THIRD READING

Bill No: SB 58
Author: Padilla (D), et al.
Amended: 1/14/26
Vote: 21

SENATE ENVIRONMENTAL QUALITY COMMITTEE: 7-0, 1/13/26
AYES: Blakespear, Valladares, Dahle, Gonzalez, Menjivar, Pérez, Reyes
NO VOTE RECORDED: Hurtado

SENATE APPROPRIATIONS COMMITTEE: 7-0, 1/22/26
AYES: Caballero, Seyarto, Cabaldon, Dahle, Grayson, Richardson, Wahab

SUBJECT: Air quality: standard: hydrogen sulfide

SOURCE: Author

DIGEST: This bill requires the Office of Environmental Health Hazard Assessment (OEHHA) to develop additional health-based threshold levels for hydrogen sulfide.

ANALYSIS:

Existing federal law:

1) The federal Clean Air Act (CAA) and its implementing regulations set National Ambient Air Quality Standard (NAAQS) for six criteria pollutants, designate air basins that do not achieve NAAQS as nonattainment, and require states with nonattainment areas to submit a State Implementation Plan (SIP) detailing how they will achieve compliance with NAAQS. (42 U.S.C. 7401 *et seq.*)

Existing state law:

1) Establishes OEHHA under the California Environmental Protection Agency and authorizes OEHHA to perform activities relating to the assessment of

human health risks of chemicals, toxicology, or scientific consultation. (HSC § 59000 et. seq.)

2) Establishes the California Air Resources Board (CARB) as the air pollution control agency in California and requires CARB, among other things, to control emissions from a wide array of mobile sources and coordinate with local air districts to control emissions from stationary sources in order to implement the CAA. (Health and Safety Code (HSC) § 39000 et seq.)

3) Requires CARB to adopt ambient air quality standards for each air basin in consideration of the public health, safety, and welfare, and based upon the recommendations of OEHHA. (HSC § 39606(a)(2))

4) Authorizes CARB or local air districts to adopt regulations to control pollutants associated with state ambient air quality standards, including hydrogen sulfide. (HSC § 40926)

5) Required CARB, in consultation with OEHHA, to review all existing health-based ambient air quality standards, including hydrogen sulfide, to determine whether they adequately protect the health of the public, including infants and children, before December 31, 2000. (HSC § 39606(d))

6) Requires, subject to the powers and duties of CARB, local air districts to adopt and enforce rules and regulations to achieve and maintain the state and federal air quality standards in all areas affected by emission sources under their jurisdiction, and to enforce all applicable provisions of state and federal law. (HSC § 40001)

7) Authorizes local air district rules and regulations to provide for the prevention and abatement of air pollution episodes which cause discomfort or health risks to a significant number of persons. (HSC § 40001(b))

8) Authorizes local air districts to sponsor, coordinate, and promote projects that will lead to the prevention, mitigation, or cure of the adverse effects of air pollution, including the adverse health effects of air pollution. (HSC § 40004)

This bill:

1) Requires OEHHA to develop health-based threshold levels for hydrogen sulfide, in addition to any standards adopted by CARB, on or before January 1, 2030.

2) Requires OEHHA, in developing the threshold levels, to consider all of the following:
   a) Current scientific literature regarding acute, subchronic, and chronic health effects of hydrogen sulfide exposure;
   b) The adequacy of current averaging times and the need for additional threshold levels based on various averaging times;
   c) Outdoor and indoor air exposure;
   d) Local and regional climates, including whether existing standards and levels are appropriate for specific locations;
   e) Current federal, state, and international exposure guidelines; and,
   f) Corresponding actions for threshold levels.

3) Authorizes OEHHA to develop threshold levels for additional air pollutants upon an appropriation from the Legislature.

4) Authorizes OEHHA to develop threshold levels in consultation with CARB, air districts, the California Department of Public Health (CDPH), local or regional authorities, local environmental and public health agencies, universities and academic institutions, affected tribal governments, and community-based organizations.

5) Requires OEHHA to conduct at least three public workshops, with at least one in the Tijuana River Valley region, the Salton Sea region, and a location selected in consultation with a community that has experienced significant hydrogen sulfide exposure.

