Testimony: HB1190: Pesticides – PFAS Chemicals – Prohibition

Submitted to: The House Committee on Health & Government Operations
Submitted by: Bonnie Raindrop, Program Director, Smart on Pesticides Coalition
Ruth Berlin, Executive Director, Smart on Pesticides Coalition
Position: In Support

March 13, 2024

Dear Chair Pena-Melnyk, Vice Chair Cullison and Members of the Committee,

The **Smart on Pesticides Coalition** (SOPC) comprised of 114 organizations and businesses**,, facilitated by the Maryland Pesticide Education Network** supports passage of HB1190 banning pesticides used in Maryland where environment from toxic pesticides and promoting healthy alternatives.icated to protecting the public and the

- HB1190 provides a critical and simple action to reduce PFAS pollution from pesticides in Maryland (Md). No need to test any of these pesticides – they are already identified by the EPA as you can see in the attached chart - and PFAS active ingredients are listed right on pesticide product labels. These currently 66 PFAS active ingredients contained in 1,071 Md registered pesticides are confirmed to be PFAS by EPA's CompTox Chemical Dashboard, a database that is part of EPA's PFAS Analytic Tools.

- Of the 14,000 Md registered pesticides – less than 8% are currently known to us to be PFAS. There are many Md registered alternatives, sometimes hundreds, for the products that have a PFAS as an active ingredient. These known PFAS pesticides can be swapped out for another product that is not a known "forever chemical" that targets the same pests.

- The George Walter Taylor Act Action Plan, released by Maryland Dept. of the Environment (MDE) in December 2023 clearly states that "MDA will consider a pesticide product adulterated if PFAS is found in the formulation itself." This provides the directive for pesticides with a PFAS active ingredient to have their registrations revoked
  - HB1190- similar to this law, defines PFAS in alignment with EPA's definition identifying 14,000 PFAS chemicals in its CompTox Chemicals Dashboard, and used by 22 states, Congress, and the U.S. Military. States that use the same definition as Maryland's f "one fully fluorinated carbon atom" are**:** Arkansas, Arizona, California, Colorado, Connecticut, Georgia, Kentucky, Hawaii, Illinois, Indiana, Louisiana, Maryland, Maine, Minnesota, New Hampshire, Nevada, New York, Ohio, Oregon, Rhode Island, Vermont, and Washington. HB1190 PFAS definition is also similar to the definition created by a group of international scientists that included U.S. EPA via the Organization for Economic Cooperation & Development (OECD), comprised of 37 member nations including the United States, and adopted by the European Union in their pending regulation of PFAS. See Scientist Statement on Defining PFAS with 168 scientist signers (attached in Addenda)

Consider this:

> ***"If the intent was to spread PFAS contamination across the globe there would be few more effective methods than lacing pesticides with PFAS,"*** PEER Science Policy Director Kyla Bennett, and former EPA attorney

- **EPA's lifetime safe level for the most notorious PFAS, PFOS, in drinking water is 4 parts per trillion (ppt).** PFAS pesticides are absorbed and run off from lawns, crops, and farmland where they are applied, contaminating the soil, streams, rivers and the Bay. Many Marylanders' drinking water comes from surface waters and wells that are consequently PFAS contaminated.
  - Maryland's $600 million dollar seafood industry is also at risk from PFAS – MDE has issued fish consumption warnings for 15 fish species in the Bay watershed. Eating just one Maryland rockfish could be equivalent to drinking PFAS-tainted water for a month. Keep in mind, these numbers are for a single exposure; we may be eating tainted food every day and it accumulates in our bodies.
  - **PFAS are considered "forever chemicals" because they remain in our bodies for years**. Given our ongoing cumulative exposures to PFAS it accumulates in our bodies throughout our lifetime.
  - **Pesticides do not require PFAS to be effective** as noted by two mosquito control product samples tested by EPA used by the Maryland Dept. of Agriculture (MDA) in Md.

Two years ago, Md legislators wisely took a crucial first step by banning PFAS in firefighting foam, food packaging, carpets, and rugs.

Similar to other toxic chemicals that cause dangerous health impacts such as lead, asbestos, and the pesticide DDT, the first step is identifying the problem. As with these overwhelming issues we have conquered, once identified, the solutions were evasive, and the threat seemed insurmountable. This is where we are with PFAS. The issue and even the solutions have been scientifically clarified. The time is now for addressing the solutions.

3M a global chemical manufacturer of PFAS recently announced its plans to terminate production of PFAS by 2025. Market shifts like this are welcome and crucial but must be accompanied by state-level policy changes to protect all life from further harm. While eliminating exposure to PFAS appears to be a daunting task, we can make a difference by eliminating a significant unnecessary source of PFAS exposure in our state and fill the void left by federal regulators who have so far failed to address this crucial issue.

Recently, there has been welcome good news regarding the Earth's fragile ozone layer: Phasing out harmful ozone-depleting chemicals has led to the partial recovery of the ozone hole. And we have reduced lead levels in Md, thanks to needed state laws and policies. Problems that once seemed insurmountable are now, due to wise leaders acting, are increasingly becoming success stories. Decades of hard work curbing these harmful chemicals has led to improvements in our environment and hope for better public health. Like all public health reforms, once accomplished, **We need to tackle known PFAS in pesticides with a similar strategy.**

Why more PFAS use guardrails are needed

PFAS exposure through pesticides presents a broader risk to Marylanders and our environment than common household items because pesticides are so pervasive. There are 14,000 of pesticides used in Maryland, and they are everywhere.

- Everyone is subjected to pesticides where we work and play – in public spaces, healthcare facilities, schools, and our neighborhoods.
- Bifenthrin is one of the PFAS pesticides targeted by this bill. It is heavily marketed to healthcare facilities as an indoor and out door solution. Bifenthrin is also a popular mosquito control product used by companies that contract with homeowners for multiple spray of yards in spring summer, and fall.

PFAS in pesticides is an Environmental Justice issue

Md's overburdened and underserved communities are at even greater risk from PFAS in pesticides.

- Farmworkers and families in agricultural areas bear greater exposures from pesticides applied in farming.
- Those living in poverty are more likely to fish to supplement protein, yet USGS has reported Md fish are testing with PFAS at levels as high as 500,000 parts per trillion.
- People of color are more likely to be harmed; pesticide use against rodent and cockroaches is often higher in lower-income housing due to age of buildings, poor maintenance and often crowded living conditions.

Background on finding PFAS in pesticides used in Maryland

- **In 2021, PFAS were found at notably toxic levels in pesticides used** by the MDA **annually for mosquito control in over 2,000 Maryland communities.** One product MDA notes on its program webpage, Mavrik Perimeter, was found by the Massachusetts Dept. of the Environment to contain 16,703 ppt. Once again, compare this number to EPA's *lifetime* exposure for PFAS in drinking water: 4 ppt.
- While there is research underway to extract PFAS from water, there is still no way to dispose of the extracted *forever* chemical**.**

These chemicals have made their way into our drinking water, the Chesapeake Bay and its tributaries, the soil, our food, and consequently, our bodies.

Scientists have provided notable evidence that both pesticides and PFAS runoff into Md waterways. PFAS-containing pesticides clearly add to this toxic mix from which we and our children swim, eat fish, and drink, as when communities draw their water from Md's Potomac and Patuxent rivers.

Human health impacts

- PFAS are linked to serious health impacts even at low levels of exposure. There is strong evidence linking PFAS to kidney, testicular, prostate, and breast cancer, birth defects and developmental damage in infants, childhood obesity, thyroid disease, high cholesterol, non-alcoholic fatty liver disease, and impaired immune function.
- Exposure to PFAS has been associated with increased COVID-19 susceptibility and with an increased risk of more severe outcomes from the disease
- Synthetic pyrethroid pesticides used in our state for mosquito control and PFAS chemicals can both act as endocrine disruptors, meaning they can interfere with people's hormone systems—which can result in serious health complications. This presents a public health threat of serious magnitude. Furthermore, the effects of combining two endocrine disrupting chemicals have yet to be studied.

Other species health impacts

- Science has shown PFAS is causing harm to fish and wildlife, including pollinating bees and birds.
- Maryland has found alarming levels of PFAS in Bay waters, tributaries, and fish. These were so high that the MDE issued a warning against eating three fish species caught in Piscataway Creek in Prince Georges County.
  - New research shows dangerous levels of toxic PFAS in freshwater fish. "You'd have to drink an incredible amount of water — we estimate a month of contaminated water — to get the same exposure as you would from a single serving of freshwater fish," – *study co-author David Andrews*

The solution

HB1190 is a simple next step to reduce accumulating harm to our bodies, crops, lawns, and the environment by eliminating the unnecessary PFAS pollution from ubiquitous use of pesticides that contain PFAS as their active ingredient. EPA has identified these pesticide active ingredients as PFAS. MDE's PFAS action plan states "MDA will consider a pesticide product adulterated if PFAS is found in the formulation itself." And there are plenty of alternatives in the more than 12,000 other pesticides that Maryland registers, so HB1190 will not be a hardship for farmers and professional pesticide applicators to switch to another solution..

It's time to turn off this PFAS tap

- **HB1190 addresses the need to stop the use of pesticide-containing PFAS chemicals** in our communities and is a critical step for states in order to fill the void left by federal regulators. Maine and Minnesota recently banned known pesticides containing PFAS and other states are proposing to do so.
- HB1190 would require that after June 1, 2025, no pesticides may be sold in Maryland that have ingredients identified as PFAS and listed as an active ingredient on the label.
- Existing stocks of pesticides containing pfas as an active ingredient purchased prior to june1, 2025 may be used until December 31, 2025.

We urge a positive report on HB1190.

Addenda:

1- SOPC membership list

2- Fact sheet/infographic

3- The 66 known PFAS compounds included as active ingredients in 1071 pesticides used in MD

4- Scientist Statement on Defining PFAS – 168 scientist signers

The Smart on Pesticides Maryland Campaign is a coalition of 114 concerned Maryland citizens, organizations, groups, and businesses working for better protections and data to keep our families, our waterways, and our wildlife safe from toxic pesticides.

