

**State of California
Office of Administrative Law**

In re:
Department of Toxic Substances Control

Regulatory Action:

Title 22, California Code of Regulations

Adopt sections: 69511.4

Amend sections: 66260.11, 69511

Repeal sections:

**NOTICE OF APPROVAL OF REGULATORY
ACTION**

Government Code Section 11349.3

OAL Matter Number: 2021-0510-02

OAL Matter Type: Regular (S)

This regular rulemaking action amends the Safer Consumer Products regulations by adding carpets and rugs containing perfluoroalkyl or polyfluoroalkyl substances to the Priority Products List.

OAL approves this regulatory action pursuant to section 11349.3 of the Government Code. This regulatory action becomes effective on 7/1/2021.

Date: June 22, 2021



**Amy R. Gowan
Attorney**

**For: Kenneth J. Pogue
Director**

**Original: Meredith Williams, Director
Copy: Rick Brausch**

NOTICE PUBLICATION/REGULATIONS SUBMISSION

REGULAR

See instructions on reverse)

For use by Secretary of State only

STD. 400 (REV. 01-2013)

OAL FILE NUMBERS	NOTICE FILE NUMBER Z- 2020-0218-04	REGULATORY ACTION NUMBER 2021-0510-025	EMERGENCY NUMBER
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For use by Office of Administrative Law (OAL) only

2021 MAY 10 P 12: 37
OFFICE OF ADMINISTRATIVE LAW

ENDORSED - FILED

In the office of the Secretary of State of the State of California

JUN 18 2021

1:26 PM

NOTICE	REGULATIONS
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AGENCY WITH RULEMAKING AUTHORITY

Department of Toxic Substances Control

AGENCY FILE NUMBER (If any)

R-2019-02

A. PUBLICATION OF NOTICE (Complete for publication in Notice Register)

1. SUBJECT OF NOTICE		TITLE(S)	FIRST SECTION AFFECTED	2. REQUESTED PUBLICATION DATE	
3. NOTICE TYPE <input type="checkbox"/> Notice re Proposed Regulatory Action <input type="checkbox"/> Other		4. AGENCY CONTACT PERSON	TELEPHONE NUMBER	FAX NUMBER (Optional)	
OAL USE ONLY	ACTION ON PROPOSED NOTICE <input type="checkbox"/> Approved as Submitted <input type="checkbox"/> Approved as Modified <input type="checkbox"/> Disapproved/Withdrawn		NOTICE REGISTER NUMBER	PUBLICATION DATE	

B. SUBMISSION OF REGULATIONS (Complete when submitting regulations)

1a. SUBJECT OF REGULATION(S) Listing Carpets & Rugs with PFASs as Priority Product		1b. ALL PREVIOUS RELATED OAL REGULATORY ACTION NUMBER(S)
2. SPECIFY CALIFORNIA CODE OF REGULATIONS TITLE(S) AND SECTION(S) (Including title 26, if toxics related)		
SECTION(S) AFFECTED (List all section number(s) individually. Attach additional sheet if needed.)	ADOPT	section 69511.4
	AMEND	sections 66260.11 and 69511
	REPEAL	
TITLE(S) 22		

3. TYPE OF FILING		
<input checked="" type="checkbox"/> Regular Rulemaking (Gov. Code §11346)	<input type="checkbox"/> Certificate of Compliance: The agency officer named below certifies that this agency complied with the provisions of Gov. Code §§11346.2-11347.3 either before the emergency regulation was adopted or within the time period required by statute.	<input type="checkbox"/> Emergency Readopt (Gov. Code, §11346.1(h))
<input type="checkbox"/> Resubmittal of disapproved or withdrawn nonemergency filing (Gov. Code §§11349.3, 11349.4)	<input type="checkbox"/> Resubmittal of disapproved or withdrawn emergency filing (Gov. Code, §11346.1)	<input type="checkbox"/> File & Print
<input type="checkbox"/> Emergency (Gov. Code, §11346.1(b))		<input type="checkbox"/> Changes Without Regulatory Effect (Cal. Code Regs., title 1, §100)
		<input type="checkbox"/> Print Only
		<input type="checkbox"/> Other (Specify) _____

4. ALL BEGINNING AND ENDING DATES OF AVAILABILITY OF MODIFIED REGULATIONS AND/OR MATERIAL ADDED TO THE RULEMAKING FILE (Cal. Code Regs. title 1, §44 and Gov. Code §11347.1)
4/5/21 - 4/20/21 request oal