6) Requires air districts to adopt, and authorizes local environmental and public health agencies to consider, any threshold level developed by OEHHA.

7) Authorizes CARB to adopt additional or updated standards based on the threshold levels developed by OEHHA.

8) States the intent of the Legislature to develop guidelines that would require CARB, in consultation with specified entities, to develop a response framework based on the threshold levels developed by OEHHA.

9) Makes related findings and declarations.

Background

1) *Hydrogen sulfide*. Hydrogen sulfide, commonly associated with sewage, landfills, geothermal fields, and oil and natural gas extraction, is a toxic gas that produces a foul odor. Hydrogen sulfide is known to cause negative respiratory and neurological impacts at the acute exposure level, and while epidemiological information for chronic effects is limited, some studies suggest chronic exposure levels may be associated with ocular, cardiovascular, respiratory, and neurological impacts.[1,2,3,4]

2) *Standards vs. thresholds*. As amended January 5, 2026, this bill required CARB to adopt an updated standard for hydrogen sulfide. The role of CARB and local air districts is to protect the public from the harmful effects of air pollution and drive reductions through various programs and actions. The ambient air quality standards serve as a metric through which CARB and local air districts drive reductions in pollutants and coordinate efforts to maintain them. If an air quality standard is not met in a certain area, then CARB and local air districts must develop a plan to attain that standard. CARB and local air districts regulate mobile and stationary sources of pollution, respectively. These sources typically have a responsible party who can respond to regulatory requirements as outlined in attainment plans, face penalties for non-compliance, and implement controls to abate their emissions

   Threshold levels, on the other hand, can be used as a tool for various programs and response mechanisms to protect public health, regardless of source. OEHHA typically establishes reference exposure levels (REL) to assess the risk of exposure to various toxins.[5] RELs are used in the Air Toxics Hot Spots Program to assess the risk of emissions by stationary sources and for health

[1] Office of Environmental Health and Hazard Assessment. (2000). Chronic Toxicity Summary: Hydrogen Sulfide.
[2] Office of Environmental Health and Hazard Assessment. (2008). Acute Toxicity Summary: Hydrogen Sulfide.
[3] Batterman, S., et. al. (2023). Low level exposure to hydrogen sulfide: a review of emissions, community exposure, health effects, and exposure guidelines.
[4] Nuvolone, D., et. al. (2019). Health effects associated with chronic exposure to low-level hydrogen sulfide from geothermoelectric power plants.
[5] Office of Environmental Health and Hazard Assessment. (2023). OEHHA Acute, 8-hour and Chronic Reference Exposure Level (REL) Summary.

risk assessments. OEHHA has also been tasked to develop other thresholds, like for heavy metals released by metal shredding facilities (AB 2851, Bonta, Chapter 743, Statutes of 2024). In this case, the threshold levels will serve as triggers for community notification and potentially other actions.

This bill was amended in the Senate Environmental Quality Committee to require OEHHA to develop threshold levels for hydrogen sulfide in addition to existing RELs, rather than requiring CARB to update the hydrogen sulfide standard. Currently, CARB regulates hydrogen sulfide as a nuisance odor with the state standard established at 30 parts per billion (ppb) averaged over one hour.[6] OEHHA adopted this standard as the acute REL and established a chronic inhalation REL of 8 ppb (prolonged exposure greater than one year).[1]

3) *The odd ones out*. Unlike the emissions from entities that CARB and local air districts regulate, there have been incidents of air emissions across the state that do not have a clear responsible party, but may far exceed established standards and have significant impacts on neighboring communities. The two situations highlighted by this bill are examples of these "orphan incidents":

   a) *Tijuana River Valley*. Near the California-Mexico border, raw sewage from Tijuana crosses into San Diego County polluting the Tijuana River Valley with industrial chemicals, pesticides, and trash.[7,8] As this transboundary pollution meanders through the valley, it generates hydrogen sulfide emissions and local scientists and communities have raised alarms about a particular emission site on Saturn Blvd, infamously known as the "hot spot".[9] A constricted culvert under Saturn Blvd accelerates the untreated wastewater, generating turbulence and emitting hydrogen sulfide. When the wastewater is not diverted in Mexico, hydrogen sulfide has been detected at 2100 ppb (1-hour average), which is 70 times the nuisance standard, and frequently spikes depending on the flow rate of the sewage. Local scientists have demonstrated that averaging the hydrogen sulfide data over 1 hour to compare to the 30 ppb standard does not capture exceedances that occur within minutes and are suspected to have negative public health implications. The community has called for standards that consider different averaging times to capture these spikes and subsequent public notice and response.

