MAINE DEPARTMENT OF
AGRICULTURE
CONSERVATION
& FORESTRY

Amanda E. Beal
Commissioner

Randy Charette
Deputy Commissioner

Nancy McBrady
Deputy Commissioner

18 Elkins Lane
Augusta, ME 04333

(207) 287-3200
maine.gov/dacf

PFAS RESPONSE KIT

for Impacted Farms in Maine

Maine Department of Agriculture, Conservation and Forestry
Fund to Address PFAS Contamination
22 State House Station
Augusta, ME 04333-0022
https://www.maine.gov/dacf/ag/pfas/index.shtml

Prepared by Melissa Hamlin, June 2024.

Contents

Acronym List

APR	Agricultural Preservation Program
APS	Agricultural PFAS Specialist(s)
ARDD	Agricultural Resource Development Division
CDC	Centers for Disease Control and Prevention
CRP	Conservation Reserve Program
DACF	Maine Department of Agriculture, Conservation and Forestry
DEP	Maine Department of Environmental Protection
DIPP	Dairy Indemnity Payment Program
DPO	Direct Public Offering
EGAD	Environmental and Geographic Analysis Database
EST	Eastern Standard Time
FAQ	Frequently Asked Questions
FLAG	Farmers' Legal Action Group
FRSAN	Farm and Ranch Stress Assistance Network
FSA	Farm Service Agency
GIS	Geographic Information Systems
IRS	Internal Revenue Service
MAMP	Maine Agricultural Mediation Program
ME	Maine
MFEF	Maine Farm Emergency Relief Fund
MFT	Maine Farmland Trust
MOFGA	Maine Organic Farmers and Growers Association
NRCS	Natural Resources Conservation Service
PFAS	per- and polyfluoroalkyl substances
PFDA	Perfluorodecanoic acid
PFHxS	Perfluorohexane sulfonate
PFNA	Perfluorononanoic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonic acid
PR	Public Relations
STEEP	Sources, Transport, Exposure & Effects of PFAS (University of Rhode Island)
UMCE	University of Maine Cooperative Extension
USEPA	United States Environmental Protection Agency
USDA	United States Department of Agriculture

I. Introduction to DACF's PFAS Programs and Farm Assistance

A. Background

The Maine Department of Agriculture, Conservation and Forestry (DACF) is committed to ensuring a safe food supply in Maine and supporting the state's vibrant agricultural community. Both statewide and nationally, DACF has taken a leading role in responding to the chemicals known as per- and polyfluoroalkyl substances (PFAS) in agriculture.

The discovery of PFAS on a farm is undeniably challenging, but with support, some farms can make adjustments that allow them to remain in business and ultimately produce safe food. Importantly, Maine has learned that PFAS does not have to mean the end of a farm.

1. PFAS Contamination

PFAS have been widely used in household products and industrial settings for decades because they resist heat and chemical reactions and repel oil and water, grease and stains. These characteristics of PFAS's strong carbon-fluorine bond allow PFAS to persist in the environment for a very long time, which can lead to contamination in plants, animals, and humans. Several scientific studies have demonstrated the toxic effects of Perfluorooctanoic acid (PFOA) and Perfluorooctane sulfonic acid (PFOS) exposure, including their adverse effects on lipid metabolism, immune function, fertility, endocrine function, cardiovascular health, bone health and neurological function.[1]

2. How Farms are Impacted and the Initial Response of State Agencies

PFAS found in industrial and household products are discharged into sewer systems. This PFAS then accumulates in biosolids produced during the municipal wastewater treatment process. PFAS can be found in agricultural soil due to the land application of biosolids, through the uptake and use of contaminated groundwater, or through the application of other contaminated inputs. Plants grown in contaminated soil or water can then transfer PFAS to humans and animals that consume those plants. The Maine Department of Environmental Protection (DEP) is testing sites throughout Maine with historical licenses for land application of biosolids.

When this testing occurs at a commercial farm, DEP notifies DACF to provide an interpretation of the results in the context of agricultural production, and to initiate support for the farm including recommendations to allow continued operations, other technical assistance, and potential financial assistance. Farms may self-test for PFAS; those who report results to DACF and receive confirmation that levels are unsafe may also receive support.

DACF also works closely with the Maine Centers for Disease Control and Prevention (CDC) to protect human health. The Maine CDC assesses the risks of exposure to PFAS that may impact human health, recommends strategies to minimize exposure, sets drinking water standards, and develops educational resources. With DACF, it collaborates to evaluate transfer factors for agricultural products and sets action levels for certain PFAS in those products. The PFAS Fund is collaborating with the ME CDC on a number of

[1] See, *e.g.*, https://www.atsdr.cdc.gov/pfas/health-effects/index.html.

health-related initiatives, such as making results of PFAS blood serum tests reportable (much like childhood lead test results), as well as a farmer and farm worker soil exposure study to determine whether soil exposure is a cause for concern. It is also exploring options for a clinical trial of methods to remove PFAS from the human body.

DACF's experience with contaminated farms in Maine has shown that it is possible to depurate (i.e., detoxify) livestock over time with clean water, feed, and access to PFAS-free grazing fields. Emerging data also indicates that some crops appear to tolerate PFAS-impacted soils and may not contain PFAS at levels of concern for human consumption.

3. Agency Collaboration with Nonprofits: The Emergency Relief Fund from MFT and MOFGA

DACF has worked hand in hand with Maine nonprofits to provide farmers with timely, targeted relief and assistance to help them overcome the impacts of discovering PFAS contamination on their farm. Maine Farmland Trust (MFT) and the Maine Organic Farmers and Gardeners Association (MOFGA) jointly administer a PFAS Emergency Relief Fund to support any Maine farm dealing with potential PFAS contamination. The Emergency Relief Fund has operated to help facilitate more timely relief for eligible farmers, in partnership with DACF, for income replacement and grants for business planning, equipment and inputs, infrastructure, and others.

Other areas where the Relief Fund independently provides assistance include the PFAS Testing Grants Program, a PFAS Farmer Wellness Fund, technical assistance, and the tax preparation support.

Publication Website: ***PFAS Emergency Relief Fund***

Website Link: PFAS Emergency Relief Fund
Web Address: https://www.mofga.org/pfas/pfas-emergency-relief-fund/

B. PFAS Programs and Working with DACF

Commercial farms with unsafe levels of PFAS contamination may need to modify operations, management, or the overall business model to safely continue farming. Producers may need financial assistance, and time, to make the investments necessary to achieve these results and retain or regain profitability. For example, a livestock owner may need to secure a steady supply of clean feed, change the type of feed grown on the impacted land, or change from a dairy to a beef operation. A produce farmer may need to purchase clean soil for a greenhouse, new seed, or other PFAS-free inputs to transition to safe crops. Other infrastructure investments or equipment purchases may also need to be made to plant, irrigate, harvest, or store these inputs and ultimate products.

DACF provides several types of technical and financial support to impacted producers across several programs described below. Each program has specific criteria and approval processes. Please consult the program descriptions found in this resource packet for more information.

As recipients of program funding and support, DACF expects farms to provide property access as needed, cooperate with DACF staff as they work with farms to manage PFAS investigation and remediation actions, and adhere to DACF guidance and recommendations for farm activities that will minimize product contamination.

1. DACF Response Program

DACF's Response Program is comprised of Agricultural PFAS Specialists (APS), veterinarians, specialists that work with laboratories, data, mapping and documentation, and agency leadership. The Response Program provides:

- Contamination consultation – explaining what the contamination findings mean, how they might impact the farm products, and how to move forward to investigate any potential impacts;
- Testing for soil, water and/or products – both initial samplings and follow-up monitoring;
- Technical assistance – (i) identifying the source(s) of contamination; (ii) providing a Results Report that interprets test results and recommends steps to reduce the risk of product contamination; (iii) implementing any modifications that are employed to ensure farm products are safe; and
- Certain DACF financial assistance programs.

2. DACF PFAS Fund Program

The $60 million PFAS Fund was created in 2022. The enabling legislation required development of a Fund Implementation Plan with the guidance of an advisory panel; the Plan was completed in 2023. DACF then developed policies and established rules, ultimately launching the PFAS Fund Program in March 2024.

The PFAS Fund provides or will provide:

- Direct support for commercial farmers to maintain farm viability;
- The purchase of contaminated real estate from farmers who wish to sell;
- Research funding to help farmers make informed decisions about how to adjust operations; and

- Health-related initiatives such as blood testing, mental health services, and others.

Print Publication (included): ***The Fund to Address PFAS Contamination***

3. Financial Assistance Currently Available through the PFAS Response & Fund Programs

PFAS-impacted commercial farms may seek assistance through DACF; specific criteria apply for eligibility. See associated guidance or application documents for each type of assistance for more information.

Response Program Assistance:

Testing Reimbursement: Reimbursement to a commercial farm for eligible costs incurred for self-testing soil, water, and/or farm products for the presence of PFAS. See Section III(B) for more information.

For commercial farms collaboratively engaged with the PFAS Response Program, financial support is available when necessary for water filtration and/or livestock depopulation:

Water Filtration: Financial support for necessary system equipment, maintenance, and repair is available. See Section V(A)(1) for more information.