5. EFFECTIVE DATE OF CHANGES (Gov. Code, §§ 11343.4, 11346.1(d); Cal. Code Regs., title 1, §100)
 Effective January 1, April 1, July 1, or October 1 (Gov. Code §11343.4(a)) Effective on filing with Secretary of State \$100 Changes Without Regulatory Effect Effective other (Specify) 2021-07-01 see "Memo for OAL"

6. CHECK IF THESE REGULATIONS REQUIRE NOTICE TO, OR REVIEW, CONSULTATION, APPROVAL OR CONCURRENCE BY, ANOTHER AGENCY OR ENTITY
 Department of Finance (Form STD. 399) (SAM §6660) Fair Political Practices Commission State Fire Marshal
 Other (Specify) _____

7. CONTACT PERSON Rick Brausch	TELEPHONE NUMBER 916-251-6398	FAX NUMBER (Optional)	E-MAIL ADDRESS (Optional) rick.brausch@dtsc.ca.gov
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8. I certify that the attached copy of the regulation(s) is a true and correct copy of the regulation(s) identified on this form, that the information specified on this form is true and correct, and that I am the head of the agency taking this action, or a designee of the head of the agency, and am authorized to make this certification.

SIGNATURE OF AGENCY HEAD OR DESIGNEE Meredith J Williams Digitally signed by Meredith J Williams Date: 2021.04.28 15:15:49 -0700	DATE
TYPED NAME AND TITLE OF SIGNATORY Meredith Williams, Director of the Department of Toxic Substances Control	

For use by Office of Administrative Law (OAL) only

ENDORSED APPROVED

JUN 22 2021

Office of Administrative Law

FINAL REGULATORY TEXT

SAFER CONSUMER PRODUCTS REGULATIONS – Listing Carpets and Rugs Containing Perfluoroalkyl or Polyfluoroalkyl Substances as a Priority Product

Department of Toxic Substances Control reference number: R-2019-02
Office of Administrative Law Notice Reference Number: Z-2020-0218-04

Amend sections 66260.11, 69511 and adopt section 69511.4, to article 11, chapter 55, division 4.5 of title 22 of the California Code of Regulations, to read as follows:

(Note: The proposed amendments are shown in underline to indicate additions and ~~strikethrough~~ to indicate deletions from regulatory text. The symbol "*****" means that intervening text not proposed for amendment is not shown.)

Section 66260.11. References.

- (a) When used in this division, the following publications are incorporated by reference:

(71) "Biomonitoring California Priority Chemicals," February 2019, available from the California Environmental Contaminant Biomonitoring Program led by the California Department of Public Health, PO Box 997377, MS 0500, Sacramento, CA 95899-7377.

- (b) The references listed in subsection (a) of this section are available for inspection at the California Environmental Protection Agency, Department of Toxic Substances Control, Technical Reference Library, 1001 I Street, 2nd Floor, Sacramento, CA 95812-0806.

Note: Authority cited: Sections 25141, 25150, 25159 and 58012, Health and Safety Code. Reference: Sections 25141, 25159 and 25159.5, Health and Safety Code; and 40 CFR Section 260.11.

Section 69511. General.

- (a) This article specifies product-chemical combinations listed as Priority Products pursuant to section 69503.5.
- (b) The following product-chemical combinations are listed as Priority Products:
- (1) Children's foam-padded sleeping products containing tris(1,3-dichloro-2-propyl) phosphate (TDCPP) or tris(2-chloroethyl) phosphate (TCEP);

- (2) Spray polyurethane foam systems containing unreacted methylene diphenyl diisocyanates; and
- (3) Paint or varnish strippers containing methylene chloride; and
- (4) Carpets and rugs containing perfluoroalkyl or polyfluoroalkyl substances.

Note: Authority cited: Sections 25252, 25253, and 58012 of the Health and Safety Code.

Reference: Sections 25252 and 25253, Health and Safety Code.

Section 69511.4. Carpets and Rugs Containing Perfluoroalkyl or Polyfluoroalkyl Substances.

(a) (1) "Carpets and rugs containing perfluoroalkyl or polyfluoroalkyl substances," means any consumer product made from natural or synthetic fabric intended to be used as a floor covering inside commercial or residential buildings that contains any member of the class of perfluoroalkyl and polyfluoroalkyl substances (PFASs). This includes carpeted door mats.