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[6] California Air Resources Board. (2026). Hydrogen Sulfide & Health.
[7] McLamb, F., et. al. (2024). Evidence of transboundary movement of chemicals from Mexico to the U.S. in Tijuana River Estuary sediments.
[8] Cooper, A., et. al. (2025). Identifying wastewater chemicals in coastal aerosols.
[9] Rico, B., et. al. (2025). Heavily polluted Tijuana River drives regional air quality crisis.

b) *Salton Sea*. Located in Riverside and Imperial counties, the Salton Sea tends to be a major source of hydrogen sulfide emissions due to a large influx of nutrients through agricultural runoff and the declining water levels, which increase the sea's ability to mix.[10,11,12,13] With summer conditions, monitoring efforts have shown that hydrogen sulfide frequently exceeds the 30 ppb standard, for hundreds of hours over the course of the season.[14] The humid climate of the region anecdotally exacerbates health effects and the current standard does not take humidity into account. These emissions impact communities already overburdened and suffering respiratory impacts from other emissions originating from the progressively declining Salton Sea, such as aerosolized seawater containing toxins and particulate matter released from the exposed seabed.[11]

   Differences between monitoring techniques and deployment locations between local agencies and external groups have highlighted discrepancies in exceedances of the hydrogen sulfide standard.[14] While there are jurisdictional limitations and particular considerations that influence where air quality management districts deploy their monitors, universities and non-governmental organizations have called for more comprehensive monitoring that factors in wind direction.[11,14,15]

These incidents fall outside existing regulatory frameworks because attainment plans, and any subsequent action, may not be applicable to sources without specific and identifiable responsible parties. Thus standards, used to achieve attainment, may not be the most useful tool in addressing the harms of these incidents.

4) *Responses involving responsible parties*. There have been other incidents of hydrogen sulfide releases in which local agencies were able to identify a responsible party, and their responses have varied. Some of the actions taken in these situations may benefit communities impacted by such "orphan incidents".

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[10] Reese, B., et. al. (2008). Hydrogen sulfide production and volatilization in a polymictic eutrophic saline lake, Salton Sea, California.
[11] Centeno, D., et. al. (2025). Hypereutrophication, Hydrogen Sulfide, and Environmental Injustices: Mechanisms and Knowledge Gaps at the Salton Sea.
[12] Márquez, C., et. al. (2025). Inadequate Government-Led Water-Quality Monitoring Hinders Improvement Efforts in the Salton Sea.
[13] Wilson, J. (2024). This stinks: Salton Sea now emitting bad smells year round. Here's why.
[14] Márquez, C., et. al. (2025). Salton Sea Exceedances of California's Air Quality Standards Highlight Governance Gaps and Monitoring Needs.
[15] Wilson, J. (2025). Study: Salton Sea is emitting foul gas at levels worse than official monitors show.

For instance, a warehouse fire led to the release of product chemicals in the Dominguez Channel in Los Angeles County, prompting biological processes that resulted in hydrogen sulfide emissions. Technology played a key role in the resolution of this emergency, as a variety of monitoring technologies were deployed such as handheld, mobile, and fixed monitors, and odor neutralizers and aeration devices were used to mitigate emissions.[16] In 2015, a gas blowout occurred at the Aliso Canyon natural gas storage facility in LA County that led to the release of hydrogen sulfide emissions.[17] In part, the South Coast Air Quality Management District and CARB responded by establishing criteria for typical air quality levels for hydrogen sulfide at 10 ppb and reporting levels at 5 ppb.[18,19]

Comments

1) *Purpose of Bill.* According to the author, "For generations, families in some of the most economically strained parts of the state have suffered from millions of gallons of sewage and pollution flowing through the Tijuana River and emissions from the Salton Sea. This pollution has been harming our community for decades and yet our air quality standards haven't been updated in nearly half a century. It is unacceptable that the regulatory standard monitoring the very air our families breathe is so woefully out of date, leaving communities at risk. Making this critical change is a long overdue step towards addressing an issue that has been allowed to fester for decades. It is critical that Sacramento finally act to help our community."

