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Biennial Review of 40 CFR part 503

To Fulfill Clean Water Act Section 405(d)(2)(C)

Biosolids Biennial Report No.9
(Reporting Period 2020–2021)

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U.S. Environmental Protection Agency
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Washington, DC

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NOTICE

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This document can be downloaded from EPA's website at http://www.epa.gov/biosolids.

Definition of Biosolids

The terms "biosolids" and "sewage sludge" are often used interchangeably; however, biosolids typically means sewage sludge treated to meet the requirements in Title 40 of the *Code of Federal Regulations* (CFR) part 503 and intended to be applied to land as a soil amendment or fertilizer. For the purposes of this biennial report, "biosolids" means "sewage sludge."

Sewage sludge, as defined in 40 CFR part 503, means:

Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of *domestic sewage* in a *treatment works*. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works (40 CFR 503.9(w)). Terms in italics are defined as follows:

- ***Domestic sewage*** is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works (40 CFR 503.9(g)).
- ***Treatment works*** is either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature (40 CFR 503.9(aa)).
- ***Industrial wastewater*** is wastewater generated in a commercial or industrial process (40 CFR 503.9(n)).

Taken together, these definitions mean that biosolids, or sewage sludge, for the purposes of 40 CFR part 503, are the residues from treatment of domestic sewage, whether the industrial wastewater has been treated at the domestic treatment works alongside domestic sewage or not. It does not include sludge originating from treatment of industrial wastes in the absence of domestic sewage or at an industrial treatment works.

Executive Summary

During the 2020–2021 biennial review process, the U.S. Environmental Protection Agency (EPA) collected and searched publicly available peer-reviewed academic publications on pollutants found in biosolids that: (1) were identified in three previous EPA national sewage sludge surveys and in eight previous biennial reviews; and (2) were newly identified during the literature search timeframe (2020–2021). Information was collected on the occurrence, fate, and transport of these pollutants in the environment and their effects on human health and ecological receptors.

Since Biosolids Biennial Report (BR) No.8 was published in 2021, EPA undertook an effort to curate a complete list of chemicals found in biosolids based on the three previous national sewage sludge surveys and eight biennial review reports (Richman et al. 2022). Through that curation, EPA determined that 259 chemicals had been previously reported as detected in biosolids but had not been included in the data collection phase of previous biennial reviews. Also, EPA made corrections to the Chemical Abstracts Service (CAS) numbers of 22 chemicals that had been reported in previous biennial reviews. EPA included these 281 chemicals in the biennial review process for BR No.9.

EPA found 16 new articles that provide relevant data on chemical pollutants that have been found in biosolids in the U.S., two papers had information on both chemical and microbial pollutants. The articles identified 13 new chemicals found in biosolids: nine drugs, three per- and polyfluoroalkyl substances (PFAS), and one element. The articles also identified new data for three chemicals identified during the curation process and 30 chemicals that were previously identified in biosolids. Concentration data in biosolids were found for the 13 new chemicals, three chemicals identified during the curation process, and 30 chemicals identified in previous biennial reviews.

Human health toxicity values were found for 70 chemicals identified during the curation process, and 64 previously identified chemicals. ECOTOXicology records were found for five of the newly identified chemicals, 157 chemicals identified during the curation process, and 116 previously identified chemicals. Additional ecological toxicity data were identified for 20 chemicals identified in the curation process, and 32 previously identified chemicals. Uptake and transfer data, including bioconcentration or bioaccumulation factors, were identified for the 13 new chemicals, 276 chemicals identified during the curation process, and three previously identified chemicals.

In addition, five of the new articles provided relevant data for microbial pollutants that have been found in biosolids. Review of these articles identified one new microbial pollutant in biosolids and data for two previously identified microbial pollutants.

The list of all chemicals found in biosolids based on biennial reviews and sewage sludge surveys is publicly hosted on the EPA CompTox Chemicals Dashboard. The “Biosolids List” allows EPA to take advantage of the functionality of the Dashboard and its integrated data and make the list readily available to the public and connect chemicals found in biosolids with data that is needed for risk assessment. A total of 739 chemicals have been identified in biosolids to date; about 250 of these are dioxins, furans, and PCBs. The list is available here: https://comptox.epa.gov/dashboard/chemical-lists/BIOSOLIDS2022.

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1 Introduction

Section 405(d) of the Clean Water Act (CWA) requires the U.S. Environmental Protection Agency (EPA) to review sewage sludge regulations every two years to identify any additional pollutants that might occur in biosolids and to set regulations for those pollutants if sufficient scientific evidence shows they could harm, or present a risk to, human health or the environment.

EPA's biennial review process is intended to help fulfill that CWA requirement. The data gleaned from the process may be used to assess risk from chemicals found in biosolids. EPA has published eight biosolids biennial reports (BRs) each covering a two-year timeframe: BR No.1 (2004–2005), BR No.2 (2006–2007), BR No.3 (2008–2009), BR No.4 (2010–2011), BR No.5 (2012–2013), BR No.6 (2014–2015), BR No.7 (2016–2017), and BR No.8 (2018–2019).

Once pollutants found in biosolids are identified, EPA must assess if there is sufficient information about the pollutants to determine whether they pose a risk to human health or the environment. EPA is currently developing a prioritization and risk screening process to evaluate pollutants found in biosolids. The screening results will be used to make informed decisions about priorities for risk assessments or to address data gaps or uncertainties.

Addressing the uncertainty around risks from pollutants identified in biosolids is the top priority for EPA's Biosolids Program. EPA continues to make significant progress in building capacity to assess pollutants by developing tools and data. EPA expects to begin risk evaluations once review of its screening process has been completed.

This report provides the approach used and the results of EPA's Biosolids BR No.9, covering 2020–2021.

2 Approach for the 2020–2021 Biennial Review

Every two years, EPA collects and reviews publicly available information about pollutants that have been found in biosolids in the U.S. since the last biennial review. The review focuses on pollutant occurrence and concentration, effects on human health and ecological receptors, and fate and transport in the environment. The four categories of information collected and presented here are needed to conduct risk assessments.

1. **Occurrence and Concentration**. Both the ability to detect a given pollutant in biosolids and the determination of the concentration at which that pollutant is present are highly dependent on the existence of analytical methods for the pollutant in the biosolids matrix.
2. **Toxicity to Human Health**. These data include values such as reference doses (RfDs), reference concentrations (RfCs), cancer slope factors (CSFs), and inhalation unit risks (IURs).
3. **Toxicity to Ecological Receptors**. These data include values such as lethal dose, lethal concentration, and chronic endpoints related to survival, growth, and reproduction.
4. **Environmental Fate and Transport**. These data are necessary for assessing exposure and include various physical-chemical properties as well as bioconcentration or bioaccumulation factors (BCFs and BAFs, respectively), which describe the tendency of a chemical to move from one medium (e.g., soil) to another (e.g., plant matter).

2.1 Two-Phase Literature Search and Review

The 2020–2021 biennial review process consisted of a series of steps designed to effectively search for and review data on chemical and microbial pollutants and divided into the following phases (Figure 1):

- **Phase 1. Search for Pollutant Occurrence**. EPA conducted a search of open literature published from January 1, 2020 through December 31, 2021 for papers that provided evidence of the occurrence of unregulated chemical or microbial pollutants in biosolids in the U.S. and Canada. EPA reported available concentration data for both newly found and previously found chemicals in biosolids.
- **Phase 2. Searches for Data Collection**. For newly identified chemicals found in biosolids, EPA conducted additional searches not limited to 2020–2021 and collected data on environmental fate and transport, human health, and ecological effects. For chemicals previously found to occur in biosolids, EPA collected environmental fate and transport data, human health toxicity data, and ecological toxicity data if data published since January 2020 were available. No additional literature searches were conducted for microbial pollutants.

Since BR No.8 was published in 2021, EPA undertook an effort to curate a complete list of chemicals found in biosolids based on the three previous national sewage sludge surveys and eight biennial review reports (Richman et al. 2022). Through that curation EPA determined that 259 chemicals had been previously detected in biosolids but had not been included in the data collection phase of previous biennial reviews. Also, EPA made corrections to the Chemical Abstracts Service (CAS) numbers of 22 chemicals that had been reported in previous biennial reviews. Therefore, EPA treated these 281 chemicals, as well as those identified from in this biennial review (2020–2021), as if they were newly identified in biosolids and did not limit the search dates for environmental fate and transport data, human health toxicity data, or ecological toxicity data.

The list of all chemicals found in biosolids based on biennial reviews and sewage sludge surveys is publicly hosted on the EPA CompTox Chemicals Dashboard. The Biosolids List allows EPA to take advantage of the functionality of the Dashboard and its integrated data and make the list readily available to the public and connect chemicals found in biosolids with data that is needed for risk assessment. A total of 739 chemicals have been identified in biosolids to date; about 250 of these are dioxins, furans, and PCBs. The list is available here: https://comptox.epa.gov/dashboard/chemical-lists/BIOSOLIDS2022.

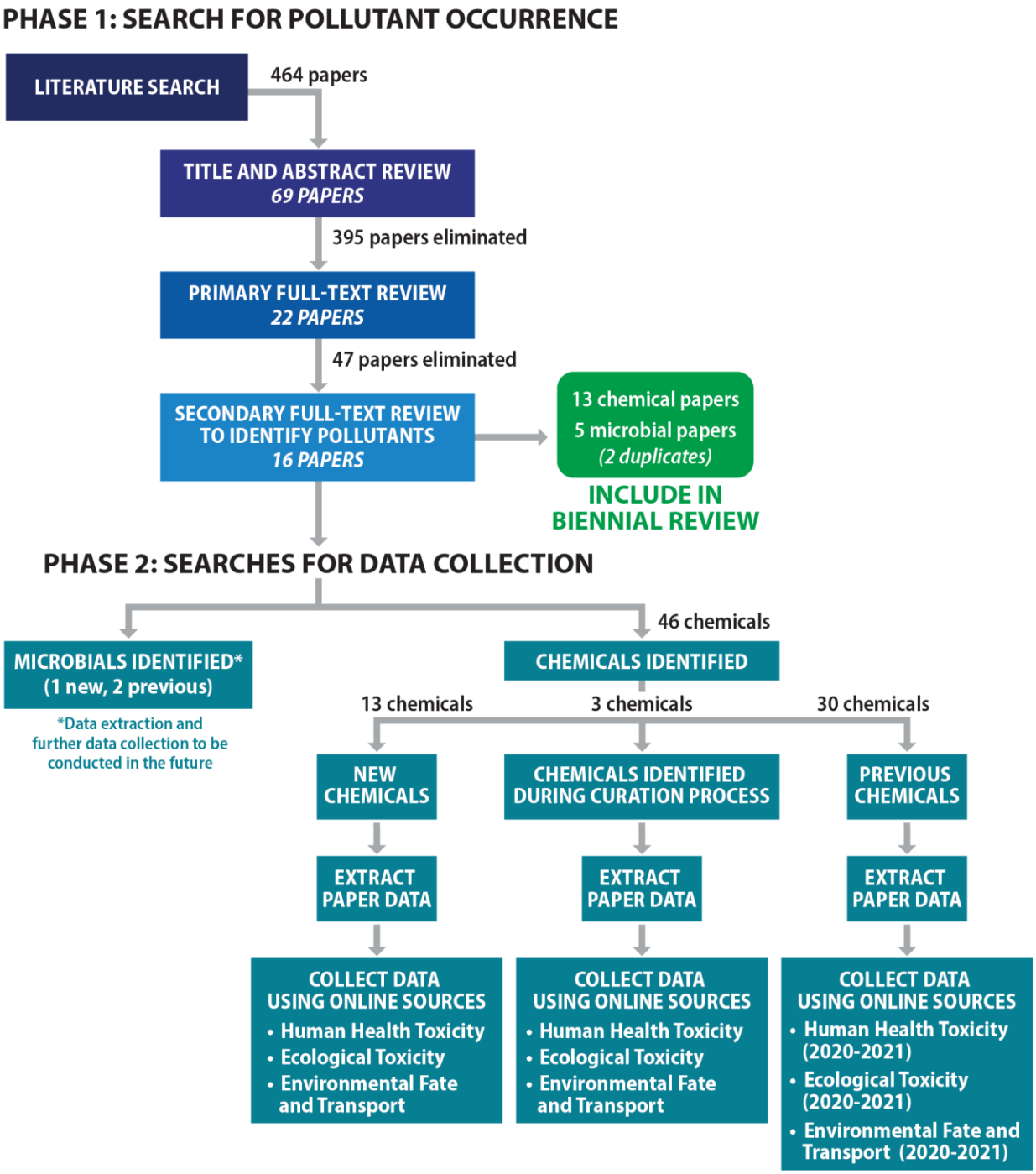

Figure 1. Overview of the 2020–2021 Biennial Review Process.

2.2 Literature Identification and Review

2.2.1 Literature Search for Pollutant Occurrence

EPA conducted a literature search for articles published in peer-reviewed, English language-based journals. The search, conducted for the period of January 1, 2020 through December 31, 2021, focused on identifying data published in ePuB or print since the previous biennial review search period ended in December 2019. The bibliographic databases searched for the current review included: ProQuest, PubMed, and Web of Science. Conference abstracts, reports, comments, letters, and editorials were excluded.

For chemical pollutants, health-related keywords were combined with chemical-related keywords and land application keywords. Geographical search terms were used to restrict the searches to studies conducted in the U.S. and Canada. Asterisks at the end of a search term broadened the search by returning results of that term with any relevant ending. Specifically, to be identified as a candidate, a paper had to have at least one biosolids-related keyword, one chemical keyword, one land application keyword, one health-related keyword, and one geographic keyword, based on the following search strings:

- ***Biosolids-related keywords***: sewage sludge OR biosolids OR treated sewage OR sludge treatment OR sewage treatment

  AND

- ***Land application-related keywords***: land application OR farm OR agriculture OR soil

  AND

- ***Chemical-related keywords***: pollutant* OR toxic* OR chemical OR constituent OR contaminant* OR metal* OR dioxin* OR inorganic* OR organic* OR flame retardant* OR pharmaceutical* OR steroid* OR hormone* OR antibiotic* OR personal care product*

  AND

- ***Health-related keywords***: occurrence OR concentration OR effect* OR propert* OR fate OR transport OR health

  AND

- ***Geographical keywords***: United States OR Canada OR USA OR U.S.A. OR U.S. OR US

For microbial pollutants, health-related keywords were combined with microbial pollutant-related keywords and land application keywords. Land application keywords were retained because 40 CFR part 503.32(b)(5) includes site restrictions specific to land application of Class B biosolids, which allow time for environmental conditions to further reduce pathogen levels. Geographical search terms were used to restrict the searches to studies conducted in the U.S. and Canada. Specifically, to be identified as a candidate, a paper had to have at least one biosolids-related keyword, one land application-related keyword, one microbial pollutant-related keyword, one health-related keyword, and one geographic keyword, based on the following search strings:

- ***Biosolids-related keywords***: sewage sludge OR biosolids OR treated sewage OR sludge treatment OR sewage treatment

  AND

- ***Land application-related keywords***: land application OR farm OR agriculture OR soil

  AND

- ***Microbial pollutant-related keywords***: pathogen* OR Salmonella OR microb*

  AND

- ***Health-related keywords***: occurrence OR concentration OR effect* OR propert* OR fate OR transport OR health

  AND

- ***Geographical keywords***: United States OR Canada OR USA OR U.S.A. OR U.S. OR US

2.2.2 Occurrence Literature Selection and Review

For the papers identified in the chemical and microbial literature searches for the occurrence of pollutants in biosolids, EPA first screened the citation titles and eliminated papers based on their titles if it was possible to determine the papers did not provide relevant data for pollutants that might occur in U.S. biosolids. Studies not related to biosolids or not conducted in the U.S. or Canada were eliminated from further evaluation.

For the remaining papers, EPA reviewed their abstracts and eliminated papers based on the following:

- Endpoints are not pollutant-specific (i.e., overall effects of biosolids on plant growth, crop yield, soil microbe community, or soil nutrients).
- The medium evaluated is:
  - influent and effluent wastewater;
  - industrial sludge (e.g., pulp and paper mill residuals);
  - activated carbon;
  - activated sludge;
  - biochar; and
  - biosolids compost.
- Only an analytical method or effectiveness-of-treatment method is described, and no data are provided on pollutant concentration in biosolids.
- The study was done outside of U.S. or Canada.

EPA reviewed the full text of papers not eliminated during the abstract review. During this review, additional papers were eliminated based on the exclusion criteria for abstracts, as sometimes a paper could not be fully evaluated using the abstract alone. Papers were also eliminated based on the following:

- Only spiked concentration data were reported.
- There was no evidence of the occurrence of new pollutants in biosolids AND no new data were reported for previously identified chemicals.
- The only reported data were for chemicals in biosolids that are already regulated under 40 CFR part 503 (i.e., arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc). EPA did not search the open literature for these chemicals but they were included in the chemical data collection phase of the review.

Appendix A provides 16 abstracts of the papers retained after full-text review for chemical pollutants (13 papers) and microbial pollutants (five[1] papers).

2.3 Chemical Data Collection

Information was collected on pollutants in biosolids, including their occurrence, concentration, fate and transport of chemicals in the environment, and their effects on human and ecological health. This section provides detailed information. Table B-1 in Appendix B provides a complete list of pollutants found in biosolids that are new, previously identified, and identified during the curation process.

EPA categorized chemicals found in biosolids using a hybridized approach accounting for both functional use and structure-based classification. An attempt was made to categorize the individual chemicals in terms of their primary membership in a single class, though many chemicals could naturally fit into multiple categories. Chemicals identified in biosolids were compared to chemical lists on the EPA CompTox Chemicals Dashboard to flag chemicals into specific list-category collections and, in some cases, expert judgement was used. EPA followed the same categorization approach in the curation effort described previously (Richman et al. 2022). Information is provided in Table B-2. Categories for microbes are provided in Table B-3.

2.3.1 Human Health Toxicity Value Sources and Selection

EPA uses human health effects information to assess the risk from pollutants that occur in biosolids. Specifically, EPA uses RfD and RfC values to evaluate noncancer risk associated with oral and inhalation exposures, respectively. Oral CSF and IUR values are used to evaluate risk from carcinogens associated with oral and inhalation exposures, respectively. These four values were searched for and obtained for newly identified chemicals and chemicals identified during the curation process without limiting the search period. For chemicals previously identified in biosolids, EPA limited the data search to the period from January 2020 through December 2021.

EPA's Integrated Risk Information System (IRIS) is considered an excellent source for human health toxicity values for EPA risk assessments; IRIS was the primary source of toxicity values for this review (U.S. EPA 2022a). However, IRIS does not contain toxicity values for all chemicals, and some chemicals with a toxicity value in IRIS do not necessarily have all four of the values EPA uses for risk assessments: RfD, RfC, CSF, and IUR. For the 2020–2021 biennial review, EPA conducted a search of peer-reviewed, publicly available sources to obtain the oral toxicity value (RfD or CSF) and the inhalation toxicity value (RfC or IUR) for potential use in biosolids risk assessments. EPA also searched for toxicological assessments from selected EPA program offices, other national and international programs, and state programs. EPA searched the following data sources:

- **Human Health Benchmarks for Pesticides (HHBPs)**: Data include EPA Office of Pesticide Program's risk assessments for pesticides using health effects data submitted during the pesticide registration process (U.S. EPA 2022b).
- **Provisional Peer-Reviewed Toxicity Values (PPRTVs)**: The Center for Public Health and Environmental Assessment (CPHEA), formerly the National Center for Environmental Assessment, and the Human Health Risk Assessment (HHRA) National Research Program develop PPRTVs (U.S. EPA 2022c). Both CPHEA and HHRA are within EPA's Office of Research and Development.

[1] Two of these papers contained occurrence data for chemical as well as microbial parameters.

- **Health Effects Support Documents (HESDs)**: EPA's Office of Science and Technology (within EPA's Office of Water) develops toxicity values for chemicals in drinking water in these peer-reviewed documents (U.S. EPA 2022e).
- **Agency for Toxic Substances and Disease Registry (ATSDR)**: ATSDR develops oral and inhalation minimum risk levels (MRLs), which are oral noncancer toxicity values equivalent to RfDs and RfCs, respectively (ATSDR 2022).
- **California Environmental Protection Agency (CalEPA)**: CalEPA develops reference exposure levels, which are noncancer toxicity values equivalent to RfDs or RfCs, and cancer potency factors, which are cancer toxicity values equivalent to CSFs or IURs (CalEPA 2021).
- **Health Canada**: Health Canada develops guidelines and technical documents with tolerable daily in-take values, which are noncancer toxicity values used in risk evaluation (Health Canada 2021).

For the 2020-2021 biennial review, EPA reviewed several sources not previously included in biennial reviews. EPA searched these databases for all chemicals found in biosolids and the data search time frame was not limited to any period. EPA searched the following data sources:

- **National Primary Drinking Water Regulations (NPDWR):** EPA's Office of Water develops legally enforceable primary standards limiting the levels of contaminants in drinking water (U.S. EPA 2022g).
- **National Recommended Water Quality Criteria – Human Health Criteria (NRWQC-HHC):** EPA's Office of Science and Technology (within EPA's Office of Water) develops human health ambient water quality criteria for states and authorized tribes to consider when adopting criteria into their water quality criteria. EPA provides recommendations for "water + organism" and "organism only" (U.S. EPA 2022i).

EPA searched for toxicity data using CAS numbers which are unique numeric identifiers assigned to chemical substances. In some cases, toxicity data associated with a CAS number may be applicable to other related chemicals. In the case of polychlorinated biphenyls (PCBs) there is some toxicity data available for the category PCBs which is actually a family of several hundred chemical structures. While EPA has noted that there is not toxicity data available for some of the individual PCB congeners in the category, it may be possible to utilize the toxicity data for the category PCBs when evaluating individual chemical structures. Further, the chemicals may be evaluated as a group using toxicity equivalency factors. A full hazard assessment of PCBs is outside of the scope of this document.

2.3.2 Ecological Toxicity Value Sources and Selection

To evaluate the potential for ecological risks from biosolids, EPA assesses direct contact and ingestion pathways for aquatic and terrestrial species. For the direct contact exposure pathway, species assemblages (or communities) are assessed in soil, sediment, and surface water where they are assumed to be exposed through direct contact with the contaminated medium. For the ingestion pathway, species are assumed to ingest contaminated food and prey from biosolids-treated agricultural fields and from farm ponds that receive runoff from biosolids-treated fields. The ecological toxicity values are expressed in terms of media concentration (e.g., milligrams [mg] per liter [L] for surface water and mg/kilograms [kg] for soil) for the direct contact pathway and in terms of dose (mg/kg/day) for the ingestion pathway.

ECOTOXicology Knowledgebase

EPA does not have a single repository for approved ecological toxicity values directly comparable to IRIS for human toxicity values; however, EPA searched ECOTOX (U.S. EPA 2022d) for all newly identified and existing chemicals to find the number of papers and species, if any, that were available. For previously identified chemicals, the search was limited to data added to ECOTOX from studies published in 2020–2021. For newly identified chemicals in biosolids (including the 281 previously identified chemicals described earlier), the search was not limited to studies published during the 2020–2021 period.

ECOTOX is a comprehensive, publicly available knowledgebase providing single-chemical environmental toxicity data on aquatic life, terrestrial plants, and wildlife. To be included in ECOTOX, studies must meet the following minimum criteria based on the ECOTOX applicability criteria:

- The toxic effects are related to single-chemical exposure.
- A biological effect on live, whole organisms is reported.
- Chemical test concentrations are reported.
- There is an explicit duration of exposure.
- Toxicology information is reported for the chemical of concern.
- The paper is published in the English language.
- The paper is available as a full article (not an abstract).
- The paper is publicly available.
- The paper is the primary source of the data.
- A calculated endpoint is reported or can be calculated using reported or available information.
- Treatment(s) are compared to an acceptable control.
- The location of the study (e.g., laboratory versus field) is reported.
- The tested species is reported (with recognized nomenclature).

EPA considered the studies from the open literature papers that passed the ECOTOX screen of applicability to be potentially relevant for inclusion in its risk assessments.

EPA also publishes aquatic life criteria and benchmarks. For the 2020-2021 biennial review, EPA reviewed these sources not previously included in biennial reviews. EPA searched these databases for all chemicals found in biosolids and the data search time frame was not limited to any period. EPA searched the following data sources:

- **National Recommended Water Quality Criteria – Aquatic Life Criteria (NRWQC-ALC):** EPA's Office of Science Technology (with EPA's Office of Water) develop Aquatic Life Criteria for chemicals representing the highest concentration of a specific pollutant that is not expected to pose a significant risk to the majority of species in a given environment or a narrative description of the desired conditions of a water body being "free from" certain negative conditions (U.S. EPA 2022h).
- **Office of Pesticide Programs Aquatic Life Benchmarks for Registered Pesticides (OPP-ALB):** EPA worked with the U.S. Geological Survey to identify aquatic ecotoxicity benchmark values from risk assessments developed by EPA for individual pesticides during previous re-registration programs. The toxicity data used to develop Aquatic Life Benchmarks are extracted from the most recent publicly available OPP risk assessment for the individual pesticide and are typically based on the most sensitive value for each taxon (U.S. EPA 2022f).

2.3.3 Environmental Fate and Transport Data

EPA uses risk assessment models that require physical-chemical properties and transfer factors to estimate the potential for chemical transport and uptake from agricultural lands that were amended with biosolids.

Physical-Chemical Properties

Because the list of chemicals identified in biosolids is now integrated into the EPA Comptox Chemicals Dashboard, and the Dashboard contains measured and predicted values for physical-chemical properties, there was no need to collect and report physical-chemical values for these properties for newly identified or previously identified chemicals.

Uptake and Transfer Factors

For many organic chemicals, the plant and animal product uptake and transfer factors can be estimated using empirical relationships between the transfer factor and the octanol/water partition coefficient, or log K_{ow}. BCFs are preferred if available. If adequate physical-chemical property data were available, EPA estimated fish BCFs and BAFs using EPI Suite, and EPA searched for and extracted the following data during this biennial review:

- Log BCF (regression-based estimate)
- Log BCF and BAF (Arnot-Gobas upper, mid, and lower trophic)

During this biennial review, EPA also searched for and extracted species-specific, field-measured BAFs and laboratory-measured BCFs from two peer-reviewed, publicly available databases—Arnot and Gobas (2006) and Environment and Climate Change Canada (2006)—as well as bioaccumulation values published by the Oak Ridge National Laboratory (ORNL) (2022). EPA uses these sources in risk-based assessments. These data included the following:

- Log BCF or BAF
- Organism scientific name
- Organism common name

The ORNL Risk Assessment Information System (RAIS) database (ORNL 2022) contains additional uptake and transfer data, which EPA also searched for and extracted during this biennial review. These include:

- Diffusivities in air and water
- Soil-to-dry plant uptake
- Soil-to-wet plant uptake
- Beef transfer coefficient
- Milk transfer coefficient
- Soil-water partition coefficient (K_d)
- Organic carbon partition coefficient (F_{oc})

3 Results from the 2020–2021 Biosolids Biennial Review

During the 2020–2021 biennial review, EPA identified 13 articles that met the eligibility criteria for chemicals. Review of these 13 articles identified 13 new chemicals that occur in biosolids (Table 1): nine drugs, three per- and polyfluoroalkyl substances (PFAS), and one element. The 13 new articles also provided concentration data for three of the chemicals identified during the curation process (see

chemicals marked with 'A' in the column 'Concentration Data' in Table 2) and 30 previously identified chemicals (see chemicals marked with 'A' in the column 'Concentration Data' in Table 3).

Of the 13 papers, four identified or provided data on new chemicals and 11 provided data on previously identified chemicals. Abstracts for all 13 articles are provided in Appendix A-1. EPA identified several papers during the literature review that met the search criteria but were excluded from the biennial review. For example, EPA excluded studies that provided information on plastic-related compounds or nutrients, or studies that provided information on chemicals without providing concentration data. Abstracts for these articles that were reviewed but not included in the biennial review are provided in Appendix A-2.

Data identified for all the sources that EPA reviewed included:

- Concentration data for 13 newly identified chemicals, three chemicals identified during the curation process, and 30 previously identified chemicals (see Appendix C).
- Human health toxicity data for 70 chemicals identified during the curation process, and 64 previously identified chemicals (see Appendix D).
- ECOTOX records for five newly identified chemicals, 157 chemicals identified during the curation process, and 116 previously identified chemicals (see Appendix E).
- Environmental fate and transport data for 13 newly identified chemicals, 276 chemicals identified during the curation process, and three previously identified chemical (see Appendix F).

3.1 Chemicals Newly Identified in the 2020–2021 Biennial Review

Table 1 lists the 13 chemicals that were newly identified as occurring in biosolids in the 2020–2021 biennial review. The letters in the table legend indicate where further information can be found in the appendices. As stated previously for these chemicals, EPA collected data required to inform risk assessments from preferred sources not limited to the 2020–2021 reporting period (see sections 2.3.1, 2.3.2, and 2.3.3 in this report).

EPA extracted concentration data for the 13 newly identified chemicals from the public literature reviewed. These data are provided in Appendix C.

No human health toxicity values were found for any of the newly identified chemicals.

EPA found papers for five newly identified chemicals in ECOTOX (U.S. EPA 2022d). The results are presented in Appendix E, Table E-1. These papers will require further evaluation for relevance for inclusion in risk assessments.

Environmental fate and transport data were available from the papers reviewed for 13 of the newly identified chemicals (see Appendix F). BAFs and BCFs were reported by trophic level for 12 of the newly identified chemicals in EPI Suite, but the values are not species-specific (see Appendix F, Table F-2). Additionally, EPA found species-specific, field-measured BAFs and laboratory-measured BCFs in the peer-reviewed database published by ORNL (2022) for one of the newly identified chemicals (see Appendix F, Table F-3).

Additional uptake and transfer data were available for two newly identified chemicals from the ONRL RASI database (ORNL 2022) (see Appendix F, Table F-4).

Additional physical/chemical properties were not collected for this biennial review because the data are now available in EPA's Comptox Chemicals Dashboard here: https://comptox.epa.gov/dashboard/chemical-lists/BIOSOLIDS2022.

Table 1. Chemicals Newly Identified in Biosolids in the 2020–2021 Reporting Period and Types of Data Available

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
New Chemicals Identified in the 2021–2022 Literature Review					
2-(N-Ethylperfluorooctanesulfonamido)acetic acid	2991-50-6	A	X	I	J
2-(N-Methylperfluorooctanesulfonamido)acetic acid	2355-31-9	A	X	X	J, M
alpha-Solanine	20562-02-1	A	X	X	J
Berberine	2086-83-1	A	X	X	J
Bromide	24959-67-9	A	X	X	J
Doxepin	1668-19-5	A	X	X	J
Fentanyl	437-38-7	A	X	I	J
Hydromorphone	466-99-9	A	X	X	J
Hydroxychloroquine	118-42-3	A	X	X	J
Levorphanol	77-07-6	A	X	X	J
Losartan	114798-26-4	A	X	I	J
Methadone	76-99-3	A	X	I	J
Perfluorohexadecanoic acid	67905-19-5	A	X	I	J, M

Notes:

X = No data were found
A = Concentration data (Table C-1)
I = ECOTOX (Table E-1)
J = EPI Suite (Table F-2)
M = ORNL RAIS (Tables F-3 and F-4)

3.2 Chemicals Identified in the Curation Process

Table 2 lists the 281 chemicals that EPA identified through the curation process described previously. The letters in the table legend indicate where further information can be found in the appendices. As stated previously for these chemicals, EPA collected data required to inform risk assessments from preferred sources not limited to the 2020–2021 reporting period (see sections 2.3.1, 2.3.2, and 2.3.3 in this report).

Concentration data for three chemicals identified in the curation process were extracted from the reviewed literature. These data are provided in Appendix C.

Human health toxicity values were found for 70 chemicals identified in the curation process. Data were found in eight different sources (IRIS, HHBP, PPRTV, ATSDR, CalEPA, Health Canada, NRWQC-HHC, and NPDWR). These values are reported in Appendix D.

Papers for 157 chemicals identified in the curation process were found in ECOTOX (U.S. EPA 2022d). The results are presented in Appendix E, Table E-2. These papers will require further evaluation for relevance for inclusion in risk assessments. Ecotoxicity data were available for 11 chemicals identified in the curation process from the National Recommended Water Quality Criteria – Aquatic Life Criteria (see Appendix E, Table E-4). Additional ecotoxicity data were available for 14 chemicals identified in the curation process from EPA's Office of Pesticide Programs – Aquatic Life Benchmarks for pesticides (See Appendix E, Table E-5).

Environmental fate and transport data were available from the papers reviewed for 276 of the chemicals identified in the curation process. These values are provided in Appendix F. BAFs and BCFs were reported by trophic level for 275 of the chemicals identified in the curation process in EPISuite, but the values are not species-specific (see Appendix F, Table F-2). Additionally, species-specific, field-measured BAFs and laboratory-measured BCFs were found in peer-reviewed databases published by Arnot and Gobas (2006), Environment and Climate Change Canada (2006), and ORNL (2022) for 114 of the chemicals identified in the curation process; these data are provided in Tables F-1 and F-3.

Additional uptake and transfer data were available for 86 chemicals identified in the curation process from the ONRL RASI database (ORNL 2022) (see Appendix F, Table F-4).

Additional physical/chemical properties were not collected for this biennial review because the data are now available in EPA's Comptox Chemicals Dashboard.

Table 2. Chemicals Identified in the Curation Process and Types of Data Available

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
(E)-1,2-Dichloroethylene	156-60-5	X	B, D, F, P, Q	I	J, M
1,1,1-Trichloroethane	71-55-6	X	B, F, G, P, Q	I	K, L, M
1,2,3,4,6,7,8-Heptachlorodibenzo[b,d]furan	67562-39-4	X	G	I	J, M
1,2,3,7,8,9-Hexachlorodibenzo[b,d]furan	72918-21-9	X	G	I	J, M
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	X	G	I	J, M
1,2,3-Trichlorobenzene	87-61-6	X	D, H	I	L, M
1,2,4-Trichlorobenzene	120-82-1	X	B, F, G, H, P, Q	I	K, L, M
1,2-Dichlorobenzene	95-50-1	X	B, F, H, P, Q	I	K, L, M
1,2-Dichloropropane	78-87-5	X	B, D, F, G, P, Q	I	K, M
1,4-Dinitrobenzene	100-25-4	X	D	I	K, M
1,4-Dioxane	123-91-1	X	B, F, G, Q	I	K, M
1-Methyl phenanthrene	832-69-9	X	X	I	J, M
2-(2,4,5-Trichlorophenoxy)propionic acid	93-72-1	X	B, P, Q	I	J, M

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
2-(Methylthio)benzothiazole	615-22-5	X	X	X	J
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	X	X	I	L
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	X	X	I	L
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	X	X	X	J
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	X	X	I	L
2,2',3,3',4,4',6,6'-Octachlorobiphenyl	33091-17-7	X	X	X	J
2,2',3,3',4,4',6-Heptachlorobiphenyl	52663-71-5	X	X	I	J
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	X	X	X	J
2,2',3,3',4,5,5',6'-Octachlorobiphenyl	52663-75-9	X	X	X	L
2,2',3,3',4,5,5',6-Octachlorobiphenyl	68194-17-2	X	X	I	J
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	X	X	X	J
2,2',3,3',4,5,6,6'-Octachlorobiphenyl	52663-73-7	X	X	X	J
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	X	X	X	L
2,2',3,3',4,5,6-Heptachlorobiphenyl	68194-16-1	X	X	I	J
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	X	X	X	L
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	X	X	X	J
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	X	X	I	J
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	X	X	X	J
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	X	X	X	L
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	X	X	X	L
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	X	X	I	J
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	X	X	I	J
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	X	X	X	J
2,2',3,3',5,6'-Hexachlorobiphenyl	52744-13-5	X	X	X	J
2,2',3,3',5,6-Hexachlorobiphenyl	52704-70-8	X	X	X	J
2,2',3,3',5-Pentachlorobiphenyl	60145-20-2	X	X	X	J
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	X	X	X	L
2,2',3,3'-Tetrachlorobiphenyl	38444-93-8	X	X	X	L
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	X	X	X	J
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	X	X	X	J
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	X	X	X	J
2,2',3,4,4',5',6-Heptachlorobiphenyl	52663-69-1	X	X	I	L
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	X	X	X	J
2,2',3,4,4',5'-Hexabromodiphenyl ether	182677-30-1	X	X	X	J
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	X	X	I	J

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
2,2',3,4,4',6'-Hexachlorobiphenyl	59291-64-4	X	X	X	J
2,2',3,4,4',6-Hexachlorobiphenyl	56030-56-9	X	X	X	J
2,2',3,4',5,5',6-Heptachloro-1,1'-biphenyl	52663-68-0	X	X	X	L
2,2',3,4,5,5',6-Heptachlorobiphenyl	52712-05-7	X	X	I	J
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	X	X	I	L
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	X	X	X	L
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	X	X	X	J
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	X	X	I	J
2,2',3,4,5,6'-Hexachlorobiphenyl	68194-15-0	X	X	I	J
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	X	X	X	J
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	X	X	X	J
2,2',3,4',5,6-Hexachlorobiphenyl	68194-13-8	X	X	X	J
2,2',3,4',5',6-Hexachlorobiphenyl	38380-04-0	X	X	X	J
2,2',3,4,5-Pentachlorobiphenyl	55312-69-1	X	X	X	J
2,2',3,4',5'-Pentachlorobiphenyl	41464-51-1	X	X	I	L
2,2',3,4',5-Pentachlorobiphenyl	68194-07-0	X	X	X	J
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	X	X	X	J
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	X	X	X	J
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	X	X	X	J
2,2',3,4,6-Pentachlorobiphenyl	55215-17-3	X	X	X	J
2,2',3,4',6'-Pentachlorobiphenyl	60233-25-2	X	X	X	J
2,2',3,4',6-Pentachlorobiphenyl	68194-05-8	X	X	X	L
2,2',3,4'-Tetrachloro-1,1'-biphenyl	36559-22-5	X	X	X	L
2,2',3,4-Tetrachlorobiphenyl	52663-59-9	X	X	X	J
2,2',3,5,5',6-Hexachlorobiphenyl	52663-63-5	X	X	I	L
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	X	X	X	L
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	X	X	X	J
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	X	X	X	J
2,2',3,5,6-Pentachlorobiphenyl	73575-56-1	X	X	X	J
2,2',3,5'-tetrachlorobiphenyl	41464-39-5	X	X	I	L
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	X	X	X	J
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	X	X	X	J
2,2',3-Trichlorobiphenyl	38444-78-9	X	X	X	L
2,2',4,4',5,6'-Hexachlorobiphenyl	60145-22-4	X	X	X	J
2,2',4,4',5-Pentachlorobiphenyl	38380-01-7	X	X	X	L

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	X	X	I	J
2,2',4,4',6-Pentachlorobiphenyl	39485-83-1	X	X	I	L
2,2',4,4',6-Pentabromodiphenyl ether	189084-64-8	X	X	I	J
2,2',4,5,6'-Pentachlorobiphenyl	68194-06-9	X	X	X	J
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	X	X	X	J
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	X	X	I	J
2,2',4,6-Tetrachlorobiphenyl	62796-65-0	X	X	I	L
2,2',4-Trichlorobiphenyl	37680-66-3	X	X	X	L
2,2',5,6'-Tetrachlorobiphenyl	41464-41-9	X	X	X	L
2,2',5-Trichlorobiphenyl	37680-65-2	X	X	I	L
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	X	X	I	J
2,2'-Bioxirane	1464-53-5	X	X	I	J, M
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	X	X	X	L
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	X	X	X	J
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	X	X	X	J
2,3,3',4',5,5',6-Heptachlorobiphenyl	69782-91-8	X	X	X	J
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	X	X	X	J
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	X	X	X	J
2,3,3',4,5,6-Hexachlorobiphenyl	41411-62-5	X	X	X	J
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	X	X	X	J
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	X	X	X	J
2,3,3',4,5'-Pentachlorobiphenyl	70362-41-3	X	X	X	J
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	X	X	X	J
2,3,3',4',5-Pentachlorobiphenyl	70424-68-9	X	X	X	J
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	X	X	X	J
2,3,3',4',6-Pentachlorobiphenyl	38380-03-9	X	X	I	L
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	X	X	X	L
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	X	X	X	J
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	X	X	X	J
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	X	X	X	J
2,3,3',5',6-Pentachlorobiphenyl	68194-10-5	X	X	X	J
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	X	X	I	J
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	X	X	X	J
2,3,3',6-Tetrachlorobiphenyl	74472-33-6	X	X	X	J
2,3,3'-Trichlorobiphenyl	38444-84-7	X	X	I	J

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
2,3,4,4',5,6-Hexachlorobiphenyl	41411-63-6	X	X	X	J
2,3',4,4',5',6-Hexachlorobiphenyl	59291-65-5	X	X	X	J
2,3,4,4',6-Pentachlorobiphenyl	74472-38-1	X	X	X	J
2,3',4,4',6-Pentachlorobiphenyl	56558-17-9	X	X	I	J
2,3',4,4'-Tetrabromodiphenyl ether	189084-61-5	X	X	X	J
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	X	X	I	L
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	X	X	X	J
2,3',4',5,5'-Pentachlorobiphenyl	70424-70-3	X	X	X	J
2,3,4,5,6-Pentachlorobiphenyl	18259-05-7	X	X	I	J
2,3,4',5,6-Pentachlorobiphenyl	68194-11-6	X	X	X	J
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	X	X	X	J
2,3',4',5',6-Pentachlorobiphenyl	74472-39-2	X	X	X	J
2,3,4,5-Tetrachlorobiphenyl	33284-53-6	X	X	I	J
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	X	X	X	J
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	X	X	X	J
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	X	X	X	J
2,3',4',5'-Tetrachlorobiphenyl	70362-48-0	X	X	X	J
2,3',4',5-Tetrachlorobiphenyl	32598-11-1	X	X	I	L
2,3,4,6-Tetrachlorobiphenyl	54230-22-7	X	X	X	J
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	X	X	X	L
2,3',4,6-Tetrachlorobiphenyl	60233-24-1	X	X	X	J
2,3',4',6-Tetrachlorobiphenyl	41464-46-4	X	X	X	J
2,3,4-Trichlorobiphenyl	55702-46-0	X	X	X	J
2,3',4-Trichlorobiphenyl	55712-37-3	X	X	X	J
2',3,4-Trichlorobiphenyl	38444-86-9	X	X	X	L
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	X	X	X	J
2,3,5,6-Tetrachlorobiphenyl	33284-54-7	X	X	I	J
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	X	X	X	J
2,3,5-Trichlorobiphenyl	55720-44-0	X	X	X	J
2,3',5'-Trichlorobiphenyl	37680-68-5	X	X	X	J
2,3'-Dichlorobiphenyl	25569-80-6	X	X	X	J
2,4,4',5-Tetrachlorobiphenyl	32690-93-0	X	X	X	L
2,4,4',6-Tetrachlorobiphenyl	32598-12-2	X	X	I	J
2,4,4'-Tribromodiphenyl ether	41318-75-6	X	X	I	J
2,4,4'-Trichlorobiphenyl	7012-37-5	X	X	I	L

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
2,4,5-Trichlorobiphenyl	15862-07-4	X	X	I	J
2,4,5-Trichlorophenoxyacetic acid	93-76-5	X	B, Q	I	J, M
2,4,5-Trimethylaniline	137-17-7	X	X	I	J
2,4,6-Trichlorobiphenyl	35693-92-6	X	X	I	J
2,4',6-Trichlorobiphenyl	38444-77-8	X	X	X	J, L
2,4-Dichlorobiphenyl	33284-50-3	X	X	I	X
2,5-Dichlorobiphenyl	34883-39-1	X	X	I	X
2,6-Dinitrotoluene	606-20-2	X	D, F, Q	I	K, M
2-Chloro-4-phenylphenol	92-04-6	X	X	I	J
2-Hexanone	591-78-6	X	B, F	I	J, M
2-Methyl-1-propanol	78-83-1	X	B	I	J, M
2-Methylpyridine	109-06-8	X	X	I	J, M
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	X	X	X	J
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	X	X	X	J
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	X	X	X	J
3,3',4-Trichlorobiphenyl	37680-69-6	X	X	X	J
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	X	X	I	J
3,3',5-Trichlorobiphenyl	38444-87-0	X	X	X	J
3,3'-Dichloro-1,1'-biphenyl	2050-67-1	X	X	X	J
3,4,5-Trichlorobiphenyl	53555-66-1	X	X	X	J
3,4',5-Trichlorobiphenyl	38444-88-1	X	X	X	J
3,4'-Dichlorobiphenyl	2974-90-5	X	X	X	J
3,4-Dichlorobiphenyl	2974-92-7	X	X	I	J
3,5-Dichlorobiphenyl	34883-41-5	X	X	I	J
3,6-Dimethylphenanthrene	1576-67-6	X	X	I	J, M
3-Chlorobiphenyl	2051-61-8	X	X	I	J
4,4'-Dichlorobiphenyl	2050-68-2	X	X	I	J
4-Androstene-3,17-dione	63-05-8	X	X	I	J
4-Chloro-3-methylphenol	59-50-7	X	P	I	K, L, M
4-Methyl-2-pentanone	108-10-1	X	B	I	J, M
Acenaphthene	83-32-9	X	B, D, F, P, Q	I	K, M
Aldrin	309-00-2	X	B, D, F, G, H, P, Q	I, N	L, M
Allyl alcohol	107-18-6	X	B, D	I	J, M

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
Allyl chloride	107-05-1	X	B, G	I	K, M
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	319-84-6	X	B, F, P	I	L, M
alpha-Terpineol	98-55-5	X	X	I	J
Anhydrochlortetracycline	4497-08-9	X	X	X	X
Aroclor 1248	12672-29-6	X	F	I	J, M
Aroclor 1254	11097-69-1	X	B, F	I	J, M
Aroclor 1260	11096-82-5	X	X	I	J, M
Azinphos-methyl	86-50-0	X	B, C, F	I, N, O	J, M
Bensulide	741-58-2	X	C	I, O	J, M
Benzene	71-43-2	X	B, D, F, G, P, Q	I	K, L, M
Benzenethiol	108-98-5	X	D	I	M
Benzo(g,h,i)perylene	191-24-2	X	Q	I	J, M
Benzyl alcohol	100-51-6	X	D	I	J, M
Benzyl butyl phthalate	85-68-7	X	B, D, P, Q	I	K, L, M
beta-Hexachlorocyclohexane	319-85-7	X	B, F, P	I	J, M
Biphenyl	92-52-4	X	B, D	I	K, L, M
Bisphenol A	80-05-7	A	B	I	K, L, M
Caffeine	58-08-2	X	X	I	J
Captan	133-06-2	X	B, C, G	I, O	K, M
Carbon disulfide	75-15-0	X	B, F, G	I, O	L, M
Carbadox	6804-07-5	X	X	I	J
Carbophenothion	786-19-6	X	X	I	J, M
Chlorobenzene	108-90-7	X	B, D, F, G, H, P, Q	I	K, L, M
Chlorobenzilate	510-15-6	X	B, G	I	J, M
Chloroethane	75-00-3	X	B, D, F, G	I	J, M
Chloromethane	74-87-3	X	B, D, F, Q	I	J, M
Chlorpyrifos	2921-88-2	X	F, Q	I, N, O	K, L, M
Clomazone	81777-89-1	X	C	I, O	J, M
Crotonaldehyde	4170-30-3	X	X	I	J, M
Crotoxyphos	7700-17-6	X	X	I	J
Cyanide	57-12-5	X	B, P, Q	I, N	J, M
Decane	124-18-5	X	X	I	J, M
delta-Hexachlorocyclohexane	319-86-8	X	X	I	J, M

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
Diallate	2303-16-4	X	X	I	J, M
Diazinon	333-41-5	X	F, P, Q	I, N	K, L, M
Dibenzofuran	132-64-9	X	D	I	K, M
Dibenzothiophene	132-65-0	X	X	I	K, L, M
Dichlorodiphenyltrichloroethane	50-29-3	X	B, F, G, H, P	I, N	L, M
Dichloromethane	75-09-2	X	B, F, G, H, P, Q	I	K, L, M
Dicrotophos	141-66-2	X	C	I, O	J, M
Dieldrin	60-57-1	X	B, F, G, H, P, Q	I, N	L, M
Dimethyl sulfone	67-71-0	X	X	X	J
Diphenyl oxide	101-84-8	X	X	I	K, M
Diphenylamine	122-39-4	X	C	I	K
dl-Norgestrel	6533-00-2	X	X	X	J
Docosane	629-97-0	X	X	I	J
Dodecane	112-40-3	X	X	I	K, L
Eicosane	112-95-8	X	X	I	J
Endrin	72-20-8	X	B, F, P, Q	I, N	L, M
EPN	2104-64-5	X	B	I, O	J, M
Heptachlor	76-44-8	X	B, F, G, P, Q	I, N	L, M
Hexabromocyclododecane	25637-99-4	X	X	I	J
Hexacosane	630-01-3	X	X	X	J
Hexadecane	544-76-3	X	X	I	L
Iodine	7553-56-2	X	F	I	J, M
Leptophos	21609-90-5	X	X	I	J
Lindane	58-89-9	X	B, G, P, Q	I, N, O	K, L, M
Methacrylonitrile	126-98-7	X	B, D	I	X
Methyl ethyl ketone	78-93-3	X	B, F, G, Q	I	J, M
Methyl triclosan	4640-01-1	X	X	I	X
Mevinphos	7786-34-7	X	C	I, O	J, M
Naled	300-76-5	X	B, C	I, O	J, M
Nitrobenzene	98-95-3	X	B, P	I	K, L, M
Nonylphenol and Nonylphenol Ethoxylates (NP/NPEs)	NOCAS_872428	X	X	X	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
o-Cresol	95-48-7	X	B, D	I	K, M
Octacosane	630-02-4	X	X	I	J
Octadecane	593-45-3	X	X	I	J
p,p'-DDD	72-54-8	X	B, F, G, P	I	L, M
p,p'-DDE	72-55-9	X	B, D, F, G, P	I	L, M
PCB 026	38444-81-4	X	X	X	J
p-Cymene	99-87-6	X	X	I	J, M
Penicillin V	87-08-1	X	X	X	J
Pentachlorophenol	87-86-5	X	B, F, G, P, Q	I, N, O	K, L, M
Perfluorodecanesulfonic acid	335-77-3	A	X	X	J, M
Perylene	198-55-0	X	X	I	J, M
Phenanthrene	85-01-8	X	Q	I	K, L, M
Phosphamidon	13171-21-6	X	X	I	J, M
Potassium	7440-09-7	A	X	I	J, M
Propionitrile	107-12-0	X	X	I	J, M
Quinine	130-95-0	X	X	I	J
Silicon	7440-21-3	X	X	I	J, M
Squalene	7683-64-9	X	X	X	J
Strontium	7440-24-6	X	B, F, Q	I	J, M
Tenofovir	147127-20-6	X	X	X	J
Tetracosane	646-31-1	X	x	X	J
Tetradecane	629-59-4	X	X	I	J
Tetraethyl pyrophosphate	107-49-3	X	X	I	J
Thioxanthen-9-one	492-22-8	X	X	I	J
Triacontane	638-68-6	X	X	X	J
Trichloroethylene	79-01-6	X	B, F, G, H, P, Q	I	K, L, M
Trichlorofluoromethane	75-69-4	X	B, D, Q	X	J, M
Trifluralin	1582-09-8	X	B, Q	I, O	K, M
Tri-o-cresyl phosphate	78-30-8	X	X	I	K, L
Triphenylene	217-59-4	X	X	I	J
Valproic acid	99-66-1	X	X	I	J

Notes:

X = No data were found
A = Concentration data (Tables C-1)
B = IRIS (Table D-1)
C = HHBP (Table D-2)
D = PPRTV (Table D-3)
E = HESD (No data available)
F = ATSDR (Table D-5)
G = CalEPA (Table D-5)
H = Health Canada (Table D-6)
I = ECOTOX (Table E-2)
J = EPI Suite (Table F-2)
K = Environment and Climate Change Canada (BCF/BAF only) (Table F-1)
L = Arnot and Gobas (BCF/BAF only) (Table F-1)
M = ORNL RAIS (Tables F-3 and F-4)
N = NRWQC-ALC (Table E-4)
O = OPP-ALB (Table E-5)
P = NRWQC-HHC (Table D-7)
Q = NPDWR (Table D-8)

3.3 Chemicals Identified in Previous Biennial Reviews

In addition to reporting newly identified chemicals in biosolids, EPA reviewed the literature for new (i.e., published after the previous biennial review period) concentration data, physical-chemical properties, human health and ecological toxicity data, and environmental fate and transport data for chemical pollutants previously identified in biosolids. Table 3 shows the 445 previously identified chemicals for which new data were found, along with the types of data available for the chemicals. The letters in the table legend indicate where further information can be found in the appendices).

Concentration data for 30 previously identified chemicals were available in the reviewed literature. These data are provided in Appendix C.

Six sources EPA reviewed (HHBP, ATSDR, CalEPA, Health Canada, NRWQC-HHC, and NPDWR) contained one or more human health toxicity values for 64 previously identified chemicals. These values are reported in Appendix D.

EPA found papers published in ECOTOX (U.S. EPA 2022d) from 2020 to 2021 for 116 previously identified chemicals. The results are presented in Appendix E, Table E-3. These papers will require further evaluation for relevance for inclusion in risk assessments. Ecotoxicity data were available for 19 previously identified from the National Recommended Water Quality Criteria – Aquatic Life Criteria (see Appendix E, Table E-4). Additional ecological toxicity data were available for 14 previously identified chemicals from EPA's Office of Pesticide Programs – Aquatic Life Benchmarks for pesticides (See Appendix E, Table E-5).

There were no new data available since the last reporting period (i.e., after 2019) from EPI Suite (U.S. EPA 2017), Arnot and Gobas (2006), and Environment and Climate Change Canada (2006). ORNL (2022) had BAF/BCF data and additional uptake and transfer data for one previously identified chemical (see Appendix F, Table F-4).

