

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 372**

[EPA-HQ-TRI-2019-0375; FRL-10002-70]

RIN 2070-AK51

**Addition of Certain Per- and Polyfluoroalkyl Substances; Community Right-to-Know Toxic Chemical Release Reporting****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Advance notice of proposed rulemaking.

**SUMMARY:** In this advance notice of proposed rulemaking (ANPRM), EPA is soliciting information from the public as EPA considers proposing a future rule on adding certain per- and polyfluoroalkyl substances (PFAS) to the list of toxic chemicals subject to reporting under section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and section 6607 of the Pollution Prevention Act (PPA). In this ANPRM, EPA outlines what PFAS are, why the Agency is considering adding certain PFAS to EPCRA section 313, what listing actions are being considered, who may be required to report, the current understanding of hazard concerns for PFAS, EPA's hazard assessments on PFAS, and other information available on these chemicals. In considering a chemical for addition to the EPCRA section 313 list, EPA bases its listing decision on the chemical's hazard (*i.e.*, toxicity), not the risk (*i.e.*, toxicity plus potential exposures) related to that chemical. EPA is requesting comment on which, if any, PFAS should be evaluated for listing, how to list them, and what would be appropriate reporting thresholds given their persistence and bioaccumulation potential. Lastly, EPA asks for any additional data to inform the Agency's evaluation and determination of which PFAS may meet the EPCRA section 313 listing criteria.

**DATES:** Comments must be received on or before February 3, 2020.**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-HQ-TRI-2019-0375, by one of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI)

or other information whose disclosure is restricted by statute.

- *Mail:* Document Control Office (7407M), Office of Pollution Prevention and Toxics (OPPT), Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460-0001.

- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at <http://www.epa.gov/dockets/where-send-comments-epa-dockets#hq>.

All documents in the docket are listed on <http://www.regulations.gov>.

Although listed in the index, some information is not publicly available, *e.g.*, Confidential Business Information or other information the disclosure of which is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through <http://www.regulations.gov>. Additional instructions on visiting the docket, along with more information about dockets generally, is available at <http://www.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:** *For technical information contact:* Daniel R. Bushman, Toxics Release Inventory Program Division (7410M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460-0001; telephone number: (202) 566-0743; email: [bushman.daniel@epa.gov](mailto:bushman.daniel@epa.gov).

*For general information contact:* The Emergency Planning and Community Right-to-Know Hotline; telephone numbers: toll free at (800) 424-9346 (select menu option 3) or (703) 348-5070 in the Washington, DC Area and International; or go to <https://www.epa.gov/home/epa-hotlines>.

**SUPPLEMENTARY INFORMATION:****I. General Information***A. Does this action apply to me?*

You may be potentially affected by this action if you manufacture, process, or otherwise use PFAS. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Facilities included in the following NAICS manufacturing codes

(corresponding to Standard Industrial Classification (SIC) codes 20 through 39): 311\*, 312\*, 313\*, 314\*, 315\*, 316, 321, 322, 323\*, 324, 325\*, 326\*, 327, 331, 332, 333, 334\*, 335\*, 336, 337\*, 339\*, 111998\*, 211130\*, 212324\*, 212325\*, 212393\*, 212399\*, 488390\*, 511110, 511120, 511130, 511140\*, 511191, 511199, 512230\*, 512250\*, 519130\*, 541713\*, 541715\* or 811490\*. \*Exceptions and/or limitations exist for these NAICS codes.

- Facilities included in the following NAICS codes (corresponding to SIC codes other than SIC codes 20 through 39): 212111, 212112, 212113 (corresponds to SIC code 12, Coal Mining (except 1241)); or 212221, 212222, 212230, 212299 (corresponds to SIC code 10, Metal Mining (except 1011, 1081, and 1094)); or 221111, 221112, 221113, 221118, 221121, 221122, 221330 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce) (corresponds to SIC codes 4911, 4931, and 4939, Electric Utilities); or 424690, 425110, 425120 (limited to facilities previously classified in SIC code 5169, Chemicals and Allied Products, Not Elsewhere Classified); or 424710 (corresponds to SIC code 5171, Petroleum Bulk Terminals and Plants); or 562112 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis (previously classified under SIC code 7389, Business Services, NEC)); or 562211, 562212, 562213, 562219, 562920 (limited to facilities regulated under the Resource Conservation and Recovery Act, subtitle C, 42 U.S.C. 6921 *et seq.*) (corresponds to SIC code 4953, Refuse Systems).

