

Links:

- [LGA Press Release](#)
- [LGA “Your Questions Answered by the LGA”](#)
- [Persistence of florpyrauxifen-benzyl in sediments following application to a large oligotrophic lake to control Eurasian watermilfoil](#)

Collected comments and documents

> Lake George Association comments:

Press Release:

“The LGA emphasizes that there is no evidence of drinking water, recreation or human health risks based on its current data.”

“Your Questions Answered by the LGA:”

Is drinking water safe? Nothing in our data indicates human health or drinking water risks. Our concern is ecological, not drinking water or recreation.

Should people who eat Lake George fish be concerned? Nothing in our data suggests human health risk from eating Lake George fish at this time.

Do your scientific findings impact swimming or fishing? Recreational use of Lake George remains safe.

> Executive Director Dave Wick from the LGPC (as quoted in the Glens Falls Chronicle):

The Chronicle asked, Do you accept the LGA finding that ProcellaCOR and its breakdown products persisted more than a year in lakebed sediments?

The Park Commission replied, “The LGA findings largely align with the EPA product registration which notes that ProcellaCOR can persist at trace levels in anoxic condition in sediment for many months. While this finding is longer than noted in the EPA documents, the minute quantity (parts per billion) identified has absolutely no public health impacts nor identified ecological impacts.”

The Chronicle asked, Does the LGA report alter the state's view that ProcellaCOR is safe to use in Lake George (and in other New York lakes)?

The Commission replied, "The Lake George Association press release clearly notes that their organization does not dispute that ProcellaCOR has no negative impacts on the public health, safety or welfare of the users of Lake George.

"The current LGA study finding of trace amounts of ProcellaCOR in the treatment areas does not identify any direct impact to the ecology of Lake George.

"ProcellaCOR was studied extensively over years of time by the EPA, the NYS DEC, and dozens of other countries, all of which align in their assessments that this product has no identified ecological impacts.

"The two ProcellaCOR treatments in Lake George, and indeed every Adirondack Park lake treatment, were found to be exceedingly effective at eliminating invasive Eurasian watermilfoil with no resulting negative impacts."

> Olin Reed, Aquatic Biologist & Permit Specialist, Department of Environmental Conservation (communication with FOVLAP President Pat Suozzi, shared with permission):

Thanks for sending this over. I had read through some of this yesterday but hadn't had a chance to dive into it. I'll simply reiterate the LGPC statement that finding trace amounts of ProcellaCOR in the treatment areas does not identify direct impacts to lake ecology. As they mention, extensive studies on the pesticide have been conducted around the world. Additionally, the State of Vermont has independently reviewed the parent compound and degradation products in ProcellaCOR. I know you're aware of the VDH and DEC Ecotoxicity reviews which go into more detail, but I will link them below. Additionally, I've CC'ed toxicologists from VDH, VAAFM, and DEC for their awareness.

> Jon Gosselin, Technical Development Biologist - North, SePRO (communication with LSCA, shared with permission) (10/2/25):

Thanks for reaching out. I'll first highlight LGA's last statement in the press release, *'The LGA emphasizes that there is no evidence of drinking water, recreation or human health risks based on its current data.'* Their findings are in line with EPA Env Fate and Transport studies and expectations, except for they note a couple of sites (single point within a 1-inch section of a ~20 inch core) where flurpyrauxifen-benzyl concentration exceeded the NOAEC level for chironomids (midges). However, there is nuance to how the chironomid NOAEC was

established (see below), and based on their findings I think it's reasonable to conclude that risk to midges in Lake George sediment is extremely minimal.

Please see comments to help contextualize the LGA findings.