(2) Notwithstanding subsection (a)(1), "carpets and rugs containing perfluoroalkyl or polyfluoroalkyl substances" does not include:

(A) Carpets and rugs intended solely for outdoor use;

(B) Carpets and rugs intended solely for use inside airplanes, trains, ships, automobiles, light duty trucks, vans, buses, or any other vehicles, as well as aftermarket or replacement parts marketed solely for use in vehicles;

(C) Resilient floor coverings;

(D) Artificial turf;

(E) Wall hangings and coverings;

(F) Table mats; and

(G) Camping sleeping mats.

(b) Candidate Chemical. For purposes of this chapter, the following Candidate Chemical is identified as the basis for the product defined in subsection (a) being listed as a Priority Product:

(1) Perfluoroalkyl and polyfluoroalkyl substances (PFASs), a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom, as defined by the California Environmental Contaminant Biomonitoring

Program in "Biomonitoring California Priority Chemicals," February 2019
(incorporated by reference, see section 66260.11 of this division).

(c) Hazard traits associated with PFASs include one or more of the following:

- (1) Carcinogenicity;
- (2) Cardiovascular toxicity;
- (3) Developmental toxicity;
- (4) Endocrine toxicity;
- (5) Hepatotoxicity;
- (6) Immunotoxicity;
- (7) Nephrotoxicity;
- (8) Ocular toxicity;
- (9) Reproductive toxicity;
- (10) Environmental persistence;
- (11) Bioaccumulation;
- (12) Mobility in environmental media; and
- (13) Lactational and transplacental transfer.

(d) Toxicological and environmental endpoints associated with exposure to certain PFASs include:

- (1) Kidney and testicular cancers in humans;
- (2) Increased serum cholesterol and increased risk of heart disease in humans;
- (3) Decreased birth weight in humans; reduced ossification and accelerated puberty in male mice; decreased hatching success in bird eggs; delayed metamorphosis in frogs; tail deformation, uninflated swim bladders, and increased occurrence of malformations in zebrafish;
- (4) Thyroid disease and obesity in humans; pubertal disorders in mice;
- (5) Increased liver weight and liver tumors in mice;
- (6) Decreased effectiveness of vaccines, ulcerative colitis, and increased risk of respiratory tract infections in humans;
- (7) Renal disease in humans;
- (8) Delayed pupil response and retina degeneration in rats; and

(9) Pregnancy-induced hypertension and decreased fertility in humans; delayed eye opening and delayed puberty in mice; decreased hatching success in birds.

(e) For the purposes of this chapter, the Candidate Chemical identified in subsection (b) is designated as the Chemical of Concern for the product defined in subsection (a).

(f) The Preliminary Alternatives Analysis Report for this Priority Product shall be submitted within 180 days after the effective date of this regulation.

Note: Authority cited: Sections 25252, 25253, and 58012 of the Health and Safety Code.

Reference: Sections 25252 and 25253, Health and Safety Code.

**Biomonitoring California
Priority Chemicals
February 2019**

The following is a list of priority chemicals for Biomonitoring California.^a The Scientific Guidance Panel (SGP) recommends priority chemicals from the designated chemicals list.

Targets for measurement in biomonitoring studies could include the parent chemical, metabolites and other chemical products formed in the body or the environment (e.g., hemoglobin adduct; environmental degradation product). The approach for biomonitoring a chemical may change as methods development proceeds. For some of the parent chemicals listed below, metabolites or other targets for measurement are shown indented underneath. Chemicals are grouped into categories (like "metals" and "pesticides"); some are included in more than one category. The Program determines the chemicals that are actually biomonitored and the appropriate targets for measurement. To jump to each footnote referenced in the list below, click on the relevant number.

