

Words to Win

Communication Tools for Advocacy: Talking Points, Pitches, and One-Pagers

Skills Activity Session

Hypothetical:

You are a policy advocate for a national environmental organization. Recently, a bill, the Relief for Farmers Hit with PFAS Act, has been introduced in Congress, and it concerns an issue your organization cares about: PFAS. According to the bill summary from Congress, “this bill directs the Department of Agriculture (USDA) to establish a grant program to help states and other entities address contamination by perfluoroalkyl and polyfluoroalkyl substances, common referred to as PFAS, on agricultural land and commercial farms.” Several partner organizations and allied groups support this bill. Your organization has also decided to support this bill and advocate for it on the Hill.

At present, your organization has meetings scheduled to discuss this piece of legislation with two Representatives, Representative David Valadao (R-CA), and Representative Nikema Williams (D-GA); and two Senators, Senator Tim Sheehy (R-MT) and Senator Jeanne Shaheen (D-NH).

Representative David Valadao (R-CA)

<https://valadao.house.gov/>
https://ballotpedia.org/David_Valadao

Senator Tim Sheehy (R-MT)

<https://www.sheehy.senate.gov/>
https://ballotpedia.org/Tim_Sheehy

Representative Nikema Williams (D-GA)

<https://nikemawilliams.house.gov/>
https://ballotpedia.org/Nikema_Williams

Senator Jeanne Shaheen (D-NH)

<https://www.shaheen.senate.gov/>
https://ballotpedia.org/Jeanne_Shaheen

As a team, please outline talking points and develop a policy elevator pitch in SUPPORT of the Relief for Farmers Hit with PFAS Act. Choose **one** of the Congresspersons listed above as your target audience for the pitch. **Your team will submit the final versions of your talking points outline and your written pitch as the work product for this workshop, enabling you to earn a PhD Plus badge.** Please note, your team should not create a one-pager.

Document Requirements & Sample Formats

Talking Points Outline

- Choose three (3) talking points to outline.
- Document length should be 1 page maximum.
- Submission Format: Google Docs

Sample Outline Format

- Argument/Talking Point (1 sentence)
- List Legal and Policy Reasons Supporting Argument (3 max)
 - Reason 1
 - Reason 2
 - Reason 3
- List Scientific Evidence Supporting Argument (3 max)
 - Evidence 1
 - Evidence 2
 - Evidence 3
- List Firsthand Facts, Stories Supporting Argument (1-2 max)
 - Testimony 1
 - Testimony 2
- Conclusion (1-2 sentences)
- List Anticipated Counterarguments (and Counters) (3 max)
 - Counterargument 1
 - Counter-Counterargument 1
 - Counterargument 2
 - Counter-Counterargument 2
 - Counterargument 3
 - Counter-Counterargument 3

Policy Elevator Pitch

- Choose one (1) talking point to turn into an elevator pitch.
- Pitch must be written out in full.
- Submission Format: Google Docs

Checklist

- Length of Time to Speak: 30-60 seconds
- Language: Clear, Concise, Convincing
 - Clear: Plain language, avoids unnecessary legal and/or technical jargon
 - Concise: Short, direct sentences that gets your point of view across
 - Convincing: Persuasive tone. Makes an argument (claim + evidence + ask)
- Language: Memorable & Repeatable
 - Memorable: Uses storytelling elements, narrative connects to the human impacts
 - Repeatable: Sounds good, easy to say (on paper: Looks good, reads well)
- Format:
 - Greeting & Intro
 - Statement of the problem;
 - Supporting evidence;
 - Real world example of impacts; and
 - Policy recommendation/"ask" (request for a specific action to be taken)

Universe of Materials:

In the interest of time, you have been provided with key documents and some background information to jumpstart your research and developing talking points. These documents and links are included below. Some additional research may be helpful (for example, finding additional specific scientific data or facts). Finally, for the purposes of this activity, assume that supporting the bill strategically aligns with your organization's mission.

Activity Timeline

Read and review materials. Conduct <i>minimal</i> additional research.	25 minutes
Outline talking points. Conduct <i>minimal</i> additional research.	20 minutes
Develop pitch. Write out in full, revise, and edit. Practice reading aloud at least 1x to a teammate. Try to memorize as you read aloud!	30 minutes

118TH CONGRESS
1ST SESSION

S. 747

To authorize the Secretary of Agriculture to provide grants to States, territories, and Indian Tribes to address contamination by perfluoroalkyl and polyfluoroalkyl substances on farms, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 9, 2023

Ms. COLLINS (for herself, Mr. KING, and Mrs. SHAHEEN) introduced the following bill; which was read twice and referred to the Committee on Agriculture, Nutrition, and Forestry

A BILL

To authorize the Secretary of Agriculture to provide grants to States, territories, and Indian Tribes to address contamination by perfluoroalkyl and polyfluoroalkyl substances on farms, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Relief for Farmers Hit
5 with PFAS Act”.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

8 (1) AGRICULTURAL LAND.—

1 (A) IN GENERAL.—The term “agricultural
2 land” means any land that is used, or capable
3 of use without substantial modification, for pro-
4 duction of farm products.