- Federal facilities.

A more detailed description of the types of facilities covered by the NAICS codes subject to reporting under EPCRA section 313 can be found at: <https://www.epa.gov/toxics-release-inventory-tri-program/tri-covered-industry-sectors>. To determine whether your facility would be affected by this action, you should carefully examine the applicability criteria in part 372, subpart B of Title 40 of the Code of Federal Regulations. Federal facilities are required to report under Executive Order 13834 (<https://www.govinfo.gov/content/pkg/FR-2018-05-22/pdf/2018-11101.pdf>) as explained in the Implementing Instructions from the Council on Environmental Quality ([https://www.sustainability.gov/pdfs/eo13834\\_instructions.pdf](https://www.sustainability.gov/pdfs/eo13834_instructions.pdf)). If you have

questions regarding the applicability of this action to a particular entity, consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

*B. What action is under consideration by the Agency?*

EPA is considering proposing a rule to add certain PFAS to the list of toxic chemicals subject to reporting under EPCRA section 313 and section 6607 of the PPA (more commonly known as the Toxics Release Inventory (TRI)). EPA is also considering establishing reporting thresholds for PFAS that are lower than the usual statutory thresholds (25,000 pounds for manufacturing or processing and 10,000 pounds for otherwise using listed chemicals) due to concerns for their environmental persistence and bioaccumulation potential.

*C. What is the Agency's authority for this potential action?*

This action is issued under EPCRA sections 313(d) and 328, 42 U.S.C. 11023 *et seq.*, and PPA section 6607, 42 U.S.C. 13106. EPCRA is also referred to as Title III of the Superfund Amendments and Reauthorization Act of 1986.

Section 313 of EPCRA, 42 U.S.C. 11023, requires certain facilities that manufacture, process, or otherwise use listed toxic chemicals in amounts above reporting threshold levels to report their environmental releases and other waste management quantities of such chemicals annually to EPA and the States. These facilities must also report pollution prevention and recycling data for such chemicals, pursuant to section 6607 of the PPA, 42 U.S.C. 13106. Congress established an initial list of toxic chemicals that was comprised of 308 individually listed chemicals and 20 chemical categories.

EPCRA section 313(d) authorizes EPA to add or delete chemicals from the list and sets criteria for these actions. EPCRA section 313(d)(2) states that EPA may add a chemical to the list if any of the listing criteria in EPCRA section 313(d)(2) are met. Therefore, to add a chemical, EPA must demonstrate that at least one criterion has been met, but need not determine whether any other criterion has been met. Conversely, to remove a chemical from the list, EPCRA section 313(d)(3) dictates that EPA must demonstrate that none of the criteria in EPCRA section 313(d)(2) have been met. The listing criteria in EPCRA section 313(d)(2)(A) through (C) are as follows:

- The chemical is known to cause or can reasonably be anticipated to cause significant adverse acute human health effects at concentration levels that are reasonably likely to exist beyond facility

site boundaries as a result of continuous, or frequently recurring, releases.

- The chemical is known to cause or can reasonably be anticipated to cause in humans: Cancer or teratogenic effects, or serious or irreversible reproductive dysfunctions, neurological disorders, heritable genetic mutations, or other chronic health effects.

- The chemical is known to cause or can be reasonably anticipated to cause, because of its toxicity, its toxicity and persistence in the environment, or its toxicity and tendency to bioaccumulate in the environment, a significant adverse effect on the environment of sufficient seriousness, in the judgment of the Administrator, to warrant reporting under this section.

EPA often refers to the EPCRA section 313(d)(2)(A) criterion as the "acute human health effects criterion;" the EPCRA section 313(d)(2)(B) criterion as the "chronic human health effects criterion;" and the EPCRA section 313(d)(2)(C) criterion as the "environmental effects criterion."

