SENATE COMMITTEE ON ENVIRONMENTAL QUALITY
Senator Blakespear, Chair
2025 - 2026 Regular

Bill No:	SB 58		
Author:	Padilla		
Version:	1/5/2026	**Hearing Date:**	1/13/26
Urgency:	No	**Fiscal:**	Yes
Consultant:	Taylor McKie		

SUBJECT: Air quality: standard: hydrogen sulfide

DIGEST: This bill requires the California Air Resources Board (CARB) to review the ambient air quality standard for hydrogen sulfide and adopt an updated standard to protect public health.

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 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.)

2) 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 the Office of Environmental Health Hazard Assessment (OEHHA). (HSC § 39606(a)(2))

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

4) 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))

5) 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)

6) 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))

7) 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)

8) 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.)

This bill:

1) Requires CARB to conduct a comprehensive review of the current ambient air quality standard for hydrogen sulfide and adopt an updated standard to protect public health.

2) Requires CARB, in conducting the comprehensive review, to evaluate at least all of the following:
   a) Current scientific literature regarding the health effects of hydrogen sulfide exposure;
   b) Current federal, state, and international health-based exposure guidelines;
   c) Documented exposure conditions in the Tijuana River Valley and Salton Sea regions;
   d) The adequacy of current averaging times for toxic exposure assessments; and,
   e) Cumulative and disproportionate impacts on environmental justice communities.

3) Requires CARB to conduct at least three public workshops during the review in regions including the Tijuana River Valley, Salton Sea, and an additional location selected in consultation with overburdened communities.

4) Requires CARB to consult with local air districts, OEHHA, the California Department of Public Health (CDPH), affected tribal governments, and community-based organizations.

5) Requires CARB to publish a report on its website following the completion of the review that includes scientific findings, exposure conditions, proposed revised standards, and monitoring strategies.

6) Requires CARB to adopt an updated hydrogen sulfide ambient air quality standard to protect sensitive populations and overburdened communities within 12 months of publishing the report.

7) Makes related findings and declarations.

Background

1) *Ambient air quality standards*. 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, which define the maximum amount of pollutants that can be present in outdoor air without harming public health, serve as a metric through which CARB and local air districts drive reductions in pollutants and coordinate efforts to maintain them. The federal Clean Air Act requires that all states attain the National Ambient Air Quality Standards (NAAQS), which consist of standards for particulate matter, carbon monoxide, lead, ozone, and nitrogen and sulfur oxides.[1] California has established additional standards (CAAQS) for those and other pollutants, including hydrogen sulfide.[2] 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.

2) *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

[1] California Air Resources Board. (2026). National Ambient Air Quality Standards.
[2] California Air Resources Board. (2026). California Ambient Air Quality Standards.

chronic exposure levels may be associated with ocular, cardiovascular, respiratory, and neurological impacts.[3,4,5,6]

Hydrogen sulfide is regulated by CARB as a nuisance based on odor detection and the CAAQS for the chemical has been established at 30 parts per billion (ppb) averaged over one hour.[7] OEHHA adopted this standard as the acute reference exposure level and established a chronic inhalation reference exposure level of 8 ppb (prolonged exposure greater than one year).[3] A health-based standard for hydrogen sulfide would be established at a much higher level, as severe adverse health impacts are expected to occur at concentrations higher than 30 ppb.

As research progresses and new findings emerge, the air quality standards adopted by agencies adapt. NAAQS are reviewed by the U.S. Environmental Protection Agency (U.S. EPA) at five-year intervals, and all have been updated within the last 15 years. For all CAAQS, the last review took place on December 2000 and was initiated by the Children's Environmental Health Protection Act (SB 25, Escutia, Chapter 731, Statutes of 1999). While the review (2000 Standards Review) led to updates for some standards, it ultimately concluded that the standard for hydrogen sulfide was reasonably health protective. The report further stated that the ambient levels of hydrogen sulfide are very low throughout most the state and the standard was considered a low priority for review since it was meant "to prevent odor annoyance and associated symptoms, outcomes that are clearly not as serious as those associated with [other] pollutants".[8]

3) *The odd ones out*. While CARB's regulatory framework focuses on mobile sources of emissions, like motor vehicles, the local air districts regulate stationary sources, such as industrial facilities. These sources typically have a responsible party who can respond to regulatory requirements, face penalties for non-compliance, and implement controls to abate their emissions. Unlike these regulated entities, there have been incidents or stationary sources 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

[3] Office of Environmental Health and Hazard Assessment. (2000). Chronic Toxicity Summary: Hydrogen Sulfide.
[4] Office of Environmental Health and Hazard Assessment. (2008). Acute Toxicity Summary: Hydrogen Sulfide.
[5] Batterman, S., et. al. (2023). Low level exposure to hydrogen sulfide: a review of emissions, community exposure, health effects, and exposure guidelines.
[6] Nuvolone, D., et. al. (2019). Health effects associated with chronic exposure to low-level hydrogen sulfide from geothermoelectric power plants.
[7] California Air Resources Board. (2026). Hydrogen Sulfide & Health.
[8] Collins, J. and Lewis, D. (2000). Hydrogen Sulfide: Evaluation of Current California Air Quality Standards with Respect to Protection of Children.