5 (B) INCLUSIONS.—The term “agricultural
6 land” includes irrigation water, livestock water,
7 surface water, groundwater, and agricultural in-
8 puts on or associated with land described in
9 subparagraph (A).

10 (2) COMMERCIAL FARM.—The term “commer-
11 cial farm” means a farm on which a person pro-
12 duces any farm product with the intent that the
13 farm product be sold or otherwise disposed of to
14 generate income.

15 (3) ELIGIBLE GOVERNMENT.—The term “eligi-
16 ble government” means—

- 17 (A) a State;
- 18 (B) the District of Columbia;
- 19 (C) a territory of the United States; and
- 20 (D) an Indian Tribe.

21 (4) FARM PRODUCT.—

22 (A) IN GENERAL.—The term “farm prod-
23 uct” means any plant or animal that is useful
24 to humans.

1 (B) INCLUSIONS.—The term “farm prod-
2 uct” includes—

- 3 (i) forages;
4 (ii) sod crops;
5 (iii) grains;
6 (iv) food crops;
7 (v) dairy products;
8 (vi) poultry and poultry products;
9 (vii) bees;
10 (viii) livestock and livestock products;
11 (ix) products of aquaculture;
12 (x) fruits;
13 (xi) berries;
14 (xii) vegetables;
15 (xiii) flowers;
16 (xiv) seeds;
17 (xv) grasses;
18 (xvi) Christmas trees; and
19 (xvii) other similar products, as deter-
20 mined by the Secretary.

21 (5) PERFLUOROALKYL OR POLYFLUOROALKYL
22 SUBSTANCE; PFAS.—The term “perfluoroalkyl or
23 polyfluoroalkyl substance” or “PFAS” means a
24 chemical that—

25 (A) contains at least one of—

1 (i) $R-(CF_2)-CF(R')R''$, where both
 2 the CF_2 and CF moieties are saturated
 3 carbons, and none of the R groups can be
 4 hydrogen;

5 (ii) $R-CF_2OCF_2-R'$, where both the
 6 CF_2 moieties are saturated carbons, and
 7 none of the R groups can be hydrogen; or

8 (iii) $CF_3C(CF_3)RR'$, where all the
 9 carbons are saturated, and none of the R
 10 groups can be hydrogen; or

11 (B) is covered by the most recent working
 12 definition of PFAS issued by the Administrator
 13 of the Environmental Protection Agency.

14 (6) PROGRAM.—The term “program” means
 15 the program established under section 3(a).

16 (7) SECRETARY.—The term “Secretary” means
 17 the Secretary of Agriculture.

18 (8) SEPTAGE.—The term “septage” means
 19 waste, refuse, effluent, sludge, and any other mate-
 20 rials from septic tanks, cesspools, or any other simi-
 21 lar facilities.

22 (9) SLUDGE.—The term “sludge” means—

23 (A) solid, semisolid, or liquid waste gen-
 24 erated from a municipal, commercial, or indus-
 25 trial—

- 1 (i) wastewater treatment plant;
2 (ii) water supply treatment plant; or
3 (iii) wet process air pollution control
4 facility; and
5 (B) any other waste having similar charac-
6 teristics and effect.

7 **SEC. 3. ESTABLISHMENT.**

8 (a) IN GENERAL.—The Secretary shall establish a
9 program under which the Secretary shall provide grants
10 to eligible governments for the purposes described in sec-
11 tion 4(a).

12 (b) ELIGIBILITY.—

13 (1) IN GENERAL.—To be eligible to receive a
14 grant under the program, the territory of an eligible
15 government shall contain—

16 (A) agricultural land that contains any soil
17 with levels of PFAS that the Secretary, in co-
18 ordination with the Administrator of the Envi-
19 ronmental Protection Agency, determines to be
20 unsafe; or

21 (B) water used for the production of farm
22 products with levels of PFAS that the Adminis-
23 trator of the Environmental Protection Agency,
24 in coordination with the Secretary, determines
25 to be unsafe.

1 (2) CONSIDERATION.—In determining the eligi-
2 bility of an eligible government for a grant under the
3 program, the Secretary, in consultation with the Ad-
4 ministrator of the Environmental Protection Agency,
5 shall consider State standards and limitations relat-
6 ing to soil and water.