In a final rule that added 286 chemicals and chemical categories to the TRI list, EPA published in the **Federal Register** of November 30, 1994 (59 FR 61432) (FRL-4922-2), a statement clarifying its interpretation of the EPCRA section 313(d)(2) criteria for modifying the EPCRA section 313 list of toxic chemicals. EPA's interpretation of the EPCRA section 313 listing criteria addressed a number of issues including EPA's authority to add chemical categories and EPA's policy on the use of exposure for chemicals that are toxic only at high doses/concentrations.

## II. Background Information

### A. What is TRI?

EPCRA section 313, 42 U.S.C. 11023, requires certain facilities that manufacture, process, or otherwise use listed toxic chemicals in amounts above reporting threshold levels to report their environmental releases and other waste management quantities of such chemicals annually. These facilities must also report pollution prevention and recycling data for such chemicals, pursuant to Pollution Prevention Act section 6607, 42 U.S.C. 13106. Note that TRI does not cover all chemicals, facilities, or types of pollution.

TRI provides information about releases of toxic chemicals from covered facilities throughout the United States; however, TRI data do not reveal whether or to what degree the public is exposed to listed chemicals. TRI data can, in conjunction with other information, be used as a starting point

in evaluating such exposures and the risks posed by such exposures. The determination of potential risk to human health and/or the environment depends upon many factors, including the toxicity of the chemical, the fate of the chemical in the environment, and the amount and duration of human or other exposure to the chemical.

For more information on TRI, visit the TRI website at [www.epa.gov/tri](http://www.epa.gov/tri). Additionally, via this website, EPA provides a *Factors to Consider When Using TRI Data* document, which helps explain some of the uses, as well as limitations, of data collected by TRI.

### B. What are PFAS?

PFAS are synthetic organic compounds that do not occur naturally in the environment. PFAS contain an alkyl carbon chain on which the hydrogen atoms have been partially or completely replaced by fluorine atoms. The strong carbon-fluorine bonds of PFAS make them resistant to degradation and thus highly persistent in the environment (Refs. 1 and 2). Some of these chemicals have been used for decades in a wide variety of consumer and industrial products (Ref. 1). Some PFAS have been detected at high levels in wildlife indicating that at least some PFAS have the ability to bioaccumulate (Ref. 2). Some PFAS can accumulate in humans and remain in the human body for long periods of time (e.g., months to years) (Refs. 1, 2, and 3). As noted in EPA's Action Plan (Ref. 1), because of the widespread use of PFAS in commerce and their tendency to persist in the environment, most people in the United States have been exposed to PFAS. As a result, several PFAS have been detected in human blood serum (Refs. 1, 2 and 4).

### C. Why is EPA considering adding PFAS to the TRI?

Some PFAS may be toxic, persistent in the environment, and accumulate in wildlife and humans. Therefore, releases of some PFAS to the environment and potential human exposure may be of concern. One source of potential exposure to PFAS are releases from industrial facilities that manufacture, process, or otherwise use PFAS. Information on the releases and waste management quantities from such facilities could help EPA and the public identify some potential sources of exposure to PFAS. The TRI is a tool that EPA can use to collect such information. As noted in the EPA Action Plan:

"Currently, no PFAS chemicals are included on the list of chemicals required to report to TRI; however, the EPA is considering whether to add

PFAS chemicals. In considering listing, the EPA must determine whether data and information are available to fulfill the listing criteria and the extent and utility of the data that would be gathered. For example, hazard data required for TRI listing may be readily available for certain PFAS chemicals, but not others. In addition, in considering if TRI will provide useful information to stakeholders, the EPA also will consider if those PFAS are still active in commerce. The process for listing includes notice and comment rulemaking to list PFAS chemicals for reporting prior to adding these chemicals to the TRI for annual reporting.” (Ref. 1)

As the first step in the process of adding certain PFAS to the TRI, EPA is issuing this ANPRM to allow all stakeholders the opportunity to comment on the various aspects of adding certain PFAS to the TRI toxic chemical list. Note that adding certain PFAS to the TRI could help inform discussions related to risks to human health and the environment but the information collected through TRI, as previously indicated, would not capture all sources of PFAS releases.

