

**Comment to the California Air Resources Board on
Draft 2026 Roadmap to Reduce Air Toxics**

*Submitted electronically by Earthjustice with Environmental, Health, and Community Nonprofit
Organizations and Individual Scientists (September 16, 2026)*

The undersigned environmental, health, and community nonprofit organizations and individual scientists urge the California Air Resources Board (CARB) to strengthen and expand the *Draft 2026 Roadmap to Reduce Air Toxics* to protect all children, families, and communities in California from hazardous air pollution. The Draft Roadmap includes important goals and plan components, but it omits or fails to fully address the following essential areas for action. We urge CARB to include these components and strengthen the proposal to ensure a meaningful 20-year roadmap that communities can count on.

1. Stronger government action by CARB on toxic air focusing on protecting children's health and preventing developmental exposure is essential to ensure a healthy start and future for all children in our state.

A roadmap to reduce air toxics must do more to prevent and reduce some of the most dangerous and harmful exposures for communities: those during childhood and early development. CARB should ensure children's health is not sidelined or an afterthought in air standards but is a guiding metric and goalpost in regulating toxic air contaminants (TACs) and setting air standards and safeguards for human health that ensure protection for children. Designing environmental health safeguards with children's health in mind would make vital progress toward CARB's goals in the Draft Roadmap and toward health protection for all. This also would help reduce and finally start to end the cycle of injustice in communities facing the worst impacts over time from pollution and chemical exposure.

CARB should ensure that the final roadmap hardwires children's health into its design and make certain that its actions translate important scientific research into on-the-ground health protection. This will help reduce preventable pollution and chemical exposure during pregnancy, infancy, childhood, and adolescence and ensure stronger regulations and other policies that can finally break the cycle of generations of children breathing toxic air, particularly in the most exposed communities and populations.¹ In particular, the science shows the need to coordinate action on TACs in ways designed specifically to prevent and reduce children's exposure and harm. In the final roadmap, CARB should:

- (1) Require specific evaluation and incorporation of the science on children's health and developmental exposure and harm in all air rules and actions, to ensure that all are designed to ensure protection not just for a hypothetical healthy adult but for children's health and to prevent harm from early exposure. *Key areas for action to consider should include, for example: the use of more protective age-dependent adjustment and uncertainty factors in health risk assessments to prioritize prevention of exposure that has the potential to cause harm to children or during early developmental stages (including prenatal); the use of safer alternatives, phase-outs and bans on the use or release into the air of chemicals that can cause harm to children's health, rather than delaying protection to try to find some reachable level of safety from exposure; incorporating a requirement for a margin of children's safety into all air standards and permitting decisions that ensures no one is exposed to*

toxicants in the air, to the greatest extent avoidable, during pregnancy or childhood; and,

(2) Evaluate, implement, and advance child-centric policies, including those that could immediately increase protection where it is not already built into air standards. Examples should include: considering and implementing stronger air standards and permitting protections that focus on preventing exposure to children and developmental harm from: sources near schools, daycare centers, parks, playgrounds, hospitals, and other locations where children regularly visit or spend time; persistent and bioaccumulative toxicants that can build up in soil, dust, breastmilk, and the human body, and that can increase children's exposure and harm across generations; all carcinogens that can cause mutagenic or genotoxic harm from exposure to children and during early development; all neurodevelopmental toxicants; emergency and other short-term releases and incidents that can cause particular exposure and harm during childhood and pregnancy.

CARB should evaluate the best available science, tools, and policy examples within the United States and beyond, and seek additional scientific and community input on all potential ways to boost progress and advance efforts to protect children's health from toxic air. CARB should commit to ensuring that protecting children's health finally becomes a central test and metric for progress on clean air and environmental health in California, so that someday, all children will be able to grow up breathing healthy air here. There is a new global effort in progress to address chemical management and children's health that CARB should track and learn from as CARB seeks to evaluate and show progress as part of its roadmap.ⁱⁱ

2. CARB must chart a roadmap that protects Californians from upsets, malfunctions, and chemical emergencies.

Industrial facility process upsets, malfunctions and uncontrolled highly toxic air releases in California – including recent repeated chemical disasters, fires, and emergencies in the Los Angeles areaⁱⁱⁱ – continue to put communities in harm's way, yet often go ignored or insufficiently addressed in regulations and permits. These incidents should simply not be happening over and over again in any community and underscore the need for CARB to do more to protect communities from all preventable releases of toxic chemicals. This should include working to ensure the development of updated health reference values and exposure assessment methods for pollution spikes and chemical emergencies, as existing values (e.g., ERPGs, AEGLs, and acute RELs) do not currently protect children or prevent harm during pregnancy. During pregnancy, critical windows for health and organ system development can be disrupted by relatively "short-term" exposures leading to increased risk of both childhood and life-long health impacts including birth defects, learning disabilities, and cancer.^{iv} CARB also must use its full authority to plan ahead and work with all relevant agencies including CalEPA, CalOSHA, the U.S. EPA, air districts, and other local jurisdictions both to plan ahead to prevent pollution spikes and chemical emergencies and to ensure meaningful response that actually safeguards local health. This planning must also prepare for multiple disasters happening at the same time.