Depopulation: Compensation for the humane euthanasia of impacted animals in some circumstances. See Section IV(C2) for more information.

Master Application Assistance from the Response and Fund Programs:

Commercial farms collaboratively engaged with DACF and seeking direct support in the form of assistance need to provide *Section I. General Applicant Information* in addition to any specific application found in individual subsequent sections. Applications for specific types of assistance can be found within the complete, 35-page Master Application as well as their respective individual sections.

Web Publication: ***Master Application: Assistance for PFAS-Impacted Commercial Farms***

Website Link: Master Application: Assistance for PFAS-Impacted Commercial Farms
Web Address: https://www.maine.gov/dacf/ag/pfas/pfas-assistance.shtml#masterapplication

Print Publication (not included, 35 pages): ***Master Application (All Sections)***

Website Link: Master Application: Assistance for PFAS-Impacted Commercial Farms (PDF)
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/application/master-application.pdf

Print Publication (included): ***Master Application Section I. General Applicant Information***

Website Link: Master Application: Section 1, General Applicant Information (PDF)
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/application/1-applicant-information.pdf

Clean Feed Assistance: Financial support for clean feed when it is necessary for the health and welfare of livestock and to achieve depuration goals in the absence of clean feed from the farm. See Section IV(C)(1) for more information.

Technical Assistance / Professional Services: Financial support for professional services to help guide recovery efforts (e.g., business planning, marketing support, others). See Section V(B) and (C) for more information.

Administrative Cost Grant: A one-time grant intended to partially compensate commercial farms for time spent on activities common to most farms upon the initial discovery of PFAS contamination. See Section IV(B)(1) for more information.

Income Replacement: Commercial farms that have stopped selling some or all products due to PFAS contamination may apply to DACF for up to a total of 24 months of lost income, adjusted for inflation. See Section V(F) for more information.

Debt Service on Existing Loans: Payment of loans directly related to farm infrastructure built/installed prior to the discovery of PFAS contamination (e.g., high-tunnel, greenhouse, farm store) that (1) have not yet contributed to income or (2) are no longer useful to the producer because of PFAS contamination. See Section V(G) for more information.

Equipment and Input Costs: Financial support for equipment and related input costs to allow a commercial farm to convert its operations to accommodate new products and production methods. See Section V(D) for more information.

Infrastructure: Financial support for infrastructure projects (permanent physical assets and structures) that will help a commercial farm transition to new products and production methods. See Section V(E) for more information.

New Loan Assistance: Financial support for costs associated with obtaining a new loan (e.g., payment of fees for a guaranteed loan, commercial loan insurance, or environmental site assessments required by a lending institution). See Section V(H) and (I) for more information.

DACF Purchase of Contaminated Land

Land Purchases: Contaminated farmland owned by farmers wishing to sell may be purchased by DACF if the department determines its acquisition is a priority. See Section V(K).

Vendor Form

Any farm applying for assistance that is not already set up in the state procurement system needs to provide a completed vendor form.

Print Publication (included): ***Vendor Authorization Form***

Website Link: State of Maine Substitute W-9 & Vendor Authorization Form
Web Address: https://www.maine.gov/osc/sites/maine.gov.osc/files/inline-files/vendor_ME_W9v5.pdf

4. Getting started with DACF Support for the Farm

DACF's overarching goal is to protect human health by characterizing and limiting or eliminating PFAS in farm products and to help farms remain commercially viable.

Any commercial farm may contact DACF to learn more. DACF and its partners are available to help farms find answers and implement solutions.

Contacting DACF's PFAS Team

Commercial farms new to DACF support can access technical and financial assistance by contacting:

pfas.dacf@maine.gov and/or (207) 287-4514

A member of the PFAS Response Program will talk to you about your farm's circumstances and next steps.

First Farm Visit

If the next steps involve finding out more about how much or how little contamination exists on the land or in products, an Agricultural PFAS Specialist (APS) can schedule a farm visit. The purposes of the visit include, as applicable, discussing your farm operations (i.e. what products you grow, your typical market, etc.), discussing test findings if they have been obtained, potentially collecting additional samples, and providing resources or information to address some of your immediate questions and concerns.

Sampling Plan and Results Report

Next, DACF crafts a sampling plan specific to the farm, which may include testing soil, water sources, farm products, livestock, and/or other media to determine and monitor contamination levels. Some sampling can be ongoing to track results over time. DACF staff will conduct the sampling in the plan at no cost to the producer.

After laboratory testing of the samples is complete and the resulting data is available, DACF specialists interpret the test results and provide the farm a report with this information. The report includes recommended steps to help reduce the risk of unsafe levels of contamination in the farm's products.

Next Steps and Application for Assistance

DACF offers a variety of additional technical and financial assistance for PFAS-impacted commercial farms. Once the farm has considered the report's findings and recommendations, the APS and/or other DACF staff can help the farm understand the relevant types of assistance and discuss ways to move forward.

If the farm's plan involves further technical assistance and/or financial assistance from DACF, an APS or other PFAS team member can help the farm with the applications.

Ongoing Collaboration and Access:

PFAS response work on a farm can be time consuming. Repeated testing and monitoring, plus implementation of mitigation strategies, often takes time. It is critical for farms to continue to collaborate with DACF during this timeframe and provide access to the farm for these ongoing activities in order to maximize the impact of DACF's technical and financial support.

5. How to Use this Resource

DACF assembled this Resource Kit to help PFAS-impacted farmers better understand the risks of PFAS, impacts to farm businesses, and what programs exist to help farms navigate this challenge. It includes informational handouts and publications from various organizations to help explain the basics of PFAS, how it can impact farm soil and water, feed, animals, produce and other farm products. It includes the levels of PFAS that cause concern, and PFAS health considerations.

- Publications and Handouts referenced in each section are included at the end of that section.
- A list of all publications and handouts can be found at the end of the Resource Kit.

If you have questions, please do not hesitate to reach out to the DACF team listed below.

Please Note: This is a living document that will be updated regularly. This version reflects the best available information at the time of its printing.

6. Key DACF Team Member Contacts

DACF PFAS Response Team		
Meagan Hennessey PFAS Response Director 207-592-3795 Meagan.Hennessey@maine.gov	Duncan Pfaehler Agricultural PFAS Specialist 207-992-6643 Duncan.Pfaehler@maine.gov	Mary Yurlina Agricultural PFAS Specialist 207-441-1643 Mary.Yurlina@maine.gov
Felicia Whitten Agricultural PFAS Specialist 207-592-0821 Felicia.Whitten@maine.gov	Dr. Kasia Szymanska Assist. State Veterinarian 207-592-5146 Kasia.Szymanska@maine.gov	Data & Sampling Mgmt. Sp. Vacant
Amie Greenham Finance and Application Specialist 207-592-0644 Amie.Greenham@maine.gov	Hannah Legacy Geographic Information Systems (GIS) Coordinator Hannah.Legacy@maine.gov	Rick Kersbergen Sustainable Dairy and Forage Systems 207-322-3109 Richard.Kersbergen@maine.edu
DACF PFAS Fund Team		
Beth Valentine PFAS Fund Director 207-313-0962 Beth.Valentine@maine.gov	Melissa Hamlin PFAS Fund Management Specialist Land Acquisition & Stewardship 207-592-1080 Melissa.Hamlin@maine.gov	Madeline Bruno PFAS Fund Management Specialist Research 207-287-7601 Madeline.S.Bruno@maine.gov

I. Introduction to DACF's PFAS Group and Farm Assistance

Section I Publication Attachments

The Fund to Address PFAS Contamination

With the Fund to Address PFAS Contamination, Maine leads the nation in aiding commercial farmers to overcome the challenges presented by PFAS contamination. It will directly assist farmers, purchase contaminated land, propel critical ag-PFAS research, and support health-related activities.

The PFAS Fund was created in 2022 by Governor Mills to support farmers whose land or groundwater is contaminated with per- and poly-fluoroalkyl substances (PFAS). The Legislature appropriated $60 million from the General Fund and directed DACF to work with an advisory committee to develop a plan for use of the budget. The Implementation Plan was finalized in July 2023. DACF developed policies and rules, which became effective in March 2024, to administer the programs in the Plan.

PROGRAMS IN DEVELOPMENT

The overarching purpose of the PFAS Fund is to keep farmers farming. Programs currently under development include:

Administrative Cost Grants	Blood Serum Testing	Assistance Obtaining New Loans
Income Replacement	Mental Health Care	Third-Party Technical Assistance
Competitive Research Grants	Land Acquisition	Infrastructure Investment

The intent of these programs is to help mitigate the various impacts that occur when unsafe contamination is discovered on a commercial farm. For eligible farms, the PFAS Fund may:

- Reimburse administrative costs incurred during initial response efforts.
- Provide third-party professional/technical assistance to help farmers evaluate options and develop business plans to guide their return to profitability.
- Provide for up to two years of lost income while the farm retools.
- Help obtain loans, and/or make infrastructure investment grants for new types of production.
- Purchase property from eligible farms at fair market value as if there was no PFAS contamination.
- Provide for uninsured costs of health testing and mental health services for impacted individuals.
- Fund research that will help farms determine their best options for maintaining viability.