Brominated and Chlorinated Organic Compounds used as Flame Retardants ¹

Allyl 2,4,6-tribromophenyl ether (ATE)
2,2-Bis(bromomethyl)-1,3-propanediol
2,2-Bis(chloromethyl)trimethylene bis[bis(2-chloroethyl)phosphate]
Bis(2-ethyl-1-hexyl)tetrabromophthalate (TBPH)
Bis(hexachlorocyclopentadieno)cyclooctane (Dechlorane Plus)
1,2-Bis(2,4,6-tribromophenoxy)ethane (BTBPE)
2-Bromoallyl-2,4,6-tribromophenyl ether (BATE)
Chlorendic acid
Chlorinated paraffins
Decabromodiphenylethane (DBDPE)
1,2-Dibromo-4-(1,2-dibromoethyl)cyclohexane (TBECH)
2,4-Dibromophenol
2,3-Dibromopropyl-2,4,6-tribromophenyl ether (DPTE)
2-Ethyl-1-hexyl-2,3,4,5-tetrabromobenzoate (TBB)
2,3,4,5-Tetrabromobenzoic acid (TBBA)
N,N'-Ethylenebis(tetrabromophthalimide)
Hexabromobenzene (HBB)
2,2',4,4',5,5'-Hexabromobiphenyl (BB 153)
Hexabromocyclododecane (HBCD)
Hexachlorocyclopentadienyl-dibromocyclooctane
2-Hydroxypropyl 2-(2-hydroxyethyl)ethyl tetrabromophthalate
Isobutoxypentabromocyclododecanes (iBPBCDs)
Octabromotrimethylphenylindane (OBIND)
Pentabromoethylbenzene (PBEB)
Pentabromophenol (PBP)
Pentabromotoluene (PBT)
1,1'-Sulfonylbis[3,5-dibromo-4-(2,3-dibromopropoxy) benzene
Tetrabromobisphenol A (TBBPA)

Tetrabromobisphenol A bis(2,3-dibromopropyl) ether (TBBPA-DBPE)
Tetrabromobisphenol A bis(2-hydroxyethyl) ether
Tetrabromobisphenol A diallyl ether
Tetrabromophthalic acid, mixed esters
Tetrabromophthalic anhydride
2,3,5,6-Tetrabromo-*p*-xylene
Tetrachlorophthalic anhydride
2,4,6-Tribromophenol
Tribromoneopentylalcohol
Tris(2-chloroethyl)phosphate (TCEP)
Bis(2-chloroethyl)phosphate (BCEP)
Tris(1-chloro-2-propyl)phosphate (TCPP)
Bis(1-chloro-2-propyl)phosphate (BCPP)
Tris(2,3-dibromopropyl) isocyanurate
Tris(2,3-dibromopropyl)phosphate (TDBPP)
Tris(1,3-dichloro-2-propyl)phosphate (TDCPP)
Bis(1,3-dichloro-2-propyl)phosphate (BDCPP)
Tris(2,3-dichloro-1-propyl)phosphate
Tris(tribromoneopentyl)phosphate
2,4,6-Tris(2,4,6-tribromophenoxy)-1,3,5-triazine

Polybrominated diphenyl ethers (PBDEs)

2,2',4-Tribromodiphenyl ether (BDE 17)
2,4,4'-Tribromodiphenyl ether (BDE 28)
2,2',4,4'-Tetrabromodiphenyl ether (BDE 47)
2,3',4,4'-Tetrabromodiphenyl ether (BDE 66)
2,2',3,4,4'-Pentabromodiphenyl ether (BDE 85)
2,2',4,4',5-Pentabromodiphenyl ether (BDE 99)
2,2',4,4',6-Pentabromodiphenyl ether (BDE 100)
2,2',4,4',5,5'-Hexabromodiphenyl ether (BDE 153)
2,2',4,4',5,6'-Hexabromodiphenyl ether (BDE 154)
2,2',3,4,4',5',6-Heptabromodiphenyl ether (BDE 183)
2,2',3,3',4,4',5,6'-Octabromodiphenyl ether (BDE 196)
2,2',3,3',4,4',6,6'-Octabromodiphenyl ether (BDE 197)

a. California Environmental Contaminant Biomonitoring Program, codified at Health and Safety Code section 105440 et seq.

2,2',3,3',4,5',6,6'-Octabromodiphenyl ether (BDE 201)
2,2',3,3',5,5',6,6'-Octabromodiphenyl ether (BDE 202)
2,2',3,4,4',5,5',6-Octabromodiphenyl ether (BDE 203)
2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether (BDE 206)
2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether (BDE 207)
2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether (BDE 208)
2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether (BDE 209)

Hydroxy-PBDEs (Metabolites of PBDEs)

4'-Hydroxy-BDE 17
4-Hydroxy-BDE 42
3-Hydroxy-BDE 47
5-Hydroxy-BDE 47
6-Hydroxy-BDE 47
4'-Hydroxy-BDE 49
2'-Hydroxy-BDE 68
4-Hydroxy-BDE 90
5'-Hydroxy-BDE 99
6'-Hydroxy-BDE 99
3-Hydroxy-BDE 100
5'-Hydroxy-BDE 100
4'-Hydroxy-BDE 101
4'-Hydroxy-BDE 103

