

CONCURRENCE IN SENATE AMENDMENTS

AB 28 (Schiavo)

As Amended August 21, 2026

2/3 vote

SUMMARY

Establishes a protocol for the Department of Resources Recycling and Recovery (CalRecycle) to require a corrective action plan in the event of a subsurface elevated temperature event (SET) at a landfill. Authorizes the Secretary of the California Environmental Protection Agency (CalEPA) to establish a multiagency coordination group to investigate and provide recommendations for addressing landfill SETs. Authorizes CalRecycle to impose penalties of up to \$100,000 per day for specified violations.

Senate Amendments

- 1) Revise the definitions in the bill, including deleting numerous definitions and revising the definition of "subsurface elevated temperature event."
- 2) Require the owner or operator of a landfill to notify specified entities in the event of an SET.
- 3) Require the owner or operator to take any action required by CalRecycle to resolve the SET, including creating a corrective action plan.
- 4) Require the owner or operator to provide evidence of sufficient financial ability to cover the costs of the corrective action plan and revise the owner or operator's postclosure maintenance plan to account for the additional costs associated with the SET.
- 5) If the owner or operator cannot cover the cost of managing and implementing a corrective action plan, authorize the Attorney General to pursue an action against the parent company of the owner and operator of the landfill, as specified.
- 6) Authorize CalRecycle to, at its sole discretion, become the enforcement agency for all or part of a solid waste landfill that is experiencing a SET.
- 7) Authorize CalRecycle to assess administrative civil penalties of up to \$100,000 per day for failing to comply with specified requirements, including implementing a corrective action plan. Specify that penalties begin accruing after the 31st day following the notice of violation. Direct penalty funds to counties adversely affected by a SET.
- 8) Authorizes CalEPA to select and coordinate a multiagency coordination group to investigate and provide recommendations for how to resolve a SET.
- 9) Require a local county public health department to conduct an initial community health needs assessment, as specified, within 60 days of receiving a recommendation from the multiagency coordination group. Require the owner or operator of the landfill to provide funding for the assessment.
- 10) Authorize CalRecycle or a local enforcement agency to impose an administrative civil penalty of up to \$100,000 per day for failing to submit or implement an air monitoring and sampling plan, as specified.

COMMENTS

Landfill fires. Landfill fires occur with some regularity; however, most fires, if managed properly, are resolved fairly quickly with little to no impact to surrounding communities. There are two types of fires that occur in landfills, surface fires and SETs. Surface fires typically occur when a landfill inadvertently accepts flammable waste that ignites on the landfill surface. The risk and frequency of these fires has increased as products containing lithium ion batteries have become more common. Surface fires are generally identified and responded to quickly by landfill operators and are relatively easy to put out by moving the burning material to a safe area, applying a cover material, like soil, to suffocate the fire, or using foam or water to extinguish the fire.

In contrast, SETs, also referred to as subsurface landfill fires or subsurface elevated temperature events, occur deep within a landfill, often without producing visible flames or smoke, making them difficult to identify quickly. Unlike surface fires, these events are exothermic chemical reactions that occur when waste is heated by biological decomposition and chemical oxidation. This reaction can result in emissions of toxic and/or flammable gases, such as volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons, polychlorinated dibenzodioxins, polychlorinated dibenzofurans, methane, hydrogen, ammonia, carbon monoxide (CO), acetylene, benzene, and others. Some signs of an SET occurring are rapid settling, smoke, odors, changes in landfill gas composition, changes in landfill gas pressure, combustion residue in gas wells, excessive liquid generation, and increased temperatures in landfill gas wells. Once an SET starts, the event can spread within the landfill, especially if the SET has exposure to air, moisture, and voids within the waste material.

Proper landfill design and operations minimize the risks of an SET occurring, and the severity of an SET should one occur, but uncertainty exists about why some landfills experience SETs. Oxygen management (i.e., minimizing air intrusion into the landfill), effective waste acceptance protocols and screening, liquid management (i.e., minimizing liquids in the landfill), and effective landfill gas controls can all reduce the risks of SETs. Identifying and monitoring elevated landfill temperatures are important to catch SETs early. According to the United States Environmental Protection Agency (USEPA), normal landfill temperatures are between 90-131 degrees Fahrenheit, temperatures from 131 to 145 degrees may suggest heat-generating chemical reactions may exist, above 145 degrees methane generation slows, and above 165 degrees biological activity begins to cease, which may trigger an SET. Once an SET is identified, temperatures can be monitored by additional wells for this purpose. However, temperature monitoring alone may not catch all SET events, and not all SET events pose a threat to the environment or surrounding communities.

