
THIRD READING

Bill No: AB 1181
Author: Haney (D) and Harabedian (D), et al.
Amended: 8/29/25 in Senate
Vote: 21

SENATE LABOR, PUB. EMP. & RET. COMMITTEE: 5-0, 6/18/25
AYES: Smallwood-Cuevas, Strickland, Cortese, Durazo, Laird

SENATE APPROPRIATIONS COMMITTEE: 7-0, 8/29/25
AYES: Caballero, Seyarto, Cabaldon, Dahle, Grayson, Richardson, Wahab

ASSEMBLY FLOOR: 78-0, 6/2/25 - See last page for vote

SUBJECT: Firefighters: personal protective equipment

SOURCE: California Professional Firefighters

DIGEST: This bill requires the Occupational Safety and Health Board (Board) to modify its existing safety order, by January 1, 2028, in a manner that addresses National Fire Protection Association (NFPA) performance standards for personal protective equipment (PPE) that result in the use of perfluoroalkyl and polyfluoroalkyl substances (PFAS) and other hazardous substances in firefighting personal protective garments and auxiliary firefighting PPE.

ANALYSIS:

Existing law:

- 1) Establishes the Department of Industrial Relations (DIR) in the Labor and Workforce Development Agency (LWDA) and vests it with various powers and duties to foster, promote, and develop the welfare of the wage earners of California, to improve their working conditions, and to advance their opportunities for profitable employment. (Labor Code § 50.5)

- 2) Establishes the Division of Occupational Safety and Health (known as Cal/OSHA) within DIR to, among other things, propose, administer, and enforce occupational safety and health standards. (Labor Code §§ 6300 et seq.)
- 3) Establishes the Occupational Safety and Health Standards Board (Board), within DIR, to promote, adopt, and maintain reasonable and enforceable standards that will ensure a safe and healthful workplace for workers. (Labor Code §§ 140-147.6)
- 4) Requires the Board, every five years, to complete a comprehensive review of all revisions to the National Fire Protection Association (NFPA) standards pertaining to firefighter PPE and maintain alignment with the NFPA safety orders. (Labor Code §§ 147.4)
- 5) Requires that, if the review described in 4), above, finds the revisions provide a greater degree of personal protection than the safety orders, the Board must consider modifying existing safety orders and render a decision regarding changing safety orders or other standards and regulations to maintain alignment of the safety orders with the NFPA standards no later than July 1 of the subsequent year. (Labor Code § 147.4(c))
- 6) Requires, commencing January 1, 2022, a person that sells firefighter personal protective equipment (PPE) to provide a written notice to the purchaser, if the firefighter PPE contains intentionally added PFAS chemicals. (Health and Safety Code § 13029 (b)(1))
- 7) Makes a violation of 6), above, subject to a penalty of up to \$5,000 for a first violation and up to \$10,000 for a subsequent violation. (Health and Safety Code § 13029(d)(1))
- 8) Prohibits, commencing January 1, 2022, a manufacturer of class B firefighting foam from manufacturing, or knowingly selling, offering for sale, distributing for sale, or distributing for use, and a person from using, class B firefighting foam containing intentionally added PFAS chemicals. (Health and Safety Code §13061 (b)(1))

This bill:

- 1) Makes various findings and declarations regarding the toxic and carcinogenic nature of perfluoroalkyl and polyfluoroalkyl substances (PFAS).

- 2) Defines “auxiliary firefighting PPE” as personal protective equipment other than firefighting personal protective garments, including self-contained breathing apparatuses and other respiratory protection products, hearing protection, protective communication devices, and fall-protection products.
- 3) Defines “firefighting personal protective garments” as any garments designed, intended, or marketed to be worn by firefighting personnel in the performance of their duties, designed with the intent for use in fire and rescue activities, including jackets, pants, shoes, gloves, and helmets.
- 4) Requires, by January 1, 2028, the Board in consultation with DIR to modify its existing safety order regarding firefighter PPE in a manner that addresses NFPA performance standards that are not relevant or applicable to how firefighters utilize their PPE and that result in the use of PFAS, fluoropolymers, flame retardants, and other hazardous substances in firefighting personal protective garments and auxiliary firefighting PPE.
- 5) Requires the Board, in modifying the existing safety order, to do all of the following:
 - a) Use scientific research to create a standard for firefighter PPE used in California that includes performance standards that are relevant and applicable to how firefighters utilize their equipment while being the most protective of firefighters’ health and safety, using the 2025 NFPA 1970 Standard on Protective Ensembles for Structural and Proximity Firefighting, Work Apparel, Open-Circuit Self-Contained Breathing Apparatus for Emergency Services, and Personal Alert Safety Systems as a floor.
 - b) Utilize scientific research to mandate that firefighter PPE certified for future use in California be free of hazardous substances that might pose long-term environmental and human health risks, including but not limited to, PFAS and flame retardants. The modified safety order shall require manufacturers of firefighter PPE to certify that their products meet the new standards.
 - c) Provide for an implementation date that applies to auxiliary firefighting PPE to be later than the implementation date for firefighting personal protective garments.