### III. What TRI listing actions are being considered?

Currently, approximately 600 PFAS are manufactured (including imported) and/or used in the United States (Ref. 5). The two PFAS that have been studied the most are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). Due to a voluntary phaseout under the 2010/2015 PFOA Stewardship Program, PFOA and PFOS are no longer produced domestically by the companies participating in the Program. However, PFOA and PFOS may still be produced domestically, imported, and used by companies not participating in the PFOA Stewardship Program (Ref. 6). PFOA and PFOS may also be present in imported articles. PFAS such as hexafluoropropylene oxide (HFPO) dimer acid (Chemical Abstract Service Registry Number (CASRN) 13252-13-6) and its ammonium salt (CASRN 62037-80-3), both commonly referred to as GenX, and perfluorobutane sulfonic acid (PFBS) (CASRN 375-73-5) and its salt potassium perfluorobutane sulfonate (CASRN 29420-49-3), are some examples of short-chain PFAS that have been developed to replace long-chain PFOA and PFOS, respectively. Compared to PFOA and PFOS, most replacement PFAS tend to have less information available about their potential toxicity to human and ecological populations. Through this

ANPRM process, EPA is seeking information to determine which PFAS currently active in commerce have sufficient toxicity information available to meet the EPCRA section 313(d)(2) listing criteria. EPA is considering whether to add any PFAS currently active in commerce for which hazard assessments show that they meet the EPCRA section 313(d)(2) listing criteria. Note that one factor EPA considers when determining whether to add a chemical to the TRI list is whether reporting would occur on the chemical if it were to be added.

In addition, for any PFAS that meet the listing criteria, EPA is considering adding these compounds to the list of chemicals of special concern (§ 372.28) and establishing lower reporting thresholds. In the past EPA has lowered the reporting thresholds for persistent, bioaccumulative, and toxic (PBT) chemicals (October 29, 1999, 64 FR 58666 (FRL-6389-11)). For PBT chemicals, with one exception, EPA established two reporting thresholds, 100 pounds for PBT chemicals and 10 pounds for highly PBT chemicals (*i.e.*, those PBT chemicals with very high persistence and bioaccumulation values). Certain PFAS may have persistence and bioaccumulation properties similar to other PBT chemicals where even small amounts of release present a concern. To appropriately capture release information of PFAS, EPA is considering establishing reporting thresholds lower than the statutory thresholds of 25,000 pounds for manufacturing or processing and 10,000 pounds for otherwise using listed chemicals.

PFAS, that meet the EPCRA section 313 listing criteria, could be listed as individual chemicals or as members of PFAS chemical categories. For example, EPA’s “Health Effects Support Document for Perfluorooctane Sulfonate (PFOS)” (Ref. 7) states that PFOS (CASRN 1763-23-1) is commonly produced as a potassium salt (CASRN 2795-39-3) and that, while the CASRN given is for linear PFOS, the toxicity studies are commonly based on a mixture of linear and branched PFOS. Therefore, the reference dose (RfD) derived in the 2016 Health Effects Support Document applies to the total linear and branched PFOS. For PFOS it would seem appropriate to create a TRI chemical category that includes all linear and branched isomers of PFOS and any salts of PFOS. PFOA has similar considerations, as may other PFAS that may warrant reporting as a category rather than as individually listed chemicals. EPA may also consider

establishing a single chemical category for all PFAS, however, a single category would be of limited use since it would not provide any information about which PFAS are being released and/or managed as waste.

### IV. What are the hazard concerns for PFAS?

Some PFAS are known to persist in the environment because they are resistant to degradation and have been shown to bioaccumulate in wildlife and humans (Refs. 1 and 2). There are also concerns that some PFAS may cause adverse human health effects, including reproductive, developmental, cancer, liver, immune, thyroid, and other effects (Refs. 1, 2, 8, and 9).

Based on their physicochemical properties and measured environmental concentrations, some PFAS are considered to be environmentally persistent chemicals (Refs. 1 and 2). In general, most PFAS are resistant to environmental degradation due to their strong carbon-fluorine bonds (Refs. 1 and 2). While PFAS chain length and chemical structure can have implications for environmental fate, PFAS are typically resistant to biodegradation, photooxidation, direct photolysis, and hydrolysis which is consistent with their persistence in soil and water (Ref. 2). Some PFAS, can also degrade or be metabolized to other PFAS such as PFOA or PFOS (Ref. 2). PFAS have been detected in air, surface water, groundwater, drinking water, soil, and food (Ref. 2). The presence of PFAS in many parts of the world, including the Arctic, indicate that long-range transport is possible (Ref. 2).

