

**CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT**

SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986

(PROPOSITION 65)

**NOTICE OF INTENT TO LIST BY THE AUTHORITATIVE BODIES MECHANISM:
PERFLUORODECANOIC ACID (PFDA) AND RELATED SALTS**

OCTOBER 30, 2026

The California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA) intends to list *perfluorodecanoic acid (PFDA) and related salts* as known to the state to cause reproductive toxicity under the Safe Drinking Water and Toxic Enforcement Act of 1986, codified in Health & Safety Code section 25249.5 *et seq.*, otherwise known as Proposition 65.

As stated in US EPA (2024), *related salts* includes "salts (including nonmetal or alkali metal salts) of PFDA that would be expected to fully dissociate in aqueous solutions of pH ranging from 4 to 9 (e.g., in the human body). Thus, while this Toxicological Review would not necessarily apply to nonalkali metal salts of PFDA because of the possibility of PFDA-independent contributions of toxicity, it does apply to PFDA salts including ammonium perfluorodecanoate (PFDA NH₄, CASRN 3108-42-7) and sodium perfluorodecanoate (PFDA-Na, CASRN 3830-45-3), and other nonmetal or alkali metal salts of PFDA." (Executive Summary, Pg. xvi)

This action is being proposed under the "Authoritative Bodies" listing mechanism (Health & Safety Code section 25249.8(b)) described below. OEHHA has determined that *PFDA and related salts* meet the criteria for listing for reproductive toxicity, based on the developmental, male reproductive, and female reproductive endpoints, by this mechanism. *PFDA and related salts* are members of a large group of chemicals known as per- and polyfluoroalkyl substances (PFAS), which have widespread use in consumer products and industrial applications due to their heat-, oil-, stain-, and water-resistant properties (US EPA, 2024). PFDA has been detected in consumer products including cosmetics (Whitehead et al., 2021), outdoor textiles, carpet, ski wax, and leather (US EPA, 2024).

Background on listing via the Authoritative Bodies mechanism: A chemical must be listed under the Proposition 65 regulations when two conditions are met:

- 1) An authoritative body formally identifies the chemical as causing reproductive toxicity pursuant to Cal. Code Regs., tit 27, section 25306(d).

- 2) The evidence considered by the authoritative body meets the sufficiency criteria contained in Cal. Code Regs., tit 27, section 25306(g).

However, the chemical is not listed if scientifically valid data which were not considered by the authoritative body clearly establish that the sufficiency of evidence criteria were not met (Cal. Code Regs., tit. 27, section 25306(h)).

The US Environmental Protection Agency (US EPA) is one of several institutions designated as authoritative for the identification of chemicals as causing reproductive toxicity (Cal. Code Regs., tit. 27, section 25306(l)).

OEHHA is the lead agency for Proposition 65 implementation. After an authoritative body has made a determination about a chemical, OEHHA evaluates whether listing under Proposition 65 is required using the criteria contained in Cal. Code Regs., tit. 27, section 25306.

OEHHA's determination: *PFDA and related salts* meet the criteria for listing as known to the state to cause reproductive toxicity under Proposition 65, based on findings by the US EPA (2024), as outlined below:

Formal identification and sufficiency of evidence:

OEHHA is relying on:

- The statement in the US EPA's Toxicological Review of Perfluorodecanoic Acid [PFDA, CASRN 335-76-2] and Related Salts (US EPA, 2024) that "This Toxicological Review applies to PFDA as well as salts (including nonmetal or alkali metal salts) of PFDA that would be expected to fully dissociate in aqueous solutions of pH ranging from 4 to 9 (e.g., in the human body). Thus, while this Toxicological Review would not necessarily apply to nonalkali metal salts of PFDA because of the possibility of PFDA-independent contributions of toxicity, it does apply to PFDA salts including ammonium perfluorodecanoate (PFDA NH₄, CASRN 3108-42-7) and sodium perfluorodecanoate (PFDA-Na, CASRN 3830-45-3), and other nonmetal or alkali metal salts of PFDA." (Executive Summary, Pg. xvi)
- US EPA's conclusion that "perfluorodecanoic acid (PFDA) is likely to cause adverse hepatic, immune, developmental, and male and female reproductive effects in humans".
- US EPA's establishment of lifetime and subchronic oral reference doses (RfDs) for PFDA based on developmental toxicity (decreased birth weight in male and female children).

The findings and actions in this document satisfy the formal identification and sufficiency of evidence criteria in the Proposition 65 regulations for listing.