The QR code below links to DACF's PFAS website, which provides information about DACF's role and extensive efforts in response to PFAS contamination on farms, the PFAS Fund, and the assistance programs that are available to impacted commercial farms.

For more information, contact:
Beth Valentine, PFAS Fund Director
beth.valentine@maine.gov
207-313-0962

MAINE DEPARTMENT OF AGRICULTURE CONSERVATION & FORESTRY

Date of Application: _____

Section 1. General Applicant Information

(*all applicants must complete this section*)

BUSINESS ENTITY'S LEGAL NAME: _____

STATE OF INCORPORATION AND CHARTER NUMBER: _____

FARM'S PRIMARY PRODUCT(S): _____

CONTACT NAME: _____

MAILING STREET ADDRESS: _____

CITY/STATE/ZIP: _____

PHYSICAL STREET ADDRESS IF DIFFERENT: _____

PHYSICAL ADDRESS CITY/STATE/ZIP: _____

PHONE: _____ EMAIL: _____

NAME OF DACF STAFF (APS) WORKING WITH THE FARM: _____

Required Documentation - Section 1

The following information must be attached and submitted with this Section of the application:

A. Farm Narrative. A statement, one page or less, explaining (1) the date and circumstances of the discovery of PFAS on the property, (2) the impacts to the farm's business operations due to PFAS contamination, and (3) how the requested financial assistance will support the farm's efforts to remain viable in connection with these impacts.

B. Proof of Contamination. PFAS test results from an approved laboratory (*if DACF does not already have them*). See **Appendix B** for the current Maine PFAS Screening Levels, updated as of December 2023.

   The commercial farm has DACF-confirmed unsafe levels of PFAS contamination, defined as
   1. One or more samples of farm products showing PFAS exceeding current Action Levels or deemed of concern by the Maine CDC, and/or
   2. groundwater test results exceeding Maine's enforceable interim drinking water standard for PFAS until superseded by either Maine's Maximum Contaminant Level (MCL) for PFAS or a federal MCL for PFAS, whichever is lowest, for wells servicing the farm or fields, and/or
   3. soil test results exceeding any current Maine CDC crop-specific screening level

C. Vendor Form. A completed State of Maine Vendor Authorization Form (*if not already on record*), available in Appendix A. The purpose of the vendor form is to establish an account with the State of Maine's accounting system so that payments may be issued to the applicant by the State of Maine. Any change in information, such as an address change, will require a new vendor form.

Date of Application: _____

Additional Information Requested – Section 1

Has this farm previously applied for assistance from DACF via the master application? ☐ YES ☐ NO

If YES, please indicate any changes in your operations that have occurred since your last application. Also, has the name/contact information provided above changed?

Does this farm currently produce any farm product with the intent that the farm product be sold or otherwise disposed of to generate income? ☐ YES ☐ NO

If no, approximate date farm stopped producing farm products for sale: _____

Applications Included in this Submittal:
Please check all applications that apply. If multiple projects are being applied for within a category, please indicate the number:

☐ Administrative Cost Grant

☐ Income Replacement

☐ Tech Assistance/Prof. Services (# projects: ___)

☐ Clean Feed Assistance

☐ Equipment and Input Costs (# projects: ___)

☐ Infrastructure (# projects: ___)

☐ Debt Service on Existing Loans

☐ New Loan Assistance

Signature Block – Section 1

Consent and Certification

By submitting this application, the undersigned:

- Agrees to partner with DACF to investigate the scope of contamination at the farm, grants ongoing access such that DACF staff are able to develop an understanding of the farm, its PFAS contamination, and potential strategies for recovery, and agrees to follow any such recommendations to the greatest extent possible;
- Authorizes DACF to receive information from and share information with other organizations when the information is necessary for DACF to make a decision on an application, including the Maine Department of the Environment (DEP), Maine Center for Disease Control and Prevention (MECDC), USDA Farm Service Agency, Maine Farmland Trust, and Maine Organic Farmers and Gardeners Association;
- Acknowledges that DACF reserves the right to request any additional supporting documentation that is necessary to evaluate the request for assistance;
- Acknowledges that DACF reserves the right to limit the amount of funding for all requests based on available resources;
- Agrees that if payments exceed a commercial farm's eligible documented expenses, losses, or other outlays, the commercial farm shall reimburse DACF an amount equal to the overpayment.

Date of Application: _____

I certify that the information given in this application is correct and complete to the best of my knowledge. I acknowledge that where funds are granted for a specified purpose, those funds will be utilized solely for the approved activities described in the application.

I acknowledge that payments may represent reportable income for tax purposes.

I certify that I have been granted the authority by _____ (business name) to sign as its representative, and my signature contractually binds the business in this agreement.

_____

Applicant's Signature Date

_____

Applicant's Name (printed) Title

_____

Applicant's Signature Date

_____

Applicant's Name (printed) Title

Please complete if someone assisted the applicant in completing this form:

_____

Preparer Name (If not applicant) Preparer's relationship to applicant

Permission to discuss application with Preparer: ☐ YES ☐ NO

State of Maine Substitute W-9 & Vendor Authorization Form

RETURN TO: *by mail the agency who requested the form or sent it to you, or the agency you're doing business with. (ie.. DHHS/Labor/ DEP/Education/etc)*

PURPOSE: To establish or update an account with the State of Maine's accounting system.
Complete this form if: 1) You will receive payment from the State of Maine, and/or 2) You are a vendor who provides services or goods to the State of Maine.
This form replaces the IRS W-9 form per the IRS W-9 language; "If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9."

FILL OUT FORM COMPLETELY - ALL AREAS WITH * ARE REQUIRED - ONLY ONE NAME & TIN PER A FORM

TYPE OF REQUEST*: (Must select one.)

☐ **New Request** ☐ **New Location/Additional Entry** ☐ **Change** ◯ Legal Name ◯ Phone # ◯ Contact Info ◯ Payment Address ◯ DBA Name ◯ Care Of ◯ Email Only ◯ Ordering Address

TAXPAYER ID NUMBER* (TIN) ***(Provide ONE only)*** Social Security # (person) or a Federal Employer ID # (business) TIN

TIN Type * choose ONE	Organization Type *	Classification * choose ONE	
◯ Social Security No. ⇨	◯ Individual ⇨	☐ Individual	☐ Nonresident Alien ☐ Estate ☐ Sole Proprietorship
◯ Employer ID No. ⇨	◯ Company ⇨	☐ Corporation ☐ Partnership ☐ Trust ☐ Estate ☐ Other Non-Profit Org ☐ Other Gov't ☐ Federal Gov't ☐ State Gov't ☐ Other ☐ Foreign (W8 required)	

LEGAL NAME ***(Must provide: Legal name filed with IRS tied to the ID number, SSN=first & last name/FEIN=business name)***

Legal Name* Alias/DBA

Other Info Vendor Customer Number (if known) VC#/VS# Account/Client/Provider Number (if known)

Payment Address* My ☐ **Billing Address** ☐ **Admin. Address** is the same.

Address C/O

City/State/Zip Phone

Contact*

Name Phone Ext

Email ☐ Send me Email notifications of DD/EFT (requires Direct Deposit/EFT form to be completed)

Procurement/Physical Address* My ☐ **Billing Address** ☐ **Admin. Address** is the same.

Address C/O

City/State/Zip Phone

Contact*

Name Phone Ext

Email

Authorized Signature, Title & Current Date*

Under penalties of perjury, I certify that: 1) The number shown on this form is my correct taxpayer identification number, and 2)I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the IRS that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and 3) I am a U. S. citizen or other U. S. person (defined by the IRS). Ref: www.irs.gov

Information on State Agency Submitting Vendor Form

OFFICE USE ONLY State Agency & SHS # | Agency Contact Person Name & Title | OFFICE USE ONLY Contact's Phone #

II. PFAS Risks to Farms

There are several informational resources about risks to farms from PFAS contamination. The below content, links and references provide some of this information and resources, in no particular order.

A. UMaine Cooperative Extension: Guide to Investigating PFAS Risk on Your Farm

This resource from the University of Maine Cooperative Extension (UMCE) provides helpful content and context. As of June 2024, however, some of its content is out of date; an update is in the review stage.

Web Publication: ***Guide to Investigating PFAS Risk on Your Farm***

Source: University of Maine Cooperative Extension (UMCE)
Website Link: Guide to Investigating PFAS Risk on Your Farm
Web Address: https://extension.umaine.edu/agriculture/guide-to-investigating-pfas-risk-on-your-farm/

From the Guide: The first step to deciding whether PFAS may be a risk on your farm is determining whether there is any history of residuals (biosolids) application on your farm, dating back to the 1980s. Maine DEP has made several resources available to the public that can assist you in learning whether your land was ever licensed as a land application site for residuals, whether any residuals were actually applied, how much was applied, and in what years.

B. Maine DEP PFAS Investigation & Online Map

Keep in mind that this map does not tell the entire story of spreading.

- Sites licensed to spread biosolids may not have applied any material to the land, and conversely,
- Certain biosolid products that were spread were not required to be licensed;
- DEP continues to update publicized information as historical records are reviewed and digitized.