A.I.R. Lawncare & Landscaping Services
Alliance of Nurses for a Healthy Environment
American Academy of Pediatrics – Md. Chapter
American Bird Conservancy
American Public Health Association – Md. Chapter
Anacostia Watershed Society
Annapolis Green
Anne Arundel Beekeepers Association
Arundel Rivers Foundation
Assateague Coastal Trust
Audubon Maryland – DC
Audubon Naturalist Society
Baltimore Backyard Beekeepers Network
Baltimore Bird Club
Bee Friendly Apiary
Beyond Pesticides
Big City Farms
Bowie-Upper Marlboro Beekeepers Association
CATA, Farmworkers Support Committee
Carroll County Beekeepers Association
Cecil Bird Club
Center for Biological Diversity
Center for Food Safety
Central Maryland Beekeepers Association
Central Maryland Ecumenical Council/Ecumenical Leaders Group
Centro de los Derechos del Migrante
Charm City Meadworks
Charles Smith Apiaries
Chesapeake Physicians for Social Responsibility
Children's Environmental Health Network
Clean Bread and Cheese Creek
Clean Water Action
Common Market Co-Op
Conservation Community Consulting
Cottingham Farm
Crossroads Community Food Network
Earth Coalition
Earthjustice
Eastern Shore Food Hub
Environment Maryland
Fair Farms
F&D Apiaries
Farmworker Justice
Food and Water Watch
Fox Haven Farm and Learning Center
Frederick County Beekeepers Association
Friends of Briers Mill Run
Friends of Lower Beaverdam Creek
Friends of Quincy Run
Friends of the Earth
Greenbelt Forest Preserve
Butterfly Brigade
Heathcote – School of Living
Healthy Campaigns
Hampden Community Council
Hereford Bed & Biscuit
HoneyFlower Foods
Howard County Beekeepers Association
Howard County Bird Club
Interfaith Partners of the Chesapeake
Interfaith Power and Light
Johns Hopkins Center for a Livable Future
Karma.Farm
KW Landscaping
Latino Farmers & Ranchers Association – Md Chapter
League of Women Voters of Maryland
Learning Disabilities Association – Md Chapter
Lower Susquehanna Riverkeeper
Maryland Autism Project
Maryland Bass Nation
Maryland Children's Environmental Health Coalition
Maryland Conservation Council
Maryland Environmental Health Network
Maryland Ethical Cannabis Association
Maryland League of Conservation Voters
Maryland Nurses Association
Maryland Organic Food and Farming Association
Maryland Ornithological Society
Maryland Pesticide Education Network
Maryland Public Interest Research Group
Maryland United for Peace and Justice
Maryland Votes for Animals
McDaniel Honey Farm
Migrant Clinicians Network
Moms Clean Air Force
MOM's Organic Market
Montgomery Countryside Alliance
National Aquarium
Natural Resources Defense Council
Organic Consumers Association
Pearlstone Conference Centera
Perfect Earth Project
Pesticide Action Network – North America
Potomac Riverkeeper
Queen Anne's Conservation Association
Rachel Carson Council
Really Raw Honey Company
Red Top Farm
Rodale Institute
Rosedale Farm
Ruscombe Community Health Center
SafeGrow Montgomery
Safe Minds
Safe Skies Maryland
Severn River Association
Sierra Club – Maryland Chapter
Spa Creek Conservancy
The Flower Factory
Towson Estates Association
Trout Unlimited
Washington County Beekeepers Association
Waterkeepers Chesapeake
Westport Farmers Market
Westport Neighborhood Association
Wicomico Environmental Trust

SMART on PESTICIDES maryland

2024 GENERAL ASSEMBLY

Protect Maryland & Vote for

REDUCING PFAS IN PESTICIDES

Protect Marylanders from Forever Chemicals

Some pesticides are much more dangerous to human health and our environment because they contain **PFAS**, also known as ***forever chemicals***. We're urging the Maryland General Assembly to pass **HB 1190,** which will keep all Marylanders, especialy children, pregnant women, families, the elderly — and our environment — safer from the life-threatening effects of PFAS when used as a pesticide's active ingredient.

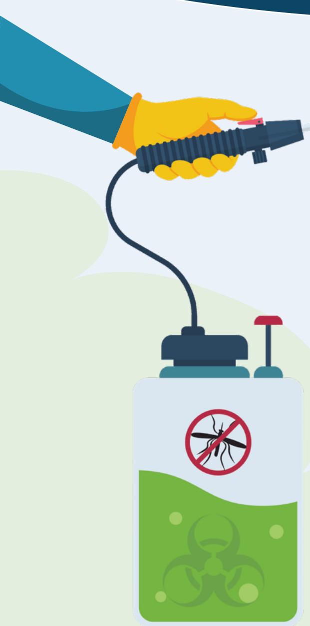
What Are Forever Chemicals?

A class of fluorinated chemicals, PFAS are known as ***forever chemicals*** because they do not break down in the environment. PFAS remediation is a massive problem and emerging technologies are limited and extremely expensive. These heavy costs will ultimately fall on communities, counties, and states. PFAS are already in our drinking water, in the Chesapeake Bay,[1] and in our soil, food,[2] and bodies.[3] Nearly every U.S. resident now carries measurable levels of PFAS in their blood.[4] Every exposure adds to the impact on our bodies.

The Problem

Maryland registers over 14,000 pesticides annually and over 1,000 contain toxic forever chemicals as their **active** ingredient. These pesticides are used widely in agriculture, homes, emergency rooms, health care facilities, and schools — among people who are already vulnerable. Also alarming is that there is no research on the synergistic effects of combining these ***forever chemicals*** with toxic pesticides that already have adverse health impacts.

Maryland has issued fish consumption warnings for PFAS in 15 fish species in the Bay watershed. Testing has found PFAS in drinking water from household taps in Maryland's Montgomery County[5] and other locations around the state.



Even low PFAS exposure is linked to many long-term serious health impacts, including:[6,7]

- Birth Defects
- Developmental Damage to Infants
- High Cholesterol
- Impaired Functioning of the Liver, Kidneys, and Immune System
- Kidney, Testicular, and Breast Cancer
- Less Effective Vaccine Response
- More Serious Covid-19 Outcomes
- Thyroid Disease

> "IF THE INTENT WAS TO SPREAD PFAS CONTAMINATION ACROSS THE GLOBE THERE WOULD BE FEW MORE EFFECTIVE METHODS THAN LACING PESTICIDES WITH PFAS."
>
> — Kyla Bennett, PEER Science Policy Director, attorney & scientist formerly with EPA

It's Not Too Late

The good news is we can stop further contamination from known PFAS pesticides. We can turn off ***this*** tap. Yes, forever chemicals are already here, but we can stop adding to the damage. There are numerous pesticides that can easily replace PFAS pesticides for all uses.

Our legislators can make a difference.

Maine and Minnesota have already passed laws preventing pesticides containing these forever chemicals from being sold. This General Assembly session, Maryland's leaders and elected officials can do the same.

We can stop adding to the problem and compounding damage already done. We **can** remove PFAS from pesticides — and protect our families and future generations.

WHAT THE BILL DOES

- HB 1190 says that on June 1, 2025, no pesticides may be sold in Maryland that have ingredients identified as PFAS listed as an active ingredient on the label.
- Existing stocks of pesticides containing PFAS purchased prior to June 1, 2025, may be used until December 31, 2025.

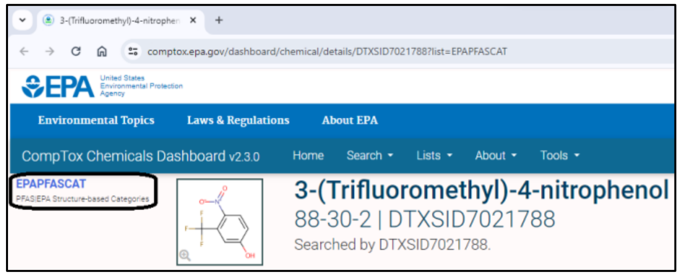
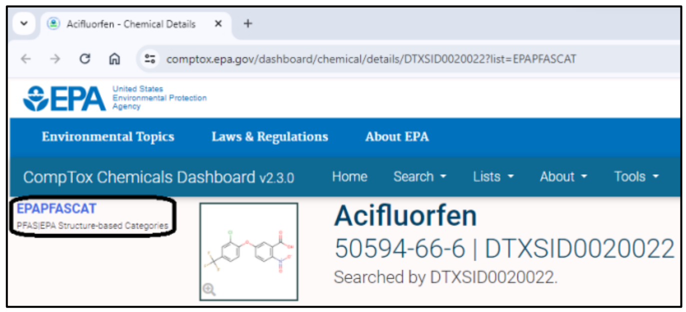
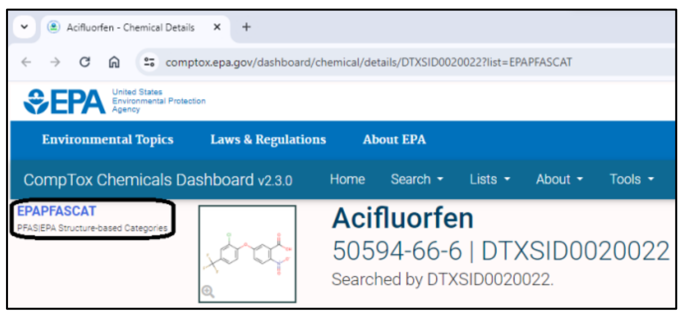
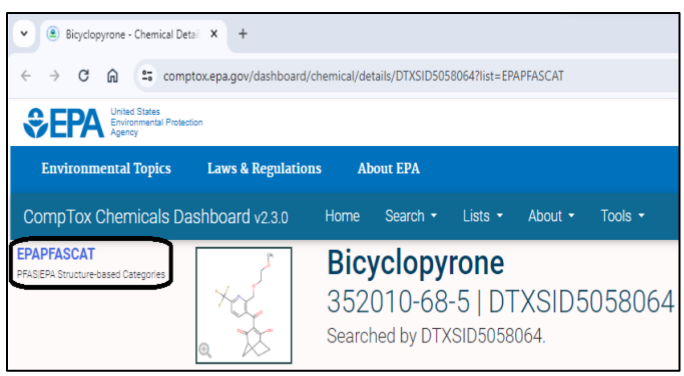
KEY TAKEAWAYS

- No PFAS testing is required for this bill.
- There are hundreds of alternative replacement products.
- This bill is a reasonable step to reduce PFAS contamination.