Cyclosiloxanes ¹

Decamethylcyclopentasiloxane (D5)
Dodecamethylcyclohexasiloxane (D6)
Octamethylcyclotetrasiloxane (D4)

Diesel Exhaust ²

1-Nitropyrene
6-Hydroxy-1-nitropyrene
8-Hydroxy-1-nitropyrene

Diglycidyl Ethers of *p,p'*-Bisphenols ¹

Bisphenol A diglycidyl ether (BADGE)
Bisphenol F diglycidyl ether (BFDGE)

Environmental Phenols ³

***p,p'*-Bisphenols ¹**

Bisphenol A (BPA)
Bisphenol AF (BPAF)
Bisphenol B (BPB)
Bisphenol F (BPF)

Bisphenol S (BPS)
4,4'-Sulfonylbis[2-(2-propen-1-yl)phenol] (TGSA)

Brominated phenols ^{3, 4}

2,4-Dibromophenol
Pentabromophenol (PBP)
Tetrabromobisphenol A (TBBPA)
2,4,6-Tribromophenol

Chlorinated phenols ^{3, 5}

2,4-Dichlorophenol
2,5-Dichlorophenol
Pentachlorophenol ⁶
2,4,5-Trichlorophenol ⁶
2,4,6-Trichlorophenol ⁶
Triclosan

Parabens ³

Butylparaben ⁷
Ethylparaben
Methylparaben
n-Propylparaben

Metals ³

Antimony ⁸
Arsenic
Arsenic (V) acid
Arsenobetaine
Arsenocholine
Arsenous (III) acid
Dimethylarsinic acid
Monomethylarsonic acid
Trimethylarsine oxide
Beryllium ⁸
Cadmium
Cobalt
Lead
Manganese
Mercury
Molybdenum
Thallium
Tungsten
Uranium

Non-Halogenated Aromatic Phosphates ¹

Bisphenol A bis(diphenyl phosphate)
Butylated triphenyl phosphate
Butyldiphenyl phosphate
t-Butylphenyl diphenyl phosphate
Dibutylphenyl phosphate
2-Ethylhexyl diphenyl phosphate

Isodecyl diphenyl phosphate
Isopropyl phenyl diphenyl phosphate
Isopropylated triphenyl phosphate
Resorcinol bis(diphenyl phosphate)
Tribenzyl phosphate (TBzP)
Dibenzyl phosphate (DBzP)
Tricresyl phosphate (TCP)
Tri-*o*-cresylphosphate (ToCP)
Di-*o*-cresylphosphate (DoCP)
Tri-*p*-cresylphosphate (TpCP)
Di-*p*-cresylphosphate (DpCP)
Triphenyl phosphate (TPP)
Diphenyl phosphate (DPhP)

Perchlorate

Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) ^{1, 2}

Ammonium 4,8-dioxa-3H-perfluorononanoate
(ADONA)
Bis(perfluorohexyl)phosphinic acid
Bis(perfluorooctyl)phosphinic acid
N-Ethyl-perfluorooctane sulfonamido acetic acid
6:2 Fluorotelomer acetate
8:2 Fluorotelomer acetate
10:2 Fluorotelomer acetate
6:2 Fluorotelomer acrylate
8:2 Fluorotelomer acrylate
10:2 Fluorotelomer acrylate
5:3 Fluorotelomer carboxylic acid
6:2 Fluorotelomer carboxylic acid
7:3 Fluorotelomer carboxylic acid
8:2 Fluorotelomer carboxylic acid
10:2 Fluorotelomer carboxylic acid
6:2 Fluorotelomer phosphate diester
6:2/8:2 Fluorotelomer phosphate diester
8:2 Fluorotelomer phosphate diester
6:2 Fluorotelomer phosphate monoester
8:2 Fluorotelomer phosphate monoester
4:2 Fluorotelomer sulfonic acid
6:2 Fluorotelomer sulfonic acid
8:2 Fluorotelomer sulfonic acid
6:2 Fluorotelomer unsaturated carboxylic acid
8:2 Fluorotelomer unsaturated carboxylic acid
10:2 Fluorotelomer unsaturated carboxylic acid
N-Methyl-perfluorooctane sulfonamido) acetic
acid
Perfluorobutane sulfonic acid
Perfluorobutanoic acid
Perfluorodecane sulfonic acid
Perfluorodecanoic acid
Perfluorodecylphosphonic acid
Perfluorododecanoic acid
Perfluoroethylcyclohexane sulfonic acid