7 (c) APPLICATIONS.—

8 (1) IN GENERAL.—To receive a grant under the
9 program, the department of agriculture or similar
10 agency of an eligible government shall submit to the
11 Secretary an application at such time, in such man-
12 ner, and containing such information as the Sec-
13 retary may require.

14 (2) SPEND PLAN.—An application submitted
15 under paragraph (1) shall contain a plan describing
16 how the eligible government will administer the
17 funding received under the program, including fund-
18 ing priorities and oversight.

19 (d) SET-ASIDE.—Each year, the Secretary shall pro-
20 vide not less than 30 percent of the total funding provided
21 under the program to 1 or more eligible governments with
22 a population of less than 3,000,000.

1 **SEC. 4. PURPOSES.**

2 (a) IN GENERAL.—An eligible government may use
3 a grant received under the program to provide funding for
4 any of the following purposes:

5 (1) Monitoring (including through blood serum
6 testing) the PFAS-related health complications of a
7 person, and members of the household of that per-
8 son, if agricultural land the person lives or works on
9 is found to be contaminated by PFAS.

10 (2) Buying, selling, or providing compensation
11 for agricultural land or farm products found,
12 through test results provided to the eligible govern-
13 ment, to be contaminated by PFAS, including costs
14 associated with the depopulation or disposal of farm
15 products, premortem or postmortem.

16 (3) Investing in agricultural equipment, facili-
17 ties, and infrastructure to ensure that agricultural
18 land that, or a commercial farm any agricultural
19 land of which, is found to be contaminated by PFAS
20 maintains profitability while the producers on the
21 agricultural land, in response to the PFAS contami-
22 nation—

23 (A) transition to an alternative production
24 system; or

25 (B) implement remediation strategies (in-
26 cluding disposal), technological adaptations, or

1 other modifications to the operations of the ag-
2 ricultural land or commercial farm.

3 (4) Assisting the producers on agricultural land
4 that, or a commercial farm any agricultural land of
5 which, is found to be contaminated by PFAS in de-
6 veloping an enterprise budget for—

7 (A) alternative production systems;

8 (B) remediation strategies;

9 (C) technological adaptations;

10 (D) transitioning to an alternative revenue
11 stream; or

12 (E) relocating a farming operation to new
13 agricultural land.

14 (5) Providing financial assistance to a person
15 the commercial farm of which is found to be con-
16 taminated by PFAS, including income replacement.

17 (6) Evaluating and expanding the capacity of
18 PFAS testing and data management in the territory
19 of the eligible government.

20 (7) Conducting research that—

21 (A) supports short-term farm management
22 decisions with respect to agricultural land that
23 has been contaminated by PFAS; and

24 (B) assesses future options for viable uses
25 of agricultural land and water used for agricul-

1 tural production that has been contaminated by
2 PFAS.

3 (8) Conducting research that quantifies the im-
4 pact of PFAS on commercial farms and agricultural
5 communities in the territory of the eligible govern-
6 ment.

7 (9) Conducting research on—

8 (A) soil and water remediation systems;

9 (B) the viability of those systems for
10 PFAS-contaminated commercial farms;

11 (C) the composting or disposal of PFAS-
12 contaminated crops or livestock;

13 (D) implementing alternative production
14 systems in response to PFAS contamination;

15 (E) the PFAS uptake of various farm
16 products; and

17 (F) food safety relating to PFAS contami-
18 nation.

19 (10) Developing and implementing educational
20 programs for owners of agricultural land, including
21 determining best practices for—

22 (A) informing residents about the potential
23 of being near or on a site on which sludge or
24 septage application was licensed or permitted by

1 the eligible government or the Federal Govern-
2 ment; and

3 (B) providing information and guidance on
4 buying or selling agricultural land on which
5 sludge or septage was applied.

6 (11) Long-term monitoring of agricultural land
7 contaminated by PFAS and establishing a cor-
8 responding centralized data repository.

9 (12) Assisting owners and operators of commer-
10 cial farms not directly affected by PFAS contamina-
11 tion with marketing efforts whose branding and
12 marketing may be affected by the public perception
13 of PFAS contamination in the territory of the eligi-
14 ble government.

15 (13) Voluntary testing of farm products, agri-
16 cultural land, or other locations that are suspected
17 to be contaminated with PFAS.

18 (b) PRIORITY.—

19 (1) IN GENERAL.—In using funding received
20 under the program, an eligible government shall
21 prioritize purposes that directly assist producers who
22 are experiencing financial losses due to agricultural
23 PFAS contamination.