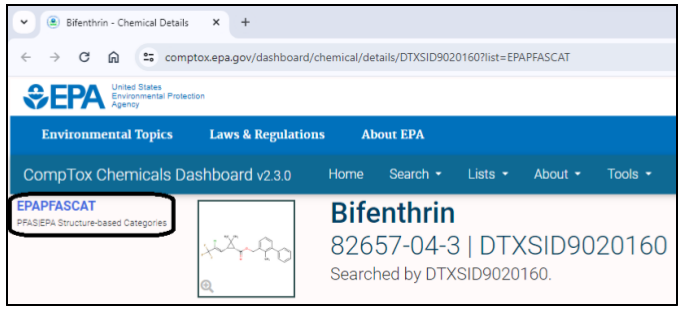
For more information: email raindrop@mdpestnet.org and visit smartonpesticides.org

[1] https://www.ewg.org/research/national-pfas-testing
[2] https://www.fda.gov/food/chemical-contaminants-food/testing-food-pfas-and-assessing-dietary-exposure
[3] https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html
[4] https://www.scientificamerican.com/article/pesticides-are-spreading-toxic-lsquo-forever-chemicals-rsquo-scientists-warn
[5] https://www.bayjournal.com/news/fisheries/forever-chemicals-found-in-chesapeake-seafood-and-maryland-drinking-water/article_2aa7a82a-28fa-11eb-ac61-9f14273a6e14.html
[6] https://www.atsdr.cdc.gov/pfas/health-effects/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.atsdr.cdc.gov%2Fpfas%2Fhealth-effects.html
[7] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6380916

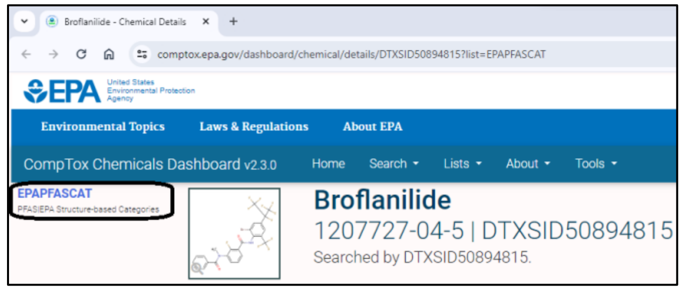
Pesticide active ingredients: Verified as PFAS in EPA's PFAS Analytic Tool CompTox Chemicals Dashboard

Pesticide	EPA identification as PFAS - CompTox screenshot
3-trifluoromethyl-4-nitrophenol, CAS #88-30-2	
Acifluorfen, CAS #50594-66-6	
Benfluralin, CAS #1861-40-1	
Bicyclopyrone, CAS #352010-68-5	