- d) Specify an implementation timeline that includes phasing out firefighter PPE that is in use at the time the safety order is modified through normal attrition or no later than 10 years after the safety order is modified.
- 6) Requires Cal/OSHA, by July 1, 2026, to provide a report to the Governor and Legislature on progress toward implementation of the modified PPE safety standards.

Background

Perfluoroalkyl and Polyfluoroalkyl (PFAS). PFAS are a diverse group of thousands of chemicals that resist grease, oil, water, and heat. Chemically, individual PFAS can be very different; however, all have a carbon-fluorine bond.¹ Due to the strength and stability of this carbon-fluorine bond, PFAS are long lasting and are exceedingly difficult to destroy, making them highly persistent in the environment and resulting in their classification as “forever chemicals.” The usage of PFAS has grown immensely across multiple industries since their invention in the 1950s. PFAS are now widely used in food packaging, cookware, electronics, medical products, carpeting, cosmetics, building materials, and apparel. In the textile industry, fabrics, including turnout gear outer shells for firefighters, have been historically finished with PFAS due to their high level of repellency to water and oils and durability.

PFAS pose high risks for human, environmental, and animal health. PFAS exposure occurs mainly through ingestion of contaminated food or liquids. Exposure can also occur through inhalation of indoor air or contact with contaminated media. The Agency for Toxic Substances and Disease Registry identifies the following health effects as potential outcomes from exposure to PFAS: changes in cholesterol, changes in infant birth weight, changes in the immune system, increased risk of high blood pressure during pregnancy, and increased risk of certain cancers.

Turnout Gear and PFAS. Firefighters use heavy-duty PPE to fulfill their responsibilities safely and efficiently. PPE gear includes turnout jackets and pants, gloves, boots, helmets, hoods, and self-contained breathing apparatus. This PPE protects firefighters from different thermal, physiological, physical, chemical, and biological hazards on the job.

¹ “Per- and Polyfluoroalkyl Substances (PFAS),” FDA, April 29, 2024, [Per- and Polyfluoroalkyl Substances \(PFAS\) | FDA](#)

The turnout gear used by firefighters, however, contains significant levels of cancer-causing PFAS.² The turnout ensemble consists of three layers, the outer shell, the moisture barrier, and the thermal liner, all of which are standardized by the NFPA. The outer shell is usually finished with a PFAS-based durable water and oil-repellent (DWR) to protect the wearer from hazardous liquids. This DWR can cause various health problems if absorbed into the body through ingestion, inhalation, and/or dermal absorption.

A study by the Centers for Disease Control and Prevention and the National Institute for Occupational Safety & Health found that firefighters have higher risks of certain types of cancer than the general population and that firefighters have a higher rate of cancer-related deaths.³ According to the International Association of Firefighters, 66 percent of firefighter deaths between 2002 and 2019 were due to cancer. Across the nation and in California, there are existing efforts to protect firefighters by banning the use of PFAS. In May 2024, San Francisco became the first major American city to ban PFAS from PPE gear, requiring the city's fire department to provide PFAS-free gear to its firefighters by June 30, 2026.

The National Fire Protection Association (NFPA) and PFAS. The NFPA is an international nonprofit established in 1896 comprised of firefighter professionals, industry representatives, and others concerned with fire safety. The NFPA sets the performance, durability, and safety standards for firefighter PPE. In 2024, the NFPA standards council adopted the NFPA 1970 Standard on Protective Ensembles for Structural and Proximity Firefighting, Work Apparel, Open-Circuit Self-Contained Breathing Apparatus for Emergency Services, and Personal Alert Safety Systems. The NFPA 1970 standard does not ban the use of PFAS in turnout gear, however it does establish mandatory PFAS testing requirements for manufacturers and optional labeling guidelines. PFAS-free turnout gear is available, but alternatives can be less breathable and offer less thermal protection.⁴ Furthermore, strict performance tests, that do not always reflect how firefighters use their PPE, make it difficult for PFAS-free gear to comply with the NFPA 1970 Standard.

This bill. California tasks the Board with creating standards for firefighter PPE. In doing so, the Board is required to, every five years, review all revisions to the NFPA standards pertaining to PPE and determine whether the revisions provide a

² Maizel AC, et al., "Per- and Polyfluoroalkyl Substances in New Firefighter Turnout Gear Textiles," National Institute of Standards and Technology, Gaithersburg, MD, NIST Technical Note (TN) NIST TN 2248.

<https://doi.org/10.6028/NIST.TN.2248>

³ National Institute for Occupational Safety and Health. (2016). Findings from a study of cancer among U.S. fire fighters.