Background from DEP's website:

Since the late 1970s, sludge and septage were often used on land to add nutrients back into the soil. The land application of sludge and sludge-derived products was once common at farms and landscaping areas throughout the United States and was perceived as a positive practice. In Maine, these practices were licensed to help ensure that concentrations of metals or other organic compounds did not compromise soil health. PFAS were not taken into consideration as part of the licensing process until 2019, as it was not fully understood before then that PFAS in sludge could impact public health and the environment.

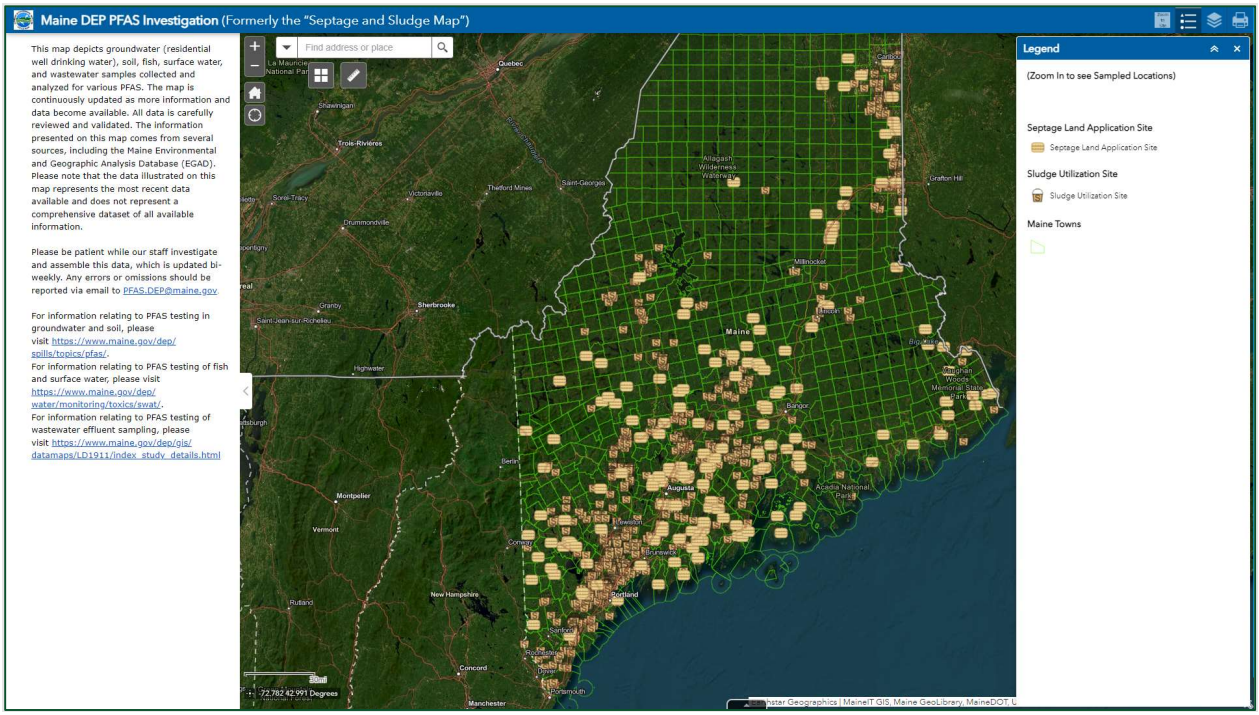
In October 2021, a new law required DEP to develop and implement a program to evaluate soil and groundwater for PFAS at locations licensed for the land application of sludge or septage. In August 2022, the land application of sludge and sludge-derived products was banned by the legislature.

DEP maintains a map that depicts groundwater (residential well drinking water), soil, fish, surface water, and wastewater samples collected and analyzed for various PFAS. The map is updated biweekly as more information and data become available.

Web Publication: ***Maine DEP PFAS Investigation (Formerly the "Septage and Sludge Map")***

Website Link: Maine DEP PFAS Investigation Map
Web Address: https://maine.maps.arcgis.com/apps/webappviewer/index.html?id=468a9f7ddcd54309bc1ae8ba173965c7

From University of Maine Cooperative Extension (UMCE)'s website – A general note regarding use of the "Maine Environmental and Geographic Analysis Database (EGAD) Site Types" Online Map: This mapping tool is under development and is continuing to be updated as more information is gathered. In some cases, the map shows sites that were licensed for spreading, but which never received any material. In other cases, sites that were land-applied with residual materials may not be indicated on the map. The DEP welcomes any information from citizens that can help them continue to improve their data. Landowners can contact PFAS.DEP@maine.gov with questions, corrections, or other information related to the map data.



DEP provides a narrative description of the PFAS Investigation at sludge and septage sites on its website:

Web Publication: ***PFAS and Maine DEP: Overview of Maine's PFAS Soil and Groundwater Evaluation of Sludge and Septage Sites***

Website Link: Overview of Maine's PFAS Soil and Groundwater Evaluation of Sludge and Septage Sites
Web Address: https://www.maine.gov/dep/spills/topics/pfas/maine-pfas.html (scroll to Soil and Groundwater Evaluation)

C. Unsafe Levels of PFAS on my Farm – What Does this Mean?

1. Terminology

Terminology that may be helpful to understand how PFAS could be of concern at your farm are below. Any questions about risks of exposure to PFAS that may impact human health should be directed to the Maine Centers for Disease Control and Prevention (CDC) at 1-866-292-3474.

Soil Screening Levels – A level used by DACF to determine if enough PFAS are present in the soil to warrant further investigation. There are different soil screening levels for different farm management scenarios.

Additionally, DEP has defined PFAS soil screening levels applicable to other, non-agricultural land uses.

Action Levels – A regulatory level applicable to farm products. Once the level is met or exceeded in a product, that product may no longer be sold for human consumption. In Maine, PFOS action levels exist for two farm commodities: milk and beef. The beef action level is 3.4 parts per billion (ppb) PFOS. The milk action level is 210 parts per trillion (ppt) PFOS. Other state agencies utilize Action Levels in a similar manner for non-agricultural products; e.g., there is a fish consumption advisory of 3.5 ppb.[2] ***Action levels may be lower in the future and may include additional products and PFAS compounds.***

Drinking Water Standard – The maximum amount of PFAS allowed in public drinking water systems in Maine was set as a temporary ("interim") standard in 2021. The interim state drinking water standard is 20 ppt for the combined sum of six PFAS: PFOA + PFOS + Perfluoroheptanoic acid (PFHpA) + Perfluorononanoic acid (PFNA) + Perfluorodecanoic acid (PFDA) + Perfluorohexane sulfonate (PFHxS). Residential systems that have over 20 ppt (sum of 6) PFAS should filter their water and should speak with Maine DEP to see if they are eligible for state funding (current as of June 2024). While the drinking water standard does not apply for agricultural use, impacts to farm products can occur and should be evaluated if there is a concern.[3]

Please note, although the interim drinking water standard is 20 ppt (sum of 6), new information provided on the website from the Maine Department of Health and Human Services states, "The National Primary Drinking Water Regulation (NPDWR) for six PFAS was announced by the EPA on April 10, 2024. Maine is currently reviewing this regulation and will be adopting rules at least as stringent. The interim Maine standard of 20 ppt for six PFAS compounds (alone or in combination) is still in effect until further notice."[4,5] Maine is evaluating the NPDWR and through rulemaking, will adopt a consistent final standard.

Remedial Action Guidelines – Guidance set by Maine DEP for specific PFAS compound levels in soil to help determine human health risk and cleanup goals at remediation sites as relate to site uses. An in-depth publication is linked from the *Maine PFAS Screening Levels* reference page.

---

[2] *Maine CDC Scientific Brief: PFOS Fish Consumption Advisory*, May 2022, found at https://www.maine.gov/dhhs/mecdc/environmental-health/eohp/fish/documents/pfas-fish-science-brief-05052022.pdf (last visited April 13, 2024).

[3] See Section V(A).

[4] *PFAS in Public Water Systems*, Maine Department of Health and Human Services, found at https://www.maine.gov/dhhs/mecdc/environmental-health/dwp/pws/pfas.shtml (last visited June 4, 2024).

[5] *Final PFAS National Primary Drinking Water Regulation – Summary*, USEPA, found at https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas#Summary (last visited June 4, 2024).

2. Maine One-Page Reference with PFAS Screening Levels, Guidelines and Action Levels

DEP maintains a one-page reference compiling Maine's current PFAS screening, guidance and action levels, including remedial action guidelines for soil, beneficial use thresholds for soil, the interim drinking water standard, action levels for milk, beef and fish tissue, and crop-specific soil screening levels for dairy cows.

Print Publication (Included): ***Maine PFAS Screening Levels*** (current as of June 2024)

Website Link: Maine PFAS Screening Levels
Web Address:
www.maine.gov/dep/spills/topics/pfas/Maine%20PFAS%20Screening%20Levels_Rev_12_4_23.pdf

3. PFAS Levels in Drinking Water Wells

Maine CDC has provided a useful Q&A sheet that talks about what the contaminant is in overview, how to read test results, what the drinking water standards are, possible health effects, ways to minimize exposure, and whether blood testing could be considered:

Print Publication (Included): ***PFOS, PFOA and other PFAS: Questions and Answers***

Website Link: Maine CDC PFAS in Well Water Fact Sheet 9.01.2023 FINAL
Web Address: https://www.maine.gov/dhhs/mecdc/environmental-health/eohp/wells/documents/PFOA_PFOS_tipsheet.pdf

As discussed above in Section II(C)(1), wells for residential drinking water that have over 20 ppt (sum of 6) PFAS should be filtered. For assistance in treatment, see Section V(A).