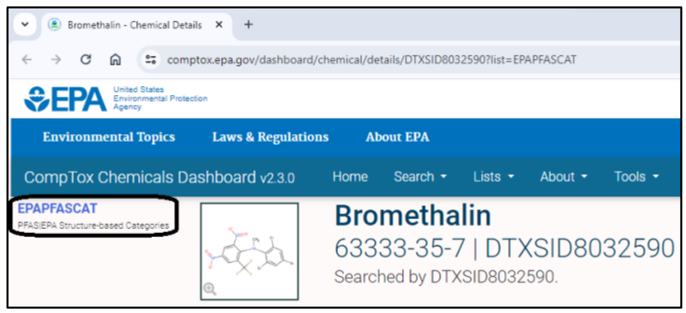
Bifenthrin, CAS #82657-04-03



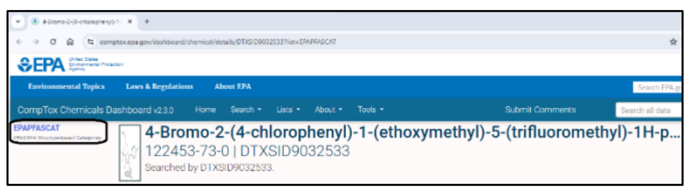
Broflanilide, CAS #1207727-04-5



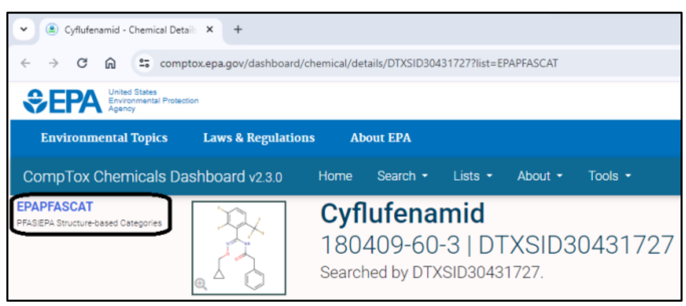
Bromethalin, CAS #63333-35-7



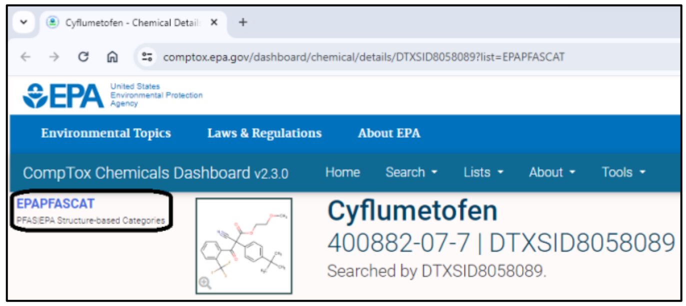
Chlorfenapyr, CAS #122453-73-0



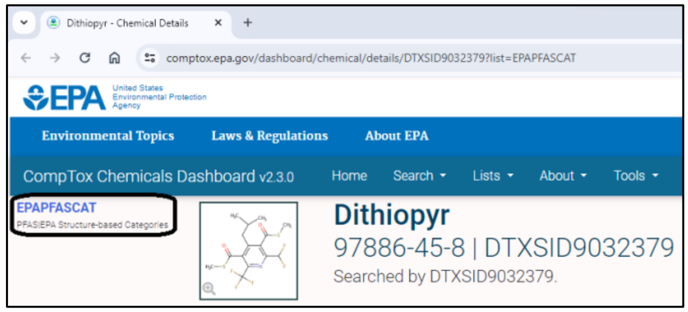
Cyflufenamid, CAS #180409-60-3



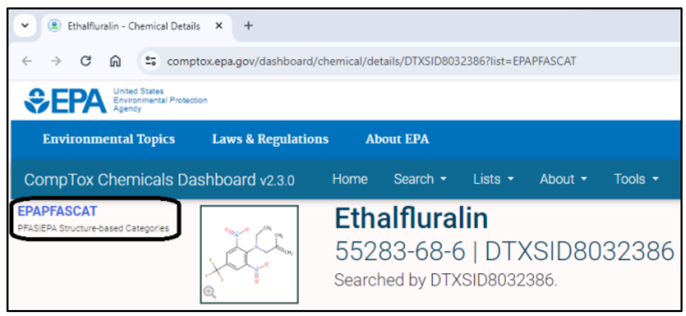
Cyflumetofen, CAS #400882-07-7



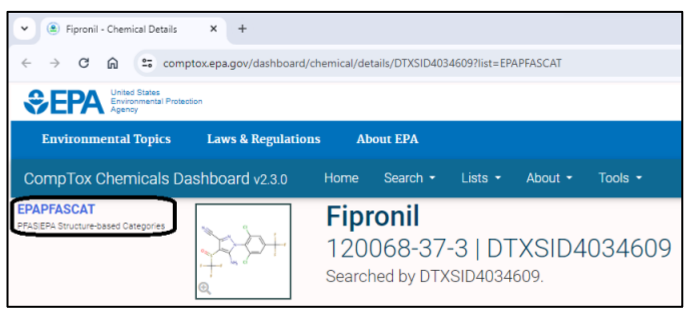
Dithiopyr, CAS #97886-45-8



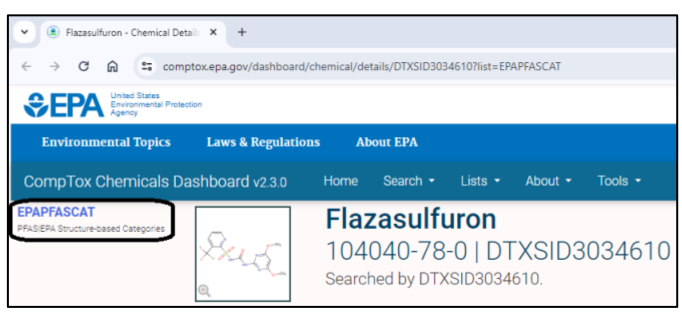
Ethalfluralin, CAS #55283-68-6



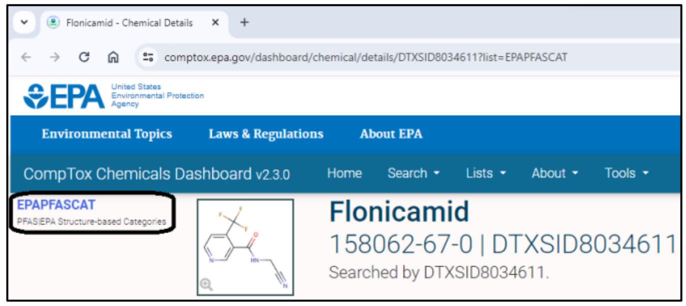
Fipronil, CAS #120068-37-3



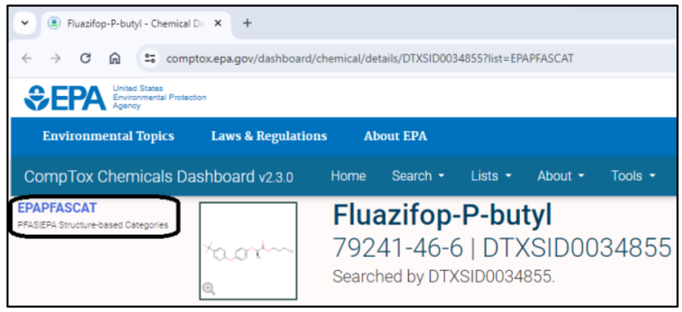
Flazasulfuron, CAS #104040-78-0



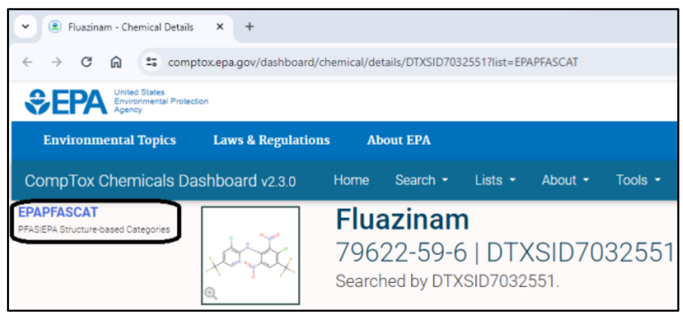
Flonicamid, CAS #158062-67-0



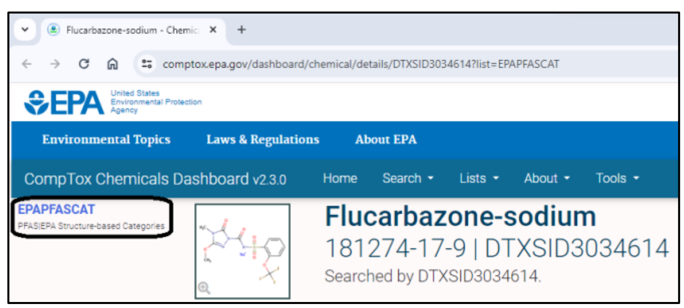
Fluazifop-P-butyl, CAS #79241-46-6



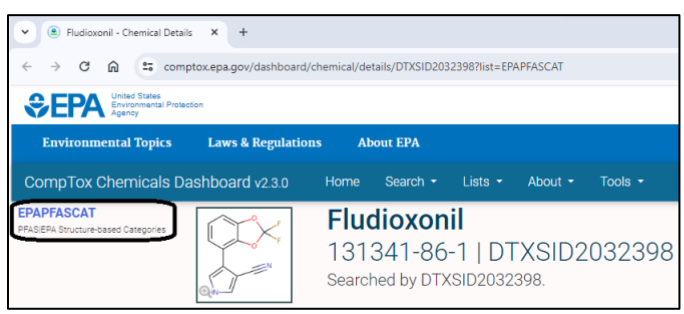
Fluazinam, CAS #79622-59-6



Flucarbazone-sodium, CAS #181274-17-9



Fludioxonil, CAS #131341-86-1



Flufenacet, CAS #142459-58-3
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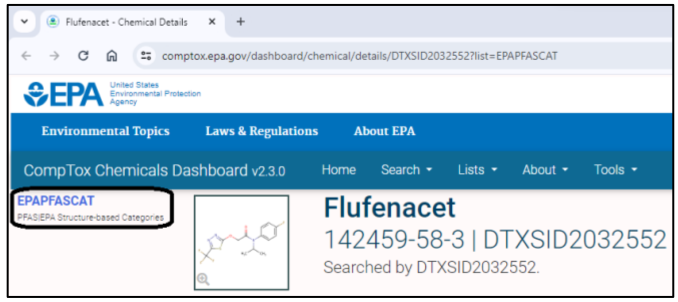
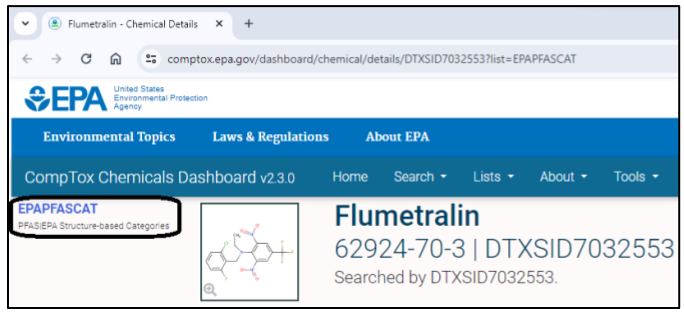
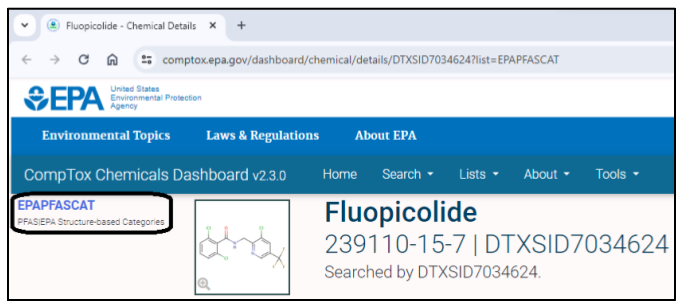


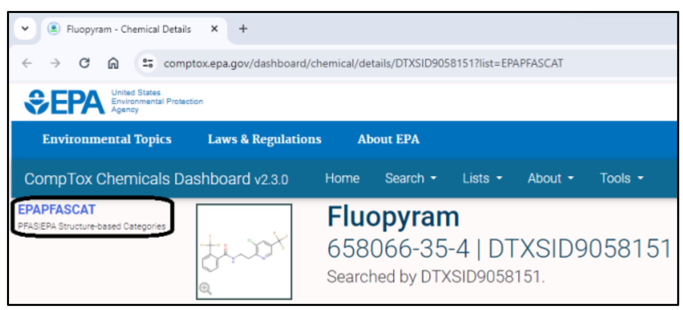
Flumetralin, CAS #62924-70-3



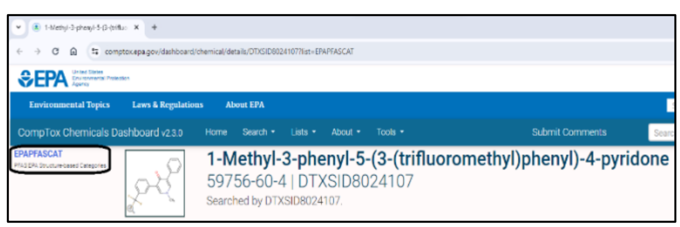
Fluopicolide, CAS #239110-15-7



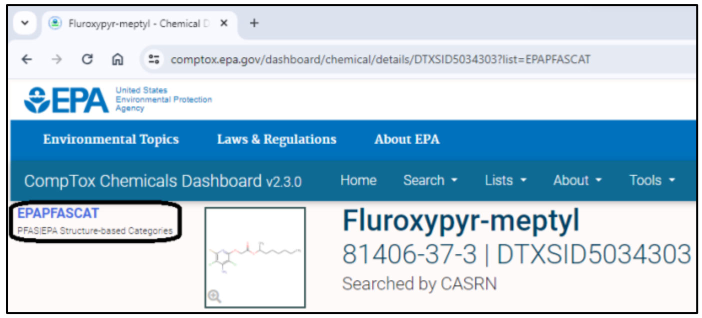
Fluopyram, CAS #658066-35-4



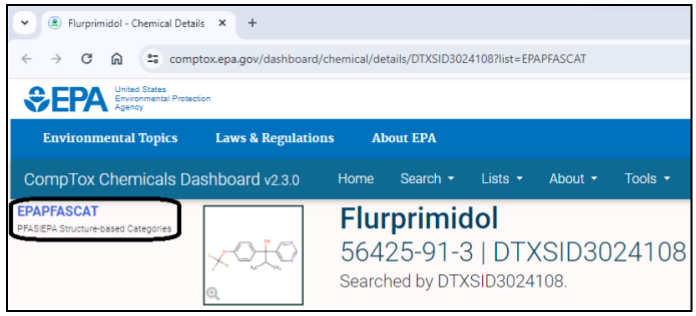
Fluridone, CAS #59756-60-4



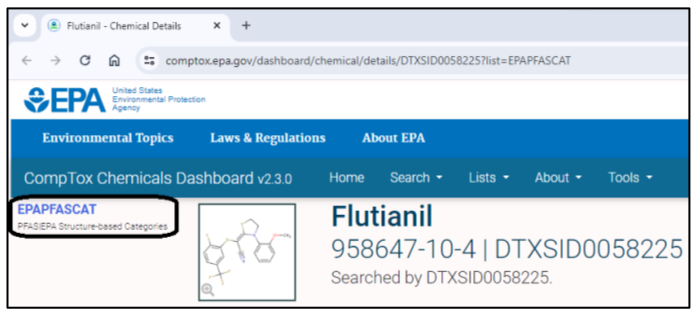
Fluroxypyr-meptyl, CAS #81406-37-3



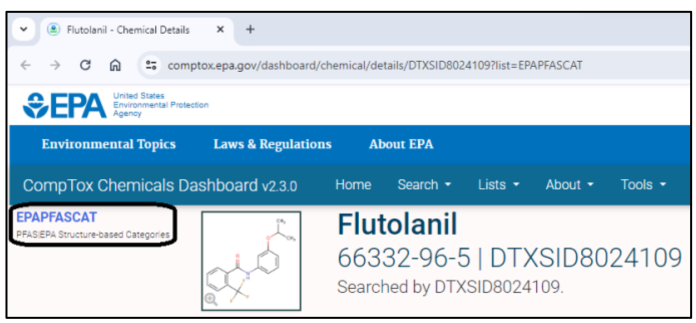
Flurprimidol, CAS #56425-91-3



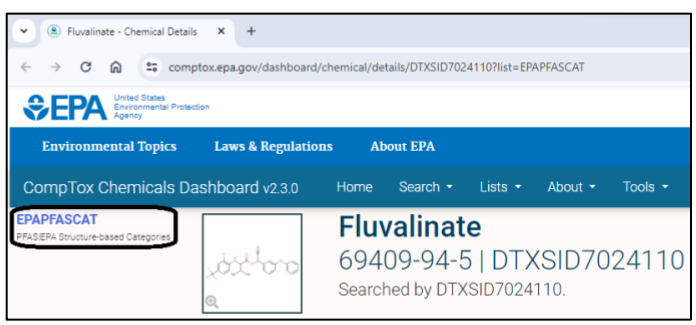
Flutianil, CAS #958647-10-4



Flutolanil, CAS #66332-96-5



Fluvalinate, CAS #69409-94-5



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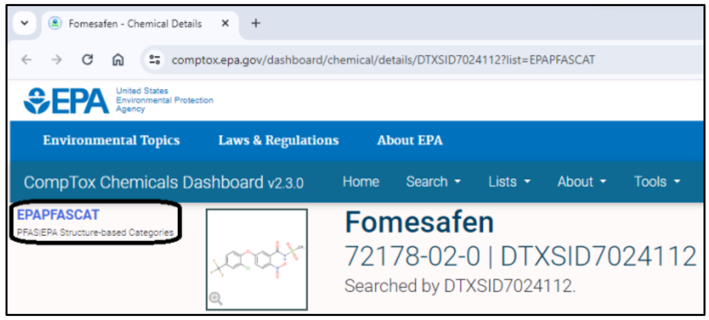

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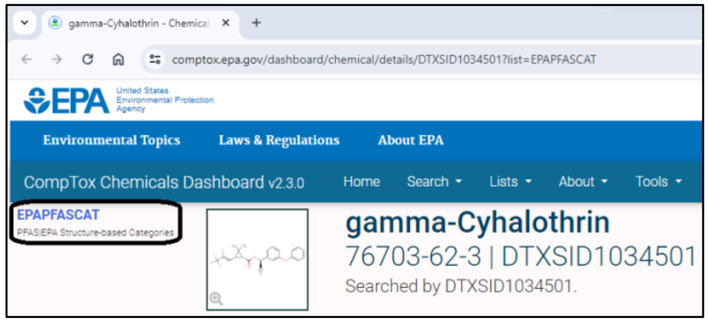