24 (2) DEPARTMENT OF AGRICULTURE PRI-
25 ORITY.—In providing grants under the program, the

1 Secretary shall prioritize the provision of grants to
2 eligible governments that will use the grant funds
3 for the purposes described in paragraphs (3)
4 through (5) of subsection (a).

5 **SEC. 5. REPORTS.**

6 Each year of the period of a grant received under
7 the program, the department of agriculture or similar
8 agency of an eligible government shall submit to the Sec-
9 retary and Congress a report describing—

10 (1) the uses of the grant during the previous
11 year, including—

12 (A) the purposes described in section 4(a)
13 for which the grant was used;

14 (B) the amount of the grant allocated to
15 each purpose described in section 4(a); and

16 (C) the extent to which the funding re-
17 ceived under the program, including funding
18 priorities and oversight, was administered in ac-
19 cordance with the plan described in section
20 3(e)(2);

21 (2) any additional needs identified by agricul-
22 tural producers in the territory of the eligible gov-
23 ernment; and

24 (3) any additional information the Secretary de-
25 termines to be appropriate.

1 **SEC. 6. TASK FORCE.**

2 The Secretary shall establish a task force composed
3 of officers or employees of the Department of Agri-
4 culture—

5 (1) to provide advice to the Secretary relating
6 to whether addressing PFAS contamination should
7 be added as an eligible activity under each program
8 of the Department of Agriculture;

9 (2) to evaluate necessary actions for farms al-
10 ready enrolled in a Department of Agriculture pro-
11 gram where PFAS is detected; and

12 (3) to provide technical assistance to eligible
13 governments in addressing PFAS contamination.

14 **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

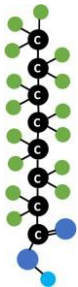
15 There is authorized to be appropriated to the Sec-
16 retary to carry out this Act \$500,000,000 for the period
17 of fiscal years 2024 through 2028.

○

PFAS Explained:



Scientific studies have shown that exposure to some PFAS in the environment is linked to harmful health effects in humans and animals.



What are PFAS?

PFAS are manufactured chemicals that have been used in industry and consumer products since the 1940s.

Because of their widespread use and their persistence in the environment, many PFAS are found in the blood of people and animals all over the world.

There are thousands of different PFAS, some of which have been more widely used and studied than others.



Are PFAS safe?

Research is ongoing to determine how exposure to different PFAS can lead to a variety of health effects. Studies have shown that exposure to certain levels of PFAS may lead to:



Cancer Effects

Increased risk of some cancers, including prostate, kidney, and testicular cancers.



Weight Effects

Increased cholesterol levels and/or risk of obesity.



Immune Effects

Reduced ability of the body's immune system to fight infections.



Developmental Effects

Low birth weight, accelerated puberty, bone variations, or behavioral changes.



Reproductive Effects

Decreased fertility or increased high blood pressure in pregnant women.

The more we learn about PFAS chemicals, the more we learn that certain PFAS can cause health risks even at very low levels. This is why anything we can do to reduce PFAS in water, soil, and air, can have a meaningful impact on health. EPA is taking action to reduce PFAS in water and in the environment. You can also take action if you remain concerned about your own risk.

Read on to learn where PFAS are coming from, and how EPA is taking action on PFAS.



Where Are PFAS Found?



Most people in the United States have been exposed to some PFAS. People can be exposed to PFAS by touching, drinking, eating, or breathing in materials containing PFAS. PFAS may be present in:



Drinking Water

Drinking water contaminated by other sources of PFAS.



Waste Sites

Soil and water at or near landfills, disposal sites, and hazardous waste sites.



Fire Extinguishing Foam

Used in training and emergency response events at airports and firefighting training facilities.



Facilities

Chrome plating, electronics, and certain textile and paper manufacturers that produce or use PFAS.



Consumer Products

Stain- or water-repellent, or non-stick products, paints, sealants, and some personal care products.



Food Packaging

Grease-resistant paper, microwave popcorn bags, pizza boxes, and candy wrappers.



Biosolids

Fertilizer from wastewater treatment plants used on agricultural lands can affect ground and surface water.



Food

Fish caught from water contaminated by PFAS and dairy products from livestock exposed to PFAS.

Very little of the PFAS in water can get into your body through your skin, so, showering, bathing, and washing dishes in water containing PFAS are unlikely to significantly increase your risk.

EPA's researchers and partners across the country are working hard to understand how much PFAS people are exposed to and how.