Under the TRI, bioaccumulation, to the extent it happens, is part of the hazard concerns and will be considered both in the listing criteria and in considering lower reporting thresholds. Bioconcentration factors (BCFs) estimated from an octanol-water partition coefficient ( $K_{ow}$ ) or measured in aquatic tests, have typically been used to assess bioaccumulation potential.  $K_{ow}$  and the associated BCFs are based on the partitioning of organic chemicals into octanol or lipids. However, for PFAS such as PFOA and PFOS partitioning appears to be more related to their protein binding properties than to their lipophilicity (Refs. 8 and 9). Since  $K_{ow}$  does not provide a reliable estimate of bioaccumulation potential for these chemicals, field evidence of bioaccumulation is preferable. Field measured bioaccumulation factors (BAFs), and biomagnification factors (BMFs) or trophic magnification factors (TMFs) are considered more appropriate

indicators of the potential for PFAS, such as PFOA and PFOS, to accumulate in fish, other wildlife, and humans (Refs. 8, 9, 10, and 11). The trophic magnification data for PFOA and PFOS was deemed sufficient to consider them to be bioaccumulative by the Stockholm Convention Persistent Organic Pollutants Review Committee in 2015 (Ref. 12).

While the toxicity of PFOA and PFOS has been studied extensively, there is less data available for other PFAS (Ref. 2). Differences in PFAS chain length and chemical structure can have implications for environmental fate, bioaccumulation, metabolism, and toxicity (Ref. 1). As part of EPA's PFAS Action Plan, the Agency is continuing to collect, systematically review, and evaluate available toxicity data for other PFAS that may help determine whether exposure to structurally similar PFAS results in similar toxic effects (Ref. 1).

#### V. What EPA hazard assessments and other toxicity data are available for PFAS?

To date EPA has published two assessments of PFAS: (1) Health Effects Support Document for Perfluorooctane Sulfonate (PFOS) and (2) Health Effects Support Document for Perfluorooctanoic Acid (PFOA) (Refs. 7 and 13). These two documents could be used to determine whether PFOA, PFOS, and related chemicals (*e.g.*, their salts) meet the EPCRA section 313(d)(2) listing criteria. EPA has also developed two new draft PFAS assessments for public comment: (1) Human Health Toxicity Values for Hexafluoropropylene Oxide (HFPO) Dimer Acid and Its Ammonium Salt (CASRN 13252-13-6 and CASRN 62037-80-3) Also Known as "GenX Chemicals" and (2) Human Health Toxicity Values for Perfluorobutane Sulfonic Acid (CASRN 375-73-5) and Related Compound Potassium Perfluorobutane Sulfonate (PFBS) (CASRN 29420-49-3) (Refs. 14 and 15). Once these documents are finalized, EPA expects these assessments will provide a basis for determining whether GenX chemicals and PFBS meet the EPCRA section 313(d)(2) listing criteria.

In addition, EPA is working on hazard assessments for the following PFAS containing varying degrees of available toxicity information relevant for human health assessment purposes: Perfluorononanoic acid (PFNA), perfluorobutanoic acid (PFBA), perfluorodecanoic acid (PFDA), perfluorohexanoic acid (PFHxA), and perfluorohexane sulfonic acid (PFHxS) (Ref. 16). Once finalized, EPA expects these assessments will provide a basis

for determining whether these chemicals meet the EPCRA section 313(d)(2) listing criteria.

EPA has also collected scientific literature on approximately 30 PFAS. This list of PFAS and the available scientific literature is posted at <https://hero.epa.gov/hero/index.cfm/litbrowser/public/#PFAS>. For some of these PFAS, there may be epidemiological and/or experimental animal toxicity data available for review and evaluation of suitability to inform potential human health effects.

Lastly, EPA is collaborating with the National Toxicology Program (NTP) to study individual PFAS and PFAS as a chemical class. Specifically, the NTP has conducted toxicology studies to evaluate and identify the adverse effects of certain PFAS chemicals including PFBS, PFHxS, PFOS, PFHxA, PFOA, PFNA, and PFDA (<https://www.niehs.nih.gov/health/topics/agents/pfc/index.cfm>). NTP continues to assess the potential health effects of PFAS through a large multi-faceted research effort (<https://ntp.niehs.nih.gov/results/areas/pfas/index.html>).