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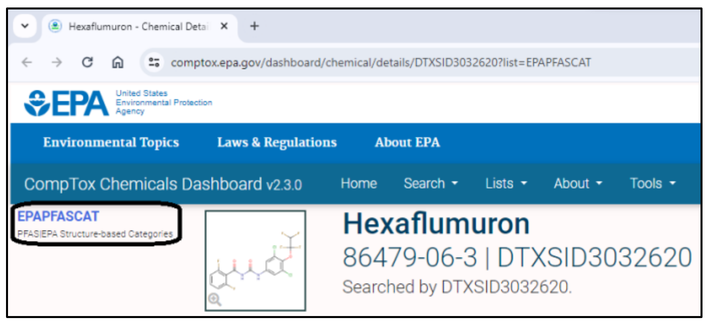

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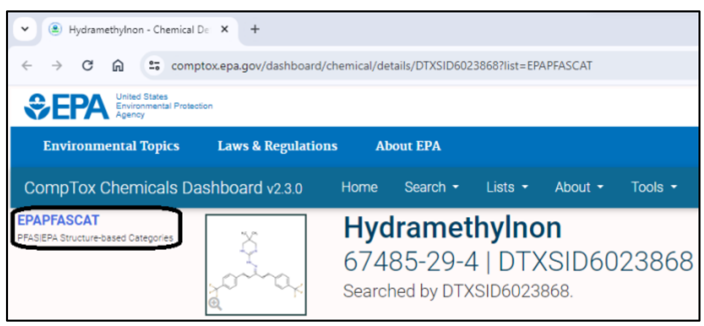

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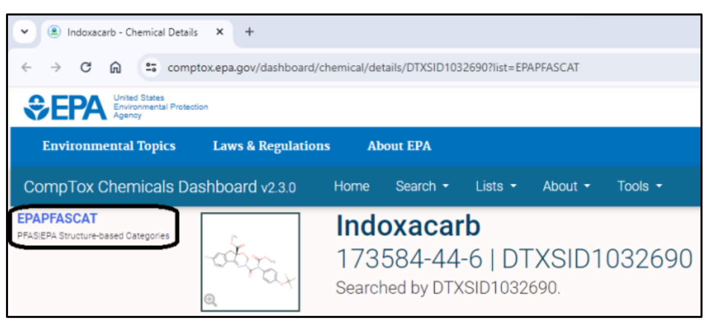

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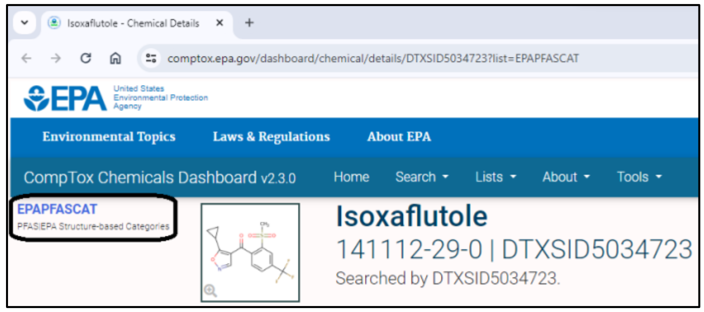

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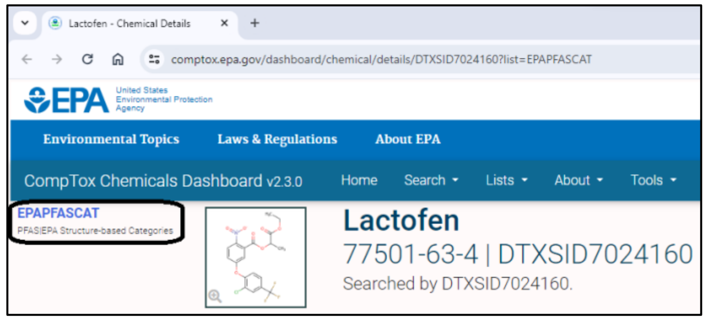

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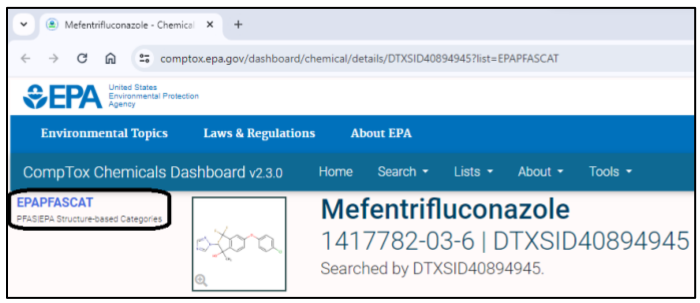

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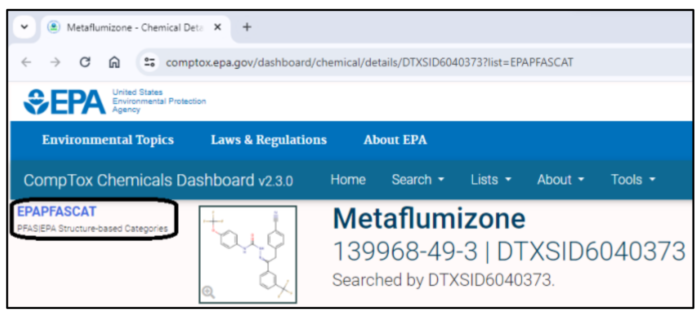

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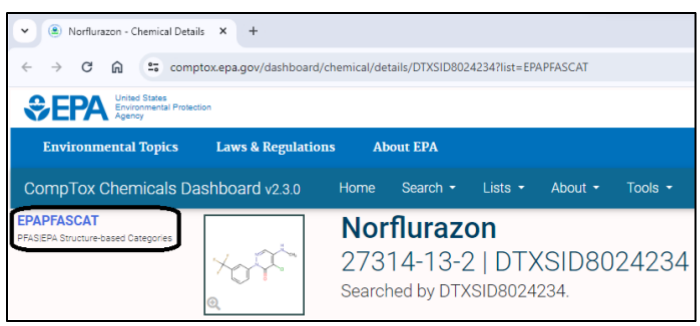

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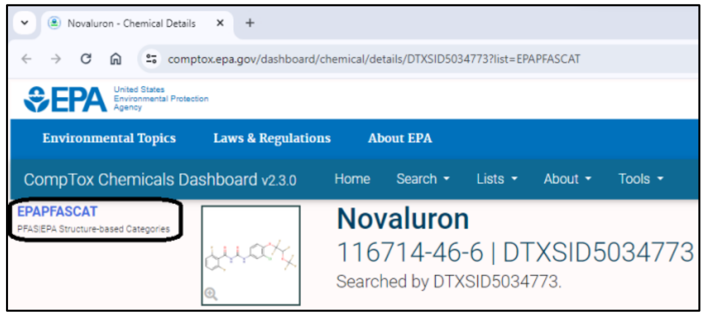

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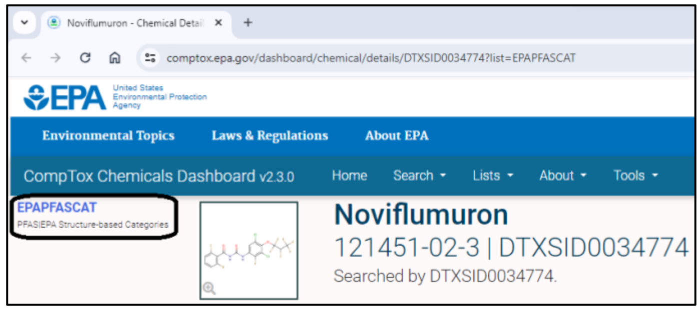

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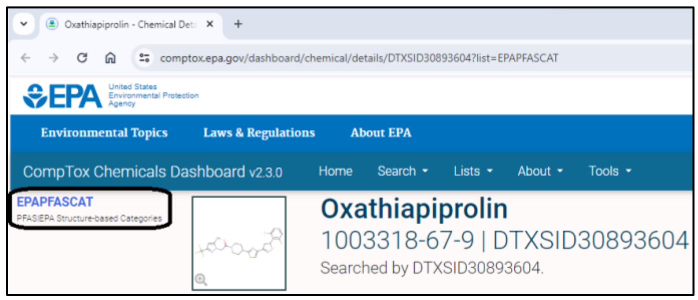

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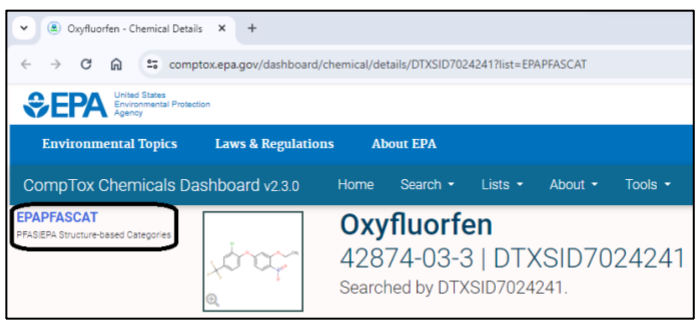

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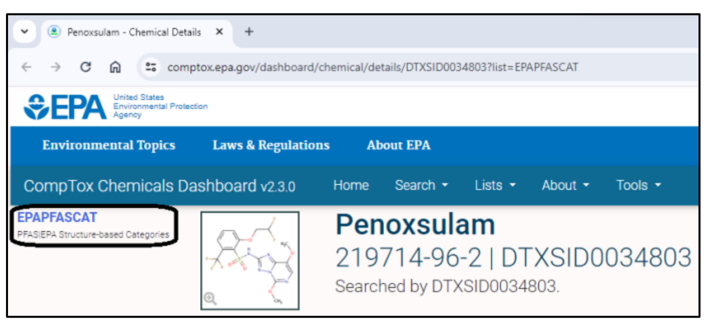

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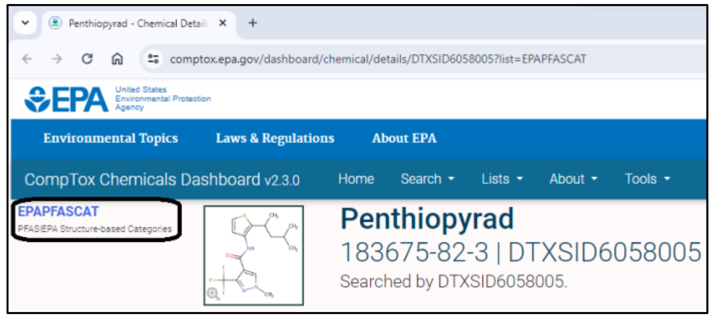