4. PFAS Levels in Agricultural Well Water at the Farm

Farm well water exceeding Maine's interim drinking water standard may or may not be acceptable for farm product use. DACF specialists can provide guidance specific to your farm's situation.

A Farm Water Treatment Program provided by DACF PFAS Response is included in Section V(A).

5. PFAS Screening Levels for Agricultural Soil

Current soil screening levels (SSLs) for dairy farms are in the table below. As of June 2024, these SSLs for agronomic exposure pathways are in the process of being updated; once complete, the updates will be posted on Maine CDC's website and other state agency websites.

Product = Milk	Feed = Hay ppb	Feed = Corn Silage ppb	Feed = Corn Silage & Hay ppb
Grass-Based Farm – Screening Level: Soil	6.8	120.0	6.4
Avg. Maine Farm – Screening Level: Soil	13.8	54.8	11.0

Maine CDC's scientific report underlying these values can be found at the below link:

Print Publication (not included, 29 pages, available upon request): ***Derivation of PFOS soil screening levels for a soil-to-fodder-to-cow's milk agronomic pathway***

Website Link: Derivation of PFOS soil screening levels for a soil-to-fodder-to-cow's milk agronomic pathway
Website Address: https://www.maine.gov/dep/spills/topics/pfas/Agronomic-Pathway-Soil-Screening-Levels-Soil-Fodder-Cows-Milk-09.16.20.pdf

Soil screening levels for other products are under development. DACF can often provide recommendations for your products based on previous testing results at other locations.

D. Agricultural Products at Risk

There is currently no known effective method to remediate soils or the crops grown in them. However, water can be effectively filtered if needed, and DACF has developed strategies which can be effective in managing contamination at your farm.

Website Link: PFAS Response
Web Address: https://www.maine.gov/dacf/ag/pfas/pfas-response.shtml

The Agricultural PFAS Specialist assigned to work with you is your best source of information for questions specific to products you are, or are considering, producing. Questions about contaminated products may also be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795.

1. Livestock

DACF has collected data documenting how PFAS-contaminated livestock depurate (eliminate contamination from their bodies) if they are provided clean feed and water. This means PFAS levels in milk and beef from these animals will lower over time. See below for more specific product information.

2. Milk

The milk action level is 210 parts per trillion (ppt) PFOS.

After PFOS was found in the milk of a dairy farm in 2016, DACF requested Maine CDC help ascertain the level of PFOS at which milk was unsafe to drink. Maine CDC issued a memorandum defining the 210 ppt action level in 2017.

Print Publication (not included, 8 pages, available upon request): ***Memorandum: Action levels for PFOS in cow's milk***

Website Link: Memorandum: Action levels for PFOS in cow's milk
Web Address: https://www.maine.gov/dep/spills/topics/pfas/Derivation-of-Action-Levels-for-PFOS-in-Cows-Milk-03.28.17.pdf

DACF's PFAS Response recommends some steps dairy farmers can take to minimize the impact of PFAS-contaminated soils on crops and milk.

Print Publication (included): ***Assessing PFAS Contamination & Managing Risks on Dairy Farms in Maine***

Website Link: Assessing PFAS Contamination & Managing Risks on Dairy Farms in Maine

Web Address: https://www.maine.gov/dacf/ag/pfas/docs/dairy-risk-management-updated122023.pdf

3. Beef

The beef action level is 3.4 parts per billion (ppb) PFOS.

At DACF's request Maine CDC established the beef action level in 2020. The memorandum below provides context about the level of PFAS considered unsafe (the "reference dose"), discussed on pages 2-3.

Print Publication (not included, 9 pages, available upon request): ***Memorandum: Action levels for PFOS in beef for use in determining whether beef at a farm is adulterated***

Website Link: Memorandum: Action levels for PFOS in cow's milk
Web Address: https://www.maine.gov/dep/spills/topics/pfas/Derivation-of-Action-Levels-for-PFOS-in-Cows-Milk-03.28.17.pdf

Maine DACF's PFAS Response recommends steps beef farmers can take to minimize the impact of PFAS contamination on the herd.

Excerpted from the below publication about hay:

> *Corn and small grains take up less PFOS than grass and legumes. This is becoming a viable crop option for fields with higher levels of PFOS. Instead of a hay crop, farmers are growing corn silage, snaplage, or grain for cattle feed.*
>
> *PFOS concentrations in livestock can be [reduced] by managing what is fed and when. For example, a farmer can reduce the level of PFOS in beef cattle over a few months with clean feed. It is therefore possible for hay that contains low levels of PFOS to be used as feed during certain times of the year or for specific life stages of livestock. Please speak with a DACF Agricultural PFAS Specialist to discuss the details of a potential feeding plan for your farm.*

4. Hay

Hay can become contaminated from PFAS in soil. To assess potential contamination and the risk for exposure to livestock, it's important to understand the current milk and beef action levels, soil screening levels, and the importance of characterizing your fields and tracking your hay lots. It is also important to note DACF has documented evidence of ongoing low-level exposure of certain herds consuming hay which tested Non-Detect at commercial laboratories. DACF now relies on soil data in determining the appropriateness of hay consumption due to this limitation in laboratory testing capabilities.

If you are selling, or allowing others to utilize, hay or other forage from your fields it is important to let your customers know about the presence of PFAS compounds in your farm's soil so that they can make an informed decision about how to use your hay or other forage. If they have specific questions, they can contact Maine DACF at pfas.dacf@maine.gov and/or (207) 287-4514.

Print Publication (included): ***Recommendations to Farmers Managing PFAS Risks: HAY***

Website Link: PFAS Response
Web Address: https://www.maine.gov/dacf/ag/pfas/pfas-response.shtml

5. Crops

Plant uptake of PFAS is a growing body of research. Although there is no current method to remove PFAS from plant tissue once it is present, it appears that some PFAS compounds do not readily transfer from soil or water into the edible portions of certain plant tissue. The rate of transfer also varies widely from one species of plant to another.[6]

Based on current findings, it appears that there would be a lower likelihood of PFAS accumulation in tomatoes, cucumbers, melons, corn kernels, and other fruiting parts of plants. There would be a higher potential for PFAS accumulation in lettuce, spinach, and other leafy greens.[7]

[6] From *PFAS Response: What's the impact to agriculture?*, DACF, found at: https://www.maine.gov/dacf/ag/pfas/pfas-response.shtml#:~:text=fluorine%20and%20carbon.-,Plants%3A,-Plant%20uptake%20of (last visited June 4, 2024).

[7] From *Step 8: Should I Eat Produce Grown in My Garden?*, UMCE, found at: https://extension.umaine.edu/gardening/understanding-pfas-and-your-home-garden/step-8/ (last visited June 4, 2024).

II. PFAS Risks to Farms

Section II Publication Attachments

MAINE PFAS SCREENING LEVELS

December 2023

Soil Remedial Action Guidelines[1] (mg/kg dry weight)						
Compound	Leaching to Groundwater	Residential	Commercial Worker	Park User	Recreator Sediment	Construction Worker
PFBS	0.11	26	340	74	85	230
PFBA	0.36	110	1,600	300	350	2,000
PFHxS	0.00047	1.7	22	4.9	5.7	5.1
PFHxA	0.13	43	560	120	140	130
PFNA	0.0046	0.26	3.4	0.74	0.85	0.77
PFOS	0.001	0.17	2.2	0.49	0.57	0.51
PFOA	0.017	0.26	3.4	0.74	0.85	0.77

Soil Beneficial Use[2] (ng/g dry weight)	
Compound	Beneficial Use
PFBS	1,900
PFOS	5.2
PFOA	2.5

Interim Drinking Water Standard[3] (ng/l or ppt)	
Compound	Residential
PFOS + PFOA + PFHpA + PFNA + PFHxS + PFDA	20

Fish Tissue Action Level (ng/g wet weight)	
Compound	Action Level
PFOS	3.5

Milk[4] (ng/l or ppt)	
Compound	Action Level
PFOS	210

Beef[5] (ng/g)	
Compound	Action Level
PFOS	3.4

Dairy[6] - PFOS Crop-Specific Soil Screening Levels (ng/g dry weight)			
	Soil to Hay to Milk Screening Level	Soil to Corn-Silage to Milk Screening Level	Soil to Hay and Corn-Silage to Milk Screening Level
Grass-Based Farm	6.8	120.0	6.4
Average Maine Farm	13.8	54.8	11.0

Helpful Conversions: 0.000001 ppm = 0.001 ppb = 1 ppt

Parts Per Million (ppm)	Parts Per Billion (ppb)	Parts Per Trillion (ppt)
1 milligram/kilogram (mg/kg) = 1 ppm	1 microgram/kilogram (µg/kg) = 1 ppb	1 nanogram/kilogram (ng/kg) = 1 ppt
1 milligram/liter (mg/l) = 1 ppm	1 microgram/liter (µg/l) = 1 ppb	1 nanogram/liter (ng/l) = 1 ppt
1 microgram/gram (µg/g) = 1 ppm	1 nanogram/gram (ng/g) = 1 ppb	1 picogram/gram (pg/g) = 1 ppt

[1] Maine Department of Environmental Protection (Maine DEP), *Maine Remedial Action Guidelines (RAGs) for Contaminated Sites*, effective November 15, 2023.