Federal regulations (40 Code of Federal Regulations 60.34(f)) require landfill operators to operate a landfill gas collection system for each area, cell, or group of cells. The regulation requires the owner or operator to operate landfill gas wellheads with a landfill gas temperature below 131 degrees; however, the regulation authorizes an owner or operator to establish a higher operating temperature at a particular well, if the operator demonstrates, including supporting data, that the elevated parameter neither causes fires nor significantly inhibits anaerobic decomposition by killing methanogens to the administering agency.

Controlling an SET requires operators to take quick and appropriate action using a combination of factors. Prompt response can limit the movement of the SET within the landfill. However, the state lacks clear requirements for the identification and management of SETs.

Regulation of landfill emissions. The Air Resources Board (ARB) implemented the landfill methane rule (LMR) to monitor and reduce methane emissions from landfills in 2010. The LMR requires owners and operators of certain landfills to install and operate gas collection and control systems, monitor surface methane concentration and other performance parameters, repair emission exceedances and other performance issues, source test, keep records of these actions and data, and report certain information to ARB or the air districts. In November of last year, ARB updated the LMR to include specific processes for monitoring, reporting, and dealing with SETs at landfills. The regulation establishes a tiered response framework for elevated subsurface temperatures at landfill gas collection wells, triggered at two critical thresholds: 131°F (55°C) and 145°F (62.8°C). These requirements apply to interior wellheads and are designed to detect and prevent subsurface fires. The new provisions include a shorter timeline by which landfill operators must respond to a leak and new monitoring requirements for landfills with and without gas collection and control systems. The state will also begin requiring operators to respond to detected leaks via third-party technology verified by ARB — including the California Satellite Methane Project. Under the LMR, air districts may voluntarily enter into memoranda of understanding with ARB to implement and enforce the regulation and to assess fees to cover costs. Currently, 22 of the 35 local air districts are implementing and enforcing the LMR.

In addition to ARB, federal, state, and local agencies all play a role in regulating landfills including but not limited to:

- 1) Local air districts in California play a lead role in regulating stationary sources of air pollution, including issuing permits for landfill Gas Collection and Control System (GCCS). Local air districts regulate enclosed flares and other landfill gas combustion devices used to destroy methane and co-pollutants, and respond to nuisance and odor complaints
- 2) CalRecycle regulates solid waste handling, processing, and disposal activities to protect public health and safety and the environment by supporting solid waste local enforcement agencies.
- 3) The State Water Resources Control Board and their nine Regional Water Quality Control Boards regulate discharges to land that could impact surface water and groundwater quality, including regulatory and permitting requirements for landfills.
- 4) The Department of Toxic Substances Control regulates facilities for disposal of hazardous waste.
- 5) U.S. EPA regulates emissions of volatile organic compounds from landfills through requirements similar to those in the LMR.

Chiquita Canyon. Chiquita Canyon Landfill is operated by Chiquita Canyon LLC, which is a subsidiary of Waste Connections, Inc. The landfill, located in Castaic, California, is approximately 640 acres total, with 400 acres permitted for solid waste disposal. The facility includes two closed areas, Primary Canyon, which covers 55 acres and operated from 1970 to 1987, and Canyon B, which covers 15 acres and operated from 1987 to 1988. The active operating area is known as Main Canyon, and spans approximately 212 acres. The facility also

includes a permitted 114 acre expansion, East Canyon. The landfill accepted nearly one-quarter of Los Angeles County's solid waste prior to this year.

Since at least May 2022, the landfill has been experiencing elevated landfill gas temperatures and emissions indicative of an SET. The SET, located deep in an inactive area of the landfill, has grown significantly in size since it was first identified. The SET has impacted nearby residents. Since it was discovered, the SET has generated more than 27,000 complaints to the South Coast Air Quality Management District (SCAQMD). The SET has also produced additional quantities of liquid waste (leachate) that must be removed from the reaction area. The leachate being collected from the SET contains high levels of benzene, a chemical that poses risk to public health and the environment. The SET is causing substantial impacts to the neighboring communities, with residents living as close as 1,000 feet from the SET's border.