Perfluoroheptane sulfonic acid
Perfluoroheptanoic acid
Perfluorohexadecanoic acid
Perfluorohexane sulfonic acid
Perfluorohexanoic acid
Perfluorohexylperfluorooctylphosphinic acid
Perfluorohexylphosphonic acid
Perfluorononane sulfonic acid
Perfluorononanoic acid
Perfluorooctadecanoic acid
Perfluorooctane sulfonamide
Perfluorooctane sulfonic acid (PFOS), including
linear and branched isomers
Perfluorooctanoic acid (PFOA), including
linear and branched isomers
Perfluorooctylphosphonic acid
Perfluoropentane sulfonic acid
Perfluoropentanoic acid
Perfluorotetradecanoic acid
Perfluorotridecanoic acid
Perfluoroundecanoic acid
Sodium bis-[2-(*N*-ethylperfluorooctane-1-
sulfonamido)ethyl] phosphate
Sodium 2-(*N*-ethylperfluorooctane-1-
sulfonamido)ethyl phosphate
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-
heptafluoropropoxy)propanoic acid
1,1,2,2-Tetrafluoro-2-({1,1,1,2,3,3-hexafluoro-3-
[(trifluorovinyl)oxy]-2-propanyl}oxy)ethane
sulfonic acid

Pesticides ^{3, 10}

Herbicides ³

2,4-Dichlorophenoxyacetic acid (2,4-D), salts and
esters
2,4-Dichlorophenoxyacetic acid
2,4-Dichlorophenol

Organochlorine Pesticides ³

Dichlorodiphenyltrichloroethane (DDT) (including
p,p'-DDT and *o,p'*-DDT)
p,p'-Dichlorodiphenyldichloroethene (*p,p'*-DDE)

Organophosphate Insecticides ³

Acephate
Azinphos methyl
Dimethyldithiophosphate
Dimethylphosphate
Dimethylthiophosphate
Chlorethoxyphos
Diethylphosphate
Diethylthiophosphate

Chlorpyrifos
Diethylphosphate
Diethylthiophosphate
3,5,6-Trichloro-2-pyridinol (TCPy)
Chlorpyrifos methyl
Dimethylphosphate
Dimethylthiophosphate
3,5,6-Trichloro-2-pyridinol (TCPy)
Coumaphos
3-Chloro-7-hydroxy-4-methyl-2H-chromen-2-one/ol
Diethylphosphate
Diethylthiophosphate
Diazinon
Diethylphosphate
Diethylthiophosphate
2-Isopropyl-4-methyl-6-hydroxypyrimidine (IMPY)
Dichlorvos (DDVP)
Dimethylphosphate
Dicrotophos
Dimethylphosphate
Dimethoate
Dimethyldithiophosphate
Dimethylphosphate
Dimethylthiophosphate
Disulfoton
Diethyldithiophosphate
Diethylphosphate
Diethylthiophosphate
Ethion
Diethyldithiophosphate
Diethylphosphate
Diethylthiophosphate
Fenitrothion
Dimethylphosphate
Dimethylthiophosphate
Fenthion
Dimethylphosphate
Dimethylthiophosphate
Isazophos-methyl
5-Chloro-1,2-dihydro-1-isopropyl-[3H]-1,2,4-triazol-3-one
Dimethylphosphate
Dimethylthiophosphate
Malathion
Dimethyldithiophosphate
Dimethylphosphate
Dimethylthiophosphate
Malathion dicarboxylic acid
Methamidophos
Methidathion
Dimethyldithiophosphate
Dimethylphosphate
Dimethylthiophosphate

Methyl parathion
Dimethylphosphate
Dimethylthiophosphate
p-Nitrophenol
Naled
Dimethylphosphate
Oxydemeton-methyl
Dimethylphosphate
Dimethylthiophosphate
Parathion (Ethyl parathion)
Diethylphosphate
Diethylthiophosphate
p-Nitrophenol
Phorate
Diethyldithiophosphate
Diethylphosphate
Diethylthiophosphate
Phosmet (Imidan)
Dimethyldithiophosphate
Dimethylphosphate
Dimethylthiophosphate
Pirimiphos-methyl
2-(Diethylamino)-6-methylpyrimidin-4-ol/one
Dimethylphosphate
Dimethylthiophosphate
Sulfotep
Diethylphosphate
Diethylthiophosphate
Temephos
Dimethylphosphate
Dimethylthiophosphate
Terbufos
Diethyldithiophosphate
Diethylphosphate
Diethylthiophosphate
Tetrachlorvinphos
Dimethylphosphate