- In their Environmental Fate and Ecological Risk Assessment, EPA unfortunately is not clear in describing that the NOAEC for the OECD 219 study referenced by Wiltse et al. is actually the average measured concentration of the active ingredient in sediment (25 ug ai/kg...or 25 ng/g per LGA paper units) for the maximum exposure rate at the beginning and end of the 28-day study reference (the end sediment concentration at 28-days was 46 ug ai/kg). The starting maximum test concentration in the spiked overlying water in the study was measured at 78.5 ppb ai (circa 10X LG application rate and 60% over max label rate). While this supplementary study's results were not fully explained by EPA, the study showed no effects on survival, emergence, or development rate of the midge at that maximum rate evaluated. Going above that concentration in that particular study design (spiked water) isn't feasible because of solubility artifacts noted for the active ingredient. Since the LGA paper emphasizes this study and its 'endpoint' as evidence of risk, it is important to make this clarification. It should also be noted that lifecycle studies for the particular midge evaluated are typically 28-days based on their biology in such trials in case there are questions about potentially longer study periods.
- EPA has an understanding that concentrations of the active and some of its degradants persist in sediments for an extended period. Our pond dissipation studies showed trace concentrations in some sediment samples at 4 months. With photolysis and hydrolysis as key drivers of active ingredient breakdown, some longer-term detection of the active in sediments is not surprising. The profile of the degradants is also understood such that detections here are also not surprising. The question comes down to 'hazard' vs 'risk'. EPA has fully assessed aquatic risk based on the full profile of the product after reviewing all of the studies on the product's fate and toxicological profile, and will continue to do that formally over the lifetime of the product's registration. The effort here to sample sediments following treatment does give more data about the product's environmental fate, however, the paper doesn't fully assess risk based on all information provided to EPA in the registration process.
- It should be noted that any management options, including the option of no EWM control, have hazards and potential risks. For example, Lake George's productive DASH program has hazards and risks to divers, non-target organisms, water quality etc. A full risk assessment to support a comprehensive AIS management plan that weighs all available tools' (quote from the draft LGA press release) should describe and compare hazards and risks of all strategies.
- EPA concluded it does not have any hazard concern for metabolites and/or degradates of florpyrauxifen-benzyl that may be found in drinking water, plants, and livestock.

- EPA Env Fate and Ecological Risks Assessment provides a robust, data-driven foundation showing low persistence and minimal ecological risk for florpyrauxifen-benzyl, countering the paper's portrayal of uncertainty and prolonged threats.

Notes:

NOAEC = No Observed Adverse Effect Concentration

> Jon Gosselin, Technical Development Biologist - North, SePRO (follow up communication with LSCA, shared with permission) (2/2/26):

1. Your comment on the midge mentioned in the study:

"In their Environmental Fate and Ecological Risk Assessment, EPA unfortunately is not clear in describing that the NOAEC for the OECD 219 study referenced by Wiltse et al. is actually the average measured concentration of the active ingredient in sediment (25 ug ai/kg...or 25 ng/g per LGA paper units) for the maximum exposure rate at the beginning and end of the 28-day study reference (the end sediment concentration at 28-days was 46 ug ai/kg). The starting maximum test concentration in the spiked overlying water in the study was measured at 78.5 ppb ai (circa 10X LG application rate and 60% over max label rate). While this supplementary study's results were not fully explained by EPA, the study showed no effects on survival, emergence, or development rate of the midge at that maximum rate evaluated. Going above that concentration in that particular study design (spiked water) isn't feasible because of solubility artifacts noted for the active ingredient. Since the LGA paper emphasizes this study and its 'endpoint' as evidence of risk, it is important to make this clarification. It should also be noted that lifecycle studies for the particular midge evaluated are typically 28-days based on their biology in such trials in case there are questions about potentially longer study periods."

This seems to be referring to this paragraph in the study:

"Observed concentrations of FPB and its degradants in surface sediments and sediment cores were above the no observable adverse effect concentration (NOAEC, 25 ng/g FPB) for chironomids identified in the US EPA's risk assessment. (9) It is worth noting that the NOAEC identified in the risk assessment was for a 28-day exposure period, whereas our studies indicate persistence at or above these concentrations for at least a year. The impact of long-term exposure of benthic macroinvertebrates to FPB and its degradants is poorly understood. (9,25) Given the potential for chronic exposure on the order of months to years, as opposed to days to weeks, further research on the impact of FPB and its degradants on these ecologically important organisms is warranted."

Can you elaborate on this for us, explaining in a way that a lay person could understand? It sounds like the test created conditions that would not apply in the real world because the water above the sediment was kept at a concentration that would not occur during a spot treatment? If so, can you elaborate on this?

Answer: You are correct that my comments above were related to the paragraph that you highlighted.