The Agency relies on EPA hazard assessments and externally peer-reviewed hazard assessments from other federal agencies in making determinations as to whether a chemical meets the EPCRA section 313 listing criteria. EPA will consider all PFAS assessments on the human health and environmental effects of PFAS that are available from all sources, including those being conducted by other federal agencies.

#### VI. What information is EPA requesting?

EPA is seeking comments on which of the approximately 600 PFAS currently active in U.S. commerce the Agency should consider evaluating for potential addition to the EPCRA section 313 list of toxic chemicals. EPA would also like to receive comments on whether there are data available to inform how to list PFAS, *i.e.*, as individual chemical listings, as a single category, as multiple categories or as a combination of individual listings and category listings. Note that when chemicals are listed as a category, the TRI reports submitted would include combined data for all members of the category, such that there are no data reported specific to any individual member of the category.

EPA is also seeking comments on the appropriate reporting thresholds for PFAS. Reporting thresholds should be set at an appropriate level to capture most of the releases of PFAS from the facilities that submit reports under EPCRA section 313. Finally, EPA would

like to receive any additional information on human health and environmental toxicity, persistence, and bioaccumulation of PFAS that would help determine if they meet the EPCRA section 313 listing criteria.

#### VII. What are the next steps EPA will take?

EPA intends to carefully review all the comments and information received in response to this ANPRM, as well as previously collected and assembled studies. Once that review is completed, EPA may supplement the collected information with additional hazard assessments to determine whether some PFAS meet the EPCRA section 313(d)(2) criteria. Should EPA decide to move forward with this action, the next step will be to publish a proposed rule to add certain PFAS to the EPCRA section 313 toxic chemical list and set the appropriate reporting thresholds. At that time, the public will have the opportunity to comment on EPA's proposal.

#### VIII. References

The following is a listing of the documents that are specifically referenced in this document. The docket includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not itself physically located in the docket. For assistance in locating these other documents, please consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

- USEPA. EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan. EPA 823R18004. U.S. Environmental Protection Agency, Washington, DC. February 2019. Available from: <https://www.epa.gov/pfas/epas-pfas-action-plan>.
- ATSDR. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Perfluoroalkyls—Draft for Public Comment. June 2018. Available from: <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>.
- USEPA. Basic Information on PFAS. U.S. Environmental Protection Agency, Washington, DC. Available from: <https://www.epa.gov/pfas/basic-information-pfas>.
- Department of Health and Human Services, Centers for Disease Control and Prevention. Fourth National Report on Human Exposure to Environmental Chemicals. Pages 247–257, 2009. Available from: <https://www.cdc.gov/exposurereport/pdf/fourthreport.pdf>.
- USEPA. Toxic Substances Control Act (TSCA) Chemical Substance Inventory. U.S. Environmental Protection Agency, Washington, DC. Available from: <https://www.epa.gov/tscainventory>.