3. CARB must expand emission testing and fenceline monitoring.

CARB must commit to ensure that within the time period of this roadmap all of its air toxics rules and permits will require the best available emission testing and fenceline air monitoring methods so that no facility can emit toxic air in this state without groundtruthing and demonstrating what its actual emissions are. CARB should learn from examples like the South

Coast Air Quality Management District and U.S. EPA (where some progress previously occurred), and create new fenceline monitoring methods to avoid stalled advancements in protecting clean air, including for local communities in California facing the greatest health and environmental impacts. The final roadmap should include a plan, with clear timelines, to include in air rules and permits requirements that:

- Implement the best available methods for fenceline monitoring for all sources of TACs in the state, to the greatest extent possible based on existing methods;
- Include fenceline corrective action levels based on the best available health reference values, ensuring emissions reductions occur where fenceline monitoring shows exceedances of the fenceline levels;
- Provide prompt and full online public access to all air monitoring data;
- Fund and support the creation of additional fenceline monitoring methods for all TACs for which no current method is available or where a method is not available at the detection levels needed to assess health impacts.
- CARB also must expand its air toxics monitoring network, including through the use of the best available stationary and mobile monitors, across all communities in the state with sources of TACs.

4. Addressing unregulated or under-regulated toxics in the air must focus on prevention and faster action, and not just chemical-by-chemical assessment.

Due to serious potential harm that can begin in childhood and during early development, CARB should evaluate ways to prioritize prevention and reduction of exposure to protect health now. Evaluation takes time and the toxics that CARB describes as “emerging” – like ethylene oxide – have already been affecting communities for decades in our state. CARB should also evaluate and consider addressing certain toxics as classes or groups of chemicals, and not only one-by-one, which increases delay in meaningful protection. There are at least two classes of substances where science shows a strong need to prevent air pollution and exposure now: **per- and polyfluoroalkyl substances (PFAS)**, and **plastics (including additives and breakdown products)**. CARB should commit in the roadmap to prioritize action on these classes of substances. CARB should also ensure an efficient and prompt listing and regulatory procedure for unregulated toxic air pollutants, to end the delay in protection for communities currently breathing these chemicals in California.

5. Cumulative Health Risks

As CARB appropriately recognizes, the science shows the need to more fully evaluate and address the real-world ways communities experience toxic pollution by assessing the cumulative effects of toxic air exposure, including cumulative health risks and impacts, and sufficiently accounting for uncertainty by adding margins of safety into risk assessment. Communities have called for CARB and EPA to do this for years and science continues to evolve on methods that CARB should implement.^v To do so, it is vital for CARB to recognize the need to assess and understand, using the best available science, the maximum, cumulative health risks to the most exposed and most vulnerable community members’ simultaneous and combined exposures across pollutants, source, and pathways. Communities are endangered by the combined exposure of multiple toxic air contaminants and criteria pollutants that can harm the same organ system or part of the body or otherwise result in increased risk of disease. A meaningful cumulative health

risk approach by CARB that follows the best available science would necessarily include evaluating, at least, the whole picture of exposure to air pollution – including toxics and criteria pollutants combined, from stationary and mobile sources – and the context in which communities are experiencing this (e.g., added on top of legacy contamination and other types of chemical exposure). For example, current standards and risk assessment methods fail to include the combined impact of multiple criteria and air toxics on asthma and other respiratory diseases. Additionally, new research has linked low level exposure to the toxic air contaminants benzene, toluene, ethylbenzene, and xylene exposure to hospitalizations and premature mortality which should be considered alongside criteria pollutant exposures.^{vi}

One of the critical gaps in cumulative risk assessment approaches has been the failure to combine different risks in any meaningful way for consideration cumulatively. For example, in addition to cancer, acute and chronic non-cancer health risks to multiple organ systems matter and should be combined, not looked only in isolation for an organ system. Although cancer risk cannot simply be added to chronic non-cancer or acute risk, there must be a quantifiable measure to account for the multiple types of exposure and hazards that communities face simultaneously. Cumulative risk values could be scored through input from CalEPA OEHHA, scientific experts and health researchers as well as community members. Having no overall metric or evaluation of cumulative risk – e.g., a bundle that includes all components of that risk – as a measurement means that there is no meaningful way to evaluate the variety of harm communities are facing or to try to compare and assess those across time or across geographic areas.