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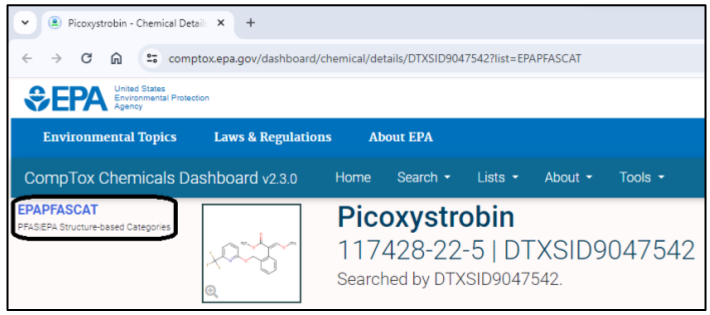

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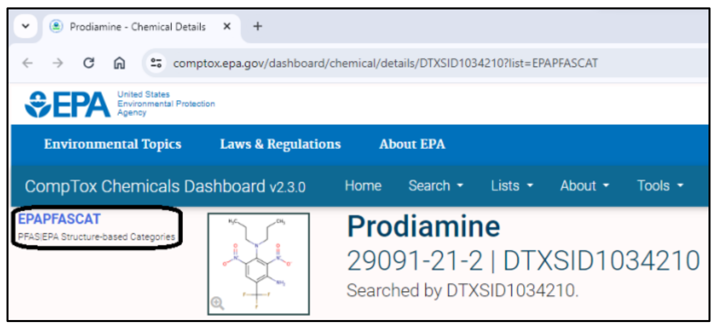

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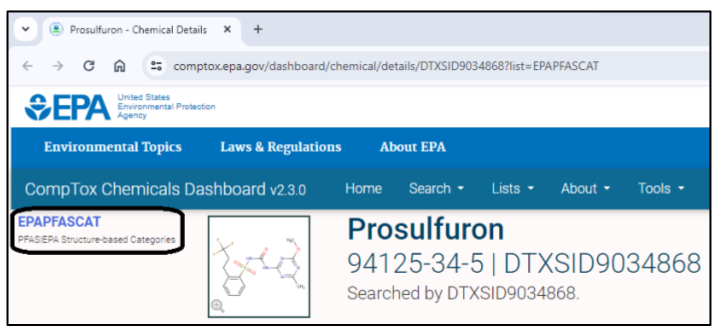

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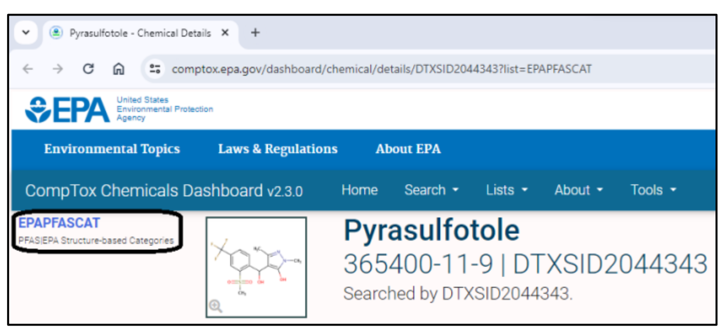

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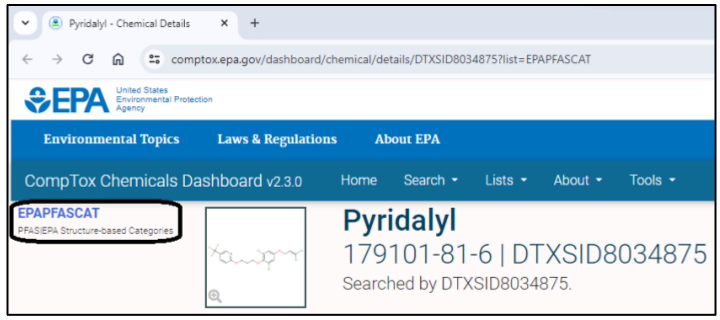

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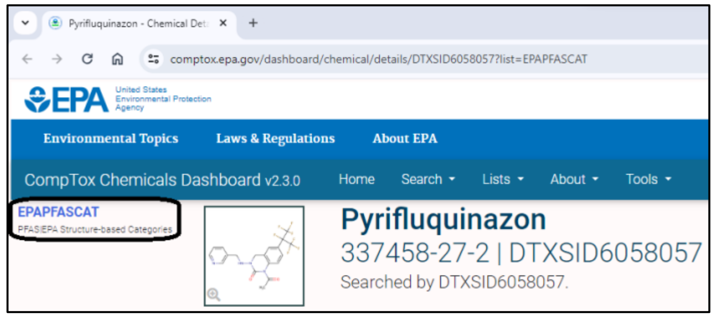

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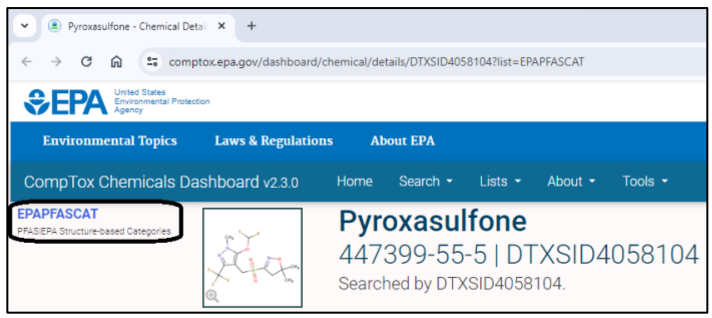

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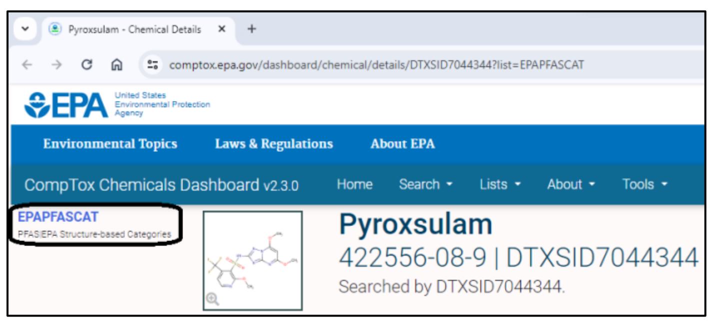

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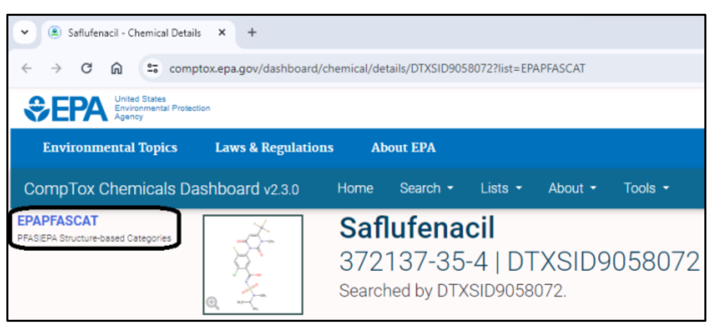

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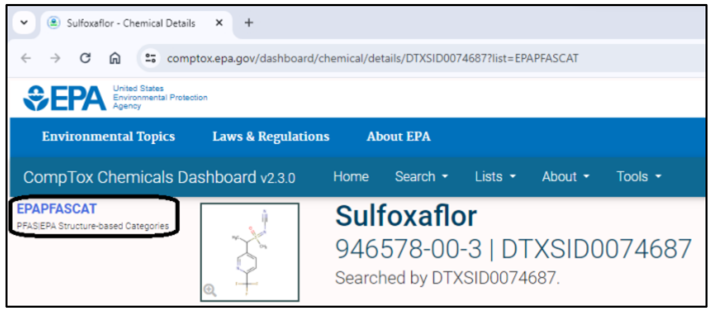

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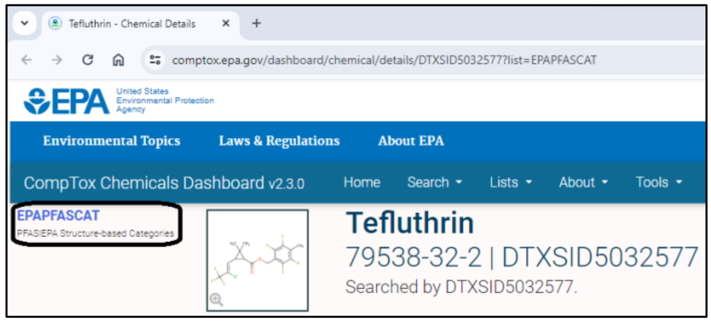

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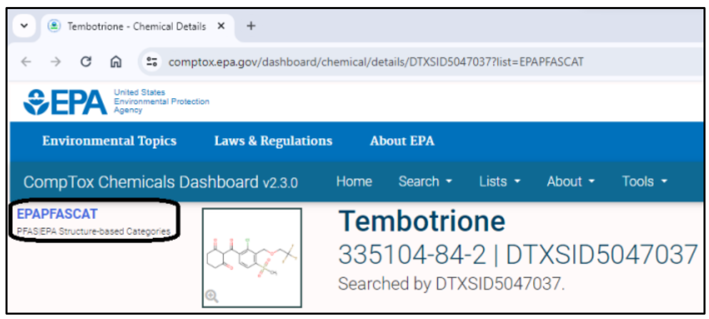

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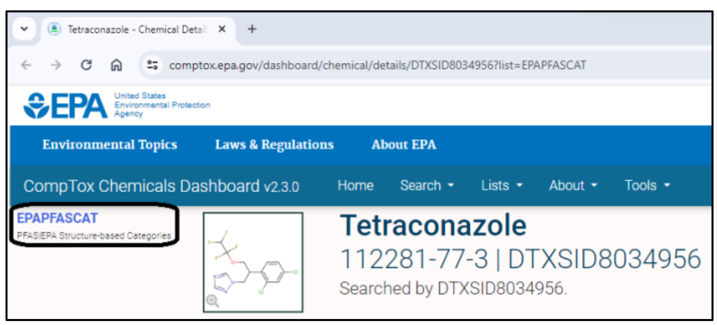