Table 3. Previously Identified Chemicals with Data Found in the 2020–2021 Reporting Period and Types of Data Available

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
(+)-Diltiazem	42399-41-7	X	X	I	X
(+/-)-Verapamil	52-53-9	X	X	I	X
(3alpha,5beta)-Cholestan-3-ol	516-92-7	X	X	X	X
1-(p-Chlorobenzoyl)-5-methoxy-2-methyl-Indole-3-acetic acid	53-86-1	X	X	I	X
1,1'-Ethane-1,2-diylbis(pentabromobenzene)	84852-53-9	X	X	I	X
1,1'-Oxybis[2,3,4,5,6-pentabromobenzene]	1163-19-5	X	X	I	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
1,2,3,4,5-Pentabromo-6-(2,3,4,5-tetrabromophenoxy)benzene	63387-28-0	X	X	X	X
1,2,3,4,6,7,8,9,10,10,11,11-dodecachloro-1,4,4a,5a,6,9,9a,9b-octahydro-1,4:6,9-dimethanodibenzofuran	31107-44-5	X	X	X	X
1,2,3,4,6,7,8-Heptabromodibenzofuran	107555-95-3	X	X	X	X
1,2,3,4,6,7,8-Heptabromodibenzo-p-dioxin	110999-47-8	X	X	X	X
1,2,3,4,6,7,8-Heptachlorodibenzodioxin	35822-46-9	X	X	X	X
1,2,3,4,7,8,9-Heptabromodibenzo[b,d]furan	161880-51-9	X	X	X	X
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	X	X	X	X
1,2,3,4,7,8-Hexabromodibenzofuran	129880-08-6	X	X	X	X
1,2,3,4,7,8-Hexabromodibenzo-p-dioxin	110999-44-5	X	X	X	X
1,2,3,4,7,8-Hexachlorodibenzodioxin	39227-28-6	X	X	X	X
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	X	X	X	X
1,2,3,5-Tetrabromo-4-(3,4,5-tribromophenoxy)benzene	446255-30-7	X	X	X	X
1,2,3,6,7,8-Hexabromodibenzofuran	107555-94-2	X	X	X	X
1,2,3,6,7,8-Hexabromodibenzo-p-dioxin	110999-45-6	X	X	X	X
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	X	X	X	X
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	X	X	X	X
1,2,3,7,8,9-Hexabromodibenzo[b,d]furan	161880-49-5	X	X	X	X
1,2,3,7,8,9-Hexabromodibenzo-p-dioxin	110999-46-7	X	X	X	X
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	X	X	X	X
1,2,3,7,8-Pentabromodibenzo[b,d]furan	107555-93-1	X	X	X	X
1,2,3,7,8-Pentabromodibenzo-p-dioxin	109333-34-8	X	X	X	X
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	X	X	X	X
1,2-Bis(2,4,6-tribromophenoxy)ethane	37853-59-1	X	X	X	X
1,3,5-Triazin-2(1H)-one, 4,6-diamino-	645-92-1	X	X	X	X
1,3,5-Trichlorobenzene	108-70-3	X	Q	X	X
1,3-Dichlorobenzene	541-73-1	X	P, Q	X	X
1,4:5,8:9,10-Trimethanoanthracene, 1,2,3,4,5,6,7,8,12,12,13,13-dodecachloro-1,4,4a,5,8,8a,9,9a,10,10a-decahydro-	13560-92-4	X	X	X	X
1,4-Dichlorobenzene	106-46-7	X	H, P, Q	X	X
1,7-Dimethylxanthine	611-59-6	X	X	X	X
10-Hydroxyamitriptyline	1159-82-6	X	X	X	X
17alpha-Estradiol	57-91-0	X	X	X	X
17alpha-Ethinylestradiol	57-63-6	X	X	I	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
17beta-Estradiol	50-28-2	X	X	I	X
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	X	X	X	X
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	X	X	X	X
2,2',3,3',4,4'-Hexachlorobiphenyl	38380-07-3	X	X	X	X
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	X	X	X	X
2,2',3,3',4,5-Hexachlorobiphenyl	55215-18-4	X	X	X	X
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	X	X	X	X
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	X	X	X	X
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	X	X	X	X
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	X	X	X	X
2,2',3,4,4',5',6-Heptabromodiphenyl ether	207122-16-5	X	X	X	X
2,2',3,4,4',5'-Hexachlorobiphenyl	35065-28-2	X	X	X	X
2,2',3,4,4'-Pentabromodiphenyl ether	182346-21-0	X	X	X	X
2,2',3,4,4'-Pentachlorobiphenyl	65510-45-4	X	X	X	X
2,2',3,4,5'-Pentachlorobiphenyl	38380-02-8	X	X	X	X
2,2',3,5',6-Pentachlorobiphenyl	38379-99-6	X	X	X	X
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	X	X	X	X
2,2',4,4',5,5'-Hexabromobiphenyl	59080-40-9	X	X	X	X
2,2',4,4',5,5'-Hexabromodiphenyl ether	68631-49-2	X	X	X	X
2,2',4,4',5,5'-Hexachlorobiphenyl	35065-27-1	X	X	I	X
2,2',4,4',5,6'-Hexabromodiphenyl ether	207122-15-4	X	X	X	X
2,2',4,4',5-Pentabromodiphenyl ether	60348-60-9	X	X	X	X
2,2',4,4'-Tetrabromodiphenyl ether	5436-43-1	X	X	I	X
2,2',4,4'-Tetrachlorobiphenyl	2437-79-8	X	X	X	X
2,2',4,5,5'-Pentachlorobiphenyl	37680-73-2	X	X	X	X
2,2',4,5'-Tetrachlorobiphenyl	41464-40-8	X	X	X	X
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	X	X	X	X
2,2',4,6'-Tetrachlorobiphenyl	68194-04-7	X	X	X	X
2,2',4-Tribromodiphenyl ether	147217-75-2	X	X	X	X
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	X	X	X	X
2,2',6-Trichlorobiphenyl	38444-73-4	X	X	X	X
2,2'-Dichlorobiphenyl	13029-08-8	X	X	X	X
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	X	X	X	X
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	X	X	X	X
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	X	X	X	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	X	X	X	X
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	X	X	X	X
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	X	X	X	X
2,3,3',4',5,6-Hexachlorobiphenyl	74472-44-9	X	X	X	X
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	X	X	X	X
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	X	X	X	X
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	X	X	X	X
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	X	X	X	X
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	X	X	X	X
2,3,4,5,6-Pentabromoethylbenzene	85-22-3	X	X	X	X
2,3,4,6,7,8-Hexabromodibenzo[b,d]furan	161880-50-8	X	X	X	X
2,3,4,6,7,8-Hexachlorodibenzo[b,d]furan	60851-34-5	X	X	X	X
2,3,4,7,8-Pentabromodibenzofuran	131166-92-2	X	X	X	X
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	X	X	X	X
2,3,4'-Trichlorobiphenyl	38444-85-8	X	X	X	X
2,3,6-Trichlorobiphenyl	55702-45-9	X	X	X	X
2,3',6-Trichlorobiphenyl	38444-76-7	X	X	X	X
2,3,7,8-Tetrabromodibenzofuran	67733-57-7	X	X	X	X
2,3,7,8-Tetrabromodibenzo-p-dioxin	50585-41-6	X	X	X	X
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	X	X	X	X
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	X	P, Q	I	X
2,3-Dichlorobiphenyl	16605-91-7	X	X	X	X
2,4',5-Trichlorobiphenyl	16606-02-3	X	X	X	X
2,4,5-Trichlorophenol	95-95-4	X	P	X	X
2,4,6-Trinitro-1,3-dimethyl-5-tert-butylbenzene	81-15-2	X	X	X	X
2,4,6-Tris(tert-butyl)phenol	732-26-3	X	X	X	X
2,4'-Dichlorobiphenyl	34883-43-7	X	X	X	X
2,4-Dichlorophenol	120-83-2	X	P, Q	I	X
2,4-Dichlorophenoxyacetic acid	94-75-7	X	P, Q	I, O	X
2,4-Di-tert-butylphenol	96-76-4	X	X	X	X
2,4-Di-tert-pentylphenol	120-95-6	X	X	X	X
2,6-Dichlorobiphenyl	33146-45-1	X	X	X	X
2,6-Di-tert-butylphenol	128-39-2	X	X	X	X
2-Chlorobiphenyl	2051-60-7	X	X	X	X
2-Chloronaphthalene	91-58-7	X	P	X	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
2-Ethylhexyl diphenyl phosphate	1241-94-7	X	X	X	X
2H,2H,3H,3H-Perfluorooctanoic acid	914637-49-3	X	X	I	X
2-Methylnaphthalene	91-57-6	X	X	X	X
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-Henicosafluorododecyl 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl hydrogen phosphate	1158182-60-5	X	X	X	X
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	X	X	X	X
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	X	X	I	X
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	X	X	X	X
3,3',5,5'-Tetrabromobisphenol A	79-94-7	X	X	I	X
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	X	X	X	X
3,4,4'-Trichlorobiphenyl	38444-90-5	X	X	X	X
3,4-Dihydroxybenzoic acid	99-50-3	X	X	X	X
3-Methylindole	83-34-1	X	X	X	X
4-(1,1,3,3-Tetramethylbutyl)phenol	140-66-9	X	X	X	X
4-(Butan-2-yl)-2,6-di-tert-butylphenol	17540-75-9	X	X	X	X
4,4'-Dichlorocarbanilide	1219-99-4	X	X	X	X
4,4'-Methylenebis(2,6-di-t-butylphenol)	118-82-1	X	X	X	X
4,4'-Thiobis(6-tert-butyl-m-cresol)	96-69-5	X	X	X	X
4-Chloroaniline	106-47-8	X	X	X	X
4-Chlorobiphenyl	2051-62-9	X	X	X	X
4-Dimethylaminoantipyrine	58-15-1	X	X	X	X
4-Epianhydrotetracycline	7518-17-4	X	X	X	X
4-Epichlortetracycline	14297-93-9	X	X	X	X
4-epi-Oxytetracycline	14206-58-7	X	X	X	X
4-Hydroxybenzoic acid	99-96-7	X	X	X	X
4-Nitrophenol	100-02-7	X	Q	X	X
4-Nonylphenol	104-40-5	X	X	X	X
4-Nonylphenol, branched	84852-15-3	X	X	I, N	X
5-Aminosalicylic acid	89-57-6	X	X	X	X
6:2 Fluorotelomer phosphate diester	57677-95-9	X	X	I	X
6:2 Fluorotelomer sulfonic acid	27619-97-2	X	X	I	X
6:2/8:2 Fluorotelomer phosphate diester	943913-15-3	X	X	X	X
7-Acetyl-1,1,3,4,4,6-hexamethyltetraline	21145-77-7	X	X	I	X
8:2 Fluorotelomer phosphate diester	678-41-1	X	X	I	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
8:2 Fluorotelomer sulfonic acid	39108-34-4	X	X	I	X
Acetaminophen	103-90-2	X	X	I, O	X
Acetone	67-64-1	X	F	I	X
Acetophenone	98-86-2	X	X	X	X
Albuterol	18559-94-9	X	X	X	X
Alprazolam	28981-97-7	X	X	X	X
Aluminum	7429-90-5	X	X	N	X
Amitriptyline	50-48-6	X	X	X	X
Amlodipine	88150-42-9	X	X	X	X
Ammelide	645-93-2	X	X	X	X
Amoxicillin	26787-78-0	X	X	I	X
Amphetamine	300-62-9	X	X	X	X
Ampicillin	69-53-4	X	X	I	X
Androsterone	53-41-8	X	X	X	X
Anhydrotetracycline	1665-56-1	X	X	X	X
Anthracene	120-12-7	X	P, Q	X	X
Antimony	7440-36-0	X	P, Q	X	X
Arsenic	7440-38-2	X	P, Q	I, N	X
Aspirin	50-78-2	X	X	I	X
Atenolol	29122-68-7	X	X	I	X
Atorvastatin	134523-00-5	X	X	I	X
Azithromycin	83905-01-5	A	X	I	X
Barium	7440-39-3	X	P, Q	X	X
BDE-196	446255-39-6	X	X	X	X
BDE-197	117964-21-3	X	X	X	X
BDE-207	437701-79-6	X	X	X	X
Benz(a)anthracene	56-55-3	X	P, Q	X	X
Benzene, 1,2,3,5-tetrabromo-4-(2,4,6-tribromophenoxy)-	117948-63-7	X	X	X	X
Benzo(a)pyrene	50-32-8	X	H, P, Q	I	X
Benzo(b)fluoranthene	205-99-2	X	P, Q	I	X
Benzo(k)fluoranthene	207-08-9	X	P, Q	X	X
Benzoic acid	65-85-0	X	X	I, O	X
Benzoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 2,4-bis(1,1-dimethylethyl)phenyl ester	4221-80-1	X	X	X	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
Benzoylecgonine	519-09-5	X	X	X	X
Benztropine	86-13-5	X	X	X	X
Benzyl 4-hydroxybenzoate	94-18-8	X	X	X	X
Beryllium	7440-41-7	X	H, Q	X	X
beta-Sitosterol	83-46-5	X	X	X	X
Bezafibrate	41859-67-0	X	X	X	X
Bis(1,3-dichloropropan-2-yl) hydrogen phosphate	72236-72-7	X	X	I	X
bis(1-Chloropropan-2-yl) hydrogen phosphate	789440-10-4	X	X	X	X
Bis(2-chloroethyl) phosphate	3040-56-0	X	X	I	X
Bis(2-ethylhexyl) phosphate	298-07-7	X	X	X	X
Bis(2-methylphenyl) hydrogen phosphate	35787-74-7	X	X	X	X
Boron	7440-42-8	X	Q	N	X
Butylated hydroxyanisole	25013-16-5	X	X	X	X
Butylated hydroxytoluene	128-37-0	X	X	X	X
Butylparaben	94-26-8	X	X	I	X
Cadmium	7440-43-9	X	H, P, Q	N	M
Calcium	7440-70-2	X	X	X	X
Campesterol	474-62-4	X	X	X	X
Carbamazepine	298-46-4	A	X	I	X
Carbon tetrachloride	56-23-5	X	H, P, Q	X	X
Cerium	7440-45-1	X	X	X	X
Cesium	7440-46-2	X	X	X	X
Chloroform	67-66-3	X	P, Q	I	X
Chlortetracycline	57-62-5	X	X	X	X
Cholestan-3-ol, (3.beta.,5.alpha.)-	80-97-7	X	X	X	X
Cholesterol	57-88-5	X	X	X	X
Chromium	7440-47-3	X	P, Q	N	X
Chrysene	218-01-9	X	P, Q	X	X
Cimetidine	51481-61-9	X	X	I	X
Ciprofloxacin	85721-33-1	A	X	I	X
Clarithromycin	81103-11-9	X	X	X	X
Clindamycin	18323-44-9	X	X	X	X
Clofibric acid	882-09-7	X	X	I	X
Clorophene	120-32-1	X	X	I	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
Clotrimazole	23593-75-1	X	X	X	X
Cobalt	7440-48-4	X	X	X	X
Cocaine	50-36-2	A	X	I	X
Codeine	76-57-3	A	X	X	X
Copper	7440-50-8	X	H, P, Q	N, O	X
Coprosterol	360-68-9	X	X	X	X
Cotinine	486-56-6	X	X	X	X
Cresyl diphenyl phosphate	26444-49-5	X	X	X	X
Cyanuric acid	108-80-5	X	X	X	X
Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-	1222-05-5	X	X	I	X
Cyclophosphamide	50-18-0	X	X	X	X
Decachlorobiphenyl	2051-24-3	X	X	X	X
Decamethylcyclopentasiloxane	541-02-6	X	X	X	X
Dechlorane Plus	13560-89-9	X	X	X	X
DEET	134-62-3	X	X	O	X
Demeclocycline	127-33-3	X	X	X	X
Desmosterol	313-04-2	X	X	X	X
Di(2-ethylhexyl) phthalate	117-81-7	X	F, P, Q	I	X
Diazepam	439-14-5	X	X	I	X
Dibenzofuran, 1,2,3,4,6,7,8,9-octabromo-	103582-29-2	X	X	X	X
Dibutyl phthalate	84-74-2	X	P, Q	I	X
Dichlorobiphenyl	25512-42-9	X	X	X	X
Dichlorophen	97-23-4	X	X	X	X
Diclofenac	15307-86-5	X	X	I	X
Diethyl hydrogen phosphate	598-02-7	X	X	X	X
Digoxin	20830-75-5	X	X	X	X
Diisobutyl hydrogen phosphate	6303-30-6	X	X	X	X
Dimethoate	60-51-5	X	X	I, O	X
Dimethyl 2,6-dimethyl-4-(2-nitrophenyl)-3,5-pyridinedicarboxylate	67035-22-7	X	X	X	X
Dimethyl phthalate	131-11-3	X	P, Q	I	X
Di-n-octyl phthalate	117-84-0	X	X	I	X
Diphenhydramine	58-73-1	X	X	X	X
Diphehyl phosphate	838-85-7	X	X	I	X
D-Limonene	5989-27-5	X	X	O	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
Doxycycline	564-25-0	X	X	I	X
Endosulfan I	959-98-8	X	P	I, N	X
Endosulfan II	33213-65-9	X	P	I, N	X
Enrofloxacin	93106-60-6	X	X	I	X
Epitetracycline	79-85-6	X	X	X	X
Equilenin	517-09-9	X	X	X	X
Equilin	474-86-2	X	X	X	X
ERGOSTEROL	57-87-4	X	X	X	X
Erythromycin	114-07-8	X	X	X	X
Estradiol benzoate	50-50-0	X	X	X	X
Estriol	50-27-1	X	X	X	X
Estrone	53-16-7	X	X	X	X
Ethanaminium, 2-hydroxy-N-(2-hydroxyethyl)-N,N-dimethyl-, esters with C16-18 and C18-unsatd. Fatty acids, chlorides	1079184-43-2	X	X	X	X
Ethanol, 2-butoxy-, hydrogen phosphate	14260-97-0	X	X	X	X
Ethylbenzene	100-41-4	X	H, P, Q	X	X
Ethylene glycol nonylphenyl ether	27986-36-3	X	X	X	X
Ethylparaben	120-47-8	X	X	I	X
Fenofibric acid	42017-89-0	X	X	I	X
Fenthion	55-38-9	X	X	I, O	X
Fipronil	120068-37-3	X	C	I, O	X
Fipronil amide	205650-69-7	X	X	X	X
Fipronil sulfide	120067-83-6	X	X	X	X
Fipronil Sulfone	120068-36-2	X	X	X	X
Fipronil-desulfinyl	205650-65-3	X	X	X	X
Floxacillin	5250-39-5	X	X	X	X
Fluoranthene	206-44-0	X	P	I	X
Fluoride	16984-48-8	X	Q	X	X
Fluoxetine	54910-89-3	X	X	I	X
Furosemide	54-31-9	X	X	I	X
Gemfibrozil	25812-30-0	A	X	I	X
Glybenclamide	10238-21-8	X	X	X	X
Heptachlor epoxide B	1024-57-3	X	P, Q	N	X
Heptachlorobiphenyl	28655-71-2	X	X	X	X
Hexabromobenzene	87-82-1	X	X	I	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
Hexachlorobiphenyl	26601-64-9	X	X	X	X
Hexanoic acid	142-62-1	X	X	X	X
Hydrocodone	125-29-1	X	X	X	X
Ibuprofen	15687-27-1	A	X	I	X
Indole	120-72-9	X	X	X	X
Iron	7439-89-6	A	X	N	X
Isochlortetracycline	514-53-4	X	X	X	X
Isodecyl diphenyl phosphate	29761-21-5	X	X	X	X
Ketoprofen	22071-15-4	X	X	I	X
Lead	7439-92-1	X	H, Q	N	X
Lincomycin	154-21-2	X	X	X	X
Lomefloxacin	98079-51-7	X	X	X	X
Magnesium	7439-95-4	A	X	X	X
Manganese	7439-96-5	A	H, P, Q	X	M
MDMA	42542-10-9	X	X	X	X
Mefenamic acid	61-68-7	X	X	X	X
Melamine	108-78-1	X	X	O	X
Mercury	7439-97-6	X	Q	X	N
Mestranol	72-33-3	X	X	X	X
Metformin	657-24-9	X	X	X	X
Methamphetamine	537-46-2	X	X	I	X
Methyl 3,4-dihydroxybenzoate	2150-43-8	X	X	X	X
Methylparaben	99-76-3	X	X	I	X
Metoprolol	51384-51-1	X	X	I	X
Miconazole	22916-47-8	A	X	X	X
Minocycline	10118-90-8	X	X	X	X
Molybdenum	7439-98-7	X	F, Q	X	X
Monochlorobiphenyl	27323-18-8	X	X	X	X
Monuron	150-68-5	X	X	I	X
Musk ketone	81-14-1	X	X	X	X
m-Xylene	108-38-3	X	X	X	X
Nadolol	42200-33-9	X	X	X	X
Nalidixic acid	389-08-2	X	X	X	X
Naphthalene	91-20-3	X	H, Q	I	X
Naproxen	22204-53-1	A	X	I	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
N-Desmethyldiltiazem	86408-45-9	X	X	X	X
Nickel	7440-02-0	X	P, Q	N	X
Nitrofen	1836-75-5	X	X	I	X
N-Nitrosodibutylamine	924-16-3	X	P	X	X
N-Nitrosodiethylamine	55-18-5	X	P	X	X
N-Nitrosodimethylamine	62-75-9	X	P	X	X
N-Nitrosodi-n-propylamine	621-64-7	X	P	X	X
N-Nitrosodiphenylamine	86-30-6	X	P	X	X
N-Nitrosopiperidine	100-75-4	X	X	X	X
N-Nitrosopyrrolidine	930-55-2	X	P	X	X
n-Nonylphenol	25154-52-3	X	X	X	X
n-Octylphenol	67554-50-1	X	X	X	X
Nonachlorobiphenyl	53742-07-7	X	X	X	X
Norethindrone	68-22-4	X	X	I	X
Norfloxacin	70458-96-7	X	X	X	X
Norfluoxetine	83891-03-6	X	X	I	X
Norverapamil	67018-85-3	X	X	X	X
Octabromodibenzo-p-dioxin	2170-45-8	X	X	X	X
Octachlorobiphenyl	55722-26-4	X	X	X	X
Octachlorodibenzofuran	39001-02-0	X	X	X	X
Octachlorodibenzo-p-dioxin	3268-87-9	X	X	X	X
Ofloxacin	82419-36-1	A	X	X	X
Ormetoprim	6981-18-6	X	X	X	X
Oxolinic acid	14698-29-4	X	X	X	X
Oxycodone	76-42-6	A	X	X	X
o-Xylene	95-47-6	X	X	X	X
Oxytetracycline	79-57-2	X	C	I, O	X
Paroxetine	61869-08-7	X	X	X	X
PCB 045	70362-45-7	X	X	X	X
PCB 131	61798-70-7	X	X	X	X
p-Cresol	106-44-5	X	X	X	X
Pentabromodiphenyl ether	32534-81-9	X	X	X	X
Pentachloro-1,1'-biphenyl	25429-29-2	X	X	X	X
Pentachloronitrobenzene	82-68-8	X	X	I, O	X
Perfluorobutanesulfonic acid	375-73-5	A	X	I	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
Perfluorobutanoic acid	375-22-4	A	X	I	X
Perfluorodecanoic acid	335-76-2	A	X	I	X
Perfluorododecanoic acid	307-55-1	A	X	I	X
Perfluoroheptanoic acid	375-85-9	A	X	I	X
Perfluorohexanesulfonic acid	355-46-4	A	F	I	X
Perfluorohexanoic acid	307-24-4	A	X	I	X
Perfluorononanoic acid	375-95-1	A	X	I	X
Perfluorooctanesulfonamide	754-91-6	X	X	I	X
Perfluorooctanesulfonic acid	1763-23-1	A	H, Q	I, N	X
Perfluorooctanoic acid	335-67-1	A	H, Q	I, N	X
Perfluoropentanoic acid	2706-90-3	X	X	I	X
Perfluorotetradecanoic acid	376-06-7	A	X	X	X
Perfluorotridecanoic acid	72629-94-8	A	X	I	X
Perfluoroundecanoic acid	2058-94-8	A	X	I	X
Phenazone	60-80-0	X	X	X	X
Phenol	108-95-2	X	P, Q	I	X
Phenol, 2,5-bis(1,1-dimethylethyl)-	5875-45-6	X	X	X	X
Phenol, 4,4',4''-(1-methyl-1-propanyl-3-ylidene)tris 2-(1,1-dimethylethyl)-5-methyl-	1843-03-4	X	X	X	X
Phosphoric acid, 2,2-bis(chloromethyl)-1,3-propanediyl tetrakis(2-chloroethyl) ester	38051-10-4	X	X	X	X
Phosphoric acid, dibutyl ester	107-66-4	X	X	X	X
Phosphoric acid, dipropyl ester	1804-93-9	X	X	X	X
Phosphoric acid, P,P'-[(1-methylethylidene)di-4,1-phenylene] P,P,P',P'-tetraphenyl ester	5945-33-5	X	X	X	X
Polycarbonates	25766-59-0	X	X	X	X
Polychlorinated biphenyls	1336-36-3	X	P, Q	X	M
Polyethylene glycol	25322-68-3	X	X	X	X
Polyethylene terephthalate	25038-59-9	X	X	X	X
Progesterone	57-83-0	X	X	X	X
Promethazine	60-87-7	X	X	X	X
Propoxyphene	469-62-5	X	X	X	X
Propranolol	525-66-6	X	X	I	X
Propylparaben	94-13-3	X	X	I	X
p-Xylene	106-42-3	X	X	X	X
Pyrene	129-00-0	X	P, Q	X	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
Ranitidine	66357-35-5	X	X	X	X
Roxithromycin	80214-83-1	X	X	I	X
Rubidium	7440-17-7	X	X	X	X
Salicylic acid	69-72-7	X	X	X	X
Sarafloxacin	98105-99-8	X	X	X	X
Selenium	7782-49-2	X	H, P, Q	N	X
Sertraline	79617-96-2	X	X	I	X
Silver	7440-22-4	A	Q	I, N	X
Sodium	7440-23-5	X	X	X	X
Stigmastan-3beta-ol	19466-47-8	X	X	X	X
Stigmastanol	138126-65-5	X	X	X	X
Stigmasterol	83-48-7	X	X	X	X
STK368415	5136-34-5	X	X	X	X
Styrene	100-42-5	X	Q	X	X
Sulfachloropyridazine	80-32-0	X	X	X	X
Sulfadiazine	68-35-9	X	X	I	X
Sulfadimethoxine	122-11-2	X	X	X	X
Sulfamerazine	127-79-7	X	X	X	X
Sulfamethazine	57-68-1	X	X	I	X
Sulfamethoxazole	723-46-6	X	X	I	X
Sulfanilamide	63-74-1	X	X	X	X
Sulfasalazine	599-79-1	X	X	X	X
Sulfate	14808-79-8	X	X	X	X
Sulfathiazole	72-14-0	X	X	X	X
Sulfur	7704-34-9	X	X	I	X
Terephthalic acid	100-21-0	X	X	X	X
tert-Butylphenyl diphenyl phosphate	56803-37-3	X	X	X	X
Testosterone	58-22-0	X	X	X	X
Tetrabutyl ethylidenebisphenol	35958-30-6	X	X	X	X
Tetrachlorobiphenyl	26914-33-0	X	X	X	X
Tetrachloroethylene	127-18-4	X	F, H, P, Q	X	X
Tetracycline	60-54-8	X	X	I	X
Tetraphenyl m-phenylene bis(phosphate)	57583-54-7	X	X	X	X
Thallium	7440-28-0	X	P, Q	X	X
Thiabendazole	148-79-8	X	C	I, O	X

Chemical	CAS number	Concentration data	Human health toxicity data	Ecological toxicity data	Environmental fate and transport data
Tin	7440-31-5	X	X	X	X
Titanium	7440-32-6	X	X	X	X
Toluene	108-88-3	X	G, P, Q	X	X
Triamterene	396-01-0	X	X	X	X
Tributyl phosphate	126-73-8	X	X	X	X
Trichlorfon	52-68-6	X	C	O	X
Trichlorobiphenyl	25323-68-6	X	X	X	X
Triclocarban	101-20-2	A	X	I	X
Triclosan	3380-34-5	A	X	I	X
Triethyl phosphate	78-40-0	X	X	X	X
Triethylene glycol bis(3-tert-butyl-4-hydroxy-5-methylphenyl)propionate	36443-68-2	X	X	X	X
Triisobutyl phosphate	126-71-6	X	X	X	X
Trimethoprim	738-70-5	X	X	X	X
Trimethyl phosphate	512-56-1	X	X	X	X
Trimethylsilanol	1066-40-6	X	X	X	X
Triphenyl phosphate	115-86-6	X	X	I	X
Tripropyl phosphate	513-08-6	X	X	X	X
Tris(1,3-dichloro-2-propyl) phosphate	13674-87-8	X	X	I	X
Tris(2-butoxyethyl) phosphate	78-51-3	X	X	X	X
Tris(2-chloroethyl) phosphate	115-96-8	X	X	I	X
Tris(2-chloroisopropyl)phosphate	13674-84-5	X	X	X	X
Tris(2-ethylhexyl) phosphate	78-42-2	X	X	I	X
Tris(4-tert-butylphenyl) phosphate	78-33-1	X	X	X	X
Tris(methylphenyl) phosphate	1330-78-5	X	X	X	X
Tylosin	1401-69-0	X	X	X	X
Valsartan	137862-53-4	X	X	I	X
Vanadium	7440-62-2	X	X	X	X
Virginiamycin	11006-76-1	X	X	X	X
Yttrium	7440-65-5	X	X	I	X
Zinc	7440-66-6	X	H, P, Q	X, N	X
α-Dihydroequilin	651-55-8	X	X	X	X

Notes:

X = No data were found
A = Concentration data (Table C-1)
B = IRIS (Table D-1)
C = HHBP (Table D-2)
D = PPRTV (Table D-3)
E = HESD (No available data)
F = ATSDR (Table D-4)
G = CalEPA (Table D-5)
H = Health Canada (Table D-6)
I = ECOTOX (Table E-3)
M = ORNL (Tables F-3 and F-4)
N = NRWQC-ALC (Table E-4)
O = OPP-ALB (Table E-5)
P = NRWQC-HHC (Table D-7)
Q = NPDWR (Table D-8)

3.4 Microbial Pollutants Identified in the 2020–2021 Biennial Review

EPA identified five articles that met the eligibility criteria for microbial pollutants (abstracts of the articles are provided in Appendix A-1). Review of the articles found one newly identified microbial pollutant in biosolids and provided potentially useful data on two previously identified microbial pollutants. Table 4 lists these microbial pollutants.

Table 4. Microbial Pollutants Identified During the Biosolids Biennial Review for the 2020–2021 Reporting Period

Name	Category	New or previous	Reference[1]
Antibiotic Resistant Bacteria[2]	Bacteria	Previous	Mays et al. 2021
Escherichia coli	Bacteria	Previous	Archer et al. 2020; Navab-Daneshmand et al. 2021
SARS-CoV2	Virus	New	Nason et al. 2021; Peccia et al. 2020

Notes:

[1]These references are described in Appendix A-1, Abstracts for Papers Reviewed for the 2020–2021 Biennial Review.
[2]Antibiotic resistant *E. coli* and *Enterococcus* were identified in this paper.

4 Conclusions

Every two years, EPA develops biennial reports by collecting and reviewing publicly available information on the occurrence, human health and ecological effects, and fate and transport in the environment of pollutants that have been found in biosolids in the previous two years. The types of information collected and presented in Biennial Report No.9 (Reporting Period 2020–2021) are needed to conduct risk assessments.

EPA identified 13 new articles that provide relevant data for chemical pollutants that may occur in biosolids. Review of the 13 articles identified 13 new chemicals in biosolids: nine drugs, three PFAS, and one element. These articles also identified new data for three chemicals identified during the curation process and 30 chemicals that were previously identified in biosolids. EPA found concentration data in biosolids for 13 new chemicals, three chemicals identified during the curation process, and 30 chemicals identified in a previous biennial review. EPA found human health toxicity values for 70 of the chemicals identified during the curation process, and 64 previously identified chemicals. EPA found ECOTOX (U.S. EPA 2022d) records for five newly identified chemicals, 157 chemicals identified during the curation process, and 116 previously identified chemicals. EPA identified additional ecological toxicity data for 20 chemicals identified in the curation process, and 32 previously identified chemicals.

EPA identified environmental fate and transport data in EPI Suite (U.S. EPA 2017), Arnot and Gobas (2006), Environment and Climate Change Canada (2006), or ORNL (2022) for 13 newly identified

chemicals, 276 chemicals identified during the curation process, and three previously identified chemicals.

EPA identified five new articles that provide relevant data for microbial pollutants that may occur in biosolids. Within these articles, one new microbial pollutant in biosolids was identified, and potentially useful data on two previously identified microbial pollutants were found.

Addressing the uncertainty around potential risk for pollutants identified in biosolids is the top priority for EPA's Biosolids Program. EPA has made significant progress in developing the necessary tools and data needed to build capacity to assess pollutants found in biosolids.

For additional information about EPA's Biosolids Program, please visit the website at: http://epa.gov/biosolids.

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Appendix A-1: Abstracts for Papers Reviewed for the 2020–2021 Biennial Review

Abbott, T., and C. Eskicioglu. 2020. Comparison of anaerobic, cycling aerobic/anoxic, and sequential anaerobic/aerobic/anoxic digestion to remove triclosan and triclosan metabolites from municipal biosolids. *Science of the Total Environment* 745:140953.

The antimicrobial triclosan (TCS) is a pervasive and persistent environmental micropollutant which can contaminate land, biota, and water through the land application of biosolids. Many existing sludge management techniques have limited effectiveness against TCS and TCS metabolites including triclosan-sulfate (TCS-SO_4). The objective of this study was to evaluate the impacts of different digestion types (anaerobic, aerobic/anoxic, and sequential anaerobic + aerobic/anoxic), temperatures, and digester sludge retention times (SRTs) on the destruction of organic matter, and on TCS/TCS metabolites. Conventional mesophilic anaerobic digesters (AD), room temperature cycling aerobic/anoxic digesters (AERO/ANOX), and sequential AD + AERO/ANOX digesters were all effective in removing organic matter. The optimum single-stage AD, and AERO/ANOX scenarios were both 20-day SRTs which had 52.3 ± 1.4 and 47.1 ± 3.7% chemical oxygen demand (COD) removals, respectively. Sequential AD + AERO/ANOX digesters improved organic matter destruction, removing up to 68.2 ± 2.1% of COD at an 8-day AD + 12-day AERO/ANOX second-stage (mesophilic) SRTs. While AD showed modest levels of TCS removals (all <40%), TCS was substantially more degradable aerobically with AERO/ANOX removing up to 80.3 ± 2.5% of TCS and nearly all TCS-SO_4 entering the digester at a 20-day SRT. Sequential AD + AERO/ANOX removed virtually all TCS-SO_4 entering the system and improved TCS removals from first stage ADs. However, they were less effective than a single-stage AERO/ANOX digester operating at the same overall SRT. These results demonstrate that AERO/ANOX and sequential AD + AERO/ANOX processes could be used to reduce the amount of TCS, TCS-SO_4 and TCS-related compounds in digested sludge, minimizing the environmental burden of the land application of biosolids.

Adesanya, T., F. Zvomuya, T. Sultana, C. Metcalfe, and A. Farenhorst. 2021. Dissipation of sulfamethoxazole and trimethoprim during temporary storage of biosolids: a microcosm study. *Chemosphere* 269:128729.

Little is known about the dissipation rate of microcontaminants in biosolids during storage and stabilization in stockpiles (unsaturated) or storage lagoons/tanks (saturated). The objective of this study was to characterize the dissipation in biosolids of two antibiotics, sulfamethoxazole (SMX) and trimethoprim (TMP), in microcosms under saturated and unsaturated conditions that simulate biosolids that are stockpiled on land or deposited in lagoons/tanks, respectively. The laboratory experiment was conducted at 22 °C using biosolids spiked at an initial nominal concentration of 10 mg kg^{-1} for both antibiotics. Biosolids were sampled in triplicate at seven sampling times over a 42-d period. Concentrations of SMX and TMP in extracts prepared from biosolids were quantified using liquid chromatography with tandem mass spectrometry. Dissipation data fitted to a first-order kinetic model indicated that the time to 50% dissipation (DT_{50}) for SMX was significantly shorter in the unsaturated microcosms (2.8 d) than the saturated microcosms (4.4 d), while the DT50 for TMP was significantly shorter in microcosms under saturated conditions (10 d) relative to unsaturated conditions (116 d). These results indicate that the reducing conditions that develop in biosolids deposited in lagoons or placed in storage tanks might be effective for enhancing the microbial degradation of antibiotics that are otherwise persistent under aerobic conditions (i.e., TMP), while also being effective for removing other antibiotics including those that dissipate relatively readily under aerobic conditions (i.e., SMX).

Archer, G., C. Jin, and W. Parker. 2020. Benchmarking the sustainability of sludge handling systems in small wastewater treatment plants. *Journal of Environmental Management* 256:109893.

A benchmarking strategy was developed to assess all aspects of sludge handling in small wastewater treatment plants and tested on a cross-section of Ontario facilities. Using operational data and on-site measurements, sustainability metrics that addressed energy consumption, chemical use, biosolids quality and disposition, and greenhouse gas (GHG) emissions were estimated. Electricity consumption for sludge handling ranged from 0.9 to 3.9 kW-hours per dry kilogram of raw sludge (kWh/dry kg) with thermo-alkali hydrolysis and auto-thermal thermophilic aerobic digestion (ATAD) processes consuming the least and most electricity for stabilization, respectively. Mechanical dewatering processes consumed between 2 and 5% of total sludge handling electricity, however, associated polymer dosages were higher than literature values in some cases. Disposition fuel requirements for plants with dewatering were up to 85% lower than facilities without dewatering. Biosolids contaminant (pathogen/metals) contents were observed to be substantially below Non-Agricultural Source Material (NASM) requirements. The copper content of the hauled biosolids exhibited the highest concentration relative to the NASM limit among all plants studied, ranging from 14 to 37% among facilities practicing land application of biosolids. Four biosolid products met Class A requirements for *E. coli* content, including one product generated via long-term storage. Carbon emissions ranged from −119 to 299 kg CO_2 equivalents per dry tonne of raw sludge (g CO_2 eq./kg). Six facilities that practiced land application exhibited net-negative GHG emissions; the carbon credits gained from fertilizer production avoidance outweighed emissions associated with sludge processing and transportation. The results provide evidence that this practice is sustainable from a GHG emissions standpoint. The benchmarking approach developed and information gathered is beneficial to plant owners and operators seeking to better understand how their utility is performing relative to peers, identify areas of need and further investigation, and improve the sustainability of their operations.

Gewurtz, S.B., G. Tardif, M. Power, S.M. Backus, A. Dove, K. Dubé-Roberge, C. Garron, M. King, B. Lalonde, R.J. Letcher, P.A. Martin, T.V. McDaniel, D.J. McGoldrick, M. Pelletier, J. Small, S.A. Smyth, S. Teslic, and J. Tessier. 2021. Bisphenol A in the Canadian environment: a multimedia analysis. *Science of the Total Environment* 755:142472.

Bisphenol A (BPA) is an industrial chemical that has been identified by some jurisdictions as an environmental concern. In 2010, Canada concluded that this substance posed a risk to the environment and human health, and implemented actions to reduce its concentrations in the environment. To support these activities, a multimedia analysis of BPA in the Canadian environment was conducted to evaluate spatial and temporal trends, and to infer mechanisms influencing the patterns. BPA was consistently detected in wastewater and biosolids across Canadian wastewater treatment plants (WWTPs) and in landfill leachate. In addition, BPA concentrations were significantly higher in surface water downstream compared to upstream of WWTPs in three of five urban areas evaluated. However, application of biosolids to Canadian agricultural fields did not contribute to elevated BPA concentrations in soil, earthworms, and European Starling (*Sturnus vulgaris*) plasma one and two years post-treatment. Spatial trends of BPA concentrations in surface water and sediment are influenced by human activity, with higher concentrations typically found downstream of industrial sources and WWTPs in urban areas. BPA was detected in bird plasma at locations impacted by WWTPs and landfills. However, spatial trends in birds were less clear and may have been confounded by metabolic biotransformation. In terms of temporal trends, BPA concentrations in surface water decreased significantly at 10 of 16 monitoring sites evaluated between 2008 and 2018. In contrast, recent temporal trends of BPA in six sediment cores were

variable, which may be a result of biotransformation of the flame retardant tetrabromobisphenol A to BPA. Overall, our study provides evidence that Government of Canada actions have been generally successful in reducing BPA concentrations in the Canadian environment. Our results indicate that long-term monitoring programs using surface water are more effective than other media for tracking and understanding future environmental trends of BPA.

Kor-Bicakci, G., T. Abbott, E. Ubay-Cokgor, and C. Eskicioglu. 2020. Occurrence of the persistent antimicrobial triclosan in microwave pretreated and anaerobically digested municipal sludges under various process conditions. *Molecules* 25(2):310.

Treatment of emerging contaminants, such as antimicrobials, has become a priority topic for environmental protection. As a persistent, toxic, and bioaccumulative antimicrobial, the accumulation of triclosan (TCS) in wastewater sludge is creating a potential risk to human and ecosystem health via the agricultural use of biosolids. The impact of microwave (MW) pretreatment on TCS levels in municipal sludge is unknown. This study, for the first time, evaluated how MW pretreatment (80 and 160 °C) itself and together with anaerobic digestion (AD) under various sludge retention times (SRTs: 20, 12, and 6 days) and temperatures (35 and 55 °C) can affect the levels of TCS in municipal sludge. TCS and its potential transformation products were analyzed with ultra-high-performance liquid chromatography and tandem mass spectrometry. Significantly higher TCS concentrations were detected in sludge sampled from the plant in colder compared to those in warmer temperatures. MW temperature did not have a discernible impact on TCS reduction from undigested sludge. However, AD studies indicated that compared to controls (no pretreatment), MW irradiation could make TCS more amenable to biodegradation (up to 46%), especially at the elevated pretreatment and digester temperatures. At different SRTs studied, TCS levels in the thermophilic digesters were considerably lower than that of in the mesophilic digesters.

Lazcano, R.K., Y.J. Choi, M.L. Mashtare, and L.S. Lee. Characterizing and comparing per- and polyfluoroalkyl substances in commercially available biosolid and organic non-biosolid-based products. *Environmental Science and Technology* 54(14):8640–8648.

There is increasing concern over the presence of per- and polyfluoroalkyl substances (PFAS) in biosolids, while sales in commercially available biosolid-based products used as soil amendments are also increasing. Here, the occurrence of 17 perfluoroalkyl acids (PFAAs) present in 13 commercially available biosolid-based products, six organic composts (manure, mushroom, peat, and untreated wood), and one food and yard waste compost were studied. The PFAA concentration ranges observed are as follows: biosolid based products (9.0−199 μg/kg) > food and yard waste (18.5 μg/kg) > other organic products (0.1−1.1 μg/kg). Analysis of 2014, 2016, and 2018 bags produced from one product line showed a temporal decrease in the total PFAAs (181, 101, and 74 μg/kg, respectively). The total oxidizable precursor (TOP) assay revealed the presence of PFAA precursors in the biosolid-based products at much higher levels, when the soluble carbon was removed by the ENVI-Carb clean-up prior to the TOP assay. Time-of-flight mass spectrometry confirmed the presence of three sulfonamides, two fluorotelomer sulfonates, and several polyfluoroalkyl phosphate diesters. Pore-water concentrations of water-saturated products were primarily of short-chain PFAAs and increased with increasing PFAA concentrations in the products. A strong positive log-linear correlation between organic carbon (OC)-normalized PFAA partition coefficients and the number of CFn units indicates that OC is a good predictor of PFAA release concentrations.

Li, J., L. Sabourin, J. Renaud, S. Halloran, A. Singh, M. Sumarah, M. Dagnew, and M.B. Ray. 2021. Simultaneous quantification of five pharmaceuticals and personal care products in biosolids and their fate in thermo-alkaline treatment. *Journal of Environmental Management* 278:111404.

The presence of pharmaceuticals and personal care products (PPCPs) in biosolids applied to farmland is of concern due to their potential accumulation in the environment and the subsequent effects on humans. Thermo-alkaline hydrolysis (TAH) is a method used for greater stabilization of biosolids after anaerobic digestion. In this work, the effect of TAH on five selected PPCPs including fluoroquinolone antibiotics, ciprofloxacin (CIP), and ofloxacin (OFLX), and three commonly used antimicrobial agents, miconazole (MIC), triclosan (TCS) and triclocarban (TCC) was evaluated. At the onset, extraction and analytical methods were optimized for maximum simultaneous recovery and LC-MS quantification of the target PPCPs from both water and biosolids for improved accuracy. The compounds were detected in the range of 54 ± 3 to 6166 ± 532 ng/g in raw biosolids collected from a local WWTP. Next, batch control adsorption experiments of the selected PPCPs were conducted in various sludges, which indicated about 89%–98% sorption of the PPCPs onto solid phase due to their high octanol-water coefficients. Subsequently, thermo-alkaline (pH 9.5, 75 °C, 45 min) hydrolysis (TAH) was conducted to determine the extent of degradation of these compounds in deionized (DI) water and biosolids due to treatment. The degradation of these compounds due to TAH ranged from 42% to 99% and 37%–41% in pure water and biosolids, respectively, potentially lowering their risk in the environment due to land application. A list of compounds for which the optimized analytical method potentially can be used for detection and quantification in environmental samples is provided in the supporting document.

Liu, Y., C.J. Ptacek, S. Beauchemin, T. MacKinnon, and D.W. Blowes. 2021. Effect of composting and amendment with biochar and woodchips on the fate and leachability of pharmaceuticals in biosolids destined for land application. *Science of the Total Environment* 810:151193.

Land application of biosolids can improve soil fertility and enhance crop production. However, the occurrence and persistence of pharmaceutical compounds in the biosolids may result in leaching of these contaminants to surface water and groundwater, causing environmental contamination. This study evaluated the effectiveness of two organic amendments [biochar (BC) and woodchips (WC)] for reducing the concentration and leachability (mobility) of four pharmaceuticals in biosolids derived from wastewater treatment plants in southern Ontario, Canada. The effect of 360-d composting on fate and leachabilities of target pharmaceuticals in biosolid mixtures was also investigated. Composting decreased total and leachable concentrations of pharmaceuticals in unamended and BC- and WC-amended biosolids to various degrees, from 10% up to 99% depending on the compound. Blending BC or WC into the biosolids greatly increased the removal rates of the target pharmaceuticals, while simultaneously decreasing their half-lives ($t_{0.5}$), compared to unamended biosolids. The $t_{0.5}$ of contaminants in this study followed the order: carbamazepine (304–3053 d) > gemfibrozil (42.3–92.4 d) > naproxen (15.3–104 d) > ibuprofen (12.5–19.0 d). Amendment with BC and(or) WC significantly reduced the leachability of carbamazepine, ibuprofen, and gemfibrozil to variable extents, but significantly enhanced the leachability of naproxen, compared to unamended biosolids ($P < 0.05$). Biochar and WC exhibited different (positive or negative) effects on the leachability of individual pharmaceuticals. Significantly lower concentrations of total and(or) leachable (mobile) pharmaceuticals were observed in amended biosolids than unamended biosolids ($P < 0.05$). Biochar and WC are effective amendments that can reduce the environmental impact of biosolid land applications with respect to pharmaceutical contamination.

Mays, C., G.L. Garza, J. Waite-Cusic, T.S. Radniecki, and T. Navab-Daneshmand. 2021. Impact of biosolids amendment and wastewater effluent irrigation on enteric antibiotic-resistant bacteria – a greenhouse study. *Water Research X* 13:100119.

Reuse of wastewater effluent and biosolids in agriculture is essential to sustainable water and nutrient resource management practices. Wastewater and biosolids, however, are reportedly the recipients, reservoirs, and sources of antibiotic-resistant enteric pathogens. While decay rates of fecal bacterial indicators in soil are frequently studied, very few studies have reported on the persistence of the antibiotic-resistant sub-populations. Little is known about how multi-drug resistance phenotypes of enteric bacteria in agricultural soil change over time. In this study, germinated carrot seeds were planted in soil that received biosolids amendment and/or wastewater effluent irrigation in a greenhouse setting. We quantified total and antibiotic-resistant fecal bacterial indicators (E*scherichia coli* and enterococci) weekly in soil and total *E. coli* at harvest (day 77) on carrots. Antibiotic susceptibility of 121 *E. coli* and 110 enterococci collected isolates were determined. E. coli or enterococci were not recovered from the soil without biosolids amendment regardless of the irrigation water source. After biosolids amendment, soil *E. coli* and enterococci concentrations increased more than 3 $\log_{10}$ CFU/g-TS within the first week, declined slowly over time, but stayed above the detection limit (0.39 CFU/g-TS) over the entirety of the study. No statistical difference was found between effluent wastewater or water irrigation in soil total and antibiotic-resistant *E. coli* and enterococci concentrations or carrots *E. coli* levels. Soil antibiotic-resistant *E. coli* and enterococci decayed significantly faster than total *E. coli* and enterococci. Moreover, the prevalence of multi drug resistant (resistance to three or more antibiotics) *E. coli* declined significantly over time, while almost all collected enterococci isolates showed multi-drug resistance phenotypes. At harvest, *E. coli* were present on carrots; the majority of which were resistant to ampicillin. The survival of antibiotic-resistant enteric bacteria in soil and on harvested carrots indicates there are transmission risks associated with biosolids amendment use in root crops.

Nason, S.L., E. Lin, K.J.G. Pollitt, and J. Peccia. 2021. Changes in sewage sludge chemical signatures during a COVID-19 community lockdown, part 2: nontargeted analysis of sludge and evaluation with COVID-19 metrics. *Environmental Toxicology and Chemistry* 41(5):1193–1201.

Sewage sludge and wastewater include urine and feces from an entire community, and it is highly likely that this mixture contains chemicals whose presence is dependent on levels of SARS-CoV-2 in the community. We analyzed primary sewage sludge samples collected in New Haven, Connecticut, USA, during the initial wave of the COVID-19 pandemic using liquid chromatography coupled with high-resolution mass spectrometry and performed an exploratory investigation of correlations between chemical features and COVID-19 metrics including concentrations of severe acute respiratory syndrome–coronavirus 2 (SARS-CoV-2) RNA in the sludge and local COVID-19 case numbers and hospital admissions. Inclusion of all chemical features in this analysis is key for discovering potential indicator compounds for COVID-19, whose structures may not be known. We found correlations with COVID-19 metrics for several identified chemicals as well as many unidentified features in the data, including three potential indicator molecules that are recommended for prioritization in future studies on COVID-19 in wastewater and sludge. These features have molecular weights of 108.0935, 318.1214, and 331.1374. While it is not possible to achieve prediction of COVID-19 epidemiological metrics from the one data set used in the present study, advances in this research area are important to share as scientists worldwide work on discovering efficient methods for tracking SARS-CoV-2 in wastewater and the environment.

Navab-Daneshmand, T., B. Guo, R. Gehr, and D. Frigon. 2022. Impact of pH and removed filtrate on *E. coli* regrowth and microbial community during storage of electro-dewatered biosolids. *Science of the Total Environment* 814:152544.

Residual biosolids can be land applied if they meet microbiological requirements at the time of application. Electro-dewatering technology is shown to reduce biosolids bacterial counts to detection limits with little potential for bacterial regrowth during incubations. Here, we investigated the impacts on *Escherichia coli* regrowth and microbial communities of biosolids pH, removed nutrients via the filtrate, and inhibitory compounds produced in electro-dewatered biosolids. Findings suggest pH as the primary mechanism impacting *E. coli* regrowth in electro-dewatered biosolids. Propidium monoazide treatments were effective at removing DNA from dead cells, based on the removal of obligate anaerobes observed after anaerobic incubation. Analyses of high throughput sequenced data showed lower alpha-diversities associated with electro-dewatering treatment and incubation time. Moreover, biosolids pH and incubation period were the main factors contributing to the variations in microbial community compositions after incubation. Results highlight the role of electro-dewatered biosolids' low pH on inhibiting the regrowth of culturable bacteria as well as reducing the microbial community variance.

Onchoke, K.K., C.M. Franclemont, and P.W. Weatherford. 2018. Structural characterization and evaluation of municipal wastewater sludge (biosolids) from two rural wastewater treatment plants in East Texas, USA. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 204:514–524.

Wastewater sludge (or) biosolids collected from two rural wastewater treatment plants (NWWTP, LWWTP) in East Texas, USA were characterized and evaluated via inductively coupled plasma optical emission spectrometry, scanning electron microscopy (SEM), energy dispersive X-ray spectroscopy (EDX), thermogravimetric analysis, X-ray diffraction, Fourier transform infrared spectroscopy (FTIR), and ion chromatography. The proximate organic and inorganic compositions and spectroscopic characteristics of sewage sludge were determined. The results show that the concentrations of toxic metals Cd, Cr, Cu, Mo, Ni, Pb, Hg, and Zn meet USEPA guideline recommendations for land applications. Notably, metals concentrations in biosolids from NWWTP (Mn (700 ± 83) > Zn (422.5 ± 35.4 ppm) > Ba (319.5 ± 87 ppm) > Cu (240 ± 27 ppm) > B (107 ± 14 ppm) > V (24 ± 3.3 ppm) > Cr (20 ± 3.3 ppm) > Ni (16.7 ± 2.0 ppm) > Pb (16.8 ± 1.1 ppm) > As (11.99 ± 1.27 ppm) > Co (7.6 ± 0.7 ppm) > Mo (6.4 ± 1.4 ppm) > Hg (0.55 ± 0.24 ppm) > Cd (0.130 ± 0.109 ppm)) and LWWTP follow similar trends. Macro-elements concentrations in LWWTP follow the trend P (19,648 ± 169) > Fe (22,688 ± 2110) > Ca (9372 ± 163) > S (9010 ± 1009) > Al (12,538 ± 2116) > K (3514 ± 550) > Mg (33,370 ± 502) > Na (1511 ± 472). The Br^-, NO_3^-, NO_2^-, F^-, Cl^-, and SO_4^{2-} concentrations meet USEPA guidelines. Whereas biosolid particle sizes were in the range ~20 μm to 500 μm, mineralogical results show quartz and vermiculite to be major constituents with abundancies 12.94%, and 10.87% w/wt, respectively.

Peccia, J., A. Zulli, D.E. Brackney, N.D. Grubaugh, E.H. Kaplan, A. Casanovas-Massana, A.I. Ko, A.A. Malik, D. Wang, M. Wang, J.L. Warren, D.M. Weinberger, W. Arnold, and S.B. Omer. 2020. Measurement of SARS-CoV-2 RNA in wastewater tracks community infection dynamics. *Nature Biotechnology* 38:1164–1167.

We measured severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) RNA concentrations in primary sewage sludge in the New Haven, Connecticut, USA, metropolitan area during the Coronavirus Disease 2019 (COVID-19) outbreak in Spring 2020. SARS-CoV-2 RNA was detected throughout the more than 10-week study and, when adjusted for time lags, tracked the rise and fall of cases seen in SARS-CoV-2 clinical test results and local COVID-19 hospital admissions. Relative to

these indicators, SARS-CoV-2 RNA concentrations in sludge were 0–2 d ahead of SARS-CoV-2 positive test results by date of specimen collection, 0–2 d ahead of the percentage of positive tests by date of specimen collection, 1–4 d ahead of local hospital admissions and 6–8 d ahead of SARS-CoV-2 positive test results by reporting date. Our data show the utility of viral RNA monitoring in municipal wastewater for SARS-CoV-2 infection surveillance at a population-wide level. In communities facing a delay between specimen collection and the reporting of test results, immediate wastewater results can provide considerable advance notice of infection dynamics.

Pepper, I.L., M.L. Brusseau, F.J. Prevatt, and B.A. Escobar. 2021. Incidence of Pfas in soil following long-term application of class B biosolids. *Science of the Total Environment* 793:148449.

This field study investigated the impact of long-term land application of biosolids on PFAS presence in soils that received annual repetitive land application of Class B biosolids from 1984 to 2019. Soil samples were collected from three depths of 30.5, 91 and 183 cm below land surface. Biosolid and groundwater samples used for irrigation were also collected. Concentrations measured for 18 PFAS compounds were evaluated to assess incidence rates and potential impact on groundwater. No PFAS analytes were detected at the three sampling depths for soil samples collected from undisturbed sites with no history of agriculture, irrigation, or biosolids application (background control sites). Relatively low mean concentrations of PFAS ranging from non-detect to 1.9 μg/kg were measured in soil samples collected from sites that were used for agriculture and that received irrigation with groundwater, but never received biosolids. PFAS concentrations in soils amended with biosolids were similarly low, ranging from non-detect to a mean concentration of 4.1 μg/kg. PFOS was observed at the highest concentrations, followed by PFOA for all locations. PFAS detected in the irrigation water were also present in the soil. These results indicate that biosolids and irrigation water are both important sources of PFAS present in the soils for all of the study sites. Not all PFAS detected in the biosolids were detected in the soil. Very long chain PFAS present in the biosolids were not detected or were detected at very low levels for soil, suggesting potential preferential retention within the biosolids. The precursor NMeFOSAA was present at the second highest concentrations in the biosolids but not detected in soil, indicating possible occurrence of transformation reactions. The total PFAS soil concentrations exhibited significant attenuation with depth, with a mean attenuation of 73% at the 183 cm depth. Monotonically decreasing concentrations with depth were observed for the longer-chain PFAS.

Sidhu, H., H.S. Bae, A. Ogram, G. O'Connor, and F. Yu. 2021. Azithromycin and Ciprofloxacin can promote antibiotic resistance in biosolids and biosolids-amended soils. *Applied and Environmental Microbiology* 87(16):e00373-21.

Spread of biosolids-borne antibiotic resistance is a growing public and environmental health concern. Herein, we conducted incubation experiments involving biosolids, which are byproducts of sewage treatment processes, and biosolids-amended soil. Quantitative reverse transcription-PCR (RT-qPCR) was employed to assess responses of select antibiotic resistance genes (ARGs) and mobile elements to environmentally relevant concentrations of two biosolids-borne antibiotics, azithromycin (AZ) and ciprofloxacin (CIP). Additionally, we examined sequence distribution of *gyrA* (encoding DNA gyrase; site of action of CIP) to assess potential shifts in genotype. Increasing antibiotic concentrations generally increased the transcriptional activities of *qnrS* (encoding CIP resistance) and *ermB* and *mefE* (encoding AZ resistance). The transcriptional activity of *intl1*, a marker of class 1 integrons, was unaffected by CIP or AZ concentrations, but biosolids amendment increased *intl1* activity in the soil by 4 to 5 times, which persisted throughout incubation. While the dominant *gyrA* sequences found herein were unrelated to known CIP-resistant genotypes, the increasing CIP concentrations significantly decreased the diversity of genes encoding the DNA gyrase A subunit,

suggesting changes in microbial community structures. This study suggests that biosolids harbor transcriptionally active ARGs and mobile elements that could survive and spread in biosolids-amended soils. However, more research is warranted to investigate these trends under field conditions.

Taylor, S.E., C.I. Pearce, I. Chowdhury, L. Kovarik, I. Leavy, S. Baum, A.I. Bary, and M. Flury. 2020. Long-term accumulation, depth distribution, and speciation of silver nanoparticles in biosolids-amended soils. *Journal of Environmental Quality* 49(6):1679–1689.

Biosolids can be a source of metals and metal nanoparticles. The objective of this study was to quantify and characterize the accumulation and transport of silver (Ag) in a natural soil that has received agronomically recommended rates of biosolids as fertilizer from 1994 to 2017. Total Ag concentrations were measured in biosolids and soil samples collected from 0 to 10 cm between 1996 and 2017. The depth distribution of Ag in soil to 60-cm depth was measured in 2017. Electron microscopy, in combination with X-ray spectroscopy, and X-ray absorption spectroscopy were used to characterize the Ag. The Ag concentrations in the biosolids-amended soil increased steadily from 1996 until 2007, after which the concentrations leveled off at about 1.25 mg Ag kg^{-1} soil. This corresponded with a decrease of Ag concentrations in biosolids over time. The majority of the Ag (82%) was confined to the top 10 cm of the soil, small amounts (14%) were detected at 10-to-20-cm depth, and trace amounts (4%) were detected at 30-to-40-cm depth. The Ag in the biosolids was identified as S-containing nanoparticles (Ag_2S) with a diameter of 10–12 nm; however, in soil, the Ag concentrations were too low to allow identification of Ag speciation. This study shows that in a real-world field scenario, biosolids applied at agronomic rates represent a long-term, economically viable source of crop nutrients without increasing the concentration of total Ag in soil above a maximum of 1.5 mg Ag kg^{-1}. This concentration is below estimated ecotoxicity limits for Ag_2S in soil.

Appendix A-2: Abstracts of Papers Containing Microplastics, Nutrients, or Chemicals Without Concentration Data (Excluded from the 2020–2021 Biennial Review)

Buchanan, C.M., and J.A. Ippolito. 2021. Long-term biosolids applications to overgrazed rangelands improve soil health. *Agronomy* 11(7):1339.

Overgrazed rangelands can lead to soil degradation, yet long-term land application of organic amendments (i.e., biosolids) may play a pivotal role in improving degraded rangelands in terms of soil health. However, the long-term effects on soil health properties in response to single or repeated, low to excessive biosolids applications, on semi-arid, overgrazed grasslands have not been quantified. Using the Soil Management Assessment Framework (SMAF), soil physical, biological, chemical, nutrient, and overall soil health indices between biosolids applications (0, 2.5, 5, 10, 21, or 30 Mg ha^{-1}) and application time (single: 1991, repeated: 2002) were determined. Results showed no significant changes in soil physical and nutrient health indices. However, the chemical soil health index was greater when biosolids were applied at rates <30 Mg ha^{-1} and within the single compared to repeated applications. The biological soil health index was positively affected by increasing biosolids application rates, was overall greater in the repeated as compared to the single application, and was maximized at 30 Mg ha^{-1}. The overall soil health index was maximized at rates <30 Mg ha^{-1}. When all indices were combined, and considering past plant community findings at this site, overall soil health appeared optimized at a biosolids application rate of ~10 Mg ha^{-1}. The use of soil health tools can help determine a targeted organic amendment application rate to overgrazed rangelands so the material provides maximum benefits to soils, plants, animals, and the environment.

Crossman, J., R.R. Hurley, M. Futter, and L. Nizzetto. 2020. Transfer and transport of microplastics from biosolids to agricultural soils and the wider environment. *Science of the Total Environment* 724:138334.

Between April to November of 2017, microplastics (MPs) were analysed in biosolids from two separate suppliers, and in the soils of three agricultural fields to which they were applied, in Ontario, Canada. Soils of a control site with no history of biosolid application were also examined. High MP concentrations of between 8.7×10^3 MP kg^{-1} and 1.4×10^4 MP kg^{-1} were found in biosolids samples. Lower MP concentrations observed in Provider 2 biosolids may be due to storage, settling and supernatant removal prior to applications. Annual MP additions to agricultural soils across Ontario were estimated at between 4.1×10^{11} and 1.3×10^{12} particles. All fields receiving biosolids had higher soil pre-treatment MP concentrations than the control. The field with the greatest number of previous biosolid treatments had the highest pre-treatment soil MP concentrations; suggesting some MP retention in soils between applications. Immediately following biosolids applications, two fields demonstrated significant increases in soil MP concentrations, with preferential retention of MP fibers over fragments observed, while a reduction in soil MP concentrations were observed in the third. Surprisingly, only one field demonstrated a net gain in soil MPs over the course of the study. At all three fields, >99% of MPs applied in biosolids in 2017 were unaccounted for. The study suggests that despite adhering to applicable legislation, biosolids applications at all sites likely result in high rates of MP export. This study is the first to track MP transport through soils following their application in biosolids, and contributes to filling current knowledge gaps regarding export of MPs to aquatic systems from the terrestrial environment.

Gravesen, C., and J.D. Judy. 2020. Effect of biosolids characteristics on retention and release behavior azithromycin and ciprofloxacin. *Environmental Research* 184:109333.

Azithromycin (AZ) and ciprofloxacin (CIP) are commonly prescribed antibiotics frequently detected in municipal biosolids and identified by the USEPA as contaminants of emerging concern. The land application of municipal biosolids is an agronomically beneficial practice but is also a potential pathway of CIP and AZ release into the environment. Understanding retention-release behavior is crucial for assessing the environmental fate of and risks from land-applied biosolids-borne target antibiotics. Here, we used batch equilibrations to assess retention and release of environmentally relevant concentrations of CIP and AZ in ten different biosolids. The biosolids included Class A and Class B materials with a range of physiochemical characteristics (e.g. pH, cation exchange capacity (CEC), organic matter content (OM), and iron (Fe) and aluminum (Al)) expected to influence retention and release of AZ and CIP. Retention was linear ($R^2 > 0.99$ for AZ and >0.96 for CIP) and sorption coefficients (K_d) ranged from 52 to 370 L kg^{-1} for AZ and 430–2300 L kg^{-1} for CIP. Desorption also varied but was highly hysteretic, with hysteresis coefficients (H) ranging 0.01 to 0.15 for AZ and ≤0.01 for CIP, suggesting limited bioaccessibility. The penalized and shrinkage method least absolute shrinkage and selection operator (LASSO) was used to produce models describing AZ and CIP sorption behavior based on any given biosolids physiochemical characteristics. Multiple linear regression analysis linked AZ sorption behavior to total Fe content, likely due to a predisposition of AZ to participate in reactions with in situ Fe species. CIP sorption behavior was linked to oxalate extractable Al and total phosphorus (P) content, suggesting CIP bonding with amorphous forms of Al and a potential relationship between CIP sorption to biosolids and biosolids production processes, as manifested by correlation of CIP sorption with total P content.

Ippolito, J.A., T.F. Ducey, K. Diaz, and K.A. Barbarick. 2021. Long-term biosolids land application influences soil health. *Science of the Total Environment* 791:148344.

Soil health assessments associated with organic amendment applications have primarily focused attention on manure or composts. Yet, quantifying specific changes in soil health associated with biosolids land applications has yet to be determined. Our objectives were to evaluate the changes in various soil indicators, and utilizing the Soil Management Assessment Framework (SMAF), quantify changes in soil indicator scores and soil health indices as affected by either increasing inorganic N fertilizer (0 up to 112 kg N ha^{-1}) or biosolids (0 up to 11.2 dry Mg ha^{-1}) applied every other year over 22 years. Soils were sampled (0 to 20 cm depth) following 22 years of N fertilizer or biosolids inputs to a dryland wheat-fallow (*Triticum aestivum* L.) rotation, 11 soil health indicators were monitored under SMAF guidelines, and indicators, indicator scores, and soil health indices were analyzed statistically. In general, increasing N fertilizer application rates had little effect on soil indicators, SMAF indicator scores or soil health indices. Increasing biosolids application rates increased soil organic C (SOC) and potentially mineralizable N (PMN). The SMAF indicator scores showed upward trends for soil pH, SOC, PMN, and microbial biomass C (MBC) associated with increasing biosolids application rates; discussing trends are important as these indicator scores are combined to provide soil health indices. Indeed, increasing biosolids application rates increased soil chemical and biological health indices, leading to an improvement in the overall soil health index. When comparing the overall N fertilizer to biosolids effect, biosolids applications significantly improved the soil biological health index. Results indicate that long-term biosolids land application to semi-arid, dryland wheat fallow rotations, similar to those studied, improve various aspects of soil health. These findings suggest that biosolids may play a pivotal role in dryland agroecosystem sustainability**.**

Lu, Y., M.L. Silveira, G.A. O'Connor, J.M.B. Vendramini, J.E. Erickson, Y.C. Li, and M. Cavigelli. 2020. Biochar impacts on nutrient dynamics in a subtropical grassland soil – part I. N and P leaching. ***Journal of Environmental Quality*** **49(5):1408–1420.**

Despite the numerous benefits of biosolids, concerns over nutrient losses restrict the extent to which biosolids can be beneficially reused. We evaluated the effectiveness of biochar in controlling the lability of nutrients in agricultural land. This study was designed to investigate the potential impacts of co-applying biochar with biosolids or inorganic fertilizer on N and P leaching losses. A companion paper focuses on greenhouse gas responses. Nutrients were surface applied as biosolids (aerobically digested Class B) and inorganic fertilizer (ammonium nitrate and triple superphosphate) to an established perennial pasture at equivalent annual rates typical of field practices. Biochar was applied at an annual rate of 20 Mg ha^{-1}. Leachate N and P were monitored using passive capillary drainage lysimeters. Results demonstrated significant temporal variability in leachate N and P, with larger pulses generally occurring during periods of high water table levels or after intensive rainfall. Inorganic fertilizer generally resulted in greater leachate N and P losses than biosolids. No differences in leachate N and P losses between biosolids and control were observed. Approximately 1% of applied N was lost via leaching from biosolids treatments vs. 16% for inorganic fertilizer. Regardless of the P source, negligible (0.1–0.2% of applied P), cumulative P leaching occurred during the 3-yr study. Biochar had no effect on P leaching but reduced N leaching from treatments receiving inorganic fertilizer by 60%. Prudent nutrient management is possible even on biosolids-amended Spodosols with high water tables.

White, J.G., R. Dodd, and R. Walters. 2020. Can an amino sugar test estimate potentially available nitrogen from biosolids? ***Soil Science Society of America Journal*** **84(1):274–286.**

Biosolids land application is governed by N content and estimates of potentially available N (PAN). Amino sugar test N (AST-N) has been used with varying success to estimate soil responsiveness to N and optimum N rates. We investigated the utility of an amino sugar test (AST) in estimating PAN and hypothesized that this would depend on biosolids type, rate, and receiving soil. In vitro, we applied three dissimilar biosolids at five rates to four representative southeastern US soils, measured AST-N, and estimated recovery of biosolids AST-N. Target PAN rates were zero to two times a realistic yield expectation rate (127 kg N ha−1) for a common biosolids-receiving grass. Rates were based on biosolids type, total N, and book-value availability coefficients. Biosolids AST-N varied from 263 to 9790 mg kg−1 (3.8–20.1% of total N). Soil AST-N was 66–93 mg kg−1 and differed among soils. Treatment interactions indicated that AST-N of the biosolids–soil mixtures differed from what might be predicted from biosolids and soil AST-N and rate. Rate response was linear; thus, the AST did not saturate at the rates tested. Biosolids AST-N recovery ranged from −303 to 152% depending on biosolids, rate, soil, and their interactions. The AST-N was related linearly to total N from anaerobic incubation (R2 = 0.10–0.67), depending on biosolids. The weakness of these relationships; the biosolids, rate, and soil interactions; and the potential confounding effects of biosolids and soil NH4–N suggest that AST-N would not be a good estimator of PAN.

Appendix B: Pollutants Identified in Biosolids

The list of all chemicals that have been identified in biosolids is provided in Table B-1. The list of all microbials that have been identified in biosolids is provided in Table B-3. The categories for all of the chemicals that have been identified in biosolids are shown in Table B-2. An explanation for how the categories are determined is included below.

The dashboard lists and queries (represented as Dashboard URLs) used for the categorization and classification of chemicals are listed below. Each list can be viewed on the dashboard by adding the appropriate URL prefix:
https://comptox.epa.gov/dashboard/chemical_lists/CHEMICAL_LIST_NAME.