EPA Is Taking Action to Address PFAS

In October 2021, EPA released its PFAS Strategic Roadmap, which highlights concrete actions the Agency will take across a range of environmental media and EPA program offices to protect people and the environment from PFAS contamination. The Roadmap is guided by three primary goals:



Research

Invest in research, development, and innovation



Restrict

Prevent PFAS from entering air, land, and water



Remediate

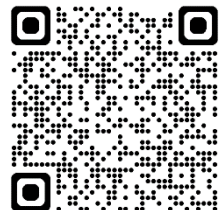
Broaden and accelerate the cleanup of PFAS contamination

Since the Roadmap's release, EPA has taken a number of key actions including:



- Began distributing \$10 billion in funding to address emerging contaminants such as PFAS under the Bipartisan Infrastructure Law (BIL).
- Finalized legally enforceable standards for six PFAS substances in drinking water.
- Designated two PFAS as CERCLA hazardous substances.
- Finalized rules to significantly enhance data on PFAS uses and releases.

To learn more about the PFAS Strategic Roadmap and key actions taken by EPA scan the QR code.



Turn the page to learn more about what actions you can take.



If You Are Concerned about PFAS in Your Drinking Water:



1

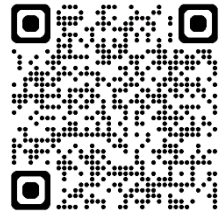
Contact your drinking water utility:

People who are concerned about PFAS in their drinking water should first contact their drinking water utility to find out more about their drinking water, including if the utility is monitoring for PFAS, what contaminants may be present, what the levels are, and to see whether any actions are being taken to reduce exposure.

2

If you remain concerned after talking to your utility, then consider using or installing in-home water treatment (e.g., filters) that is certified to lower the levels of PFAS in your water and/or contact your health care provider as well as your state or local health department.

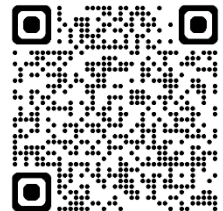
Scan this code for more information about water filters that help reduce PFAS:



3

Finally, if you get your water from a home drinking water well, then EPA recommends you conduct regular testing. If PFAS are found, you can take steps to lower the levels of PFAS including using or installing in-home water treatment.

Scan this code for more information about the PFAS drinking water rule:



4 EPA makes frequent updates to its website. To learn more about PFAS go to <https://www.epa.gov/pfas>.

We're Only Beginning to Grapple with the Toxic Legacy of "Forever Chemicals"

Maine leads the nation in its response to the PFAS crisis, but we're just waking up to the problem.

By Kate Olson
Photographed By Greta Rybus
From our July 2022 issue

One summer morning in 1992, Henry Perkins had finished milking his herd of 80 Dutch Belted cows and was on to other chores when a pickup truck pulled up to his Albion farm. The man who stepped out said he was with BFI Organics, a waste-management company, and he told Perkins about a new, free source of nutrients for his land. The Portland Water District needed a way to dispose of what the industry calls sludge, a by-product of wastewater treatment containing the residue of household, municipal, and human waste. The sludge would come mixed with lime, the man said, to raise the PH of the soil. Perkins was curious, and when he asked around in the days that followed, he found that other farmers he knew — good ones, in his estimation — were already using this new fertilizer.

Perkins asked the BFI reps if it was safe. "And they said, 'It's completely safe. We test it for all the chemicals and all that,'" he recalls. "I was led to believe that it was benefitting society in general."

Perkins used the free fertilizer for five years, then never thought any more of it. In 2013, he sold most of

his farm and moved onto a remaining parcel up the road. The new owners, Katia and Brendan Holmes, named the operation Misty Brook Farm and diversified it to include sheep, pigs, and laying hens. Then, early last year, customers started asking whether they were testing their milk for PFAS.

“We said, ‘Okay, we can do that,’” Katia says. “‘And by the way, what is PFAS?’”



Brendan and Katia Holmes, of Albion’s Misty Brook Farm, were relieved to find no PFAS contamination of their land or water, but their herd was affected by PFAS-contaminated hay from another farm. They’ve since acquired new cows, which they keep separate from their original herd. Above: The couple’s son Alister walks through a pile of manure mixed with straw bedding.

PFAS is an acronym for perfluoroalkyl and polyfluoroalkyl substances, often called “forever chemicals,” a class of at least 4,700 manufactured chemicals used in industrial processes and consumer goods since the 1940s, valued for their resistance to heat and water and their extreme durability. Among the most widely used and studied is perfluorooctanoic acid, or PFOA, essential to nuclear-weapons production during World War II and famously used to make Teflon. Over time, manufacturers found more and more applications for PFAS, and today, they’re found in outerwear, furniture, rugs, food packaging, cosmetics, cleaning products, and more. They’re used in firefighting and oil and gas fracking. In short, PFAS are all around us.