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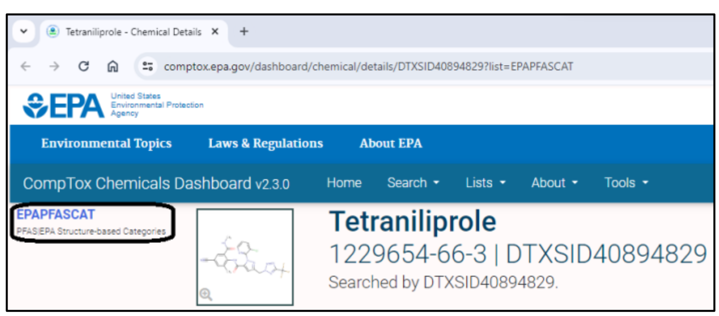

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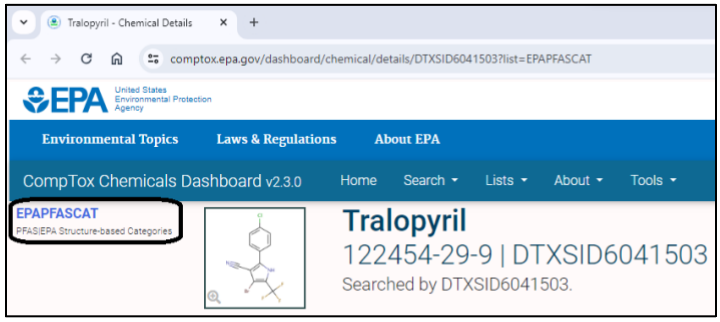

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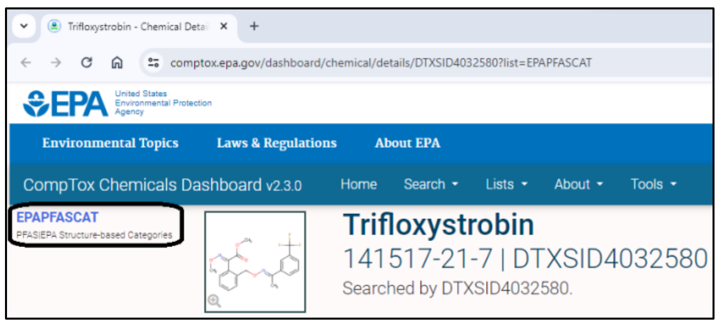

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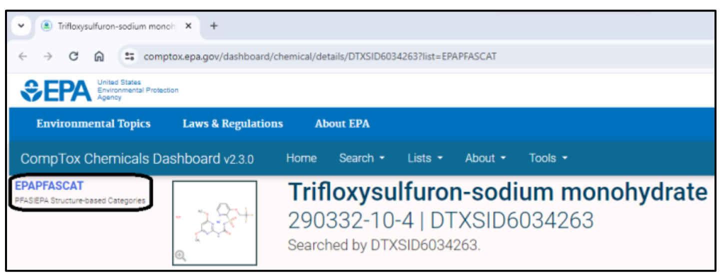

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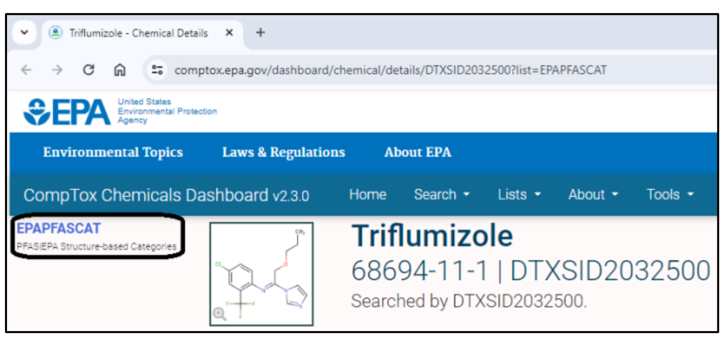

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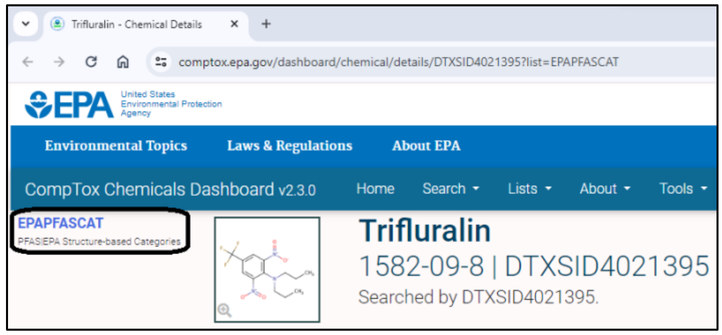

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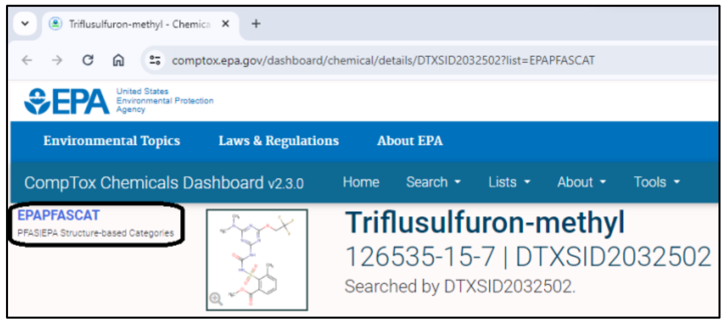

***Note:** PFAS names highlighted in yellow indicate PFAS not indicated in the MDA database

March 7, 2024

Scientists' Statement on Defining PFAS

The undersigned are scientists with expertise in per- and polyfluoroalkyl substances ("PFAS"). We study the use and health & environmental effects of PFAS, and support reducing the adverse impacts of PFAS, the "forever chemicals". Here, we address the necessity for government agencies and legislatures to adopt complete PFAS definitions grounded in science without political interference.

PFAS are used in consumer and industrial applications as surfactants and to impart oil, water, and stain resistance. There are thousands of PFAS chemicals and all well-studied PFAS show human health harms ranging from immune system dysfunction to increased risk of certain cancers.[1] All PFAS are distinguished by the presence of at least one fully fluorinated carbon atom. The carbon-fluorine bond is the strongest single bond in organic chemistry[2], giving all PFAS the shared trait of persistence, leading to their accumulation in our bodies and ecosystems. The health and environmental risks of PFAS coupled with their extreme environmental persistence[3] requires a class-based approach[4] and a definition that reflects that.

The following are science-based definitions:

- The "at least one fully fluorinated carbon" definition that has been used by 23 US states, the Department of Defense, and Congress.[5]
- The nearly identical 2021 OECD definition that was crafted by a panel of international PFAS experts, including those representing the chemical industry and US EPA.[6]

PFAS definitions that exclude polymers and gases are overlooking the most widely used PFAS. Claims that these PFAS are needed to fulfill climate and infrastructure goals are irrelevant to the definition of PFAS and are continuing to be refuted through the development of safer alternatives.

PFAS polymers can be thought of as plastics that contain carbon-fluorine bonds. They have been exempted in some PFAS regulations and definitions due to their lack of direct toxicity, but life-cycle effects must be considered to protect our health and our ecosystems.[7] The manufacturing, use, and disposal of PFAS polymers emits harmful fluorinated building blocks and PFAS greenhouse gases, with *80% of historical PFAS environmental contamination estimated to have originated from polymer production*.[8] PFAS polymers are also persistent, contributing to the ongoing microplastic crisis. Any PFAS definition grounded in science must include all PFAS polymers.

Fluorinated gases must also be included in the class of PFAS. Many persist in the environment or decay into trifluoroacetic acid (TFA), a PFAS that has been building up in the environment since the introduction of CFC replacements like hydrofluoroolefin (HFO) gases. We are concerned that TFA has been increasingly detected in people and drinking water worldwide.[9,10] The low global warming potential of some fluorinated gases does not justify their exclusion from the definition of PFAS.

Government agencies and legislatures should continue to define PFAS accurately using the above definitions, and if any exemptions are needed, e.g., for certain pharmaceuticals, then those can be given without changing the definition of PFAS.

Respectfully signed,

The views expressed are those of the signatories and do not represent their affiliated organizations.

Ovokeroye Abafe, PhD, Lecturer/Assistant Professor, Brunel University London
Chibuzor Abasilim, PhD, MPH, Postdoctoral Fellow, University of Illinois Chicago
John Adgate, PhD, Professor, University of Colorado, School of Public Health
Marlene Ågerstrand, PhD, Associate Professor, Stockholm University
Lutz Ahrens, PhD, Senior Researcher/Professor, Swedish University of Agricultural Sciences
Amira Aker, PhD, Postdoctoral Fellow, Universite Laval
William Arnold, PhD, Distinguished McKnight Professor, University of Minnesota
Hans Peter H. Arp, PhD, Professor, Norwegian Geotechnical Institute & Norwegian U. of Science & Tech.
Bridget Baker, DVM, MS, Research Assistant Professor, University of Florida
Emily Barrett, PhD, Professor, Rutgers School of Public Health
Riley Barta, PhD, Assistant Professor, Purdue University
Scott Belcher, PhD, Professor, North Carolina State University
Michael Belliveau, SB, Founder & Senior Strategist, Defend Our Health
Kimberley Bennett, PhD, Senior Lecturer, Abertay University
Kyla Bennett, PhD, JD, Science Policy Advisor, Public Employees for Environmental Responsibility
Åke Bergman, PhD, Senior Professor, Örebro University and Stockholm University
Michael Bertram, PhD, Assistant Professor, Swedish University of Agricultural Sciences
Jos Bessems, PhD, MSc, Senior R&D, VITO
Linda Birnbaum, PhD, Scientist Emeritus and Former Director, NIEHS and NTP
Arlene Blum, PhD, Executive Director, Green Science Policy Institute
Eva Cecilie Bonefeld-Jørgensen, PhD, MSc, Professor; Center Director, Aarhus University
Katrine Borgå, PhD, Professor, University of Oslo
Bailey Bowers, PhD, Visiting Assistant Professor, Earlham College
Joseph Braun, PhD, RN, MSPH, Professor, Brown University
Phil Brown, PhD, University Distinguished Professor of Sociology & Health Sciences, Northeastern U.
Helene Budzinski, PhD, Head of EPOC laboratory, CNRS, France
Sam Byrne, PhD, Assistant Professor, Middlebury College
Courtney Carignan, PhD, Assistant Professor, Michigan State University
Meghan Cerpa, MPH, PhD Candidate, University of Illinois Chicago
Lida Chatzi, MD, PhD, Professor, University of Southern California
Perry Cohn, PhD, MPH, retired, New Jersey Department of Health
Justin Colacino, PhD, MA, MPH, Associate Professor, University of Michigan
Pere Colomer Vidal, PhD, Postdoc, Institute of General Organic Chemistry, CSIC
Ellen Cooper, PhD, Research Scientist, Duke University
Alissa Cordner, PhD, Associate Professor, Whitman College
Ian Cousins, PhD, Professor, Stockholm University
Hugo de Campos Pereira, PhD, MSc, Environmental Risk Assessor, The Swedish Chemicals Agency
Cynthia de Wit, PhD, Professor Emerita, Stockholm University
Jamie DeWitt, PhD, Professor, Oregon State University
Miriam L. Diamond, PhD, Professor, University of Toronto
Elmer Diaz, MS, Toxicologist, Washington State Department of Health
Michael Dooley, MSc, Graduate Student, Colorado School of Mines
Alan Ducatman, MD, Professor Emeritus, West Virginia University
Suzanne Fenton, PhD, MS, Center Director, NC State University
Seth Rojello Fernández, MS, Science & Policy Associate, Green Science Policy Institute
Jennifer Freeman, PhD, Professor, Purdue University