In short, the LGA paper notes that florpyrauxifen-benzyl (FPB) was detected in Lake George sediment at a higher concentration than the No Observable Adverse Effect Concentration (NOAEC) for chironomids (midges) of 25 ng/g. However, the NOAEC was set at 25 ng/g because that is the highest avg sediment concentration that could be reached by spiking the water above it with FPB in the EPA study. The study showed no effects on survival, emergence, or development rate of the midge at that maximum rate evaluated. The limited detections of FPB above 25 ng/g do not represent a significant risk to chironomids/midges. I anticipate that the LGA will conduct midge sampling inside and outside the treated areas to confirm there were no negative impacts in the treated areas.

Lay Person Explanation: The 25 ng/g exposure on midges was the highest exposure tested in the EPA study; it did not harm the midges. Without the ability to test higher levels of exposure within the study design, the NOAEC was conservatively set at 25 ng/g.

2. Based on the LGA testing and studies, they noted that all but the sediment finding met previous studies and findings. Do you have any thoughts on why this particular finding of degradants in their sediments did not match the previously published ~4 month finding?

Answer: I'll note that the majority of the LGA sediment core sections were non-detect and are in line with the degradation rates modeled in the EPA risk assessment for FPB and degradates in sediment. LGA did find a few small sections (1 cm section) of a limited # of cores where FPB and/or degradates persisted longer than expected. This could be due in part to sampling deeper into the sediment (down to 20 cm) vs EPA studies, however it's worth noting that chironomids/midges exist mostly in the top 10 cm of sediment. Also, the treatment areas at Lake George are deeper vs the depth of water above the sediment in the EPA studies, this could lead to less sunlight reaching the sediment and thus slower photolytic breakdown.

3. Do you have any new thoughts or information to share on the study?

Answer: The LGA findings are mostly in line with expectations based on rates of breakdown in sediment modeled in the EPA risk assessment. The limited detection of FPB and/or degradates does not represent a significant risk to midges. Also, a NJ lake that was treated with ProcettaCOR recently conducted sediment sampling (5 years post treatment). The samples were analyzed by UConn (same lab that did analysis for the LGA) and all were confirmed

non-detect. I expect LGA will continue to sample the treated areas, which will be helpful in fine tuning expectations for environmental fate and transport of FPB in different field settings.

4. Can you share your thoughts on this Wisconsin Sea Grant study:

<https://youtu.be/phm7YcWWWgU?si=yhLM5z2lfLdx-JPP&t=786>

Answer: I'm curious to learn more about the methods, especially placement of the control sites vs the treatment sites, and whether or not water quality parameters were evaluated such as DO, water temperature, pH, etc. ProcellaCOR EC was not acutely toxic up to its functional limit of solubility (40 ppb) in tests on freshwater fish, including rainbow trout, fathead minnow and common carp. It was not chronically toxic to freshwater fish up to the limit of functional solubility. Toxicity testing with juvenile rainbow trout indicated no toxicity at the limit of solubility application rate (40 ppb). I note the general safety margins because I suspect the % survivorship in this field study is likely tied to the inability of the fish to move around as water quality conditions change. The presenter noted a 15% reduction in survivorship in the ProcellaCOR treated sites vs the control sites. The water quality at the surface in the pictured bucket study looks much worse vs the water quality in the control area. The algae mats could occasionally decrease dissolved oxygen in that area and the water temperature could also be impacted by the mats. Overall, I think it's a good initiative to evaluate impacts of invasive plant management on juvenile fish in the field, but I think there are ways that the design could be improved to better determine causation of decreased survivorship (acute sensitivity to herbicide, drop in DO, shift in temperature or pH, etc).



> Lake Iroquois Association - Herbicide Renewal Permit, November 2025,
[Link:](#)

ProcellaCOR Herbicide Information

First registered with the EPA in 2018, and approved for use in Vermont for the 2019 management season, ProcellaCOR was then applied at four Vermont waterbodies that year. Since then, it has been applied extensively throughout New England, New York and elsewhere in Vermont. Based on available data, ProcellaCOR has been more selective for EWM control in Vermont than when previously using Sonar (fluridone) or Renovate (triclopyr) herbicides.