A. Drugs/Metabolites

Chemicals are compared to 11 drug/metabolite lists in ChemDashboard. Despite their primary categorization (which could differ based on expert judgement), if they are present in any of these 11 lists they are considered Drugs/Metabolites and there is a Y in that column.

a. Drugs/Metabolites

ZINC15PHARMA
DRUGBANK
LUXPHARMA
NTUPHTW
ITNANTIBIOTIC
OPIOIDS
SWISSPHARMA
STATINS
UOATARGPHARMA
VETDRUGS
ANTIBIOTICS

b. Antimicrobials

ANTIMICROBIALS

c. Antibiotics

ANTIBIOTICS
ITNANTIBIOTIC

d. Steroids/Sterols

Inclusion in the Steroids/Sterols category is based on expert judgement.

B. Cosmetics

COSMOSDB

C. Polychlorinated biphenyls (PCBs)

PCBCHEMICALS

D. Pesticides/Metabolites

OPPIN
INERTNONFOOD
LUXPEST
SLUPESTTPS

SWISSPEST
PESTACTIVES
PESTINERTS
EPAPCS
NPINSECT
SWISSPEST19
PFASPACKAGING
PPDB

E. Dibenzofurans
https://comptox.epa.gov/dashboard/dsstoxdb/multiple_results?input_type=synonym_substring&inputs=dibenzofuran

F. Dioxins
https://comptox.epa.gov/dashboard/dsstoxdb/multiple_results?input_type=synonym_substring&inputs=p-dioxin

G. Elements
ELEMENTS

H. Perfluoro- and polyfluoroalkyl substances
PFASSTRUCT

I. Phosphate
https://comptox.epa.gov/dashboard/dsstoxdb/multiple_results?input_type=synonym_substring&inputs=phosphate

J. Polybrominated Diphenyl Ethers (PBDEs)
PBDEs

K. Polyaromatic hydrocarbons (PAHs)
PAHLIST

L. Flame retardants
FLAMERETARD

M. Surfactants
ALLSURFACTANTS

N. Extractables/ Leachables
ELSIE

O. Other Organics
This set of chemicals remains after the classification and categorization of the rest of the list.

P. Inorganic Anions

UVCB Chemicals
UVCB chemicals are generally recognized by the fact that they do not have explicit structures, so no InChIKeys in ChemDashboard. The chemicals are then manually checked.

Table B-1. Chemical Pollutants Identified in Biosolids

Chemical	CAS number	When identified
(+)-Diltiazem	42399-41-7	BR No.1 (2004–2005)
(+/-)-Verapamil	52-53-9	BR No.5 (2012–2013)
(3alpha,5beta)-Cholestan-3-ol	516-92-7	2006 TNSSS
(E)-1,2-Dichloroethylene	156-60-5	1988 NSSS
1-(p-Chlorobenzoyl)-5-methoxy-2-methyl-Indole-3-acetic acid	53-86-1	BR No.1 (2004–2005)
1,1,1-Trichloroethane	71-55-6	1988 NSSS
1,1'-Ethane-1,2-diylbis(pentabromobenzene)	84852-53-9	BR No.7 (2016–2017)
1,1'-Oxybis[2,3,4,5,6-pentabromobenzene]	1163-19-5	2006 TNSSS
1,2,3,4,5-Pentabromo-6-(2,3,4,5-tetrabromophenoxy)benzene	63387-28-0	BR No.7 (2016–2017)
1,2,3,4,6,7,8,9,10,10,11,11-dodecachloro-1,4,4a,5a,6,9,9a,9b-octahydro-1,4:6,9-dimethanodibenzofuran	31107-44-5	BR No.7 (2016–2017)
1,2,3,4,6,7,8-Heptabromodibenzofuran	107555-95-3	BR No.6 (2014–2015)
1,2,3,4,6,7,8-Heptabromodibenzo-p-dioxin	110999-47-8	BR No.6 (2014–2015)
1,2,3,4,6,7,8-Heptachlorodibenzo[b,d]furan	67562-39-4	1988 NSSS
1,2,3,4,6,7,8-Heptachlorodibenzodioxin	35822-46-9	1988 NSSS
1,2,3,4,7,8,9-Heptabromodibenzo[b,d]furan	161880-51-9	BR No.6 (2014–2015)
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	1988 NSSS
1,2,3,4,7,8-Hexabromodibenzofuran	129880-08-6	BR No.6 (2014–2015)
1,2,3,4,7,8-Hexabromodibenzo-p-dioxin	110999-44-5	BR No.6 (2014–2015)
1,2,3,4,7,8-Hexachlorodibenzodioxin	39227-28-6	1988 NSSS
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	1988 NSSS
1,2,3,5-Tetrabromo-4-(3,4,5-tribromophenoxy)benzene	446255-30-7	BR No.7 (2016–2017)
1,2,3,6,7,8-Hexabromodibenzofuran	107555-94-2	BR No.6 (2014–2015)
1,2,3,6,7,8-Hexabromodibenzo-p-dioxin	110999-45-6	BR No.6 (2014–2015)
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	1988 NSSS
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	1988 NSSS
1,2,3,7,8,9-Hexabromodibenzo[b,d]furan	161880-49-5	BR No.6 (2014–2015)
1,2,3,7,8,9-Hexabromodibenzo-p-dioxin	110999-46-7	BR No.6 (2014–2015)
1,2,3,7,8,9-Hexachlorodibenzo[b,d]furan	72918-21-9	1988 NSSS
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	1988 NSSS
1,2,3,7,8-Pentabromodibenzo[b,d]furan	107555-93-1	BR No.6 (2014–2015)
1,2,3,7,8-Pentabromodibenzo-p-dioxin	109333-34-8	BR No.6 (2014–2015)
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1988 NSSS
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	1988 NSSS
1,2,3-Trichlorobenzene	87-61-6	1988 NSSS
1,2,4-Trichlorobenzene	120-82-1	1988 NSSS
1,2-Bis(2,4,6-tribromophenoxy)ethane	37853-59-1	BR No.7 (2016–2017)
1,2-Dichlorobenzene	95-50-1	1988 NSSS

Chemical	CAS number	When identified
1,2-Dichloropropane	78-87-5	1988 NSSS
1,3,5-Triazin-2(1H)-one, 4,6-diamino-	645-92-1	BR No.8 (2018–2019)
1,3,5-Trichlorobenzene	108-70-3	BR No.1 (2004–2005)
1,3-Dichlorobenzene	541-73-1	1988 NSSS
1,4:5,8:9,10-Trimethanoanthracene, 1,2,3,4,5,6,7,8,12,12,13,13-dodecachloro-1,4,4a,5,8,8a,9,9a,10,10a-decahydro-	13560-92-4	BR No.7 (2016–2017)
1,4-Dichlorobenzene	106-46-7	1988 NSSS
1,4-Dinitrobenzene	100-25-4	1988 NSSS
1,4-Dioxane	123-91-1	1988 NSSS
1,7-Dimethylxanthine	611-59-6	BR No.1 (2004–2005)
10-Hydroxyamitriptyline	1159-82-6	BR No.5 (2012–2013)
17alpha-Estradiol	57-91-0	BR No.1 (2004–2005)
17alpha-Ethinylestradiol	57-63-6	BR No.1 (2004–2005)
17beta-Estradiol	50-28-2	BR No.1 (2004–2005)
1-Methyl phenanthrene	832-69-9	1988 NSSS
2-(2,4,5-Trichlorophenoxy)propionic acid	93-72-1	1988 NSSS
2-(Methylthio)benzothiazole	615-22-5	1988 NSSS
2-(N-Ethylperfluorooctanesulfonamido)acetic acid	2991-50-6	BR No.9 (2020–2021)
2-(N-Methylperfluorooctanesulfonamido)acetic acid	2355-31-9	BR No.9 (2020–2021)
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	2001 NSSS
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	2001 NSSS
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	2001 NSSS
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	2001 NSSS
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	2001 NSSS
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	2001 NSSS
2,2',3,3',4,4',6,6'-Octachlorobiphenyl	33091-17-7	2001 NSSS
2,2',3,3',4,4',6-Heptachlorobiphenyl	52663-71-5	2001 NSSS
2,2',3,3',4,4'-Hexachlorobiphenyl	38380-07-3	2001 NSSS
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	2001 NSSS
2,2',3,3',4,5,5',6'-Octachlorobiphenyl	52663-75-9	2001 NSSS
2,2',3,3',4,5,5',6-Octachlorobiphenyl	68194-17-2	2001 NSSS
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	2001 NSSS
2,2',3,3',4,5,6,6'-Octachlorobiphenyl	52663-73-7	2001 NSSS
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	2001 NSSS
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	2001 NSSS
2,2',3,3',4,5,6-Heptachlorobiphenyl	68194-16-1	2001 NSSS
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	2001 NSSS
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	2001 NSSS
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	2001 NSSS

Chemical	CAS number	When identified
2,2',3,3',4,5-Hexachlorobiphenyl	55215-18-4	2001 NSSS
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	2001 NSSS
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	2001 NSSS
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	2001 NSSS
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	2001 NSSS
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	2001 NSSS
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	2001 NSSS
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	2001 NSSS
2,2',3,3',5,6'-Hexachlorobiphenyl	52744-13-5	2001 NSSS
2,2',3,3',5,6-Hexachlorobiphenyl	52704-70-8	2001 NSSS
2,2',3,3',5-Pentachlorobiphenyl	60145-20-2	2001 NSSS
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	2001 NSSS
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	2001 NSSS
2,2',3,3'-Tetrachlorobiphenyl	38444-93-8	2001 NSSS
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	2001 NSSS
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	2001 NSSS
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	2001 NSSS
2,2',3,4,4',5',6-Heptabromodiphenyl ether	207122-16-5	2006 TNSSS
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	2001 NSSS
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	2001 NSSS
2,2',3,4,4',5',6-Heptachlorobiphenyl	52663-69-1	2001 NSSS
2,2',3,4,4',5'-Hexabromodiphenyl ether	182677-30-1	2006 TNSSS
2,2',3,4,4',5'-Hexachlorobiphenyl	35065-28-2	2001 NSSS
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	2001 NSSS
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	2001 NSSS
2,2',3,4,4',6'-Hexachlorobiphenyl	59291-64-4	2001 NSSS
2,2',3,4,4',6-Hexachlorobiphenyl	56030-56-9	2001 NSSS
2,2',3,4,4'-Pentabromodiphenyl ether	182346-21-0	2006 TNSSS
2,2',3,4,4'-Pentachlorobiphenyl	65510-45-4	2001 NSSS
2,2',3,4',5,5',6-Heptachloro-1,1'-biphenyl	52663-68-0	2001 NSSS
2,2',3,4,5,5',6-Heptachlorobiphenyl	52712-05-7	2001 NSSS
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	2001 NSSS
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	2001 NSSS
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	2001 NSSS
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	2001 NSSS
2,2',3,4,5,6'-Hexachlorobiphenyl	68194-15-0	2001 NSSS
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	2001 NSSS
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	2001 NSSS
2,2',3,4',5,6-Hexachlorobiphenyl	68194-13-8	2001 NSSS

Chemical	CAS number	When identified
2,2',3,4',5',6-Hexachlorobiphenyl	38380-04-0	2001 NSSS
2,2',3,4,5'-Pentachlorobiphenyl	38380-02-8	2001 NSSS
2,2',3,4,5-Pentachlorobiphenyl	55312-69-1	2001 NSSS
2,2',3,4',5'-Pentachlorobiphenyl	41464-51-1	2001 NSSS
2,2',3,4',5-Pentachlorobiphenyl	68194-07-0	2001 NSSS
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	2001 NSSS
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	2001 NSSS
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	2001 NSSS
2,2',3,4,6-Pentachlorobiphenyl	55215-17-3	2001 NSSS
2,2',3,4',6'-Pentachlorobiphenyl	60233-25-2	2001 NSSS
2,2',3,4',6-Pentachlorobiphenyl	68194-05-8	2001 NSSS
2,2',3,4'-Tetrachloro-1,1'-biphenyl	36559-22-5	2001 NSSS
2,2',3,4-Tetrachlorobiphenyl	52663-59-9	2001 NSSS
2,2',3,5,5',6-Hexachlorobiphenyl	52663-63-5	2001 NSSS
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	2001 NSSS
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	2001 NSSS
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	2001 NSSS
2,2',3,5,6-Pentachlorobiphenyl	73575-56-1	2001 NSSS
2,2',3,5',6-Pentachlorobiphenyl	38379-99-6	2001 NSSS
2,2',3,5'-Tetrachlorobiphenyl	41464-39-5	2001 NSSS
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	2001 NSSS
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	2001 NSSS
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	2001 NSSS
2,2',3-Trichlorobiphenyl	38444-78-9	2001 NSSS
2,2',4,4',5,5'-Hexabromobiphenyl	59080-40-9	BR No.1 (2004–2005)
2,2',4,4',5,5'-Hexabromodiphenyl ether	68631-49-2	2006 TNSSS
2,2',4,4',5,5'-Hexachlorobiphenyl	35065-27-1	2001 NSSS
2,2',4,4',5,6'-Hexabromodiphenyl ether	207122-15-4	2006 TNSSS
2,2',4,4',5,6'-Hexachlorobiphenyl	60145-22-4	2001 NSSS
2,2',4,4',5-Pentabromodiphenyl ether	60348-60-9	2006 TNSSS
2,2',4,4',5-Pentachlorobiphenyl	38380-01-7	2001 NSSS
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	2001 NSSS
2,2',4,4',6-Pentabromodiphenyl ether	189084-64-8	2006 TNSSS
2,2',4,4',6-Pentachlorobiphenyl	39485-83-1	2001 TNSSS
2,2',4,4'-Tetrabromodiphenyl ether	5436-43-1	2006 TNSSS
2,2',4,4'-Tetrachlorobiphenyl	2437-79-8	2001 NSSS
2,2',4,5,5'-Pentachlorobiphenyl	37680-73-2	2001 NSSS
2,2',4,5,6'-Pentachlorobiphenyl	68194-06-9	2001 NSSS
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	2001 NSSS

Chemical	CAS number	When identified
2,2',4,5'-Tetrachlorobiphenyl	41464-40-8	2001 NSSS
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	2001 NSSS
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	2001 NSSS
2,2',4,6'-Tetrachlorobiphenyl	68194-04-7	2001 NSSS
2,2',4,6-Tetrachlorobiphenyl	62796-65-0	2001 NSSS
2,2',4-Tribromodiphenyl ether	147217-75-2	BR No.7 (2016–2017)
2,2',4-Trichlorobiphenyl	37680-66-3	2001 NSSS
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	2001 NSSS
2,2',5,6'-Tetrachlorobiphenyl	41464-41-9	2001 NSSS
2,2',5-Trichlorobiphenyl	37680-65-2	2001 NSSS
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	2001 NSSS
2,2',6-Trichlorobiphenyl	38444-73-4	2001 NSSS
2,2'-Bioxirane	1464-53-5	1988 NSSS
2,2'-Dichlorobiphenyl	13029-08-8	2001 NSSS
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	2001 NSSS
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	2001 NSSS
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	2001 NSSS
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	2001 NSSS
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	2001 NSSS
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	2001 NSSS
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	2001 NSSS
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	2001 NSSS
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	2001 NSSS
2,3,3',4',5,5',6-Heptachlorobiphenyl	69782-91-8	2001 NSSS
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	2001 NSSS
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	2001 NSSS
2,3,3',4,5,6-Hexachlorobiphenyl	41411-62-5	2001 NSSS
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	2001 NSSS
2,3,3',4',5,6-Hexachlorobiphenyl	74472-44-9	2001 NSSS
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	2001 NSSS
2,3,3',4,5'-Pentachlorobiphenyl	70362-41-3	2001 NSSS
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	2001 NSSS
2,3,3',4',5-Pentachlorobiphenyl	70424-68-9	2001 NSSS
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	2001 NSSS
2,3,3',4',6-Pentachlorobiphenyl	38380-03-9	2001 NSSS
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	2001 NSSS
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	2001 NSSS
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	2001 NSSS
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	2001 NSSS

Chemical	CAS number	When identified
2,3,3',5',6-Pentachlorobiphenyl	68194-10-5	2001 NSSS
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	2001 NSSS
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	2001 NSSS
2,3,3',6-Tetrachlorobiphenyl	74472-33-6	2001 NSSS
2,3,3'-Trichlorobiphenyl	38444-84-7	2001 NSSS
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	2001 NSSS
2,3,4,4',5,6-Hexachlorobiphenyl	41411-63-6	2001 NSSS
2,3',4,4',5',6-Hexachlorobiphenyl	59291-65-5	2001 NSSS
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	2001 NSSS
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	2001 NSSS
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	2001 NSSS
2,3,4,4',6-Pentachlorobiphenyl	74472-38-1	2001 NSSS
2,3',4,4',6-Pentachlorobiphenyl	56558-17-9	2001 NSSS
2,3',4,4'-Tetrabromodiphenyl ether	189084-61-5	2006 TNSSS
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	2001 NSSS
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	2001 NSSS
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	2001 NSSS
2,3',4',5,5'-Pentachlorobiphenyl	70424-70-3	2001 NSSS
2,3,4,5,6-Pentabromoethylbenzene	85-22-3	BR No.7 (2016–2017)
2,3,4,5,6-Pentachlorobiphenyl	18259-05-7	2001 NSSS
2,3,4',5,6-Pentachlorobiphenyl	68194-11-6	2001 NSSS
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	2001 NSSS
2,3',4',5',6-Pentachlorobiphenyl	74472-39-2	2001 NSSS
2,3,4,5-Tetrachlorobiphenyl	33284-53-6	2001 NSSS
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	2001 NSSS
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	2001 NSSS
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	2001 NSSS
2,3',4',5'-Tetrachlorobiphenyl	70362-48-0	2001 NSSS
2,3',4',5-Tetrachlorobiphenyl	32598-11-1	2001 NSSS
2,3,4,6,7,8-Hexabromodibenzo[b,d]furan	161880-50-8	BR No.6 (2014–2015)
2,3,4,6,7,8-Hexachlorodibenzo[b,d]furan	60851-34-5	1988 NSSS
2,3,4,6-Tetrachlorobiphenyl	54230-22-7	2001 NSSS
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	2001 NSSS
2,3',4,6-Tetrachlorobiphenyl	60233-24-1	2001 NSSS
2,3',4',6-Tetrachlorobiphenyl	41464-46-4	2001 NSSS
2,3,4,7,8-Pentabromodibenzofuran	131166-92-2	BR No.6 (2014–2015)
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	1988 NSSS
2,3,4'-Trichlorobiphenyl	38444-85-8	2001 NSSS
2,3,4-Trichlorobiphenyl	55702-46-0	2001 NSSS

Chemical	CAS number	When identified
2,3',4-Trichlorobiphenyl	55712-37-3	2001 NSSS
2',3,4-Trichlorobiphenyl	38444-86-9	2001 NSSS
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	2001 NSSS
2,3,5,6-Tetrachlorobiphenyl	33284-54-7	2001 NSSS
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	2001 NSSS
2,3,5-Trichlorobiphenyl	55720-44-0	2001 NSSS
2,3',5'-Trichlorobiphenyl	37680-68-5	2001 NSSS
2,3,6-Trichlorobiphenyl	55702-45-9	2001 NSSS
2,3',6-Trichlorobiphenyl	38444-76-7	2001 NSSS
2,3,7,8-Tetrabromodibenzofuran	67733-57-7	BR No.6 (2014–2015)
2,3,7,8-Tetrabromodibenzo-p-dioxin	50585-41-6	BR No.6 (2014–2015)
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1988 NSSS1
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	1988 NSSS
2,3'-Dichlorobiphenyl	25569-80-6	2001 NSSS
2,3-Dichlorobiphenyl	16605-91-7	2001 NSSS
2,4,4',5-Tetrachlorobiphenyl	32690-93-0	2001 NSSS
2,4,4',6-Tetrachlorobiphenyl	32598-12-2	2001 NSSS
2,4,4'-Tribromodiphenyl ether	41318-75-6	2006 TNSSS
2,4,4'-Trichlorobiphenyl	7012-37-5	2001 NSSS
2,4,5-Trichlorobiphenyl	15862-07-4	2001 NSSS
2,4',5-Trichlorobiphenyl	16606-02-3	2001 NSSS
2,4,5-Trichlorophenol	95-95-4	BR No.6 (2014–2015)
2,4,5-Trichlorophenoxyacetic acid	93-76-5	1988 NSSS
2,4,5-Trimethylaniline	137-17-7	1988 NSSS
2,4,6-Trichlorobiphenyl	35693-92-6	2001 NSSS
2,4',6-Trichlorobiphenyl	38444-77-8	2001 NSSS
2,4,6-Trinitro-1,3-dimethyl-5-tert-butylbenzene	81-15-2	BR No.1 (2004–2005)
2,4,6-Tris(tert-butyl)phenol	732-26-3	BR No.8 (2018–2019)
2,4'-Dichlorobiphenyl	34883-43-7	2001 NSSS
2,4-Dichlorobiphenyl	33284-50-3	2001 NSSS
2,4-Dichlorophenol	120-83-2	BR No.7 (2016–2017)
2,4-Dichlorophenoxyacetic acid	94-75-7	1988 NSSS
2,4-Di-tert-butylphenol	96-76-4	BR No.8 (2018–2019)
2,4-Di-tert-pentylphenol	120-95-6	BR No.8 (2018–2019)
2,5-Dichlorobiphenyl	34883-39-1	2001 NSSS
2,6-Dichlorobiphenyl	33146-45-1	2001 NSSS
2,6-Dinitrotoluene	606-20-2	1988 NSSS
2,6-Di-tert-butylphenol	128-39-2	BR No.1 (2004–2005)
2-Chloro-4-phenylphenol	92-04-6	BR No.6 (2014–2015)

Chemical	CAS number	When identified
2-Chlorobiphenyl	2051-60-7	2001 NSSS
2-Chloronaphthalene	91-58-7	1988 NSSS
2-Ethylhexyl diphenyl phosphate	1241-94-7	BR No.8 (2018–2019)
2H,2H,3H,3H-Perfluorooctanoic acid	914637-49-3	BR No.8 (2018–2019)
2-Hexanone	591-78-6	1988 NSSS
2-Methyl-1-propanol	78-83-1	1988 NSSS
2-Methylnaphthalene	91-57-6	1988 NSSS
2-Methylpyridine	109-06-8	1988 NSSS
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-Henicosafluorododecyl 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl hydrogen phosphate	1158182-60-5	BR No.8 (2018–2019)
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	2001 NSSS
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	2001 NSSS
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	2001 NSSS
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	2001 NSSS
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	2001 NSSS
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	2001 NSSS
3,3',4-Trichlorobiphenyl	37680-69-6	2001 NSSS
3,3',5,5'-Tetrabromobisphenol A	79-94-7	BR No.1 (2004–2005)
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	2001 NSSS
3,3',5-Trichlorobiphenyl	38444-87-0	2001 NSSS
3,3'-Dichloro-1,1'-biphenyl	2050-67-1	2001 NSSS
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	2001 NSSS
3,4,4'-Trichlorobiphenyl	38444-90-5	2001 NSSS
3,4,5-Trichlorobiphenyl	53555-66-1	2001 NSSS
3,4',5-Trichlorobiphenyl	38444-88-1	2001 NSSS
3,4'-Dichlorobiphenyl	2974-90-5	2001 NSSS
3,4-Dichlorobiphenyl	2974-92-7	2001 NSSS
3,4-Dihydroxybenzoic acid	99-50-3	BR No.7 (2016–2017)
3,5-Dichlorobiphenyl	34883-41-5	2001 NSSS
3,6-Dimethylphenanthrene	1576-67-6	1988 NSSS
3-Chlorobiphenyl	2051-61-8	2001 NSSS
3-Methylindole	83-34-1	BR No.2 (2006–2007)
4-(1,1,3,3-Tetramethylbutyl)phenol	140-66-9	BR No.2 (2006–2007)
4-(Butan-2-yl)-2,6-di-tert-butylphenol	17540-75-9	BR No.8 (2018–2019)
4,4'-Dichlorobiphenyl	2050-68-2	2001 NSSS
4,4'-Dichlorocarbanilide	1219-99-4	BR No.4 (2010–2011)
4,4'-Methylenebis(2,6-di-t-butylphenol)	118-82-1	BR No.8 (2018–2019)
4,4'-Thiobis(6-tert-butyl-m-cresol)	96-69-5	BR No.8 (2018–2019)
4-Androstene-3,17-dione	63-05-8	2006 TNSSS

Chemical	CAS number	When identified
4-Chloro-3-methylphenol	59-50-7	1988 NSSS
4-Chloroaniline	106-47-8	1988 NSSS
4-Chlorobiphenyl	2051-62-9	2001 NSSS
4-Dimethylaminoantipyrine	58-15-1	BR No.1 (2004–2005)
4-Epianhydrotetracycline	7518-17-4	2006 TNSSS
4-Epichlortetracycline	14297-93-9	2006 TNSSS
4-epi-Oxytetracycline	14206-58-7	2006 TNSSS
4-Hydroxybenzoic acid	99-96-7	BR No.7 (2016–2017)
4-Methyl-2-pentanone	108-10-1	1988 NSSS
4-Nitrophenol	100-02-7	BR No.1 (2004–2005)
4-Nonylphenol	104-40-5	BR No.1 (2004–2005)
4-Nonylphenol, branched	84852-15-3	BR No.1 (2004–2005)
5-Aminosalicylic acid	89-57-6	BR No.1 (2004–2005)
6:2 Fluorotelomer phosphate diester	57677-95-9	BR No.8 (2018–2019)
6:2 Fluorotelomer sulfonic acid	27619-97-2	BR No.8 (2018–2019)
6:2/8:2 Fluorotelomer phosphate diester	943913-15-3	BR No.8 (2018–2019)
7-Acetyl-1,1,3,4,4,6-hexamethyltetraline	21145-77-7	BR No.2 (2006–2007)
8:2 Fluorotelomer phosphate diester	678-41-1	BR No.8 (2018–2019)
8:2 Fluorotelomer sulfonic acid	39108-34-4	BR No.8 (2018–2019)
Acenaphthene	83-32-9	1988 NSSS
Acetaminophen	103-90-2	BR No.1 (2004–2005)
Acetone	67-64-1	1988 NSSS
Acetophenone	98-86-2	1988 NSSS
Albuterol	18559-94-9	BR No.1 (2004–2005)
Aldrin	309-00-2	1988 NSSS
Allyl alcohol	107-18-6	1988 NSSS
Allyl chloride	107-05-1	1988 NSSS
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	319-84-6	1988 NSSS
alpha-Solanine	20562-02-1	BR No.9 (2020–2021)
alpha-Terpineol	98-55-5	1988 NSSS
Alprazolam	28981-97-7	BR No.5 (2012–2013)
Aluminum	7429-90-5	1988 NSSS
Amitriptyline	50-48-6	BR No.5 (2012–2013)
Amlodipine	88150-42-9	BR No.5 (2012–2013)
Ammelide	645-93-2	BR No.8 (2018–2019)
Amoxicillin	26787-78-0	BR No.8 (2018–2019)
Amphetamine	300-62-9	BR No.2 (2006–2007)
Ampicillin	69-53-4	BR No.8 (2018–2019)
Androsterone	53-41-8	2006 TNSSS

Chemical	CAS number	When identified
Anhydrochlortetracycline	4497-08-9	2006 TNSSS
Anhydrotetracycline	1665-56-1	2006 TNSSS
Anthracene	120-12-7	1988 NSSS
Antimony	7440-36-0	1988 NSSS
Aroclor 1248	12672-29-6	1988 NSSS
Aroclor 1254	11097-69-1	1988 NSSS
Aroclor 1260	11096-82-5	1988 NSSS
Arsenic	7440-38-2	1988 NSSS
Aspirin	50-78-2	BR No.1 (2004–2005)
Atenolol	29122-68-7	BR No.5 (2012–2013)
Atorvastatin	134523-00-5	BR No.5 (2012–2013)
Azinphos-methyl	86-50-0	1988 NSSS
Azithromycin	83905-01-5	BR No.2 (2006–2007)
Barium	7440-39-3	1988 NSSS
BDE-196	446255-39-6	BR No.7 (2016–2017)
BDE-197	117964-21-3	BR No.7 (2016–2017)
BDE-207	437701-79-6	BR No.7 (2016–2017)
Bensulide	741-58-2	BR No.4 (2010–2011)
Benz(a)anthracene	56-55-3	1988 NSSS
Benzene	71-43-2	1988 NSSS
Benzene, 1,2,3,5-tetrabromo-4-(2,4,6-tribromophenoxy)-	117948-63-7	BR No.7 (2016–2017)
Benzenethiol	108-98-5	1988 NSSS
Benzo(a)pyrene	50-32-8	1988 NSSS
Benzo(b)fluoranthene	205-99-2	1988 NSSS
Benzo(g,h,i)perylene	191-24-2	1988 NSSS
Benzo(k)fluoranthene	207-08-9	1988 NSSS
Benzoic acid	65-85-0	1988 NSSS
Benzoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 2,4-bis(1,1-dimethylethyl) phenyl ester	4221-80-1	BR No.8 (2018–2019)
Benzoylecgonine	519-09-5	BR No.5 (2012–2013)
Benztropine	86-13-5	BR No.5 (2012–2013)
Benzyl 4-hydroxybenzoate	94-18-8	BR No.7 (2016–2017)
Benzyl alcohol	100-51-6	1988 NSSS
Benzyl butyl phthalate	85-68-7	1988 NSSS
Berberine	2086-83-1	BR No.9 (2020–2021)
Beryllium	7440-41-7	1988 NSSS
beta-Hexachlorocyclohexane	319-85-7	1988 NSSS
beta-Sitosterol	83-46-5	BR No.2 (2006–2007)
Bezafibrate	41859-67-0	BR No.1 (2004–2005)

Chemical	CAS number	When identified
Biphenyl	92-52-4	1988 NSSS
Bis(1,3-dichloropropan-2-yl) hydrogen phosphate	72236-72-7	BR No.8 (2018–2019)
bis(1-Chloropropan-2-yl) hydrogen phosphate	789440-10-4	BR No.8 (2018–2019)
Bis(2-chloroethyl) phosphate	3040-56-0	BR No.8 (2018–2019)
Bis(2-ethylhexyl) phosphate	298-07-7	BR No.8 (2018–2019)
Bis(2-methylphenyl) hydrogen phosphate	35787-74-7	BR No.8 (2018–2019)
Bisphenol A	80-05-7	BR No.2 (2006–2007)
Boron	7440-42-8	1988 NSSS
Bromide	24959-67-9	BR No.9 (2020–2021)
Butylated hydroxyanisole	25013-16-5	BR No.1 (2004–2005)
Butylated hydroxytoluene	128-37-0	BR No.1 (2004–2005)
Butylparaben	94-26-8	BR No.7 (2016–2017)
Cadmium	7440-43-9	1988 NSSS
Caffeine	58-08-2	BR No.1 (2004–2005)
Calcium	7440-70-2	1988 NSSS
Campesterol	474-62-4	2006 TNSSS
Captan	133-06-2	1988 NSSS
Carbadox	6804-07-5	BR No.1 (2004–2005)
Carbamazepine	298-46-4	BR No.1 (2004–2005)
Carbon disulfide	75-15-0	1988 NSSS
Carbon tetrachloride	56-23-5	1988 NSSS
Carbophenothion	786-19-6	1988 NSSS
Cerium	7440-45-1	BR No.1 (2004–2005)
Cesium	7440-46-2	BR No.8 (2018–2019)
Chlorobenzene	108-90-7	1988 NSSS
Chlorobenzilate	510-15-6	1988 NSSS
Chloroethane	75-00-3	1988 NSSS
Chloroform	67-66-3	1988 NSSS
Chloromethane	74-87-3	1988 NSSS
Chlorpyrifos	2921-88-2	1988 NSSS
Chlortetracycline	57-62-5	2006 TNSSS
Cholestan-3-ol, (3.beta.,5.alpha.)-	80-97-7	2006 TNSSS
Cholesterol	57-88-5	BR No.1 (2004–2005)
Chromium	7440-47-3	1988 NSSS
Chrysene	218-01-9	1988 NSSS
Cimetidine	51481-61-9	BR No.1 (2004–2005)
Ciprofloxacin	85721-33-1	BR No.1 (2004–2005)
Clarithromycin	81103-11-9	BR No.2 (2006–2007)
Clindamycin	18323-44-9	BR No.4 (2010–2011)

Chemical	CAS number	When identified
Clofibric acid	882-09-7	BR No.1 (2004–2005)
Clomazone	81777-89-1	BR No.4 (2010–2011)
Clorophene	120-32-1	BR No.6 (2014–2015)
Clotrimazole	23593-75-1	BR No.4 (2010–2011)
Cobalt	7440-48-4	1988 NSSS
Cocaine	50-36-2	BR No.5 (2012–2013)
Codeine	76-57-3	BR No.1 (2004–2005)
Copper	7440-50-8	1988 NSSS
Coprosterol	360-68-9	BR No.2 (2006–2007)
Cotinine	486-56-6	BR No.1 (2004–2005)
Cresyl diphenyl phosphate	26444-49-5	BR No.8 (2018–2019)
Crotonaldehyde	4170-30-3	1988 NSSS
Crotoxyphos	7700-17-6	1988 NSSS
Cyanide	57-12-5	1988 NSSS
Cyanuric acid	108-80-5	BR No.8 (2018–2019)
Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-	1222-05-5	BR No.1 (2004–2005)
Cyclophosphamide	50-18-0	BR No.1 (2004–2005)
Decachlorobiphenyl	2051-24-3	2001 NSSS
Decamethylcyclopentasiloxane	541-02-6	BR No.6 (2014–2015)
Decane	124-18-5	1988 NSSS
Dechlorane Plus	13560-89-9	BR No.7 (2016–2017)
DEET	134-62-3	BR No.1 (2004–2005)
delta-Hexachlorocyclohexane	319-86-8	1988 NSSS
Demeclocycline	127-33-3	2006 TNSSS
Desmosterol	313-04-2	2006 TNSSS
Di(2-ethylhexyl) phthalate	117-81-7	1988 NSSS
Diallate	2303-16-4	1988 NSSS
Diazepam	439-14-5	BR No.1 (2004–2005)
Diazinon	333-41-5	1988 NSSS
Dibenzofuran	132-64-9	1988 NSSS
Dibenzofuran, 1,2,3,4,6,7,8,9-octabromo-	103582-29-2	BR No.6 (2014–2015)
Dibenzothiophene	132-65-0	1988 NSSS
Dibutyl phthalate	84-74-2	1988 NSSS
Dichlorobiphenyl	25512-42-9	BR No.8 (2018–2019)
Dichlorodiphenyltrichloroethane	50-29-3	1988 NSSS
Dichloromethane	75-09-2	1988 NSSS
Dichlorophen	97-23-4	BR No.6 (2014–2015)
Diclofenac	15307-86-5	BR No.1 (2004–2005)
Dicrotophos	141-66-2	1988 NSSS

Chemical	CAS number	When identified
Dieldrin	60-57-1	1988 NSSS
Diethyl hydrogen phosphate	598-02-7	BR No.8 (2018–2019)
Digoxin	20830-75-5	BR No.1 (2004–2005)
Diisobutyl hydrogen phosphate	6303-30-6	BR No.8 (2018–2019)
Dimethoate	60-51-5	1988 NSSS
Dimethyl 2,6-dimethyl-4-(2-nitrophenyl)-3,5-pyridinedicarboxylate	67035-22-7	2006 TNSSS
Dimethyl phthalate	131-11-3	1988 NSSS
Dimethyl sulfone	67-71-0	1988 NSSS
Di-n-octyl phthalate	117-84-0	1988 NSSS
Diphenhydramine	58-73-1	BR No.2 (2006–2007)
Diphenyl oxide	101-84-8	1988 NSSS
Diphenyl phosphate	838-85-7	BR No.8 (2018–2019)
Diphenylamine	122-39-4	1988 NSSS
D-Limonene	5989-27-5	BR No.2 (2006–2007)
dl-Norgestrel	6533-00-2	BR No.1 (2004–2005)
Docosane	629-97-0	1988 NSSS
Dodecane	112-40-3	1988 NSSS
Doxepin	1668-19-5	BR No.9 (2020–2021)
Doxycycline	564-25-0	BR No.1 (2004–2005)
Eicosane	112-95-8	1988 NSSS
Endosulfan I	959-98-8	1988 NSSS
Endosulfan II	33213-65-9	1988 NSSS
Endrin	72-20-8	1988 NSSS
Enrofloxacin	93106-60-6	2006 TNSSS
Epitetracycline	79-85-6	2006 TNSSS
EPN	2104-64-5	1988 NSSS
Equilenin	517-09-9	2006 TNSSS
Equilin	474-86-2	BR No.1 (2004–2005)
ERGOSTEROL	57-87-4	2006 TNSSS
Erythromycin	114-07-8	BR No.1 (2004–2005)
Estradiol benzoate	50-50-0	2006 TNSSS
Estriol	50-27-1	BR No.1 (2004–2005)
Estrone	53-16-7	BR No.1 (2004–2005)
Ethanaminium, 2-hydroxy-N-(2-hydroxyethyl)-N,N-dimethyl-, esters with C16-18 and C18-unsatd. fatty acids, chlorides	1079184-43-2	BR No.8 (2018–2019)
Ethanol, 2-butoxy-, hydrogen phosphate	14260-97-0	BR No.8 (2018–2019)
Ethylbenzene	100-41-4	1988 NSSS
Ethylene glycol nonylphenyl ether	27986-36-3	BR No.2 (2006–2007)
Ethylparaben	120-47-8	BR No.7 (2016–2017)

Chemical	CAS number	When identified
Fenofibric acid	42017-89-0	BR No.1 (2004–2005)
Fentanyl	437-38-7	BR No.9 (2020–2021)
Fenthion	55-38-9	BR No.1 (2004–2005)
Fipronil	120068-37-3	BR No.4 (2010–2011)
Fipronil amide	205650-69-7	BR No.8 (2018–2019)
Fipronil sulfide	120067-83-6	BR No.8 (2018–2019)
Fipronil sulfone	120068-36-2	BR No.8 (2018–2019)
Fipronil-desulfinyl	205650-65-3	BR No.8 (2018–2019)
Floxacillin	5250-39-5	BR No.1 (2004–2005)
Fluoranthene	206-44-0	1988 NSSS
Fluoride	16984-48-8	1988 NSSS
Fluoxetine	54910-89-3	BR No.1 (2004–2005)
Furosemide	54-31-9	BR No.5 (2012–2013)
Gemfibrozil	25812-30-0	BR No.1 (2004–2005)
Glybenclamide	10238-21-8	BR No.5 (2012–2013)
Heptachlor	76-44-8	1988 NSSS
Heptachlor epoxide B	1024-57-3	1988 NSSS
Heptachlorobiphenyl	28655-71-2	BR No.8 (2018–2019)
Hexabromobenzene	87-82-1	BR No.7 (2016–2017)
Hexabromocyclododecane	25637-99-4	BR No.7 (2016–2017)
Hexachlorobiphenyl	26601-64-9	BR No.8 (2018–2019)
Hexacosane	630-01-3	1988 NSSS
Hexadecane	544-76-3	1988 NSSS
Hexanoic acid	142-62-1	1988 NSSS
Hydrocodone	125-29-1	BR No.5 (2012–2013)
Hydromorphone	466-99-9	BR No.9 (2020–2021)
Hydroxychloroquine	118-42-3	BR No.9 (2020–2021)
Ibuprofen	15687-27-1	BR No.1 (2004–2005)
Indole	120-72-9	BR No.2 (2006–2007)
Iodine	7553-56-2	1988 NSSS
Iron	7439-89-6	1988 NSSS
Isochlortetracycline	514-53-4	2006 TNSSS
Isodecyl diphenyl phosphate	29761-21-5	BR No.8 (2018–2019)
Ketoprofen	22071-15-4	BR No.1 (2004–2005)
Lead	7439-92-1	1988 NSSS
Leptophos	21609-90-5	1988 NSSS
Levorphanol	77-07-6	BR No.9 (2020–2021)
Lincomycin	154-21-2	BR No.3 (2008–2009)
Lindane	58-89-9	1988 NSSS

Chemical	CAS number	When identified
Lomefloxacin	98079-51-7	2006 TNSSS
Losartan	114798-26-4	BR No.9 (2020–2021)
Magnesium	7439-95-4	1988 NSSS
Manganese	7439-96-5	1988 NSSS
MDMA	42542-10-9	BR No.3 (2008–2009)
Mefenamic acid	61-68-7	BR No.1 (2004–2005)
Melamine	108-78-1	BR No.8 (2018–2019)
Mercury	7439-97-6	1988 NSSS
Mestranol	72-33-3	BR No.1 (2004–2005)
Metformin	657-24-9	2006 TNSSS
Methacrylonitrile	126-98-7	1988 NSSS
Methadone	76-99-3	BR No.9 (2020–2021)
Methamphetamine	537-46-2	BR No.2 (2006–2007)
Methyl 3,4-dihydroxybenzoate	2150-43-8	BR No.7 (2016–2017)
Methyl ethyl ketone	78-93-3	1988 NSSS
Methyl triclosan	4640-01-1	BR No.7 (2016–2017)
Methylparaben	99-76-3	BR No.7 (2016–2017)
Metoprolol	51384-51-1	BR No.1 (2004–2005)
Mevinphos	7786-34-7	1988 NSSS
Miconazole	22916-47-8	2006 TNSSS
Minocycline	10118-90-8	2006 TNSSS
Molybdenum	7439-98-7	1988 NSSS
Monochlorobiphenyl	27323-18-8	BR No.8 (2018–2019)
Monuron	150-68-5	BR No.1 (2004–2005)
Musk ketone	81-14-1	BR No.1 (2004–2005)
m-Xylene	108-38-3	1988 NSSS
Nadolol	42200-33-9	BR No.1 (2004–2005)
Naled	300-76-5	1988 NSSS
Nalidixic acid	389-08-2	BR No.8 (2018–2019)
Naphthalene	91-20-3	1988 NSSS
Naproxen	22204-53-1	BR No.1 (2004–2005)
N-Desmethyldiltiazem	86408-45-9	BR No.5 (2012–2013)
Nickel	7440-02-0	1988 NSSS
Nitrobenzene	98-95-3	1988 NSSS
Nitrofen	1836-75-5	1988 NSSS
N-Nitrosodibutylamine	924-16-3	BR No.6 (2014–2015)
N-Nitrosodiethylamine	55-18-5	BR No.6 (2014–2015)
N-Nitrosodimethylamine	62-75-9	BR No.6 (2014–2015)
N-Nitrosodi-n-propylamine	621-64-7	BR No.6 (2014–2015)

Chemical	CAS number	When identified
N-Nitrosodiphenylamine	86-30-6	1988 NSSS
N-Nitrosopiperidine	100-75-4	BR No.6 (2014–2015)
N-Nitrosopyrrolidine	930-55-2	BR No.6 (2014–2015)
n-Nonylphenol	25154-52-3	BR No.1 (2004–2005)
n-Octylphenol	67554-50-1	BR No.1 (2004–2005)
Nonachlorobiphenyl	53742-07-7	BR No.8 (2018–2019)
Nonylphenol and Nonylphenol Ethoxylates (NP/NPEs)	NOCAS_872428	BR No.2 (2006–2007)
Norethindrone	68-22-4	BR No.1 (2004–2005)
Norfloxacin	70458-96-7	BR No.1 (2004–2005)
Norfluoxetine	83891-03-6	BR No.4 (2010–2011)
Norverapamil	67018-85-3	BR No.5 (2012–2013)
o-Cresol	95-48-7	1988 NSSS
Octabromodibenzo-p-dioxin	2170-45-8	BR No.6 (2014–2015)
Octachlorobiphenyl	55722-26-4	BR No.8 (2018–2019)
Octachlorodibenzofuran	39001-02-0	1988 NSSS
Octachlorodibenzo-p-dioxin	3268-87-9	1988 NSSS
Octacosane	630-02-4	1988 NSSS
Octadecane	593-45-3	1988 NSSS
Ofloxacin	82419-36-1	2006 TNSSS
Ormetoprim	6981-18-6	2006 TNSSS
Oxolinic acid	14698-29-4	2006 TNSSS
Oxycodone	76-42-6	BR No.5 (2012–2013)
o-Xylene	95-47-6	1988 NSSS
Oxytetracycline	79-57-2	BR No.1 (2004–2005)
p,p'-DDD	72-54-8	1988 NSSS
p,p'-DDE	72-55-9	1988 NSSS
Paroxetine	61869-08-7	BR No.5 (2012–2013)
PCB 026	38444-81-4	2001 NSSS
PCB 045	70362-45-7	2001 NSSS
PCB 131	61798-70-7	2001 NSSS
p-Cresol	106-44-5	1988 NSSS
p-Cymene	99-87-6	1988 NSSS
Penicillin V	87-08-1	BR No.1 (2004–2005)
Pentabromodiphenyl ether	32534-81-9	BR No.3 (2008–2009)
Pentachloro-1,1'-biphenyl	25429-29-2	BR No.8 (2018–2019)
Pentachloronitrobenzene	82-68-8	1988 NSSS
Pentachlorophenol	87-86-5	1988 NSSS
Perfluorobutanesulfonic acid	375-73-5	BR No.5 (2012–2013)
Perfluorobutanoic acid	375-22-4	BR No.5 (2012–2013)

Chemical	CAS number	When identified
Perfluorodecanesulfonic acid	335-77-3	BR No.8 (2018–2019)
Perfluorodecanoic acid	335-76-2	BR No.5 (2012–2013)
Perfluorododecanoic acid	307-55-1	BR No.5 (2012–2013)
Perfluoroheptanoic acid	375-85-9	BR No.5 (2012–2013)
Perfluorohexadecanoic acid	67905-19-5	BR No.9 (2020–2021)
Perfluorohexanesulfonic acid	355-46-4	BR No.5 (2012–2013)
Perfluorohexanoic acid	307-24-4	BR No.5 (2012–2013)
Perfluorononanoic acid	375-95-1	BR No.5 (2012–2013)
Perfluorooctanesulfonamide	754-91-6	BR No.5 (2012–2013)
Perfluorooctanesulfonic acid	1763-23-1	BR No.5 (2012–2013)
Perfluorooctanoic acid	335-67-1	BR No.5 (2012–2013)
Perfluoropentanoic acid	2706-90-3	BR No.5 (2012–2013)
Perfluorotetradecanoic acid	376-06-7	BR No.7 (2016–2017)
Perfluorotridecanoic acid	72629-94-8	BR No.7 (2016–2017)
Perfluoroundecanoic acid	2058-94-8	BR No.5 (2012–2013)
Perylene	198-55-0	1988 NSSS
Phenanthrene	85-01-8	1988 NSSS
Phenazone	60-80-0	BR No.1 (2004–2005)
Phenol	108-95-2	1988 NSSS
Phenol, 2,5-bis(1,1-dimethylethyl)-	5875-45-6	BR No.8 (2018–2019)
Phenol, 4,4',4''-(1-methyl-1-propanyl-3-ylidene)tris 2-(1,1-dimethylethyl)-5-methyl-	1843-03-4	BR No.8 (2018–2019)
Phosphamidon	13171-21-6	1988 NSSS
Phosphoric acid, 2,2-bis(chloromethyl)-1,3-propanediyl tetrakis (2-chloroethyl) ester	38051-10-4	BR No.8 (2018–2019)
Phosphoric acid, dibutyl ester	107-66-4	BR No.8 (2018–2019)
Phosphoric acid, dipropyl ester	1804-93-9	BR No.8 (2018–2019)
Phosphoric acid, P,P'-[(1-methylethylidene)di-4,1-phenylene] P,P,P',P'-tetraphenyl ester	5945-33-5	BR No.8 (2018–2019)
Polycarbonates	25766-59-0	BR No.8 (2018–2019)
Polychlorinated biphenyls	1336-36-3	BR No.8 (2018–2019)
Polyethylene glycol	25322-68-3	BR No.1 (2004–2005)
Polyethylene terephthalate	25038-59-9	BR No.8 (2018–2019)
Potassium	7440-09-7	1988 NSSS
Progesterone	57-83-0	BR No.1 (2004–2005)
Promethazine	60-87-7	BR No.5 (2012–2013)
Propionitrile	107-12-0	1988 NSSS
Propoxyphene	469-62-5	BR No.5 (2012–2013)
Propranolol	525-66-6	BR No.1 (2004–2005)
Propylparaben	94-13-3	BR No.7 (2016–2017)

Chemical	CAS number	When identified
p-Xylene	106-42-3	1988 NSSS
Pyrene	129-00-0	1988 NSSS
Quinine	130-95-0	BR No.1 (2004–2005)
Ranitidine	66357-35-5	BR No.1 (2004–2005)
Roxithromycin	80214-83-1	BR No.2 (2006–2007)
Rubidium	7440-17-7	BR No.1 (2004–2005)
Salicylic acid	69-72-7	BR No.1 (2004–2005)
Sarafloxacin	98105-99-8	2006 TNSSS
Selenium	7782-49-2	1988 NSSS
Sertraline	79617-96-2	BR No.5 (2012–2013)
Silicon	7440-21-3	1988 NSSS
Silver	7440-22-4	1988 NSSS
Sodium	7440-23-5	1988 NSSS
Squalene	7683-64-9	1988 NSSS
Stigmastan-3beta-ol	19466-47-8	2006 TNSSS
Stigmastanol	138126-65-5	BR No.2 (2006–2007)
Stigmasterol	83-48-7	2006 TNSSS
STK368415	5136-34-5	BR No.1 (2004–2005)
Strontium	7440-24-6	1988 NSSS
Styrene	100-42-5	1988 NSSS
Sulfachloropyridazine	80-32-0	2006 TNSSS
Sulfadiazine	68-35-9	2006 TNSSS
Sulfadimethoxine	122-11-2	2006 TNSSS
Sulfamerazine	127-79-7	BR No.1 (2004–2005)
Sulfamethazine	57-68-1	BR No.1 (2004–2005)
Sulfamethoxazole	723-46-6	2006 TNSSS
Sulfanilamide	63-74-1	2006 TNSSS
Sulfasalazine	599-79-1	BR No.1 (2004–2005)
Sulfate	14808-79-8	BR No.8 (2018–2019)
Sulfathiazole	72-14-0	2006 TNSSS
Sulfur	7704-34-9	1988 NSSS
Tenofovir	147127-20-6	BR No.4 (2010–2011)
Terephthalic acid	100-21-0	BR No.8 (2018–2019)
tert-Butylphenyl diphenyl phosphate	56803-37-3	BR No.8 (2018–2019)
Testosterone	58-22-0	2006 TNSSS
Tetrabutyl ethylidenebisphenol	35958-30-6	BR No.8 (2018–2019)
Tetrachlorobiphenyl	26914-33-0	BR No.8 (2018–2019)
Tetrachloroethylene	127-18-4	1988 NSSS
Tetracosane	646-31-1	1988 NSSS

Chemical	CAS number	When identified
Tetracycline	60-54-8	2006 TNSSS
Tetradecane	629-59-4	1988 NSSS
Tetraethyl pyrophosphate	107-49-3	1988 NSSS
Tetraphenyl m-phenylene bis(phosphate)	57583-54-7	BR No.8 (2018–2019)
Thallium	7440-28-0	1988 NSSS
Thiabendazole	148-79-8	2006 TNSSS
Thioxanthen-9-one	492-22-8	1988 NSSS
Tin	7440-31-5	1988 NSSS
Titanium	7440-32-6	1988 NSSS
Toluene	108-88-3	1988 NSSS
Triacontane	638-68-6	1988 NSSS
Triamterene	396-01-0	BR No.5 (2012–2013)
Tributyl phosphate	126-73-8	BR No.8 (2018–2019)
Trichlorfon	52-68-6	1988 NSSS
Trichlorobiphenyl	25323-68-6	BR No.8 (2018–2019)
Trichloroethylene	79-01-6	1988 NSSS
Trichlorofluoromethane	75-69-4	1988 NSSS
Triclocarban	101-20-2	BR No.2 (2006–2007)
Triclosan	3380-34-5	BR No.1 (2004–2005)
Triethyl phosphate	78-40-0	BR No.8 (2018–2019)
Triethylene glycol bis(3-tert-butyl-4-hydroxy-5-methylphenyl)propionate	36443-68-2	BR No.8 (2018–2019)
Trifluralin	1582-09-8	1988 NSSS
Triisobutyl phosphate	126-71-6	BR No.8 (2018–2019)
Trimethoprim	738-70-5	BR No.1 (2004–2005)
Trimethyl phosphate	512-56-1	BR No.8 (2018–2019)
Trimethylsilanol	1066-40-6	BR No.8 (2018–2019)
Tri-o-cresyl phosphate	78-30-8	1988 NSSS
Triphenyl phosphate	115-86-6	BR No.1 (2004–2005)
Triphenylene	217-59-4	1988 NSSS
Tripropyl phosphate	513-08-6	BR No.8 (2018–2019)
Tris(1,3-dichloro-2-propyl) phosphate	13674-87-8	BR No.8 (2018–2019)
Tris(2-butoxyethyl) phosphate	78-51-3	BR No.1 (2004–2005)
Tris(2-chloroethyl) phosphate	115-96-8	BR No.1 (2004–2005)
Tris(2-chloroisopropyl)phosphate	13674-84-5	BR No.8 (2018–2019)
Tris(2-ethylhexyl) phosphate	78-42-2	BR No.8 (2018–2019)
Tris(4-tert-butylphenyl) phosphate	78-33-1	BR No.8 (2018–2019)
Tris(methylphenyl) phosphate	1330-78-5	BR No.8 (2018–2019)
Tylosin	1401-69-0	BR No.1 (2004–2005)
Valproic acid	99-66-1	BR No.1 (2004–2005)

Chemical	CAS number	When identified
Valsartan	137862-53-4	BR No.5 (2012–2013)
Vanadium	7440-62-2	1988 NSSS
Virginiamycin	11006-76-1	BR No.1 (2004–2005)
Yttrium	7440-65-5	1988 NSSS
Zinc	7440-66-6	1988 NSSS
α-Dihydroequilin	651-55-8	2006 TNSSS

Notes:

BR = Biennial Report; CAS = Chemical Abstracts Service; NSSS = National Sewage Sludge Survey; TNSSS = Targeted National Sewage Sludge Survey

The list includes only chemicals identified through biennial reviews and sewage sludge surveys. This list does not include chemicals identified in the 2003 literature review conducted as part of the EPA response to the 2002 National Research Council (NRC) report reviewing the biosolids regulation (68 FR 75531).