Kay Fritz, PhD, Toxicologist, Michigan Department of Agriculture & Rural Development
Alex Ford, PhD, MSc, Professor, University of Portsmouth
Cristóbal Galbán, PhD, Full Professor, Genomics, Ecology & Environment Center, Universidad Mayor
Kimberly Garrett, PhD, Postdoctoral Research Fellow, Northeastern University PFAS Project Lab
Juliane Glüge, PhD, Senior Researcher, ETH Zürich, Switzerland
Gretta Goldenman, JD, MPP, Co-Coordinator, Global PFAS Science Panel
Belen Gonzalez-Gaya, PhD, Researcher, University of the Basque Country
Jaclyn Goodrich, PhD, Research Associate Professor, University of Michigan
Jesse Goodrich, PhD, Assistant Professor, University of Southern California
Judith Graber, PhD, MS, Associate Professor, Rutgers School of Public Health
Philippe Grandjean, MD, DMSc, dr.h.c., Research Professor, University of Rhode Island
Yago Guida, PhD, Research Associate, Federal University of Rio de Janeiro
Sarah Hale, PhD, Senior Researcher, German Water Center TZW
Kris Hansen, PhD, Founder/CEO, Savanna Science
Stuart Harrad, PhD, Full Professor, University of Birmingham
Nicholas Herkert, PhD, Research Scientist, Duke University
Åse Høisæter, MSc, Senior Consultant, PhD Candidate, Norwegian Geotechnical Institute AS
Marie Louise Holmer, MSc, Special Consultant, DTU National Food Institute
Tyler Hoskins, PhD, Research Assistant Professor, Purdue University
Taylor Hoxie, BS, PhD Candidate, Duke University
Yuyun Ismawati, MSc, Senior Researcher, Nexus3 Foundation
Lydia Jahl, PhD, Senior Scientist, Green Science Policy Institute
Karl Jobst, PhD, Assistant Professor, Memorial University of Newfoundland
Rashmi Joglekar, PhD, Associate Director of Science, Policy & Engagement, University of California, San Francisco Program on Reproductive Health and the Environment
Olga-Ioanna Kalantzi, PhD, Associate Professor, University of the Aegean
Anna Kärrman, PhD, Associate Professor, Örebro University
Sarit Kaserzon, PhD, Associate Professor, University of Queensland
Detlef Knappe, PhD, S. James Ellen Distinguished Professor, North Carolina State University
Gail Krowech, PhD, Staff Toxicologist (retired), CA OEHHA
Carol Kwiatkowski, PhD, Adjunct Assistant Professor, North Carolina State University
Pierre Labadie, PhD, Senior Researcher, CNRS France
Jimena Diaz Leiva, PhD, Science Director, Center for Environmental Health
Mélanie Lemire, PhD, Professor, CHU de Québec - Université Laval
Anna Lennquist, PhD, Senior Toxicologist, ChemSec
Juliana Leonel, PhD, Professor, Universidade de Santa Catarina
Wenting Li, PhD, Post-Doctoral Researcher, University of California Davis
Jinxia Liu, PhD, Associate Professor, McGill University
Shelley Liu, PhD, Associate Professor, Icahn School of Medicine at Mount Sinai
Mallory Llewellyn, BS, PhD Candidate, University of Florida
Rainer Lohmann, PhD, Professor, University of Rhode Island
Christine Luetzkendorf, MSc, Policy Advisor on Fluorinated Gases, Deutsche Umwelthilfe e.V.
Maricel Maffini, PhD, Independent Consultant
Katherine Manz, PhD, Assistant Professor, University of Michigan
Olwenn Martin, PhD, Associate Professor, University College London
Pingping Meng, PhD, Assistant Professor, East Carolina University
Mindi Messmer, MS, President, NH Science and Public Health
David Michaels, PhD, MPH, Professor, Milken Institute School of Public Health, George Washington U.

Ulf Miehe, PhD, Deputy Director/Head of Process Innovation, Kompetenzzentrum Wasser Berlin gGbmH
Gillian Miller, PhD, Senior Scientist, Ecology Center
Pamela Miller, MS, Executive Director and Senior Scientist, Alaska Community Action on Toxics
Daniele Miranda, PhD, Research Assistant Professor, University of Notre Dame
Michelle Misselwitz, BS, Research Assistant, Duke University
Rachel Molé, MS, PhD Candidate, Carnegie Mellon University
Michelangelo Morganti, PhD, Researcher, CNR-IRSA, Water Research Institute
Dean Morrow, BSc, Senior Environmental Scientist, Royal Military College of Canada
Jane Muncke, PhD, Managing Director and Chief Scientific Officer, Food Packaging Forum
Dawn Myers, BS, Senior Environmental Specialist, Orange County Sanitation District
Michael Neumann, PhD, Scientific Officer, German Environment Agency
Carla Ng, PhD, Associate Professor, University of Pittsburgh
Sascha Nicklisch, PhD, Assistant Professor, UC Davis
Mariam Oladosu, MPH, PhD Student, University of Illinois, Chicago
Sung Kyun Park, ScD, Associate Professor, University of Michigan
Marco Parolini, PhD, Associate Professor, University of Milan
Sharyle Patton, BA, Director of Health and Environment, Commonweal
Graham Peaslee, PhD, Professor, University of Notre Dame
Katie Pelch, PhD, Scientist, Natural Resources Defense Council
Myrto Petreas, PhD, MPH, Branch Chief (retired), Environmental Chemistry Laboratory, CA DTSC
Heidi Pickard, MSc, PhD Candidate, Harvard University
Merle Plassmann, PhD, Laboratory Manager, Stockholm University
Stefano Polesello, PhD, Research Director, CNR-IRSA, Water Research Institute
Grace Poudrier, MA, PhD Candidate, Northeastern University
Hannah Ray, PhD, Senior Manager, Programs + Innovation, Materials, International Living Future Institute
Jessica Ray, PhD, Assistant Professor, University of Washington
Anna Reade, PhD, Senior Scientist & Director of PFAS Advocacy, Natural Resources Defense Council
Amirhossein Rezaei Adaryani, PhD, Water Resource Control Engineer, Santa Ana Regional Water Quality Control Board
Lauren Richter, PhD, Assistant Professor, University of Toronto
Megan Romano, PhD, MPH, Associate Professor, Dartmouth Geisel School of Medicine
Joëlle Rüegg, PhD, Professor, Uppsala University
Marianna Rusconi, PhD, Researcher, CNR-IRSA, Water Research Institute
Mohammad Sadia, MSc, PhD Candidate, University of Amsterdam
Amina Salamova, PhD, Assistant Professor, Emory University
Gabriel Salierno, PhD, Green Chemist, TURI - UMass Lowell
Sébastien Sauvé, PhD, Full Professor, Université de Montréal
Andreas Schäffer, PhD, Professor, RWTH Aachen University
Laurel Schaider, PhD, Senior Scientist, Silent Spring Institute
Ted Schettler, MD, MPH, Science Director, Science and Environmental Health Network
Jona Schulze, MSc, Scientific Officer, German Environment Agency
Michael Schümann, Dr. Dipl. Psych., Retired Senior Scientist, German Human Biomonitoring Comm'n
Maria Sepulveda, PhD, Professor, Purdue University
Gabriel Sigmund, PhD, Assistant Professor, Wageningen University
Anna Soehl, MSc, Science & Policy Consultant, Green Science Policy Institute
Ariana Spentzos, PhD, Science & Policy Associate, Green Science Policy Institute
Heather Stapleton, PhD, Professor, Duke University
Maria Starling, PhD, Professor, Universidade Federal de Minas Gerais

Prashant Srivastava, PhD, Sr. Research Scientist, Commonwealth Scientific & Industrial Research Org.
Eleni Strompoula, MSc, PhD Candidate, National Technical University of Athens
Roxana Suehring, Dr. rer. nat., Assistant Professor, Toronto Metropolitan University
Ryan Sullivan, PhD, Professor & Associate Director, Institute for Green Science, Carnegie Mellon U.
Brita Sundelin, PhD, Associate Professor/Researcher, Stockholm University
Rebecca Sutton, PhD, Senior Scientist, San Francisco Estuary Institute
Drew Szabo, PhD, Postdoctoral Researcher, Stockholm University
Alicia Timme-Laragy, PhD, Professor, University of Massachusetts Amherst
Héloïse Thouément, PhD, Researcher, Wageningen University
Konstantina Tsintsifas, MPH, PhD Student, University of Illinois Chicago
Mary Turyk, PhD, MPH, Professor, University of Illinois Chicago
Sara Valsecchi, MSc, Senior Researcher, CNR-IRSA, Water Research Institute
Almudena Veiga-Lopez, DVM, PhD, Associate Professor, University of Illinois at Chicago
Marta Venier, PhD, Assistant Professor, Indiana University
Arjun Venkatesan, PhD, Associate Professor, New Jersey Institute of Technology
Penny Vlahos, PhD, Professor, University of Connecticut
Marc-André Verner, PhD, Associate Professor, Université de Montréal
Tiziano Verri, PhD, Full Professor, University of Salento
Anne Marie Vinggaard, PhD, Professor, Technical University of Denmark
Kimberlee West, MS, Water Resource Control Engineer, San Francisco Bay Regional Water Board
Christopher Witt, PhD, Professor, University of New Mexico
Chunjie Xia, PhD, Research Associate, Indiana University Bloomington
Guomao Zheng, PhD, Associate Professor, Southern University of Science and Technology
Veronika Zhiteneva, PhD, Group Lead, Water Treatment, Kompetenzzentrum Wasser Berlin gGmbH

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