6. USEPA. Fact Sheet: 2010/2015 PFOA Stewardship Program. Available from: <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/fact-sheet-20102015-pfoa-stewardship-program>.
7. USEPA. Health Effects Support Document for Perfluorooctane Sulfonate (PFOS). EPA 822-R-16-002. U.S. Environmental Protection Agency, Washington, DC. May 2016. Available from: [https://www.epa.gov/sites/production/files/2016-05/documents/pfos\\_hesd\\_final\\_508.pdf](https://www.epa.gov/sites/production/files/2016-05/documents/pfos_hesd_final_508.pdf).
8. USEPA. Drinking Water Health Advisory for Perfluorooctanoic Acid (PFOA). EPA 822-R-16-005. U.S. Environmental Protection Agency, Washington, DC. Available from: [https://www.epa.gov/sites/production/files/2016-05/documents/pfoa\\_health\\_advisory\\_final\\_508.pdf](https://www.epa.gov/sites/production/files/2016-05/documents/pfoa_health_advisory_final_508.pdf).
9. USEPA. Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS). EPA 822-R-16-002. U.S. Environmental Protection Agency, Washington, DC. Available from: [https://www.epa.gov/sites/production/files/2016-05/documents/pfos\\_health\\_advisory\\_final\\_508.pdf](https://www.epa.gov/sites/production/files/2016-05/documents/pfos_health_advisory_final_508.pdf).
10. USEPA. Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000) Technical Support Document Volume 2: Development of National Bioaccumulation Factors. Office of Water, Office of Science and Technology. December 2003 (EPA-822-R-03-030). Available from: <https://www.epa.gov/sites/production/files/2018-10/documents/methodology-wqc-protection-hh-2000-volume2.pdf>.
11. Gobas, F.A.P.C., Watze de Wolf, W., Burkhard, L.P., Verbruggen, E., I and Plotzke, K. 2009. Revisiting Bioaccumulation Criteria for POPs and PBT Assessments. Integrated Environmental Assessment and Management—Volume 5, Number 4—pp. 624–637.
12. UNEP. Proposal to list pentadecafluorooctanoic acid (CAS No: 335-67-1, PFOA, perfluorooctanoic acid), its salts and PFOA-related compounds in Annexes A, B and/or C to the Stockholm Convention on Persistent Organic Pollutants. United Nations Environmental Program. 2015. Available from: <http://chm.pops.int/TheConvention/POPsReviewCommittee/Meetings/POPRC11/POPRC11Documents/tabid/4573/>.
13. USEPA. Health Effects Support Document for Perfluorooctanoic Acid (PFOA). EPA 822-R-16-003. U.S. Environmental Protection Agency, Washington, DC. May 2016. Available from: [https://www.epa.gov/sites/production/files/2016-05/documents/pfoa\\_hesd\\_final\\_plain.pdf](https://www.epa.gov/sites/production/files/2016-05/documents/pfoa_hesd_final_plain.pdf).
14. USEPA. Human Health Toxicity Values for Hexafluoropropylene Oxide (HFPO) Dimer Acid and Its Ammonium Salt (CASRN 13252-13-6 and CASRN 62037-80-3) Also Known as “GenX Chemicals. Public Comment Draft. EPA-823-P-18-001. U.S. Environmental Protection Agency, Washington, DC. November 2018. Available from: [https://www.epa.gov/sites/production/files/2018-11/documents/genx\\_public\\_comment\\_draft\\_toxicity\\_assessment\\_nov2018-508.pdf](https://www.epa.gov/sites/production/files/2018-11/documents/genx_public_comment_draft_toxicity_assessment_nov2018-508.pdf).
15. USEPA. Human Health Toxicity Values for Perfluorobutane Sulfonic Acid (CASRN 375-73-5) and Related Compound Potassium Perfluorobutane Sulfonate (CASRN 29420-49-3). Public Comment Draft. EPA-823-R-18-307. U.S. Environmental Protection Agency, Washington, DC. November 2018. Available from: [https://www.epa.gov/sites/production/files/2018-11/documents/pfbs\\_public\\_comment\\_draft\\_toxicity\\_assessment\\_nov2018-508.pdf](https://www.epa.gov/sites/production/files/2018-11/documents/pfbs_public_comment_draft_toxicity_assessment_nov2018-508.pdf).
16. USEPA. IRIS Program Outlook. A Message from the IRIS Program (April 2019). U.S. Environmental Protection Agency, Washington, DC. Available from: [https://www.epa.gov/sites/production/files/2019-04/documents/iris\\_program\\_outlook\\_apr2019.pdf](https://www.epa.gov/sites/production/files/2019-04/documents/iris_program_outlook_apr2019.pdf).

## IX. Statutory and Executive Order Reviews

This action is a significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review under Executive Order 12866, entitled “Regulatory Planning and Review” (58 FR 51735, October 4, 1993). Any changes made in response to OMB recommendations have been documented in the docket for this action. Because this action does not propose or impose any requirements, and instead seeks comments and suggestions for the Agency to consider in possibly developing a subsequent proposed rule, the various statutes and Executive Orders that normally apply to rulemaking do not apply in this case. Should EPA subsequently determine to pursue a rulemaking, EPA will address the statutes and Executive Orders as applicable to that rulemaking.

### List of Subjects in 40 CFR Part 372

Environmental protection, Community right-to-know, Reporting and recordkeeping requirements, and Toxic chemicals.

Dated: November 25, 2019.

**Andrew R. Wheeler,**  
Administrator.

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