ProcellaCOR has a reduced-risk profile from the EPA, a minimal photolytic half-life (1.68 hours), and thus is only present within the water for a short time. Based on ProcellaCOR's high selectivity for milfoils and few other species, there is minimal impact anticipated to the native plant species present within Vermont. For anticipated non-target treatment impacts that are specific to Lake Iroquois, please refer to that section below.

In a recent study led by the Lake George Association, a historically anti-aquatic herbicide organization, it was found that ProcellaCOR and/or its degradates could be identified in sediment core samples within a treatment area approximately a year after application (Wiltse et al., 2025). Although the study was well orchestrated, it is a limited example of this type of data and has not been certified by peer review, which is a crucial step of ensuring credible scientific research.

Additionally, the lead author on the study is a member of the Lake George Association, which could be viewed as a potential conflict of interest. Core samples were only collected at one site per treatment area, but multiple core samples were collected outside of the treatment area and were primarily found to have non-detect results. Further, memos from both Vermont DEC's Monitoring and Assessment Program and the Department of Health's state toxicologist state that findings of their reviews support that proposed use of ProcellaCOR at rates of 3-5 PDU/ac-ft "pose an acceptable risk to the non-target aquatic biota and environment" (Levy, 2022) and "is expected to result in negligible risk to public health from both the active and inert compounds in ProcellaCOR," (Vose, 2022) respectively. Both memos are included within this application for reference.

Given recent attention that PFAS, or perfluoroalkyl or polyfluoroalkyl substances, have received, it is important to note that the State of Vermont has defined PFAS as a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom, in [Bill H.238 \(Act 54\)](#). It is important to note that floryprauxifen-benzyl, the active ingredient in ProcellaCOR EC herbicide, does not contain any fully fluorinated carbon atoms (National Center for Biotechnology Information, 2025). Based on that information and the State of Vermont's definition of PFAS, ProcellaCOR would not be defined as a PFAS product. Additionally, it is

important to note that Bill H.238 only defines PFAS and does not regulate the sale or use of pesticides that meet this definition.

> Additional PFAS Information

Referring to Lake Iroquois' comment in their permit about ProcellaCOR not having fully fluorinated carbon atoms, here is additional information from Gemini AI:

“Based on its chemical structure, **florpyrauxifen-benzyl** does **not** contain a fully fluorinated methyl ($-\text{CF}_3$) or methylene ($-\text{CF}_2-$) group, which are the structures typically associated with "fully fluorinated" carbons in standard scientific definitions of PFAS (such as the Organisation for Economic Co-operation and Development [OECD] definition).

However, the interpretation of "fully fluorinated carbon atom" can vary by regulatory context. Here is the detailed breakdown:

1. Chemical Structure Analysis

Florpyrauxifen-benzyl (chemical formula: $\text{C}_{20}\text{H}_{14}\text{Cl}_2\text{F}_2\text{N}_2\text{O}_3$) contains exactly **two fluorine atoms**, and they are located on separate aromatic rings.

- **Location 1:** One fluorine atom is attached to the pyridine ring (at position 5).
- **Location 2:** One fluorine atom is attached to the phenyl ring (at position 2).

2. Is the Carbon "Fully Fluorinated"?

- **Scientific Definition (Strict):** In chemistry and under definitions like that of the OECD, a "fully fluorinated carbon" generally refers to a carbon atom where all available valence bonds (non-carbon bonds) are occupied by fluorine. This usually implies a saturated sp^3 carbon, such as in a **trifluoromethyl ($-\text{CF}_3$)** or **difluoromethylene ($-\text{CF}_2-$)** group. Florpyrauxifen-benzyl **does not** have these groups.
- **Regulatory Interpretation (Broad):** Some definitions, such as the one used in **Minnesota state law**, define PFAS as chemicals containing "at least one fully fluorinated carbon atom." Under this broad definition, the Minnesota Department of Agriculture (MDA) has identified florpyrauxifen-benzyl as a PFAS.
 - **Why?** The specific carbon atoms bonded to the fluorine atoms in florpyrauxifen-benzyl are aromatic carbons. These carbons are bonded only to other carbons (in the ring) and the fluorine atom; they have no hydrogen atoms attached. Therefore, in a literal sense of "having no non-fluorine substituents other than carbon," these specific atoms are sometimes interpreted legally as "fully fluorinated," despite being part of an aromatic ring rather than a fluorinated chain.