6. New Scientific Methods and Technologies

CARB notes that OEHHA is considering strategies to accelerate the development of toxicity values, including the use of New Approach Methods (NAMs). It is widely known that many governmental agencies are also using or considering the use of Artificial Intelligence (AI) in chemical safety reviews. CARB must exercise caution when evaluating and suggesting that these methods are reliable, safe, or sufficiently validated and robust to aid in the evaluation and development of toxicity values used in critical regulatory and decision-making processes – including due to the fact that they have not been shown to reliably predict all threats to health and well-being or to satisfy all ethical and legal responsibilities. NAMs – especially when not part of a public, transparent, and consultative process, as in other assessment paradigms – have not shown to be sufficiently protective or informative on real-world impacts to health, including during early human development and childhood. Due to the inherent limitations they contain, such methods should never be used to determine that a chemical or source should not be regulated. They are also often non-transparent, preventing affected communities and other experts from understanding or participating in decisions that directly affect their health. CARB should seek expert and community input on ways to evaluate, democratize, develop and deploy any new chemical assessment protocols safely, transparently, and effectively without embracing false shortcuts that could undermine reliability and trust in chemical assessments or harm human health and the environment, particularly in view of the evolving research continuing to demonstrate even greater sensitivity and vulnerability to children and early in life than previously understood.

7. Additional Key Topics

CARB should ensure meaningful components of the next version of the roadmap that include a mini-roadmap for each key area of its work. For example, we continue to support robust action

to control diesel air toxics. While CARB has adopted important and significant regulations to curb diesel pollution, there is still work to be done in this space as communities near diesel hubs continue to suffer elevated health risks. The agency's work in regulations and incentives to shift diesel and other equipment from combustion technologies to zero-emissions continues to be a key priority to protect communities from the freight industry.

As well, more input and action are needed on each of the areas discussed in the plan that are only briefly referenced from specific industry sectors – like petroleum refineries, chemical facilities, sterilizers, metal smelters and foundries – and other sources not mentioned, like data centers, which release toxic air and can pose a serious threat to human health and well-being, to all areas of CARB's work overall, like air toxics standards, permitting, enforcement, and emergency response. In the roadmap, it is also vital for CARB to include ways to modernize and strengthen its overall management and administration of its responsibilities. For example, CARB should commit to expand staffing to meet the strong need statewide for air toxics reductions, and should collect increased fees from polluting companies to ensure effective management of all of its programs so that it does not have to try to shift funds from other key air priorities in order to advance the roadmap and meet key goals. Increasing funding for air toxics monitoring, adding knowledgeable, committed staff to the program, and investing both regulatory and enforcement resources in real, measurable reductions of air toxics statewide, including in communities facing environmental injustice, is what this moment requires.

Conclusion

Thank you for your time and consideration of these comments and for your work on a roadmap that, we hope, all Californians will be able to count on to protect their own and their children's health for years to come, and that can lead the way at this critical moment nationally. For questions or any additional information that may be helpful please contact California Communities Against Toxics – Jane Williams, dcapjane@aol.com; Earthjustice – Emma Cheuse, echeuse@earthjustice.org and Michelle Mabson, mmabson@earthjustice.org; or any undersigned organization.

Sincerely,

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Air Alliance Houston
Alaska Community Action on Toxics
Alliance of Nurses for Healthy
Environments
American Sustainable Business Network
Ban SUP (Single Use Plastic)
Biofuelwatch
California Environmental Justice Coalition
California League of United Latin
American Citizens
California Safe Schools
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Global Alliance for Incinerator Alternatives
 Green Science Policy Institute
 Kentucky Resources Council
 La Comadre Network
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Notes

ⁱ See, e.g., Aithal, SS, Sachdeva, I & Kurmi, OP, Air quality and respiratory health in children, *Breathe*, vol. 19, no. 2, 230040 (2023), <https://dx.doi.org/10.1183/20734735.0040.2023>; Brumberg HL, Karr CJ, et al., *Am. Acad. of Pediatrics*, Council on Environmental Health, Ambient Air Pollution: Health Hazards to Children, *Pediatrics*, 147(6) (2021), e2021051484, <https://publications.aap.org/pediatrics/article/147/6/e2021051484/180283>; K.L. O'Shaughnessy, A.N. Lorenz, E.O. Owens, G.G. Miller, D.A. Malashock, L.M. Carlson, J.A. Franzosa, M. Wilson, & E.B. Boyle, Current progress and research needs to protect children's environmental health, *Proc. Natl. Acad. Sci. U.S.A.* 122 (40) e2522786122 (2025), <https://doi.org/10.1073/pnas.2522786122>.