They are also *in* us. Highly mobile, PFAS are increasingly found in the food we eat, water we drink, and air we breathe. National sampling efforts conducted by the CDC have found PFAS in more than 98 percent of American blood samples. What makes the compounds industrially and commercially useful – their stubborn resistance to degradation – also makes them persist in the environment and accumulate in our bodies. High levels of PFAS exposure are associated with increased risk of kidney and testicular cancer, thyroid disease, reproductive complications, elevated cholesterol, and vaccine resistance in children.

Katia Holmes fences off one herd before beginning to gather and herd next group of milking cows. Each day, the Holmeses milk both, hoping to gradually “milk out” the chemicals from their original cows.

In Maine, beginning in the 1980s, the state Department of Environmental Protection and sewer districts across the state began promoting the spreading of sewage sludge, sometimes known as biosolids, on farmland. The practice, widespread in all 50 states, had its genesis in the Clean Water Act, which set wastewater standards and provided funding for sewage-treatment plants. Spreading sludge seemed, at the time, like a win-win – free fertilizer for farmers and savings on landfill fees for municipalities. Today, Maine’s DEP knows of 700 sites across the state where “residuals” from both residential and industrial sources – including, in Maine, paper mills – were likely spread as fertilizer.

In 2016, an EPA test of unregulated contaminants found significant levels of PFAS in a public well not far from Stoneridge Farm, in Arundel. The next year, the state's Department of Agriculture, Conservation, and Forestry found high levels of PFAS in milk from Stoneridge Farm. Although chemical companies have been quietly accumulating evidence of PFAS's hazardous health effects since the 1960s, federal and state agencies have been slow to regulate and set safety standards.

But as news of Stoneridge broke and concern grew in Maine over PFAS dairy contamination, the Maine CDC created an "action threshold" for one common type — called perfluorooctyl sulfonate, or PFOS — and DACF started conducting retail-milk tests. In 2020, one test revealed that milk from Fairfield's Tozier Dairy Farm had PFOS concentrations of more than 150 times the state's threshold for contamination — likely the highest PFAS concentration ever recorded in milk. Both the Arundel and Fairfield farms, it turned out, had participated in the sludge programs.

Last year, the DEP published a map of sites where historic licensing data shows biosolids may have been applied. Perkins's land was on it, and when he tested his well water, the levels came back high. Down the road, at Misty Brook, the soil and water tested low for PFAS, but the milk tested high, as did some hay the Holmeses had bought from a nearby farm.

So the Holmeses called their buyers across the state and immediately pulled all of their products from the shelves. They were devastated. They told their 10 staff members that they didn't know the extent of the contamination. "We went from full-on to zero income overnight," Katia says.

Above: the Misty Brook farmers dump milk from their affected herd. The contaminated milk is kept separate from clean milk in marked plastic containers, then disposed of instead of sold. Farmers and state agencies continue to navigate hard questions about how best to deal with contaminated milk, meat, and manure.

Last fall, the DEP [announced a testing program](#) for all 700 sites, but the effort will take as long as four years to complete. In the meantime, some farms have begun testing proactively, and so far, 12 have identified contamination, either in milk or on their land or water. Many other farmers are afraid of losing their customers, land, and livelihoods if tests should reveal contamination. In February, [Maine Farmland Trust](#) and the [Maine Organic Farmers and Gardeners Association](#) set up a PFAS emergency-relief fund to pay for testing and replace income for farmers, as well as for food and medicine producers from Native communities.

“In a matter of weeks, our business went from forecasting for record growth for the 2022 season to insecurity about being able to pay our bills or see a clear path forward,” Adrienne Lee, of Knox’s [New Beat Farm](#), told a state legislative committee in March. “The pride and confidence we had that we were feeding our family and our community safe and healthy food got crushed.” Beyond the economic and community impacts, Lee and her husband, Ken Lamson, worry about their health and that of their now-two-year-old daughter, whose blood-serum levels of PFOA registered 340 times higher than the average American’s.

For most farmers, anxiety over PFAS has to do with more than just the bottom line. “A lot of these farmers have that intimate relationship with the land,” Maine Farmland Trust president Amy Fisher says, “but 20 to 30 years ago, sludge was spread, before they owned their properties, and it feels like such a shock and a betrayal when they find out.”

Sludged farmland isn’t the only place in Maine where PFAS are turning up. Scientists are rapidly learning more about the ease with which these compounds can move through the soil, air, and water to be taken up by wildlife, plants, and trees. In 2021, the Maine Department of Inland Fish and Wildlife posted a “do not eat” alert for deer in and around Fairfield, a hotspot of PFAS contamination, due in part to a history of spread sludge from paper mills. Scientists have also documented so much PFAS contamination in Maine’s freshwater fish that the state CDC is considering adjusting warnings for fish consumption.