[2] Maine DEP, *Maine Solid Waste Management Rules: Beneficial Use of Solid Wastes*, 06-096 C.M.R. ch. 418, Appendix A, last amended July 8, 2018.

[3] Resolve 2021, ch. 82, *Resolve, To Protect Consumers of Public Drinking Water by Establishing Maximum Contaminant Levels for Certain Substances and Contaminants*, Emergency, effective June 21, 2021.

[4] Maine Center for Disease Control and Prevention (CDC), *Action levels for PFOS in cow's milk*, Memorandum to Rachael Fiske, Maine Department of Agriculture, Conservation and Forestry (DACF), from Andrew Smith, SM, ScD and Thomas Simones, PhD, Maine CDC, March 28, 2017.

[5] Maine CDC, *Action levels for PFOS in beef for use in determining whether beef at a farm is adulterated*, Memorandum to Nancy McBrady, Maine DACF, from Andrew Smith, SM, ScD and Thomas Simones, PhD, Maine CDC, August 4, 2020.

[6] Maine CDC, *Derivation of PFOS soil screening levels for a soil-to-fodder-to-cow's milk agronomic pathway*, September 16, 2020.

Janet T. Mills
Governor

Jeanne M. Lambrew, Ph.D.
Commissioner

Maine Department of Health and Human Services
Maine Center for Disease Control and Prevention
11 State House Station
286 Water Street
Augusta, Maine 04333-0011
Tel; (207) 287-8016; Fax (207) 287-9058
TTY: Dial 711 (Maine Relay)

PFOS, PFOA and other PFAS Questions and Answers

What are PFOS, PFOA and PFAS?

PFOS and PFOA belong to a large family of chemicals referred to as perfluoroalkyl substances, or PFAS for short. PFOS (perfluorooctanesulfonic acid) and PFOA (perfluorooctanoic acid) are two chemicals in this family that were made in the highest amounts in the United States. Other chemicals in this family that have been found in Maine soils and water are:

- PFHpA (perfluoroheptanoic acid)
- PFNA (perfluorononanoic acid)
- PFDA (perfluorodecanoic acid)
- PFHxS (perfluorohexanesulfonic acid)

PFOS and PFOA were used for a long time in many household and industrial products. These chemicals were used to make products that repel water, resist stains and grease, and withstand heat. PFOS and PFOA were used to make carpet, fabric, clothing, food packaging, pots and pans, and personal care products. They were also used in some factories and were a key ingredient in some fire-fighting foams. Most companies have stopped using PFOS and PFOA, but other PFAS are still in use.

Almost everyone has some PFOA, PFOS and other PFAS in their bodies because of their use in so many consumer products. We also find low levels of PFOA, PFOS and other PFAS in our environment, and sometimes higher levels near airfields or factories that used the chemicals, or land with a history of land spreading of waste materials containing PFOA, PFOS or other PFAS. This means that some water sources including private wells may contain these chemicals.

Is there PFOA or PFOS in your well water?

Federal or state agencies may have been testing water for PFOA, PFOS and other PFAS in wells near or at your home. Testing for PFAS is usually only done when there is reason to think there is the possibility of well water contamination. Testing for these chemicals in well water is expensive and only done by a few laboratories.

If you are concerned about whether these chemicals are in your well water, contact one of our toxicologists to discuss whether testing your well water makes sense. Please call 866-292-3474 (toll-free in Maine), 207-287-4311, or Maine Relay 711.

How do you read test results for PFOA and PFOS in well water?

Laboratory test results will have a number followed by the letters ng/L or ppt. The letters “ng/L” mean nanograms per liter and “ppt” means parts per trillion and these units are same concentration. These are units of measurement, like grams of sugar per ounce of soda. You only need to pay attention to the numbers and whether they are above Maine’s current drinking water standard for these chemicals. The Maine Department of Environmental Protection has a helpful tip sheet for understanding your water test results at: https://www.maine.gov/dep/spills/topics/pfas/PFAS-interpret-lab-report.pdf.

What is the current drinking water standard for PFAS?

In June 2021, the Maine Legislature enacted a law that established a new State drinking water standard of 20 ng/L for the combined sum of six different PFAS: PFOA, PFOS, PFHpA, PFNA, PFDA, PFHxS). If your water has more than 20 ng/L for the sum of these six PFAS, it does not necessarily mean you will have health problems. It does mean that you should take action to reduce the amount of the contaminated water you are drinking.

What are the health effects of PFAS?

Scientists are still learning about the possible health effects from being exposed to PFAS. Most people have some amount of these chemicals in their blood because they were used for many years in many household and industrial products. Drinking water with PFAS can result in higher levels of these chemicals in the blood. Health problems that have been associated with higher levels of PFAS exposure include:

- Decreased response to vaccinations
- Elevated cholesterol
- Small decreases in infant and fetal growth
- Increased risk of kidney, testicular, and breast cancer
- Liver and thyroid abnormalities
- Increased risk of pregnancy-induced hypertension and pre-eclampsia
- Increased risk of ulcerative colitis

Not everyone who is exposed to higher levels of PFAS will develop a health problem associated with that exposure and some people develop these health problems without high levels of exposure to PFAS. In their July 2022 report, the National Academies of Science, Engineering and Medicine (NASEM) provided guidance to healthcare providers on how to evaluate individuals with unusually high PFAS exposure: https://nap.nationalacademies.org/catalog/26156/guidance-on-pfas-exposure-testing-and-clinical-follow-up.

What do you do if you have too much PFAS in your water?

What you do depends on how much is in your water, how much water you use, and who is using the water. To quickly reduce the amount of PFAS you take in, you can switch to bottled water for drinking, and making drinks such as coffee, tea, juice, and infant formula. Use of water for cooking, bathing, or watering your garden is unlikely to be a concern unless your water levels of these chemicals are very high.

Should you get your blood tested?

Talk to your doctor if you are interested in testing your blood for PFAS. Together you can discuss what testing your blood for PFAS means in terms of benefits, harms, and next steps (such as follow-up appointments), as well as whether your insurance will pay for this test. According to a July 2022 report from the National Academies of Sciences, Engineering, and Medicine, clinicians should offer PFAS blood testing to patients likely to have a history of elevated exposure, such as from contaminated water.

Contact one of our toxicologists if you are concerned about PFAS and your health or want more information about blood testing at 866-292-3474 (toll-free in Maine), 207-287-4311, or Maine Relay 711.

Updated 8/30/2023

Assessing PFAS Contamination and Managing Risks on Dairy Farms in Maine

December 2023

It is hard to escape the news about PFAS in Maine. For dairy farmers, whose land was often used for the approved application of biosolids, the scrutiny and worry can be overwhelming. As we move closer to another cropping season, there are some steps dairy farmers can take to minimize the impact of PFAS-contaminated soils on crops and the milk your cows produce.

The best place to start is to learn more about PFAS in Maine. A group of service providers and crop consultants put together this useful guide:

Guide to Investigating PFAS Risk on Your Farm
extension.umaine.edu/agriculture/guide-to-investigating-pfas-risk-on-your-farm/

Next, it's important to know about forage crop uptake of PFAS. The Maine Center for Disease Control (CDC), Maine Department of Environmental Protection (DEP), Department of Agriculture Conservation and Forestry (DACF), University of Maine Cooperative Extension, and others have been investigating forage crop uptake on several dairy farms in Maine to get a better understanding of the potential for contaminated soils to impact the levels of PFOS in milk (PFOS is most prevalent PFAS chemical found in milk). While this research is preliminary, we have been able to use the information and data to alter the cropping practices on several farms to reduce the level of PFOS to acceptable levels so they can sell milk again.

What has been discovered about forage crop uptake?

1. Perennial forage grasses and legumes tend to have a high potential to uptake PFAS from the soil. Therefore, from a crop management perspective, harvesting grasses and legumes grown in contaminated soil have the highest risk as a contamination source for milk. **Tall Fescue** seems to be a forage crop that accumulates PFOS more than other grasses and **should be avoided if possible.**
2. Corn silage has a lower potential to uptake PFAS and therefore has a lower potential to contaminate milk.
3. Corn grain has an even lower potential, so corn harvested as grain, snaplage, or high moisture ear corn will have much lower levels of PFAS than corn silage. Other grains are also an alternative, although the straw or vegetative parts of the plant will contain significant PFOS.
4. Although not quantified, the potential for soil contamination or dirt in your forages harvested from contaminated fields will increase the risk for contaminated milk. Try to increase mowing height to minimize contamination. If your forage tests have more that 8% ash, you are probably contaminating the feed with soil.
5. There is variation in uptake levels of PFAS into plants, and this is an area that needs further investigation. Hopefully further research will help us understand and be able to provide better recommendations.