Summary Table

Feature	Details for Florpyrauxifen-benzyl
Formula	$C_{20}H_{14}ClF_2N_2O_3$
Total Fluorine Atoms	2
Contains –CF ₃ (Trifluoromethyl)?	No
Contains –CF ₂ – (Difluoromethylene)?	No
Fluorine Configuration	Two separated aromatic C–F bonds (Ar–F)
PFAS Status	Debated. Not PFAS under OECD/EPA definitions (due to lack of –CF ₂ –/–CF ₃); considered PFAS under Minnesota state law (due to broad interpretation of "fully fluorinated carbon").

Conclusion: If you are asking about the presence of a "forever chemical" style carbon chain saturated with fluorine (–CF₂–/–CF₃), the answer is **no**. If you are asking if it falls under broad "fully fluorinated carbon" regulatory definitions used in some jurisdictions (like MN), the answer is effectively **yes** because the specific carbons bonded to fluorine carry no hydrogen."

Next, Gemini AI was asked to analyze the National Center for Biotechnology Information (NCBI) PubChem database for info on Florpyrauxifen-benzyl:

"The **National Center for Biotechnology Information (NCBI)** does not function as a regulatory agency (like the EPA or FDA); therefore, it does not make legal "determinations" or bans. Instead, it serves as a scientific library and database.

However, the NCBI's **PubChem database** aggregates data from various regulatory agencies and scientific sources. Here is what the NCBI data and linked regulatory sources indicate about **Florpyrauxifen-benzyl** and its status as a fluorinated chemical.

1. NCBI/PubChem Classification

In the PubChem database (CID 70495450), Florpyrauxifen-benzyl is listed with the following classifications:

- **Chemical Class:** It is categorized as a **Monofluorobenzene** and **Aminopyridine**.
- **PFAS Tree:** The compound appears in the PubChem section titled "*PFAS and Fluorinated Organic Compounds*."
 - **Important Distinction:** Inclusion in this list does not automatically mean it is a "PFAS" by every definition. This section includes *all* fluorinated organic compounds.
 - PubChem often uses the **OECD definition** for its internal classification, which generally requires a fully fluorinated methyl (-CF_3) or methylene ($\text{-CF}_2\text{-}$) group. Florpyrauxifen-benzyl lacks these specific groups.

2. The "Fully Fluorinated Carbon" Controversy

The confusion regarding whether this herbicide contains a "fully fluorinated carbon" stems from two different interpretations of the term.

- **The Scientific/OECD Definition (Strict):**

Most chemists and the OECD define a "fully fluorinated carbon" as a saturated carbon atom where all bonds (that are not to other carbons) are to fluorine (e.g., a -CF_3 group).

 - **Status:** Florpyrauxifen-benzyl **does not** meet this definition. Its fluorine atoms are attached to aromatic rings, not saturated chains.
- **The Regulatory Definition (e.g., Minnesota State Law):**

Some recent regulations, such as those in Minnesota, define PFAS broadly as any chemical containing "at least one fully fluorinated carbon atom." Regulators in these jurisdictions have interpreted the aromatic carbons bonded to fluorine in Florpyrauxifen-benzyl as "fully fluorinated" because those specific carbon atoms are bonded only to Carbon and Fluorine (with no Hydrogen attached).

 - **Status:** Under this broad legal interpretation, **yes**, it is considered a PFAS.

3. Visual Explanation

To visualize why this is debated, I have generated a diagram of the structure below.

What to look for in the diagram:

- Note the two **Fluorine (F)** atoms.

- They are attached directly to the **rings** (aromatic structures).
- There are **no** "chains" of carbon saturated with fluorine (like $-\text{CF}_2-\text{CF}_2-$), which are the hallmark of traditional "forever chemicals" (PFAS) like PFOA or PFOS.