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.[9,10] 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".[11] 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.

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.[12,13,14,15] 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.[16] 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

[9] McLamb, F., et. al. (2024). Evidence of transboundary movement of chemicals from Mexico to the U.S. in Tijuana River Estuary sediments.
[10] Cooper, A., et. al. (2025). Identifying wastewater chemicals in coastal aerosols.
[11] Rico, B., et. al. (2025). Heavily polluted Tijuana River drives regional air quality crisis.
[12] Reese, B., et. al. (2008). Hydrogen sulfide production and volatilization in a polymictic eutrophic saline lake, Salton Sea, California.
[13] Centeno, D., et. al. (2025). Hypereutrophication, Hydrogen Sulfide, and Environmental Injustices: Mechanisms and Knowledge Gaps at the Salton Sea.
[14] Márquez, C., et. al. (2025). Inadequate Government-Led Water-Quality Monitoring Hinders Improvement Efforts in the Salton Sea.
[15] Wilson, J. (2024). This stinks: Salton Sea now emitting bad smells year round. Here's why.
[16] Márquez, C., et. al. (2025). Salton Sea Exceedances of California's Air Quality Standards Highlight Governance Gaps and Monitoring Needs.

declining Salton Sea, such as aerosolized seawater containing toxins and particulate matter released from the exposed seabed.[13]

Differences between monitoring techniques and deployment locations between local agencies and external groups have highlighted discrepancies in exceedances of the hydrogen sulfide standard.[16] 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.[13,16,17]

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". 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.[18] 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.[19] 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.[20,21]

Whether there is an identified responsible party or not, it is clear that exceedances of the hydrogen sulfide standard tend to generate varied responses from local communities and agencies. Each response is likely custom to particular public health impacts and local needs demonstrated by each community, but not all responses would work for all situations. Reviewing the standard may not change it, as the review would still consider science that originally determined the standard in addition to more recent literature. But more importantly, reviewing the standard may not change how communities respond to these incidents. However, it may be worthwhile to evaluate certain

[17] Wilson, J. (2025). Study: Salton Sea is emitting foul gas at levels worse than official monitors show.
[18] South Coast Air Quality Management District. (2024). Dominguez Channel Odor Event.
[19] County of Los Angeles Public Health. (n.d.). Aliso Canyon Disaster Health Research Study: Blowout and Public Health Disaster.
[20] South Coast Air Quality Management District. (2016). Aliso Canyon Facility Monitoring Network Plan.
[21] 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.

trigger points, their calculations, and responses that correspond to specific community needs.

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) *Are standards the solution?* There may be merit to updating the hydrogen sulfide standard that was deprioritized during the 2000 Standards Review. With 25 years of further research, especially around chronic exposure, additional standards could be beneficial. Moreover, the previous review did not consider the various circumstances across the state that warrant more specificity and nuance. However, the unique situations calling for the proposed standard update fall out of the existing regulatory framework and the development of a new or updated standard would not lead to beneficial outcomes from regulatory action. Thus, rather than updating the existing standards in hope that it will apply at a lower concentration, a new regulatory framework with tailored metrics or trigger points that center public health and response may better meet the needs of impacted communities.

3) *Establishing response thresholds*. Advisory and response thresholds developed by OEHHA could serve as metrics or trigger points and could consider different averaging times, climates and new research. The 2000 Standards Review referenced that several countries have short-term 30-minute standards and long-term 24-hour standards for hydrogen sulfide.[8] 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.[22] 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. OEHHA could also consider possible local agency

[22] U.S. Environmental Protection Agency. (2025). Acute Exposure Guideline Levels for Airborne Chemicals.

or community responses in the development of such thresholds, including, but not limited to the need for public advisory and notification, reporting, monitoring, regulatory action, mitigation efforts, or relocation. Air districts and other local agencies can adopt the developed thresholds and apply the appropriate response. This will also allow for a uniform approach to such incidents across the state. ***The author and committee may wish to require OEHHA to develop health-based advisory and response thresholds for hydrogen sulfide and require air districts to adopt any newly developed thresholds.***

Given that the review and adoption of a new standard would initiate the rulemaking process within CARB and would involve the input of various stakeholders, any newly established standard may not be purely health-based, but would take into account the regulatory environment. Furthermore, a review of the standard within CARB may not result in any substantial change in the standard. Advisory and response thresholds could center public health and based on any newly developed thresholds, CARB could then adopt updated standards at its discretion. ***The author and committee may wish to authorize (rather than require) CARB to adopt updated standards, and do so based on any newly developed advisory or response thresholds.***

4) *A framework for response*. Given that these "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.