2) *Response thresholds and a new framework*. Whether there is an identified responsible party or not, exceedances of the hydrogen sulfide standard tend to generate varied responses from local communities and agencies. Each response is likely tailored to the particular public health impacts and local needs demonstrated by each community, but not all responses would work for all situations. It is also clear that the current standard for hydrogen sulfide may be insufficient in indicating hazards to public health. Thus, a new regulatory framework with tailored metrics or trigger points that center public health and response may better meet the needs of impacted communities.

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[16] South Coast Air Quality Management District. (2024). Dominguez Channel Odor Event.
[17] County of Los Angeles Public Health. (n.d.). Aliso Canyon Disaster Health Research Study: Blowout and Public Health Disaster.
[18] South Coast Air Quality Management District. (2016). Aliso Canyon Facility Monitoring Network Plan.
[19] South Coast Air Quality Management District and California Air Resources Board. (2016). Criteria for Determining when Air Quality in the Porter Ranch and Surrounding Communities Has Returned to Typical Levels.

Advisory and response thresholds developed by OEHHA could serve as metrics or trigger points and could consider different averaging times, climates and new research. Several countries have short-term 30-minute standards and long-term 24-hour standards for hydrogen sulfide.[20] It is also not clear the extent to which air districts and local agencies consider Acute Exposure Guideline Levels (AEGLs), which are typically used by emergency responders during accidental chemical releases.[21] AEGLs for hydrogen sulfide have been established at intervals under an hour, and given that emissions data may be solely averaged to compare to the 1-hour standard, this metric may be underutilized. Newly developed thresholds could consider these metrics or develop additional metrics.

Given that "orphan incidents" can lack a designated regulatory framework, discretion is left to local agencies on how to respond. It can be unclear what the most appropriate response would be, especially since local agencies may lack experience with such incidents and they could vary with context. A review of best practices during similar incidents inside and outside the state could inform guidelines on public notification procedures, local agency response actions and coordination, mitigation technologies, public health assessments, monitoring strategies, data collection, reporting, and resource availability. Establishing guidance could support local air districts and public health agencies and pairing this guidance with newly established response thresholds and existing standards could bring clarity in challenging situations.

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: Yes

SUPPORT: (Verified 1/23/26)

Alianza Coachella Valley
Alliance San Diego
Azul
Cactustocloud Institute
City of Imperial
City of Imperial Beach
City of Indian Wells
City of Indio
City of Needles
Coachella Valley Association of Governments

[20] Collins, J. and Lewis, D. (2000). Hydrogen Sulfide: Evaluation of Current California Air Quality Standards with Respect to Protection of Children.
[21] U.S. Environmental Protection Agency. (2025). Acute Exposure Guideline Levels for Airborne Chemicals.

Coalition for Clean Air
Coronado Democratic Club
Desert Care Network
Desert Recreation District
Environmental Health Coalition
Imperial Valley Equity & Justice Coalition
Imperial Valley Healthcare District
LA Cooperativa Campesina De California
Latino Outdoors
Leadership Counsel for Justice and Accountability
Loma Linda University Adventist Health Sciences Center and its Affiliated Entities
Los Amigos De LA Comunidad, INC.
Outdoor Outreach
Palm Desert Area Chamber of Commerce
San Diego for Every Child
Sierra Club
Sierra Service Project
Solana Beach Eco Rotary Club
Surfrider Foundation
The Border Group
Tijuana River Coaliton
Un Mar De Colores
Wildcoast
YMCA of San Diego County

OPPOSITION: (Verified 1/23/26)

None received

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