Pyrethroid Pesticides³

Allethrin
cis/trans-Dimethylvinylcyclopropane carboxylic diacid
Cyfluthrin
cis-3-(2,2-Dichlorovinyl)-2,2-dimethylcyclopropane carboxylic acid (*cis*-DCCA)
trans-3-(2,2-Dichlorovinyl)-2,2-dimethylcyclopropane carboxylic acid (*trans*-DCCA)
4-Fluoro-3-phenoxybenzoic acid
Cyhalothrin (including *lambda*- and *gamma*-)
3-Phenoxybenzoic acid (3-PBA)

Cypermethrin (including *cis*- and *trans*-)
cis-3-(2,2-Dichlorovinyl)-2,2-
dimethylcyclopropane carboxylic acid
(*cis*-DCCA)
trans-3-(2,2-Dichlorovinyl)-2,2-
dimethylcyclopropane carboxylic acid
(*trans*-DCCA)
3-Phenoxybenzoic acid (3-PBA)

Deltamethrin
cis-3-(2,2-Dibromovinyl)-2,2-
dimethylcyclopropane carboxylic acid
3-Phenoxybenzoic acid (3-PBA)

Fenpropathrin
3-Phenoxybenzoic acid (3-PBA)

Permethrin (including *cis*- and *trans*-)
cis-3-(2,2-Dichlorovinyl)-2,2-
dimethylcyclopropane carboxylic acid
(*cis*-DCCA)
trans-3-(2,2-Dichlorovinyl)-2,2-
dimethylcyclopropane carboxylic acid
(*trans*-DCCA)
3-Phenoxybenzoic acid (3-PBA)

Pyrethrin 1
cis/trans-Dimethylvinylcyclopropane
carboxylic diacid

Resmethrin
cis/trans-Dimethylvinylcyclopropane carboxylic
diacid

Tralomethrin
3-Phenoxybenzoic acid (3-PBA)

Other Pesticides

1,4-Dichlorobenzene (*p*-Dichlorobenzene)
2,5 Dichlorophenol

***ortho*-Phthalates ¹**

Benzylbutyl phthalate (BzBP)
Mono-benzyl phthalate (MBzP)
Mono-*n*-butyl phthalate (MnBP)
Diallyl phthalate
Di-*n*-butyl phthalate (DnBP)
Mono-*n*-butyl phthalate (MnBP)
Mono-3-hydroxybutyl phthalate (MHBP)
Di-isobutyl phthalate (DIBP)
Mono-isobutyl phthalate (MIBP)
Mono-2-methyl-2-hydroxypropyl phthalate
Dicyclohexyl phthalate (DCHP)
Mono-cyclohexyl phthalate (MCHP)
Diethyl phthalate (DEP)
Mono-ethyl phthalate (MEP)
Di-2-ethylhexyl phthalate (DEHP)
Mono-(2-carboxymethylhexyl) phthalate
Mono-(2-ethyl-5-carboxypentyl) phthalate
(MECPP)
Mono-2-ethylhexyl phthalate (MEHP)

Mono-(2-ethyl-5-hydroxyhexyl) phthalate
(MEHHP)
Mono-(2-ethyl-5-oxohexyl) phthalate (MEOHP)
Di-*n*-hexyl phthalate
Di-isodecyl phthalate (DIDP)
Mono-(carboxynonyl) phthalate (MCNP)
Di-isoheptyl phthalate
Di-isononyl phthalate (DINP)
Mono-(carboxyoctyl) phthalate (MCOP)
Mono-(hydroxyisononyl) phthalate
Mono-isononyl phthalate (MINP)
Mono-(oxoisononyl) phthalate
Dimethyl phthalate (DMP)
Mono-methyl phthalate (MMP)
Di-*n*-octyl phthalate (DnOP)
Mono-(3-carboxypropyl) phthalate (MCP)
Mono-*n*-octyl phthalate (MnOP)
Di-*n*-pentyl phthalate
Di-2-propylheptyl phthalate
Diundecyl phthalate
Di-isodecyl phthalate
Di-isotridecyl phthalate

**Polychlorinated Biphenyls (PCBs),
Dioxin-Like ²**

Coplanar PCBs ²

3,4,4',5-Tetrachlorobiphenyl (PCB 81)
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)

Mono-*ortho*-Substituted PCBs ²

2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)
2',3,4,4',5-Pentachlorobiphenyl (PCB 123)
2,3,3',4,4',5-Hexachlorobiphenyl (PCB 156)
2,3,3',4,4',5'-Hexachlorobiphenyl (PCB 157)
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)