Table B-2. Categorization of Chemicals

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
2-(N-Ethylperfluorooctanesulfonamido) acetic acid	2991-50-6	DTXSID5062760	N	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
2-(N-Methylperfluorooctanesulfonamido) acetic acid	2355-31-9	DTXSID10624392	N	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
alpha-Solanine	20562-02-1	DTXSID9030707	N	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Berberine	2086-83-1	DTXSID9043857	N	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromide	24959-67-9	DTXSID6043967	N	-	P	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	Y	-	Y
Doxepin	1668-19-5	DTXSID7022966	N	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fentanyl	437-38-7	DTXSID9023049	N	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydromorphone	466-99-9	DTXSID8023133	N	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydroxychloroquine	118-42-3	DTXSID8023135	N	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Levorphanol	77-07-6	DTXSID3023213	N	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Losartan	114798-26-4	DTXSID7023227	N	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methadone	76-99-3	DTXSID7023273	N	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexadecanoic acid	67905-19-5	DTXSID1070800	N	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
(E)-1,2-Dichloroethylene	156-60-5	DTXSID7024031	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
1,1,1-Trichloroethane	71-55-6	DTXSID0021381	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,3,4,6,7,8-Heptachlorodibenzo[b,d]furan	67562-39-4	DTXSID8052350	P*	-	E	-	-	-	-	-	-	-	-		-	-	-	-	-	Y	-	-	-	-
1,2,3,7,8,9-Hexachlorodibenzo[b,d]furan	72918-21-9	DTXSID9052470	P*	-	E	-	-	-	-	-	-	-	-		-	-	-	-	-	Y	-	-	-	-
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	DTXSID7052078	P*	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-
1,2,3-Trichlorobenzene	87-61-6	DTXSID8026193	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
1,2,4-Trichlorobenzene	120-82-1	DTXSID0021965	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	95-50-1	DTXSID6020430	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
1,2-Dichloropropane	78-87-5	DTXSID0020448	P*	-	A.1	Y	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dinitrobenzene	100-25-4	DTXSID0021836	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
1,4-Dioxane	123-91-1	DTXSID4020533	P*	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methyl phenanthrene	832-69-9	DTXSID6025648	P*	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-(2,4,5-Trichlorophenoxy)propionic acid	93-72-1	DTXSID0021387	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
2-(Methylthio)benzothiazole	615-22-5	DTXSID70274236	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	DTXSID50865989	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	DTXSID5074139	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	DTXSID6074172	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	DTXSID1074171	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,4',6,6'-Octachlorobiphenyl	33091-17-7	DTXSID0074134	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,4',6-Heptachlorobiphenyl	52663-71-5	DTXSID4073540	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	DTXSID6074170	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5,5',6'-Octachlorobiphenyl	52663-75-9	DTXSID2074168	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5,5',6-Octachlorobiphenyl	68194-17-2	DTXSID1074204	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	DTXSID7074167	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5,6,6'-Octachlorobiphenyl	52663-73-7	DTXSID2074166	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	DTXSID4074142	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5,6-Heptachlorobiphenyl	68194-16-1	DTXSID6074203	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	DTXSID2074164	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	DTXSID9074147	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	DTXSID5073539	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	DTXSID7074161	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	DTXSID9074141	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	DTXSID60274189	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	DTXSID0074132	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	DTXSID4030045	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	DTXSID0073538	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',5,6'-Hexachlorobiphenyl	52744-13-5	DTXSID9073541	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',5,6-Hexachlorobiphenyl	52704-70-8	DTXSID1074173	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',5-Pentachlorobiphenyl	60145-20-2	DTXSID0074188	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	DTXSID0073536	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3'-Tetrachlorobiphenyl	38444-93-8	DTXSID3073503	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	DTXSID7074240	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	DTXSID9074191	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	DTXSID8074235	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4',5',6-Heptachlorobiphenyl	52663-69-1	DTXSID7074163	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4',5'-Hexabromodiphenyl Ether	182677-30-1	DTXSID60872265	P*	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	Y	-	-	-	-
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	DTXSID0074138	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	DTXSID3074236	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4',6'-Hexachlorobiphenyl	59291-64-4	DTXSID0074186	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4',6-Hexachlorobiphenyl	56030-56-9	DTXSID5074183	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4',5,5',6-Heptachloro-1,1'-biphenyl	52663-68-0	DTXSID5052832	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,5,5',6-Heptachlorobiphenyl	52712-05-7	DTXSID1074175	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	DTXSID6074174	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	DTXSID8074158	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	DTXSID8074237	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	DTXSID7074242	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,5,6'-Hexachlorobiphenyl	68194-15-0	DTXSID1074202	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	DTXSID6074201	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	DTXSID3074230	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4',5,6-Hexachlorobiphenyl	68194-13-8	DTXSID1074200	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4',5',6-Hexachlorobiphenyl	38380-04-0	DTXSID1073498	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,5-Pentachlorobiphenyl	55312-69-1	DTXSID1074179	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4',5'-Pentachlorobiphenyl	41464-51-1	DTXSID2073510	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4',5-Pentachlorobiphenyl	68194-07-0	DTXSID4074196	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	DTXSID4074229	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	DTXSID9074197	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	DTXSID0074219	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,6-Pentachlorobiphenyl	55215-17-3	DTXSID6074178	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4',6'-Pentachlorobiphenyl	60233-25-2	DTXSID9074193	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4',6-Pentachlorobiphenyl	68194-05-8	DTXSID1073608	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4'-Tetrachloro-1,1'-biphenyl	36559-22-5	DTXSID80873557	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4-Tetrachlorobiphenyl	52663-59-9	DTXSID5073535	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,5,5',6-Hexachlorobiphenyl	52663-63-5	DTXSID2074160	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	DTXSID5073537	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	DTXSID70867526	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	DTXSID0074217	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,5,6-Pentachlorobiphenyl	73575-56-1	DTXSID5074218	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
2,2',3,5'-tetrachlorobiphenyl	41464-39-5	DTXSID8038302	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	DTXSID5074216	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	DTXSID40866046	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3-Trichlorobiphenyl	38444-78-9	DTXSID3073501	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,4',5,6'-Hexachlorobiphenyl	60145-22-4	DTXSID4074190	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,4',5-Pentachlorobiphenyl	38380-01-7	DTXSID1073496	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	DTXSID3040302	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,4',6-Pentabromodiphenyl ether	189084-64-8	DTXSID4052689	P*	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	Y	-	-	-	-
2,2',4,4',6-Pentachlorobiphenyl	39485-83-1	DTXSID8073504	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,5,6'-Pentachlorobiphenyl	68194-06-9	DTXSID10867525	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	DTXSID5074189	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	DTXSID0074184	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,6-Tetrachlorobiphenyl	62796-65-0	DTXSID4074194	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4-Trichlorobiphenyl	37680-66-3	DTXSID1073492	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',5,6'-Tetrachlorobiphenyl	41464-41-9	DTXSID3073509	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',5-Trichlorobiphenyl	37680-65-2	DTXSID6073491	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	DTXSID0065983	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2'-Bioxirane	1464-53-5	DTXSID0041307	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	DTXSID2074241	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	DTXSID3074238	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	DTXSID8074239	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4',5,5',6-Heptachlorobiphenyl	69782-91-8	DTXSID30867845	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	DTXSID4074146	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	DTXSID10865965	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,5,6-Hexachlorobiphenyl	41411-62-5	DTXSID20866044	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	DTXSID3074232	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	DTXSID3074234	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,5'-Pentachlorobiphenyl	70362-41-3	DTXSID1074206	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	DTXSID2074243	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4',5-Pentachlorobiphenyl	70424-68-9	DTXSID0074211	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	DTXSID9074224	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4',6-Pentachlorobiphenyl	38380-03-9	DTXSID3038307	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	DTXSID3074153	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	DTXSID4074221	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	DTXSID8073631	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	DTXSID50865964	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',5',6-Pentachlorobiphenyl	68194-10-5	DTXSID4074198	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	DTXSID8074156	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	DTXSID5074210	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',6-Tetrachlorobiphenyl	74472-33-6	DTXSID9074222	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3'-Trichlorobiphenyl	38444-84-7	DTXSID8073502	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4,4',5,6-Hexachlorobiphenyl	41411-63-6	DTXSID8074150	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4,4',5',6-Hexachlorobiphenyl	59291-65-5	DTXSID5074187	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4,4',6-Pentachlorobiphenyl	74472-38-1	DTXSID4074227	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4,4',6-Pentachlorobiphenyl	56558-17-9	DTXSID5074185	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4,4'-Tetrabromodiphenyl ether	189084-61-5	DTXSID9052688	P*	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	Y	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	DTXSID3073474	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	DTXSID6073609	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4',5,5'-Pentachlorobiphenyl	70424-70-3	DTXSID0074213	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4,5,6-Pentachlorobiphenyl	18259-05-7	DTXSID40864820	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4',5,6-Pentachlorobiphenyl	68194-11-6	DTXSID9074199	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	DTXSID50866577	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4',5',6-Pentachlorobiphenyl	74472-39-2	DTXSID9074228	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4,5-Tetrachlorobiphenyl	33284-53-6	DTXSID5074135	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	DTXSID4074223	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	DTXSID5074214	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	DTXSID0074215	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4',5'-Tetrachlorobiphenyl	70362-48-0	DTXSID60867919	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4',5-Tetrachlorobiphenyl	32598-11-1	DTXSID3038309	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4,6-Tetrachlorobiphenyl	54230-22-7	DTXSID1074177	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	DTXSID3074159	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4,6-Tetrachlorobiphenyl	60233-24-1	DTXSID4074192	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4',6-Tetrachlorobiphenyl	41464-46-4	DTXSID8074154	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4-Trichlorobiphenyl	55702-46-0	DTXSID0074180	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4-Trichlorobiphenyl	55712-37-3	DTXSID5074181	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2',3,4-Trichlorobiphenyl	38444-86-9	DTXSID8040303	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	DTXSID8074152	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,5,6-Tetrachlorobiphenyl	33284-54-7	DTXSID0074136	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	DTXSID9074220	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
2,3,5-Trichlorobiphenyl	55720-44-0	DTXSID0074182	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',5'-Trichlorobiphenyl	37680-68-5	DTXSID4074140	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3'-Dichlorobiphenyl	25569-80-6	DTXSID3074024	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,4,4',5-Tetrachlorobiphenyl	32690-93-0	DTXSID8073473	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,4,4',6-Tetrachlorobiphenyl	32598-12-2	DTXSID5074133	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,4,4'-Tribromodiphenyl ether	41318-75-6	DTXSID4052710	P*	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	Y	-	-	-	-
2,4,4'-Trichlorobiphenyl	7012-37-5	DTXSID2038310	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorobiphenyl	15862-07-4	DTXSID0073405	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenoxyacetic acid	93-76-5	DTXSID5021388	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trimethylaniline	137-17-7	DTXSID9021398	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
2,4,6-Trichlorobiphenyl	35693-92-6	DTXSID7073482	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,4',6-Trichlorobiphenyl	38444-77-8	DTXSID8073500	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorobiphenyl	33284-50-3	DTXSID8040301	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,5-Dichlorobiphenyl	34883-39-1	DTXSID7073480	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	606-20-2	DTXSID5020528	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
2-Chloro-4-phenylphenol	92-04-6	DTXSID0022353	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	591-78-6	DTXSID0022068	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
2-Methyl-1-propanol	78-83-1	DTXSID0021759	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylpyridine	109-06-8	DTXSID9021899	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	DTXSID9074145	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	DTXSID3074155	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	DTXSID1074208	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,3',4-Trichlorobiphenyl	37680-69-6	DTXSID60865879	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	DTXSID4058657	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,3',5-Trichlorobiphenyl	38444-87-0	DTXSID50858937	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichloro-1,1'-biphenyl	2050-67-1	DTXSID70872817	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,4,5-Trichlorobiphenyl	53555-66-1	DTXSID6074176	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,4',5-Trichlorobiphenyl	38444-88-1	DTXSID40865913	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,4'-Dichlorobiphenyl	2974-90-5	DTXSID10863067	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,4-Dichlorobiphenyl	2974-92-7	DTXSID6073310	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,5-Dichlorobiphenyl	34883-41-5	DTXSID5074137	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,6-Dimethylphenanthrene	1576-67-6	DTXSID9052682	P*	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Chlorobiphenyl	2051-61-8	DTXSID1040299	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-Dichlorobiphenyl	2050-68-2	DTXSID0022515	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
4-Androstene-3,17-dione	63-05-8	DTXSID8024523	P*	-	A.1.3	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	59-50-7	DTXSID4021717	P*	-	B	-	Y	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	108-10-1	DTXSID5021889	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	83-32-9	DTXSID3021774	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Aldrin	309-00-2	DTXSID8020040	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Allyl alcohol	107-18-6	DTXSID8020044	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Allyl chloride	107-05-1	DTXSID4039231	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	319-84-6	DTXSID2020684	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
alpha-Terpineol	98-55-5	DTXSID5026625	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Anhydrochlortetracycline	4497-08-9	DTXSID50912301	P*	-	A.1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1248	12672-29-6	DTXSID4023884	P*	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1254	11097-69-1	DTXSID5020100	P*	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	Y	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Aroclor 1260	11096-82-5	DTXSID0020101	P*	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Azinphos-methyl	86-50-0	DTXSID3020122	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Bensulide	741-58-2	DTXSID9032329	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	71-43-2	DTXSID3039242	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzenethiol	108-98-5	DTXSID7026811	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Benzo(g,h,i)perylene	191-24-2	DTXSID5023908	P*	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-
Benzyl alcohol	100-51-6	DTXSID5020152	P*	-	B	Y	Y	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Benzyl butyl phthalate	85-68-7	DTXSID3020205	P*	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	Y	-	-
beta-Hexachlorocyclohexane	319-85-7	DTXSID7020685	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	92-52-4	DTXSID4020161	P*	-	D	-	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Bisphenol A	80-05-7	DTXSID7020182	P*	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
Caffeine	58-08-2	DTXSID0020232	P*	-	A.1	Y	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Captan	133-06-2	DTXSID9020243	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbadox	6804-07-5	DTXSID6043913	P*	-	A.1.1	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	75-15-0	DTXSID6023947	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbophenothion	786-19-6	DTXSID7022120	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	108-90-7	DTXSID4020298	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Chlorobenzilate	510-15-6	DTXSID9020299	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	75-00-3	DTXSID1020302	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Chloromethane	74-87-3	DTXSID0021541	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorpyrifos	2921-88-2	DTXSID4020458	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-
Clomazone	81777-89-1	DTXSID1032355	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Crotonaldehyde	4170-30-3	DTXSID8024864	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Crotoxyphos	7700-17-6	DTXSID6037514	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide	57-12-5	DTXSID6023991	P*	-	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y
Decane	124-18-5	DTXSID6024913	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
delta-Hexachlorocyclohexane	319-86-8	DTXSID5024134	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Diallate	2303-16-4	DTXSID2020391	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Diazinon	333-41-5	DTXSID9020407	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	132-64-9	DTXSID2021993	P*	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
Dibenzothiophene	132-65-0	DTXSID0047741	P*	-	K	-	-	-	-	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-	-
Dichlorodiphenyltrichloroethane	50-29-3	DTXSID4020375	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	75-09-2	DTXSID0020868	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Dicrotophos	141-66-2	DTXSID9023914	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Dieldrin	60-57-1	DTXSID9020453	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-
Dimethyl sulfone	67-71-0	DTXSID4043937	P*	-	B	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diphenyl oxide	101-84-8	DTXSID9021847	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	Y	-	Y	-	-
Diphenylamine	122-39-4	DTXSID4021975	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
dl-Norgestrel	6533-00-2	DTXSID3047477	P*	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Docosane	629-97-0	DTXSID7047063	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Dodecane	112-40-3	DTXSID0026913	P*	-	B	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eicosane	112-95-8	DTXSID1025227	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin	72-20-8	DTXSID6020561	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
EPN	2104-64-5	DTXSID7022174	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor	76-44-8	DTXSID3020679	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-
Hexabromocyclododecane	25637-99-4	DTXSID8025383	P*	Y	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Hexacosane	630-01-3	DTXSID7060883	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Hexadecane	544-76-3	DTXSID0027195	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	Y	-	Y	-	-
Iodine	7553-56-2	DTXSID7034672	P*	-	G	Y	Y	-	-	-	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-
Leptophos	21609-90-5	DTXSID3040279	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-
Lindane	58-89-9	DTXSID2020686	P*	-	A.1	Y	-	-	-	-	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-
Methacrylonitrile	126-98-7	DTXSID1024176	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Methyl ethyl ketone	78-93-3	DTXSID3021516	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Methyl triclosan	4640-01-1	DTXSID0047874	P*	-	A.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mevinphos	7786-34-7	DTXSID2032683	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Naled	300-76-5	DTXSID1024209	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	98-95-3	DTXSID3020964	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Nonylphenol and Nonylphenol Ethoxylates (NP/NPEs)	NOCAS_872428	DTXSID20872428	P*	Y	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-
o-Cresol	95-48-7	DTXSID8021808	P*	-	B	-	Y	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
Octacosane	630-02-4	DTXSID6058639	P*	-	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Octadecane	593-45-3	DTXSID9047172	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
p,p'-DDD	72-54-8	DTXSID4020373	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
p,p'-DDE	72-55-9	DTXSID9020374	P*	-	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB 026	38444-81-4	DTXSID4074778	P*	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
p-Cymene	99-87-6	DTXSID3026645	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Penicillin V	87-08-1	DTXSID3023429	P*	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	87-86-5	DTXSID7021106	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorodecanesulfonic acid	335-77-3	DTXSID3040148	P*	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perylene	198-55-0	DTXSID4047753	P*	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Phenanthrene	85-01-8	DTXSID6024254	P*	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-
Phosphamidon	13171-21-6	DTXSID7021156	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	DTXSID9049748	P*	-	G	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Propionitrile	107-12-0	DTXSID1021879	P*	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Quinine	130-95-0	DTXSID0044280	P*	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silicon	7440-21-3	DTXSID0051441	P*	-	G	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Squalene	7683-64-9	DTXSID4064767	P*	-	B	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Strontium	7440-24-6	DTXSID3024312	P*	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Tenofovir	147127-20-6	DTXSID9040132	P*	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetracosane	646-31-1	DTXSID8060955	P*	-	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetradecane	629-59-4	DTXSID1027267	P*	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetraethyl pyrophosphate	107-49-3	DTXSID3034957	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Thioxanthen-9-one	492-22-8	DTXSID8060082	P*	-	A.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Triacontane	638-68-6	DTXSID0060935	P*	-	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	79-01-6	DTXSID0021383	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	75-69-4	DTXSID5021384	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Trifluralin	1582-09-8	DTXSID4021395	P*	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Tri-o-cresyl phosphate	78-30-8	DTXSID6032192	P*	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
Triphenylene	217-59-4	DTXSID9059757	P*	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-
Valproic acid	99-66-1	DTXSID6023733	P*	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(+)-Diltiazem	42399-41-7	DTXSID9022940	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(+/-)-Verapamil	52-53-9	DTXSID9041152	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(3alpha,5beta)-Cholestan-3-ol	516-92-7	DTXSID7046700	P	-	A.1.3	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
1-(p-Chlorobenzoyl)-5-methoxy-2-methyl-Indole-3-acetic acid	53-86-1	DTXSID9020740	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1'-Ethane-1,2-diylbis(pentabromobenzene)	84852-53-9	DTXSID2052732	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
1,1'-Oxybis[2,3,4,5,6-pentabromobenzene]	1163-19-5	DTXSID9020376	P	-	J	-	-	-	-	-	Y	-	-	-	-	-	-	Y	-	-	-	-	-	-
1,2,3,4,5-Pentabromo-6-(2,3,4,5-tetrabromophenoxy)benzene	63387-28-0	DTXSID30881107	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
1,2,3,4,6,7,8,9,10,10,11,11-dodecachloro-1,4,4a,5a,6,9,9a,9b-octahydro-1,4:6,9-dimethanodibenzofuran	31107-44-5	DTXSID0052702	P	-	L	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
1,2,3,4,6,7,8-Heptabromodibenzofuran	107555-95-3	DTXSID7073779	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
1,2,3,4,6,7,8-Heptabromodibenzo-p-dioxin	110999-47-8	DTXSID2074245	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
1,2,3,4,6,7,8-Heptachlorodibenzodioxin	35822-46-9	DTXSID1052034	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
1,2,3,4,7,8,9-Heptabromodibenzo[b,d]furan	161880-51-9	DTXSID50936608	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	DTXSID9052216	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
1,2,3,4,7,8-Hexabromodibenzofuran	129880-08-6	DTXSID6073861	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
1,2,3,4,7,8-Hexabromodibenzo-p-dioxin	110999-44-5	DTXSID5073793	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
1,2,3,4,7,8-Hexachlorodibenzodioxin	39227-28-6	DTXSID8052067	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	DTXSID6029915	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
1,2,3,5-Tetrabromo-4-(3,4,5-tribromophenoxy)benzene	446255-30-7	DTXSID10704805	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
1,2,3,6,7,8-Hexabromodibenzofuran	107555-94-2	DTXSID7074244	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
1,2,3,6,7,8-Hexabromodibenzo-p-dioxin	110999-45-6	DTXSID0073794	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	DTXSID2069155	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	DTXSID0023824	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
1,2,3,7,8,9-Hexabromodibenzo[b,d]furan	161880-49-5	DTXSID30936606	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
1,2,3,7,8,9-Hexabromodibenzo-p-dioxin	110999-46-7	DTXSID5073795	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	DTXSID6023781	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
1,2,3,7,8-Pentabromodibenzo[b,d]furan	107555-93-1	DTXSID60869478	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
1,2,3,7,8-Pentabromodibenzo-p-dioxin	109333-34-8	DTXSID6073784	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	DTXSID7052234	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
1,2-Bis(2,4,6-tribromophenoxy)ethane	37853-59-1	DTXSID1024627	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
1,3,5-Triazin-2(1H)-one, 4,6-diamino-	645-92-1	DTXSID3060950	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
1,3,5-Trichlorobenzene	108-70-3	DTXSID8026195	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	541-73-1	DTXSID6022056	P	-	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4:5,8:9,10-Trimethanoanthracene, 1,2,3,4,5,6,7,8,12,12,13,13-dodecachloro-1,4,4a,5,8,8a,9,9a,10,10a-decahydro-	13560-92-4	DTXSID30108225	P	Y	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
1,4-Dichlorobenzene	106-46-7	DTXSID1020431	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
1,7-Dimethylxanthine	611-59-6	DTXSID2052281	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10-Hydroxyamitriptyline	1159-82-6	DTXSID90873785	P	-	A.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17alpha-Estradiol	57-91-0	DTXSID8022377	P	-	A.1.3	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17alpha-Ethinylestradiol	57-63-6	DTXSID5020576	P	-	A.1.3	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17beta-Estradiol	50-28-2	DTXSID0020573	P	-	A.1.3	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	DTXSID3074157	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	DTXSID2073481	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,4'-Hexachlorobiphenyl	38380-07-3	DTXSID50858932	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	DTXSID4074148	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',4,5-Hexachlorobiphenyl	55215-18-4	DTXSID8073554	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	DTXSID2074162	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	DTXSID6073499	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	DTXSID7074169	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	DTXSID6038299	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4',5',6-Heptabromodiphenyl ether	207122-16-5	DTXSID8052693	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
2,2',3,4,4',5'-Hexachlorobiphenyl	35065-28-2	DTXSID8038300	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,4'-Pentabromodiphenyl ether	182346-21-0	DTXSID4052685	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
2,2',3,4,4'-Pentachlorobiphenyl	65510-45-4	DTXSID9073599	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,4,5'-Pentachlorobiphenyl	38380-02-8	DTXSID6073497	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,5',6-Pentachlorobiphenyl	38379-99-6	DTXSID3038301	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	DTXSID00867918	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,4',5,5'-Hexabromobiphenyl	59080-40-9	DTXSID70858838	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
2,2',4,4',5,5'-Hexabromodiphenyl ether	68631-49-2	DTXSID4030047	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
2,2',4,4',5,5'-Hexachlorobiphenyl	35065-27-1	DTXSID2032180	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,4',5,6'-Hexabromodiphenyl ether	207122-15-4	DTXSID3052692	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
2,2',4,4',5-Pentabromodiphenyl ether	60348-60-9	DTXSID9030048	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
2,2',4,4'-Tetrabromodiphenyl ether	5436-43-1	DTXSID3030056	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
2,2',4,4'-Tetrachlorobiphenyl	2437-79-8	DTXSID0022513	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,5,5'-Pentachlorobiphenyl	37680-73-2	DTXSID8038304	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,5'-Tetrachlorobiphenyl	41464-40-8	DTXSID8073508	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	DTXSID6074207	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4,6'-Tetrachlorobiphenyl	68194-04-7	DTXSID9074195	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2',4-Tribromodiphenyl ether	147217-75-2	DTXSID40872703	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	DTXSID3038305	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
2,2',6-Trichlorobiphenyl	38444-73-4	DTXSID9074777	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,2'-Dichlorobiphenyl	13029-08-8	DTXSID4044533	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	DTXSID4074144	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	DTXSID3074151	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	DTXSID6074205	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	DTXSID0052706	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	DTXSID8074231	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	DTXSID8038306	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,3',4',5,6-Hexachlorobiphenyl	74472-44-9	DTXSID8074233	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	DTXSID7074165	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	DTXSID9074226	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	DTXSID4032116	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	DTXSID50867160	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	DTXSID3073472	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,4,5,6-Pentabromoethylbenzene	85-22-3	DTXSID7021782	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
2,3,4,6,7,8-Hexabromodibenzo[b,d]furan	161880-50-8	DTXSID90936607	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
2,3,4,6,7,8-Hexachlorodibenzo[b,d]furan	60851-34-5	DTXSID3052276	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
2,3,4,7,8-Pentabromodibenzofuran	131166-92-2	DTXSID5073870	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	DTXSID7030066	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
2,3,4'-Trichlorobiphenyl	38444-85-8	DTXSID7091549	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,6-Trichlorobiphenyl	55702-45-9	DTXSID3073557	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3',6-Trichlorobiphenyl	38444-76-7	DTXSID9074143	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,3,7,8-Tetrabromodibenzofuran	67733-57-7	DTXSID6073605	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
2,3,7,8-Tetrabromodibenzo-p-dioxin	50585-41-6	DTXSID6073524	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	DTXSID3052147	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	DTXSID2021315	P	-	F	-	-	-	-	-	Y	-	-	Y	-	-	-	-	-	-	-	-	-	-
2,3-Dichlorobiphenyl	16605-91-7	DTXSID0073409	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,4',5-Trichlorobiphenyl	16606-02-3	DTXSID9073410	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	95-95-4	DTXSID4024359	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trinitro-1,3-dimethyl-5-tert-butylbenzene	81-15-2	DTXSID1021405	P	-	B	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Tris(tert-butyl)phenol	732-26-3	DTXSID2021311	P	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
2,4'-Dichlorobiphenyl	34883-43-7	DTXSID0022511	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	120-83-2	DTXSID1020439	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
2,4-Dichlorophenoxyacetic acid	94-75-7	DTXSID0020442	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Di-tert-butylphenol	96-76-4	DTXSID2026602	P	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
2,4-Di-tert-pentylphenol	120-95-6	DTXSID9026974	P	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
2,6-Dichlorobiphenyl	33146-45-1	DTXSID7038313	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Di-tert-butylphenol	128-39-2	DTXSID6027052	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
2-Chlorobiphenyl	2051-60-7	DTXSID6040298	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	91-58-7	DTXSID8023971	P	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
2-Ethylhexyl diphenyl phosphate	1241-94-7	DTXSID1025300	P	-	I	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-	-	-
2H,2H,3H,3H-Perfluorooctanoic acid	914637-49-3	DTXSID20874028	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
2-Methylnaphthalene	91-57-6	DTXSID4020878	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-Henicosafluorododecyl 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl hydrogen phosphate	1158182-60-5	DTXSID60873414	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	DTXSID2038314	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	DTXSID3032179	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	DTXSID5022514	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,3',5,5'-Tetrabromobisphenol A	79-94-7	DTXSID1026081	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	DTXSID6074209	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,4,4'-Trichlorobiphenyl	38444-90-5	DTXSID00865914	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
3,4-Dihydroxybenzoic acid	99-50-3	DTXSID4021212	P	-	A.1	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Methylindole	83-34-1	DTXSID8021775	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
4-(1,1,3,3-Tetramethylbutyl)phenol	140-66-9	DTXSID9022360	P	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
4-(Butan-2-yl)-2,6-di-tert-butylphenol	17540-75-9	DTXSID8029315	P	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
4,4'-Dichlorocarbanilide	1219-99-4	DTXSID70153436	P	-	A.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-Methylenebis(2,6-di-t-butylphenol)	118-82-1	DTXSID7022411	P	-	B	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-Thiobis(6-tert-butyl-m-cresol)	96-69-5	DTXSID4021341	P	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
4-Chloroaniline	106-47-8	DTXSID9020295	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorobiphenyl	2051-62-9	DTXSID3040300	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
4-Dimethylaminoantipyrine	58-15-1	DTXSID7020504	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Epianhydrotetracycline	7518-17-4	DTXSID00873791	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Epichlortetracycline	14297-93-9	DTXSID60873792	P	-	A.1.1	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-epi-Oxytetracycline	14206-58-7	DTXSID20873793	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Hydroxybenzoic acid	99-96-7	DTXSID3026647	P	-	A.1	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	100-02-7	DTXSID0021834	P	-	A.1	Y	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nonylphenol	104-40-5	DTXSID5033836	P	-	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	Y	-	-
4-Nonylphenol, branched	84852-15-3	DTXSID5029055	P	Y	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
5-Aminosalicylic acid	89-57-6	DTXSID5024506	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:2 Fluorotelomer phosphate diester	57677-95-9	DTXSID50561590	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-
6:2 Fluorotelomer sulfonic acid	27619-97-2	DTXSID6067331	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
6:2/8:2 Fluorotelomer phosphate diester	943913-15-3	DTXSID20873415	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-
7-Acetyl-1,1,3,4,4,6-hexamethyltetraline	21145-77-7	DTXSID7041544	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
8:2 Fluorotelomer phosphate diester	678-41-1	DTXSID90218051	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-
8:2 Fluorotelomer sulfonic acid	39108-34-4	DTXSID00192353	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Acetaminophen	103-90-2	DTXSID2020006	P	-	A.1	Y	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	67-64-1	DTXSID8021482	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Acetophenone	98-86-2	DTXSID6021828	P	-	A.1	Y	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Albuterol	18559-94-9	DTXSID5021255	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alprazolam	28981-97-7	DTXSID4022577	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum	7429-90-5	DTXSID3040273	P	-	G	Y	-	-	-	Y	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-
Amitriptyline	50-48-6	DTXSID7022594	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amlodipine	88150-42-9	DTXSID7022596	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammelide	645-93-2	DTXSID10214757	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
Amoxicillin	26787-78-0	DTXSID3037044	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amphetamine	300-62-9	DTXSID4022600	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ampicillin	69-53-4	DTXSID4022602	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Androsterone	53-41-8	DTXSID3036525	P	-	A.1	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Anhydrotetracycline	1665-56-1	DTXSID201016171	P	-	A.1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	120-12-7	DTXSID0023878	P	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-
Antimony	7440-36-0	DTXSID5023879	P	-	G	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Arsenic	7440-38-2	DTXSID4023886	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Aspirin	50-78-2	DTXSID5020108	P	-	A.1	Y	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Atenolol	29122-68-7	DTXSID2022628	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-
Atorvastatin	134523-00-5	DTXSID8029868	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azithromycin	83905-01-5	DTXSID8030760	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	7440-39-3	DTXSID8023894	P	-	G	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
BDE-196	446255-39-6	DTXSID3074789	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
BDE-197	117964-21-3	DTXSID9074775	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
BDE-207	437701-79-6	DTXSID30451985	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
Benz(a)anthracene	56-55-3	DTXSID5023902	P	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-
Benzene, 1,2,3,5-tetrabromo-4-(2,4,6-tribromophenoxy)-	117948-63-7	DTXSID50448655	P	-	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
Benzo(a)pyrene	50-32-8	DTXSID2020139	P	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-
Benzo(b)fluoranthene	205-99-2	DTXSID0023907	P	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-
Benzo(k)fluoranthene	207-08-9	DTXSID0023909	P	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-
Benzoic acid	65-85-0	DTXSID6020143	P	-	D	Y	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-		Y	-	-
Benzoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 2,4-bis(1,1-dimethylethyl)phenyl ester	4221-80-1	DTXSID5063364	P	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
Benzoylecgonine	519-09-5	DTXSID7046758	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benztropine	86-13-5	DTXSID9022659	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl 4-hydroxybenzoate	94-18-8	DTXSID9022526	P	-	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	DTXSID4023913	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
beta-Sitosterol	83-46-5	DTXSID5022481	P	-	A.1.3	Y	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Bezafibrate	41859-67-0	DTXSID3029869	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(1,3-dichloropropan-2-yl) hydrogen phosphate	72236-72-7	DTXSID30992969	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
bis(1-Chloropropan-2-yl) hydrogen phosphate	789440-10-4	DTXSID90274172	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Bis(2-chloroethyl) phosphate	3040-56-0	DTXSID50184485	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Bis(2-ethylhexyl) phosphate	298-07-7	DTXSID1027134	P	-	I	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-	-	-
Bis(2-methylphenyl) hydrogen phosphate	35787-74-7	DTXSID70957173	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Boron	7440-42-8	DTXSID3023922	P	-	G	-	-	-	-	Y	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-
Butylated hydroxyanisole	25013-16-5	DTXSID7020215	P	Y	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Butylated hydroxytoluene	128-37-0	DTXSID2020216	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Butylparaben	94-26-8	DTXSID3020209	P	-	A.1	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	DTXSID1023940	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Calcium	7440-70-2	DTXSID9050484	P	-	G	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Campesterol	474-62-4	DTXSID801009891	P	-	A.1.3	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbamazepine	298-46-4	DTXSID4022731	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	56-23-5	DTXSID8020250	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerium	7440-45-1	DTXSID0058641	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Cesium	7440-46-2	DTXSID5036767	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Chloroform	67-66-3	DTXSID1020306	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlortetracycline	57-62-5	DTXSID9022811	P	-	A.1.1	Y	-	Y	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholestan-3-ol, (3.beta.,5.alpha.)-	80-97-7	DTXSID40883258	P	-	B	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholesterol	57-88-5	DTXSID3022401	P	-	A.1.3	Y	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	DTXSID3031022	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Chrysene	218-01-9	DTXSID0022432	P	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-
Cimetidine	51481-61-9	DTXSID4020329	P	-	A.1	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ciprofloxacin	85721-33-1	DTXSID8022824	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clarithromycin	81103-11-9	DTXSID3022829	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clindamycin	18323-44-9	DTXSID2022836	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clofibric acid	882-09-7	DTXSID1040661	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clorophene	120-32-1	DTXSID5020154	P	-	D	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Clotrimazole	23593-75-1	DTXSID7029871	P	-	A.1.1	Y	-	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	DTXSID1031040	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Cocaine	50-36-2	DTXSID2038443	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Codeine	76-57-3	DTXSID2020341	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	DTXSID2023985	P	-	G	Y	-	-	-	Y	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-
Coprosterol	360-68-9	DTXSID1052036	P	-	A.1.3	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cotinine	486-56-6	DTXSID1047576	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresyl diphenyl phosphate	26444-49-5	DTXSID3024861	P	Y	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Cyanuric acid	108-80-5	DTXSID7024873	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-	1222-05-5	DTXSID8027373	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclophosphamide	50-18-0	DTXSID5020364	P	-	A.1	Y	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Decachlorobiphenyl	2051-24-3	DTXSID4047541	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Decamethylcyclopentasiloxane	541-02-6	DTXSID1027184	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Dechlorane Plus	13560-89-9	DTXSID7027750	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
DEET	134-62-3	DTXSID2021995	P	-	D	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Demeclocycline	127-33-3	DTXSID1022893	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Desmosterol	313-04-2	DTXSID10878676	P	-	A.1.3	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di(2-ethylhexyl) phthalate	117-81-7	DTXSID5020607	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Diazepam	439-14-5	DTXSID4020406	P	-	A.1	Y	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran, 1,2,3,4,6,7,8,9-octabromo-	103582-29-2	DTXSID90145919	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
Dibutyl phthalate	84-74-2	DTXSID2021781	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Dichlorobiphenyl	25512-42-9	DTXSID301026563	P	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorophen	97-23-4	DTXSID6021824	P	-	D	-	-	Y	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Diclofenac	15307-86-5	DTXSID6022923	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl hydrogen phosphate	598-02-7	DTXSID1044699	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Digoxin	20830-75-5	DTXSID5022934	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diisobutyl hydrogen phosphate	6303-30-6	DTXSID30212316	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Dimethoate	60-51-5	DTXSID7020479	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl 2,6-dimethyl-4-(2-nitrophenyl)-3,5-pyridinedicarboxylate	67035-22-7	DTXSID9052347	P	-	A.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	131-11-3	DTXSID3022455	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate	117-84-0	DTXSID1021956	P	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
Diphenhydramine	58-73-1	DTXSID4022949	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diphenyl phosphate	838-85-7	DTXSID1048207	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
D-Limonene	5989-27-5	DTXSID1020778	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Doxycycline	564-25-0	DTXSID0037653	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan I	959-98-8	DTXSID9037539	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan II	33213-65-9	DTXSID8037540	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Enrofloxacin	93106-60-6	DTXSID1045619	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Epitetracycline	79-85-6	DTXSID40873795	P	-	A.1.1	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Equilenin	517-09-9	DTXSID2052156	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equilin	474-86-2	DTXSID7047433	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ERGOSTEROL	57-87-4	DTXSID90878679	P	-	A.1.3	Y	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Erythromycin	114-07-8	DTXSID4022991	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Estradiol benzoate	50-50-0	DTXSID9022998	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Estriol	50-27-1	DTXSID9022366	P	-	A.1.3	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Estrone	53-16-7	DTXSID4022367	P	-	A.1.3	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethanaminium, 2-hydroxy-N-(2-hydroxyethyl)-N,N-dimethyl-, esters with C16-18 and C18-unsatd. fatty acids, chlorides	1079184-43-2	DTXSID00108550	P	Y	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethanol, 2-butoxy-, hydrogen phosphate	14260-97-0	DTXSID3065740	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Ethylbenzene	100-41-4	DTXSID3020596	P	-	B	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
Ethylene glycol nonylphenyl ether	27986-36-3	DTXSID9043809	P	Y	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylparaben	120-47-8	DTXSID9022528	P	-	A.1	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	Y	-	-	-
Fenofibric acid	42017-89-0	DTXSID8041030	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenthion	55-38-9	DTXSID8020620	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Fipronil	120068-37-3	DTXSID4034609	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Fipronil amide	205650-69-7	DTXSID60873419	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Fipronil sulfide	120067-83-6	DTXSID50869644	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Fipronil sulfone	120068-36-2	DTXSID6074750	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Fipronil-desulfinyl	205650-65-3	DTXSID0043719	P	-	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Floxacillin	5250-39-5	DTXSID8023056	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	206-44-0	DTXSID3024104	P	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-
Fluoride	16984-48-8	DTXSID9049617	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	Y	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Fluoxetine	54910-89-3	DTXSID7023067	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Furosemide	54-31-9	DTXSID6020648	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gemfibrozil	25812-30-0	DTXSID0020652	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glybenclamide	10238-21-8	DTXSID0037237	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor epoxide B	1024-57-3	DTXSID1024126	P	-	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlorobiphenyl	28655-71-2	DTXSID101026567	P	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Hexabromobenzene	87-82-1	DTXSID1024128	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
Hexachlorobiphenyl	26601-64-9	DTXSID001026564	P	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Hexanoic acid	142-62-1	DTXSID7021607	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Hydrocodone	125-29-1	DTXSID8023131	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ibuprofen	15687-27-1	DTXSID5020732	P	-	A.1	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indole	120-72-9	DTXSID0020737	P	-	A.1	Y	-	-	-	Y	Y	-	-	-	-	-	-	-	Y	-	-	-	-	-
Iron	7439-89-6	DTXSID5043710	P	-	G	Y	-	-	-	Y	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-
Isochlortetracycline	514-53-4	DTXSID20873798	P	-	A.1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isodecyl diphenyl phosphate	29761-21-5	DTXSID3025465	P	Y	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Ketoprofen	22071-15-4	DTXSID6020771	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	DTXSID2024161	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Lincomycin	154-21-2	DTXSID3023215	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lomefloxacin	98079-51-7	DTXSID4040680	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	DTXSID0049658	P	-	G	Y	-	-	-	Y	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	DTXSID2024169	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
MDMA	42542-10-9	DTXSID90860791	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mefenamic acid	61-68-7	DTXSID5023243	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Melamine	108-78-1	DTXSID6020802	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-
Mercury	7439-97-6	DTXSID1024172	P	-	G	-	-	-	-	-	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-
Mestranol	72-33-3	DTXSID0020814	P	-	A.1.3	Y	-	-	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Metformin	657-24-9	DTXSID2023270	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-
Methamphetamine	537-46-2	DTXSID8037128	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl 3,4-dihydroxybenzoate	2150-43-8	DTXSID20301804	P	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Methylparaben	99-76-3	DTXSID4022529	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	Y	-	-	-
Metoprolol	51384-51-1	DTXSID2023309	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miconazole	22916-47-8	DTXSID6023319	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Minocycline	10118-90-8	DTXSID1045033	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum	7439-98-7	DTXSID1024207	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Monochlorobiphenyl	27323-18-8	DTXSID401026566	P	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Monuron	150-68-5	DTXSID0020311	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Musk ketone	81-14-1	DTXSID6025690	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
m-Xylene	108-38-3	DTXSID6026298	P	-	B	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nadolol	42200-33-9	DTXSID3023342	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nalidixic acid	389-08-2	DTXSID3020912	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	91-20-3	DTXSID8020913	P	-	D	-	Y	-	-	-	Y	-	-	-	-	-	-	-	Y	-	-	Y	-	-
Naproxen	22204-53-1	DTXSID4040686	P	-	A.1	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Desmethyldiltiazem	86408-45-9	DTXSID60873797	P	-	A.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	DTXSID2020925	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Nitrofen	1836-75-5	DTXSID7020970	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodibutylamine	924-16-3	DTXSID2021026	P	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
N-Nitrosodiethylamine	55-18-5	DTXSID2021028	P	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
N-Nitrosodimethylamine	62-75-9	DTXSID7021029	P	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
N-Nitrosodi-n-propylamine	621-64-7	DTXSID6021032	P	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
N-Nitrosodiphenylamine	86-30-6	DTXSID6021030	P	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
N-Nitrosopiperidine	100-75-4	DTXSID8021060	P	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
N-Nitrosopyrrolidine	930-55-2	DTXSID8021062	P	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
n-Nonylphenol	25154-52-3	DTXSID3021857	P	Y	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	Y	-	-
n-Octylphenol	67554-50-1	DTXSID90897481	P	Y	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Nonachlorobiphenyl	53742-07-7	DTXSID001026176	P	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Norethindrone	68-22-4	DTXSID9023380	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norfloxacin	70458-96-7	DTXSID7037680	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norfluoxetine	83891-03-6	DTXSID80866540	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norverapamil	67018-85-3	DTXSID80873799	P	-	A.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Octabromodibenzo-p-dioxin	2170-45-8	DTXSID70176089	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
Octachlorobiphenyl	55722-26-4	DTXSID801026568	P	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Octachlorodibenzofuran	39001-02-0	DTXSID3052062	P	-	E	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-
Octachlorodibenzo-p-dioxin	3268-87-9	DTXSID4025799	P	-	F	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-
Ofloxacin	82419-36-1	DTXSID3041085	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ormetoprim	6981-18-6	DTXSID1046689	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxolinic acid	14698-29-4	DTXSID1021089	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxycodone	76-42-6	DTXSID5023407	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	95-47-6	DTXSID3021807	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxytetracycline	79-57-2	DTXSID1034260	P	-	A.1.1	Y	-	Y	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Paroxetine	61869-08-7	DTXSID3023425	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
PCB 045	70362-45-7	DTXSID9074779	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
PCB 131	61798-70-7	DTXSID8074780	P	-	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
p-Cresol	106-44-5	DTXSID7021869	P	-	A.1	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
Pentabromodiphenyl ether	32534-81-9	DTXSID2024246	P	Y	J	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-
Pentachloro-1,1'-biphenyl	25429-29-2	DTXSID10873621	P	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Pentachloronitrobenzene	82-68-8	DTXSID2021105	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanesulfonic acid	375-73-5	DTXSID5030030	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluorobutanoic acid	375-22-4	DTXSID4059916	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluorodecanoic acid	335-76-2	DTXSID3031860	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluorododecanoic acid	307-55-1	DTXSID8031861	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid	375-85-9	DTXSID1037303	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluorohexanesulfonic acid	355-46-4	DTXSID7040150	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluorohexanoic acid	307-24-4	DTXSID3031862	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluorononanoic acid	375-95-1	DTXSID8031863	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluorooctanesulfonamide	754-91-6	DTXSID3038939	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluorooctanesulfonic acid	1763-23-1	DTXSID3031864	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluorooctanoic acid	335-67-1	DTXSID8031865	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluoropentanoic acid	2706-90-3	DTXSID6062599	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluorotetradecanoic acid	376-06-7	DTXSID3059921	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluorotridecanoic acid	72629-94-8	DTXSID90868151	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Perfluoroundecanoic acid	2058-94-8	DTXSID8047553	P	-	H	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-
Phenazone	60-80-0	DTXSID6021117	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Phenol	108-95-2	DTXSID5021124	P	-	A.1.2	Y	Y	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Phenol, 2,5-bis(1,1-dimethylethyl)-	5875-45-6	DTXSID0064046	P	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-
Phenol, 4,4',4"-(1-methyl-1-propanyl-3-ylidene)tris 2-(1,1-dimethylethyl)-5-methyl-	1843-03-4	DTXSID0038883	P	-	B	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
Phosphoric acid, 2,2-bis(chloromethyl)-1,3-propanediyl tetrakis(2-chloroethyl) ester	38051-10-4	DTXSID8028000	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
Phosphoric acid, dibutyl ester	107-66-4	DTXSID3040728	P	-	I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphoric acid, dipropyl ester	1804-93-9	DTXSID80883752	P	-	I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphoric acid, P,P'-[(1-methylethylidene) di-4,1-phenylene] P,P,P',P'-tetraphenyl ester	5945-33-5	DTXSID8052720	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-
Polycarbonates	25766-59-0	DTXSID201027532	P	Y	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated biphenyls	1336-36-3	DTXSID5024267	P	Y	C	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-
Polyethylene glycol	25322-68-3	DTXSID4027862	P	Y	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	Y	Y	-	-
Polyethylene terephthalate	25038-59-9	DTXSID10872790	P	Y	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	Y	-	-	-	-
Progesterone	57-83-0	DTXSID3022370	P	-	A.1.3	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Promethazine	60-87-7	DTXSID7023518	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propoxyphene	469-62-5	DTXSID1023524	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propranolol	525-66-6	DTXSID6023525	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propylparaben	94-13-3	DTXSID4022527	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	Y	-	-	-
p-Xylene	106-42-3	DTXSID2021868	P	-	B	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	129-00-0	DTXSID3024289	P	-	K	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	Y	-	-
Ranitidine	66357-35-5	DTXSID8045191	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-
Roxithromycin	80214-83-1	DTXSID8041117	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rubidium	7440-17-7	DTXSID4064686	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Salicylic acid	69-72-7	DTXSID7026368	P	-	A.1.2	Y	Y	-	-	Y	Y	-	-	-	-	-	-	-	-	-		-	-	-
Sarafloxacin	98105-99-8	DTXSID8048494	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	DTXSID9021261	P	-	G	-	-	-	-	-	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-
Sertraline	79617-96-2	DTXSID6023577	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	DTXSID4024305	P	-	G	Y	Y	-	-	Y	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	DTXSID1049774	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Stigmastan-3beta-ol	19466-47-8	DTXSID8051835	P	-	A.1.3	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stigmastanol	138126-65-5	DTXSID50860237	P	Y	A.1.3	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stigmasterol	83-48-7	DTXSID801015733	P	-	A.1.3	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STK368415	5136-34-5	DTXSID30408651	P	-	A.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	100-42-5	DTXSID2021284	P	-	B	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Sulfachloropyridazine	80-32-0	DTXSID9045265	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfadiazine	68-35-9	DTXSID7044130	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfadimethoxine	122-11-2	DTXSID1023607	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfamerazine	127-79-7	DTXSID0023612	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfamethazine	57-68-1	DTXSID6021290	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfamethoxazole	723-46-6	DTXSID8026064	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfanilamide	63-74-1	DTXSID4023622	P	-	A.1.1	Y	-	Y	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfasalazine	599-79-1	DTXSID0021256	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	14808-79-8	DTXSID3042425	P	-	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y
Sulfathiazole	72-14-0	DTXSID8026068	P	-	A.1.1	Y	-	Y	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfur	7704-34-9	DTXSID9034941	P	-	G	-	-	-	-	-	Y	-	-	-	Y	-	-	-	-	-	-	Y	-	-
Terephthalic acid	100-21-0	DTXSID6026080	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
tert-Butylphenyl diphenyl phosphate	56803-37-3	DTXSID6024701	P	Y	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Testosterone	58-22-0	DTXSID8022371	P	-	A.1.3	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrabutyl ethylidenebisphenol	35958-30-6	DTXSID4038899	P	-	B	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorobiphenyl	26914-33-0	DTXSID701026565	P	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	127-18-4	DTXSID2021319	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetracycline	60-54-8	DTXSID7023645	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetraphenyl m-phenylene bis(phosphate)	57583-54-7	DTXSID8069197	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Thallium	7440-28-0	DTXSID2036035	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Thiabendazole	148-79-8	DTXSID0021337	P	-	D	Y	Y	Y	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	7440-31-5	DTXSID1049801	P	-	G	-	-	-	-	Y	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Titanium	7440-32-6	DTXSID3047764	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Toluene	108-88-3	DTXSID7021360	P	-	A.1	Y	-	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Triamterene	396-01-0	DTXSID6021373	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tributyl phosphate	126-73-8	DTXSID3021986	P	-	I	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-	Y	-	-
Trichlorfon	52-68-6	DTXSID0021389	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorobiphenyl	25323-68-6	DTXSID601026562	P	Y	C	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-
Triclocarban	101-20-2	DTXSID4026214	P	-	A.1.2	-	Y	-	-	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
Triclosan	3380-34-5	DTXSID5032498	P	-	A.1.2	Y	Y	-	-	Y	Y	-	-	-	-	-	-	-	-	-		-	-	-
Triethyl phosphate	78-40-0	DTXSID8026228	P	-	D	Y	-	-	-	Y	Y	-	-	-	-	-	Y	-	-	-	-	-	-	-
Triethylene glycol bis(3-tert-butyl-4-hydroxy-5-methylphenyl)propionate	36443-68-2	DTXSID0044236	P	-	D	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-	-	Y	-	-
Triisobutyl phosphate	126-71-6	DTXSID8040698	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Trimethoprim	738-70-5	DTXSID3023712	P	-	A.1.1	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethyl phosphate	512-56-1	DTXSID1021403	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-

Chemical	CAS number	DTXSID	New or previous	UVCB	CLASS[1]	A.1 Drugs/Metabolites	A.1.1 Antimicrobials	A.1.2 Antibiotics	A.1.3 Steroids/Sterols	B. Cosmetics (COSMOS)	C. Pesticides/Metabolites	D. PCBs	E. Dibenzofurans	F. Dioxins	G. Elements	H. PFAS	I. Phosphates	J. PBDEs	K. PAHs	L. Flame retardants	M. Surfactants	N. Extractables	O. Other Organics	P. Inorganic Anions
Trimethylsilanol	1066-40-6	DTXSID7061433	P	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-
Triphenyl phosphate	115-86-6	DTXSID1021952	P	-	D	-	-	-	-	Y	Y	-	-	-	-	-	Y	-	-	-	-	Y	-	-
Tripropyl phosphate	513-08-6	DTXSID4052712	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Tris(1,3-dichloro-2-propyl) phosphate	13674-87-8	DTXSID9026261	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Tris(2-butoxyethyl) phosphate	78-51-3	DTXSID5021758	P	-	I	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-	-	-
Tris(2-chloroethyl) phosphate	115-96-8	DTXSID5021411	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Tris(2-chloroisopropyl)phosphate	13674-84-5	DTXSID5026259	P	-	I	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-	-	-
Tris(2-ethylhexyl) phosphate	78-42-2	DTXSID0021414	P	-	I	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-	-	-
Tris(4-tert-butylphenyl) phosphate	78-33-1	DTXSID3051466	P	-	I	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-
Tris(methylphenyl) phosphate	1330-78-5	DTXSID4021391	P	Y	I	-	-	-	-	-	Y	-	-	-	-	-	Y	-	-	-	-	-	-	-
Tylosin	1401-69-0	DTXSID3043996	P	-	A.1.1	Y	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Valsartan	137862-53-4	DTXSID6023735	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	7440-62-2	DTXSID2040282	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Virginiamycin	11006-76-1	DTXSID40880080	P	Y	A.1.1	-	-	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yttrium	7440-65-5	DTXSID0049816	P	-	G	-	-	-	-	-	-	-	-	-	Y	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	DTXSID7035012	P	-	G	Y	-	-	-	Y	Y	-	-	-	Y	-	-	-	-	-	-	-	-	-
α-Dihydroequilin	651-55-8	DTXSID70873788	P	-	A.1	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

N = Newly identified chemical; P = Previously identified chemical; P* = Chemical identified during the curation process

[1]Classes:

A.1: DRUGS/METABOLITES (A.1.1: DRUGS/METABOLITES/ANTIBIOTICS; A.1.2: DRUGS/METABOLITES/ANTIMICROBIALS; A.1.3: DRUGS/METABOLITES/STEROLS); B: COSMETICS; C: PCBs; D: PESTICIDES/METABOLITES; E: DIBENZOFURANS; F: DIOXINS; G: ELEMENTS; H: PFAS; I: PHOSPHATE; J: PBDEs; K: PAHs; L: FLAME RETARDANTS; M: SURFACTANTS; N: EXTRACTABLES/ LEACHABLES; O: OTHER ORGANICS; P: INORGANIC ANIONS

Table B-3. Microbial Pollutants Identified in Biosolids

Microbial pollutant	When identified
Aerobic endospores	BR No.5 (2012–2013)
Aeromonas spp.	BR No.3 (2008–2009)
Antibiotic-resistant bacteria (ARB) or Antibiotic-resistant genes (ARG)	BR No.5 (2012–2013)
Clostridia spp.	BR No.2 (2006–2007)
Clostridium perfringens	BR No.8 (2018–2019)
Coronavirus HKU1	BR No.5 (2012–2013)
Cosavirus	BR No.5 (2012–2013)
Cryptosporidium parvum	BR No.2 (2006–2007)
Endotoxin	BR No.2 (2006–2007)
Enterovirus	BR No.3 (2008–2009)
Enterococcus spp.	BR No.8 (2018–2019)
Escherichia coli	BR No.3 (2008–2009)
Fecal coliforms	BR No.8 (2018–2019)
Giardia spp.	BR No.3 (2008–2009)
Human adenoviruses	BR No.3 (2008–2009)
Human norovirus	BR No.5 (2012–2013)
Human polyomaviruses	BR No.4 (2010–2011)
Klassevirus	BR No.5 (2012–2013)
Listeria spp.	BR No.3 (2008–2009)
Salmonella spp.	BR No.2 (2006–2007)
Total coliforms	BR No.8 (2018–2019)
Yersinia spp.	BR No.8 (2018–2019)
SARS COV2	BR No.9 (2020–2021)

Notes:
BR = Biennial Report

Appendix C: Concentrations of Chemicals Found in Biosolids

Table C-1. Concentrations of Newly and Previously Identified Chemicals in Biosolids for the 2020–2021 Biennial Review

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
2-(N-Ethylperfluorooctanesulfonamido) acetic acid	2991-50-6	New	Class B	7/16/2020	ND	µg/kg	Individual	Pepper et al. 2021
2-(N-Ethylperfluorooctanesulfonamido) acetic acid	2991-50-6	New	Class B	7/16/2020	ND	µg/kg	Individual	Pepper et al. 2021
2-(N-Ethylperfluorooctanesulfonamido) acetic acid	2991-50-6	New	Class B	7/27/2020	ND	µg/kg	Individual	Pepper et al. 2021
2-(N-Ethylperfluorooctanesulfonamido) acetic acid	2991-50-6	New	Class B	7/27/2020	11	µg/kg	Individual	Pepper et al. 2021
2-(N-Methylperfluorooctanesulfonamido) acetic acid	2355-31-9	New	Class B	7/16/2020	21	µg/kg	Individual	Pepper et al. 2021
2-(N-Methylperfluorooctanesulfonamido) acetic acid	2355-31-9	New	Class B	7/16/2020	22	µg/kg	Individual	Pepper et al. 2021
2-(N-Methylperfluorooctanesulfonamido) acetic acid	2355-31-9	New	Class B	7/27/2020	23	µg/kg	Individual	Pepper et al. 2021
2-(N-Methylperfluorooctanesulfonamido) acetic acid	2355-31-9	New	Class B	7/27/2020	18	µg/kg	Individual	Pepper et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/19/2020	37.388	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/20/2020	1.061	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/20/2020	2.876	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/21/2020	0.666	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/22/2020	2.419	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/23/2020	2.187	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/24/2020	1.713	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/25/2020	0	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/26/2020	2.099	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/28/2020	183.01	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/28/2020	9.323	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/29/2020	4.423	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
alpha-Solanine	20562-02-1	New	Primary sludge	3/30/2020	5.975	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	3/31/2020	0.688	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/1/2020	0.547	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/2/2020	4.163	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/3/2020	2.378	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/4/2020	1.931	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/4/2020	3.252	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/5/2020	0	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/6/2020	3.612	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/7/2020	1.284	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/9/2020	0.539	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/10/2020	8.771	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/11/2020	8.273	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/12/2020	1.962	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/13/2020	0.992	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/14/2020	2.593	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/15/2020	0	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	4/15/2020	0	ng/mL	Individual	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	March-April 2020	0.791	ng/mL	Composite	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	March-April 2020	1.498	ng/mL	Composite	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	March-April 2020	4.571	ng/mL	Composite	Nason et al. 2021
alpha-Solanine	20562-02-1	New	Primary sludge	March-April 2020	7.085	ng/mL	Composite	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/19/2020	22.711	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/20/2020	18.525	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/20/2020	17.656	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/21/2020	10.044	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/22/2020	20.608	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Berberine	2086-83-1	New	Primary sludge	3/23/2020	15.524	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/24/2020	23.986	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/25/2020	10.737	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/26/2020	14.89	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/28/2020	20.769	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/28/2020	21.017	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/29/2020	27.874	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/30/2020	16.859	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	3/31/2020	13.086	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/1/2020	18.197	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/2/2020	19.233	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/3/2020	20.209	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/4/2020	18.977	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/4/2020	25.221	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/5/2020	20.529	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/6/2020	21.784	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/7/2020	19.313	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/9/2020	17.22	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/10/2020	18.815	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/11/2020	16.572	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/12/2020	20.967	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/13/2020	23.526	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/14/2020	25.901	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/15/2020	16.514	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	4/15/2020	21.719	ng/mL	Individual	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	March-April 2020	12.57	ng/mL	Composite	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	March-April 2020	11.859	ng/mL	Composite	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Berberine	2086-83-1	New	Primary sludge	March-April 2020	14.817	ng/mL	Composite	Nason et al. 2021
Berberine	2086-83-1	New	Primary sludge	March-April 2020	16.751	ng/mL	Composite	Nason et al. 2021
Bromide	24959-67-9	New	Not specified	June 2016-Sep 2017	1.215	mg/L	Mean	Onchoke et al. 2018
Bromide	24959-67-9	New	Not specified	June 2016-Sep 2017	1.22	mg/L	Mean	Onchoke et al. 2018
Doxepin	1668-19-5	New	Primary sludge	3/19/2020	0.415	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/20/2020	0.325	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/20/2020	0.262	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/21/2020	0.099	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/22/2020	0.213	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/23/2020	0.177	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/24/2020	0.253	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/25/2020	0.114	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/26/2020	0.237	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/28/2020	0.54	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/28/2020	0.483	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/29/2020	0.234	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/30/2020	0.2	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	3/31/2020	0.082	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/1/2020	0.162	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/2/2020	0.189	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/3/2020	0.218	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/4/2020	0.258	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/4/2020	0.286	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/5/2020	0.249	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/6/2020	0.242	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Doxepin	1668-19-5	New	Primary sludge	4/7/2020	0.207	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/9/2020	0.223	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/10/2020	0.235	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/11/2020	0.21	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/12/2020	0.244	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/13/2020	0.273	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/14/2020	0.55	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/15/2020	0.211	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	4/15/2020	0.219	ng/mL	Individual	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	March-April 2020	0.194	ng/mL	Composite	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	March-April 2020	0.182	ng/mL	Composite	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	March-April 2020	0.217	ng/mL	Composite	Nason et al. 2021
Doxepin	1668-19-5	New	Primary sludge	March-April 2020	0.272	ng/mL	Composite	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/19/2020	0.257	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/20/2020	0.152	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/20/2020	0.136	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/21/2020	0.067	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/22/2020	0.16	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/23/2020	0.146	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/24/2020	0.231	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/25/2020	0.058	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/26/2020	0.095	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/28/2020	0.135	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/28/2020	0.138	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/29/2020	0.16	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/30/2020	0.113	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	3/31/2020	0.041	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Fentanyl	437-38-7	New	Primary sludge	4/1/2020	0.082	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/2/2020	0.105	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/3/2020	0.123	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/4/2020	0.139	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/4/2020	0.194	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/5/2020	0.168	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/6/2020	0.146	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/7/2020	0.182	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/9/2020	0.139	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/10/2020	0.192	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/11/2020	0.117	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/12/2020	0.163	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/13/2020	0.147	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/14/2020	0.33	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/15/2020	0.16	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	4/15/2020	0.188	ng/mL	Individual	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	March-April 2020	0.129	ng/mL	Composite	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	March-April 2020	0.122	ng/mL	Composite	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	March-April 2020	0.151	ng/mL	Composite	Nason et al. 2021
Fentanyl	437-38-7	New	Primary sludge	March-April 2020	0.188	ng/mL	Composite	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/19/2020	0.368	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/20/2020	0.287	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/20/2020	0.284	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/21/2020	0.306	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/22/2020	0.335	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/23/2020	0.328	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/24/2020	0.33	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Hydromorphone	466-99-9	New	Primary sludge	3/25/2020	0.305	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/26/2020	0.266	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/28/2020	0.267	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/28/2020	0.269	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/29/2020	0.309	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/30/2020	0.292	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	3/31/2020	0.286	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/1/2020	0.291	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/2/2020	0.295	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/3/2020	0.307	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/4/2020	0.299	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/4/2020	0.354	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/5/2020	0.316	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/6/2020	0.341	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/7/2020	0.305	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/9/2020	0.277	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/10/2020	0.302	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/11/2020	0.276	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/12/2020	0.307	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/13/2020	0.298	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/14/2020	0.3	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/15/2020	0.254	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	4/15/2020	0.249	ng/mL	Individual	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	March-April 2020	0.281	ng/mL	Composite	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	March-April 2020	0.263	ng/mL	Composite	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	March-April 2020	0.278	ng/mL	Composite	Nason et al. 2021
Hydromorphone	466-99-9	New	Primary sludge	March-April 2020	0.286	ng/mL	Composite	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Hydroxychloroquine	118-42-3	New	Primary sludge	3/19/2020	30.796	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/20/2020	37.407	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/20/2020	33.741	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/21/2020	10.273	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/22/2020	29.799	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/23/2020	27.863	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/24/2020	43.383	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/25/2020	8.403	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/26/2020	22.01	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/28/2020	25.729	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/28/2020	36.126	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/29/2020	39.686	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/30/2020	16.941	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	3/31/2020	6.858	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/1/2020	12.41	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/2/2020	30.491	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/3/2020	31.381	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/4/2020	34.172	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/4/2020	67.631	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/5/2020	51.209	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/6/2020	47.208	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/7/2020	46.945	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/9/2020	29.132	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/10/2020	35.313	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/11/2020	29.198	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/12/2020	42.572	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/13/2020	36.051	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Hydroxychloroquine	118-42-3	New	Primary sludge	4/14/2020	23.209	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/15/2020	19.582	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	4/15/2020	27.472	ng/mL	Individual	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	March-April 2020	13.415	ng/mL	Composite	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	March-April 2020	14.474	ng/mL	Composite	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	March-April 2020	25.18	ng/mL	Composite	Nason et al. 2021
Hydroxychloroquine	118-42-3	New	Primary sludge	March-April 2020	24.224	ng/mL	Composite	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/19/2020	2.268	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/20/2020	1.682	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/20/2020	1.934	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/21/2020	1.264	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/22/2020	2.111	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/23/2020	1.546	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/24/2020	1.47	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/25/2020	1.378	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/26/2020	1.52	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/28/2020	1.552	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/28/2020	1.425	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/29/2020	1.511	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/30/2020	1.412	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	3/31/2020	1.051	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/1/2020	1.367	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/2/2020	1.387	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/3/2020	1.326	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/4/2020	1.352	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/4/2020	2.01	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/5/2020	1.55	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Levorphanol	77-07-6	New	Primary sludge	4/6/2020	1.505	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/7/2020	1.206	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/9/2020	1.192	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/10/2020	1.308	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/11/2020	1.084	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/12/2020	1.153	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/13/2020	1.077	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/14/2020	1.585	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/15/2020	0.877	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	4/15/2020	1.02	ng/mL	Individual	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	March-April 2020	1.413	ng/mL	Composite	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	March-April 2020	1.1	ng/mL	Composite	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	March-April 2020	1.194	ng/mL	Composite	Nason et al. 2021
Levorphanol	77-07-6	New	Primary sludge	March-April 2020	1.149	ng/mL	Composite	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/19/2020	17.447	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/20/2020	2.844	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/20/2020	3.105	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/21/2020	1.655	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/22/2020	3.505	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/23/2020	2.448	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/24/2020	3.611	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/25/2020	1.923	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/26/2020	2.957	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/28/2020	4.257	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/28/2020	4.732	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/29/2020	3.056	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	3/30/2020	7.758	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Losartan	114798-26-4	New	Primary sludge	3/31/2020	1.914	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/1/2020	2.365	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/2/2020	3.109	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/3/2020	3.627	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/4/2020	3.135	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/4/2020	5.624	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/5/2020	4.674	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/6/2020	4.273	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/7/2020	5.174	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/9/2020	2.986	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/10/2020	3.759	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/11/2020	4.806	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/12/2020	4.412	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/13/2020	3.822	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/14/2020	3.136	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/15/2020	2.288	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	4/15/2020	3.238	ng/mL	Individual	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	March-April 2020	2.927	ng/mL	Composite	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	March-April 2020	1.959	ng/mL	Composite	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	March-April 2020	2.984	ng/mL	Composite	Nason et al. 2021
Losartan	114798-26-4	New	Primary sludge	March-April 2020	2.58	ng/mL	Composite	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/19/2020	0.852	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/20/2020	0.686	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/20/2020	0.726	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/21/2020	0.442	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/22/2020	0.745	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/23/2020	0.667	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Methadone	76-99-3	New	Primary sludge	3/24/2020	0.613	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/25/2020	0.497	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/26/2020	0.572	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/28/2020	0.654	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/28/2020	0.604	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/29/2020	0.561	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/30/2020	0.559	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	3/31/2020	0.504	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/1/2020	0.62	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/2/2020	0.685	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/3/2020	0.84	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/4/2020	0.584	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/4/2020	0.661	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/5/2020	0.754	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/6/2020	0.669	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/7/2020	0.722	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/9/2020	0.708	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/10/2020	0.569	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/11/2020	0.53	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/12/2020	0.706	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/13/2020	0.55	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/14/2020	0.88	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/15/2020	0.474	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	4/15/2020	0.532	ng/mL	Individual	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	March-April 2020	0.584	ng/mL	Composite	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	March-April 2020	0.544	ng/mL	Composite	Nason et al. 2021
Methadone	76-99-3	New	Primary sludge	March-April 2020	0.629	ng/mL	Composite	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Methadone	76-99-3	New	Primary sludge	March-April 2020	0.662	ng/mL	Composite	Nason et al. 2021
Perfluorohexadecanoic acid	67905-19-5	New	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Heat-treated granular biosolids	2014	1.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Heat-treated granular biosolids	2014	1.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Heat-treated granular biosolids	2016	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Heat-treated granular biosolids	2018	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Biosolids blended with sawdust, bark	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Composted biosolids with woodchips	2014	0.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Composted biosolids with woodchips	2014	0.8	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Composted biosolids with municipal solid waste	2014	0.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Composted biosolids with residential yard trimmings	2014	1.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexadecanoic acid	67905-19-5	New	Composted biosolids with plant materials	2014	0.5	µg/kg	Individual	Lazcano et al. 2020
Bisphenol A	80-05-7	Previous*	Biosolids	2009-2013	1300	ng/g dw	Median	Gewurtz et al. 2021
Bisphenol A	80-05-7	Previous*	Biosolids	2009-2013	520	ng/g dw	Median	Gewurtz et al. 2021
Bisphenol A	80-05-7	Previous*	Biosolids	2009-2013	100	ng/g dw	Median	Gewurtz et al. 2021
Perfluorodecanesulfonic acid	335-77-3	Previous*	Heat-treated granular biosolids	2014	3.2	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanesulfonic acid	335-77-3	Previous*	Heat-treated granular biosolids	2014	0.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanesulfonic acid	335-77-3	Previous*	Heat-treated granular biosolids	2014	1.8	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanesulfonic acid	335-77-3	Previous*	Heat-treated granular biosolids	2016	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanesulfonic acid	335-77-3	Previous*	Heat-treated granular biosolids	2018	<LOQ	µg/kg	Individual	Lazcano et al. 2020

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Perfluorodecanesulfonic acid	335-77-3	Previous*	Heat-treated granular biosolids	2014	2.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanesulfonic acid	335-77-3	Previous*	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanesulfonic acid	335-77-3	Previous*	Biosolids blended with sawdust, bark	2014	0.67	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanesulfonic acid	335-77-3	Previous*	Composted biosolids with woodchips	2014	1.87	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanesulfonic acid	335-77-3	Previous*	Composted biosolids with woodchips	2014	2.8	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanesulfonic acid	335-77-3	Previous*	Composted biosolids with municipal solid waste	2014	0.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanesulfonic acid	335-77-3	Previous*	Composted biosolids with residential yard trimmings	2014	0.2	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanesulfonic acid	335-77-3	Previous*	Composted biosolids with plant materials	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Products that met Class A requirements for *E. coli* content mixed with sludge/biosolids from other facilities	2014-2016	3.1	kg/dry kg	Median	Archer et al. 2020
Potassium	7440-09-7	Previous*	Products that met Class A requirements for *E. coli* content mixed with sludge/biosolids from other facilities	2014-2016	0.9 - 6.0	kg/dry kg	Range	Archer et al. 2020
Potassium	7440-09-7	Previous*	Heat-treated granular biosolids	2014	339	ppm	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Heat-treated granular biosolids	2014	2819	ppm	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Heat-treated granular biosolids	2014	1495	ppm	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Heat-treated granular biosolids	2016	1062	ppm	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Heat-treated granular biosolids	2018	2154	ppm	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Heat-treated granular biosolids	2014	599	ppm	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Heat-treated granular biosolids	2014	9776	ppm	Individual	Lazcano et al. 2020