Summary of Determinations Found in NCBI Literature

- **US EPA:** Generally treats it as a "fluorinated" pesticide but has historically distinguished it from long-chain PFAS.
- **Minnesota Dept of Agriculture:** Explicitly designated it as a **PFAS** under their state law due to the "fully fluorinated carbon" interpretation.
- **European Union:** Some literature indexed in NCBI suggests it is being scrutinized under broader "PFAS" grouping attempts, but it is currently approved for use (e.g., in rice farming)."

Next Step: Would you like to see a comparison table of how this herbicide's half-life (persistence) compares to traditional PFAS like PFOS?

Next, Gemini offered a comparison of Florpyrauxifen-benzyl to a 'traditional' PFAS:

NCBI & PubChem Classification

The **National Center for Biotechnology Information (NCBI)** is a scientific library, not a regulatory agency, so it does not make legal "determinations" or bans. However, its **PubChem database** (the world's largest collection of freely accessible chemical information) uses algorithms to classify chemicals based on their structure.

Here is how PubChem categorizes **Florpyrauxifen-benzyl**:

- **PFAS Status:** It appears in the PubChem classification tree titled *"PFAS and Fluorinated Organic Compounds."*
- **The Nuance:** This list is very broad and includes *all* fluorinated compounds. However, PubChem data explicitly shows the molecule **lacks** the "fully fluorinated methyl or methylene carbon" ($-\text{CF}_3$ or $-\text{CF}_2-$) required to meet the strict **OECD definition** of a PFAS.
- **Key Data Point:** In PubChem, it is chemically classified as a "Monofluorobenzene" and "Aminopyridine," confirming the fluorine atoms are attached to rings, not saturated carbon chains.

Comparison: Florpyrauxifen-benzyl vs. Traditional PFAS (PFOS)

To address your concern about whether this behaves like a "forever chemical," the table below compares it to **PFOS**(Perfluorooctanesulfonic acid), a classic PFAS.

Feature	Florpyrauxifen-benzyl (The Herbicide)	PFOS (Traditional PFAS)
Primary Structure	Aromatic rings with 2 separate Fluorine atoms	Long chain of 8 Carbons <i>fully saturated</i> with Fluorine
Contains –CF ₂ – or –CF ₃ ?	No	Yes (Chain of 8)
Half-Life in Water	Rapid. ~2 hours to 6 days (breaks down via sunlight/microbes)	Extremely Persistent. >41 years (virtually no degradation)
Half-Life in Soil	Moderate. ~14–55 days	High. >5 years to decades
Bioaccumulation	Low. Metabolized and excreted quickly by fish/mammals.	Very High. "Biomagnifies" up the food chain.
Human Half-Life	Estimated in hours/days (rapidly excreted)	Estimated in years (~4–5 years to eliminate half)

Key Takeaway: While strict regulations (like Minnesota's) might legally label Florpyrauxifen-benzyl a "PFAS" because of technical definitions regarding carbon atoms, its **environmental behavior** is opposite to that of traditional "forever chemicals." It breaks down relatively quickly, whereas PFOS remains in the environment effectively forever.

Visualizing the Structure

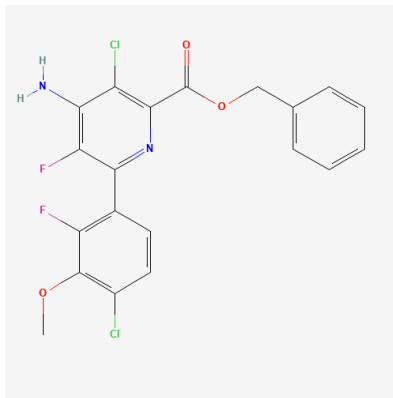
To help you see the difference, this diagram highlights the chemical structure. You will see the fluorine atoms (F) attached directly to the ring structures, rather than forming a long "tail" or chain.

Summary of the Debate

- **Technically (Legal):** In states like **Minnesota**, it **is** a PFAS because they define "fully fluorinated carbon" to include aromatic carbons bonded to fluorine (C–F) with no hydrogen attached.
- **Functionally (Scientific):** It **is not** a "forever chemical" in the traditional sense because it lacks the stable carbon-fluorine *chain* that makes compounds like PFOS indestructible in nature."