What should you do as a concerned dairy farmer?

1. Evaluate the potential for contaminated soil on your farm and the acres you lease for forage crop production.
2. Review the history of the fields and look for biosolid applications.
3. Maine DEP is using historical records of licenses and volume of materials to prioritize what fields to sample. The initial evaluation of Tier 1 and 2 sites is complete, with evaluation of Tier III sites underway. https://www.maine.gov/dep/spills/topics/pfas/
4. Maine DEP has a map of the licensed sludge spreading sites. The EGAD Septage and Sludge Sites map* may help you locate what fields and licenses were recorded. Details about particular licenses and amounts spread are available in a DEP spreadsheet that you can download [https://www.maine.gov/dep/spills/topics/pfas/2020-11-12-sludge-bioash-land-application.xlsx].

Continued on reverse side >>>

* https://maine.maps.arcgis.com/apps/webappviewer/index.html?

Have questions? We can help.

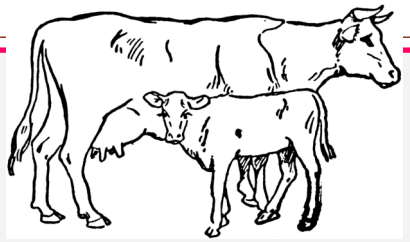
DACF Agricultural PFAS Specialists

- Duncan Pfaehler
  duncan.pfaehler@maine.gov
  207-992-6643
- Mary Yurlina
  mary.yurlina@maine.gov
  207-441-1643
- Felicia Whitten
  Felicia.Whitten@maine.gov
  207-592-0821

Rick Kersbergen
Extension Professor Emeritus, Sustainable Dairy and Forage Systems
richard.kersbergen@maine.edu
207-322-3109

For fields that have a history of biosolid applications, consider the following forage crop production and harvest changes for 2023.

1. Consider testing the suspect field soils for PFAS levels if DEP (or DACF) has not done so already. If the suspect fields are near your well, consider getting that tested, too.
   a. The testing is expensive, and the sample collection process must be done carefully. There are several private consultants that have experience testing for producers in Maine.
   b. DACF can reimburse for testing (when test results are shared). https://www.maine.gov/dacf/ag/pfas/pfas-assistance.shtml
   c. The Maine Organic Farmers and Gardeners Association and Maine Farmland Trust also can cover testing costs (for organic and conventional farms). https://www.mofga.org/pfas/pfas-emergency-relief-fund/
2. If you find or suspect the potential of higher than background levels in the soil and it is currently producing a perennial forage (grass/legume), consider rotating that field into corn silage.
   a. If soils are **highly** contaminated, even corn silage could also result in contaminated milk, so knowing the levels in the field may help you decide to go to suggestion #3. DACF staff can help advise you on understanding levels in soils and the potential risk for contamination.
3. If you feel you have the potential to do so, plant the field to corn, and harvest the crop as either snaplage, high moisture ear corn, or even corn grain. Research has shown that minor amounts of PFAS are taken into the grain portion of the plant. Snaplage can be easily harvested and stored in bunker silos, so the investment in moving to this harvest and storage method would only require the use of a snapper head on your chopper and good bunker silo management.
4. If the suspect field does remain in a perennial forage, make sure you reduce the potential for soil contamination by raising your mower and making sure that rakes, tedders, and pick-up heads are set high to eliminate soil contact.
5. If you are grazing the contaminated fields, do not allow the fields to become over-grazed, as that will also contribute to soil-contaminated ingestion of feed and lead to high levels of PFOS in milk. The general recommendation is to not use contaminated fields for grazing since the transfer from soil to feed to milk will be high.
6. If you use balage as a storage system for your feed, make sure to mark the bales from contaminated fields. You may consider testing those bales before feeding or potential disposal. If you still intend to feed those bales, make sure they only account for a very small percentage of the dairy cow's diet. It doesn't take much contaminated feed to create an unacceptable level in milk. Research shows that PFOS levels go up very quickly after ingesting contaminated feed but decline slowly.
7. If you use bunker silos, and you harvest feed from a contaminated field, it is critical that you put that feed in your bunker evenly, and hopefully as a small layer or percentage of the total feed in the bunker to avoid hitting "slugs" of problematic feed when removing silage. As with round bales of perennial forages, it would be best not to include that feed in the bunker, if possible.



Can I harvest contaminated hay and feed it to my heifers or dry cows?

This is not a solution to the problem and should be avoided. By monitoring fresh heifers at one farm, we found that although the heifers had clean feed for 8-10 months after being fed contaminated feed (both milk when they were calves and forage), their milk contained high levels of PFOS when they first freshened!

The PFAS Response Team will continue to investigate the transfer factors for forage crops this coming season so we can make better forage crop harvest decisions to minimize risk.

There are some safety nets for dairy producers if your milk is considered adulterated with PFOS. USDA FSA's Dairy Indemnity Payment Program (DIPP) is a temporary option, especially if there is a way to depurate your herd. DACF also has financial assistance programs available, as does MOFGA and MFT.

While stressful, we have successfully depurated several dairy herds in Maine this past year. While these contaminants are considered "forever chemicals", they are not forever in your cows, and they can again produce quality milk once they are on non-contaminated feed for an extended period of time.

Please reach out with questions as you plan for this coming season. **Knowing your soil PFOS levels will help decide the best course of action.** Your farm may need to think about forage budgeting and feed requirements to make sure your herd size will fit the available forage you can safely harvest this coming season. Knowing and evaluating all your options is the best path forward.

If you are a **commercial farmer** with questions regarding PFAS testing, income replacement, or farm viability projects or are a **member of the public with questions regarding PFAS and agriculture** in Maine, please contact Maine DACF (207) 287-4514 and leave your name, phone number and a brief message. For more resources from DACF, visit:

https://www.maine.gov/dacf/ag/pfas/index.shtml

Recommendations to Farmers Managing PFAS Risks: HAY

Hay can become contaminated from PFAS in soil. To assess potential contamination and the risk for exposure to livestock, it's important to understand current action levels applicable to milk and beef, soil screening levels, and the importance of characterizing your fields and tracking your hay lots. Please contact Pfas.dacf@maine.gov to learn more.

Beef and milk are currently regulated for PFOS contamination in Maine. Beef and milk have action levels above which the products cannot be sold. The action level for beef is 3.4 parts per billion (ppb) PFOS. The action level for cow milk is 210 parts per trillion (ppt) PFOS. Notice the difference in units for milk. **Please be advised that these action levels may be lowered in the future and may include additional PFAS compounds.**

Soil screening levels are under development. If soils are "ND" or non-detect for PFOS, plants and animals should not take up detectable concentrations from consuming feed grown on these soils. If soil concentrations are at or below 6.8 ppb for PFOS, these soils are currently considered adequate for producing forage to feed to beef animals and growing vegetables. However, special consideration must be taken if these soils are intended to grow feed for dairy animals.

For milk to be safely below the current action level, DACF encourages feeding hay that is non-detect (ND) for PFOS. Hay and pasture grown in soil with PFOS concentration of less than 6.8 ppb are still likely to contain detectable amounts of PFOS. As a result, feeding forages from these fields to lactating dairy animals should be avoided.

Corn and small grains take up less PFOS than grass and legumes. This is becoming a viable crop option for fields with higher levels of PFOS. Instead of a hay crop, farmers are growing corn silage, snaplage, or grain for cattle feed.

PFOS concentrations in livestock can be lowered by managing what is fed and when. For example, a farmer can greatly reduce the level of PFOS in beef cattle over a few months with clean feed. It is, therefore, possible for hay that contains low levels of PFOS to be used as feed during certain times of the year or for specific life stages of livestock. Please speak with a PFAS Agricultural Compliance Officer to discuss the details of a potential feeding plan for your farm.

Label your hay lots. Field soils vary in their levels of PFAS contamination, which means that the PFAS contamination in the hay harvested will vary by field. Therefore, storing your baled or wrapped hay in labeled lots is very important. If you use a bunker silo, segregate by fields if you can. Certain lots may be more appropriate for specific purposes than others.

Inform your customers. Let your customers know about the presence of PFAS compounds in your farm's soil so that they can make an informed decision about how to use your hay or silage. If they have specific questions, they can contact Maine DACF at Pfas.dacf@maine.gov

Financial support. DACF has programs available to assist producers impacted by PFAS. Please visit https://www.maine.gov/dacf/ag/pfas/index.shtml#funding to learn more.

III. Testing

A. Partnering with DACF

For an overview of the process of becoming engaged as a partner with DACF to investigate and address PFAS contamination, see Section I(B)(4) above, *Getting started with DACF Support for the Farm*.

When a producer partners with DACF for testing, DACF will craft a sampling plan for that farm, which may include testing of farm products, additional farm fields' soils, water sources, livestock, and feed to determine and monitor levels of contamination. Some sampling can be ongoing to track results over time. DACF staff will conduct the sampling in the plan at no cost to the producer.

B. Self-Testing Reimbursement from DACF Response

DACF can reimburse producers who self-test for PFAS at their farms (soil, farm water, feed, farm products such as hay, milk or beef). The reimbursable costs include third-party contractors who performed the sampling and laboratory fees. See included guidance document for full details.