ⁱⁱ See, e.g., Chemicals and Waste Youth Platform nomination of Chemicals Management Issues of Special Concern for Children's Health under the Global Framework on Chemicals (Nov. 2025),

<https://owncloud.unog.ch/s/dmMLblyopE6z2SI>; Comments supporting proposed Children’s Health IoC filed by CCAT *et al.* (Aug. 21, 2026), <https://earthjustice.org/wp-content/uploads/2026/08/comments-global-chem-childrens-health-filed-08.21.26.pdf>.

ⁱⁱⁱ See, e.g., C. Weber & A. Taxin, Southern California authorities respond to a leak of an unknown chemical from a tank, AP News (updated 6:55pm EDT, Sept. 8, 2026), <https://apnews.com/article/southern-california-chemical-leak-la-habra-orange-556f428cdd2a38630a2e0194f9d94a2c>; C. Tebor, CNN, An L.A. Neighborhood was terrorized by a warehouse inferno (Aug. 31, 2026), <https://www.cnn.com/2026/08/08/us/boyle-heights-smell-warehouse-fire>; J. Lloyd, NBC Los Angeles, Claims program established for residents in Garden Grove chemical tank crisis (Aug. 24, 2026), <https://www.nbclosangeles.com/news/local/claims-program-garden-grove-chemical-tank-crisis/3933142/>.

^{iv} See, e.g., Shad, N. A. *et al.* Maternal exposure to volatile organic compounds and the risk of congenital anomalies: A systematic review and meta-analysis. *Ecotoxicology and Environmental Safety* 309, 119656 (2026); Lane, M. *et al.*, The Effects of Air Pollution on Neurological Diseases: A Narrative Review on Causes and Mechanisms. *Toxics* 2025, 13, 207, <https://doi.org/10.3390/toxics13030207>; Navarrete-Meneses. 2024. *Int. J. Mol. Sci.* 2024, 25(6), 3284, <https://doi.org/10.3390/ijms25063284>.

^v See, e.g., Comments of CCAT *et al.* on EPA RFI and Citations on Methods for Cumulative Risk Assessment (June 28, 2013), <https://www.regulations.gov/comment/EPA-HQ-ORD-2013-0292-0133> (citing National Academies of Sciences and other sources); Comments of CA Safe Schools *et al.* on EPA Interim Framework for Advancing Consideration of Cumulative Impacts (Feb. 19, 2025), <https://www.regulations.gov/comment/EPA-HQ-OLEM-2024-0360-0060>; Comments of Earthjustice *et al.*, on EPA, Guidelines for Cumulative Risk Assessment (Aug. 30, 2023), <https://www.regulations.gov/comment/EPA-HQ-ORD-2013-0292-0198>; see also Chiger *et al.*, Improving Methodologies for Cumulative Risk Assessment: A Case Study of Noncarcinogenic Health Risks from VOCs in Fenceline Communities in Southeastern Pennsylvania, *Environ. Health Perspect.* 2025 May;133(5):57004. doi: 10.1289/EHP14696. Epub 2025 May 8, <https://pubmed.ncbi.nlm.nih.gov/40127300/>; D. Payne-Sturges *et al.*, Methods for Evaluating the Combined Effects of Chemical and Nonchemical Exposures for Cumulative Environmental Health Risk Assessment, *Int. J. Environ. Res. Pub. Health* (Dec. 2018), <https://pubmed.ncbi.nlm.nih.gov/30544651/>; NRDC: Strengthening Toxic Chemical Risk Assessments to Protect Human Health (Feb. 2012), <https://www.nrdc.org/sites/default/files/strengthening-toxic-chemical-risk-assessments-report.pdf>; see also NASEM, Science and Decisions: Advancing Risk Assessment (2009), <https://www.nationalacademies.org/projects/BEST-K-05-02-A/publication/12209>; NASEM, State-of-the-Science and the Future of Cumulative Impact Assessment (2025), <https://www.nationalacademies.org/projects/DELS-BEST-23-04>; UCS, Unfinished Business (2026), <https://www.ucs.org/resources/unfinished-business>.

^{vi} See, e.g., Choi *et al.* 2025. Associations Between Ambient Exposure to Styrene, Benzene, Toluene, Ethylbenzene, and Xylenes and Hospitalizations in the US Gulf Region, *Lancet Planet Health* Volume 9, Issue 9 101306 DOI: 10.1016/j.lanplh.2025.101306, *Environ Res.* 2026 Mar 7;298:124217. doi: 10.1016/j.envres.2026.124217, <https://pmc.ncbi.nlm.nih.gov/articles/PMC13045796/>.