In 2018, Dan Kusnierz, head of water resources for the [Penobscot Nation](#), requested federal researchers measure PFAS levels in a study of anadromous fish (those that move between the ocean and fresh water) in the Penobscot River. The results showed levels high enough to cause health effects, particularly if consumed frequently. It was, Kusnierz says, “pretty devastating.” Wild foods are critically important to the Penobscot Nation, both for nutrition and for cultural significance, and although its citizens hunt, fish, and forage across the state, they are particularly reliant on fish from the Penobscot, where they have sustenance-fishing rights. Among other potential pathways, sludge is deposited in the Juniper Ridge Landfill, a state-owned but privately operated facility on the river, near the Penobscot Indian Island Reservation. Runoff from that sludge, called leachate, is then taken to a wastewater-treatment plant at Orono’s Nine Dragons Paper Mill, which is not equipped to filter out PFAS before discharging treated

water into the river.

Tribal members, Kusnierz says, are unnerved. “I’ve had people in tears being scared about what’s happening to their river. They want to be able to feel safe about eating fish from it, and they can’t.”

Like the Holmeses at Misty Brook, farmers and gardeners are elsewhere around the state are increasingly worried about ways PFAS can enter the food system even where sludge wasn’t spread. At the various sites of the nonprofit Wabanaki Public Health & Wellness, for instance, growers use only raised beds or soil they’ve made themselves. “The very thing that we know nourishes and sustains us, Mother Earth, now we have to separate from it because of pollution and poisoning,” executive director Lisa Sockabasin says.

At least 32 states will consider PFAS regulation this year, and Maine is at the leading edge of both

gauging the extent of contamination and proposing legislative and economic solutions. A nascent collaboration among several state agencies and the University of Maine is examining possibilities for phyto-remediation, using plants to pull PFAS out of the soil. In the absence of federal safety standards for food, the Maine CDC is helping farmers interpret test results. Last summer, Maine lawmakers passed a suite of PFAS-related bills, which included setting the country's strictest standards for PFAS concentrations in drinking water and a first-in-the-nation ban on PFAS in consumer products, to be phased in by 2030. This April, in another round of other PFAS legislation, the state banned the land application of PFAS-contaminated sludge and mandated a study on treating leachate from state-owned landfills like Juniper Ridge. It also passed a budget with \$60 million to fund health monitoring and income-replacement and buy-back programs for affected farmers, plus more than \$6 million to support state agencies' research, testing, and mitigation efforts.

Organizing on the part of farmers has been crucial in galvanizing state support. "The way the farmers have responded to this challenge speaks to the strength of the network and the food community here," Fisher says. "By the time other states wake up to this issue, Maine will be way out of the gate and will be showing other states how to navigate."

Becca Hansen, above, has worked at Misty Brook for three years. A new state budget allocation will fund health monitoring and income replacement for farmworkers on farms affected by PFAS, among other things. "PFAS contamination can be devastating to impacted farms," says DACF commissioner Amanda Beal. This spring, farmworkers at Misty Brook launched a GoFundMe to help offset the cost of the farm's replacement herd.

"This can't get swept under the rug again," says Misty Brook Farm's Katia Holmes. "DuPont and 3M started realizing this was a problem back in the '70s. This poisoning of land and plants and animals has been going on way too long."

The Holmeses have found a path forward since discovering PFAS contamination in their farm's milk. The parcel on which Henry Perkins allowed sludge in the '90s was relatively small, and it remains a part of Perkins's neighboring property today, not the Holmeses'. Misty Brook's cows, it turns out, were contaminated by the hay they'd purchased from another farm. After buying new, PFAS-free cows and

testing their hay, they've continued selling milk. But their story indicates the frustratingly unpredictable ways in which PFAS move through our environment: even a farm with no on-site contamination is in danger of unknowingly introducing it with PFAS-laced feed. And because PFAS can move through the environment in insidious ways, soil contamination in one plot now could mean future water contamination nearby.

When he reflects today on his small role in the crisis, Perkins is deeply troubled. "It makes me sick to my stomach," the 70-year-old retired farmer says. "I wanted to leave this place in a better place than I came upon it, and I don't know whether that's gonna happen or not. I feel a little bit betrayed."

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Protecting Farmers' Livelihoods in the Face of 'Forever Chemicals'

Congress must act now to protect consumers and farmers from harmful 'forever chemicals.'

What are 'Forever Chemicals'?

'Forever chemicals' is a term used to describe per- and polyfluoroalkyl substances (PFAS), which break down very slowly over time. They are present in many industrial and consumer products like firefighting foam and food packaging. As a result, these chemicals can also be found in drinking water and soil that has been contaminated by a nearby or upstream source, like a PFAS manufacturing plant.

