

## FREQUENTLY ASKED QUESTIONS | HYDROGEN SULFIDE

### **What is hydrogen sulfide (H<sub>2</sub>S) and where does it come from?**

H<sub>2</sub>S is a colorless gas with a rotten egg smell and is produced by the breakdown of organic matter, such as human or animal waste. It is commonly associated with sewage treatment facilities. It is heavier than air and can collect in low-lying and enclosed, poorly ventilated areas.

### **Why does Pinal County, and not ADEQ, have jurisdiction over H<sub>2</sub>S?**

Pinal County has an air quality program that is directly approved by EPA, providing them authority to monitor and regulate air quality, including H<sub>2</sub>S | [EPA Air Permit Delegation >](#)

Pinal County has set an ambient air standard for H<sub>2</sub>S at 0.03 parts per million.

Pinal County Air Quality Control District Code of Regulations Chapter 5 Article 24 5-24-1030 H | [View >](#)

Pinal County Air Quality Control District monitors H<sub>2</sub>S in the ambient air at two locations near Oasis Magic Ranch | [View Weekly Data Reports >](#)

### **What does ADEQ have jurisdiction over?**

ADEQ's water quality program regulates odor under the Aquifer Protection Permit (APP) program.

### **At what level can I smell H<sub>2</sub>S?**

H<sub>2</sub>S odor can be detected at very low levels by some people, ranging from 0.01 to 1.5 parts per million (ppm), according to the Occupational Health and Safety Administration (OSHA).

### **What are the health impacts of H<sub>2</sub>S?**

On a weekly basis, Pinal County Air Quality compares measured H<sub>2</sub>S in the ambient air at two locations near Oasis Magic Ranch with health-based guidelines | [View Data >](#)

OSHA Table for H<sub>2</sub>S Health Impacts | [View >](#)

### **Why is H<sub>2</sub>S corrosive?**

H<sub>2</sub>S forms sulfuric acid when moisture is present. Sulfuric acid is corrosive to concrete and some metals. Corrosion has been noted in inspection reports for some Johnson Utilities facilities in enclosed buildings and sewer infrastructure where airflow is limited. Maintenance must be conducted if the corrosion impacts proper operation of the facility. Required control devices installed in facilities can properly mitigate this issue.

### **I heard H<sub>2</sub>S gas is explosive. At what level in the air is that dangerous?**

The Lower Explosive Limit (LEL) for H<sub>2</sub>S is 40,000 ppm, meaning this is the lowest concentration at which the gas would ignite. This is when H<sub>2</sub>S makes up 4 percent of the air. These levels have not been detected inside Johnson Utilities facilities or at the Pinal County Air Quality ambient air monitors at Oasis Magic Ranch.