Regulatory responses. Regulatory agency responses to the SET did not begin in earnest until late 2023, when odor complaints associated with the SET increased. In November 2023, local, state, and federal agencies formed a Multi-Agency Critical Action Team (MCAT), led by USEPA, to coordinate investigations and enforcement, and to ensure compliance with state and federal requirements. The MCAT is comprised of the California Environmental Protection Agency (CalEPA), CalRecycle, DTSC, ARB, the Los Angeles Regional Board, SCAQMD, and the Los Angeles County Department of Public Works. The Office of Environmental Health Hazard Assessment (OEHHA) has also provided support to the MCAT by identifying potential health risks and providing technical expertise. The establishment of the MCAT has resulted in better coordination between oversight entities and the issuance of a Stipulated Order of Abatement by SCAQMD to address odor issues and a Unilateral Administrative Order by USEPA to require the operator to comply with the law and to properly manage, treat, and dispose of hazardous waste and take steps to mitigate odors. In February 2024, USEPA, CalEPA, and Los Angeles County additionally established a Response Multi-Agency Coordination Group to monitor and advise the operator on the ongoing response to the SET. The LEA, DTSC, the Regional Board, and USEPA have issued various violations and penalties related to the SET. For example, on April 1, 2025, DTSC issued an additional Summary of Violations for failure to minimize the possibility of release of hazardous waste or hazardous waste constituents and failure to comply with land disposal restriction requirements. Under this order, the operator faces fines of up to \$70,000 per day unless it takes "prompt corrective measures.

Last year, CalRecycle issued the *Review of the Soil Reaction Break/Barrier Plan for the Chiquita Canyon Landfill SET Event*. As noted above, an SET can be caused by "overpulling" a gas collection system to address emissions or odors. This action inadvertently triggers a vacuum in adjacent landfill gas wells, creating a spike in temperature or oxygen levels, leading to an SET. According to CalRecycle's review of the Chiquita Canyon Landfill SET, "This is precisely what [the operator's] industry expert recommended in his November 2024 [Environmental Research & Education Foundation]-sponsored presentation. CalRecycle staff agree that the pressure in the landfill should be reduced, but not at the risk of initiating a new shallow SET Event by exceeding the oxygen threshold of 2% or requesting a temperature higher operating value."

According to CalRecycle's findings, a partial list of issues caused by the SET include: significant emissions and odors that have impacted the community of Val Verde and surrounding areas from 2023 to 2025; the interim cover has experienced significant damage from settlement, leachate outbreaks, slope instability, and fissures; leachate contains hazardous levels of benzene; temperatures have reached the maximum detectable limit of 250 degrees Fahrenheit in some

wells; nine wellhead temperature have exceeded 200 degrees Fahrenheit and 83 have exceeded 170 degrees Fahrenheit since 2023; two slope instability incidents have occurred on the west slope; carbon monoxide levels have exceeded 1,500 ppmv, hydrogen above 2%, and elevated volatile organic compound levels in the reaction and boundary areas; accelerated settlement continues to be documented by the operator; and temperatures exceeding 140 degrees Fahrenheit have affected the service life of a portion of the liner.

Based on its findings, CalRecycle staff determined that:

- 1) The operator's barrier plan will not contain or control the reaction. There is no proposed barrier to prevent the reaction from consuming the entire facility.
- 2) The reaction area is expanding, and the current containment strategy has failed.
- 3) More than one independent SETs are developing due to the current gas collection and control system operations.
- 4) The expansion of the SET into an additional cell must be prevented.

Chiquita Canyon, LLC. Waste Connections, the owner and operator of the facility, via the Chiquita Canyon, LLC, prepared a report, *State of the Landfill: Summary of the Efforts to Mitigate the Elevated Temperature Landfill Event at the Chiquita Canyon Landfill*, as of October 2024, the operator installed over 41 acres of geosynthetic cover over the reaction area to reduce the volume of fugitive gas emissions; installed more than 110 dewatering pumps to remove leachate and the corresponding heat; installed more 220 vertical dual extraction wells to reduce pressures and remove gas and heat; and, evaluated data on a monthly basis to look for evidence of reaction spread to other cells or modules within the landfill.

According to Waste Connections, the facility's community relief program was initiated in March 2024 to assist with offsetting costs associated with odor mitigation for those living in communities surrounding the landfill, including temporary relocation, home hardening, and increased utility bills. The program is expected to total over \$25 million, including providing nearly 1,800 air filters to the community, including filters for the Castaic Union School District. The community relief program has also installed an air monitoring station at the Castaic Middle School, resulting in costs of approximately \$330,000 per year.

According to the Author

The Chiquita Canyon Landfill has been smoldering and releasing toxic gas into communities within Assembly District 40 for over four years and is the largest on-going public health and environmental emergency in Los Angeles. Current regulations and statutes are woefully inadequate to prevent and address this disaster. Assembly Bill 28 will take it a step further by ensuring landfills continually monitor their facilities for increased temperatures, require landfills to be transparent with surrounding communities, and outline progressive enforcement actions that local and state agencies must take if landfill operators fail to successfully implement a corrective action plan.

Arguments in Support

A coalition of supporters state:

AB 28 fills a dangerous regulatory gap. While California Air Resources Board's Landfill Methane Regulation requires monitoring and control of surface-level landfill gas emissions, it does not address subsurface heating or the smoldering chemical reactions that often precede the release of toxic gases. These underground reactions (if left unchecked) can lead to conditions like those at Chiquita Canyon, where elevated temperatures have triggered widespread emissions of hazardous pollutants and unmanageable volumes of toxic leachate.