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Potassium	7440-09-7	Previous*	Biosolids blended with sawdust, bark	2014	486	ppm	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Composted biosolids with woodchips	2014	1469	ppm	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Composted biosolids with woodchips	2014	1271	ppm	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Composted biosolids with municipal solid waste	2014	1032	ppm	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Composted biosolids with residential yard trimmings	2014	1647	ppm	Individual	Lazcano et al. 2020
Potassium	7440-09-7	Previous*	Composted biosolids with plant materials	2014	1977	ppm	Individual	Lazcano et al. 2020
Azithromycin	83905-01-5	Previous	Class A	Not specified	0.06	mg/kg dw	Individual	Sidhu et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/19/2020	8.849	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/20/2020	6.561	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/20/2020	4.46	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/21/2020	3.056	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/22/2020	4.814	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/23/2020	7.176	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/24/2020	11.016	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/25/2020	1.353	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/26/2020	3.85	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/28/2020	7.426	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/28/2020	5.723	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/29/2020	5.364	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/30/2020	2.683	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	3/31/2020	2.394	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/1/2020	2.587	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Azithromycin	83905-01-5	Previous	Primary sludge	4/2/2020	3.473	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/3/2020	3.796	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/4/2020	4.449	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/4/2020	7.537	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/5/2020	6.806	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/6/2020	8.042	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/7/2020	7.905	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/9/2020	3.319	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/10/2020	21.276	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/11/2020	4.101	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/12/2020	5.899	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/13/2020	4.739	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/14/2020	9.677	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/15/2020	2.196	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	4/15/2020	4.042	ng/mL	Individual	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	March-April 2020	3.553	ng/mL	Composite	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	March-April 2020	2.86	ng/mL	Composite	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	March-April 2020	4.451	ng/mL	Composite	Nason et al. 2021
Azithromycin	83905-01-5	Previous	Primary sludge	March-April 2020	4.129	ng/mL	Composite	Nason et al. 2021
Carbamazepine	298-46-4	Previous	Class B	Not specified	100	µg/kg	Max[a]	Liu et al. 2021
Ciprofloxacin	85721-33-1	Previous	Primary sludge	Not specified	1835	ng/g dw	Mean	Li et al. 2021
Ciprofloxacin	85721-33-1	Previous	Class A	Not specified	1	mg/kg dw	Individual	Sidhu et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/19/2020	2.014	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/20/2020	0.882	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/20/2020	1.485	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/21/2020	0.833	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/22/2020	0.779	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Cocaine	50-36-2	Previous	Primary sludge	3/23/2020	0.62	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/24/2020	1.162	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/25/2020	0.565	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/26/2020	0.65	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/28/2020	0.735	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/28/2020	0.681	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/29/2020	0.857	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/30/2020	0.676	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	3/31/2020	0.546	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/1/2020	0.654	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/2/2020	0.8	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/3/2020	0.711	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/4/2020	0.681	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/4/2020	0.876	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/5/2020	0.946	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/6/2020	0.872	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/7/2020	0.583	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/9/2020	0.686	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/10/2020	1.156	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/11/2020	0.877	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/12/2020	0.727	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/13/2020	0.684	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/14/2020	1.423	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/15/2020	0.459	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	4/15/2020	0.524	ng/mL	Individual	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	March-April 2020	0.826	ng/mL	Composite	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	March-April 2020	0.53	ng/mL	Composite	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Cocaine	50-36-2	Previous	Primary sludge	March-April 2020	0.714	ng/mL	Composite	Nason et al. 2021
Cocaine	50-36-2	Previous	Primary sludge	March-April 2020	0.944	ng/mL	Composite	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/19/2020	0.167	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/20/2020	0.122	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/20/2020	0.074	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/21/2020	0.1	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/22/2020	0.097	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/23/2020	0.232	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/24/2020	0.118	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/25/2020	0.097	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/26/2020	0.088	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/28/2020	0.074	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/28/2020	0.094	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/29/2020	0.105	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/30/2020	0.069	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	3/31/2020	0.076	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/1/2020	0.097	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/2/2020	0.083	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/3/2020	0.08	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/4/2020	0.096	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/4/2020	0.138	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/5/2020	0.098	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/6/2020	0.109	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/7/2020	0.094	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/9/2020	0.078	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/10/2020	0.097	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/11/2020	0.098	ng/mL	Individual	Nason et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Codeine	76-57-3	Previous	Primary sludge	4/12/2020	0.116	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/13/2020	0.087	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/14/2020	0.093	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/15/2020	0.1	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	4/15/2020	0.143	ng/mL	Individual	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	March-April 2020	0.084	ng/mL	Composite	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	March-April 2020	0.086	ng/mL	Composite	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	March-April 2020	0.076	ng/mL	Composite	Nason et al. 2021
Codeine	76-57-3	Previous	Primary sludge	March-April 2020	0.099	ng/mL	Composite	Nason et al. 2021
Gemfibrozil	25812-30-0	Previous	Class B	Not specified	2	µg/kg	Max[a]	Liu et al. 2021
Ibuprofen	15687-27-1	Previous	Class B	Not specified	140	µg/kg	Max[a]	Liu et al. 2021
Iron	7439-89-6	Previous	Not specified	Not specified	22,000	mg/kg	Not specified	Adesanya et al. 2021
Magnesium	7439-95-4	Previous	Heat-treated granular biosolids	2014	550	ppm	Individual	Lazcano et al. 2020
Magnesium	7439-95-4	Previous	Heat-treated granular biosolids	2014	1260	ppm	Individual	Lazcano et al. 2020
Magnesium	7439-95-4	Previous	Heat-treated granular biosolids	2014	905	ppm	Individual	Lazcano et al. 2020
Magnesium	7439-95-4	Previous	Heat-treated granular biosolids	2016	780	ppm	Individual	Lazcano et al. 2020
Magnesium	7439-95-4	Previous	Heat-treated granular biosolids	2018	1210	ppm	Individual	Lazcano et al. 2020
Magnesium	7439-95-4	Previous	Heat-treated granular biosolids	2014	1175	ppm	Individual	Lazcano et al. 2020
Magnesium	7439-95-4	Previous	Heat-treated granular biosolids	2014	1055	ppm	Individual	Lazcano et al. 2020
Magnesium	7439-95-4	Previous	Biosolids blended with sawdust, bark	2014	430	ppm	Individual	Lazcano et al. 2020
Magnesium	7439-95-4	Previous	Composted biosolids with woodchips	2014	1145	ppm	Individual	Lazcano et al. 2020
Magnesium	7439-95-4	Previous	Composted biosolids with woodchips	2014	980	ppm	Individual	Lazcano et al. 2020
Magnesium	7439-95-4	Previous	Composted biosolids with municipal solid waste	2014	320	ppm	Individual	Lazcano et al. 2020

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Magnesium	7439-95-4	Previous	Composted biosolids with residential yard trimmings	2014	1235	ppm	Individual	Lazcano et al. 2020
Magnesium	7439-95-4	Previous	Composted biosolids with plant materials	2014	1020	ppm	Individual	Lazcano et al. 2020
Manganese	7439-96-5	Previous	Not specified	Not specified	500	mg/kg	Not specified	Adesanya et al. 2021
Miconazole	22916-47-8	Previous	Primary sludge	Not specified	10382	ng/g	Mean	Li et al. 2021
Naproxen	22204-53-1	Previous	Class B	Not specified	25	µg/kg	Max[a]	Liu et al. 2021
Ofloxacin	82419-36-1	Previous	Primary sludge	Not specified	148	ng/g	Mean	Li et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/19/2020	0.114	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/20/2020	0.108	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/20/2020	0.092	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/21/2020	0.092	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/22/2020	0.076	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/23/2020	0.097	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/24/2020	0.099	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/25/2020	0.079	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/26/2020	0.083	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/28/2020	0.067	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/28/2020	0.073	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/29/2020	0.091	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/30/2020	0.074	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	3/31/2020	0.074	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/1/2020	0.084	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/2/2020	0.078	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/3/2020	0.081	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/4/2020	0.088	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/4/2020	0.093	ng/mL	Individual	Nason et al. 2021

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Oxycodone	76-42-6	Previous	Primary sludge	4/5/2020	0.073	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/6/2020	0.102	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/7/2020	0.087	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/9/2020	0.071	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/10/2020	0.134	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/11/2020	0.078	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/12/2020	0.108	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/13/2020	0.098	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/14/2020	0.092	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/15/2020	0.083	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	4/15/2020	0.081	ng/mL	Individual	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	March-April 2020	0.071	ng/mL	Composite	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	March-April 2020	0.095	ng/mL	Composite	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	March-April 2020	0.093	ng/mL	Composite	Nason et al. 2021
Oxycodone	76-42-6	Previous	Primary sludge	March-April 2020	0.103	ng/mL	Composite	Nason et al. 2021
Perfluorobutanesulfonic acid	375-73-5	Previous	Class B	7/16/2020	1.9	µg/kg	Individual	Pepper et al. 2021
Perfluorobutanesulfonic acid	375-73-5	Previous	Class B	7/16/2020	1.4	µg/kg	Individual	Pepper et al. 2021
Perfluorobutanesulfonic acid	375-73-5	Previous	Class B	7/27/2020	6.5	µg/kg	Individual	Pepper et al. 2021
Perfluorobutanesulfonic acid	375-73-5	Previous	Class B	7/27/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorobutanesulfonic acid	375-73-5	Previous	Heat-treated granular biosolids	2014	1.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanesulfonic acid	375-73-5	Previous	Heat-treated granular biosolids	2014	3	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanesulfonic acid	375-73-5	Previous	Heat-treated granular biosolids	2014	0.4	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanesulfonic acid	375-73-5	Previous	Heat-treated granular biosolids	2016	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanesulfonic acid	375-73-5	Previous	Heat-treated granular biosolids	2018	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanesulfonic acid	375-73-5	Previous	Heat-treated granular biosolids	2014	2.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanesulfonic acid	375-73-5	Previous	Heat-treated granular biosolids	2014	0.5	µg/kg	Individual	Lazcano et al. 2020

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Perfluorobutanesulfonic acid	375-73-5	Previous	Biosolids blended with sawdust, bark	2014	4.4	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanesulfonic acid	375-73-5	Previous	Composted biosolids with woodchips	2014	41.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanesulfonic acid	375-73-5	Previous	Composted biosolids with woodchips	2014	19.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanesulfonic acid	375-73-5	Previous	Composted biosolids with municipal solid waste	2014	3.8	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanesulfonic acid	375-73-5	Previous	Composted biosolids with residential yard trimmings	2014	38.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanesulfonic acid	375-73-5	Previous	Composted biosolids with plant materials	2014	33.2	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Heat-treated granular biosolids	2014	0.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Heat-treated granular biosolids	2014	0.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Heat-treated granular biosolids	2014	3.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Heat-treated granular biosolids	2016	2.8	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Heat-treated granular biosolids	2018	2.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Heat-treated granular biosolids	2014	0.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Heat-treated granular biosolids	2014	0.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Biosolids blended with sawdust, bark	2014	1.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Composted biosolids with woodchips	2014	6.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Composted biosolids with woodchips	2014	3.4	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Composted biosolids with municipal solid waste	2014	3.2	µg/kg	Individual	Lazcano et al. 2020
Perfluorobutanoic acid	375-22-4	Previous	Composted biosolids with residential yard trimmings	2014	5.2	µg/kg	Individual	Lazcano et al. 2020

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Perfluorobutanoic acid	375-22-4	Previous	Composted biosolids with plant materials	2014	3.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Class B	7/16/2020	12	µg/kg	Individual	Pepper et al. 2021
Perfluorodecanoic acid	335-76-2	Previous	Class B	7/16/2020	13	µg/kg	Individual	Pepper et al. 2021
Perfluorodecanoic acid	335-76-2	Previous	Class B	7/27/2020	12	µg/kg	Individual	Pepper et al. 2021
Perfluorodecanoic acid	335-76-2	Previous	Class B	7/27/2020	12	µg/kg	Individual	Pepper et al. 2021
Perfluorodecanoic acid	335-76-2	Previous	Heat-treated granular biosolids	2014	1.4	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Heat-treated granular biosolids	2014	14.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Heat-treated granular biosolids	2014	5.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Heat-treated granular biosolids	2016	2.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Heat-treated granular biosolids	2018	2.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Heat-treated granular biosolids	2014	5.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Heat-treated granular biosolids	2014	1.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Biosolids blended with sawdust, bark	2014	4.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Composted biosolids with woodchips	2014	20.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Composted biosolids with woodchips	2014	11.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Composted biosolids with municipal solid waste	2014	2.2	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Composted biosolids with residential yard trimmings	2014	9.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorodecanoic acid	335-76-2	Previous	Composted biosolids with plant materials	2014	11.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Class B	7/16/2020	8	µg/kg	Individual	Pepper et al. 2021
Perfluorododecanoic acid	307-55-1	Previous	Class B	7/16/2020	7.3	µg/kg	Individual	Pepper et al. 2021
Perfluorododecanoic acid	307-55-1	Previous	Class B	7/27/2020	7.4	µg/kg	Individual	Pepper et al. 2021
Perfluorododecanoic acid	307-55-1	Previous	Class B	7/27/2020	6.5	µg/kg	Individual	Pepper et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Perfluorododecanoic acid	307-55-1	Previous	Heat-treated granular biosolids	2014	1.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Heat-treated granular biosolids	2014	7.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Heat-treated granular biosolids	2014	4.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Heat-treated granular biosolids	2016	1.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Heat-treated granular biosolids	2018	1.42	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Heat-treated granular biosolids	2014	3.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Heat-treated granular biosolids	2014	1.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Biosolids blended with sawdust, bark	2014	1.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Composted biosolids with woodchips	2014	7.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Composted biosolids with woodchips	2014	4.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Composted biosolids with municipal solid waste	2014	1	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Composted biosolids with residential yard trimmings	2014	6.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorododecanoic acid	307-55-1	Previous	Composted biosolids with plant materials	2014	4.8	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Class B	7/16/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluoroheptanoic acid	375-85-9	Previous	Class B	7/16/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluoroheptanoic acid	375-85-9	Previous	Class B	7/27/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluoroheptanoic acid	375-85-9	Previous	Class B	7/27/2020	0.15 J	µg/kg	Individual	Pepper et al. 2021
Perfluoroheptanoic acid	375-85-9	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Heat-treated granular biosolids	2016	3.75	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Heat-treated granular biosolids	2018	3.02	µg/kg	Individual	Lazcano et al. 2020

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Perfluoroheptanoic acid	375-85-9	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Biosolids blended with sawdust, bark	2014	0.4	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Composted biosolids with woodchips	2014	6.5	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Composted biosolids with woodchips	2014	5.3	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Composted biosolids with municipal solid waste	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Composted biosolids with residential yard trimmings	2014	4.4	µg/kg	Individual	Lazcano et al. 2020
Perfluoroheptanoic acid	375-85-9	Previous	Composted biosolids with plant materials	2014	4.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Class B	7/16/2020	3.7	µg/kg	Individual	Pepper et al. 2021
Perfluorohexanesulfonic acid	355-46-4	Previous	Class B	7/16/2020	3.5	µg/kg	Individual	Pepper et al. 2021
Perfluorohexanesulfonic acid	355-46-4	Previous	Class B	7/27/2020	15	µg/kg	Individual	Pepper et al. 2021
Perfluorohexanesulfonic acid	355-46-4	Previous	Class B	7/27/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorohexanesulfonic acid	355-46-4	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Heat-treated granular biosolids	2014	0.42	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Heat-treated granular biosolids	2016	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Heat-treated granular biosolids	2018	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Biosolids blended with sawdust, bark	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Composted biosolids with woodchips	2014	1.9	µg/kg	Individual	Lazcano et al. 2020

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Perfluorohexanesulfonic acid	355-46-4	Previous	Composted biosolids with woodchips	2014	0.45	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Composted biosolids with municipal solid waste	2014	0.82	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Composted biosolids with residential yard trimmings	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanesulfonic acid	355-46-4	Previous	Composted biosolids with plant materials	2014	0.47	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Class B	7/16/2020	4.2	µg/kg	Individual	Pepper et al. 2021
Perfluorohexanoic acid	307-24-4	Previous	Class B	7/16/2020	4	µg/kg	Individual	Pepper et al. 2021
Perfluorohexanoic acid	307-24-4	Previous	Class B	7/27/2020	4.1	µg/kg	Individual	Pepper et al. 2021
Perfluorohexanoic acid	307-24-4	Previous	Class B	7/27/2020	2	µg/kg	Individual	Pepper et al. 2021
Perfluorohexanoic acid	307-24-4	Previous	Heat-treated granular biosolids	2014	2.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Heat-treated granular biosolids	2014	3.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Heat-treated granular biosolids	2014	61	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Heat-treated granular biosolids	2016	53.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Heat-treated granular biosolids	2018	41.63	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Heat-treated granular biosolids	2014	3.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Heat-treated granular biosolids	2014	0.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Biosolids blended with sawdust, bark	2014	8.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Composted biosolids with woodchips	2014	33	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Composted biosolids with woodchips	2014	17.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Composted biosolids with municipal solid waste	2014	6.4	µg/kg	Individual	Lazcano et al. 2020
Perfluorohexanoic acid	307-24-4	Previous	Composted biosolids with residential yard trimmings	2014	21.5	µg/kg	Individual	Lazcano et al. 2020

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Perfluorohexanoic acid	307-24-4	Previous	Composted biosolids with plant materials	2014	11.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Class B	7/16/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorononanoic acid	375-95-1	Previous	Class B	7/16/2020	2	µg/kg	Individual	Pepper et al. 2021
Perfluorononanoic acid	375-95-1	Previous	Class B	7/27/2020	2	µg/kg	Individual	Pepper et al. 2021
Perfluorononanoic acid	375-95-1	Previous	Class B	7/27/2020	1.1	µg/kg	Individual	Pepper et al. 2021
Perfluorononanoic acid	375-95-1	Previous	Heat-treated granular biosolids	2014	3.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Heat-treated granular biosolids	2014	0.8	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Heat-treated granular biosolids	2014	2.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Heat-treated granular biosolids	2016	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Heat-treated granular biosolids	2018	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Heat-treated granular biosolids	2014	3.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Biosolids blended with sawdust, bark	2014	2.8	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Composted biosolids with woodchips	2014	6.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Composted biosolids with woodchips	2014	8.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Composted biosolids with municipal solid waste	2014	0.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Composted biosolids with residential yard trimmings	2014	3.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorononanoic acid	375-95-1	Previous	Composted biosolids with plant materials	2014	4.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Class B	7/16/2020	34	µg/kg	Individual	Pepper et al. 2021
Perfluorooctanesulfonic acid	1763-23-1	Previous	Class B	7/16/2020	36	µg/kg	Individual	Pepper et al. 2021
Perfluorooctanesulfonic acid	1763-23-1	Previous	Class B	7/27/2020	27	µg/kg	Individual	Pepper et al. 2021
Perfluorooctanesulfonic acid	1763-23-1	Previous	Class B	7/27/2020	14	µg/kg	Individual	Pepper et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Perfluorooctanesulfonic acid	1763-23-1	Previous	Heat-treated granular biosolids	2014	13.4	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Heat-treated granular biosolids	2014	15.4	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Heat-treated granular biosolids	2014	88.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Heat-treated granular biosolids	2016	29.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Heat-treated granular biosolids	2018	18.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Heat-treated granular biosolids	2014	10.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Heat-treated granular biosolids	2014	2.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Biosolids blended with sawdust, bark	2014	3	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Composted biosolids with woodchips	2014	37.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Composted biosolids with woodchips	2014	10.4	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Composted biosolids with municipal solid waste	2014	3.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Composted biosolids with residential yard trimmings	2014	5.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanesulfonic acid	1763-23-1	Previous	Composted biosolids with plant materials	2014	10.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Class B	7/16/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorooctanoic acid	335-67-1	Previous	Class B	7/16/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorooctanoic acid	335-67-1	Previous	Class B	7/27/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorooctanoic acid	335-67-1	Previous	Class B	7/27/2020	1.2	µg/kg	Individual	Pepper et al. 2021
Perfluorooctanoic acid	335-67-1	Previous	Heat-treated granular biosolids	2014	1.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Heat-treated granular biosolids	2014	6.9	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Heat-treated granular biosolids	2014	6.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Heat-treated granular biosolids	2016	2.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Heat-treated granular biosolids	2018	2.72	µg/kg	Individual	Lazcano et al. 2020

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Perfluorooctanoic acid	335-67-1	Previous	Heat-treated granular biosolids	2014	3.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Heat-treated granular biosolids	2014	1.4	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Biosolids blended with sawdust, bark	2014	11.4	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Composted biosolids with woodchips	2014	26	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Composted biosolids with woodchips	2014	19.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Composted biosolids with municipal solid waste	2014	8.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Composted biosolids with residential yard trimmings	2014	19	µg/kg	Individual	Lazcano et al. 2020
Perfluorooctanoic acid	335-67-1	Previous	Composted biosolids with plant materials	2014	21.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Class B	7/16/2020	3.2	µg/kg	Individual	Pepper et al. 2021
Perfluorotetradecanoic acid	376-06-7	Previous	Class B	7/16/2020	3.3	µg/kg	Individual	Pepper et al. 2021
Perfluorotetradecanoic acid	376-06-7	Previous	Class B	7/27/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorotetradecanoic acid	376-06-7	Previous	Class B	7/27/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorotetradecanoic acid	376-06-7	Previous	Heat-treated granular biosolids	2014	1.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Heat-treated granular biosolids	2014	2.4	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Heat-treated granular biosolids	2014	1.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Heat-treated granular biosolids	2016	0.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Heat-treated granular biosolids	2018	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Heat-treated granular biosolids	2014	1.5	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Biosolids blended with sawdust, bark	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Composted biosolids with woodchips	2014	1.6	µg/kg	Individual	Lazcano et al. 2020

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Perfluorotetradecanoic acid	376-06-7	Previous	Composted biosolids with woodchips	2014	1.2	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Composted biosolids with municipal solid waste	2014	0.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Composted biosolids with residential yard trimmings	2014	2.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorotetradecanoic acid	376-06-7	Previous	Composted biosolids with plant materials	2014	1.2	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Class B	7/16/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorotridecanoic acid	72629-94-8	Previous	Class B	7/16/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorotridecanoic acid	72629-94-8	Previous	Class B	7/27/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorotridecanoic acid	72629-94-8	Previous	Class B	7/27/2020	ND	µg/kg	Individual	Pepper et al. 2021
Perfluorotridecanoic acid	72629-94-8	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Heat-treated granular biosolids	2014	1	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Heat-treated granular biosolids	2014	1.2	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Heat-treated granular biosolids	2016	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Heat-treated granular biosolids	2018	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Heat-treated granular biosolids	2014	0.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Heat-treated granular biosolids	2014	<LOQ	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Biosolids blended with sawdust, bark	2014	0.1	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Composted biosolids with woodchips	2014	1.7	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Composted biosolids with woodchips	2014	2.3	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Composted biosolids with municipal solid waste	2014	0.6	µg/kg	Individual	Lazcano et al. 2020
Perfluorotridecanoic acid	72629-94-8	Previous	Composted biosolids with residential yard trimmings	2014	2.5	µg/kg	Individual	Lazcano et al. 2020

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Perfluorotridecanoic acid	72629-94-8	Previous	Composted biosolids with plant materials	2014	1.3	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Class B	7/16/2020	2.3	µg/kg	Individual	Pepper et al. 2021
Perfluoroundecanoic acid	2058-94-8	Previous	Class B	7/16/2020	2.1	µg/kg	Individual	Pepper et al. 2021
Perfluoroundecanoic acid	2058-94-8	Previous	Class B	7/27/2020	2.4	µg/kg	Individual	Pepper et al. 2021
Perfluoroundecanoic acid	2058-94-8	Previous	Class B	7/27/2020	1.8	µg/kg	Individual	Pepper et al. 2021
Perfluoroundecanoic acid	2058-94-8	Previous	Heat-treated granular biosolids	2014	2.1	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Heat-treated granular biosolids	2014	2.9	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Heat-treated granular biosolids	2014	3.5	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Heat-treated granular biosolids	2016	4.1	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Heat-treated granular biosolids	2018	2.4	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Heat-treated granular biosolids	2014	4.3	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Heat-treated granular biosolids	2014	0.6	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Biosolids blended with sawdust, bark	2014	1.3	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Composted biosolids with woodchips	2014	5.6	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Composted biosolids with woodchips	2014	8	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Composted biosolids with municipal solid waste	2014	1	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Composted biosolids with residential yard trimmings	2014	4.2	µg/kg	Individual	Lazcano et al. 2020
Perfluoroundecanoic acid	2058-94-8	Previous	Composted biosolids with plant materials	2014	4	µg/kg	Individual	Lazcano et al. 2020
Silver	7440-22-4	Previous	Mixed primary and secondary	1996	60	mg/kg	Mean[a,b]	Taylor et al. 2020
Silver	7440-22-4	Previous	Mixed primary and secondary	2017-2018	2.5	mg/kg	Mean[a,b]	Taylor et al. 2020
Triclocarban	101-20-2	Previous	Primary sludge	Not specified	86	ng/g	Mean	Li et al. 2021
Triclosan	3380-34-5	Previous	Primary sludge	Not specified	6165	ng/g	Mean	Li et al. 2021

Chemical	CAS number	New or previous	Biosolid type	Date(s) of sample collection	Biosolids concentr-ation	Biosolids units	Data type (individual, mean, median, min, max)	Source
Triclosan	3380-34-5	Previous	Mix of fermented primary sludge and thickened waste activated sludge	Not specified	4450	ng/g dry	Mean	Kor-Bicakci et al. 2020
Triclosan	3380-34-5	Previous	Mix of fermented primary sludge and thickened waste activated sludge	Not specified	6760-8240	ng/g dry	Range	Kor-Bicakci et al. 2020
Triclosan	3380-34-5	Previous	Mix of fermented primary sludge and thickened waste activated sludge	Not specified	1700-3530	ng/g dry	Range	Kor-Bicakci et al. 2020
Triclosan	3380-34-5	Previous	Un-pretreated raw mixed sludge	Not specified	4320	ng/g dry	Mean	Kor-Bicakci et al. 2020
Triclosan	3380-34-5	Previous	Mixed primary and secondary BNR sludge	Apr 2018-Apr 2019	111-214	ng/g	Range	Abbott and Eskicioglu 2020
Triclosan	3380-34-5	Previous	Undigested sludge	Apr 2018-Apr 2019	3963	ng/g	Mean	Abbott and Eskicioglu 2020
Triclosan	3380-34-5	Previous	Undigested sludge	Apr 2018-Apr 2019	2323-6127	ng/g	Range	Abbott and Eskicioglu 2020

Notes:
CAS = Chemical Abstracts Service; LOQ = Limit of quantitation; ND = Non-detect; New = Newly identified chemical; Previous = Previously identified chemical; Previous* = Chemical was identified during the curation process; J = Chemical was detected above the method detection limit but below the method reporting limit
[a] Approximate concentration
[b] Authors found that Ag in biosolids was in the form of Ag2S nanoparticles

Appendix D: Human Health Toxicity Values for Chemicals Found in Biosolids

Table D-1. Human Health Toxicity Values from EPA's Integrated Risk Information System (IRIS) for Chemicals Newly and Previously Identified in Biosolids

Chemical	CAS number	New or previous	RfD mg/kg/day	Date of last update	RfC mg/m^3	Date of last update	CSF mg/kg/day	Date of last update	IUR µg/m^3	Date of last update
(E)-1,2-Dichloroethylene	156-60-5	Previous*	0.02	9/30/2010	—	—	—	—	—	—
1,1,1-Trichloroethane	71-55-6	Previous*	2	9/28/2007	5	9/28/2007	—	—	—	—
1,1,1-Trichloroethane	71-55-6	Previous*	7	9/28/2007	5	9/28/2007	—	—	—	—
1,1,1-Trichloroethane	71-55-6	Previous*	—	—	5	9/28/2007	—	—	—	—
1,1,1-Trichloroethane	71-55-6	Previous*	—	—	6	9/28/2007	—	—	—	—
1,1,1-Trichloroethane	71-55-6	Previous*	—	—	7	9/28/2007	—	—	—	—
1,1,1-Trichloroethane	71-55-6	Previous*	—	—	7	9/28/2007	—	—	—	—
1,1,1-Trichloroethane	71-55-6	Previous*	—	—	9	9/28/2007		—	—	—
1,2,4-Trichlorobenzene	120-82-1	Previous*	0.01	5/1/1992	—	—	—	—	—	—
1,2-Dichlorobenzene	95-50-1	Previous*	0.09	8/1/1989	—	—	—	—	—	—
1,2-Dichloropropane	78-87-5	Previous*	—	—	0.004	12/1/1991	—	—	—	—
1,4-Dioxane	123-91-1	Previous*	0.03	8/11/2010	0.03	9/20/2013	0.1	—	0.000005	
2-(2,4,5-Trichlorophenoxy)propionic acid	93-72-1	Previous*	0.008	9/7/1988	—	—	—	—	—	—
2,4,5-Trichlorophenoxyacetic acid	93-76-5	Previous*	0.01	9/7/1988	—	—	—	—	—	—
2-Hexanone	591-78-6	Previous*	0.005	9/25/2009	0.03	9/25/2009	—	—	—	—
2-Methyl-1-propanol	78-83-1	Previous*	0.3	3/31/1987	—	—	—	—	—	—
4-Methyl-2-pentanone	108-10-1	Previous*	—	—	3	4/25/2003	—	—	—	—
Acenaphthene	83-32-9	Previous*	0.06	11/1/1990	—	—	—	—	—	—
Aldrin	309-00-2	Previous*	0.00003	3/31/1987	—	—	17	9/30/1987	0.0049	9/30/1987
Allyl alcohol	107-18-6	Previous*	0.005	1/31/1987	—	—	—	—	—	—
Allyl chloride	107-05-1	Previous*	—	—	0.001	12/1/1991	—	—	—	—
alpha-1,2,3,4,5,6-Hexachlorocyclo hexane	319-84-6	Previous*	—	—	—	—	6.3	3/31/1987	0.0018	3/31/1987
Aroclor 1254	11097-69-1	Previous*	0.00002	10/1/1994	—	—	—	—	—	—
Azinphos-methyl	86-50-0	Previous*	0.001	9/26/1988	—	—	—	—	—	—

Chemical	CAS number	New or previous	RfD mg/kg/day	Date of last update	RfC mg/m³	Date of last update	CSF mg/kg/day	Date of last update	IUR µg/m³	Date of last update
Benzene	71-43-2	Previous*	0.004	4/17/2003	0.03	4/17/2003	0.015 to 0.055	1/9/2000	0.0000022 to 0.0000078	1/9/2000
Benzyl butyl phthalate	85-68-7	Previous*	0.2	9/1/1989	—	—	—	—	—	—
beta-Hexachlorocyclohexane	319-85-7	Previous*	—	—	—	—	1.8	9/30/1987	0.00053	9/30/1987
Biphenyl	92-52-4	Previous*	0.5	8/27/2013	—	—	0.008	8/27/2013	—	—
Bisphenol A	80-05-7	Previous*	0.05	9/26/1988	—	—	—	—	—	—
Captan	133-06-2	Previous*	0.13	3/1/1989	—	—	—	—	—	—
Carbon disulfide	75-15-0	Previous*	0.1	9/30/1987	0.7	8/1/1995	—	—	—	—
Chlorobenzene	108-90-7	Previous*	0.02	8/1/1989	—	—	—	—	—	—
Chlorobenzilate	510-15-6	Previous*	0.02	12/1/1989	—	—	—	—	—	—
Chloroethane	75-00-3	Previous*	—	—	10	4/1/1991	—	—	—	—
Chloromethane	74-87-3	Previous*	—	—	0.09	7/17/2001	—	—	—	—
Cyanide	57-12-5	Previous*	0.00063	9/28/2010	—	—	—	—	—	—
Dichlorodiphenyltrichloroethane	50-29-3	Previous*	0.0005	3/31/1987	—	—	0.34	8/22/1988	0.000097	—
Dichloromethane	75-09-2	Previous*	0.006	11/18/2011	0.6	11/18/2011	0.002	11/18/2011	1 x 10^-8	11/18/2011
Dieldrin	60-57-1	Previous*	0.00005	9/7/1988	—	—	16	9/7/1988	0.0046	9/7/1988
Endrin	72-20-8	Previous*	0.0003	9/7/1988	—	—	—	—	—	—
EPN	2104-64-5	Previous*	0.00001	9/30/1987	—	—	—	—	—	—
Heptachlor	76-44-8	Previous*	0.0005	9/30/1987	—	—	4.5	9/30/1987	0.0013	9/30/1987
Lindane	58-89-9	Previous*	0.0003	1/31/1987	—	—	—	—	—	—
Methacrylonitrile	126-98-7	Previous*	0.0001	9/7/1988	—	—	—	—	—	—
Methyl ethyl ketone	78-93-3	Previous*	0.6	9/26/2003	5	9/26/2003	—	—	—	—
Naled	300-76-5	Previous*	0.002	3/31/1987	—	—	—	—	—	—
Nitrobenzene	98-95-3	Previous*	0.002	2/6/2009	0.009	2/6/2009	—	—	0.00004	2/6/2009
o-Cresol	95-48-7	Previous*	0.05	9/7/1988	—	—	—	—	—	—
p,p'-DDD	72-54-8	Previous*	—	—	—	—	0.24	8/22/1988	—	—
p,p'-DDE	72-55-9	Previous*	—	—	—	—	0.34	8/22/1988	—	—
Pentachlorophenol	87-86-5	Previous*	0.005	9/30/2010	—	—	0.4	9/30/2010	—	—

Chemical	CAS number	New or previous	RfD mg/kg/day	Date of last update	RfC mg/m^3	Date of last update	CSF mg/kg/day	Date of last update	IUR $\mu g/m^3$	Date of last update
Strontium	7440-24-6	Previous*	0.6	10/1/1992	—	—	—	—	—	—
Trichloroethylene	79-01-6	Previous*	0.0005	9/28/2011	0.002	9/28/2011	0.046	9/28/2011	0.0000041	9/28/2011
Trichlorofluoromethane	75-69-4	Previous*	0.3	1/31/1987	—	—	—	—	—	—
Trifluralin	1582-09-8	Previous*	0.0075	7/1/1989	—	—	0.0077	8/22/1988	—	—

Notes:
CAS = Chemical Abstracts Service; Previous* = Chemical was identified during the curation process; RfD = Reference dose; RfC = Reference concentration; CSF = Cancer slope factor; IUR = Inhalation unit risk

Table D-2. Human Health Toxicity Values from EPA's Human Health Benchmarks for Pesticides (HHBP) for Chemicals Newly and Previously Identified in Biosolids

Chemical	CAS number	New or previous	PAD or RfD	Units	Date	Notes
Azinphos-methyl	86-50-0	Previous*	0.0015	mg/kg/day	7/31/2006	Chronic or lifetime PAD
Azinphos-methyl	86-50-0	Previous*	0.003	mg/kg/day	7/31/2006	Acute or one day PAD
Bensulide	741-58-2	Previous*	0.005	mg/kg/day	6/16/1999	Chronic or lifetime PAD
Bensulide	741-58-2	Previous*	0.15	mg/kg/day	6/16/1999	Acute or one day PAD
Captan	133-06-2	Previous*	0.13	mg/kg/day	9/26/2018	Chronic or lifetime PAD
Captan	133-06-2	Previous*	0.1	mg/kg/day	9/26/2018	Acute or one day PAD
Clomazone	81777-89-1	Previous*	0.84	mg/kg/day	10/23/2018	Chronic or lifetime PAD
Clomazone	81777-89-1	Previous*	1	mg/kg/day	10/23/2018	Acute or one day PAD
Dicrotophos	141-66-2	Previous*	0.00003	mg/kg/day	9/15/2015	Chronic or lifetime PAD
Dicrotophos	141-66-2	Previous*	0.00007	mg/kg/day	9/15/2015	Acute or one day PAD
Diphenylamine	122-39-4	Previous*	0.1	mg/kg/day	8/30/2018	Chronic or lifetime PAD
Mevinphos	7786-34-7	Previous*	0.000025	mg/kg/day	5/17/2000	Chronic or lifetime PAD
Mevinphos	7786-34-7	Previous*	0.0003	mg/kg/day	5/17/2000	Acute or one day PAD
Naled	300-76-5	Previous*	0.0006	mg/kg/day	6/19/2020	Chronic or lifetime PAD
Naled	300-76-5	Previous*	0.0032	mg/kg/day	6/19/2020	Acute or one day PAD
Fipronil	120068-37-3	Previous	0.025	mg/kg/day	3/20/2020	Acute or one day PAD (RfD) for the general population
Fipronil	120068-37-3	Previous	0.0002	mg/kg/day	3/20/2020	Chronic or lifetime PAD (RfD) for children
Oxytetracycline	79-57-2	Previous	0.1	mg/kg/day	11/20/2018	Chronic dietary PAD, all populations
Oxytetracycline	79-57-2	Previous	0.1	mg/kg/day	11/20/2018	Incidental oral, short-term cPAD
Thiabendazole	148-79-8	Previous	0.5	mg/kg/day	3/28/2019	Acute dietary, all populations
Thiabendazole	148-79-8	Previous	0.1	mg/kg/day	3/28/2019	Chronic dietary
Trichlorfon	52-68-6	Previous	0.00007	mg/kg/day	6/19/2020	Acute or one day PAD (RfD) for the general population
Trichlorfon	52-68-6	Previous	0.00007	mg/kg/day	6/19/2020	Chronic or lifetime PAD (RfD) for children

Notes:
CAS = Chemical Abstracts Service; PAD = Population adjusted dose; RfD = Reference dose; Previous = Previously identified chemical; Previous* = Chemical was identified during the curation process

Table D-3. EPA's Provisional Peer Reviewed Toxicity Values (PPRTVs) for Chemicals Newly and Previously Identified in Biosolids

Chemical	CAS number	New or previous	RfD mg/kg/day	RfC mg/m^3	CSF mg/kg/day	Date of last revision	Notes
(E)-1,2-Dichloroethylene	156-60-5	Previous*	—	0.04	—	10/15/2020	RfC is chronic
(E)-1,2-Dichloroethylene	156-60-5	Previous*	—	0.4*	—	10/15/2020	RfC is subchronic
1,2,3-Trichlorobenzene	87-61-6	Previous*	0.008	—	—	9/11/2009	Chronic RfD
1,2-Dichloropropane	78-87-5	Previous*	0.04	0.004	0.037	9/29/2016	OSF and URF
1,4-Dinitrobenzene	100-25-4	Previous*	0.0001	—	—	6/16/2006	Chronic RfD
1,4-Dinitrobenzene	100-25-4	Previous*	0.001*	—	—	6/16/2006	Subchronic RfD
2,6-Dinitrotoluene	606-20-2	Previous*	—	—	1.5	4/10/2013	Screening values available
Acenaphthene	83-32-9	Previous*	0.2*	—	—	4/6/2011	RfD is subchronic
Aldrin	309-00-2	Previous*	0.00004*	—	—	3/14/2005	RfD is subchronic
Allyl alcohol	107-18-6	Previous*	0.004*	0.001*	—	9/29/2009	RfD and RfC are subchronic values
Benzene	71-43-2	Previous*	0.01*	0.08*	—	9/29/2009	RfD and RfC are subchronic
Benzenethiol	108-98-5	Previous*	0.001	—	—	4/1/2011	
Benzenethiol	108-98-5	Previous*	0.01*	—	—	4/1/2011	RfD is subchronic
Benzyl alcohol	100-51-6	Previous*	0.1	—	—	9/30/2009	Chronic
Benzyl alcohol	100-51-6	Previous*	0.3*	—	—	9/30/2009	Subchronic
Benzyl butyl phthalate	85-68-7	Previous*	—	—	0.0019	10/1/2002	
Biphenyl	92-52-4	Previous*	0.1*	—	—	4/4/2011	RfD is subchronic
Chlorobenzene	108-90-7	Previous*	0.07*	0.05	—	10/12/2006	Chronic RfD and RfC
Chlorobenzene	108-90-7	Previous*	—	0.5*	—	10/12/2006	Subchronic RfC
Chloroethane	75-00-3	Previous*	0.1*	4*	—	7/24/2007	RfD and RfC are subchronic
Chloromethane	74-87-3	Previous*	—	3*	—	12/4/2012	RfC is subchronic
Dibenzofuran	132-64-9	Previous*	0.004*	—	—	6/11/2007	RfD is subchronic
Methacrylonitrile	126-98-7	Previous*	0.05*	0.03	—	11/20/2012	RfD is subchronic; RfC is chronic
Methacrylonitrile	126-98-7	Previous*	—	0.3*	—	11/20/2012	RfC is subchronic
o-Cresol	95-48-7	Previous*	0.2*	—	—	3/19/2014	RfD is subchronic

Chemical	CAS number	New or previous	RfD mg/kg/day	RfC mg/m^3	CSF mg/kg/day	Date of last revision	Notes
p,p'-DDE	72-55-9	Previous*	0.0003*	—	—	9/26/2017	RfD is subchronic
Trichlorofluoromethane	75-69-4	Previous*	—	1*	—	9/15/2009	RfC is subchronic

Notes:
CAS = Chemical Abstracts Service; Previous* = Chemical was identified during the curation process; RfD = Reference dose; RfC = Reference concentration; CSF = Cancer slope factor

Table D-4. Human Health Toxicity Values from EPA's Health Effects Support Documents (HESDs) for Chemicals Newly and Previously Identified in Biosolids

Chemical	CAS number	New or previous	Oral MRL (acute)	Units	Oral MRL (intermediate)	Units	Oral MRL (chronic)	Units	Inhalation MRL (acute)	Units	Inhalation MRL (intermediate)	Units	Inhalation MRL (chronic)	Units	Date of last revision
(E)-1,2-Dichloroethylene	156-60-5	Previous*	—	—	0.2	mg/kg/day	—	—	0.2	ppm	0.2	ppm	—	—	8/1/1996
1,1,1-Trichloroethane	71-55-6	Previous*	—	—	20	mg/kg/day	—	—	2	ppm	0.7	ppm	—	—	7/1/2006
1,2,4-Trichlorobenzene	120-82-1	Previous*	—	—	0.1	mg/kg/day	0.1	mg/kg/day	—	—	—	—	—	—	10/1/2014
1,2-Dichlorobenzene	95-50-1	Previous*	0.7	mg/kg/day	0.6	mg/kg/day	0.3	mg/kg/day	—	—	—	—	—	—	8/1/2006
1,2-Dichloropropane	78-87-5	Previous*	0.3	mg/kg/day	0.07	mg/kg/day	—	—	0.02	ppm	2	ppm	—	—	11/1/2021
1,4-Dioxane	123-91-1	Previous*	5	mg/kg/day	0.5	mg/kg/day	0.1	mg/kg/day	2	ppm	0.2	ppm	0.03	ppm	4/1/2012
2,6-Dinitrotoluene	606-20-2	Previous*	0.09	mg/kg/day	0.004	mg/kg/day	—	—	—	—	—	—	—	—	2/1/2016
2-Hexanone	591-78-6	Previous*	—	—	—	—	0.05	mg/kg/day	—	—	—	—	—	—	2/1/2020
Acenaphthene	83-32-9	Previous*	—	—	0.6	mg/kg/day	—	—	—	—	—	—	—	—	8/1/1995
Aldrin	309-00-2	Previous*	2	µg/kg/day	—	—	0.04	µg/kg/day	—	—	—	—	—	—	7/1/2021
alpha-1,2,3,4,5,6-Hexachloro cyclohexane	319-84-6	Previous*	—	—	—	—	0.008	mg/kg/day	—	—	—	—	—	—	8/1/2005
Aroclor 1248	12672-29-6	Previous*	—	—	0.03	µg/kg/day	0.02	µg/kg/day	—	—	—	—	—	—	11/1/2000
Aroclor 1254	11097-69-1	Previous*	—	—	0.03	µg/kg/day	0.02	µg/kg/day	—	—	—	—	—	—	11/1/2000
Azinphos-methyl	86-50-0	Previous*	0.01	mg/kg/day	0.003	mg/kg/day	0.003	mg/kg/day	0.02	mg/m^3	0.01	mg/m^3	0.01	mg/m^3	9/1/2008
Benzene	71-43-2	Previous*	—	—	—	—	0.0005	mg/kg/day	0.009	ppm	0.006	ppm	0.003	ppm	8/1/2007
beta-Hexachlorocyclo hexane	319-85-7	Previous*	0.05	mg/kg/day	0.0006	mg/kg/day	—	—	—	—	—	—	—	—	8/1/2005
Carbon disulfide	75-15-0	Previous*	0.01	mg/kg/day	—	—	—	—	—	—	—	—	0.3	ppm	8/1/1996
Chlorobenzene	108-90-7	Previous*	—	—	0.07	mg/kg/day	—	—	—	—	—	—	—	—	10/1/2020
Chloroethane	75-00-3	Previous*	—	—	—	—	—	—	15	ppm	—	—	—	—	12/1/1998
Chloromethane	74-87-3	Previous*	—	—	—	—	—	—	0.5	ppm	0.2	ppm	0.05	ppm	12/1/1998

Chemical	CAS number	New or previous	Oral MRL (acute)	Units	Oral MRL (intermediate)	Units	Oral MRL (chronic)	Units	Inhalation MRL (acute)	Units	Inhalation MRL (intermediate)	Units	Inhalation MRL (chronic)	Units	Date of last revision
Chlorpyrifos	2921-88-2	Previous*	0.003	mg/kg/day	0.003	mg/kg/day	0.001	mg/kg/day	—	—	—	—	—	—	9/1/1997
Diazinon	333-41-5	Previous*	0.006	mg/kg/day	0.002	mg/kg/day	0.0007	mg/kg/day	—	—	0.01	mg/m^3	—	—	9/1/2008
Dichlorodiphenyltrichloroethane	50-29-3	Previous*	0.5[a]	µg/kg/day	0.2[a]	µg/kg/day	0.1[a]	µg/kg/day	—	—	—	—	—	—	12/1/2019
Dichloromethane	75-09-2	Previous*	0.2	mg/kg/day	—	—	0.06	mg/kg/day	0.6	ppm	0.3	ppm	0.3	ppm	9/1/2000
Dieldrin	60-57-1	Previous*	—	—	0.1	µg/kg/day	0.05	µg/kg/day	—	—	—	—	—	—	7/1/2021
Endrin	72-20-8	Previous*	0.6	µg/kg/day	0.6	µg/kg/day	0.3	µg/kg/day	—	—	—	—	—	—	3/1/2021
Heptachlor	76-44-8	Previous*	0.0006	mg/kg/day	0.0001	mg/kg/day	—	—	—	—	—	—	—	—	8/1/2007
Iodine	7553-56-2	Previous*	0.01	mg/kg/day	0.01	mg/kg/day	—	—	—	—	—	—	—	—	4/1/2004
Methyl ethyl ketone	78-93-3	Previous*	—	—	—	—	—	—	1	ppm	—	—	—	—	10/1/2020
p,p'-DDD	72-54-8	Previous*	0.0005[a]	mg/kg/day	0.0002[a]	mg/kg/day	0.0001[a]	mg/kg/day	—	—	—	—	—	—	12/1/2019
p,p'-DDE	72-55-9	Previous*	0.0005[a]	mg/kg/day	0.0002[a]	mg/kg/day	0.0001[a]	mg/kg/day	—	—	—	—	—	—	12/1/2019
Pentachlorophenol	87-86-5	Previous*	5[b]	ug/kg/day	—	—	1[b]	ug/kg/day	—	—	—	—	—	—	7/1/2021
Strontium	7440-24-6	Previous*	—	—	2	mg/kg/day	—	—	—	—	—	—	—	—	4/1/2004
Trichloroethylene	79-01-6	Previous*	—	—	0.0005	mg/kg/day	0.0005	mg/kg/day	—	—	0.0004	ppm	0.0004	ppm	6/1/2019
Acetone	67-64-1	Previous			0.6[b]	mg/kg/day	—	—	8[b]	ppm					7/1/2021
Di(2-ethylhexyl) phthalate	117-81-7	Previous	3	µg/kg/day	0.1	µg/kg/day	—	—	—	—	0.2	ppb	—	—	1/1/2022
Molybdenum	7439-98-7	Previous	—	—	0.06	mg/kg/day	—	—	—	—	—	—	2	µg/m^3	5/1/2020
Perfluorononanoic acid	375-95-1	Previous	—	—	3	ng/kg/day	—	—	—	—	—	—	—	—	3/1/2020
Tetrachloroethylene	127-18-4	Previous	0.008	mg/kg/day	0.008	mg/kg/day	0.008	mg/kg/day	0.006	ppm	0.006	ppm	0.006	ppm	6/1/2019

Notes:

CAS = Chemical Abstracts Service; Previous = Previously identified chemical; Previous* = Chemical was identified during the curation process; MRL = Minimal risk level

[a] Provisional values

[b] Draft values

Table D-5. Human Health Toxicity Values from the California Environmental Protection Agency (CalEPA) for Chemicals Newly and Previously Identified in Biosolids

Chemical	CAS number	New or previous	Inhalation REL (acute) µg/m³	Date reviewed	Inhalation REL (8-hour) µg/m³	Inhalation REL (chronic) µg/m³	Date reviewed	Unit risk (µg/m³)⁻¹	Inhalation slope factor mg/kg/day	Date reviewed [added]	Oral slope factor mg/kg/day	Date reviewed [added]
1,1,1-Trichloroethane	71-55-6	Previous*	68000	1999	—	1000	Not reported	—	—	—	—	—
1,2,3,4,6,7,8-Heptachloro dibenzo[b,d]furan	67562-39-4	Previous*	—	—	—	—	—	0.38	1300	Not reported	1300	Not reported
1,2,3,7,8,9-Hexachloro dibenzo[b,d]furan	72918-21-9	Previous*	—	—	—	—	—	0.38	13000	Not reported	13000	Not reported
1,2,3,7,8-Pentachloro dibenzo-p-dioxin	40321-76-4	Previous*	—	—	—	—	—	0.38	130000	Not reported	130000	Not reported
1,2,4-Trichlorobenzene	120-82-1	Previous*	—	—	—	—	—	—	—	—	3.6 E-3	Not reported
1,2-Dichloropropane	78-87-5	Previous*	—	—	—	—	—	0.00001	3.6 E-2	Not reported	3.6 E-2	Not reported
1,4-Dioxane	123-91-1	Previous*	3000	1999	—	3000	Not reported	0.0000077	2.7 E-2	Not reported	2.7 E-2	Not reported
Aldrin	309-00-2	Previous*	—	—	—	—	—	0.0049	17	Not reported	17	Not reported
Allyl chloride	107-05-1	Previous*	—	—	—	—	—	0.000006	0.021	Not reported	0.021	Not reported
Benzene	71-43-2	Previous*	27	2014	3	3	2014	0.000029	1.0 E-1	Not reported	0.1	Not reported
Captan	133-06-2	Previous*	—	—	—	—	—	0.00000066	0.0023	Not reported	0.0023	Not reported
Carbon disulfide	75-15-0	Previous*	6200	1999	—	800	Not reported	—	—	—	—	—
Chlorobenzene	108-90-7	Previous*	—	—	—	1000	Not reported	—	—	—	—	—
Chlorobenzilate	510-15-6	Previous*	—	—	—	—	—	0.000031	0.11	Not reported	0.11	Not reported

Chemical	CAS number	New or previous	Inhalation REL (acute) µg/m³	Date reviewed	Inhalation REL (8-hour) µg/m³	Inhalation REL (chronic) µg/m³	Date reviewed	Unit risk (µg/m³)⁻¹	Inhalation slope factor mg/kg/day	Date reviewed [added]	Oral slope factor mg/kg/day	Date reviewed [added]
Chloroethane	75-00-3	Previous*	—	—	—	30000	Not reported	—	—	—	—	—
Dichlorodipheny ltrichloroethane	50-29-3	Previous*	—	—	—	—	—	0.000097	0.34	Not reported	0.34	Not reported
Dichloromethane	75-09-2	Previous*	14000	1999	—	400	Not reported	0.000001	0.0035	Not reported	0.014	Not reported
Dieldrin	60-57-1	Previous*	—	—	—	—	—	0.0046	16	Not reported	16	Not reported
Heptachlor	76-44-8	Previous*	—	—	—	—	—	—	4.1	Not reported	4.1	Not reported
Lindane	58-89-9	Previous*	—	—	—	—	—	0.00031	—	Not reported	1.1	Not reported
Methyl ethyl ketone	78-93-3	Previous*	13000	1999	—	—	—	—	—	—	—	—
p,p'-DDD	72-54-8	Previous*	—	—	—	—	—	0.000069	0.24	Not reported	0.24	Not reported
p,p'-DDE	72-55-9	Previous*	—	—	—	—	—	0.000097	0.34	Not reported	0.34	Not reported
Pentachlorophenol	87-86-5	Previous*	—	—	—	—	—	0.0000051	0.018	2011	0.081	2009
Trichloroethylene	79-01-6	Previous*	—	—	—	600	Not reported	0.000002	0.007	Not reported	0.0059	Not reported
Toluene	108-88-3	Previous	5000	2020	830	420	Not reported	—	—	—	—	—

Notes:
CAS = Chemical Abstracts Service; Previous = Previously identified chemical; Previous* = Chemical was identified during the curation process

Table D-6. Human Health Toxicity Values from Health Canada's List of Priority Substances for Chemicals Newly and Previously Identified in Biosolids

Chemical	CAS number	New or previous	Oral TDI (mg/kg/day)	Inhalation TDI (mg/m^3)	Oral CSF $(mg/kg/day)^{-1}$	Inhalation Unit Risk $(mg/m^3)^{-1}$	Units	Date
1,2,3-Trichlorobenzene	87-61-6	Previous*	0.0015	—	—	—	mg/kg/day	2007
1,2,4-Trichlorobenzene	120-82-1	Previous*	0.0016	—	—	—	mg/kg/day	2007
1,2-Dichlorobenzene	95-50-1	Previous*	0.43	—	—	—	mg/kg/day	2021
Aldrin	309-00-2	Previous*	0.0001	—	—	—	mg/kg/day	2007
Benzene	71-43-2	Previous*	—	—	0.083	0.015	mg/kg/day	3/1/2021
Chlorobenzene	108-90-7	Previous*	0.43	—	—	—	mg/kg/day	2007
Dichlorodiphenyltrichloroethane	50-29-3	Previous*	0.01	—	—	—	mg/kg/day	2007
Dichloromethane	75-09-2	Previous*	0.013	0.6	0.002	0.00001	mg/kg/day	3/1/2021
Dieldrin	60-57-1	Previous*	0.0001	—	—	—	mg/kg/day	2007
Trichloroethylene	79-01-6	Previous*	—	0.002	0.000811	0.0041	mg/kg/day	3/1/2021
1,4-Dichlorobenzene	106-46-7	Previous	0.11	0.06	—	—	mg/kg/day	3/1/2021
Benzo(a)pyrene	50-32-8	Previous	0.0000667	0.000002	1.289	0.6	mg/kg/day	3/1/2021
Beryllium	7440-41-7	Previous	0.002	0.00002	—	2.4	mg/kg/day	3/1/2021
Cadmium	7440-43-9	Previous	0.0008	—	—	4.2	mg/kg/day	3/1/2021
Carbon tetrachloride	56-23-5	Previous	0.00071	—	—	0.006	mg/kg/day	3/1/2021
Copper	7440-50-8	Previous	0.426	—	—	—	mg/kg/day	3/1/2021
Ethylbenzene	100-41-4	Previous	0.022	2	—	—	mg/kg/day	3/1/2021
Lead	7439-92-1	Previous	0.0005[c]	—	—	—	mg/kg/day	3/1/2021
Manganese	7439-96-5	Previous	0.025	—	—	—	mg/kg/day	3/1/2021
Naphthalene	91-20-3	Previous	0.02	0.01	—	—	mg/kg/day	3/1/2021
Perfluorooctanesulfonic acid	1763-23-1	Previous	0.00006	—	—	—	mg/kg/day	3/1/2021
Perfluorooctanoic acid	335-67-1	Previous	0.000021	—	—	—	mg/kg/day	3/1/2021
Selenium	7782-49-2	Previous	0.0055	—	—	—	mg/kg/day	3/1/2021
Selenium	7782-49-2	Previous	0.006	—	—	—	mg/kg/day	3/1/2021
Selenium	7782-49-2	Previous	0.0063	—	—	—	mg/kg/day	3/1/2021
Selenium	7782-49-2	Previous	0.0062	—	—	—	mg/kg/day	3/1/2021

Chemical	CAS number	New or previous	Oral TDI (mg/kg/day)	Inhalation TDI (mg/m^3)	Oral CSF $(mg/kg/day)^{-1}$	Inhalation Unit Risk $(mg/m^3)^{-1}$	Units	Date
Selenium	7782-49-2	Previous	0.0057	—	—	—	mg/kg/day	3/1/2021
Tetrachloroethylene	127-18-4	Previous	0.0047	0.04	—	—	mg/kg/day	3/1/2021
Zinc	7440-66-6	Previous	0.49	—	—	—	mg/kg/day	3/1/2021
Zinc	7440-66-6	Previous	0.48	—	—	—	mg/kg/day	3/1/2021
Zinc	7440-66-6	Previous	0.51	—	—	—	mg/kg/day	3/1/2021
Zinc	7440-66-6	Previous	0.54	—	—	—	mg/kg/day	3/1/2021
Zinc	7440-66-6	Previous	0.57	—	—	—	mg/kg/day	3/1/2021

Notes:
CAS = Chemical Abstracts Service; CSF = Cancer slope factor; TDI = Tolerable daily intake; REL = Reference exposure level; Previous = Previously identified chemical;
Previous* = Chemical was identified during the curation process

Table D-7. EPA's National Recommended Water Quality Criteria – Human Health Criteria for Chemicals Found in Biosolids

Chemical	CAS number	New or previous	Human health for the consumption of water + organism (µg/L)	Human health for the consumption of organism only (µg/L)	Publication year
(E)-1,2-Dichloroethylene	156-60-5	Previous*	100	4000	2015
1,1,1-Trichloroethane	71-55-6	Previous*	10000	200000	2015
1,2,4-Trichlorobenzene	120-82-1	Previous*	0.071	0.076	2015
1,2-Dichlorobenzene	95-50-1	Previous*	1000	3000	2015
1,2-Dichloropropane	78-87-5	Previous*	0.9	31	2015
2-(2,4,5-Trichlorophenoxy)propionic acid	93-72-1	Previous*	100	400	2015
4-Chloro-3-methylphenol	59-50-7	Previous*	500	2000	2015
Acenaphthene	83-32-9	Previous*	70	90	2015
Aldrin	309-00-2	Previous*	0.00000077	0.00000077	2015
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	319-84-6	Previous*	0.00036	0.00039	2015
Benzene	71-43-2	Previous*	0.58-2.1	16-58	2015
Benzyl butyl phthalate	85-68-7	Previous*	0.1	0.1	2015
beta-Hexachlorocyclohexane	319-85-7	Previous*	0.008	0.014	2015
Chlorobenzene	108-90-7	Previous*	100	800	2015
Cyanide	57-12-5	Previous*	4	400	2015
Dichlorodiphenyltrichloroethane	50-29-3	Previous*	0.00003	0.00003	2015
Dichloromethane	75-09-2	Previous*	20	1000	2015
Dieldrin	60-57-1	Previous*	0.0000012	0.0000012	2015
Endrin	72-20-8	Previous*	0.03	0.03	2015
Heptachlor	76-44-8	Previous*	0.0000059	0.0000059	2015
Lindane	58-89-9	Previous*	4.2	4.4	2015
Nitrobenzene	98-95-3	Previous*	10	600	2015
p,p'-DDD	72-54-8	Previous*	0.00012	0.00012	2015
p,p'-DDE	72-55-9	Previous*	0.000018	0.000018	2015
Pentachlorophenol	87-86-5	Previous*	0.03	0.04	2015
Trichloroethylene	79-01-6	Previous*	0.6	7	2015

Chemical	CAS number	New or previous	Human health for the consumption of water + organism (µg/L)	Human health for the consumption of organism only (µg/L)	Publication year
Zinc	7440-66-6	Previous*	7400	26000	2002
1,3-Dichlorobenzene	541-73-1	Previous	7	10	2015
1,4-Dichlorobenzene	106-46-7	Previous	300	900	2015
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	Previous	0.000000005	5.1E-09	2002
2,4,5-Trichlorophenol	95-95-4	Previous	300	600	2015
2,4-Dichlorophenol	120-83-2	Previous	10	60	2015
2,4-Dichlorophenoxyacetic acid	94-75-7	Previous	1300	12000	2015
2-Chloronaphthalene	91-58-7	Previous	800	1,000	2015
Anthracene	120-12-7	Previous	300	400	2015
Antimony	7440-36-0	Previous	5.6	640	1980
Arsenic	7440-38-2	Previous	0.018	0.14	1992
Barium	7440-39-3	Previous	1000	—	1986
Benz(a)anthracene	56-55-3	Previous	0.0012	0.0013	2015
Benzo(a)pyrene	50-32-8	Previous	0.00012	0.00013	2015
Benzo(b)fluoranthene	205-99-2	Previous	0.0012	0.0013	2015
Benzo(k)fluoranthene	207-08-9	Previous	0.012	0.013	2015
Cadmium	7440-43-9	Previous	—	—	—
Carbon tetrachloride	56-23-5	Previous	0.4	5	2015
Chloroform	67-66-3	Previous	60	2000	2015
Chromium	7440-47-3	Previous	VA	VA	VA
Chrysene	218-01-9	Previous	0.12	0.13	2015
Copper	7440-50-8	Previous	1300	—	1992
Di(2-ethylhexyl) phthalate	117-81-7	Previous	0.32	0.37	2015
Dibutyl phthalate	84-74-2	Previous	20	30	2015
Dimethyl phthalate	131-11-3	Previous	2000	2000	2015
Endosulfan I	959-98-8	Previous	20	30	2015
Endosulfan II	33213-65-9	Previous	20	40	2015

Chemical	CAS number	New or previous	Human health for the consumption of water + organism (µg/L)	Human health for the consumption of organism only (µg/L)	Publication year
Ethylbenzene	100-41-4	Previous	68	130	2015
Fluoranthene	206-44-0	Previous	20	20	2015
Heptachlor epoxide B	1024-57-3	Previous	0.000032	0.000032	2015
Manganese	7439-96-5	Previous	50	100	1993
Nickel	7440-02-0	Previous	610	4600	1998
N-Nitrosodibutylamine	924-16-3	Previous	0.0063	0.22	2002
N-Nitrosodiethylamine	55-18-5	Previous	0.0008	1.24	2002
N-Nitrosodimethylamine	62-75-9	Previous	0.00069	3	2002
N-Nitrosodi-n-propylamine	621-64-7	Previous	0.005	0.51	2002
N-Nitrosodiphenylamine	86-30-6	Previous	3.3	6	2002
N-Nitrosopyrrolidine	930-55-2	Previous	0.016	34	2002
Phenol	108-95-2	Previous	4000	300000	2015
Polychlorinated biphenyls	1336-36-3	Previous	0.000064	0.000064	2002
Pyrene	129-00-0	Previous	20	30	2015
Selenium	7782-49-2	Previous	170	4200	2002
Tetrachloroethylene	127-18-4	Previous	10	29	2015
Thallium	7440-28-0	Previous	0.24	0.47	2003
Toluene	108-88-3	Previous	57	520	2015

Notes:
CAS = Chemical Abstracts Service; Previous = Previously identified chemical; Previous* = Chemical was identified during the curation process; VA = Value Available (Toxicity data may be available for this chemical or a chemical in the same family. When comparing the National Recommended Water Quality Criteria – Human Health Criteria to the list of chemicals found in biosolids, some chemicals were reported using the same name but different CASRN. A chemical may be listed with multiple CASRN if (1) there are different forms of a chemical where each is considered unique for its particular properties of characteristics; or (2) when multiple CASRN have inadvertently been assigned to the same chemical. Further evaluation would be needed to determine whether the toxicity data is relevant.)