Why are people concerned about PFAS?

PFAS have been found to adversely affect human health. Peer reviewed research has shown a number of adverse effects to human health from high levels of exposure. PFAS are linked to a variety of health problems including kidney and testicular cancer, immune system damage, and high cholesterol. PFAS can damage internal organs, including the liver, kidney, pancreas, and thyroid. PFAS exposures during pregnancy and childhood may permanently impair development. Research is ongoing and

other harms may come to light. The U.S. Environmental Protection Agency's recent determination for PFAS in drinking water indicates that **no amount of PFAS ingestion is safe.**

How do PFAS connect to agriculture?

PFAS most commonly reach farmland from sewage 'sludge,' which is commonly used to fertilize soil, including the land used to grow crops and forage for livestock. Sludge is also sometimes referred to as "biosolids" or "residuals," and is the solid material left after wastewater is treated. PFAS can also seep into agricultural soil and irrigation water through releases at nearby manufacturing or military facilities.

Plants and animals take up PFAS chemicals from contaminated soil or water. This includes milk and meat from cows raised on PFAS-affected farms. The majority of people's exposure to PFAS is through the food they eat, and people who eat food from highly impacted farms have even greater exposures.

Why are PFAS a major issue for some farmers?

Many farmers may not be aware that their land is polluted with these harmful chemicals. Choosing to test their soil or products poses a risk to farmers' livelihoods because should they find PFAS present, they may have to abandon production on their farms, or at the very least, drastically change the way they work the land. However, avoiding testing potentially contaminated land only exacerbates the problem of PFAS in our food supply. Farmers in most places are not given resources for testing and, more importantly, have no clear path for remediation if their farms are found to be contaminated. To make matters worse, some small farmers frequently consume the products they grow themselves on PFAS-contaminated soil, increasing their PFAS exposure and causing health problems for themselves and their families.

How can the 2023 Farm Bill address the problem?

The 2023 farm bill presents an opportunity to address PFAS by providing support for farmers who, through no fault of their own, may be working PFAS-contaminated farms. The 2023 farm bill could establish a fund for farmers who incur expenses because they need to decommission their farms, establish a new livelihood (like using their land for agrovoltatics or carbon sequestration), or need medical monitoring and treatment because of their own PFAS exposure. The farm bill could also provide funding for incentives and technical support so more farmers take steps to discover their farms' PFAS status.

The [Relief for Farmers Hit with PFAS Act](#) was introduced by members of Congress from Maine and includes many of these elements. Although some have raised concerns about the limited definition of PFAS in the text, if the proposals were incorporated into the 2023 farm bill, it would provide an important foundation for long-term support for PFAS-impacted farmers and protection of the nation's food supply. The bill would establish grants for states to use to support farmers who lose income or need to transition away from farming and farmers who need health support because of PFAS, as well as for testing and research.

The 2023 farm bill could also build upon [recent efforts](#) by the U.S. Department of Agriculture (USDA) to address

Case Study: PFAS in Maine

Not by choice but by circumstance, [Maine](#) has been leading the way on addressing the impact of PFAS on agriculture. In 2019, [Maine began testing cow's milk](#) for PFOS (a type of PFAS) because sludge had historically been applied to Maine's dairy farms. While most of the milk supply has been deemed safe, several dairies were found to have unacceptably high levels of PFOS. Because of these findings, Maine expanded its testing and screening to other farms where sludge or other residuals had been applied. To date, 700 sites have been deemed to be at high risk for contamination. Fortunately, Maine, its farmers, and communities are actively learning about and responding to the threat of PFAS contamination. However, while Maine is a leader in addressing PFAS, it does not mean that [Maine farmers](#) no longer need support, both for their livelihoods and health, and that of their families.

this pressing issue. For example, USDA has led research on PFAS remediation and provided funding for further research to a public university in New York State. USDA's Natural Resource Conservation Service (NRCS) is also providing some supplemental testing as part of its Conservation Evaluation and Monitoring Activities.

Conclusion

We now know that no level of PFAS exposure is safe, and yet, America's farmers shoulder an enormous burden because their work to feed our country has exposed them to this pervasive and long-lasting chemical. While the federal government begins to regulate—and perhaps one day outright ban—this harmful class of chemicals, more must be done to protect people's livelihoods and health from the threat of PFAS contamination. Because food is a major pathway of exposure for most people, Congress and the Biden administration should act urgently to address the issue of PFAS on farmland, including by providing incentives for testing and support for farmers whose land is affected.

To learn more, visit sierraclub.org/toxics/pfas

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