There are already similar efforts underway, although it is unclear the extent those efforts take the issues presented here under full consideration. AB 619 (Calderon, Chapter 412, Statutes of 2021) required the California Department of Public Health (CDPH) to develop a plan with guidelines for counties to use during significant air quality events, such as wildfires and related events. This plan is required to be completed by June 2027 (AB 1003, Calderon, Chapter 537, Statutes of 2025), so there is an opportunity to align the needs presented here with the mandated plan or for coordination to reduce duplication. *The*

author may wish to require OEHHA to develop a response framework or guidelines to establish best practices and guidance for threshold exceedance incidents that may impact public health in coordination with related entities.

5) *Committee amendments. **Staff recommends the committee adopt the bolded amendments contained in comment 3 above.***

Related/Prior Legislation

AB 1003 (Calderon, Chapter 537, Statutes of 2025) required a plan developed by CDPH with guidelines for significant air quality events to be completed by June 2027, and include public outreach and distribution of the plan.

AB 2851 (Bonta, Chapter 743, Statutes of 2025) required air districts to develop requirements for fence-line air quality monitoring and threshold levels for airborne contaminants associated with metal shredding facilities in consultation with OEHHA.

SB 867 (Allen, Chapter 83, Statutes of 2024) enacted the Safe Drinking Water, Wildfire Prevention, Drought Preparedness, and Clean Air Bond Act of 2024 authorizing the issuance of bonds in the amount of $10 billion to finance projects including, but not limited to drought, flood, and water resilience, coastal resilience, park creation, outdoor access, and clean air programs.

AB 619 (Calderon, Chapter 412, Statutes of 2021) required CDPH to develop a plan with recommendations and guidelines for counties to use in the case of significant air quality events caused by wildfires or other sources.

AB 1597 (Alvarez, 2023) would have authorized funds made available to the California Environmental Protection Agency (CalEPA) for North American Development Bank for loans, grants, and expenditures to address water quality problems arising in the California-Mexico cross-border watersheds. This bill was placed on the suspense file in the Senate Appropriations Committee.

AB 2248 (Eduardo Garcia, 2022) would have made $100 million available from the General Fund to the State Water Board for grants and direct expenditures to address water quality problems arising in the California-Mexico cross-border rivers. This bill was vetoed by Governor Newsom.

SB 1301 (Hueso, Chapter 368, Statutes of 2020) required CalEPA and the California Natural Resources Agency to collaborate to create a Tijuana River Valley Watershed Action Plan to be reviewed and updated on a 3-year cycle.

SB 690 (Hueso, Chapter 381, Statutes of 2019) encouraged the State Coastal Conservancy to prioritize projects identified in feasibility studies conducted by the County of San Diego for the Tijuana River Valley when expending funds to address transboundary flows and pollution in the Tijuana River Valley.

AB 965 (Eduardo Garcia, Chapter 668, Statutes of 2015) established the New River Wate Quality, Public Health, and River Parkway Development Program to coordinate funding and implementation for environmental and health projects and purposes relating to the California-Mexico border region.

AB 1095 (Eduardo Garcia, Chapter 722, Statutes of 2015) required the California Natural Resource Agency to submit a list of shovel-ready restoration projects for the Salton Sea to the Legislature by March 2016.

SB 277 (Ducheny, Chapter 611, Statutes of 2003) enacted the Salton Sea Restoration Act that established a fund for various purposes relating to restoration of the Salton Sea.

SB 25 (Escutia, Chapter 731, Statutes of 1999) required CARB to review all existing health-based ambient air quality standards to determine whether they adequately protect the health of the public, including infants and children, and to revise the highest priority air quality standard determined to be inadequate by December 2002.

SOURCE: Author

SUPPORT:
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
Coronado Democratic Club
Desert Care Network

Desert Recreation District
Environmental Health Coalition
Imperial Valley Equity & Justice Coalition
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
Surfrider Foundation
The Border Group
YMCA of San Diego County

OPPOSITION:
None received

-- END --