Table D-8. EPA's National Primary Drinking Water Regulations for Chemicals Found in Biosolids

Chemical	CAS number	New or previous	Standards			Status HA docu-ment	Health advisories						Cancer descrip-tor[1]
							10-kg Child						
			Status reg.	MCLG (mg/L)	MCL (mg/L)		1-day (mg/L)	10-day (mg/L)	RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10^{-4} Cancer risk	
(E)-1,2-Dichloroethylene	156-60-5	Previous*	F	0.1	0.1	F '87	20	2	0.02	0.7	0.1	—	I
1,1,1-Trichloroethane	71-55-6	Previous*	F	0.2	0.2	F '87	100	40	2	70	—	—	I
1,2,4-Trichlorobenzene	120-82-1	Previous*	F	0.07	0.07	F '89	0.1	0.1	0.01	0.35	0.07	—	D
1,2-Dichlorobenzene	95-50-1	Previous*	F	0.6	0.6	F '87	9	9	0.09	3	0.6	—	D
1,2-Dichloropropane	78-87-5	Previous*	F	zero	0.005	F '87	—	0.09	—	—	—	0.06	B2
1,4-Dioxane	123-91-1	Previous*	—	—	—	F '87	4	0.4	0.03	1	0.2	0.035	L
2-(2,4,5-Trichlorophenoxy)propionic acid	93-72-1	Previous*	F	0.05	0.05	F '88	0.2	0.2	0.008	0.3	0.05	—	D
2,4,5-Trichlorophenoxyacetic acid	93-76-5	Previous*	—	—	—	F '88	0.8	0.8	0.01	0.35	0.07	—	D
2,6-Dinitrotoluene	606-20-2	Previous*	—	—	—	F '08	0.4	0.04	0.001	0.04	—	0.005	L
Acenaphthene	83-32-9	Previous*	—	—	—	—	—	—	0.06	2	—	—	—
Aldrin	309-00-2	Previous*	—	—	—	F '92	0.0003	0.0003	0.00003	0.001	—	0.0002	B2
Benzene	71-43-2	Previous*	F	zero	0.005	F '87	0.2	0.2	0.004	0.1	0.003	1 to 10	H
Benzo(g,h,i)perylene	191-24-2	Previous*	—	—	—	—	—	—	—	—	—	—	D
Benzyl butyl phthalate	85-68-7	Previous*	—	—	—	—	—	—	0.2	7	—	—	C
Chlorobenzene	108-90-7	Previous*	F	0.1	0.1	F '87	4	4	0.02	0.7	0.1	—	D
Chloromethane	74-87-3	Previous*	—	—	—	F '89	9	0.4	—	—	—	—	I
Chlorpyrifos	2921-88-2	Previous*	—	—	—	F '92	0.03	0.03	0.0003	0.01	0.002	—	D
Cyanide	57-12-5	Previous*	VA	VA	VA	VA	VA	VA	VA				VA
Diazinon	333-41-5	Previous*	—	—	—	F '88	0.02	0.02	0.0002	0.007	0.001	—	E
Dichloromethane	75-09-2	Previous*	F	zero	0.005	D '93	10	2	0.06	2	0.2	0.5	L
Dieldrin	60-57-1	Previous*	—	—	—	F '88	0.0005	0.0005	0.00005	0.002	—	0.0002	B2
Endrin	72-20-8	Previous*	F	0.002	0.002	F '87	0.02	0.005	0.0003	0.01	0.002	—	I

Chemical	CAS number	New or previous	Standards			Status HA document	Health advisories						Cancer descriptor[1]
							10-kg Child						
			Status reg.	MCLG (mg/L)	MCL (mg/L)		1-day (mg/L)	10-day (mg/L)	RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10^{-4} Cancer risk	
Heptachlor	76-44-8	Previous*	F	zero	0.0004	F '87	0.01	0.01	0.0005	0.02	—	0.0008	B2
Lindane	58-89-9	Previous*	F	0.0002	0.0002	F '87	1	1	0.005	0.2	—	—	S
Methyl ethyl ketone	78-93-3	Previous*	—	—	—	F '87	75	7.5	0.6	20	4	—	D
Pentachlorophenol	87-86-5	Previous*	F	zero	0.001	F '87	1	0.3	0.005	0.2	0.04	0.009	L
Phenanthrene	85-01-8	Previous*	—	—	—	—	—	—	—	—	—	—	D
Strontium	7440-24-6	Previous*	—	—	—	D '93	25	25	0.6	20	4	—	D
Trichloroethylene[3]	79-01-6	Previous*	F	zero	0.005	F '87	—	—	0.007	0.2	—	0.3	B2
Trichlorofluoromethane	75-69-4	Previous*	—	—	—	F '89	7	7	0.3	10	2	—	D
Trifluralin	1582-09-8	Previous*	—	—	—	F '90	0.08	0.08	0.02	0.7	0.01	0.4	C
1,3,5-Trichlorobenzene	108-70-3	Previous	—	—	—	F '89	0.6	0.6	0.006	0.2	0.04	—	D
1,3-Dichlorobenzene[2]	541-73-1	Previous	—	—	—	F '87	9	9	0.09	3	0.6	—	D
1,4-Dichlorobenzene	106-46-7	Previous	F	0.075	0.075	F '87	11	11	0.1	4	0.075	—	C
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	Previous	F	zero	3E-08	F '87	0.000001	0.0000001	1E-09	4E-08	—	2E-08	B2
2,4-Dichlorophenol	120-83-2	Previous	—	—	—	D '94	0.03	0.03	0.003	0.1	0.02	—	E
2,4-Dichlorophenoxyacetic acid	94-75-7	Previous	F	0.07	0.07	F '87	1	0.3	0.005	0.2	—	—	D
4-Nitrophenol	100-02-7	Previous	—	—	—	F '92	0.8	0.8	0.008	0.3	0.06	—	D
Anthracene	120-12-7	Previous	—	—	—	—	—	—	0.3	10	—	—	D
Antimony	7440-36-0	Previous	F	0.006	0.006	F '92	0.01	0.01	0.0004	0.01	0.006	—	D
Arsenic	7440-38-2	Previous	F	zero	0.01	—	—	—	0.0003	0.01	—	0.002	A
Barium	7440-39-3	Previous	F	2	2	D '93	0.7	0.7	0.2	7	—	—	N
Benz(a)anthracene	56-55-3	Previous	—	—	—	—	—	—	—	—	—	—	B2
Benzo(a)pyrene	50-32-8	Previous	F	zero	0.0002	—	—	—	—	—	—	0.0005	B2
Benzo(b)fluoranthene	205-99-2	Previous	—	—	—	—	—	—	—	—	—	—	B2
Benzo(k)fluoranthene	207-08-9	Previous	—	—	—	—	—	—	—	—	—	—	B2

Chemical	CAS number	New or previous	Standards			Status HA document	Health advisories						Cancer descriptor[1]
							10-kg Child						
			Status reg.	MCLG (mg/L)	MCL (mg/L)		1-day (mg/L)	10-day (mg/L)	RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10^{-4} Cancer risk	
Beryllium	7440-41-7	Previous	F	0.004	0.004	F '92	30	30	0.002	0.07	—	—	—
Boron	7440-42-8	Previous	—	—	—	F '08	3	3	0.2	7	6	—	I
Cadmium	7440-43-9	Previous	F	0.005	0.005	F '87	0.04	0.04	0.0005	0.02	0.005	—	D
Carbon tetrachloride	56-23-5	Previous	F	zero	0.005	F '87	4	0.2	0.004	0.1	0.03	0.05	L
Chloroform	67-66-3	Previous	F	0.07	0.081	—	4	4	0.01	0.35	0.07	—	L/N
Chromium[4]	7440-47-3	Previous	F	0.1	0.1	F '87	1	1	0.003	0.1	—	—	D
Chrysene	218-01-9	Previous	—	—	—	—	—	—	—	—	—	—	B2
Copper[5]	7440-50-8	Previous	F	1.3	TT	D '98	—	—	—	—	—	—	D
Di(2-ethylhexyl) phthalate	117-81-7	Previous	F	zero	0.006	—	—	—	0.02	0.7	—	0.3	B2
Dibutyl phthalate	84-74-2	Previous	—	—	—	—	—	—	0.1	4	—	—	D
Dimethyl phthalate	131-11-3	Previous	—	—	—	—	—	—	—	—	—	—	D
Ethylbenzene	100-41-4	Previous	F	0.7	0.7	F '87	30	3	0.1	3	0.7	—	D
Fluoride	16984-48-8	Previous	VA	VA	VA	—	—	—	VA	—	—	—	—
Heptachlor epoxide B	1024-57-3	Previous	F	zero	0.0002	F '87	0.01	—	0.00001	0.0004	—	0.0004	B2
Lead[6]	7439-92-1	Previous	F	zero	TT	—	—	—	—	—	—	—	B2
Manganese[7]	7439-96-5	Previous	—	—	—	F"04	1	1	0.14	1.6	0.3	—	D
Mercury	7439-97-6	Previous	VA	VA	VA	VA	VA	VA	VA	VA	VA		VA
Molybdenum	7439-98-7	Previous	—	—	—	D '93	0.08	0.08	0.005	0.2	0.04	—	D
Naphthalene	91-20-3	Previous	—	—	—	F '90	0.5	0.5	0.02	0.7	0.1	—	I
Nickel	7440-02-0	Previous	F	—	—	F '95	1	1	0.02	0.7	0.1	—	—
Perfluorooctanesulfonic acid	1763-23-1	Previous	—	—	—	F '16	—	—	2 x 10-5	3.7 x 10-4	7 x 10-5	—	S
Perfluorooctanoic acid	335-67-1	Previous	—	—	—	F '16	—	—	2 x 10-5	3.7 x 10-4	7 x 10-5	5 x 10-2	S
Phenol	108-95-2	Previous	—	—	—	D '92	6	6	0.3	11	2	—	D
Polychlorinated biphenyls	1336-36-3	Previous	F	zero	0.0005	D '93	—	—	—	—	—	0.01	B2
Pyrene	129-00-0	Previous	—	—	—	—	—	—	0.03	—	—	—	D

Chemical	CAS number	New or previous	Standards			Status HA document	Health advisories						Cancer descriptor[1]
							10-kg Child						
			Status reg.	MCLG (mg/L)	MCL (mg/L)		1-day (mg/L)	10-day (mg/L)	RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10^{-4} Cancer risk	
Selenium	7782-49-2	Previous	F	0.05	0.05	—	—	—	0.005	0.2	0.05	—	D
Silver[8]	7440-22-4	Previous	—	—	—	F '92	0.2	0.2	0.005	0.2	0.13	—	D
Styrene	100-42-5	Previous	F	0.1	0.1	F '87	20	2	0.2	7	0.1	—	C
Tetrachloroethylene[3]	127-18-4	Previous	F	zero	0.005	F '87	2	2	0.01	0.5	0.01	—	—
Thallium	7440-28-0	Previous	F	0.0005	0.002	F '92	0.007	0.007	—	—	—	—	I
Toluene	108-88-3	Previous	F	1	1	D '93	20	2	0.08	3	—	—	I
Zinc	7440-66-6	Previous	—	—	—	D '93	6	6	0.3	10	2	—	I

Notes:

CAS = Chemical Abstracts Service; D = Draft; DWEL = Drinking Water Equivalent Level; F = Final; HA = Health Advisory; MCL = Maximum Contaminant Level; Previous = Previously identified chemical; Previous* = Chemical was identified during the curation process; RfD = Reference Dose; TT = Treatment Technique; VA = Value Available (Toxicity data may be available for this chemical or a chemical in the same family. When comparing available EPA's National Primary Drinking Water Regulations to the list of chemicals found in biosolids, some chemicals were reported using the same name but different CASRN. A chemical may be listed with multiple CASRN if: (1) there are different forms of a chemical where each is considered unique for its particular properties of characteristics; or (2) when multiple CASRN have inadvertently been assigned to the same chemical. Further evaluation would be needed to determine whether the toxicity data is relevant.)

Cancer Classification: A descriptive weight-of-evidence judgment as to the likelihood that an agent is a human carcinogen and the conditions under which the carcinogenic effects may be expressed. Under the 2005 EPA Guidelines for Carcinogen Risk Assessment, Cancer Descriptors replace the earlier alpha numeric Cancer Group designations (U.S. EPA 1986 guidelines). The Cancer Descriptors in the 2005 EPA Guidelines for Carcinogen Risk Assessment are as follows: "carcinogenic to humans" (H); "likely carcinogenic to humans" (L); "likely to be carcinogenic above a specified dose but not likely to be carcinogenic below that dose because a key event in tumor formation does not occur below that dose" (L/N); "suggestive evidence of carcinogenic potential" (S); "inadequate information to assess carcinogenic potential" (I); and "not likely to be carcinogenic to humans" (N). The letter abbreviations provided parenthetically above are now used in the DWSHA tables in place of the prior alpha numeric identifiers for chemicals that have been evaluated under the new guidelines (the 2005 guidelines or the 1996 and 1999 draft guidelines) or whose records in the DWSHA tables have been revised. Cancer Group: A qualitative weight-of-evidence judgment as to the likelihood that a chemical may be a carcinogen for humans. Each chemical was placed into one of the following five categories (U.S. EPA 1986 guidelines). The Cancer Group designations are given in the tables for chemicals that have not yet been evaluated under the new guidelines or whose records in the DWSHA tables have been revised. Group categories: (A) Human carcinogen; (B) Probable human carcinogen: (B1) Indicates limited human evidence, (B2) Indicates sufficient evidence in animals and inadequate or no evidence in humans; (C) Possible human carcinogen; (D) Not classifiable as to human carcinogenicity; (E) Evidence of noncarcinogenicity for humans.

[1] Chemicals evaluated under the 2005 Cancer Guidelines or the 1996 or 1999 drafts are demoted by an abbreviation for their weight-of-the-evidence descriptor (see page iii). If the agency has not completed a new assessment for the chemical, the 1986 Guidelines Group designation (see page iii) is given in the Cancer Descriptor column.

[2] The values for m-dichlorobenzene are based on data for o-dichlorobenzene.

[3] Under review at the time of publication 2018 document.

[4] RfD from IRIS value for chromium VI.

[5] MCL copper action level 1.3 mg/L.

[6] MCL lead action level 0.015 mg/L.

[7] RfD from Dietary manganese. The lifetime health advisory includes a 3-fold modifying factor to account for increased bioavailability from drinking water.

[8] RfD based on a cosmetic effect.

Appendix E: Ecological Toxicity Data

Table E-1. Summary of Papers Found in ECOTOX for Chemicals Newly Identified in Biosolids in the 2020–2021 Reporting Period

Chemical	CAS number	# of terrestrial species	# of papers terrestrial	# of aquatic species	# of papers aquatic
2-(N-Ethylperfluorooctanesulfonamido)acetic acid	2991-50-6	0	0	1	1
Fentanyl	437-38-7	1	1	0	0
Losartan	114798-26-4	0	0	1	1
Methadone	76-99-3	1	1	0	0
Perfluorohexadecanoic acid	67905-19-5	1	1	1	1

Notes:
CAS = Chemical Abstracts Service

Table E-2. Summary of Papers Found in ECOTOX for Chemicals Identified in Biosolids During the Curation Process

Chemical	CAS number	# of terrestrial species	# of papers terrestrial	# of aquatic species	# of papers aquatic
(E)-1,2-Dichloroethylene	156-60-5	4	3	3	6
1,1,1-Trichloroethane	71-55-6	16	18	20	35
1,2,3,4,6,7,8-Heptachlorodibenzo[b,d]furan	67562-39-4	0	0	1	1
1,2,3,7,8,9-Hexachlorodibenzo[b,d]furan	72918-21-9	0	0	1	1
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	0	0	4	10
1,2,3-Trichlorobenzene	87-61-6	2	4	17	44
1,2,4-Trichlorobenzene	120-82-1	28	20	53	85
1,2-Dichlorobenzene	95-50-1	20	32	49	89
1,2-Dichloropropane	78-87-5	10	25	12	19
1,4-Dinitrobenzene	100-25-4	0	0	7	8
1,4-Dioxane	123-91-1	8	6	19	25
1-Methyl phenanthrene	832-69-9	1	1	2	2
2-(2,4,5-Trichlorophenoxy)propionic acid	93-72-1	70	39	22	17
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	0	0	1	1
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	0	0	5	6
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	0	0	1	1
2,2',3,3',4,4',6-Heptachlorobiphenyl	52663-71-5	0	0	1	2
2,2',3,3',4,5,5',6-Octachlorobiphenyl	68194-17-2	0	0	1	1
2,2',3,3',4,5,6-Heptachlorobiphenyl	68194-16-1	0	0	1	1
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	0	0	1	1
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	0	0	1	1
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	0	0	1	2
2,2',3,3'-Tetrachlorobiphenyl	38444-93-8	0	0	2	2
2,2',3,4,4',5',6-Heptachlorobiphenyl	52663-69-1	0	0	1	1
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	0	0	1	1
2,2',3,4,5,5',6-Heptachlorobiphenyl	52712-05-7	0	0	1	1
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	0	0	2	2
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	0	0	1	1
2,2',3,4,5,6'-Hexachlorobiphenyl	68194-15-0	0	0	1	1
2,2',3,4',5'-Pentachlorobiphenyl	41464-51-1	0	0	1	1
2,2',3,5,5',6-Hexachlorobiphenyl	52663-63-5	0	0	1	1
2,2',3,5'-tetrachlorobiphenyl	41464-39-5	0	0	1	1
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	0	0	4	3
2,2',4,4',6-Pentabromodiphenyl ether	189084-64-8	0	0	3	3
2,2',4,4',6-Pentachlorobiphenyl	39485-83-1	2	1	6	6
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	0	0	4	3
2,2',4,6-Tetrachlorobiphenyl	62796-65-0	1	1	3	4

Chemical	CAS number	# of terrestrial species	# of papers terrestrial	# of aquatic species	# of papers aquatic
2,2',5-Trichlorobiphenyl	37680-65-2	1	1	8	11
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	0	0	1	1
2,2'-Bioxirane	1464-53-5	2	3	2	2
2,3,3',4',6-Pentachlorobiphenyl	38380-03-9	0	0	2	2
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	0	0	1	1
2,3,3'-Trichlorobiphenyl	38444-84-7	0	0	2	1
2,3',4,4',6-Pentachlorobiphenyl	56558-17-9	0	0	1	1
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	0	0	2	1
2,3,4,5,6-Pentachlorobiphenyl	18259-05-7	0	0	2	2
2,3,4,5-Tetrachlorobiphenyl	33284-53-6	0	0	2	3
2,3',4',5-Tetrachlorobiphenyl	32598-11-1	0	0	2	2
2,3,5,6-Tetrachlorobiphenyl	33284-54-7	0	0	1	1
2,4,4',6-Tetrachlorobiphenyl	32598-12-2	0	0	1	1
2,4,4'-Tribromodiphenyl ether	41318-75-6	3	1	2	2
2,4,4'-Trichlorobiphenyl	7012-37-5	0	0	6	6
2,4,5-Trichlorobiphenyl	15862-07-4	1	1	4	3
2,4,5-Trichlorophenoxyacetic acid	93-76-5	67	77	46	48
2,4,5-Trimethylaniline	137-17-7	2	1	0	0
2,4,6-Trichlorobiphenyl	35693-92-6	0	0	1	1
2,4-Dichlorobiphenyl	33284-50-3	0	0	4	5
2,5-Dichlorobiphenyl	34883-39-1	0	0	5	4
2,6-Dinitrotoluene	606-20-2	10	6	15	24
2-Chloro-4-phenylphenol	92-04-6	0	0	2	1
2-Hexanone	591-78-6	2	3	3	3
2-Methylpyridine	109-06-8	0	0	2	2
2-Methyl-1-propanol	78-83-1	3	6	37	22
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	1	1	2	2
3,4-Dichlorobiphenyl	2974-92-7	0	0	1	2
3,5-Dichlorobiphenyl	34883-41-5	0	0	1	1
3,6-Dimethylphenanthrene	1576-67-6	0	0	1	2
3-Chlorobiphenyl	2051-61-8	0	0	5	6
4,4'-Dichlorobiphenyl	2050-68-2	1	1	11	11
4-Androstene-3,17-dione	63-05-8	0	0	3	4
4-Chloro-3-methylphenol	59-50-7	2	3	13	21
4-Methyl-2-pentanone	108-10-1	3	3	14	32
Acenaphthene	83-32-9	8	11	24	34
Aldrin	309-00-2	67	57	136	175
Allyl alcohol	107-18-6	3	5	16	11

Chemical	CAS number	# of terrestrial species	# of papers terrestrial	# of aquatic species	# of papers aquatic
Allyl chloride	107-05-1	3	3	13	17
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	319-84-6	4	4	34	33
alpha-Terpineol	98-55-5	11	9	4	5
Aroclor 1248	12672-29-6	6	6	27	31
Aroclor 1254	11097-69-1	35	74	135	235
Aroclor 1260	11096-82-5	9	13	30	32
Azinphos-methyl	86-50-0	138	172	136	154
Bensulide	741-58-2	137	144	14	17
Benzene	71-43-2	19	23	90	153
Benzenethiol	108-98-5	1	2	4	2
Benzo(g,h,i)perylene	191-24-2	1	1	4	6
Benzyl alcohol	100-51-6	7	10	13	15
Benzyl butyl phthalate	85-68-7	12	15	39	92
beta-Hexachlorocyclohexane	319-85-7	5	3	22	27
Biphenyl	92-52-4	6	19	20	36
Bisphenol A	80-05-7	36	39	96	279
Caffeine	58-08-2	12	21	32	49
Captan	133-06-2	160	294	51	49
Carbadox	6804-07-5	0	0	1	1
Carbon disulfide	75-15-0	28	50	11	11
Carbophenothion	786-19-6	26	18	38	27
Chlorobenzene	108-90-7	9	15	39	80
Chlorobenzilate	510-15-6	13	9	13	11
Chloroethane	75-00-3	1	1	2	1
Chloromethane	74-87-3	0	0	5	4
Chlorpyrifos	2921-88-2	1270	748	349	784
Clomazone	81777-89-1	16	44	17	32
Crotonaldehyde	4170-30-3	3	3	9	4
Crotoxyphos	7700-17-6	13	16	14	8
Cyanide	57-12-5	8	5	33	29
Decane	124-18-5	4	9	7	7
delta-Hexachlorocyclohexane	319-86-8	1	1	22	16
Diallate	2303-16-4	9	11	3	3
Diazinon	333-41-5	301	415	429	220
Dibenzofuran	132-64-9	0	0	11	12
Dibenzothiophene	132-65-0	1	1	10	8
Dichlorodiphenyltrichloroethane	50-29-3	219	283	325	610
Dichloromethane	75-09-2	14	18	40	55

Chemical	CAS number	# of terrestrial species	# of papers terrestrial	# of aquatic species	# of papers aquatic
Dicrotophos	141-66-2	69	84	20	25
Dieldrin	60-57-1	130	181	277	184
Diphenyl oxide	101-84-8	3	2	11	13
Diphenylamine	122-39-4	5	5	15	10
Docosane	629-97-0	1	1	4	7
Dodecane	112-40-3	5	5	3	3
Eicosane	112-95-8	1	1	0	0
Endrin	72-20-8	54	54	200	169
EPN	2104-64-5	20	26	56	44
Heptachlor	76-44-8	41	36	105	114
Hexabromocyclododecane	25637-99-4	7	11	28	24
Hexadecane	544-76-3	3	4	2	2
Iodine	7553-56-2	3	3	10	14
Leptophos	21609-90-5	39	16	20	36
Lindane	58-89-9	101	95	517	249
Methacrylonitrile	126-98-7	1	1	0	0
Methyl ethyl ketone	78-93-3	4	4	16	28
Methyl triclosan	4640-01-1	0	0	1	1
Mevinphos	7786-34-7	38	38	29	41
Naled	300-76-5	56	54	58	69
Nitrobenzene	98-95-3	6	5	58	25
o-Cresol	95-48-7	21	14	51	44
Octacosane	630-02-4	0	0	1	1
Octadecane	593-45-3	2	2	0	0
p,p'-DDD	72-54-8	9	12	54	52
p,p'-DDE	72-55-9	27	80	53	81
p-Cymene	99-87-6	10	15	9	8
Pentachlorophenol	87-86-5	97	77	470	235
Perylene	198-55-0	3	4	5	8
Phenanthrene	85-01-8	34	48	83	142
Phosphamidon	13171-21-6	58	60	136	80
Potassium	7440-09-7	3	4	2	2
Propionitrile	107-12-0	0	0	2	2
Quinine	130-95-0	2	2	2	2
Silicon	7440-21-3	1	1	0	0
Strontium	7440-24-6	0	0	10	8
Tetradecane	629-59-4	1	2	1	1
Tetraethyl pyrophosphate	107-49-3	16	18	17	19

Chemical	CAS number	# of terrestrial species	# of papers terrestrial	# of aquatic species	# of papers aquatic
Thioxanthen-9-one	492-22-8	0	0	1	3
Trichloroethylene	79-01-6	39	56	85	64
Trifluralin	1582-09-8	349	370	106	86
Tri-o-cresyl phosphate	78-30-8	11	6	6	6
Triphenylene	217-59-4	0	0	4	6
Valproic acid	99-66-1	2	3	2	7

Notes:
CAS = Chemical Abstracts Service

Table E-3. Summary of Papers Found in ECOTOX in the 2020–2021 Reporting Period for Chemicals Previously Identified in Biosolids

Chemical	CAS number	# of terrestrial species	# of papers terrestrial	# of aquatic species	# of papers aquatic
(+)-Diltiazem	42399-41-7	0	0	1	1
(+/-)-Verapamil	52-53-9	0	0	1	1
1-(p-Chlorobenzoyl)-5-methoxy-2-methyl-Indole-3-acetic acid	53-86-1	0	0	1	1
1,1'-Ethane-1,2-diylbis(pentabromobenzene)	84852-53-9	1	1	0	0
1,1'-Oxybis[2,3,4,5,6-pentabromobenzene]	1163-19-5	0	0	1	1
17alpha-Ethinylestradiol	57-63-6	2	2	14	4
17beta-Estradiol	50-28-2	2	1	3	7
2,2',4,4',5,5'-Hexachlorobiphenyl	35065-27-1	0	0	1	1
2,2',4,4'-Tetrabromodiphenyl ether	5436-43-1	0	0	2	2
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	0	0	1	1
2,4-Dichlorophenol	120-83-2	0	0	1	1
2,4-Dichlorophenoxyacetic acid	94-75-7	2	2	1	1
2H,2H,3H,3H-Perfluorooctanoic acid	914637-49-3	0	0	1	1
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	0	0	1	3
3,3',5,5'-Tetrabromobisphenol A	79-94-7	1	1	1	1
4-Nonylphenol, branched	84852-15-3	0	0	3	1
6:2 Fluorotelomer phosphate diester	57677-95-9	1	1	0	0
6:2 Fluorotelomer sulfonic acid	27619-97-2	0	0	1	2
7-Acetyl-1,1,3,4,4,6-hexamethyltetraline	21145-77-7	0	0	2	1
8:2 Fluorotelomer sulfonic acid	39108-34-4	0	0	1	1
Acetaminophen	103-90-2	0	0	1	1
Acetone	67-64-1	2	2	2	3
Amoxicillin	26787-78-0	0	0	2	1
Ampicillin	69-53-4	1	1	0	0
Arsenic	7440-38-2	1	1	2	2
Aspirin	50-78-2	0	0	1	1
Atenolol	29122-68-7	0	0	1	1
Atorvastatin	134523-00-5	0	0	1	1
Azithromycin	83905-01-5	0	0	2	1
Benzo(a)pyrene	50-32-8	3	3	3	5
Benzo(b)fluoranthene	205-99-2	0	0	1	1
Benzoic acid	65-85-0	1	1	0	0
Bezafibrate	41859-67-0	0	0	1	1
Bis(1,3-dichloropropan-2-yl) hydrogen phosphate	72236-72-7	0	0	1	1
Bis(2-chloroethyl) phosphate	3040-56-0	0	0	1	1
Butylparaben	94-26-8	1	1	0	0

Chemical	CAS number	# of terrestrial species	# of papers terrestrial	# of aquatic species	# of papers aquatic
Carbamazepine	298-46-4	1	1	3	4
Chloroform	67-66-3	1	1	0	0
Cimetidine	51481-61-9	0	0	1	1
Ciprofloxacin	85721-33-1	6	1	2	2
Clofibric acid	882-09-7	0	0	1	1
Clorophene	120-32-1	0	0	1	1
Cocaine	50-36-2	0	0	1	1
Cyclopenta[g]-2-benzopyran, 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethyl-	1222-05-5	0	0	1	1
Di(2-ethylhexyl) phthalate	117-81-7	2	2	5	5
Diazepam	439-14-5	1	1	1	1
Dibutyl phthalate	84-74-2	1	1	3	6
Diclofenac	15307-86-5	6	1	12	4
Dimethoate	60-51-5	3	6	2	2
Dimethyl phthalate	131-11-3	1	1	1	1
Di-n-octyl phthalate	117-84-0	0	0	1	1
Diphenyl phosphate	838-85-7	0	0	1	1
Doxycycline	564-25-0	0	0	1	1
Endosulfan I	959-98-8	1	1	0	0
Endosulfan II	33213-65-9	1	1	0	0
Enrofloxacin	93106-60-6	0	0	3	3
Ethylparaben	120-47-8	1	1	0	0
Fenofibric acid	42017-89-0	0	0	1	1
Fenthion	55-38-9	1	1	0	0
Fipronil	120068-37-3	2	2	5	4
Fluoranthene	206-44-0	0	0	1	1
Fluoxetine	54910-89-3	0	0	1	1
Furosemide	54-31-9	0	0	1	1
Gemfibrozil	25812-30-0	0	0	1	1
Hexabromobenzene	87-82-1	0	0	1	1
Ibuprofen	15687-27-1	0	0	1	1
Ketoprofen	22071-15-4	1	1	2	2
Methamphetamine	537-46-2	0	0	1	1
Methylparaben	99-76-3	1	1	0	0
Metoprolol	51384-51-1	0	0	1	1
Monuron	150-68-5	1	1	0	0
Naphthalene	91-20-3	0	0	1	1
Naproxen	22204-53-1	0	0	1	1

Chemical	CAS number	# of terrestrial species	# of papers terrestrial	# of aquatic species	# of papers aquatic
Nitrofen	1836-75-5	1	1	0	0
Norethindrone	68-22-4	0	0	1	1
Norfloxacin	70458-96-7	0	0	6	4
Norfluoxetine	83891-03-6	0	0	1	1
Ofloxacin	82419-36-1	1	1	0	0
Oxytetracycline	79-57-2	1	1	0	0
Pentachloronitrobenzene	82-68-8	1	1	0	0
Perfluorobutanesulfonic acid	375-73-5	1	1	3	4
Perfluorobutanoic acid	375-22-4	2	1	1	2
Perfluorodecanoic acid	335-76-2	0	0	1	1
Perfluorododecanoic acid	307-55-1	0	0	1	1
Perfluoroheptanoic acid	375-85-9	0	0	2	3
Perfluorohexanesulfonic acid	355-46-4	1	1	3	4
Perfluorohexanoic acid	307-24-4	1	1	2	5
Perfluorononanoic acid	375-95-1	0	0	10	8
Perfluorooctanesulfonamide	754-91-6	1	1	3	4
Perfluorooctanesulfonic acid	1763-23-1	5	5	18	21
Perfluorooctanoic acid	335-67-1	20	18	31	30
Perfluoropentanoic acid	2706-90-3	0	0	1	2
Perfluorotridecanoic acid	72629-94-8	1	1	1	1
Perfluoroundecanoic acid	2058-94-8	1	1	2	2
Phenol	108-95-2	0	0	1	1
Polyethylene glycol	25322-68-3	1	1	0	0
Propranolol	525-66-6	0	0	1	1
Propylparaben	94-13-3	1	1	1	1
Roxithromycin	80214-83-1	0	0	2	2
Silver	7440-22-4	0	0	2	2
Sulfadiazine	68-35-9	2	1	2	2
Sulfamethazine	57-68-1	0	0	2	2
Sulfamethoxazole	678-41-1	0	0	1	1
Sulfamethoxazole	723-46-6	0	0	1	1
Sulfur	7704-34-9	1	1	0	0
Tetracycline	60-54-8	0	0	5	1
Thiabendazole	148-79-8	3	3	0	0
Trichlorfon	52-68-6	1	1	0	0
Triclocarban	101-20-2	0	0	2	2
Triclosan	3380-34-5	0	0	2	2
Triphenyl phosphate	115-86-6	1	2	1	2

Chemical	CAS number	# of terrestrial species	# of papers terrestrial	# of aquatic species	# of papers aquatic
Tris(1,3-dichloro-2-propyl) phosphate	13674-87-8	0	0	1	2
Tris(2-chloroethyl) phosphate	115-96-8	0	0	2	2
Tris(2-ethylhexyl) phosphate	78-42-2	0	0	1	1
Valsartan	137862-53-4	0	0	1	1
Yttrium	7440-65-5	1	1	0	0

Notes:
CAS = Chemical Abstracts Service

Table E-4. EPA's National Recommended Water Quality Criteria – Aquatic Life Criteria for Chemicals Found in Biosolids

Chemical	CAS number	New or Previous	Freshwater criteria maximum concentration (acute) (µg/L)	Freshwater criteria continuous concentration (chronic) (µg/L)	Saltwater criteria maximum concentration (acute) (µg/L)	Saltwater criteria continuous concentration (chronic) (µg/L)	Publication year
Aldrin	309-00-2	Previous*	3	—	1.3	—	1980
Azinphos-methyl	86-50-0	Previous*	—	0.01	—	0.01	1986
Chlorpyrifos	2921-88-2	Previous*	0.083	0.041	0.011	0.0056	1986
Cyanide	57-12-5	Previous*	22	5.2	1	1	1985
Diazinon	333-41-5	Previous*	0.17	0.17	0.82	0.82	2005
Dichlorodiphenyltrichloroethane	50-29-3	Previous*	1.1	0.001	0.13	0.001	1980
Dieldrin	60-57-1	Previous*	0.24	0.056	0.71	0.0019	1995
Endrin	72-20-8	Previous*	0.086	0.036	0.037	0.0023	1995
Heptachlor	76-44-8	Previous*	0.52	0.0038	0.053	0.0036	1980
Lindane	58-89-9	Previous*	0.95	—	0.16	—	1995
Pentachlorophenol	87-86-5	Previous*	19	15	13	7.9	1995
4-Nonylphenol, branched	84852-15-3	Previous	28	6.6	7	1.7	2005
Aluminum	7429-90-5	Previous	—	—	—	—	2018
Arsenic	7440-38-2	Previous	340	150	69	36	1995
Boron	7440-42-8	Previous	VA	VA	VA	VA	
Cadmium	7440-43-9	Previous	1.8	0.72	33	7.9	2016
Chromium	7440-47-3	Previous	VA	VA	VA	VA	
Copper	7440-50-8	Previous	—	—	4.8	3.1	2007
Endosulfan I	959-98-8	Previous	0.22	0.056	0.034	0.0087	1980
Endosulfan II	33213-65-9	Previous	0.22	0.056	0.034	0.0087	1980
Heptachlor epoxide B	1024-57-3	Previous	0.52	0.0038	0.053	0.0036	1981
Iron	7439-89-6	Previous	—	1000	—	—	1986
Lead	7439-92-1	Previous	65	2.5	210	8.1	1984
Mercury	7439-97-6	Previous	1.4	0.77	1.8	0.94	1995
Nickel	7440-02-0	Previous	470	52	74	8.2	1995

Chemical	CAS number	New or Previous	Freshwater criteria maximum concentration (acute) (µg/L)	Freshwater criteria continuous concentration (chronic) (µg/L)	Saltwater criteria maximum concentration (acute) (µg/L)	Saltwater criteria continuous concentration (chronic) (µg/L)	Publication year
Perfluorooctanesulfonic acid	1763-23-1	Previous	DA	DA	DA	DA	
Perfluorooctanoic acid	335-67-1	Previous	DA	DA	DA	DA	
Selenium	7782-49-2	Previous	—	—	290	71	2016 Freshwater, 1999 Saltwater
Silver	7440-22-4	Previous	3.2	—	1.9	—	1980
Zinc	7440-66-6	Previous	120	120	90	81	1995

Notes:
CAS = Chemical Abstracts Service; DA = Draft Available (At the time of publication, a draft value was available. This value is subject to change.); Previous = Previously identified chemical; Previous* = Chemical was identified during the curation process; VA = Value Available (Toxicity data may be available for this chemical or a chemical in the same family. When comparing available Aquatic Life Criteria to the list of chemicals found in biosolids, some chemicals were reported using the same name but different CASRN. A chemical may be listed with multiple CASRN if (1) there are different forms of a chemical where each is considered unique for its particular properties of characteristics; or (2) when multiple CASRN have inadvertently been assigned to the same chemical. Further evaluation would be needed to determine whether the toxicity data is relevant).

Table E-5. EPA's Aquatic Life Benchmarks for Registered Pesticides for Chemicals Found in Biosolids

Chemical	CAS number	New or previous	Year up-dated	Fish		Invertebrates		Non-vascular plants[5] (µg/L)	Vascular plants[6] (µg/L)
				Acute[1] (µg/L)	Chronic[2] (µg/L)	Acute[3] (µg/L)	Chronic[4] (µg/L)		
Azinphos-methyl	86-50-0	Previous*	2016	0.18	0.44	0.08	0.25		
Bensulide	741-58-2	Previous*	2016	550	169	290	11	780	140
Captan	133-06-2	Previous*	2014	13.1	16.5	4200	560	320	> 12700
Carbon disulfide	75-15-0	Previous*		435		430		520	
Chlorpyrifos	2921-88-2	Previous*	2022	**0.85**	**< 0.251**	**0.0069**	**< 0.005**	140	
Clomazone	81777-89-1	Previous*		1450	350	2700	2200	167	30200
Diazinon	333-41-5	Previous*	2016	45	< 0.55	0.105	0.17	3700	
Dicrotophos	141-66-2	Previous*	2015	2850	9880	6.3	1.7	> 118000	> 117000
EPN	2104-64-5	Previous*	2016						
Lindane	58-89-9	Previous*	2016	0.85	2.9	0.5	54		
Mevinphos	7786-34-7	Previous*	2016						
Naled	300-76-5	Previous*	2021	46	3.4	0.0575	0.01	24	> 1800
Pentachlorophenol	87-86-5	Previous*		47.5		25			
Trifluralin	1582-09-8	Previous*	2016	9.25	1.9	125.5	2.4	21.9	49.7
2,4-Dichlorophenoxyacetic acid	94-75-7	Previous	2016			12500			299.2
Acetaminophen	103-90-2	Previous	2015			14750			
Benzoic acid	65-85-0	Previous	2022			**> 50000**			
Copper	7440-50-8	Previous		15.7	9.01	2.05	1.11	3.1	2300
DEET	134-62-3	Previous	2015	37500		37500			
Dimethoate	60-51-5	Previous	2016	3100	430	21.5	0.5	20000	> 92600
D-Limonene	5989-27-5	Previous	2017	40000		19500		9353	29650
Fenthion	55-38-9	Previous	2016	415	7.5	2.6	0.013	400	> 2800
Fipronil	120068-37-3	Previous	2021	41.5	6.6	0.11	0.011	76	> 100
Melamine	108-78-1	Previous	2015	> 60000	500000	30000	18000	940000	
Oxytetracycline	79-57-2	Previous	2020	> 28200	8850	> 29700	13500	125	3044
Pentachloronitrobenzene	82-68-8	Previous		50	13	385	18		

Chemical	CAS number	New or previous	Year up-dated	Fish		Invertebrates		Non-vascular plants[5] (µg/L)	Vascular plants[6] (µg/L)
				Acute[1] (µg/L)	Chronic[2] (µg/L)	Acute[3] (µg/L)	Chronic[4] (µg/L)		
Thiabendazole	148-79-8	Previous	2020	280	110	155	42	1420	2320
Trichlorfon	52-68-6	Previous	2021	58.5	6.1	0.0389	0.0057	16300	70600

Notes:

CAS = Chemical Abstracts Service; Previous = Previously identified chemical; Previous* = Chemical was identified during the curation process

Empty cells indicate that acceptable aquatic toxicity values are not available.

Benchmarks preceded by a "greater-than" symbol (for example, >265,000) were derived from a "greater-than" value and may overestimate toxicity. Conversely, benchmarks preceded by a "less-than" symbol (for example, <1,500) were derived from a "less-than" value and may underestimate toxicity.

Values in bold are those that changed in the September 2022 update.

[1] Benchmark = Toxicity value x LOC. For acute fish, toxicity value is generally the lowest 96-hour LC50 in a standardized test (usually with rainbow trout (*Oncorhynchus mykiss*); fathead minnow (*Pimephales promelas*); bluegill sunfish (*Lepomis macrochirus*)), and the LOC is 0.5.

[2] Benchmark = Toxicity value x LOC. For chronic fish, toxicity value is usually the lowest NOEAC from a life-cycle or early life stage test (usually with rainbow trout (*Oncorhynchus mykiss*) or fathead minnow (*Pimephales promelas*)), and the LOC is 1.

[3] Benchmark = Toxicity value x LOC. For acute invertebrate, toxicity value is usually the lowest 48- or 96-hour EC50 or LC50 in a standardized test, and the LOC is 0.5.

[4] Benchmark = Toxicity value x LOC. For chronic invertebrates, toxicity value is usually the lowest NOAEC from a life-cycle test with invertebrates, and the LOC is 1.

[5] Benchmark = Toxicity value x LOC. For nonvascular plants, toxicity value is usually a short-term (less than 10 days) EC50 (usually with green algae or diatoms), and the LOC is 1.

[6] Benchmark = Toxicity value x LOC. For vascular plants, toxicity value is usually a short-term (less than 10 days) EC50 (usually with duckweed), and the LOC is 1.

Appendix F: Environmental Fate and Transport Data: Bioaccumulation and Bioconcentration Data

Table F-1. Bioaccumulation and Bioconcentration Factors as Reported in the Literature, Arnot & Gobas 2006, and Environment and Climate Change Canada for Newly and Previously Identified Chemicals in Biosolids

