUSINESS IMPACT STATEMENT? No	(16) AGENDA ITEM HISTORY <input type="checkbox"/> N/A    Date: <u>October 27, 2015</u>	
(17) ADMINISTRATIVE OFFICE REVIEW Geoff O'Quest, Administrative Analyst			
(18) SUPERVISOR DISTRICT(S) All Districts			

# County of San Luis Obispo



TO: Board of Supervisors

FROM: Jeff Hamm, Health Agency Director  
Penny Borenstein, MD, Health Officer/Public Health Administrator

DATE: 3/8/2016

SUBJECT: Update on deep water well construction occurring within the Paso Robles Groundwater Basin. All Districts.

## **RECOMMENDATION**

It is recommended that the Board receive and file this update on deep water well construction occurring within the Paso Robles Groundwater Basin.

## **DISCUSSION**

During its regular meeting on October 27, 2015, the Board of Supervisors asked Environmental Health Services Division staff to follow-up with additional information regarding recent deep water well drilling issues occurring within the Paso Robles Groundwater Basin (PRGWB). This update is responsive to that request and captures most recent findings and actions related to local deep water well drilling.

Recent large diameter irrigation well drilling in the PRGWB has resulted in some of these wells being constructed to depths deeper than any other previously drilled wells overlying the PRGWB. These wells have also penetrated more than one aquifer.

County Code Sections 8.40.030, subdivision (b), and 8.40.060 require that construction of all wells within the county be as set forth in Chapter II of the California Department of Water Resources (DWR) Bulletin No. 74-81 entitled "Water Well Standards: State of California" and its Appendices (DWR Standards). Section 13 of the DWR Standards provides as follows:

*In areas where a well penetrates more than one aquifer, and one or more of the aquifers contains water that, if allowed to mix in sufficient quantity, will result in significant deterioration of the quality of water in the other aquifer(s) or the quality of water produced, the strata producing such poor quality water shall be sealed off to prevent entrance of the water into the well or its migration into other aquifer(s).*

Further, County Code, Section 8.40.040, subdivision (a)(6) defines that water well permit applications shall include all "other information as may be necessary to determine if underground water will be protected."

Based on these regulatory components, Environmental Health Services (EHS) has begun to require that permit applications for new water wells that have the potential to penetrate multiple aquifers must be reviewed and certified by a registered geologist, certified hydrogeologist or certified engineering geologist. Additionally, concrete seals must be placed within the borehole to preclude mixing between multiple aquifers when such mixing is determined by EHS to likely result in significant deterioration of water quality. While DWR Standards do allow for some mixing of multiple aquifers, "significant deterioration of water quality" is ascertained by performance of specific water quality tests.

Letters were sent during the spring of 2015 to local well drillers (pursuant to Section 8.40.040, subdivision (c) of the County Code, all permittees must be licensed well drilling contractors) notifying them of the additional requirements for well construction permits for deep water wells. A workshop was also conducted on May 29, 2015 for the local well drilling

contractors where deep well drilling issues were detailed and questions from the contractors were addressed. Representatives from three of our largest well drilling companies attended. EHS staff has also met several times with the Creston Advisory Body to keep the community apprised of ongoing efforts to ensure well construction projects meet the DWR Standards.

Recently, four wells in the Creston area, ranging in depth from 1010-1485 feet, met criteria for review by a registered geologist, due to the potential for significant deterioration of the higher water quality of the upper aquifer. A geologist with expertise in well construction and groundwater basins, and particularly historical knowledge of the PRGWB, was retained by the EHS Division to investigate these four deep wells. Conclusions from these investigations are that three of the wells appear not to be a threat to the water quality of the upper aquifer.

The fourth well, known as the Cotta Well, has been required by EHS to have the lower quality aquifers sealed off based on the test results. A concrete plug was constructed in August 2015 and a follow-up water sampling plan is underway to determine if the concrete plug effectively closed off the lower aquifers. In order to get representative water samples from the well, it is necessary to purge (pump) the well. To meet water quality standards and be able to use the pumped water on the property, the pumped water must be mixed with sufficient water from another established high quality water well. Before the well owner can put the pumped water onto the ground, they obtained a waste discharge waiver from the Central Coast Regional Water Quality Control Board. This allowed them to blend the water from the new and existing irrigation wells on the property.

As part of the follow-up work to remediate the Cotta Well, water testing has also been conducted on neighboring residential wells to ensure the wells do not present a public health risk in the local community. EHS staff also attended a number of community meetings to keep the residents informed of the progress made in the construction of the four wells.

In order to be prepared and able to respond quickly to future incidents related to deep well digging in the PRGWB or elsewhere in the county, EHS has now contracted with the above-referenced hydrogeologist. Going forward, EHS will continue to work closely with deep water well drillers to ensure the requirements of the DWR Standards are being met, and to obtain input as the EHS Division continues its efforts to update well program processes and procedures.

#### **OTHER AGENCY INVOLVEMENT/IMPACT**

County Counsel has reviewed and approved the modified oversight process.

#### **FINANCIAL CONSIDERATIONS**

The financial considerations related to the modified deep well construction oversight process include expert analyses and consultation with a registered geologist on regional and specific groundwater basins in San Luis Obispo County. Public Health projects to spend approximately \$24K in the current year. Appropriations in FY 2015-16 are sufficient to cover this cost. The funding to continue this level of expenditure in FY 2016-17 has been included in the County Status Quo budget submission. Thereafter, beginning in FY 2017-18, expenses related to the cost of a consultant hydrogeologist will be built into the fee structure.

#### **RESULTS**

Updating the well construction application process to include a review of proposed deep water well construction by a Registered Geologist is expected to prevent penetration of multiple aquifers and thus lessen the likelihood of degradation of drinking water obtained from large bore, deep wells. In turn, these results will contribute to the overarching County goal of promoting healthy and livable communities.