

## H2S Odors in the Western Goleta – Regulatory Roles

**November 2017**

There has been an increase in reports of sulfur odor in western Goleta in the last several years. Some Goleta-area agriculture users have lost access to public water supplies and now rely heavily on private well water for irrigation. Some are drilling wells deeper than before, so they are more likely to encounter groundwater containing sulfur compounds including hydrogen sulfide (H<sub>2</sub>S). H<sub>2</sub>S can be released from the water as a gas and create noticeable odors similar to a “rotten egg” smell. Use of sprinklers may increase the release of sulfur odors during irrigation.

H<sub>2</sub>S is a gas that produces a sulfur odor at low levels and health effects at higher levels. Sulfur odors are typically first detected at H<sub>2</sub>S concentrations of 0.01 parts per million (ppm). According to the Occupational Safety and Health Administration (OSHA), health effects such as nausea, tearing, headaches, etc., may be experienced at H<sub>2</sub>S concentrations as low as 2 ppm. Detailed information regarding symptoms of H<sub>2</sub>S exposure at various concentrations can be found at the federal OSHA website: <https://www.osha.gov/SLTC/hydrogensulfide/hazards.html>.

Multiple local government agencies have received questions from residents concerned about these odors. To ensure that your questions are directed to the appropriate agency in order to receive a timely response, we prepared the following overview. The City of Goleta does not have a regulatory role.

### **Santa Barbara County Fire Department**

If you or your family members are experiencing health effects from H<sub>2</sub>S exposure, it is recommended that you call 911 immediately, seal up your house, and remain inside as much as possible. If the odors continue to cause health effects, you should leave the area and move uphill until conditions improve. Sensitive individuals with more serious or persistent health effects should seek medical attention.

### **Santa Barbara County Air Pollution Control District (APCD)**

To protect public health and ensure compliance with air quality regulations, the APCD responds to numerous air pollution complaints from members of the public every year. The APCD has a process for complaints, and inspectors are available to respond during normal business hours. Find more information on the APCD’s complaint process, including contact information: [www.ourair.org/complaints/](http://www.ourair.org/complaints/).

For H<sub>2</sub>S odors, the APCD has two avenues of enforcement. The first is APCD Rule 310 for Odorous Organic Sulfides. This rule is enforceable if all of the following criteria are met:

- A single source is verified
- Odors occur at or beyond the property line
- Measurements of H<sub>2</sub>S exceed the rule’s concentration limit

The second option is APCD Rule 303 for Nuisance. This rule is enforceable for H<sub>2</sub>S odors if all of the following criteria are met:

- A single source is verified
- The source is not an agricultural operation

## **Santa Barbara County Public Health Department and Environmental Health Services**

Santa Barbara County Environmental Health regulates well construction through the issuance of well construction permits. Once the applicant demonstrates that the well location meets regulatory standards, the permit is issued.

When a drilling activity results in a condition that jeopardizes or threatens the public health and safety (including the release of H<sub>2</sub>S), the department can determine that the activity constitutes a nuisance and order the abatement of the condition. Once the well has been completed there is no further role for Environmental Health.