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
1,1,1-Trichloroethane	Previous*	NA	71-55-6	0.40	BCF	*Cyprinodontidae*	Killifish	ECCC 2020
1,1,1-Trichloroethane	Previous*	NA	71-55-6	0.27	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
1,1,1-Trichloroethane	Previous*	NA	71-55-6	0.46	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
1,1,1-Trichloroethane	Previous*	NA	71-55-6	0.46	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
1,1,1-Trichloroethane	Previous*	NA	71-55-6	0.27	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
1,1,1-Trichloroethane	Previous*	NA	71-55-6	0.40	BCF	*Cyprinodontidae*	Killifish	Arnot & Gobas 2006
1,1,1-Trichloroethane	Previous*	NA	71-55-6	0.95	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.34	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.63	BCF	*Gambusia affinis*	Western mosquitofish	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.82	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.82	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.90	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	1.72	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.03	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.85	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.85	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.00	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.04	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.11	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.20	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.36	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.46	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.52	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.15	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.28	BCF	*Poecilia reticulata*	Guppy	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.25	BCF	Various	Phytoplankton	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.95	BAF	*Pontoporeia hoyi*	Amphipod	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.77	BAF	*Mysis relicta*	Shrimp	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.28	BAF	*Callinectes sapidus*	Blue crab	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.47	BAF	*Callinectes sapidus*	Blue crab	ECCC 2020
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.28	BAF	*Callinectes sapidus*	Blue crab	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.95	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.77	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.47	BAF	*Callinectes sapidus*	Blue crab	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.25	BCF	Various	Phytoplankton	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.34	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.63	BCF	*Gambusia affinis*	Western mosquitofish	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.82	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.82	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.90	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.85	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.03	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	1.72	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.85	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.52	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.36	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.46	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.20	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.11	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.04	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.00	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.28	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.15	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.04	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	3.40	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.52	BAF	*Brevoortia patronus*	Gulf menhaden	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.43	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.53	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.60	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.11	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.04	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.08	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.28	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.48	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.38	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.64	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.26	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.15	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.75	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.72	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.36	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.34	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.60	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.18	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.28	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.30	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.31	BCF	*Jordanella floridae*	Flagfish	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.86	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.89	BCF	*Cyprinus carpio*	Common carp	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	1.93	BCF	*Leiostomus xanthurus*	Spot	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.16	BCF	*Leiostomus xanthurus*	Spot	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	1.84	BCF	*Leiostomus xanthurus*	Spot	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.13	BCF	*Leiostomus xanthurus*	Spot	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.54	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.61	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.21	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.19	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.25	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.12	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.26	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.11	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.15	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.07	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.04	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.20	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.03	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.18	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.24	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.13	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.08	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.13	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.06	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.03	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.03	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.09	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	1.59	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.66	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.62	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.68	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.65	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.51	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.60	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.48	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.63	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.71	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.43	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.51	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.58	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.72	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.46	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.00	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	1.84	BCF	*Penaeus duorarum*	Northern pink shrimp	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.40	BCF	*Chlorella fusca*	Green algae	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.99	BCF	Various	Phytoplankton	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.47	BAF	*Cottus cognatus*	Sculpin	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.00	BAF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.34	BAF	*Fundulus heteroclitus*	Mummichog	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.41	BAF	*Micropogonias undulatus*	Atlantic croaker	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.10	BAF	*Micropogonias undulatus*	Atlantic croaker	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	1.90	BAF	*Cynoscion nebulosis*	Spotted sea trout	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.20	BAF	*Ichtalurus furcatus*	Blue catfish	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.91	BAF	*Tubifex tubifex*	Oligocheate	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	4.10	BAF	*Pontoporeia hoyi*	Amphipod	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.60	BAF	*Mysis relicta*	Shrimp	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.60	BAF	*Callinectes sapidus*	Blue crab	ECCC 2020
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.91	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	4.10	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.60	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.60	BAF	*Callinectes sapidus*	Blue crab	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.52	BAF	*Brevoortia patronus*	Gulf menhaden	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.34	BAF	*Fundulus heteroclitus*	Mummichog	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.41	BAF	*Micropogonias undulatus*	Atlantic croaker	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.47	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.00	BAF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.10	BAF	*Micropogonias undulatus*	Atlantic croaker	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	1.90	BAF	*Cynoscion nebulosis*	Spotted sea trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.20	BAF	*Ichtalurus furcatus*	Blue catfish	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.99	BCF	Various	Phytoplankton	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.40	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	1.84	BCF	*Penaeus duorarum*	Northern pink shrimp	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.15	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.22	BCF	*Chironomus decorus*	Midge	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.43	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.72	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.71	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.68	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.66	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.65	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.63	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.61	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.62	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.60	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.58	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.51	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.51	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.48	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.43	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.46	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.89	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.86	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.54	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	1.59	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.26	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.25	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.24	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.21	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.20	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.19	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.18	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.15	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.13	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.13	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.12	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.11	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.09	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.08	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.07	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.06	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.04	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.03	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.03	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.03	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.48	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.60	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.53	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.28	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.11	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.08	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.04	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.30	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.28	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.60	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.75	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.72	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.64	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.34	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.36	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.18	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.38	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.26	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.15	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.31	BCF	*Jordanella floridae*	Flagfish	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.16	BCF	*Leiostomus xanthurus*	Spot	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.13	BCF	*Leiostomus xanthurus*	Spot	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	1.93	BCF	*Leiostomus xanthurus*	Spot	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	1.84	BCF	*Leiostomus xanthurus*	Spot	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.00	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.04	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.46	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.69	BCF	*Leuciscus idus melanotus*	Golden ide	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.26	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.32	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.32	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.95	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	3.37	BCF	*Lepomis cyanellus*	Green sunfish	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.60	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.60	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.00	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.00	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.41	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.51	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.34	BAF	*Ichtalurus furcatus*	Blue catfish	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.70	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.85	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.83	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.48	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.43	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.40	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.40	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.60	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.41	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.70	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.24	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.28	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.28	BAF	*Micropogonias undulatus*	Atlantic croaker	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.15	BAF	*Cynoscion nebulosis*	Spotted sea trout	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.16	BAF	*Callinectes sapidus*	Blue crab	ECCC 2020
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.16	BAF	*Callinectes sapidus*	Blue crab	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.34	BAF	*Ichtalurus furcatus*	Blue catfish	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.28	BAF	*Micropogonias undulatus*	Atlantic croaker	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.15	BAF	*Cynoscion nebulosis*	Spotted sea trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	4.29	BCF	*Selenastrum capricornutum*	Green algae	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	1.49	BCF	*Chironomus decorus*	Midge	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.70	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.28	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.24	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.70	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.85	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.83	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.60	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.48	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.43	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.41	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.40	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.40	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.70	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.40	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
1,2-Dichlorobenzene	Previous*	NA	95-50-1	2.35	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
1,2-Dichlorobenzene	Previous*	NA	95-50-1	1.95	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
1,2-Dichloropropane	Previous*	NA	78-87-5	0.35	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
1,2-Dichloropropane	Previous*	NA	78-87-5	0.57	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
1,4-Dinitrobenzene	Previous*	NA	100-25-4	-0.40	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
1,4-Dioxane	Previous*	NA	123-91-1	-0.40	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
1,4-Dioxane	Previous*	NA	123-91-1	-0.30	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	Previous*	206	40186-72-9	5.38	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	5.66	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	5.25	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	5.06	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	5.20	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.27	BAF	*Salvelinus namaycush*	Lake trout	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	5.92	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.21	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.16	BAF	*Osmerus mordax*	Rainbow smelt	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	5.97	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	5.97	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	5.93	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.28	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.47	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	5.89	BAF	*Ambloplites rupestris*	Rock bass	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.82	BAF	*Noturus flavus*	Stonecat	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.18	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.12	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.52	BAF	*Moxostoma macrolepidotum*	Shorthead redhorse	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.30	BAF	*Cottus bairdi*	Mottled sculpin	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	5.82	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.00	BAF	*Ambloplites rupestris*	Rock bass	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.20	BAF	*Notropis hudsonius*	Spottail shiner	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	5.74	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.04	BAF	*Ambloplites rupestris*	Rock bass	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.88	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	6.45	BAF	*Labidesthes sicculus*	Brook silversides	Arnot & Gobas 2006
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	4.41	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,3',4,4',5,6-Octachlorobiphenyl	Previous*	195	52663-78-2	5.51	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,3',4,4',5,6-Octachlorobiphenyl	Previous*	195	52663-78-2	6.61	BAF	*Salvelinus namaycush*	Lake trout	Arnot & Gobas 2006
2,2',3,3',4,4',5,6-Octachlorobiphenyl	Previous*	195	52663-78-2	6.38	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,3',4,4',5,6-Octachlorobiphenyl	Previous*	195	52663-78-2	6.58	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,3',4,4',5,6-Octachlorobiphenyl	Previous*	195	52663-78-2	6.36	BAF	*Osmerus mordax*	Rainbow smelt	Arnot & Gobas 2006
2,2',3,3',4,5,5',6'-Octachlorobiphenyl	Previous*	199	52663-75-9	5.39	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,3',4,5,5',6'-Octachlorobiphenyl	Previous*	199	52663-75-9	6.39	BAF	*Salvelinus namaycush*	Lake trout	Arnot & Gobas 2006
2,2',3,3',4,5,5',6'-Octachlorobiphenyl	Previous*	199	52663-75-9	6.14	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,3',4,5,5',6'-Octachlorobiphenyl	Previous*	199	52663-75-9	6.16	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,3',4,5,5',6'-Octachlorobiphenyl	Previous*	199	52663-75-9	6.37	BAF	*Osmerus mordax*	Rainbow smelt	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.27	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.30	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.27	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.30	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.39	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.69	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.02	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	5.42	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	5.72	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.10	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.70	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.38	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	5.97	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.96	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.43	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.76	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	7.37	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.90	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.95	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.50	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.90	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.94	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.35	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.76	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.80	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	6.59	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	7.23	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	5.93	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	5.02	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,3',4,5',6'-Heptachlorobiphenyl	Previous*	177	52663-70-4	6.73	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,3',4,5',6'-Heptachlorobiphenyl	Previous*	177	52663-70-4	6.24	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,3',4,5',6'-Heptachlorobiphenyl	Previous*	177	52663-70-4	5.66	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,3',4,5',6'-Heptachlorobiphenyl	Previous*	177	52663-70-4	6.61	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,3',4,5',6'-Heptachlorobiphenyl	Previous*	177	52663-70-4	6.85	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,3',4,5',6'-Heptachlorobiphenyl	Previous*	177	52663-70-4	6.85	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,3',4,5',6'-Heptachlorobiphenyl	Previous*	177	52663-70-4	7.00	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,3',4,5',6'-Heptachlorobiphenyl	Previous*	177	52663-70-4	7.51	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,3',4,5',6'-Heptachlorobiphenyl	Previous*	177	52663-70-4	5.26	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,3',4,6'-Hexachlorobiphenyl	Previous*	132	38380-05-1	5.70	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,3',4,6'-Hexachlorobiphenyl	Previous*	132	38380-05-1	5.53	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,3',4,6'-Hexachlorobiphenyl	Previous*	132	38380-05-1	5.02	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,3',4,6'-Hexachlorobiphenyl	Previous*	132	38380-05-1	5.41	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,3',4,6'-Hexachlorobiphenyl	Previous*	132	38380-05-1	6.02	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,3',4,6'-Hexachlorobiphenyl	Previous*	132	38380-05-1	6.05	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,3',4,6'-Hexachlorobiphenyl	Previous*	132	38380-05-1	6.07	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,3',4,6'-Hexachlorobiphenyl	Previous*	132	38380-05-1	6.36	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,3',4,6'-Hexachlorobiphenyl	Previous*	132	38380-05-1	4.88	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,3',4-Pentachlorobiphenyl	Previous*	82	52663-62-4	6.02	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,3',4-Pentachlorobiphenyl	Previous*	82	52663-62-4	6.08	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,3',4-Pentachlorobiphenyl	Previous*	82	52663-62-4	5.28	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,3',4-Pentachlorobiphenyl	Previous*	82	52663-62-4	6.25	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,3',4-Pentachlorobiphenyl	Previous*	82	52663-62-4	6.63	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,3',4-Pentachlorobiphenyl	Previous*	82	52663-62-4	6.59	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,3',4-Pentachlorobiphenyl	Previous*	82	52663-62-4	6.38	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,3',4-Pentachlorobiphenyl	Previous*	82	52663-62-4	7.05	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,3',4-Pentachlorobiphenyl	Previous*	82	52663-62-4	5.19	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,3',6-Pentachlorobiphenyl	Previous*	84	52663-60-2	6.20	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,3',6-Pentachlorobiphenyl	Previous*	84	52663-60-2	6.15	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,3',6-Pentachlorobiphenyl	Previous*	84	52663-60-2	5.51	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,3',6-Pentachlorobiphenyl	Previous*	84	52663-60-2	6.41	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,3',6-Pentachlorobiphenyl	Previous*	84	52663-60-2	6.80	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,3',6-Pentachlorobiphenyl	Previous*	84	52663-60-2	6.66	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,3',6-Pentachlorobiphenyl	Previous*	84	52663-60-2	6.87	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,3',6-Pentachlorobiphenyl	Previous*	84	52663-60-2	7.24	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,3',6-Pentachlorobiphenyl	Previous*	84	52663-60-2	5.15	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,3'-Tetrachlorobiphenyl	Previous*	40	38444-93-8	5.95	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,3'-Tetrachlorobiphenyl	Previous*	40	38444-93-8	5.49	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,3'-Tetrachlorobiphenyl	Previous*	40	38444-93-8	5.56	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,3'-Tetrachlorobiphenyl	Previous*	40	38444-93-8	4.74	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,3'-Tetrachlorobiphenyl	Previous*	40	38444-93-8	4.23	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,2',3,3'-Tetrachlorobiphenyl	Previous*	40	38444-93-8	4.23	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,2',3,3'-Tetrachlorobiphenyl	Previous*	40	38444-93-8	4.11	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,2',3,3'-Tetrachlorobiphenyl	Previous*	40	38444-93-8	4.00	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,2',3,3'-Tetrachlorobiphenyl	Previous*	40	38444-93-8	3.36	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,2',3,3'-Tetrachlorobiphenyl	Previous*	40	38444-93-8	3.75	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.20	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.25	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.45	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.47	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.48	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.72	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.24	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	5.75	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	5.61	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	5.98	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.63	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.43	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.26	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.88	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.37	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.69	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	7.30	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.80	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.82	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.43	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.80	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.84	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.58	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.83	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	6.68	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	7.09	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	7.45	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	5.55	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	5.08	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,4',5,5',6-Heptachloro-1,1'-biphenyl	Previous*	187	52663-68-0	6.00	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,4',5,5',6-Heptachloro-1,1'-biphenyl	Previous*	187	52663-68-0	6.34	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,4',5,5',6-Heptachloro-1,1'-biphenyl	Previous*	187	52663-68-0	6.22	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4',5,5',6-Heptachloro-1,1'-biphenyl	Previous*	187	52663-68-0	6.37	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,4',5,5',6-Heptachloro-1,1'-biphenyl	Previous*	187	52663-68-0	6.86	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.03	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.02	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.50	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.15	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.34	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.16	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	5.79	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	5.16	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	5.91	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.55	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.09	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.05	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.78	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.30	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.53	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	7.22	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.81	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.69	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.44	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.81	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.75	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.08	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.40	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.44	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	6.65	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	7.00	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	5.64	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	4.86	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.07	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.18	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.30	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.49	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.54	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.21	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.22	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	5.50	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	5.58	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	5.89	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.53	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.34	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.08	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.73	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.31	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.51	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	7.15	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.74	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.68	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.42	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.74	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.56	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.50	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.85	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.74	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	6.99	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	7.36	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	5.49	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	5.12	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.76	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.79	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.04	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.78	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.75	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.90	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.72	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.20	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.29	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.76	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.23	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.13	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.65	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.52	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.08	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.16	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.96	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.47	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.40	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.13	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.47	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.66	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.95	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.31	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.31	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.90	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	6.75	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	5.40	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	4.75	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.17	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.20	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.82	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.24	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.19	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	4.90	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.03	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.81	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.44	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.12	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.89	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.48	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.67	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	6.41	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.71	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.96	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	5.67	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	6.11	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	6.06	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	4.93	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,4',6-Pentachlorobiphenyl	Previous*	98	68194-05-8	5.16	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,4',6-Pentachlorobiphenyl	Previous*	98	68194-05-8	4.93	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,4',6-Pentachlorobiphenyl	Previous*	98	68194-05-8	4.48	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,4',6-Pentachlorobiphenyl	Previous*	98	68194-05-8	4.90	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,4',6-Pentachlorobiphenyl	Previous*	98	68194-05-8	5.40	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,4',6-Pentachlorobiphenyl	Previous*	98	68194-05-8	5.48	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4',6-Pentachlorobiphenyl	Previous*	98	68194-05-8	5.24	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,4',6-Pentachlorobiphenyl	Previous*	98	68194-05-8	5.86	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,4',6-Pentachlorobiphenyl	Previous*	98	68194-05-8	4.18	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	4.95	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	4.85	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.60	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	6.14	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.66	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.56	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	4.91	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.42	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	4.92	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.03	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.33	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.20	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.43	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.97	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.29	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.79	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.31	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.97	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.80	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.74	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	6.19	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	6.18	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	5.93	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	6.48	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	4.30	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	4.78	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.71	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.82	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.05	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.81	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.67	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.32	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.05	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.52	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	4.85	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.95	BAF	*Salvelinus namaycush*	Lake trout	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.68	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.83	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.92	BAF	*Osmerus mordax*	Rainbow smelt	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.28	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.58	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.25	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.89	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.47	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.21	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.27	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.19	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.89	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.44	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.42	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.12	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.44	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.61	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.07	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.61	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.74	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	6.97	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	7.28	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	5.37	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	4.87	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,5,5'-Pentachlorobiphenyl	Previous*	92	52663-61-3	6.35	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,5,5'-Pentachlorobiphenyl	Previous*	92	52663-61-3	5.88	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,5,5'-Pentachlorobiphenyl	Previous*	92	52663-61-3	5.61	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,5,5'-Pentachlorobiphenyl	Previous*	92	52663-61-3	6.24	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,5,5'-Pentachlorobiphenyl	Previous*	92	52663-61-3	6.61	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,5,5'-Pentachlorobiphenyl	Previous*	92	52663-61-3	6.44	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,5,5'-Pentachlorobiphenyl	Previous*	92	52663-61-3	6.99	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,5,5'-Pentachlorobiphenyl	Previous*	92	52663-61-3	5.27	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.77	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.92	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.51	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.99	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.28	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.72	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.92	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.14	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.23	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	6.09	BAF	*Salvelinus namaycush*	Lake trout	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.56	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	6.07	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.96	BAF	*Osmerus mordax*	Rainbow smelt	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.44	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.69	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.32	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.92	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.75	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.28	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.04	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.15	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.80	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.07	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.49	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.15	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.71	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.41	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.95	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.48	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.66	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.51	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	5.95	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.69	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.53	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',3-Trichlorobiphenyl	Previous*	16	38444-78-9	4.95	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.27	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.41	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.80	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.51	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.76	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.89	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.04	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.37	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.31	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	6.48	BAF	*Salvelinus namaycush*	Lake trout	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.91	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	6.29	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	6.13	BAF	*Osmerus mordax*	Rainbow smelt	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	4.91	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.23	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.71	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.52	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.20	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.84	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.53	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.69	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	6.39	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.83	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	6.08	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.64	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	6.14	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.99	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	4.86	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	5.83	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	6.04	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	6.26	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	4.81	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	4.91	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',4,4',6-Pentachlorobiphenyl	Previous*	100	39485-83-1	4.06	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,2',4,4',6-Pentachlorobiphenyl	Previous*	100	39485-83-1	3.37	BCF	*Leuciscus idus*	Ide, silver or golden orfe	Arnot & Gobas 2006
2,2',4,6-Tetrachlorobiphenyl	Previous*	50	62796-65-0	4.26	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
2,2',4,6-Tetrachlorobiphenyl	Previous*	50	62796-65-0	3.50	BCF	*Leuciscus idus*	Ide, silver or golden orfe	Arnot & Gobas 2006
2,2',4-Trichlorobiphenyl	Previous*	17	37680-66-3	5.12	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',5,6'-Tetrachlorobiphenyl	Previous*	53	41464-41-9	5.72	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',5,6'-Tetrachlorobiphenyl	Previous*	53	41464-41-9	5.18	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',5,6'-Tetrachlorobiphenyl	Previous*	53	41464-41-9	5.51	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',5,6'-Tetrachlorobiphenyl	Previous*	53	41464-41-9	4.64	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	5.12	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	4.37	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	4.89	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	5.31	BAF	*Salvelinus namaycush*	Lake trout	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	4.86	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	4.47	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	5.22	BAF	*Osmerus mordax*	Rainbow smelt	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	5.22	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	4.86	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	4.78	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	3.84	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	4.23	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	4.23	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	4.08	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	3.97	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	3.43	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	3.81	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
2,3,3',4,4',5,5',6-Octachlorobiphenyl	Previous*	205	74472-53-0	6.14	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.29	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.41	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.88	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.21	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	4.95	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.71	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.60	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.13	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	4.96	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	6.05	BAF	*Salvelinus namaycush*	Lake trout	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.74	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.78	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	6.11	BAF	*Osmerus mordax*	Rainbow smelt	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.00	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.16	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.87	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.55	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.16	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.95	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.54	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.75	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	6.47	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	6.18	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	6.07	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.78	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	6.18	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	6.33	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.80	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	6.20	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	6.15	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	6.14	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	6.62	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	5.10	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	4.67	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,3,3',4'-Tetrachlorobiphenyl	Previous*	56	41464-43-1	6.22	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,3,3',4'-Tetrachlorobiphenyl	Previous*	56	41464-43-1	6.60	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,3,3',4'-Tetrachlorobiphenyl	Previous*	56	41464-43-1	6.52	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,3,3',4'-Tetrachlorobiphenyl	Previous*	56	41464-43-1	6.27	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,3,3',4'-Tetrachlorobiphenyl	Previous*	56	41464-43-1	6.88	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.11	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.13	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.94	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.31	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	4.86	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.55	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.22	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.20	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.50	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.60	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.80	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.34	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	6.11	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	5.66	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	4.58	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.66	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.71	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	5.25	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.68	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.18	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.39	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.15	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	5.10	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.69	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.42	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.93	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.73	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.99	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	5.66	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	5.05	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	5.46	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.95	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	5.67	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	5.55	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	5.81	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	6.20	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	6.05	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	5.85	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	6.49	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.09	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.23	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.68	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	4.81	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.96	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.59	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.41	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	4.71	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	4.96	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.62	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.16	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	4.95	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.49	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.23	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.54	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	6.14	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.47	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.97	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.47	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	6.11	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	6.50	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.67	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	6.07	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	6.07	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	6.00	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	6.48	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	5.65	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	4.73	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2',3,4-Trichlorobiphenyl	Previous*	33	38444-86-9	5.35	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2',3,4-Trichlorobiphenyl	Previous*	33	38444-86-9	4.46	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2',3,4-Trichlorobiphenyl	Previous*	33	38444-86-9	5.11	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2',3,4-Trichlorobiphenyl	Previous*	33	38444-86-9	4.33	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2',3,4-Trichlorobiphenyl	Previous*	33	38444-86-9	4.15	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.01	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.18	BAF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.54	BAF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.30	BAF	*Hydropychidae alterans*	Caddisfly larvae	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	6.02	BAF	*Orconectes propinquus*	Crayfish	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.91	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.60	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.34	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	4.63	BAF	*Stizostedion vitreum*	Walleye	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	4.72	BAF	*Pomoxis nigromaculatus*	Black crappie	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.46	BAF	*Micropterus dolomieu*	Smallmouth bass	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.13	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	4.81	BAF	*Aplodinotus grunniens*	Freshwater drum	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.47	BAF	*Catostomus commersonii*	White sucker	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.01	BAF	*Perca flavescens*	Yellow perch	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.23	BAF	*Percopsis omiscomaycus*	Troutperch	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	6.09	BAF	*Micropterus salmoides*	Largemouth bass	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.38	BAF	*Morone americana*	White perch	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.86	BAF	*Dorosoma cepedianum*	Gizzard shad	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.32	BAF	Mixed (mostly yellow perch and smelt)	Young of the year	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	6.08	BAF	*Notropis atherinoides*	Emerald shiner	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.72	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	5.79	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	6.15	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	6.08	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	6.08	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	6.58	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	4.59	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	4.60	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,4,4'-Trichlorobiphenyl	Previous*	28	7012-37-5	5.14	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
2,4,4'-Trichlorobiphenyl	Previous*	28	7012-37-5	5.48	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
2,4,4'-Trichlorobiphenyl	Previous*	28	7012-37-5	5.48	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
2,4,4'-Trichlorobiphenyl	Previous*	28	7012-37-5	5.23	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
2,4,4'-Trichlorobiphenyl	Previous*	28	7012-37-5	5.89	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,4',6-Trichlorobiphenyl	Previous*	32	38444-77-8	6.53	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
2,4',6-Trichlorobiphenyl	Previous*	32	38444-77-8	6.15	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
2,4',6-Trichlorobiphenyl	Previous*	32	38444-77-8	5.78	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
2,4',6-Trichlorobiphenyl	Previous*	32	38444-77-8	5.08	BCF	Various	Phytoplankton	Arnot & Gobas 2006
2,6-Dinitrotoluene	Previous*	NA	606-20-2	1.34	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
4-Chloro-3-methylphenol	Previous*	NA	59-50-7	0.92	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
4-Chloro-3-methylphenol	Previous*	NA	59-50-7	0.99	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
4-Chloro-3-methylphenol	Previous*	NA	59-50-7	0.92	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
4-Chloro-3-methylphenol	Previous*	NA	59-50-7	0.99	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Acenaphthene	Previous*	NA	83-32-9	2.59	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Acenaphthene	Previous*	NA	83-32-9	2.87	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Acenaphthene	Previous*	NA	83-32-9	2.88	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Acenaphthene	Previous*	NA	83-32-9	2.87	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Acenaphthene	Previous*	NA	83-32-9	2.88	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Acenaphthene	Previous*	NA	83-32-9	2.59	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Aldrin	Previous*	NA	309-00-2	4.09	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
Aldrin	Previous*	NA	309-00-2	4.07	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Aldrin	Previous*	NA	309-00-2	3.74	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Aldrin	Previous*	NA	309-00-2	3.57	BCF	*Leuciscus idus*	Ide, silver or golden orfe	Arnot & Gobas 2006
Aldrin	Previous*	NA	309-00-2	3.11	BCF	*Leuciscus idus*	Ide, silver or golden orfe	Arnot & Gobas 2006
Allyl chloride	Previous*	NA	107-05-1	-0.30	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Allyl chloride	Previous*	NA	107-05-1	0.54	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.88	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.59	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	2.59	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.17	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.32	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.67	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.59	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.73	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	2.40	BCF	Various	Phytoplankton	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	2.40	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	2.15	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	2.15	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.11	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.45	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	2.97	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.26	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.30	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.38	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.36	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.43	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.32	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.20	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	2.97	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	3.04	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	2.33	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.51	BCF	*Morone saxatilis*	Striped bass	ECCC 2020
Benzene	Previous*	NA	71-43-2	0.63	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Benzene	Previous*	NA	71-43-2	1.05	BCF	*Morone saxatilis*	Striped bass	ECCC 2020
Benzene	Previous*	NA	71-43-2	1.48	BCF	*Chlorella fusca*	Green algae	ECCC 2020
Benzene	Previous*	NA	71-43-2	1.48	BAF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	3.35	BAF	*Selenustrum capricornutum*	Green algae	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	2.00	BAF	*Brachionus plicatilis*	Rotifer	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	4.00	BAF	*Brachionus plicatilis*	Rotifer	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	3.00	BAF	*Brachionus plicatilis*	Rotifer	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.63	BAF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.51	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.05	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.00	BAF	*Leuciscus idus melanotus*	Golden ide	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.05	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.06	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.43	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.47	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.74	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.75	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.85	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.85	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.88	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.90	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.96	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	0.99	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Benzene	Previous*	NA	71-43-2	1.00	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.17	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.36	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.48	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.48	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.50	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.54	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.54	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.62	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.65	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.73	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.74	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	1.78	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	2.05	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	2.32	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	2.36	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	2.49	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	2.70	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	3.64	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	3.93	BAF	*Engraulis mordax*	Northern anchovy	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	2.67	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzene	Previous*	NA	71-43-2	3.15	BAF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Benzyl butyl phthalate	Previous*	NA	85-68-7	4.01	BAF	*Leptocottus armatus*	Pacific Staghorn Sculpin	ECCC 2020
Benzyl butyl phthalate	Previous*	NA	85-68-7	1.09	BCF	*Lepomis macrochirus*	Bluegill sunfish	ECCC 2020
Benzyl butyl phthalate	Previous*	NA	85-68-7	0.04	BCF	*Lepomis macrochirus*	Bluegill sunfish	ECCC 2020
Benzyl butyl phthalate	Previous*	NA	85-68-7	1.28	BCF	*Lepomis macrochirus*	Bluegill sunfish	ECCC 2020
Benzyl butyl phthalate	Previous*	NA	85-68-7	3.25	BAF	*Squalus acanthias*	Spiny Dogfish	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Benzyl butyl phthalate	Previous*	NA	85-68-7	2.77	BAF	*Squalus acanthias*	Spiny Dogfish	ECCC 2020
Benzyl butyl phthalate	Previous*	NA	85-68-7	3.31	BAF	*Hexogrammos stelleri*	Whitespotted Greenling	ECCC 2020
Benzyl butyl phthalate	Previous*	NA	85-68-7	3.67	BAF	*Pleuronectes ventulus*	English Sole	ECCC 2020
Benzyl butyl phthalate	Previous*	NA	85-68-7	3.98	BAF	*Rhacochilus vaccu*	Pile Perch	ECCC 2020
Benzyl butyl phthalate	Previous*	NA	85-68-7	4.01	BAF	*Leptocottus armatus*	Pacific Staghorn Sculpin	ECCC 2020
Benzyl butyl phthalate	Previous*	NA	85-68-7	4.06	BAF	*Embiotoea lateralis*	Striped Seaperch	ECCC 2020
Benzyl butyl phthalate	Previous*	NA	85-68-7	4.01	BAF	*Leptocottus armatus*	Pacific Staghorn Sculpin	Arnot & Gobas 2006
Benzyl butyl phthalate	Previous*	NA	85-68-7	3.25	BAF	*Squalus acanthias*	Spiny Dogfish	Arnot & Gobas 2006
Benzyl butyl phthalate	Previous*	NA	85-68-7	1.09	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Benzyl butyl phthalate	Previous*	NA	85-68-7	1.28	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Benzyl butyl phthalate	Previous*	NA	85-68-7	0.04	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Benzyl butyl phthalate	Previous*	NA	85-68-7	2.82	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Biphenyl	Previous*	NA	92-52-4	2.73	BCF	*Chlorella fusca*	Green algae	ECCC 2020
Biphenyl	Previous*	NA	92-52-4	2.73	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
Biphenyl	Previous*	NA	92-52-4	2.53	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Biphenyl	Previous*	NA	92-52-4	2.59	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Biphenyl	Previous*	NA	92-52-4	2.62	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Biphenyl	Previous*	NA	92-52-4	2.68	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Biphenyl	Previous*	NA	92-52-4	2.66	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Biphenyl	Previous*	NA	92-52-4	2.67	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Biphenyl	Previous*	NA	92-52-4	2.64	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Biphenyl	Previous*	NA	92-52-4	2.45	BCF	*Leuciscus idus melanotus*	Golden ide	Arnot & Gobas 2006
Biphenyl	Previous*	NA	92-52-4	2.45	BCF	*Leuciscus idus*	Ide, silver or golden orfe	Arnot & Gobas 2006
Bisphenol A	Previous*	NA	80-05-7	0.96	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Bisphenol A	Previous*	NA	80-05-7	1.64	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Bisphenol A	Previous*	NA	80-05-7	0.96	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Bisphenol A	Previous*	NA	80-05-7	1.64	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Bisphenol A	Previous*	NA	80-05-7	0.23	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Bisphenol A	Previous*	NA	80-05-7	0.34	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Bisphenol A	Previous*	NA	80-05-7	0.56	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Bisphenol A	Previous*	NA	80-05-7	0.94	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Bisphenol A	Previous*	NA	80-05-7	1.03	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Bisphenol A	Previous*	NA	80-05-7	1.34	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Bisphenol A	Previous*	NA	80-05-7	1.40	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Bisphenol A	Previous*	NA	80-05-7	1.58	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Bisphenol A	Previous*	NA	80-05-7	2.00	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Captan	Previous*	NA	133-06-2	2.30	BCF	*Gnathopogon coerulescens*	Willow shiner	ECCC 2020
Captan	Previous*	NA	133-06-2	1.87	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Captan	Previous*	NA	133-06-2	1.90	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Captan	Previous*	NA	133-06-2	1.96	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Captan	Previous*	NA	133-06-2	1.98	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Captan	Previous*	NA	133-06-2	2.20	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Captan	Previous*	NA	133-06-2	2.40	BCF	*Gnathopogon coerulescens*	Willow shiner	ECCC 2020
Captan	Previous*	NA	133-06-2	2.43	BCF	*Gnathopogon coerulescens*	Willow shiner	ECCC 2020
Captan	Previous*	NA	133-06-2	2.70	BCF	*Gnathopogon coerulescens*	Willow shiner	ECCC 2020
Captan	Previous*	NA	133-06-2	2.71	BCF	*Gnathopogon coerulescens*	Willow shiner	ECCC 2020
Carbon disulfide	Previous*	NA	75-15-0	1.78	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Carbon disulfide	Previous*	NA	75-15-0	0.79	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Chlorobenzene	Previous*	NA	108-90-7	2.88	BAF	*Ichtalurus furcatus*	Blue catfish	ECCC 2020
Chlorobenzene	Previous*	NA	108-90-7	1.13	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Chlorobenzene	Previous*	NA	108-90-7	1.34	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Chlorobenzene	Previous*	NA	108-90-7	1.70	BCF	*Chlorella fusca*	Green algae	ECCC 2020
Chlorobenzene	Previous*	NA	108-90-7	2.09	BAF	*Micropogonias undulatus*	Atlantic croaker	ECCC 2020
Chlorobenzene	Previous*	NA	108-90-7	1.81	BAF	*Cynoscion nebulosis*	Spotted sea trout	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Chlorobenzene	Previous*	NA	108-90-7	1.70	BAF	*Callinectes sapidus*	Blue crab	ECCC 2020
Chlorobenzene	Previous*	NA	108-90-7	1.70	BAF	*Callinectes sapidus*	Blue crab	Arnot & Gobas 2006
Chlorobenzene	Previous*	NA	108-90-7	2.88	BAF	*Ichtalurus furcatus*	Blue catfish	Arnot & Gobas 2006
Chlorobenzene	Previous*	NA	108-90-7	2.09	BAF	*Micropogonias undulatus*	Atlantic croaker	Arnot & Gobas 2006
Chlorobenzene	Previous*	NA	108-90-7	1.81	BAF	*Cynoscion nebulosis*	Spotted sea trout	Arnot & Gobas 2006
Chlorobenzene	Previous*	NA	108-90-7	1.70	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
Chlorobenzene	Previous*	NA	108-90-7	3.34	BCF	*Selenustrum capricornutum*	Green algae	Arnot & Gobas 2006
Chlorobenzene	Previous*	NA	108-90-7	1.04	BCF	*Chironomus decorus*	Midge	Arnot & Gobas 2006
Chlorobenzene	Previous*	NA	108-90-7	1.13	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Chlorobenzene	Previous*	NA	108-90-7	1.34	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Chlorobenzene	Previous*	NA	108-90-7	2.65	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Chlorobenzene	Previous*	NA	108-90-7	1.50	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.53	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	1.76	BCF	*Leuresthes tenuis*	California grunion	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	1.82	BCF	*Leuresthes tenuis*	California grunion	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.65	BCF	*Leuresthes tenuis*	California grunion	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.79	BCF	*Leuresthes tenuis*	California grunion	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.85	BCF	*Leuresthes tenuis*	California grunion	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.00	BCF	*Leuresthes tenuis*	California grunion	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.49	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.53	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.61	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.73	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.74	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.27	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.93	BCF	*Gasterosteus aculeatus*	Threespine stickleback	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.98	BCF	*Gasterosteus aculeatus*	Threespine stickleback	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Chlorpyrifos	Previous*	NA	2921-88-2	3.01	BCF	*Gasterosteus aculeatus*	Threespine stickleback	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.04	BCF	*Gasterosteus aculeatus*	Threespine stickleback	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.04	BCF	*Gasterosteus aculeatus*	Threespine stickleback	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.06	BCF	*Gasterosteus aculeatus*	Threespine stickleback	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.12	BCF	*Gasterosteus aculeatus*	Threespine stickleback	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.13	BCF	*Gasterosteus aculeatus*	Threespine stickleback	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.18	BCF	*Gasterosteus aculeatus*	Threespine stickleback	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.43	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.27	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.00	BCF	*Lepomis macrochirus*	Bluegill sunfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.65	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.22	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.00	BCF	*Opsanus beta*	Gulf toadfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.41	BCF	*Opsanus beta*	Gulf toadfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.43	BCF	*Opsanus beta*	Gulf toadfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.67	BCF	*Opsanus beta*	Gulf toadfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.68	BCF	*Opsanus beta*	Gulf toadfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.79	BCF	*Opsanus beta*	Gulf toadfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.81	BCF	*Opsanus beta*	Gulf toadfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.83	BCF	*Opsanus beta*	Gulf toadfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.95	BCF	*Opsanus beta*	Gulf toadfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.28	BCF	*Opsanus beta*	Gulf toadfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	1.62	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	1.84	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	1.85	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.08	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.11	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Chlorpyrifos	Previous*	NA	2921-88-2	2.18	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.30	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.40	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.41	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.41	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.48	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.60	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.60	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.63	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.79	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.82	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.82	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.85	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.85	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.87	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.93	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.99	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.00	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.00	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.03	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.16	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.26	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.02	BCF	*Menidia beryllina*	Inland silverside	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.11	BCF	*Menidia beryllina*	Inland silverside	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.30	BCF	*Menidia beryllina*	Inland silverside	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.64	BCF	*Menidia beryllina*	Inland silverside	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.60	BCF	*Menidia peninsulae*	Tidewater silverside	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Chlorpyrifos	Previous*	NA	2921-88-2	2.61	BCF	*Menidia peninsulae*	Tidewater silverside	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.76	BCF	*Menidia peninsulae*	Tidewater silverside	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.76	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.86	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.90	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.18	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.20	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.15	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.18	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.36	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.40	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.78	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	2.94	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.18	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.19	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	3.50	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	0.73	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	0.63	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	0.83	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	0.59	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	1.07	BAF	*Asellus aquaticus*	Aquatic sowbug	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	1.12	BAF	*Asellus aquaticus*	Aquatic sowbug	ECCC 2020
Chlorpyrifos	Previous*	NA	2921-88-2	1.07	BAF	*Asellus aquaticus*	Aquatic sowbug	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	1.12	BAF	*Asellus aquaticus*	Aquatic sowbug	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	0.73	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	0.63	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	0.83	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Chlorpyrifos	Previous*	NA	2921-88-2	0.59	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	1.10	BCF	*Hydrophilus sp*	Black beetle	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	1.83	BCF	*Simulium vittatum*	Blackfly	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	0.73	BCF	*Stenacron*	Mayfly	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	1.60	BCF	*Trichoptera*	Caddisfly order	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	1.10	BCF	*Zygoptera*	Damselfly order	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.53	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.26	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.16	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.03	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.00	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.00	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.99	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.93	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.87	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.85	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.85	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.82	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.82	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.79	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.63	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.60	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.60	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.48	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.41	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.41	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.40	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Chlorpyrifos	Previous*	NA	2921-88-2	2.30	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.18	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.11	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.08	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	1.85	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	1.84	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	1.62	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.50	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.18	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.13	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.12	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.06	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.04	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.04	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.01	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.19	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.18	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.98	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.93	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.94	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.78	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.76	BCF	*Menidia peninsulae*	Tidewater silverside	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.64	BCF	*Menidia beryllina*	Inland silverside	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.61	BCF	*Menidia peninsulae*	Tidewater silverside	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.60	BCF	*Menidia peninsulae*	Tidewater silverside	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.30	BCF	*Menidia beryllina*	Inland silverside	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.11	BCF	*Menidia beryllina*	Inland silverside	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Chlorpyrifos	Previous*	NA	2921-88-2	2.02	BCF	*Menidia beryllina*	Inland silverside	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.00	BCF	*Leuresthes tenuis*	California grunion	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.85	BCF	*Leuresthes tenuis*	California grunion	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.79	BCF	*Leuresthes tenuis*	California grunion	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.65	BCF	*Leuresthes tenuis*	California grunion	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	1.82	BCF	*Leuresthes tenuis*	California grunion	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	1.76	BCF	*Leuresthes tenuis*	California grunion	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.28	BCF	*Opsanus beta*	Gulf toadfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.95	BCF	*Opsanus beta*	Gulf toadfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.83	BCF	*Opsanus beta*	Gulf toadfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.81	BCF	*Opsanus beta*	Gulf toadfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.79	BCF	*Opsanus beta*	Gulf toadfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.68	BCF	*Opsanus beta*	Gulf toadfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.67	BCF	*Opsanus beta*	Gulf toadfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.41	BCF	*Opsanus beta*	Gulf toadfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.43	BCF	*Opsanus beta*	Gulf toadfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.00	BCF	*Opsanus beta*	Gulf toadfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.22	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.27	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.43	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.40	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.36	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.18	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.15	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.20	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.18	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.90	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Chlorpyrifos	Previous*	NA	2921-88-2	2.86	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.76	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.74	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.73	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.61	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.53	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.49	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.65	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.00	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.27	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.96	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.97	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.05	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.07	BCF	*Gasterosteus aculeatus*	Threespine stickleback	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.71	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.71	BCF	*Opsanus beta*	Gulf toadfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	1.93	BCF	*Tilapia aurea*	Tilapia	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.70	BCF	*Tilapia aurea*	Tilapia	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.71	BCF	*Tilapia aurea*	Tilapia	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.92	BCF	*Tilapia aurea*	Tilapia	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.29	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.30	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.33	BCF	*Tanichthys albonubes*	White cloud mountain minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.36	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.43	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.46	BCF	*Tanichthys albonubes*	White cloud mountain minnow	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Chlorpyrifos	Previous*	NA	2921-88-2	2.46	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.51	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.54	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.55	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.55	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.65	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.66	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.70	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.85	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.86	BCF	*Tanichthys albonubes*	White cloud mountain minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	2.88	BCF	*Tanichthys albonubes*	White cloud mountain minnow	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.01	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Chlorpyrifos	Previous*	NA	2921-88-2	3.02	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.28	BCF	*Gnathopogon coerulescens*	Biwi lake gudgeon, goby or willow shiner	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.15	BCF	*Salvelinus fontinalis*	Brook trout	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.54	BCF	*Salvelinus fontinalis*	Brook trout	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.71	BCF	*Salvelinus fontinalis*	Brook trout	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.37	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.43	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.17	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.33	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.99	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.03	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.07	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.16	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Diazinon	Previous*	NA	333-41-5	2.18	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.18	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.23	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.31	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.32	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.93	BCF	*Brachydanio rerio*	Zebrafish	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.23	BCF	*Brachydanio rerio*	Zebrafish	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.59	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.77	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.77	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.27	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.08	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.08	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.11	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.38	BCF	*Misgurnus anguillicaudatus*	Oriental weatherfish	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.38	BCF	*Misgurnus anguillicaudatus*	Oriental weatherfish	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.45	BCF	*Misgurnus anguillicaudatus*	Oriental weatherfish	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.79	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.81	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.96	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.38	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.41	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.56	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.62	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.69	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.41	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.48	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Diazinon	Previous*	NA	333-41-5	1.57	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.60	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.61	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.68	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.72	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.75	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.80	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.91	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.97	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.54	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.60	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.62	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.69	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.85	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.88	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.92	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.99	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.09	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.15	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.21	BCF	*Tanichthys albonubes*	White cloud mountain minnow	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.31	BCF	*Tanichthys albonubes*	White cloud mountain minnow	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.55	BCF	*Tanichthys albonubes*	White cloud mountain minnow	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.34	BCF	*Gnathopogon coerulescens*	Biwi lake gudgeon, goby or willow shiner	ECCC 2020
Diazinon	Previous*	NA	333-41-5	2.39	BCF	*Gnathopogon coerulescens*	Biwi lake gudgeon, goby or willow shiner	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Diazinon	Previous*	NA	333-41-5	2.44	BCF	*Gnathopogon coerulescens*	Biwi lake gudgeon, goby or willow shiner	ECCC 2020
Diazinon	Previous*	NA	333-41-5	1.45	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Diazinon	Previous*	NA	333-41-5	0.48	BCF	*Paratya compressa compressa*	Shrimp	ECCC 2020
Diazinon	Previous*	NA	333-41-5	0.48	BCF	*Paratya compressa compressa*	Shrimp	ECCC 2020
Diazinon	Previous*	NA	333-41-5	0.60	BCF	*Paratya compressa compressa*	Shrimp	ECCC 2020
Diazinon	Previous*	NA	333-41-5	0.30	BCF	*Paratya compressa compressa*	Shrimp	ECCC 2020
Diazinon	Previous*	NA	333-41-5	0.48	BCF	*Paratya compressa compressa*	Shrimp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	0.48	BCF	*Paratya compressa compressa*	Shrimp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	0.60	BCF	*Paratya compressa compressa*	Shrimp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	0.30	BCF	*Paratya compressa compressa*	Shrimp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	0.49	BCF	*Cipangopaludina malleata*	Mud snail	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	0.79	BCF	*Cipangopaludina malleata*	Mud snail	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	0.93	BCF	*Cipangopaludina malleata*	Mud snail	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.21	BCF	*Indoplanorbis exustus*	Snail	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.23	BCF	*Indoplanorbis exustus*	Snail	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.25	BCF	*Indoplanorbis exustus*	Snail	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	0.65	BCF	*Procambarus clarkii*	Red swamp crayfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	0.72	BCF	*Procambarus clarkii*	Red swamp crayfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.75	BCF	*Crassostrea virginica*	American or Virginia oyster	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.28	BCF	*Gnathopogon coerulescens*	Biwi lake gudgeon, goby or willow shiner	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Diazinon	Previous*	NA	333-41-5	1.43	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.37	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.33	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.17	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.32	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.31	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.18	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.23	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.18	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.16	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.07	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.03	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.99	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.23	BCF	*Brachydanio rerio*	Zebrafish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.93	BCF	*Brachydanio rerio*	Zebrafish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.77	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.59	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.27	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.77	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.11	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.08	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.08	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.96	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.81	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.79	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.45	BCF	*Misgurnus anguillicaudatus*	Oriental weatherfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.38	BCF	*Misgurnus anguillicaudatus*	Oriental weatherfish	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Diazinon	Previous*	NA	333-41-5	1.38	BCF	*Misgurnus anguillicaudatus*	Oriental weatherfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.15	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.09	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.99	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.92	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.97	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.88	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.91	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.85	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.69	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.80	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.62	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.69	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.75	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.56	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.72	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.62	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.68	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.60	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.61	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.54	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.60	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.41	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.57	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.38	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.48	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.55	BCF	*Tanichthys albonubes*	White cloud mountain minnow	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Diazinon	Previous*	NA	333-41-5	1.41	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.31	BCF	*Tanichthys albonubes*	White cloud mountain minnow	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.21	BCF	*Tanichthys albonubes*	White cloud mountain minnow	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.44	BCF	*Gnathopogon coerulescens*	Biwi lake gudgeon, goby or willow shiner	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.39	BCF	*Gnathopogon coerulescens*	Biwi lake gudgeon, goby or willow shiner	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.34	BCF	*Gnathopogon coerulescens*	Biwi lake gudgeon, goby or willow shiner	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.45	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.71	BCF	*Salvelinus fontinalis*	Brook trout	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.54	BCF	*Salvelinus fontinalis*	Brook trout	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.15	BCF	*Salvelinus fontinalis*	Brook trout	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.73	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.78	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.83	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.89	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	3.27	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.90	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	3.20	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.90	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	3.20	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	3.36	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.04	BCF	*Misgurnus anguillicaudatus*	Oriental weatherfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.76	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.76	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Diazinon	Previous*	NA	333-41-5	1.20	BCF	*Tanichthys albonubes*	White cloud mountain minnow	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.28	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.38	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.45	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.55	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.63	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	0.46	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.06	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.07	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.08	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.15	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.15	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.40	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.40	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.52	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.56	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.56	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.58	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.64	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.70	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.71	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.76	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.85	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.95	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.12	BCF	*Gnathopogon coerulescens*	Biwi lake gudgeon, goby or willow shiner	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Diazinon	Previous*	NA	333-41-5	2.17	BCF	*Gnathopogon coerulescens*	Biwi lake gudgeon, goby or willow shiner	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.17	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.19	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.24	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.56	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.80	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.18	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.18	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.89	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.94	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	3.27	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	1.00	BCF	*Fundulus heteroclitus*	Mummichog	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.89	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.90	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	2.94	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	3.20	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	3.27	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	3.36	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Diazinon	Previous*	NA	333-41-5	3.44	BCF	*Anguilla anguilla*	Common eel	Arnot & Gobas 2006
Dibenzofuran	Previous*	NA	132-64-9	3.22	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Dibenzofuran	Previous*	NA	132-64-9	3.16	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Dibenzofuran	Previous*	NA	132-64-9	3.18	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Dibenzothiophene	Previous*	NA	132-65-0	3.17	BCF	*Scophthalmus maximus*	Turbot	ECCC 2020
Dibenzothiophene	Previous*	NA	132-65-0	3.05	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Dibenzothiophene	Previous*	NA	132-65-0	3.26	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Dibenzothiophene	Previous*	NA	132-65-0	2.78	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Dibenzothiophene	Previous*	NA	132-65-0	3.17	BCF	*Scophthalmus maximus*	Turbot	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Dibenzothiophene	Previous*	NA	132-65-0	3.26	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Dibenzothiophene	Previous*	NA	132-65-0	3.05	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Dibenzothiophene	Previous*	NA	132-65-0	3.82	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.80	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	5.66	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	5.45	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.40	BAF	*Chironomus sp*	Midge	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.67	BAF	*Erpobdella punctata*	Red leech	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.00	BAF	*Notonectidae*	Backswimmer family	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.34	BAF	*Orconectes immunis*	Crayfish	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.67	BAF	*Planorbidae*	Orb snail family	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.45	BAF	*Invertebrates*	Invertebrates	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.46	BAF	*Invertebrates*	Invertebrates	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	6.33	BAF	*Osmerus mordax*	Smelt	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	6.27	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	6.18	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	6.62	BAF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	5.84	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	6.33	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	6.62	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.42	BCF	Various	Phytoplankton	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.97	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.92	BCF	*Ephemera danica*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.46	BCF	*Ephemera danica*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.64	BCF	*Ephemera danica*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.79	BCF	*Ephemera danica*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.35	BCF	*Ephemera danica*	Mayfly	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.30	BCF	*Ephemera danica*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.49	BCF	*Ephemera danica*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.46	BCF	*Ephemera danica*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.94	BCF	*Orconectes nais*	Crayfish	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.32	BCF	*Orconectes nais*	Crayfish	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.46	BCF	*Orconectes nais*	Crayfish	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.96	BCF	*Libellula*	Dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.66	BCF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.08	BCF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.31	BCF	*Gammarus fasciatus*	Amphipod	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.18	BCF	*Palaemonetes kadiakensis*	Grass shrimp, freshwater prawn	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.57	BCF	*Palaemonetes kadiakensis*	Grass shrimp, freshwater prawn	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.70	BCF	*Palaemonetes kadiakensis*	Grass shrimp, freshwater prawn	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.89	BCF	*Chironomus sp*	Midge	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.39	BCF	*Chironomus sp*	Midge	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.68	BCF	*Chironomus sp*	Midge	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.36	BCF	*Siphlonurus*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.51	BCF	*Hexagenia bilineata*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.54	BCF	*Ischnura verticalis*	Damselfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	5.13	BCF	*Culex pipiens*	Northern house mosquito	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.01	BCF	*Siphlonurus*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.30	BCF	*Siphlonurus*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.97	BCF	*Hexagenia bilineata*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.22	BCF	*Hexagenia bilineata*	Mayfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.40	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.84	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	5.06	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.30	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.32	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.35	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.43	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.30	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.48	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.48	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.51	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.54	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.61	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.65	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.65	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.74	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.76	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.78	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.80	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.81	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.95	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.70	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.81	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.85	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.95	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.98	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.89	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.90	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.95	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.98	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.02	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.04	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.08	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.12	BCF	*Epitheca sp.*	Baskettail dragonfly	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.56	BCF	*Cipangopaludina japonica*	Mud snail	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.41	BCF	*Daphnia pulex*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.38	BCF	*Pyganodon grandis*	Mussel	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.36	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.20	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	1.60	BCF	*Indonaia caerulea*	Unionid clam	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.29	BCF	*Indonaia caerulea*	Unionid clam	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.44	BCF	*Indonaia caerulea*	Unionid clam	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.69	BCF	*Indonaia caerulea*	Unionid clam	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.84	BCF	*Indonaia caerulea*	Unionid clam	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.37	BCF	*Indonaia caerulea*	Unionid clam	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.52	BCF	*Indonaia caerulea*	Unionid clam	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.52	BCF	*Indonaia caerulea*	Unionid clam	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.79	BCF	*Simocephalus*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.80	BCF	*Simocephalus*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	5.17	BCF	*Simocephalus*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	5.14	BCF	*Simocephalus*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.30	BCF	*Simocephalus*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.40	BCF	*Simocephalus*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.20	BCF	*Simocephalus*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.95	BCF	*Simocephalus*	Water flea	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.00	BCF	*Simocephalus*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.13	BCF	*Simocephalus*	Water flea	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	0.95	BCF	*Neanthes grubei*	Polychaete	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	0.18	BCF	*Nereis arenaceodentata*	Polychaete worm	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	2.94	BCF	*Blepharisma intermedium*	Ciliate	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.18	BCF	*Blepharisma intermedium*	Ciliate	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.48	BCF	*Blepharisma intermedium*	Ciliate	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.45	BCF	*Blepharisma intermedium*	Ciliate	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.46	BCF	*Blepharisma intermedium*	Ciliate	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.56	BCF	*Blepharisma intermedium*	Ciliate	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.53	BCF	*Blepharisma intermedium*	Ciliate	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.78	BCF	*Blepharisma intermedium*	Ciliate	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.20	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.17	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.72	BCF	*Salvelinus namaycush*	Lake trout, siscowet	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.66	BCF	*Salvelinus namaycush*	Lake trout, siscowet	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.65	BCF	*Salvelinus namaycush*	Lake trout, siscowet	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.40	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.40	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.36	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	5.00	BCF	*Notemigonus crysoleucas*	Golden shiner	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.38	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.97	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.47	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.24	BCF	*Lepomis cyanellus*	Green sunfish	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	1.04	BCF	*Gambusia affinis*	Western mosquitofish	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.58	BCF	*Lagodon rhomboides*	Pinfish	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.58	BCF	*Micropogonias undulatus*	Atlantic croaker	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.58	BCF	*Lagodon rhomboides*	Pinfish	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.58	BCF	*Micropogonias undulatus*	Atlantic croaker	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.67	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.43	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	3.70	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.36	BCF	*Tilapia nilotica*	Nile tilapia	Arnot & Gobas 2006
Dichloromethane	Previous*	NA	75-09-2	0.57	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Dichloromethane	Previous*	NA	75-09-2	1.36	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Dichloromethane	Previous*	NA	75-09-2	0.57	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Dichloromethane	Previous*	NA	75-09-2	1.36	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Dieldrin	Previous*	NA	60-57-1	3.99	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Dieldrin	Previous*	NA	60-57-1	3.95	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Dieldrin	Previous*	NA	60-57-1	3.65	BCF	*Pseudorasbora parva*	Motsuga, stone moroko	Arnot & Gobas 2006
Diphenyl oxide	Previous*	NA	101-84-8	2.67	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Diphenyl oxide	Previous*	NA	101-84-8	2.50	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Diphenyl oxide	Previous*	NA	101-84-8	2.54	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Diphenyl oxide	Previous*	NA	101-84-8	2.69	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Diphenylamine	Previous*	NA	122-39-4	2.18	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Diphenylamine	Previous*	NA	122-39-4	2.23	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Dodecane	Previous*	NA	112-40-3	1.72	BCF	*Leuciscus idus melanotus*	Golden ide	Arnot & Gobas 2006
Dodecane	Previous*	NA	112-40-3	2.38	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Endrin	Previous*	NA	72-20-8	3.87	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Endrin	Previous*	NA	72-20-8	3.77	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Heptachlor	Previous*	NA	76-44-8	4.00	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Heptachlor	Previous*	NA	76-44-8	3.94	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Heptachlor	Previous*	NA	76-44-8	3.98	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Hexadecane	Previous*	NA	544-76-3	1.38	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Hexadecane	Previous*	NA	544-76-3	1.45	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Hexadecane	Previous*	NA	544-76-3	-0.34	BCF	*Salmo salar*	Atlantic salmon	Arnot & Gobas 2006
Hexadecane	Previous*	NA	544-76-3	0.70	BCF	*Salmo salar*	Atlantic salmon	Arnot & Gobas 2006
Hexadecane	Previous*	NA	544-76-3	0.75	BCF	*Salmo salar*	Atlantic salmon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.97	BAF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.32	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.28	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.08	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.32	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.32	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.89	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.23	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.32	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.15	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.89	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.04	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.94	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.38	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.57	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.10	BCF	*Pseudorasbora parva*	Topmouth gudgeon	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.56	BCF	*Lepomis macrochirus*	Bluegill sunfish	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.47	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.86	BCF	*Poecilia reticulata*	Guppy	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.75	BCF	*Brachydanio rerio*	Zebrafish	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.30	BCF	*Lagodon rhomboides*	Pinfish	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.46	BCF	*Lagodon rhomboides*	Pinfish	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Lindane	Previous*	NA	58-89-9	2.22	BCF	*Lagodon rhomboides*	Pinfish	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.68	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.62	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.53	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.86	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.76	BCF	*Salmo salar*	Atlantic salmon	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.84	BCF	*Salmo salar*	Atlantic salmon	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.41	BCF	*Salmo salar*	Atlantic salmon	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.43	BCF	*Salmo salar*	Atlantic salmon	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.95	BCF	*Brachydanio rerio*	Zebrafish	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.16	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.67	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.00	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	1.98	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.04	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	1.95	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	1.87	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	1.96	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	1.95	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.38	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.61	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.08	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.54	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	1.70	BCF	*Asellus aquaticus*	Aquatic sowbug	ECCC 2020
Lindane	Previous*	NA	58-89-9	1.89	BCF	*Penaeus duorarum*	Northern pink shrimp	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.16	BCF	*Penaeus duorarum*	Northern pink shrimp	ECCC 2020
Lindane	Previous*	NA	58-89-9	1.51	BCF	*Penaeus duorarum*	Northern pink shrimp	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Lindane	Previous*	NA	58-89-9	1.90	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	ECCC 2020
Lindane	Previous*	NA	58-89-9	1.83	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	ECCC 2020
Lindane	Previous*	NA	58-89-9	1.89	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	ECCC 2020
Lindane	Previous*	NA	58-89-9	1.40	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.08	BCF	*Tetrahymena pyriformis*	Ciliate	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.59	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.38	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.15	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.55	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.36	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.18	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.62	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.26	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.04	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.04	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.38	BCF	*Chlorella fusca*	Green algae	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.82	BCF	Various	Phytoplankton	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.18	BCF	*Selenastrum capricornutum*	Green algae	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.43	BAF	*Osmerus mordax*	Smelt	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.85	BAF	*Alosa pseudoharengus*	Alewife	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.95	BAF	*Cottus cognatus*	Sculpin	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.12	BAF	*Corbicula manilensis*	Asiatic clam	ECCC 2020
Lindane	Previous*	NA	58-89-9	4.01	BAF	*Dreissena polymorpha*	Zebra mussel	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.52	BAF	*Tubifex tubifex*	Oligocheate	ECCC 2020
Lindane	Previous*	NA	58-89-9	4.04	BAF	*Pontoporeia hoyi*	Amphipod	ECCC 2020
Lindane	Previous*	NA	58-89-9	3.78	BAF	*Mysis relicta*	Shrimp	ECCC 2020
Lindane	Previous*	NA	58-89-9	2.52	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Lindane	Previous*	NA	58-89-9	4.04	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.78	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	4.01	BAF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.12	BAF	*Corbicula manilensis*	Asiatic clam	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.75	BAF	*Ceratophyllum submersum*	Coon-tail	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.37	BAF	*Lymnaea palustris*	Marsh snail	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.97	BAF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.43	BAF	*Osmerus mordax*	Smelt	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.85	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.95	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.82	BCF	Various	Phytoplankton	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.38	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.18	BCF	*Selenastrum capricornutum*	Green algae	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.38	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.61	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.08	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.59	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.38	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.15	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.55	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.36	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.18	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.62	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.26	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.04	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.04	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.89	BCF	*Penaeus duorarum*	Northern pink shrimp	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Lindane	Previous*	NA	58-89-9	2.16	BCF	*Penaeus duorarum*	Northern pink shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.51	BCF	*Penaeus duorarum*	Northern pink shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.90	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.83	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.89	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.40	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.00	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.98	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.04	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.95	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.87	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.96	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.95	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.54	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.70	BCF	*Asellus aquaticus*	Aquatic sowbug	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.08	BCF	*Tetrahymena pyriformis*	Ciliate	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.58	BCF	*Aedes aegypti*	Yellow fever mosquito	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.85	BCF	*Heterocypris incongruens*	Ostracod	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.98	BCF	*Artemia salina*	Brine shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.34	BCF	*Aedes aegypti*	Yellow fever mosquito	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.35	BCF	*Heterocypris incongruens*	Ostracod	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.34	BCF	*Aedes aegypti*	Yellow fever mosquito	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.75	BCF	*Lymnaea palustris*	Marsh snail	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.65	BCF	*Lymnaea palustris*	Marsh snail	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.60	BCF	*Lymnaea palustris*	Marsh snail	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.19	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.23	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Lindane	Previous*	NA	58-89-9	2.13	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.18	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.11	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.13	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.04	BCF	*Chironomus tentans*	Midge	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.98	BCF	*Chironomus tentans*	Midge	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.97	BCF	*Chironomus tentans*	Midge	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.97	BCF	*Chironomus tentans*	Midge	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.88	BCF	*Chironomus tentans*	Midge	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.38	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.30	BCF	*Aplysia punctata*	Gastropod	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.45	BCF	*Aplysia punctata*	Gastropod	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.30	BCF	*Aplysia punctata*	Gastropod	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.64	BCF	*Aplysia punctata*	Gastropod	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.14	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.09	BCF	*Lanice conchilega*	Polychaete	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	0.68	BCF	*Metapenaeus macleayi*	Eastern school shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	0.82	BCF	*Metapenaeus macleayi*	Eastern school shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	0.59	BCF	*Metapenaeus macleayi*	Eastern school shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	0.74	BCF	*Metapenaeus macleayi*	Eastern school shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	0.64	BCF	*Metapenaeus macleayi*	Eastern school shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	0.89	BCF	*Metapenaeus macleayi*	Eastern school shrimp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.08	BCF	*Venerupis japonica*	Short-necked clam	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.32	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.95	BCF	*Brachydanio rerio*	Zebrafish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.84	BCF	*Salmo salar*	Atlantic salmon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.76	BCF	*Salmo salar*	Atlantic salmon	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Lindane	Previous*	NA	58-89-9	2.43	BCF	*Salmo salar*	Atlantic salmon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.41	BCF	*Salmo salar*	Atlantic salmon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.10	BCF	*Pseudorasbora parva*	Topmouth gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.86	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.75	BCF	*Brachydanio rerio*	Zebrafish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.56	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.47	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.04	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.94	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.32	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.23	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.32	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.32	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.15	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.28	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.08	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.89	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.89	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.86	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.68	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.62	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.53	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.46	BCF	*Lagodon rhomboides*	Pinfish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.30	BCF	*Lagodon rhomboides*	Pinfish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.22	BCF	*Lagodon rhomboides*	Pinfish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.57	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.16	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Lindane	Previous*	NA	58-89-9	2.38	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.67	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.55	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.03	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.15	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	0.55	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.25	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.55	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.73	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.22	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.12	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.43	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	0.52	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.70	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.70	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.70	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.27	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.88	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.70	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.10	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.10	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.70	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.10	BCF	*Gobio gobio*	Gudgeon	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.57	BCF	*Leuciscus idus melanotus*	Golden ide	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.26	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.92	BCF	*Brachydanio rerio*	Zebrafish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.34	BCF	*Brachydanio rerio*	Zebrafish	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Lindane	Previous*	NA	58-89-9	2.70	BCF	*Brachydanio rerio*	Zebrafish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.09	BCF	*Brachydanio rerio*	Zebrafish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.29	BCF	*Brachydanio rerio*	Zebrafish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.03	BCF	*Salvelinus fontinalis*	Brook trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.71	BCF	*Salvelinus fontinalis*	Brook trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.79	BCF	*Salvelinus fontinalis*	Brook trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.94	BCF	*Salvelinus fontinalis*	Brook trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.86	BCF	*Salvelinus fontinalis*	Brook trout	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.65	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.43	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.36	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.52	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	1.43	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.45	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.65	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.71	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.83	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.61	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.00	BCF	*Sillago japonica*	Japanese whiting	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.08	BCF	*Sillago japonica*	Japanese whiting	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.78	BCF	*Sillago japonica*	Japanese whiting	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.79	BCF	*Sillago japonica*	Japanese whiting	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.40	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	3.21	BCF	*Labidesthes sicculus*	Brook silverside	Arnot & Gobas 2006
Lindane	Previous*	NA	58-89-9	2.84	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Nitrobenzene	Previous*	NA	98-95-3	0.60	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Nitrobenzene	Previous*	NA	98-95-3	0.37	BCF	*Poecilia reticulata*	Guppy	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Nitrobenzene	Previous*	NA	98-95-3	0.67	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Nitrobenzene	Previous*	NA	98-95-3	1.38	BCF	*Chlorella fusca*	Green algae	ECCC 2020
Nitrobenzene	Previous*	NA	98-95-3	1.38	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
Nitrobenzene	Previous*	NA	98-95-3	0.60	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Nitrobenzene	Previous*	NA	98-95-3	0.67	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Nitrobenzene	Previous*	NA	98-95-3	0.37	BCF	*Poecilia reticulata*	Guppy	Arnot & Gobas 2006
Nitrobenzene	Previous*	NA	98-95-3	1.00	BCF	*Leuciscus idus melanotus*	Golden ide	Arnot & Gobas 2006
Nitrobenzene	Previous*	NA	98-95-3	1.18	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Nitrobenzene	Previous*	NA	98-95-3	0.78	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
o-Cresol	Previous*	NA	95-48-7	1.03	BCF	*Brachydanio rerio*	Zebrafish	ECCC 2020
p,p'-DDD	Previous*	NA	72-54-8	4.76	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
p,p'-DDD	Previous*	NA	72-54-8	4.95	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
p,p'-DDD	Previous*	NA	72-54-8	4.21	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
p,p'-DDD	Previous*	NA	72-54-8	5.31	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
p,p'-DDD	Previous*	NA	72-54-8	5.35	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
p,p'-DDD	Previous*	NA	72-54-8	5.54	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
p,p'-DDD	Previous*	NA	72-54-8	5.70	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
p,p'-DDD	Previous*	NA	72-54-8	5.95	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006
p,p'-DDD	Previous*	NA	72-54-8	4.48	BCF	Various	Phytoplankton	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	5.68	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	6.03	BAF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.95	BAF	*Tubifex tubifex*	Oligocheate	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	6.37	BAF	*Osmerus mordax*	Smelt (small)	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	6.53	BAF	*Osmerus mordax*	Smelt (large)	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	6.37	BAF	*Alosa pseudoharengus*	Alewife	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	6.40	BAF	*Cottus cognatus*	Sculpin	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	7.05	BAF	Mixed – see reference	Salmonid	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
p,p'-DDE	Previous*	NA	72-55-9	4.75	BCF	Various	Phytoplankton	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.66	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.54	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.70	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.68	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.43	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.62	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.08	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.41	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.41	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.83	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.76	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.90	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.74	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.18	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.79	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.18	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.89	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.93	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.82	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.26	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.15	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.70	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.00	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.92	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.94	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.91	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
p,p'-DDE	Previous*	NA	72-55-9	3.91	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.86	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.57	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.34	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.59	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	3.26	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
p,p'-DDE	Previous*	NA	72-55-9	4.71	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.69	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.67	BCF	*Fundulus similis*	Longnose killifish	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.70	BCF	*Fundulus similis*	Longnose killifish	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.81	BCF	*Fundulus similis*	Longnose killifish	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.99	BCF	*Brachydanio rerio*	Zebrafish	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	3.32	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	3.32	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	3.48	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	3.59	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.33	BCF	*Jordanella floridae*	Flagfish	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.07	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.13	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	0.70	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	0.95	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.11	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.20	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.28	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.34	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.41	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.43	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Pentachlorophenol	Previous*	NA	87-86-5	1.43	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.53	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.58	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.68	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.75	BCF	*Mugil cephalus*	Striped mullet	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.90	BCF	*Mugil cephalus*	Striped mullet	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.57	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	3.23	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.72	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.11	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.78	BCF	*Carassius auratus*	Goldfish	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.61	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.68	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.58	BCF	*Oryzias latipes*	Medaka, high-eyes	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.43	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.45	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.45	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.45	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.46	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.47	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.60	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.61	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.63	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.65	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.65	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.66	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.96	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Pentachlorophenol	Previous*	NA	87-86-5	2.99	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	3.03	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	3.11	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	3.12	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	2.66	BCF	*Oncorhynchus mykiss*	Rainbow trout	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.91	BCF	*Anodonta anatina*	Fresh-water mussel	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.79	BCF	*Pseudanodonta complanata*	Depressed river mussel	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	4.00	BCF	*Dreissena polymorpha*	Zebra mussel	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	4.65	BCF	*Dreissena polymorpha*	Zebra mussel	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	4.45	BCF	*Dreissena polymorpha*	Zebra mussel	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	4.15	BCF	*Dreissena polymorpha*	Zebra mussel	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	4.36	BCF	*Dreissena polymorpha*	Zebra mussel	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	4.08	BCF	*Dreissena polymorpha*	Zebra mussel	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.52	BCF	*Crassostrea virginica*	American or Virginia oyster	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	1.82	BCF	*Crassostrea virginica*	American or Virginia oyster	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	0.19	BCF	*Palaemonetes pugio*	Shrimp	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	0.48	BCF	*Palaemonetes pugio*	Shrimp	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	3.10	BCF	*Chlorella fusca*	Green algae	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	3.79	BCF	*Chlorella fusca*	Green algae	ECCC 2020
Pentachlorophenol	Previous*	NA	87-86-5	3.10	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.79	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	4.00	BCF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	4.65	BCF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	4.45	BCF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	4.15	BCF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	4.36	BCF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	4.08	BCF	*Dreissena polymorpha*	Zebra mussel	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Pentachlorophenol	Previous*	NA	87-86-5	1.91	BCF	*Anodonta anatina*	Fresh-water mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.79	BCF	*Pseudanodonta complanata*	Depressed river mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.52	BCF	*Crassostrea virginica*	American or Virginia oyster	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.82	BCF	*Crassostrea virginica*	American or Virginia oyster	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	0.19	BCF	*Palaemonetes pugio*	Shrimp	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	0.48	BCF	*Palaemonetes pugio*	Shrimp	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.85	BCF	*Haemopis marmorata*	Leech	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.72	BCF	*Nephelopsis obscura*	Leech	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.40	BCF	*Nephelopsis obscura*	Leech	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.97	BCF	*Nephelopsis obscura*	Leech	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.24	BCF	*Anodonta anatina*	Fresh-water mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.34	BCF	*Anodonta anatina*	Fresh-water mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.07	BCF	*Anodonta anatina*	Fresh-water mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.73	BCF	*Anodonta anatina*	Fresh-water mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.50	BCF	*Anodonta anatina*	Fresh-water mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.81	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.57	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.16	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.28	BCF	*Haliotis cracherodii*	Black abalone	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.79	BCF	*Haliotis cracherodii*	Black abalone	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.83	BCF	*Haliotis cracherodii*	Black abalone	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.58	BCF	*Haliotis cracherodii*	Black abalone	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.06	BCF	*Haliotis cracherodii*	Black abalone	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.08	BCF	*Haliotis cracherodii*	Black abalone	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.04	BCF	*Haliotis rufescens*	Red abalone	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.08	BCF	*Haliotis rufescens*	Red abalone	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.11	BCF	*Haliotis rufescens*	Red abalone	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Pentachlorophenol	Previous*	NA	87-86-5	0.88	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.18	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.36	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.27	BCF	*Palaemonetes pugio*	Daggerblade grass shrimp	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.45	BCF	*Montipora verrucosa*	Coral	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.98	BCF	*Anodonta anatina*	Fresh-water mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.08	BCF	*Anodonta anatina*	Fresh-water mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.81	BCF	*Pseudanodonta complanata*	Depressed river mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.93	BCF	*Pseudanodonta complanata*	Depressed river mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.59	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.58	BCF	*Lanice conchilega*	Polychaete	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.66	BCF	*Chironomus riparius*	Midge	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.11	BCF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.97	BCF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.69	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.99	BCF	*Brachydanio rerio*	Zebrafish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.59	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.48	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.32	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.32	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.13	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.07	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.68	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.58	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.53	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.43	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.43	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Pentachlorophenol	Previous*	NA	87-86-5	1.41	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.34	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.28	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.20	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.11	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	0.95	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	0.70	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.33	BCF	*Jordanella floridae*	Flagfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.12	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.11	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.03	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.99	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.96	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.66	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.65	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.65	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.63	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.61	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.60	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.47	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.46	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.45	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.45	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.45	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.43	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.23	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.57	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Pentachlorophenol	Previous*	NA	87-86-5	1.81	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.70	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.67	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.61	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.68	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.58	BCF	*Oryzias latipes*	Medaka, high-eyes	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.66	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.78	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.11	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.72	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.90	BCF	*Mugil cephalus*	Striped mullet	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.75	BCF	*Mugil cephalus*	Striped mullet	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.54	BCF	*Oncorhyncus gorbuscha*	Pink salmon	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.88	BCF	*Oncorhyncus gorbuscha*	Pink salmon	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	0.90	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.00	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.20	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.28	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.48	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.56	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.58	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.69	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	1.69	BCF	*Fundulus similis*	Longnose killifish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.00	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.01	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.07	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.07	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Pentachlorophenol	Previous*	NA	87-86-5	2.10	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.24	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.26	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.22	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.68	BCF	*Carassius auratus*	Goldfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.00	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.41	BCF	*Leuciscus idus melanotus*	Golden ide	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.02	BCF	*Leuciscus idus melanotus*	Golden ide	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.04	BCF	*Leuciscus idus*	Ide, silver or golden orfe	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.89	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.21	BCF	*Morone saxatilis*	Striped bass	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.26	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	2.29	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Pentachlorophenol	Previous*	NA	87-86-5	3.73	BCF	*Oncorhynchus mykiss*	Rainbow trout	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.30	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	2.85	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.21	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.11	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.15	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.18	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.30	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.49	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.36	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.52	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.57	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.62	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.71	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Phenanthrene	Previous*	NA	85-01-8	2.91	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.35	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	2.97	BCF	*Scophthalmus maximus*	Turbot	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	2.46	BCF	*Crangon septemspinosa*	Bay shrimp, sand shrimp	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.11	BCF	*Mya arenaria*	Sand gaper, soft shell clam	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.09	BCF	*Mytilus edulis*	Common bay mussel	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	2.70	BCF	*Nereis virens*	Polychaete worm	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	2.80	BCF	*Asellus aquaticus*	Isopod	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	2.51	BCF	*Daphnia magna*	Water flea	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	2.51	BCF	*Daphnia pulex*	Water flea	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.43	BCF	*Mysis relicta*	Shrimp	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	4.45	BCF	*Pontoporeia hoyi*	Amphipod	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.77	BCF	*Stylodrilus heringianus*	Worm	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.21	BCF	*Hexagenia limbata*	Mayfly	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	3.25	BCF	*Chlorella fusca*	Green algae	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	4.28	BAF	*Pontoporeia hoyi*	Amphipod	ECCC 2020
Phenanthrene	Previous*	NA	85-01-8	4.28	BAF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.15	BAF	*Daphnia pulex*	Water flea	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.25	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	4.03	BCF	*Selenastrum capricornutum*	Green algae	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	2.46	BCF	*Crangon septemspinosa*	Bay shrimp, sand shrimp	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.11	BCF	*Mya arenaria*	Sand gaper, soft shell clam	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.09	BCF	*Mytilus edulis*	Common bay mussel	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	2.70	BCF	*Nereis virens*	Polychaete worm	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	2.80	BCF	*Asellus aquaticus*	Isopod	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.43	BCF	*Mysis relicta*	Shrimp	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Phenanthrene	Previous*	NA	85-01-8	4.45	BCF	*Pontoporeia hoyi*	Amphipod	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.77	BCF	*Stylodrilus heringianus*	Worm	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.21	BCF	*Hexagenia limbata*	Mayfly	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	2.51	BCF	*Daphnia pulex*	Water flea	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	2.51	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	2.78	BCF	*Daphnia magna*	Water flea	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.07	BCF	*Daphnia pulex*	Water flea	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	1.06	BCF	*Polychaete sp*	Worm	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.30	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	2.97	BCF	*Scophthalmus maximus*	Turbot	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.71	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.62	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.57	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.52	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.49	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.36	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.30	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.18	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.15	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.11	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.35	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.21	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	2.91	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	2.85	BCF	*Cyprinodon variegatus*	Sheepshead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.23	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.30	BCF	*Pimephales promelas*	Fathead minnow	Arnot & Gobas 2006
Phenanthrene	Previous*	NA	85-01-8	3.25	BCF	*Leuciscus idus melanotus*	Golden ide	Arnot & Gobas 2006

Chemical	New or Previous*	PCB #	CAS number	Log BAF or Log BCF (L/kg, ww)	BAF or BCF	Organism scientific name	Organism common name	Source
Trichloroethylene	Previous*	NA	79-01-6	1.00	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Trichloroethylene	Previous*	NA	79-01-6	0.43	BCF	*Cyprinodontidae*	Killifish	ECCC 2020
Trichloroethylene	Previous*	NA	79-01-6	1.03	BCF	*Cyprinus carpio*	Common carp	ECCC 2020
Trichloroethylene	Previous*	NA	79-01-6	1.95	BCF	*1. Chlorella fusca*	Green algae	ECCC 2020
Trichloroethylene	Previous*	NA	79-01-6	1.95	BCF	*Chlorella fusca*	Green algae	Arnot & Gobas 2006
Trichloroethylene	Previous*	NA	79-01-6	1.00	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Trichloroethylene	Previous*	NA	79-01-6	1.03	BCF	*Cyprinus carpio*	Common carp	Arnot & Gobas 2006
Trichloroethylene	Previous*	NA	79-01-6	0.43	BCF	*Cyprinodontidae*	Killifish	Arnot & Gobas 2006
Trichloroethylene	Previous*	NA	79-01-6	1.23	BCF	*Lepomis macrochirus*	Bluegill sunfish	Arnot & Gobas 2006
Trichloroethylene	Previous*	NA	79-01-6	1.95	BCF	*Leuciscus idus melanotus*	Golden ide	Arnot & Gobas 2006
Trifluralin	Previous*	NA	1582-09-8	4.06	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	3.16	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	3.46	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	3.63	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	3.65	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	3.68	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	3.85	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	4.06	BCF	*Cyprinodon variegatus*	Sheepshead minnow	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	3.51	BCF	*Pimephales promelas*	Fathead minnow	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	3.50	BCF	*Pseudorasbora parva*	Topmouth gudgeon	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	3.45	BCF	*Moxostoma macrolepidotum*	Shorthead redhorse	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	3.23	BCF	N/R	Golden redhorse	ECCC 2020
Trifluralin	Previous*	NA	1582-09-8	3.73	BCF	N/R	Sauger	ECCC 2020
Tri-o-cresyl phosphate	Previous*	NA	78-30-8	2.90	BCF	*Alburnus alburnus*	Bleak	ECCC 2020
Tri-o-cresyl phosphate	Previous*	NA	78-30-8	2.90	BCF	*Alburnus alburnus*	Bleak	Arnot & Gobas 2006

Notes:
BAF = Bioaccumulation factor; BCF = Bioconcentration factor; CAS = Chemical Abstracts Service; ECCC = Environment and Climate Change Canada; N/R = Not reported; Previous = Previously identified chemical; Previous* = Chemical was identified during the curation process

Table F-2. Bioaccumulation and Bioconcentration Factors from EPISuite for Newly and Previously Identified Chemicals in Biosolids