Pertinent statements and information in US EPA (2024) documenting the Agency's conclusions about reproductive toxicity (developmental, male reproductive, and female reproductive endpoints) include the following:

Developmental endpoint:

- “The hazard identification judgment that the **evidence indicates** PFDA exposure is likely to cause developmental toxicity, given sufficient exposure conditions²², is based primarily on consistent findings of dose-dependent decreases in fetal weight in mice gestationally exposed to PFDA doses ≥ 0.5 mg/kg-day, supported by evidence of decreased birth and childhood weight from studies of exposed humans in which PFDA was measured during pregnancy. The conclusion is further supported by coherent epidemiological evidence for biologically related effects (e.g., decreased birth length).” [emphasis in original] (Pg. 4-2)
- “Both of the identified hazards with quantitative information to support the derivation of candidate lifetime values (i.e., immune, and developmental) were selected as the basis for the RfD of 2×10^{-9} mg/kg-day.” (Pg. xx)

Male reproductive endpoint:

- “The hazard identification judgment that the **evidence indicates** PFDA exposure is likely to cause potential adverse effects to the male reproductive system in humans, given sufficient exposure conditions²³, is based on a coherent pattern of effects on sperm counts, testosterone levels, and male reproductive histopathology and organ weights at doses ≥ 0.625 mg/kg-day in adult rats exposed for 28 days (*high* confidence for most endpoints evaluated). Although the MOA for PFDA-induced male reproductive effects is unknown, a few acute i.p. and in vitro rodent studies suggest a possible mechanism via disruption of Leydig cell function and impaired steroidogenesis.” [emphasis in original] (Pg. 4-2)

Female reproductive endpoint:

- “The hazard identification judgment that the **evidence indicates** PFDA exposure is likely to cause female reproductive toxicity in humans given sufficient exposure conditions²⁴ is based primarily on the results of a *high* confidence study in rats showing biologically coherent effects on uterus weight and the estrous cycle after oral exposure to PFDA at ≥ 1.25 mg/kg-day for 28 days. Although human studies are available for examining associations between PFDA and female reproductive toxicity (e.g., fecundity), the results were mostly null, possibly due to their low sensitivity for observing effects.” [emphasis in original] (Pg. 4-3)

OEHHA has reviewed the studies or study descriptions cited in US EPA (2024) as providing the basis for the Agency’s conclusions regarding the reproductive toxicity (developmental, male reproductive, and female reproductive endpoints) relative to the criteria in Cal Code Regs., tit. 27, section 25306(g). The criteria for listing *PFDA and related salts* through the authoritative bodies mechanism as causing reproductive toxicity (developmental, male reproductive, and female reproductive endpoints) have been met.

Opportunity for Comment: OEHHA is providing this opportunity to comment as to whether this chemical meets the criteria set forth in the Proposition 65 regulations for authoritative bodies listings.

Submission of Comments

All written comments must be submitted to OEHHA by electronic submission, mail, or hand-delivery, by **Monday, November 30, 2026**. OEHHA strongly recommends that comments be submitted electronically through our website at <https://oehha.ca.gov/comments>, rather than in paper form. Alternatively, comments can be submitted in paper form, either by mail or delivered in person.

Mailed submission via the United States Postal Service:

Attention: Kiana Vaghefi
Office of Environmental Health Hazard Assessment
P.O. Box 4010
Sacramento, California 95812-4010

In-person delivery submission:

Attention: Kiana Vaghefi
Office of Environmental Health Hazard Assessment
1001 I Street
Sacramento, California 95814

OEHHA encourages all commenters to submit their comments in a format compliant with Section 508 of the federal Rehabilitation Act, Web Content Accessibility Guidelines 2.1 (<https://www.w3.org/WAI/standards-guidelines/wcag>) and California Government Code sections 7405 and 11135, so that they can be read using screen reader technology.

Comments received during the public comment period will be posted on the OEHHA website after the close of the comment period.

OEHHA is subject to the California Public Records Act and other laws that require the release of certain information upon request. If you provide comments, please be aware that your name, address, and e-mail may be available to third parties.

If you have any questions, please contact Kiana Vaghefi at Kiana.Vaghefi@oehha.ca.gov or at 916-322-1268.

Reference

US EPA (U.S. Environmental Protection Agency). 2024. IRIS Toxicological Review of Perfluorodecanoic Acid [PFDA, CASRN 335-76-2] and Related Salts (EPA/635/R-24/172Fa) Washington, DC. <https://iris.epa.gov/document/&deid=361797>

Whitehead HD, Venier M, Wu Y, Eastman E, Urbanik S, Diamond ML, et al 2021. Fluorinated Compounds in North American Cosmetics. Environ Sci Tech Letters. 8, 538-544.