Here are the structural formulas for Florpyrauxifen-benzyl and PFOS (a traditional PFAS) to illustrate the difference:

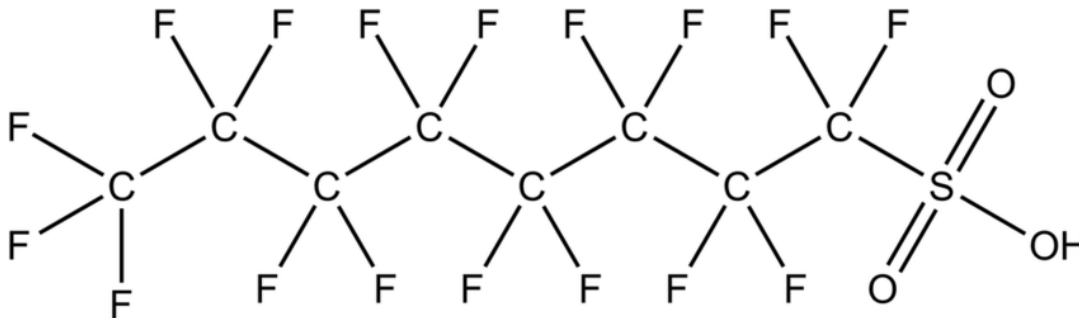
1. Florpyrauxifen-benzyl



Notice the complex ring structures. The fluorine atoms (represented by **F**) are attached to the rings themselves at specific points. There is no long "tail" of carbon and fluorine (image left)

2. Traditional PFAS (PFOS)

In contrast, look at the structure of Perfluorooctanesulfonic acid (PFOS). It is characterized by a long, snake-like "chain" or "tail" where every single carbon atom is bonded to fluorine atoms. This chain (the CF₂ and CF₃ groups) is what makes it extremely difficult for nature to break down (image below)



Visual Comparison Key

- **The "Tail":** The traditional PFAS (PFOS) has a distinct zig-zag tail saturated with Fluorine (F). Florpyrauxifen-benzyl has no such tail.

- **The Rings:** Florpyrauxifen-benzyl is built around hexagon-shaped rings (aromatic rings). While it has Fluorine attached to these rings, this bond is chemically different and generally more susceptible to being broken down by sunlight and microbes compared to the armored "tail" of a traditional PFAS.

Finally, the Vermont DEC has stated, in the Lake St. Catherine Association's ANC Permit 4233-ANC-C Response Summary that, "The State of Vermont does not consider PFAS to be present within the active or inert ingredients of ProcellaCOR EC. Based on this review, Health and the Secretary have found that the proposed use of ProcellaCOR EC in Lake St. Catherine poses a negligible risk to public health."

> **Recent Study:** [Response of juvenile Chinook salmon \(*Oncorhynchis tshawytscha*\) to the aquatic herbicide florpyrauxifen-benzyl](#)

Abstract: Florpyrauxifen-benzyl (aquatic tradename ProcellaCOR) is an aquatic herbicide commonly used to control Eurasian watermilfoil (*Myriophyllum spicatum*) and other invasive aquatic plants. Previous studies have demonstrated effective Eurasian watermilfoil control under low aqueous concentrations ($<10 \mu\text{g L}^{-1}$) and short exposure times ($< 24 \text{ hr}$). Although florpyrauxifen-benzyl possesses an excellent environmental profile and its acute toxicity has been assessed in freshwater model organisms, there has been no work to examine toxicity of this herbicide in salmonids. Therefore, the objective of this study was to evaluate the acute toxicity to Endangered Species Act-listed Chinook salmon (*Oncorhynchis tshawytscha*). Chinook fry and smolts were exposed to florpyrauxifen-benzyl at 50 and 100 $\mu\text{g L}^{-1}$ for 96 hr under a 24-hr static renewal protocol at 12 °C. Daily observations included fish startle response, position in the water column, and signs of overt toxicity. No adverse effects of the herbicide were observed at either concentration in both Chinook fry and smolts. Our results indicate that the maximum United States-labeled application rate of florpyrauxifen-benzyl (48 $\mu\text{g L}^{-1} \text{ ai}$) did not result in overt toxicity to juvenile salmonids under the exposure scenarios used in this study.