⁴ Jesse Roman, "New Gear, New Challenges," NFPA, November 18, 2024, <https://www.nfpa.org/news-blogs-and-articles/nfpa-journal/2024/11/19/new-gear-new-challenges>

greater degree of personal protection than the state safety orders. If they do, the Board must consider modifying the state safety orders and render a decision by July 1 of the subsequent year.

This bill would require, by January 1, 2028, the Board to modify its existing safety order regarding PPE in a manner that addresses NFPA performance standards that are not relevant or applicable to how firefighters utilize their PPE and that result in the use of PFAS, fluoropolymers, flame retardants, and other hazardous substances in firefighting personal protective garments and auxiliary firefighting PPE. In modifying the order, the Board shall specify an implementation timeline that includes phasing out PPE that is in use at the time the safety order is modified through normal attrition or no later than 10 years after the order is modified. This bill would also require Cal/OSHA, by July 1, 2026, to provide a report to the Governor and Legislature on progress toward implementation of the modified PPE safety standards.

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

According to the Senate Appropriations Committee:

- The Department of Industrial Relations (DIR) indicates that it would incur annual costs in the high hundreds of thousands of dollars for the Board and its Division of Occupational Health and Safety (Cal/OSHA) to perform the rulemaking and enforcement work resulting from this bill (Occupational Safety and Health Fund).
- This bill would result in one-time costs to the Department of Forestry and Fire Protection (CAL FIRE) to replace its existing supply of firefighting PPE. For the previous version of this bill, CAL FIRE estimated that doing so would ultimately require \$88 million in one-time funds, split evenly between three fiscal years, to replace existing structural firefighter turnouts. The amended version of this bill would likely reduce the fiscal impact to the CAL FIRE in the near term, as the turnout replacement timeline would likely be longer than three years. The specific year-to-year fiscal impact of the amendments has yet to be identified.

SUPPORT: (Verified 8/29/25)

California Professional Firefighters (Source)
A Voice for Choice Advocacy
Breast Cancer Prevention Partners
California Acupuncture Coalition

California Environmental Voters
California Federation of Labor Unions
California State Treasurer
Clean Water Action
Cleaneearth4kids.org
Environmental Working Group
Los Angeles County Sanitation Districts
National Stewardship Action Council
Natural Resources Defense Council
San Francisco Bay Physicians for Social Responsibility

OPPOSITION: (Verified 8/29/25)

None received

ARGUMENTS IN SUPPORT: The sponsors of the measure, the California Professional Firefighters, argue:

“PFAS are a family of synthetic chemicals that have been found to be harmful to both human health and the environment, largely because they are persistent in both the body and in nature. PFAS are released into the air, water, and soil in areas where they are stored and used and can be absorbed into the human body through inhalation, drinking water, or through contact.

‘Per- and Polyfluoralkyl Substances in New Firefighter Turnout Gear Textiles, published by the National Institute of Standards and Technology in 2023, found measurable instances of numerous PFAS substances in the jackets and pants of firefighter PPE, and notes that ‘employment as a firefighter has been found to correlate with higher serum PFAS concentrations, especially for those directly engaged in firefighting activities.’...

Under AB 1181, CalOSHA and OSHSB will be able to evaluate the recently-adopted NFPA standard and make adjustments to the tests that better reflect the functional use of firefighter PPE. In doing so, California can ensure that harmful chemicals are not added to PPE for the sole purpose of passing a light, flame or liquid test that has no meaningful impact on the protection of the firefighter wearing the equipment.”

ASSEMBLY FLOOR: 78-0, 6/2/25

AYES: Addis, Aguiar-Curry, Ahrens, Alvarez, Arambula, Ávila Farías, Bains, Bauer-Kahan, Bennett, Berman, Boerner, Bonta, Bryan, Calderon, Caloza,

Carrillo, Castillo, Chen, Connolly, Davies, DeMaio, Dixon, Elhawary, Ellis, Flora, Fong, Gabriel, Gallagher, Garcia, Gipson, Jeff Gonzalez, Mark González, Hadwick, Haney, Harabedian, Hart, Hoover, Irwin, Jackson, Kalra, Krell, Lackey, Lee, Lowenthal, Macedo, McKinnor, Muratsuchi, Nguyen, Ortega, Pacheco, Papan, Patel, Patterson, Pellerin, Petrie-Norris, Quirk-Silva, Ramos, Ransom, Celeste Rodriguez, Michelle Rodriguez, Rogers, Blanca Rubio, Sanchez, Schiavo, Schultz, Sharp-Collins, Solache, Soria, Stefani, Ta, Tangipa, Valencia, Wallis, Ward, Wicks, Wilson, Zbur, Rivas

NO VOTE RECORDED: Alanis

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