Chemical	New or Previous	PCB #	CAS number	EPISuite Log BCF (regression based estimate) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas upper trophic incl biotrans) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas mid trophic incl biotrans) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas lower trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas upper trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas mid trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas lower trophic incl biotrans) (L/kg, ww)
2-(N-Ethylperfluorooctanesulfonamido) acetic acid	New	NA	2991-50-6	1.75	4.082	4.211	4.242	6.033	5.787	5.617
alpha-Solanine	New	NA	20562-02-1	0.99	1.026	0.875	0.828	1.026	0.875	0.828
Berberine	New	NA	2086-83-1	0.5	0.737	0.731	0.719	0.737	0.731	0.719
Bromide	New	NA	24959-67-9	0.5	0.053	0.055	0.053	0.053	0.055	0.055
Doxepin	New	NA	1668-19-5	2.5	2.091	2.201	2.23	2.091	2.202	2.243
Fentanyl	New	NA	437-38-7	2.34	1.244	1.37	1.408	1.244	1.37	1.411
Hydromorphone	New	NA	466-99-9	0.72	0.205	0.243	0.25	0.205	0.243	0.25
Hydroxychloroquine	New	NA	118-42-3	1.41	0.996	1.09	1.114	0.996	1.09	1.114
Levorphanol	New	NA	77-07-6	1.72	0.949	1.051	1.078	0.949	1.051	1.078
Losartan	New	NA	114798-26-4	2.06	2.499	2.515	2.508	2.5	2.518	2.521
Methadone	New	NA	76-99-3	2.26	1.666	1.779	1.809	1.666	1.779	1.813
Perfluorohexadecanoic acid	New	NA	67905-19-5	0.5	1.749	1.929	1.985	5.443	5.079	4.795
(E)-1,2-Dichloroethylene	Previous*	NA	156-60-5	0.99	1.3	0.875	0.828	1.03	0.875	0.828
1,1,1-Trichloroethane	Previous*	NA	71-55-6	1.31	1.014	1.029	1.023	1.014	1.029	1.023
1,2,3,4,6,7,8-Heptachlorodibenzo[b,d]furan	Previous*	NA	67562-39-4	3.673	2.239	2.379	2.422	4.089	4.486	4.723
1,2,3,7,8,9-Hexachlorodibenzo[b,d]furan	Previous*	NA	72918-21-9	3.839	2.744	2.887	2.931	4.811	5.037	5.175
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	Previous*	NA	40321-76-4	4.048	3.736	3.886	3.929	5.713	5.655	5.613
1,2,3-Trichlorobenzene	Previous*	NA	87-61-6	2.339	2.94	2.816	2.771	2.954	2.84	2.806
1,2,4-Trichlorobenzene	Previous*	NA	120-82-1	2.319	2.969	2.818	2.766	3.004	2.854	2.808
1,2-Dichlorobenzene	Previous*	NA	95-50-1	1.93	2.372	2.224	2.174	2.372	2.227	2.18
1,2-Dichloropropane	Previous*	NA	78-87-5	0.973	0.87	0.786	0.753	0.87	0.786	0.753

Chemical	New or Previous	PCB #	CAS number	EPISuite Log BCF (regression based estimate) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas upper trophic incl biotrans) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas mid trophic incl biotrans) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas lower trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas upper trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas mid trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas lower trophic incl biotrans) (L/kg, ww)
1,4-Dinitrobenzene	Previous*	NA	100-25-4	0.63	0.521	0.429	0.399	0.521	0.429	0.399
1,4-Dioxane	Previous*	NA	123-91-1	0.5	-0.034	-0.019	-0.016	-0.034	-0.019	-0.016
1-Methyl phenanthrene	Previous*	NA	832-69-9	3.68	3.173	3.258	3.277	3.215	3.38	3.503
2-(2,4,5-Trichlorophenoxy)propionic acid	Previous*	NA	93-72-1	0.5	2.789	2.618	2.563	2.821	2.645	2.591
2-(Methylthio)benzothiazole	Previous*	NA	615-22-5	1.745	1.697	1.698	1.687	1.697	1.698	1.688
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	Previous*	206	40186-72-9	3.66	2.482	2.647	2.697	6.091	5.745	5.486
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	Previous*	194	35694-08-7	3.89	2.994	3.173	3.228	6.624	6.274	6.002
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	Previous*	207	52663-79-3	3.46	2.076	2.237	2.287	5.687	5.34	5.081
2,2',3,3',4,4',5,6-Octachlorobiphenyl	Previous*	195	52663-78-2	3.77	2.625	2.788	2.837	6.196	5.862	5.613
2,2',3,3',4,4',6,6'-Octachlorobiphenyl	Previous*	197	33091-17-7	3.77	2.828	3.007	3.061	6.482	6.126	5.851
2,2',3,3',4,4',6-Heptachlorobiphenyl	Previous*	171	52663-71-5	4.09	3.155	3.329	3.381	6.659	6.337	6.093
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	Previous*	208	52663-77-1	4.14	3.277	3.457	3.511	6.785	6.458	6.206
2,2',3,3',4,5,5',6'-Octachlorobiphenyl	Previous*	199	52663-75-9	3.77	2.592	2.753	2.802	6.147	5.818	5.575
2,2',3,3',4,5,5',6-Octachlorobiphenyl	Previous*	198	68194-17-2	3.77	2.828	3.007	3.061	6.482	6.126	5.851
2,2',3,3',4,5,5'-Heptachlorobiphenyl	Previous*	172	52663-74-8	4.09	3.153	3.326	3.378	6.655	6.334	6.09
2,2',3,3',4,5,6,6'-Octachlorobiphenyl	Previous*	200	52663-73-7	3.77	2.828	3.007	3.061	6.482	6.126	5.851
2,2',3,3',4,5,6'-Heptachlorobiphenyl	Previous*	174	38411-25-5	4.09	3.133	3.305	3.356	6.623	6.305	6.066
2,2',3,3',4,5,6-Heptachlorobiphenyl	Previous*	173	68194-16-1	4.09	3.277	3.463	3.519	6.848	6.508	6.241
2,2',3,3',4,5',6'-Heptachlorobiphenyl	Previous*	177	52663-70-4	4.09	3.149	3.322	3.374	6.648	6.328	6.084
2,2',3,3',4,5',6-Heptachlorobiphenyl	Previous*	175	40186-70-7	4.09	3.277	3.463	3.519	6.848	6.508	6.241
2,2',3,3',4,5'-Hexachlorobiphenyl	Previous*	130	52663-66-8	4.52	3.766	3.957	4.013	6.956	6.642	6.394
2,2',3,3',4,6,6'-Heptachlorobiphenyl	Previous*	176	52663-65-7	4.09	3.277	3.463	3.519	6.848	6.508	6.241
2,2',3,3',4,6'-Hexachlorobiphenyl	Previous*	132	38380-05-1	4.69	3.876	4.052	4.103	6.705	6.429	6.219

Chemical	New or Previous	PCB #	CAS number	EPISuite Log BCF (regression based estimate) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas upper trophic incl biotrans) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas mid trophic incl biotrans) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas lower trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas upper trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas mid trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas lower trophic incl biotrans) (L/kg, ww)
2,2',3,3',4-Pentachlorobiphenyl	Previous*	82	52663-62-4	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	Previous*	202	2136-99-4	4.35	3.59	3.782	3.839	6.985	6.66	6.402
2,2',3,3',5,5'-Hexachlorobiphenyl	Previous*	133	35694-04-3	4.68	3.934	4.118	4.171	6.877	6.568	6.326
2,2',3,3',5,6,6'-Heptachlorobiphenyl	Previous*	179	52663-64-6	4.09	3.277	3.463	3.519	6.848	6.508	6.241
2,2',3,3',5,6'-Hexachlorobiphenyl	Previous*	135	52744-13-5	4.64	3.839	4.019	4.072	6.785	6.498	6.276
2,2',3,3',5,6-Hexachlorobiphenyl	Previous*	134	52704-70-8	4.59	3.842	4.03	4.085	6.93	6.619	6.373
2,2',3,3',5-Pentachlorobiphenyl	Previous*	83	60145-20-2	4.86	3.968	4.149	4.2	6.821	6.517	6.28
2,2',3,3',6-Pentachlorobiphenyl	Previous*	84	52663-60-2	4.24	4.173	4.276	4.294	6.068	5.743	5.521
2,2',3,3'-Tetrachlorobiphenyl	Previous*	40	38444-93-8	4.33	4.103	4.228	4.256	6.037	5.776	5.595
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	Previous*	204	74472-52-9	3.77	2.828	3.007	3.061	6.482	6.126	5.851
2,2',3,4,4',5,6'-Heptachlorobiphenyl	Previous*	182	60145-23-5	4.09	3.151	3.324	3.377	6.652	6.331	6.088
2,2',3,4,4',5,6-Heptachlorobiphenyl	Previous*	181	74472-47-2	4.09	3.277	3.463	3.519	6.848	6.508	6.241
2,2',3,4,4',5',6-Heptachlorobiphenyl	Previous*	183	52663-69-1	4.09	3.184	3.361	3.414	6.705	6.378	6.128
2,2',3,4,4',5'-Hexabromodiphenyl Ether	Previous*	NA	182677-30-1	3.36	2.585	2.736	2.782	5.878	5.648	5.487
2,2',3,4,4',5-Hexachlorobiphenyl	Previous*	137	35694-06-5	4.49	3.663	3.845	3.899	6.81	6.521	6.298
2,2',3,4,4',6,6'-Heptachlorobiphenyl	Previous*	184	74472-48-3	4.44	3.684	3.876	3.932	6.98	6.661	6.408
2,2',3,4,4',6'-Hexachlorobiphenyl	Previous*	140	59291-64-4	4.59	3.842	4.03	4.085	6.93	6.619	6.373
2,2',3,4,4',6-Hexachlorobiphenyl	Previous*	139	56030-56-9	4.4	3.638	3.83	3.886	6.972	6.652	6.399
2,2',3,4',5,5',6-Heptachloro-1,1'-biphenyl	Previous*	187	52663-68-0	4.09	3.127	3.298	3.349	6.612	6.296	6.058
2,2',3,4,5,5',6-Heptachlorobiphenyl	Previous*	185	52712-05-7	4.25	3.383	3.563	3.616	6.794	6.483	6.244
2,2',3,4,5,5'-Hexachlorobiphenyl	Previous*	141	52712-04-6	4.62	3.873	4.061	4.115	6.915	6.605	6.36
2,2',3,4',5,5'-Hexachlorobiphenyl	Previous*	146	51908-16-8	4.65	3.877	4.06	4.133	6.826	6.53	6.299
2,2',3,4,5,6,6'-Heptachlorobiphenyl	Previous*	186	74472-49-4	4.09	3.277	3.463	3.519	6.848	6.508	6.241

Chemical	New or Previous	PCB #	CAS number	EPISuite Log BCF (regression based estimate) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas upper trophic incl biotrans) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas mid trophic incl biotrans) (L/kg, ww)	EPISuite Log BCF (Arnot-Gobas lower trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas upper trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas mid trophic incl biotrans) (L/kg, ww)	EPISuite Log BAF (Arnot-Gobas lower trophic incl biotrans) (L/kg, ww)
2,2',3,4',5,6,6'-Heptachlorobiphenyl	Previous*	188	74487-85-7	4.09	3.277	3.463	3.519	6.848	6.508	6.241
2,2',3,4,5,6'-Hexachlorobiphenyl	Previous*	143	68194-15-0	4.4	3.638	3.83	3.886	6.972	6.652	6.399
2,2',3,4,5',6-Hexachlorobiphenyl	Previous*	144	68194-14-9	4.4	3.498	3.673	3.726	6.7	6.425	6.216
2,2',3,4',5,6'-Hexachlorobiphenyl	Previous*	148	74472-41-6	4.79	4.025	4.203	4.252	6.79	6.482	6.243
2,2',3,4',5,6-Hexachlorobiphenyl	Previous*	147	68194-13-8	4.4	3.638	3.83	3.886	6.972	6.652	6.399
2,2',3,4',5',6-Hexachlorobiphenyl	Previous*	149	38380-04-0	4.57	3.826	4.015	4.07	6.937	6.625	6.379
2,2',3,4,5-Pentachlorobiphenyl	Previous*	86	55312-69-1	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',3,4',5'-Pentachlorobiphenyl	Previous*	97	41464-51-1	4.65	4.132	4.302	4.347	6.749	6.422	6.17
2,2',3,4',5-Pentachlorobiphenyl	Previous*	90	68194-07-0	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',3,4,6,6'-Hexachlorobiphenyl	Previous*	145	74472-40-5	4.4	3.638	3.83	3.886	6.972	6.652	6.399
2,2',3,4',6,6'-Hexachlorobiphenyl	Previous*	150	68194-08-1	4.71	4.072	4.244	4.29	6.723	6.414	6.178
2,2',3,4,6'-Pentachlorobiphenyl	Previous*	89	73575-57-2	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',3,4,6-Pentachlorobiphenyl	Previous*	88	55215-17-3	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',3,4',6'-Pentachlorobiphenyl	Previous*	91	60233-25-2	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',3,4',6-Pentachlorobiphenyl	Previous*	98	68194-05-8	4.86	4.002	4.187	4.239	6.898	6.578	6.327
2,2',3,4'-Tetrachloro-1,1'-biphenyl	Previous*	42	36559-22-5	4.43	4.239	4.379	4.409	6.563	6.201	5.932
2,2',3,4-Tetrachlorobiphenyl	Previous*	41	52663-59-9	4.28	4.169	4.282	4.305	6.131	5.815	5.595
2,2',3,5,5',6-Hexachlorobiphenyl	Previous*	151	52663-63-5	4.4	3.638	3.83	3.886	6.972	6.652	6.399
2,2',3,5,5'-Pentachlorobiphenyl	Previous*	92	52663-61-3	4.73	4.052	4.225	4.273	6.734	6.428	6.194
2,2',3,5,6,6'-Hexachlorobiphenyl	Previous*	152	68194-09-2	4.4	3.638	3.83	3.886	6.972	6.652	6.399
2,2',3,5,6'-Pentachlorobiphenyl	Previous*	94	73575-55-0	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',3,5,6-Pentachlorobiphenyl	Previous*	93	73575-56-1	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',3,5'-tetrachlorobiphenyl	Previous*	44	41464-39-5	4.09	4.197	4.255	4.256	5.937	5.54	5.285
2,2',3,6,6'-Pentachlorobiphenyl	Previous*	96	73575-54-9	4.86	3.972	4.153	4.204	6.83	6.524	6.285

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2,2',3,6'-Tetrachlorobiphenyl	Previous*	46	41464-47-5	4.43	4.142	4.282	4.315	6.324	6.028	5.814
2,2',3-Trichlorobiphenyl	Previous*	16	38444-78-9	3.76	3.957	3.935	3.913	5.002	4.667	4.495
2,2',4,4',5,6'-Hexachlorobiphenyl	Previous*	154	60145-22-4	4.4	3.638	3.83	3.886	6.972	6.652	6.399
2,2',4,4',5-Pentachlorobiphenyl	Previous*	99	38380-01-7	4.61	3.895	4.087	4.143	6.988	6.666	6.408
2,2',4,4',6,6'-Hexachlorobiphenyl	Previous*	155	33979-03-2	4.44	3.679	3.87	3.927	6.971	6.653	6.401
2,2',4,4',6-Pentachlorobiphenyl	Previous*	100	39485-83-1	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',4,5,6'-Pentachlorobiphenyl	Previous*	102	68194-06-9	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',4,5',6-Pentachlorobiphenyl	Previous*	103	60145-21-3	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',4,6,6'-Pentachlorobiphenyl	Previous*	104	56558-16-8	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,2',4,6-Tetrachlorobiphenyl	Previous*	50	62796-65-0	4.43	4.159	4.299	4.332	6.367	6.059	5.835
2,2',4-Trichlorobiphenyl	Previous*	17	37680-66-3	4.05	4.117	4.117	4.18	5.672	5.346	5.143
2,2',5,6'-Tetrachlorobiphenyl	Previous*	53	41464-41-9	4.43	4.159	4.299	4.332	6.367	6.059	5.835
2,2',5-Trichlorobiphenyl	Previous*	18	37680-65-2	3.91	4.02	4.051	4.045	5.261	4.973	4.81
2,2',6,6'-Tetrachlorobiphenyl	Previous*	54	15968-05-5	4.17	4.156	4.245	4.258	5.929	5.604	5.389
2,2'-Bioxirane	Previous*	NA	1464-53-5	0.5	-0.037	-0.02	-0.017	-0.037	-0.02	-0.017
2,3,3',4,4',5,5',6-Octachlorobiphenyl	Previous*	205	74472-53-0	3.77	2.678	2.845	2.895	6.275	5.933	5.675
2,3,3',4,4',5',6-Heptachlorobiphenyl	Previous*	191	74472-50-7	4.09	3.277	3.463	3.519	6.848	6.508	6.241
2,3,3',4,5,5',6-Heptachlorobiphenyl	Previous*	192	74472-51-8	4.09	3.277	3.463	3.519	6.848	6.508	6.241
2,3,3',4',5,5',6-Heptachlorobiphenyl	Previous*	193	69782-91-8	4.09	3.277	3.463	3.519	6.848	6.508	6.241
2,3,3',4,5,5'-Hexachlorobiphenyl	Previous*	159	39635-35-3	4.5	3.745	3.935	3.992	6.962	6.647	6.397
2,3,3',4',5,5'-Hexachlorobiphenyl	Previous*	162	39635-34-2	4.48	3.723	3.914	3.97	6.966	6.65	6.4
2,3,3',4,5,6-Hexachlorobiphenyl	Previous*	160	41411-62-5	4.56	3.815	4.004	4.06	6.941	6.629	6.382
2,3,3',4,5',6-Hexachlorobiphenyl	Previous*	161	74472-43-8	4.66	3.919	4.104	4.158	6.888	6.578	6.335
2,3,3',4',5',6-Hexachlorobiphenyl	Previous*	164	74472-45-0	4.4	3.638	3.83	3.886	6.972	6.652	6.399

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2,3,3',4,5'-Pentachlorobiphenyl	Previous*	108	70362-41-3	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,3,3',4',5'-Pentachlorobiphenyl	Previous*	122	76842-07-4	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,3,3',4',5-Pentachlorobiphenyl	Previous*	107	70424-68-9	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,3,3',4,6-Pentachlorobiphenyl	Previous*	109	74472-35-8	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,3,3',4',6-Pentachlorobiphenyl	Previous*	110	38380-03-9	4.36	4.256	4.381	4.405	6.474	6.097	5.823
2,3,3',4'-Tetrachlorobiphenyl	Previous*	56	41464-43-1	4.43	4.213	4.353	4.384	6.5	6.155	5.901
2,3,3',4-Tetrachlorobiphenyl	Previous*	55	74338-24-2	4.43	4.159	4.299	4.332	6.367	6.059	5.835
2,3,3',5,5',6-Hexachlorobiphenyl	Previous*	165	74472-46-1	4.53	3.777	3.967	4.023	6.954	6.64	6.392
2,3,3',5,5'-Pentachlorobiphenyl	Previous*	111	39635-32-0	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,3,3',5',6-Pentachlorobiphenyl	Previous*	113	68194-10-5	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,3,3',5'-Tetrachlorobiphenyl	Previous*	58	41464-49-7	4.32	4.169	4.291	4.316	6.198	5.884	5.663
2,3,3',5-Tetrachlorobiphenyl	Previous*	57	70424-67-8	4.43	4.159	4.299	4.332	6.367	6.059	5.835
2,3,3',6-Tetrachlorobiphenyl	Previous*	59	74472-33-6	4.43	4.214	4.354	4.385	6.502	6.157	5.902
2,3,3'-Trichlorobiphenyl	Previous*	20	38444-84-7	3.93	4.063	4.089	4.081	5.402	5.068	4.875
2,3,4,4',5,6-Hexachlorobiphenyl	Previous*	166	41411-63-6	4.56	3.81	3.999	4.055	6.943	6.631	6.384
2,3',4,4',5',6-Hexachlorobiphenyl	Previous*	168	59291-65-5	4.59	3.842	4.03	4.085	6.93	6.619	6.373
2,3,4,4',6-Pentachlorobiphenyl	Previous*	115	74472-38-1	4.86	3.733	3.895	3.942	6.269	6.094	5.966
2,3',4,4',6-Pentachlorobiphenyl	Previous*	119	56558-17-9	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,3',4,4'-Tetrabromodiphenyl ether	Previous*	NA	189084-61-5	4.13	3.58	3.729	3.773	5.512	5.53	5.538
2,3,4,4'-Tetrachlorobiphenyl	Previous*	60	33025-41-1	4.11	4.14	4.213	4.22	5.8	5.47	5.259
2,3',4,5,5'-Pentachlorobiphenyl	Previous*	120	68194-12-7	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,3',4',5,5'-Pentachlorobiphenyl	Previous*	124	70424-70-3	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,3,4,5,6-Pentachlorobiphenyl	Previous*	116	18259-05-7	4.71	3.826	3.983	4.028	6.124	5.966	5.852
2,3,4',5,6-Pentachlorobiphenyl	Previous*	117	68194-11-6	4.86	3.972	4.153	4.204	6.83	6.524	6.285

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2,3',4,5',6-Pentachlorobiphenyl	Previous*	121	56558-18-0	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,3',4',5',6-Pentachlorobiphenyl	Previous*	125	74472-39-2	4.86	3.972	4.153	4.204	6.83	6.524	6.285
2,3,4,5-Tetrachlorobiphenyl	Previous*	61	33284-53-6	4.48	3.884	4.027	4.065	5.755	5.642	5.563
2,3,4',5-Tetrachlorobiphenyl	Previous*	63	74472-34-7	4.43	4.205	4.345	4.377	6.481	6.141	5.892
2,3',4,5'-Tetrachlorobiphenyl	Previous*	68	73575-52-7	4.34	4.169	4.294	4.32	6.23	5.917	5.696
2,3',4,5-Tetrachlorobiphenyl	Previous*	67	73575-53-8	4.43	4.159	4.299	4.332	6.367	6.059	5.835
2,3',4',5'-Tetrachlorobiphenyl	Previous*	70	70362-48-0	4.36	4.258	4.384	4.409	6.488	6.111	5.836
2,3',4',5-Tetrachlorobiphenyl	Previous*	76	32598-11-1	4.36	4.258	4.384	4.409	6.488	6.111	5.836
2,3,4,6-Tetrachlorobiphenyl	Previous*	62	54230-22-7	4.43	3.89	4.029	4.066	5.668	5.563	5.491
2,3,4',6-Tetrachlorobiphenyl	Previous*	64	52663-58-8	4.43	4.188	4.328	4.36	6.44	6.111	5.871
2,3',4,6-Tetrachlorobiphenyl	Previous*	69	60233-24-1	4.43	4.159	4.299	4.332	6.367	6.059	5.835
2,3',4',6-Tetrachlorobiphenyl	Previous*	71	41464-46-4	4.43	4.159	4.299	4.332	6.367	6.059	5.835
2,3,4-Trichlorobiphenyl	Previous*	21	55702-46-0	4.12	3.847	3.953	3.976	4.996	4.959	4.936
2,3',4-Trichlorobiphenyl	Previous*	25	55712-37-3	4.01	4.099	4.147	4.146	5.576	5.246	5.047
2',3,4-Trichlorobiphenyl	Previous*	33	38444-86-9	4.13	4.138	4.217	4.227	5.819	5.498	5.291
2,3',5,5'-Tetrachlorobiphenyl	Previous*	72	41464-42-0	4.43	4.159	4.299	4.332	6.367	6.059	5.835
2,3,5,6-Tetrachlorobiphenyl	Previous*	65	33284-54-7	4.43	3.89	4.029	4.066	5.668	5.563	5.491
2,3',5',6-Tetrachlorobiphenyl	Previous*	73	74338-23-1	4.43	4.159	4.299	4.332	6.367	6.059	5.835
2,3,5-Trichlorobiphenyl	Previous*	23	55720-44-0	4.01	3.812	3.901	3.918	4.749	4.73	4.721
2,3',5'-Trichlorobiphenyl	Previous*	34	37680-68-5	4.01	4.099	4.147	4.146	5.576	5.246	5.047
2,3'-Dichlorobiphenyl	Previous*	6	25569-80-6	3.57	3.792	3.722	3.688	4.508	4.202	4.067
2,4,4',5-Tetrachlorobiphenyl	Previous*	74	32690-93-0	4.65	4.133	4.303	4.348	6.752	6.424	6.172
2,4,4',6-Tetrachlorobiphenyl	Previous*	75	32598-12-2	4.43	4.159	4.299	4.332	6.367	6.059	5.835
2,4,4'-Tribromodiphenyl ether	Previous*	NA	41318-75-6	3.55	3.696	3.812	3.842	4.602	4.703	4.764

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2,4,4'-Trichlorobiphenyl	Previous*	28	7012-37-5	3.96	4.04	4.083	4.081	5.358	5.073	4.906
2,4,5-Trichlorobiphenyl	Previous*	29	15862-07-4	4.09	4.048	4.128	4.139	5.516	5.273	5.123
2,4,5-Trichlorophenoxyacetic acid	Previous*	NA	93-76-5	0.5	2.323	2.14	2.083	2.33	2.148	2.092
2,4,5-Trimethylaniline	Previous*	NA	137-17-7	1.165	1.057	0.997	0.969	1.057	0.997	0.969
2,4,6-Trichlorobiphenyl	Previous*	30	35693-92-6	3.86	3.749	3.814	3.822	4.427	4.429	4.434
2,4',6-Trichlorobiphenyl	Previous*	32	38444-77-8	4.05	4.205	4.247	4.243	5.922	5.496	5.244
2,4-Dichlorobiphenyl	Previous*	7	33284-50-3	3.66	3.618	3.644	3.639	3.972	3.998	4.019
2,5-Dichlorobiphenyl	Previous*	9	34883-39-1	3.62	3.928	3.837	3.798	5.01	4.509	4.265
2,6-Dinitrotoluene	Previous*	NA	606-20-2	1.053	0.996	0.9	0.864	0.996	0.9	0.864
2-Chloro-4-phenylphenol	Previous*	NA	92-04-6	2.25	2.484	2.479	2.465	2.484	2.482	2.476
2-Hexanone	Previous*	NA	591-78-6	0.578	0.462	0.378	0.35	0.462	0.378	0.35
2-Methyl-1-propanol	Previous*	NA	78-83-1	0.5	0.12	0.099	0.092	0.12	0.099	0.092
2-Methylpyridine	Previous*	NA	109-06-8	0.399	0.269	0.222	0.206	0.269	0.222	0.206
3,3',4,5,5'-Pentachlorobiphenyl	Previous*	127	39635-33-1	4.86	3.972	4.153	4.204	6.83	6.524	6.285
3,3',4,5'-Tetrachlorobiphenyl	Previous*	79	41464-48-6	4.43	4.159	4.299	4.332	6.367	6.059	5.835
3,3',4,5-Tetrachlorobiphenyl	Previous*	78	70362-49-1	4.43	4.159	4.299	4.332	6.367	6.059	5.835
3,3',4-Trichlorobiphenyl	Previous*	35	37680-69-6	4.01	4.099	4.147	4.146	5.576	5.246	5.047
3,3',5,5'-Tetrachlorobiphenyl	Previous*	80	33284-52-5	4.61	4.108	4.27	4.312	6.594	6.291	6.062
3,3',5-Trichlorobiphenyl	Previous*	36	38444-87-0	4.09	4.127	1.296	4.202	5.74	5.416	5.211
3,3'-Dichloro-1,1'-biphenyl	Previous*	11	2050-67-1	3.73	3.931	3.904	3.881	4.915	4.592	4.43
3,4,5-Trichlorobiphenyl	Previous*	38	53555-66-1	4.01	3.812	3.901	3.918	4.749	4.73	4.721
3,4',5-Trichlorobiphenyl	Previous*	39	38444-88-1	4.01	4.099	4.147	4.146	5.576	5.246	5.047
3,4'-Dichlorobiphenyl	Previous*	13	2974-90-5	3.65	3.868	3.82	3.791	4.721	4.404	4.254
3,4-Dichlorobiphenyl	Previous*	12	2974-92-7	3.74	3.671	3.715	3.716	4.139	4.165	4.184

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3,5-Dichlorobiphenyl	Previous*	14	34883-41-5	3.82	3.579	3.658	3.672	3.967	4.103	4.185
3,6-Dimethylphenanthrene	Previous*	NA	1576-67-6	3.917	2.774	2.903	2.94	2.788	3.009	3.235
3-Chlorobiphenyl	Previous*	2	2051-61-8	2.69	3.3	3.246	3.218	3.365	3.336	3.337
4,4'-Dichlorobiphenyl	Previous*	15	2050-68-2	3.7	3.911	3.876	3.851	4.851	4.529	4.371
4-Androstene-3,17-dione	Previous*	NA	63-05-8	1.48	1.7	1.554	1.505	1.7	1.554	1.506
4-Chloro-3-methylphenol	Previous*	NA	59-50-7	1.712	1.273	1.347	1.362	1.273	1.347	1.362
4-Methyl-2-pentanone	Previous*	NA	108-10-1	0.53	0.41	0.334	0.309	0.41	0.334	0.309
Acenaphthene	Previous*	NA	83-32-9	2.253	1.978	2.065	2.085	1.978	2.066	2.09
Aldrin	Previous*	NA	309-00-2	3.956	3.653	3.796	3.837	5.265	5.317	5.347
Allyl alcohol	Previous*	NA	107-18-6	0.5	-0.004	0.005	0.005	-0.004	0.005	0.005
Allyl chloride	Previous*	NA	107-05-1	0.94	0.873	0.77	0.733	0.873	0.77	0.733
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	NA	319-84-6	2.399	3.121	2.954	2.899	3.287	3.048	2.971
alpha-Terpineol	Previous*	NA	98-55-5	1.831	2.103	2.009	1.972	2.103	2.01	1.974
Aroclor 1248	Previous*	NA	12672-29-6	4.344	4.169	4.294	4.32	6.23	5.917	5.696
Aroclor 1254	Previous*	NA	11097-69-1	4.733	3.94	4.106	4.152	6.471	6.228	6.047
Aroclor 1260	Previous*	NA	11096-82-5	4.44	3.684	3.876	3.932	6.98	6.661	6.408
Azinphos-methyl	Previous*	NA	86-50-0	1.481	1.754	1.581	1.527	1.754	1.581	1.528
Bensulide	Previous*	NA	741-58-2	2.44	2.429	2.495	2.506	2.429	2.498	2.523
Benzene	Previous*	NA	71-43-2	1.072	1.17	1	0.949	1.17	1	0.949
Benzo(g,h,i)perylene	Previous*	NA	191-24-2	4.041	1.823	1.96	2.002	1.831	2.06	2.852
Benzyl alcohol	Previous*	NA	100-51-6	0.137	0.19	0.179	0.171	0.19	0.179	0.171
Benzyl butyl phthalate	Previous*	NA	85-68-7	2.788	1.603	1.735	1.775	1.603	1.737	1.796
beta-Hexachlorocyclohexane	Previous*	NA	319-85-7	2.399	3.121	2.954	2.899	3.287	3.048	2.971

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Biphenyl	Previous*	NA	92-52-4	2.313	2.629	2.608	2.589	2.63	2.613	2.605
Bisphenol A	Previous*	NA	80-05-7	1.86	2.237	2.102	2.055	2.238	2.103	2.058
Caffeine	Previous*	NA	58-08-2	0.5	-0.029	-0.014	-0.011	-0.029	-0.014	-0.011
Captan	Previous*	NA	133-06-2	1.51	1.804	1.63	1.576	1.804	1.631	1.577
Carbadox	Previous*	NA	6804-07-5	0.5	-0.049	-0.03	-0.026	-0.049	-0.03	-0.026
Carbon disulfide	Previous*	NA	75-15-0	0.95	0.818	0.742	0.712	0.818	0.742	0.712
Carbophenothion	Previous*	NA	786-19-6	3.18	3.49	3.57	3.584	3.747	3.915	4.018
Chlorobenzene	Previous*	NA	108-90-7	1.54	1.398	1.399	1.387	1.4	1.399	1.388
Chlorobenzilate	Previous*	NA	510-15-6	2.79	2.513	2.625	2.654	2.514	2.638	2.713
Chloroethane	Previous*	NA	75-00-3	0.61	0.535	0.426	0.393	0.535	0.426	0.393
Chloromethane	Previous*	NA	74-87-3	0.5	0.215	0.161	0.146	0.215	0.161	0.146
Chlorpyrifos	Previous*	NA	2921-88-2	2.94	3.269	3.324	3.329	3.33	3.448	3.533
Clomazone	Previous*	NA	81777-89-1	1.32	1.439	1.304	1.258	1.439	1.304	1.259
Crotonaldehyde	Previous*	NA	4170-30-3	0.5	0.099	0.073	0.066	0.099	0.073	0.066
Crotoxyphos	Previous*	NA	7700-17-6	1.02	0.876	0.988	1.02	0.876	0.988	1.02
Cyanide	Previous*	NA	57-12-5	0.5	-0.036	-0.019	-0.016	-0.036	-0.019	-0.016
Decane	Previous*	NA	124-18-5	1.6	2.959	3.059	3.083	2.973	3.125	3.245
delta-Hexachlorocyclohexane	Previous*	NA	319-86-8	2.399	3.121	2.954	2.899	3.287	3.048	2.971
Diallate	Previous*	NA	2303-16-4	2.63	2.406	2.507	2.533	2.406	2.513	2.563
Diazinon	Previous*	NA	333-41-5	2.18	2.455	2.425	2.404	2.455	2.428	2.413
Dibenzofuran	Previous*	NA	132-64-9	2.39	3.072	2.919	2.868	3.14	2.976	2.924
Dibenzothiophene	Previous*	NA	132-65-0	2.56	3.113	3.054	3.024	3.134	3.095	3.091
Dichlorodiphenyltrichloroethane	Previous*	NA	50-29-3	4.23	3.818	3.983	4.03	6.365	6.16	6.01
Dichloromethane	Previous*	NA	75-09-2	0.49	0.42	0.322	0.294	0.42	0.322	0.294

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Dicrotophos	Previous*	NA	141-66-2	0.5	-0.035	-0.017	-0.013	-0.035	-0.017	-0.013
Dieldrin	Previous*	NA	60-57-1	3.1	3.802	3.792	—	4.489	4.317	—
Dimethyl sulfone	Previous*	NA	67-71-0	0.5	-0.048	-0.03	-0.026	-0.048	-0.03	-0.026
Diphenyl oxide	Previous*	NA	101-84-8	2.44	2.457	2.52	2.53	2.457	2.524	2.548
Diphenylamine	Previous*	NA	122-39-4	1.98	2.393	2.268	2.223	2.393	2.27	2.229
dl-Norgestrel	Previous*	NA	6533-00-2	1.96	2.261	2.184	2.15	2.261	2.184	2.153
Docosane	Previous*	NA	629-97-0	1.5	0.373	0.477	0.51	3.613	3.332	3.133
Dodecane	Previous*	NA	112-40-3	2.32	2.777	2.913	2.955	2.859	3.305	3.711
Eicosane	Previous*	NA	112-95-8	1.98	0.967	1.101	1.142	4.186	3.985	3.849
Endrin	Previous*	NA	72-20-8	3.098	3.802	3.792	—	4.489	4.317	—
EPN	Previous*	NA	2104-64-5	2.82	2.608	2.716	2.744	2.609	2.734	2.815
Heptachlor	Previous*	NA	76-44-8	3.28	3.809	3.864	3.867	4.593	4.531	4.501
Hexabromocyclododecane	Previous*	NA	25637-99-4	3.76	3.354	3.523	3.574	6.551	6.296	6.107
Hexacosane	Previous*	NA	630-01-3	1.13	-0.032	-0.008	-0.001	2.176	1.829	1.573
Hexadecane	Previous*	NA	544-76-3	2.94	2.505	2.65	2.694	5.278	5.265	5.256
Iodine	Previous*	NA	7553-56-2	1.31	0.992	1.013	1.008	0.992	1.013	1.008
Leptophos	Previous*	NA	21609-90-5	3.83	3.632	3.77	3.809	4.3	5.047	5.117
Lindane	Previous*	NA	58-89-9	2.4	3.802	3.792	3.774	4.489	4.317	4.238
Methacrylonitrile	Previous*	NA	126-98-7	0.5	0.119	0.09	0.081	0.119	0.09	0.081
Methyl ethyl ketone	Previous*	NA	78-93-3	0.5	0.013	0.017	0.016	0.013	0.017	0.016
Mevinphos	Previous*	NA	7786-34-7	0.5	-0.037	-0.017	-0.013	-0.037	-0.017	-0.013
Naled	Previous*	NA	300-76-5	-0.25	0.362	0.326	0.31	0.362	0.326	0.31
Nitrobenzene	Previous*	NA	98-95-3	0.89	0.808	0.705	0.669	0.808	0.705	0.669
o-Cresol	Previous*	NA	95-48-7	0.95	0.961	0.821	0.777	0.961	0.821	0.777

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Octacosane	Previous*	NA	630-02-4	0.65	0.047	0.028	0.023	1.354	1.017	0.777
Octadecane	Previous*	NA	593-45-3	2.46	1.662	1.802	1.845	4.639	4.563	4.514
p,p'-DDD	Previous*	NA	72-54-8	3.639	4.235	4.33	4.343	6.214	5.832	5.568
p,p'-DDE	Previous*	NA	72-55-9	3.96	3.88	4.028	4.068	5.889	5.758	5.666
PCB 026	Previous*	26	38444-81-4	4.05	4.117	4.117	4.18	5.672	5.346	5.143
p-Cymene	Previous*	NA	99-87-6	2.37	2.716	2.696	2.677	2.718	2.703	2.699
Penicillin V	Previous*	NA	87-08-1	0.5	0.768	0.756	0.742	0.768	0.756	0.742
Pentachlorophenol	Previous*	NA	87-86-5	3.05	2.405	2.534	2.572	2.406	2.557	2.687
Perfluorodecanesulfonic acid	Previous*	NA	335-77-3	1	3.949	4.043	4.06	5.253	5.115	5.03
Perylene	Previous*	NA	198-55-0	3.79	2.428	2.565	2.607	2.457	2.865	3.356
Phenanthrene	Previous*	NA	85-01-8	3.27	3.08	3.059	3.04	3.094	3.096	3.11
Phosphamidon	Previous*	NA	13171-21-6	0.5	0.081	0.082	0.08	0.081	0.082	0.08
Potassium	Previous*	NA	7440-09-7	0.5	-0.006	0.005	0.007	-0.006	0.005	0.007
Propionitrile	Previous*	NA	107-12-0	0.5	0.001	0.006	0.007	0.001	0.006	0.007
Quinine	Previous*	NA	130-95-0	1.68	1.653	1.721	1.733	1.653	1.721	1.735
Silicon	Previous*	NA	7440-21-3	0.5	0.042	0.043	0.041	0.042	0.043	0.041
Squalene	Previous*	NA	7683-64-9	0.63	-0.046	-0.026	-0.022	1.52	1.172	0.911
Strontium	Previous*	NA	7440-24-6	0.5	-0.012	0.002	0.004	-0.012	0.002	0.004
Tetracosane	Previous*	NA	646-31-1	1.61	0.054	0.105	0.121	2.938	2.611	2.373
Tetradecane	Previous*	NA	629-59-4	3.43	3.358	3.51	3.556	5.709	5.692	5.677
Tetraethyl pyrophosphate	Previous*	NA	107-49-3	0.5	-0.024	-0.003	0.001	-0.024	-0.003	0.001
Thioxanthen-9-one	Previous*	NA	492-22-8	1.71	2.433	2.458	2.455	2.433	2.461	2.466
Triacontane	Previous*	NA	638-68-6	0.5	-0.049	-0.03	-0.026	0.565	0.33	0.197
Trichloroethylene	Previous*	NA	79-01-6	1.26	1.375	1.235	1.188	1.375	1.235	1.188

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Trichlorofluoromethane	Previous*	NA	75-69-4	1.34	1.52	1.359	1.308	1.52	1.359	1.308
Trifluralin	Previous*	NA	1582-09-8	3.19	3.176	3.286	3.14	3.247	3.482	3.661
Tri-o-cresyl phosphate	Previous*	NA	78-30-8	2.21	3.107	3.203	3.225	3.14	3.314	3.449
Triphenylene	Previous*	NA	217-59-4	3.29	2.516	2.65	2.69	2.521	2.718	2.948
Valproic acid	Previous*	NA	99-66-1	0.5	1.667	1.537	1.491	1.667	1.537	1.492

Notes:

BAF = Bioaccumulation factor; BCF = Bioconcentration factor; CAS = Chemical Abstracts Service; NEW = Newly identified chemical; Previous = Previously identified chemical; Prevoius* = Chemical was identified during the curation process

Table F-3. Bioconcentration Factors (BCF) as Reported by ORNL for Newly and Previously Identified Chemicals in Biosolids

Chemical	New or Previous	CAS number	BCF (L/g)	Source
Perfluorohexadecanoic acid	New	67905-19-5	4800	ORNL 2022
(E)-1,2-Dichloroethylene	Previous*	156-60-5	11.12	ORNL 2022
1,1,1-Trichloroethane	Previous*	71-55-6	5.00034535	ORNL 2022
1,2,3-Trichlorobenzene	Previous*	87-61-6	664.9668571	ORNL 2022
1,2,4-Trichlorobenzene	Previous*	120-82-1	2084.97091	ORNL 2022
1,2-Dichlorobenzene	Previous*	95-50-1	270.0225287	ORNL 2022
1,2-Dichloropropane	Previous*	78-87-5	7.000031591	ORNL 2022
1,4-Dinitrobenzene	Previous*	100-25-4	4.269	ORNL 2022
1,4-Dioxane	Previous*	123-91-1	0.500034535	ORNL 2022
1-Methyl phenanthrene	Previous*	832-69-9	4780	ORNL 2022
2,2'-Bioxirane	Previous*	1464-53-5	3.162	ORNL 2022
2-(2,4,5-Trichlorophenoxy)propionic acid	Previous*	93-72-1	3.162	ORNL 2022
2,4,5-Trichlorophenoxyacetic acid	Previous*	93-76-5	3.162	ORNL 2022
2,6-Dinitrotoluene	Previous*	606-20-2	22.03433764	ORNL 2022
2-Hexanone	Previous*	591-78-6	3.78	ORNL 2022
2-Methyl-1-propanol	Previous*	78-83-1	3.162	ORNL 2022
2-Methylpyridine	Previous*	109-06-8	2.508	ORNL 2022
4-Chloro-3-methylphenol	Previous*	59-50-7	8.499629594	ORNL 2022
4-Methyl-2-pentanone	Previous*	108-10-1	3.399	ORNL 2022
Acenaphthene	Previous*	83-32-9	755.0922277	ORNL 2022
Aldrin	Previous*	309-00-2	5500.472529	ORNL 2022
Allyl Alcohol	Previous*	107-18-6	3.162	ORNL 2022
Allyl Chloride	Previous*	107-05-1	5.00034535	ORNL 2022
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	319-84-6	371.5352291	ORNL 2022
Azinphos-methyl	Previous*	86-50-0	30.3	ORNL 2022
Benzene	Previous*	71-43-2	4.265795188	ORNL 2022
Benzenethiol	Previous*	108-98-5	21.36	ORNL 2022
Benzo(g,h,i)perylene	Previous*	191-24-2	11000	ORNL 2022
Benzyl Alcohol	Previous*	100-51-6	1.371	ORNL 2022
Benzyl butyl phthalate	Previous*	85-68-7	16.32675967	ORNL 2022
beta-Hexachlorocyclohexane	Previous*	319-85-7	371.5352291	ORNL 2022
Biphenyl	Previous*	92-52-4	436.5158322	ORNL 2022
Bisphenol A	Previous*	80-05-7	43.80261112	ORNL 2022
Captan	Previous*	133-06-2	96.2941713	ORNL 2022
Carbon Disulfide	Previous*	75-15-0	19.498446	ORNL 2022
Carbophenothion	Previous*	786-19-6	1527	ORNL 2022
Chlorobenzene	Previous*	108-90-7	17.7827941	ORNL 2022
Chlorobenzilate	Previous*	510-15-6	482.5029801	ORNL 2022

Chemical	New or Previous	CAS number	BCF (L/g)	Source
Chloroethane	Previous*	75-00-3	4.079	ORNL 2022
Chloromethane	Previous*	74-87-3	3.162	ORNL 2022
Chlorpyrifos	Previous*	2921-88-2	1523.000339	ORNL 2022
Crotonaldehyde	Previous*	4170-30-3	3.162	ORNL 2022
Decane	Previous*	124-18-5	39.66	ORNL 2022
delta-Hexachlorocyclohexane	Previous*	319-86-8	371.5352291	ORNL 2022
Diallate	Previous*	2303-16-4	426.1	ORNL 2022
Diazinon	Previous*	333-41-5	71.46608639	ORNL 2022
Dibenzofuran	Previous*	132-64-9	1519.497535	ORNL 2022
Dibenzothiophene	Previous*	132-65-0	1129.015749	ORNL 2022
Dichlorodiphenyltrichloroethane	Previous*	50-29-3	19601.98263	ORNL 2022
Dichloromethane	Previous*	75-09-2	23.0993628	ORNL 2022
Dicrotophos	Previous*	141-66-2	3.162	ORNL 2022
Dieldrin	Previous*	60-57-1	7479.972479	ORNL 2022
Diphenyl oxide	Previous*	101-84-8	319	ORNL 2022
Endrin	Previous*	72-20-8	7479.972479	ORNL 2022
EPN	Previous*	2104-64-5	939.0743969	ORNL 2022
Heptachlor	Previous*	76-44-8	8765.970403	ORNL 2022
Lindane	Previous*	58-89-9	1150	ORNL 2022
Methacrylonitrile	Previous*	126-98-7	3.162	ORNL 2022
Methyl ethyl ketone	Previous*	78-93-3	3.162	ORNL 2022
Naled	Previous*	300-76-5	0.5657	ORNL 2022
Nitrobenzene	Previous*	98-95-3	4.700023182	ORNL 2022
o-Cresol	Previous*	95-48-7	10.71519305	ORNL 2022
p,p'-DDD	Previous*	72-54-8	4355	ORNL 2022
p,p'-DDE	Previous*	72-55-9	12022.64435	ORNL 2022
p-Cymene	Previous*	99-87-6	235.6	ORNL 2022
Pentachlorophenol	Previous*	87-86-5	595.9365193	ORNL 2022
Perylene	Previous*	198-55-0	6177	ORNL 2022
Phenanthrene	Previous*	85-01-8	2511.886432	ORNL 2022
Propionitrile	Previous*	107-12-0	3.162	ORNL 2022
Strontium	Previous*	7440-24-6	60	ORNL 2022
Trichloroethylene	Previous*	79-01-6	15.99926383	ORNL 2022
Trichlorofluoromethane	Previous*	75-69-4	21.69	ORNL 2022
Trifluralin	Previous*	1582-09-8	2279.817064	ORNL 2022
Cadmium	Previous	7440-43-9	200	ORNL 2022
Manganese	Previous	7439-96-5	400	ORNL 2022
Polychlorinated biphenyls	Previous	1336-36-3	25300	ORNL 2022

Notes:
CAS = Chemical Abstracts Service; BCF = Bioconcentration factor; New = Newly identified chemical; Previous = Previously identified chemical; Previous* = Chemical was identified during the curation process

Table F-4. Additional Uptake and Transfer Data as Reported by ORNL for Newly and Previously Identified Chemicals in Biosolids

Chemical	New or previous	CAS number	Diffusivity in air (cm^2/s) - ORNL	Diffusivity in water (cm^2/s) - ORNL	Beef transfer coefficient (day/kg) - ORNL	Milk transfer coefficient (day/kg) - ORNL	Soil-to-dry plant uptake - ORNL	Soil-to-wet plant uptake - ORNL	Kd – soil-water partition coefficient (cm^3/g) - ORNL	Foc - organic carbon partition coefficient (L/kg) - ORNL
2-(N-Methylperfluorooctanesulfonamido) acetic acid	New	2355-31-9	0.0275991	3.225E-06	—	—	—	—	—	—
Perfluorohexadecanoic acid	New	67905-19-5	0.0217922	2.546E-06	—	—	—	—	—	—
(E)-1,2-Dichloroethylene	Previous*	156-60-5	0.0876094	1.119E-05	3.08E-06	9.72E-07	2.3619	0.47238	—	39.6
1,1,1-Trichloroethane	Previous*	71-55-6	0.0648174	9.599E-06	7.73E-06	2.44E-06	1.3844	0.27688	—	43.89
1,2,3,4,6,7,8-Heptachlorodibenzo [b,d]furan	Previous*	67562-39-4	0.0417103	5.901E-06	2.079409	0.657093	0.00098	0.0002	—	650300
1,2,3,7,8,9-Hexachlorodibenzo[b,d]furan	Previous*	72918-21-9	0.0435842	6.097E-06	0.950473	0.30035	0.00155	0.00031	—	389300
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	Previous*	40321-76-4	0.044698	6.164E-06	0.109129	0.034485	0.00542	0.00108	—	416100
1,2,3-Trichlorobenzene	Previous*	87-61-6	0.03953	8.384E-06	0.000281	8.86E-05	0.17237	0.03447	—	1383
1,2,4-Trichlorobenzene	Previous*	120-82-1	0.0395992	8.403E-06	0.000262	8.27E-05	0.17942	0.03588	—	1356
1,2-Dichlorobenzene	Previous*	95-50-1	0.0561703	8.921E-06	6.73E-05	2.13E-05	0.39451	0.0789	—	382.9
1,2-Dichloropropane	Previous*	78-87-5	0.0733402	9.725E-06	2.39E-06	7.54E-07	2.73565	0.54713	—	60.7
1,4-Dinitrobenzene	Previous*	100-25-4	0.0491668	9.385E-06	7.21E-07	2.28E-07	5.47849	1.0957	—	351.6
1,4-Dioxane	Previous*	123-91-1	0.0873739	1.054E-05	1.34E-08	4.24E-09	55.2155	11.0431	—	2.633
1-Methyl phenanthrene	Previous*	832-69-9	0.0570376	6.664E-06	0.003006	0.00095	0.04356	0.00871	—	27330
2,2'-Bioxirane	Previous*	1464-53-5	0.0863267	1.024E-05	1.31E-08	4.15E-09	55.9578	11.1916	—	2.529
2-(2,4,5-Trichlorophenoxy)propionic acid	Previous*	93-72-1	0.0233585	5.919E-06	0.000158	4.98E-05	0.24069	0.04814	—	175.3
2,4,5-Trichlorophenoxyacetic acid	Previous*	93-76-5	0.0288853	7.763E-06	5.1E-05	1.61E-05	0.46309	0.09262	—	107
2,6-Dinitrotoluene	Previous*	606-20-2	0.0370256	7.763E-06	3.15E-06	9.95E-07	2.33056	0.46611	—	587.4
2-Hexanone	Previous*	591-78-6	0.0703564	8.44E-06	6E-07	1.9E-07	6.09622	1.21924	—	14.98
2-Methyl-1-propanol	Previous*	78-83-1	0.0896677	1.004E-05	1.44E-07	4.55E-08	13.9528	2.79056	—	2.919
2-Methylpyridine	Previous*	109-06-8	0.0802252	9.658E-06	3.22E-07	1.02E-07	8.74301	1.7486	—	115.1
4-Chloro-3-methylphenol	Previous*	59-50-7	0.0696136	8.134E-06	3.15E-05	9.95E-06	0.613	0.1226	—	491.8

Chemical	New or previous	CAS number	Diffusivity in air (cm^2/s) - ORNL	Diffusivity in water (cm^2/s) - ORNL	Beef transfer coefficient (day/kg) - ORNL	Milk transfer coefficient (day/kg) - ORNL	Soil-to-dry plant uptake - ORNL	Soil-to-wet plant uptake - ORNL	Kd – soil-water partition coefficient (cm^3/g) - ORNL	Foc - organic carbon partition coefficient (L/kg) - ORNL
4-Methyl-2-pentanone	Previous*	108-10-1	0.0697797	8.348E-06	5.1E-07	1.61E-07	6.69362	1.33872	—	12.6
Acenaphthene	Previous*	83-32-9	0.0506143	8.33E-06	0.000208	6.57E-05	0.20505	0.04101	—	5027
Aldrin	Previous*	309-00-2	0.0228116	5.84E-06	0.079057	0.024982	0.00654	0.00131	—	82020
Allyl Alcohol	Previous*	107-18-6	0.1097535	1.207E-05	3.7E-08	1.17E-08	30.6804	6.13608	—	1.904
Allyl Chloride	Previous*	107-05-1	0.093611	1.082E-05	2.13E-06	6.72E-07	2.92456	0.58491	—	39.6
alpha-1,2,3,4,5,6-Hexachlorocyclohexane	Previous*	319-84-6	0.043284	5.057E-06	0.000158	4.98E-05	0.24069	0.04814	—	2807
Aroclor 1248	Previous*	12672-29-6	0.0240593	6.175E-06	0.039622	0.012521	0.00976	0.00195	—	76530
Aroclor 1254	Previous*	11097-69-1	0.0237205	6.102E-06	0.079057	0.024982	0.00654	0.00131	—	130500
Aroclor 1260	Previous*	11096-82-5	0.0220239	5.608E-06	0.887033	0.280303	0.00161	0.00032	—	349700
Azinphos-methyl	Previous*	86-50-0	0.0233162	5.962E-06	1.41E-05	4.44E-06	0.97827	0.19565	—	51.93
Bensulide	Previous*	741-58-2	0.0351437	4.106E-06	0.000396	0.000125	0.14108	0.02822	—	—
Benzene	Previous*	71-43-2	0.089534	1.026E-05	3.37E-06	1.07E-06	2.23903	0.44781	—	145.8
Benzenethiol	Previous*	108-98-5	0.0728564	9.451E-06	8.28E-06	2.62E-06	1.33003	0.26601	—	233.9
Benzo(g,h,i)perylene	Previous*	191-24-2	0.0238659	6.092E-06	0.106645	0.0337	0.0055	0.0011	—	1951000
Benzyl Alcohol	Previous*	100-51-6	0.0731186	9.366E-06	3.15E-07	9.95E-08	8.86055	1.77211	—	21.46
Benzyl butyl phthalate	Previous*	85-68-7	0.0208319	5.173E-06	0.001343	0.000424	0.06951	0.0139	—	7155
beta-Hexachlorocyclohexane	Previous*	319-85-7	0.0276672	7.395E-06	0.000151	4.76E-05	0.24721	0.04944	—	2807
Biphenyl	Previous*	92-52-4	0.0470592	7.562E-06	0.000256	8.08E-05	0.18183	0.03637	—	5129
Bisphenol A	Previous*	80-05-7	0.0253469	6.495E-06	5.22E-05	1.65E-05	0.45694	0.09139	—	37670
Captan	Previous*	133-06-2	0.0261941	6.899E-06	1.58E-05	4.98E-06	0.91508	0.18302	—	252.2
Carbon Disulfide	Previous*	75-15-0	0.1064373	1.298E-05	2.18E-06	6.88E-07	2.88576	0.57715	—	21.73
Carbophenothion	Previous*	786-19-6	0.0210983	5.281E-06	0.005345	0.001689	0.03119	0.00624	—	8311
Chlorobenzene	Previous*	108-90-7	0.0721306	9.476E-06	1.73E-05	5.47E-06	0.86748	0.1735	—	233.9
Chlorobenzilate	Previous*	510-15-6	0.0217767	5.478E-06	0.001374	0.000434	0.06859	0.01372	—	1539
Chloroethane	Previous*	75-00-3	0.1037597	1.162E-05	6.73E-07	2.13E-07	5.70244	1.14049	—	21.73

Chemical	New or previous	CAS number	Diffusivity in air (cm^2/s) - ORNL	Diffusivity in water (cm^2/s) - ORNL	Beef transfer coefficient (day/kg) - ORNL	Milk transfer coefficient (day/kg) - ORNL	Soil-to-dry plant uptake - ORNL	Soil-to-wet plant uptake - ORNL	Kd – soil-water partition coefficient (cm^3/g) - ORNL	Foc - organic carbon partition coefficient (L/kg) - ORNL
Chloromethane	Previous*	74-87-3	0.1239651	1.365E-05	2.03E-07	6.42E-08	11.4199	2.28397	—	13.22
Chlorpyrifos	Previous*	2921-88-2	0.0382138	4.465E-06	0.00228	0.00072	0.05113	0.01023	—	7283
Clomazone	Previous*	81777-89-1	0.0492389	5.753E-06	7.91E-06	2.5E-06	1.36603	0.27321	—	—
Crotonaldehyde	Previous*	4170-30-3	0.0959907	1.078E-05	9.95E-08	3.15E-08	17.2767	3.45534	—	1.793
Cyanide	Previous*	57-12-5	0.2109549	2.465E-05	5.1E-09	1.61E-09	96.7522	19.3504	9.9	—
Decane	Previous*	124-18-5	0.0450934	6.399E-06	0.002558	0.000808	0.04783	0.00957	—	1451
delta-Hexachlorocyclohexane	Previous*	319-86-8	0.043284	5.057E-06	0.000345	0.000109	0.15285	0.03057	—	2807
Diallate	Previous*	2303-16-4	0.0454578	5.311E-06	0.000773	0.000244	0.09578	0.01916	—	644.3
Diazinon	Previous*	333-41-5	0.0210264	5.226E-06	0.000161	5.1E-05	0.2375	0.0475	—	3034
Dibenzofuran	Previous*	132-64-9	0.0650663	7.377E-06	0.00033	0.000104	0.15699	0.0314	—	9161
Dibenzothiophene	Previous*	132-65-0	0.0355475	7.596E-06	0.0006	0.00019	0.11093	0.02219	—	9161
Dichlorodiphenyltrichloroethane	Previous*	50-29-3	0.037933	4.432E-06	0.203208	0.064214	0.00378	0.00076	—	168600
Dichloromethane	Previous*	75-09-2	0.0999362	1.252E-05	4.45E-07	1.4E-07	7.25205	1.45041	—	21.73
Dicrotophos	Previous*	141-66-2	0.0250474	6.415E-06	2.5E-08	7.9E-09	38.5	7.7	—	16.58
Dieldrin	Previous*	60-57-1	0.0232865	6.006E-06	0.00628	0.001984	0.02841	0.00568	—	20090
Diphenyl oxide	Previous*	101-84-8	0.0396863	7.234E-06	0.000405	0.000128	0.13921	0.02784	—	1950
Endrin	Previous*	72-20-8	0.0361581	4.225E-06	0.003962	0.001252	0.03711	0.00742	—	20090
EPN	Previous*	2104-64-5	0.0217475	5.467E-06	0.001506	0.000476	0.06502	0.013	—	15470
Heptachlor	Previous*	76-44-8	0.0223441	5.696E-06	0.031473	0.009946	0.01115	0.00223	—	41260
Iodine	Previous*	7553-56-2	—	—	0.007	0.01	0.15	0.0375	60	—
Lindane	Previous*	58-89-9	0.043284	5.057E-06	0.000131	4.15E-05	0.26783	0.05357	—	2807
Methacrylonitrile	Previous*	126-98-7	0.0964299	1.065E-05	1.2E-07	3.78E-08	15.526	3.10521	—	13.05
Methyl ethyl ketone	Previous*	78-93-3	0.0914462	1.019E-05	4.87E-08	1.54E-08	26.1373	5.22746	—	4.51
Mevinphos	Previous*	7786-34-7	0.0514906	6.016E-06	3.37E-08	1.07E-08	32.3639	6.47278	—	—
Naled	Previous*	300-76-5	0.0245667	6.43E-06	6E-07	1.9E-07	6.09622	1.21924	—	126.7

Chemical	New or previous	CAS number	Diffusivity in air (cm^2/s) - ORNL	Diffusivity in water (cm^2/s) - ORNL	Beef transfer coefficient (day/kg) - ORNL	Milk transfer coefficient (day/kg) - ORNL	Soil-to-dry plant uptake - ORNL	Soil-to-wet plant uptake - ORNL	Kd – soil-water partition coefficient (cm^3/g) - ORNL	Foc - organic carbon partition coefficient (L/kg) - ORNL
Nitrobenzene	Previous*	98-95-3	0.068054	9.449E-06	1.77E-06	5.59E-07	3.25432	0.65086	—	226.4
o-Cresol	Previous*	95-48-7	0.072835	9.317E-06	2.23E-06	7.04E-07	2.84748	0.5695	—	306.5
p,p'-DDD	Previous*	72-54-8	0.0406077	4.745E-06	0.026178	0.008272	0.01241	0.00248	—	117500
p,p'-DDE	Previous*	72-55-9	0.0229959	5.859E-06	0.080898	0.025564	0.00645	0.00129	—	117500
p-Cymene	Previous*	99-87-6	0.0526944	7.319E-06	0.000315	9.95E-05	0.16124	0.03225	—	1120
Pentachlorophenol	Previous*	87-86-5	0.0295197	8.012E-06	0.003296	0.001041	0.04129	0.00826	—	592
Perfluorodecanesulfonic acid	Previous*	335-77-3	0.0267057	3.12E-06	—	—	—	—	—	—
Perylene	Previous*	198-55-0	0.0254676	6.581E-06	0.044457	0.014048	0.00913	0.00183	—	599400
Phenanthrene	Previous*	85-01-8	0.0344784	6.69E-06	0.000721	0.000228	0.09969	0.01994	—	16690
Phosphamidon	Previous*	13171-21-6	0.0424267	4.957E-06	1.54E-07	4.87E-08	13.4048	2.68096	—	—
Potassium	Previous*	7440-09-7	—	—	0.02	0.007	1	0.25	5.5	—
Propionitrile	Previous*	107-12-0	0.1097206	1.182E-05	3.61E-08	1.14E-08	31.0929	6.21857	—	8.511
Strontium	Previous*	7440-24-6	—	—	0.0003	0.0015	2.5	0.625	35	—
Trichloroethylene	Previous*	79-01-6	0.0686618	1.022E-05	6.58E-06	2.08E-06	1.52006	0.30401	—	60.7
Trichlorofluoromethane	Previous*	75-69-4	0.065356	1.005E-05	8.47E-06	2.68E-06	1.31238	0.26248	—	43.89
Trifluralin	Previous*	1582-09-8	0.0220519	5.574E-06	0.005469	0.001728	0.03078	0.00616	—	16390
Cadmium[a]	Previous	7440-43-9	—	—	0.00055	0.001	0.5	0.125	75	—
Cadmium[b]	Previous	7440-43-9	—	—	0.00055	0.001	0.55	0.1375	75	—
Manganese	Previous	7439-96-5	—	—	0.0004	0.00035	0.25	0.0625	65	—
Polychlorinated biphenyls	Previous	1336-36-3	0.0243397	6.267E-06	0.314731	0.099455	0.00293	0.00059	—	78100
Polychlorinated biphenyls	Previous	1336-36-3	0.0243397	6.267E-06	0.314731	0.099455	0.00293	0.00059	—	78100
Polychlorinated biphenyls	Previous	1336-36-3	0.0243397	6.267E-06	0.314731	0.099455	0.00293	0.00059	—	78100

Notes:

CAS = Chemical Abstracts Service; New = Newly identified chemical; Previous = Previously identified chemical; Previous* = Chemical was identified during the curation process

[a] Diet

[b] Water