Arguments in Opposition

Kern County writes in opposition:

In this climate, when counties are already carrying extraordinary fiscal burdens and absorbing ongoing state and federal cost shifts, AB 28 represents yet another instance of the state creating complex, high-stakes obligations and leaving counties to "figure it out" without resources, clarity, or meaningful partnership. Kern County supports thoughtful, effective, and science-based measures to address SET events. However, AB 28, as drafted, imposes unfunded mandates, unclear standards, disproportionate penalties, open-ended fiscal liabilities, and operational risks on counties and landfill operators.

FISCAL COMMENTS

- 1) CalEPA estimates ongoing costs of about \$572,000 annually (General Fund) to implement the provisions of this bill including participation in a multiagency coordination group established to investigate, monitor, and advise on subsurface elevated temperature events (SETs); provision of analysis and technical expertise; and service as a liaison with agencies, departments, and the public.
- 2) CalRecycle estimates one-time costs of \$3 million spread over 3 years and ongoing costs of approximately \$2.64 million annually (Integrated Waste Management Fund) to develop methodologies to evaluate community impacts, develop specialized expertise necessary to mitigate harm to a person or community affected by a SET, develop and implement regulations, provide enforcement support, coordinate with affected communities, provide support and technical assistance to local enforcement agencies, participate in the multiagency coordination group, and oversee the expenditure of mitigation funds, among other things.
- 3) The State Water Resources Control Board (SWRCB) estimates ongoing costs of \$750,000 annually (Waste Discharge Permit Fund) to participate in the multiagency coordination group, assist in investigations, and provide recommendations to achieve resolutions for SET at existing landfills, among other things.
- 4) The California Air Resources Board (CARB) estimates ongoing costs of \$940,000 annually (Cost of Implementation Account) to participate in the multiagency coordination group, provide technical analysis of subsurface gas and waste temperature data, provide technical expertise, consult on air monitoring analysis, serve as a community liaison, and provide support, among other things.
- 5) The Office of Environmental Health Hazards Assessment (OEHHA) estimates ongoing costs of \$324,000 annually (General Fund) to implement the additional tasks associated with the multiagency coordination group and to design and carry out additional community science investigations as needed.

- 6) The Department of Toxic Substances Control (DTSC) anticipates its costs would be minor and absorbable.
- 7) The above costs may be at least partially offset by reimbursements made by the owners and operators of landfills that experience SETs (Landfill Subsurface Fire Mitigation Community Fund).
- 8) To the extent that CalRecycle imposes and collects the penalty of up to \$100,000 per day on landfill operators that do not follow the requirements of the corrective action plan or recommendations of the MCG, unknown but potentially significant penalty revenues (Landfill Subsurface Fire Mitigation Community Fund).

VOTES:

ASM NATURAL RESOURCES: 11-3-0

YES: Bryan, Connolly, Ellis, Garcia, Haney, Kalra, Muratsuchi, Pellerin, Schultz, Wicks, Zbur

NO: Alanis, Flora, Hoover

ASM APPROPRIATIONS: 11-3-1

YES: Wicks, Arambula, Calderon, Caloza, Elhawary, Fong, Mark González, Hart, Pacheco, Pellerin, Solache

NO: Dixon, Ta, Tangipa

ABS, ABST OR NV: Sanchez

ASSEMBLY FLOOR: 56-9-14

YES: Addis, Aguiar-Curry, Ahrens, Arambula, Ávila Farías, Bains, Bauer-Kahan, Bennett, Berman, Boerner, Bonta, Calderon, Caloza, Carrillo, Connolly, Davies, Elhawary, Ellis, Fong, Gabriel, Garcia, Gipson, Mark González, Haney, Harabedian, Hart, Irwin, Jackson, Kalra, Krell, Lee, Lowenthal, McKinnor, Muratsuchi, Ortega, Pacheco, Papan, Patel, Pellerin, Petrie-Norris, Quirk-Silva, Ramos, Ransom, Celeste Rodriguez, Michelle Rodriguez, Rogers, Blanca Rubio, Schiavo, Schultz, Soria, Stefani, Valencia, Wicks, Wilson, Zbur, Rivas

NO: Castillo, DeMaio, Hadwick, Hoover, Macedo, Patterson, Sanchez, Ta, Wallis

ABS, ABST OR NV: Alanis, Alvarez, Bryan, Chen, Dixon, Flora, Gallagher, Jeff Gonzalez, Lackey, Nguyen, Sharp-Collins, Solache, Tangipa, Ward

UPDATED

VERSION: August 21, 2026

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FN: 0004177