**Polychlorinated Biphenyls (PCBs),
Non-Dioxin-Like ²**

2,2',5-Trichlorobiphenyl (PCB 18)
2,4,4'-Trichlorobiphenyl (PCB 28)
2,2',3,5'-Tetrachlorobiphenyl (PCB 44)
2,2',4,5'-Tetrachlorobiphenyl (PCB 49)
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)
2,4,4',5-Tetrachlorobiphenyl (PCB 74)
2,2',3,4,5'-Pentachlorobiphenyl (PCB 87)
2,2',4,4',5-Pentachlorobiphenyl (PCB 99)
2,2',4,5,5'-Pentachlorobiphenyl (PCB 101)
2,3,3',4',6-Pentachlorobiphenyl (PCB 110)
2,2',3,3',4,4'-Hexachlorobiphenyl (PCB 128)

2,2',3,4,4',5'-Hexachlorobiphenyl (PCB 138)
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)
2,2',3,4',5',6-Hexachlorobiphenyl (PCB 149)
2,2',3,5,5',6-Hexachlorobiphenyl (PCB 151)
2,2',4,4',5,5'-Hexachlorobiphenyl (PCB 153)
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)
2,2',3,4,4',5,5'-Heptachlorobiphenyl (PCB 180)
2,2',3,4,4',5',6-Heptachlorobiphenyl (PCB 183)
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)
2,2',3,3',4,5,5',6-Octachlorobiphenyl (PCB 199)
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)

Polychlorinated Biphenyls (PCBs)

Hydroxy-PCBs (Metabolites of PCBs) ¹¹

4-Hydroxy-PCB 107
4-Hydroxy-PCB 120
4'-Hydroxy-PCB 130
3'-Hydroxy-PCB 138
4-Hydroxy-PCB 146
3-Hydroxy-PCB 153
4'-Hydroxy-PCB 172
3'-Hydroxy-PCB 180
4-Hydroxy-PCB 187
4'-Hydroxy-PCB 193

Polycyclic Aromatic Hydrocarbons (PAHs) ^{3, 12}

3-Hydroxybenzo[a]pyrene
6-Hydroxychrysene
3-Hydroxyphenanthrene

Tobacco Smoke

Nicotine
Cotinine
Hydroxycotinine
NNK (4-[Methylnitrosamino]-1-[3-pyridyl]-1-butanone)
NNAL (4-[Methylnitrosamino)-1-(3-pyridyl)-1-butanol)

Notes

- 1 All members of the chemical class are priority chemicals, including, but not limited to, the chemicals listed.
- 2 Diesel exhaust is a complex mixture that contains many components, one or more of which may be useful as an indicator for biomonitoring.
- 3 All members of the chemical class are not priority chemicals; only the specific chemicals listed are priority chemicals.
- 4 These brominated phenols are part of the chemical group "brominated and chlorinated organic compounds used as flame retardants", which are listed as priority chemicals. The brominated phenols are also included in the category "environmental phenols" because the laboratory measures them with other environmental phenols.
- 5 These chlorinated phenols, with the exception of triclosan, are metabolites of certain pesticides that are listed as priority chemicals. These chlorophenols are also included in the category "environmental phenols" because the laboratory measures them with other environmental phenols.
- 6 Pentachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol have been removed from the priority list, because they were mistakenly added in a previous version of the list. These three phenols are designated chemicals only.
- 7 Includes *n*-butylparaben and isobutylparaben.
- 8 The SGP recommended that the Program develop methods for antimony and beryllium that meet the Program's quality assurance/quality control (QA/QC) standards.
- 9 PFASs are fluorinated aliphatic substances that contain the moiety C_nF_{2n+1} . In a perfluoroalkyl substance (also known as a "perfluorochemical"), all carbon atoms, except for carbon atoms associated with functional groups (such as an aldehyde group), are fully fluorinated. In a polyfluoroalkyl substance, at least one (but not all) of the carbon atoms is fully fluorinated.
- 10 Fungicides, herbicides, and insecticides are grouped under the general heading of "Pesticides."
- 11 Hydroxy-PCBs are measured as biomarkers of exposure to the listed PCBs.
- 12 The SGP recommended that the three hydroxy-PAHs shown be listed as priority chemicals. These three hydroxy-PAHs are metabolites of benzo[a]pyrene, chrysene and phenanthrene, respectively.