Eligibility

- ✓ Commercial farm
- ✓ DEP-approved laboratory
- ✓ Share results with DACF
- ✓ Evidence showing reasonable likelihood of PFAS contamination (such as a verified history of sludge/septage application at or near the farm, or documentation that the farm utilized contaminated off-farm manure, feed, or other inputs).

Questions about testing reimbursement may be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795. Please contact DACF if you are interested in sampling being done by the state, as DACF may be able to accommodate the request.

Print Publication (included): ***PFAS Response Commercial Farm Testing Reimbursement Program Guidance***

Website Link: Additional DACF Financial Assistance
Web Address: https://www.maine.gov/dacf/ag/pfas/pfas-assistance.shtml#additionalfunding

Print Publication (included): ***Application for Commercial Farm PFAS Testing Reimbursement***

Website Link: Application for Commercial Farm PFAS Testing Reimbursement
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/commercial-farm-pfas-testing-reimbursement-application.pdf

C. Other Funding Resources Supporting Testing

MFT / MOFGA PFAS Testing Grants program

Maine Farmland Trust (MFT) and the Maine Organic Farmers and Gardeners Association (MOFGA) are jointly administering a PFAS emergency relief fund to support any Maine farm dealing with potential PFAS contamination. This PFAS Testing Grants program is open to both organic and conventional farms, and allows for confidentiality if needed. Grants are limited and all eligible applications may not be funded.

Eligibility and prioritization:

- ✓ All commercial farms (a farm that sells at least $2,000 to consumers outside of the household) are eligible.
- ✓ Applicants self-identified as Indigenous producers of food and/or medicine do not need to meet commercial farm eligibility criteria.
- ✓ Farms must state that they require financial assistance for PFAS testing.
- ✓ Farms who are seeking to test materials associated with land that was licensed and/or spread with biosolids.
- ✓ Farms that derive at least 50% of their family income from their farm will be prioritized.
- ✓ Farms classified as "Tier 1" licensed sites will be prioritized.
- ✓ The program is available to farms whose lenders are requiring a water and/or soil test.
- ✓ Farmers who are located on licensed sites, who had to pay for testing to investigate their risk prior to the establishment of this program on March 1, 2022, may seek reimbursement for tests that are ineligible for reimbursement from state agencies due to having low test results.

Web Publication: ***PFAS Emergency Relief Fund***

Website Link: PFAS Emergency Relief Fund
Web Address: https://www.mofga.org/pfas/pfas-emergency-relief-fund/

Application

Online Form: ***PFAS Testing Program - Application Form***

Website Link: PFAS Testing Program - Application Form
Web Address:
https://docs.google.com/forms/d/e/1FAIpQLSdB_t9GiFjeY5UUaX8BQql5TUA2CXH6awFa9E2POGWv7kkJbw/viewform

USDA's Natural Resources Conservation Service (NRCS)

Offers financial assistance for sample collection and laboratory analysis to provide information to producers to determine if PFAS might be present in soil or water on their agricultural operation. Contact your local United States Department of Agriculture (USDA) Service Center.

Website Link: Find Your Local Service Center
Web Address: https://www.farmers.gov/working-with-us/service-center-locator

III. Testing

Section III Publication Attachments

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
BUREAU OF AGRICULTURE, FOOD & RURAL RESOURCES
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

COMMERCIAL FARM PFAS TESTING REIMBURSEMENT PROGRAM

The Department of Agriculture, Conservation and Forestry (DACF) may reimburse a commercial farm for the costs the farm incurred for self-testing soil, water, and/or farm products for the presence of per- and polyfluoroalkyl substances (PFAS). Reimbursement depends on meeting the requirements that are explained below.

What are the requirements to be reimbursed for PFAS sampling costs?

1. You must be a commercial farm that Maine Department of Environmental Protection (DEP) records indicate had sludge or septage or Class A materials spread on it **OR** your farm received feed or other products (like manure) that came from a farm with a record of sludge or septage spread on it **OR** your farm is located near a location where DEP records show sludge or septage was spread.
2. Your farm **conducted the tests before DACF became involved at your farm (took tests for you)**. Please contact DACF if you are interested in sampling being done by the state, as DACF may be able to accommodate the request.
3. Lab results from a PFAS-accredited laboratory. Certain laboratories accept private samples.
4. If you self-tested (you didn't use a private company to sample), you followed DEP's sampling guidance for water sampling. Commercial farms are strongly encouraged to work with DACF or a knowledgeable third party for the sampling of soil or other media.
5. Complete test results must be shared with DACF.

What costs are covered?

Reimbursable costs can include laboratory sampling costs and third-party sampling services for soil, milk, feed, beef tissue, vegetative tissue, grain, and water. **Note: Water sampling must be for water sources for farm usage.**

DACF reserves the right to review the invoices of third-party contractors to assess billing rates and other charges to determine whether they are acceptable for reimbursement.

What needs to be submitted?

1. Reimbursement application form created by DACF; **and**
2. Test results from a laboratory certified by the State of Maine to perform PFAS analysis; **and**
3. Documentation of testing expenses, including copies of receipts, itemized invoices, and proof of payment; **and**
4. A completed State of Maine Vendor Authorization form.

DACF reserves the right to amend program parameters and criteria at any time. Commercial Farm PFAS Testing Reimbursement Program payments are subject to the availability of DACF's PFAS funding.

Contact DACF staff at pfas.dacf@maine.gov

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
BUREAU OF AGRICULTURE, FOOD & RURAL RESOURCES
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

APPLICATION FOR COMMERCIAL FARM PFAS TESTING REIMBURSEMENT

PRODUCER MUST COMPLETE ALL INFORMATION BELOW AND PROVIDE COPIES OF REQUIRED DOCUMENTATION

NAME OF PRODUCER: _____

NAME OF COMMERCIAL FARM: _____

MAILING ADDRESS: _____

STATE: _____ ZIP: _____ PHONE: _____ EMAIL: _____

BUSINESS THAT PERFORMED SAMPLING (insert N/A if self-tested):

_____

IF SELF-TESTED, DID YOU FOLLOW DEP'S WATER SAMPLING GUIDANCE: ☐ YES ☐ NO

LABORATORY USED:_____

NAME OF DACF STAFF PERSON FAMILIAR WITH FARM: _____

REASON FOR CONDUCTING PFAS TESTING (i.e., history of sludge application at farm)?

_____

_____

REIMBURSEMENT AMOUNT REQUESTED: $ _____

INFORMATION THAT MUST BE SUBMITTED WITH THIS APPLICATION

1. Test results from a laboratory certified by the State of Maine to perform PFAS analysis (list of certified labs available here: https://www.maine.gov/dhhs/mecdc/environmental-health/dwp/cet/documents/PFASlabs_04062023.pdf). NOTE: water sampling must be affiliated with water sources for farm usage.

2. Supporting documentation of the testing expenses, including:

    a. Copies of receipts;
    b. Itemized invoices; and
    c. Proof of payment.

3. A completed State of Maine Vendor Authorization Form, available here: https://www.maine.gov/osc/sites/maine.gov.osc/files/inline-files/vendor_ME_W9v5.pdf)

CRAIG LAPINE, BUREAU DIRECTOR
AGRICULTURE, FOOD & RURAL RESOURCES
90 BLOSSOM LANE, DEERING BUILDING

maine DEPARTMENT OF Agriculture Conservation & Forestry

PHONE: (207) 287-3491
FAX: (207) 287-7548
WWW.MAINE.GOV/DACF

I certify, under penalty of law, that the information given in this application is correct and completed to the best of my knowledge.

SIGNATURE : _____ DATE: _____

Send completed application and all required materials to: pfas.dacf@maine.gov or

PFAS Response program
Bureau of Agriculture, Food & Rural Resources
28 State House Station
Augusta, ME 04333-0028

Sampling Reimbursement Conditions

1. Maine Department of Environmental Protection (DEP) records indicated a historical record of sludge or septage spreading at the farm or spreading of Class A materials[1]; or
2. The farm received feed or other inputs (e.g., manure) from a farm known to DACF to have elevated PFAS levels or DEP records indicate the inputs are from a farm that spread sludge or septage; or
3. The farm is located near[2] a location where DEP records indicate sludge or septage was spread; and
4. Lab results from a Maine-accredited and DEP-accredited laboratory.[3]
5. The Department of Agriculture, Conservation and Forestry (DACF) reserves the right to review the invoices of third-party sampling contractors (if utilized) to assess billing rates and total charges and determine whether acceptable.
    a. DACF's experience with winter and spring soil sampling, when the ground is frozen or newly thawed, is that soil samples are extremely wet and sample results are unreliable as to accuracy. Therefore, soil sampling conducted when the soil is frozen or newly thawed will not have costs reimbursed.
6. The laboratory reimbursement amount is generally capped at a cost equal to DACF's standard rate from its contracted companies (e.g. $200-$450 per lab sample).

---

1 Biosolids are divided into "Class A" and "Class B" designations based on treatment methods set by Federal and state regulations. Class A biosolids are treated to a higher pathogen kill standard than Class B.

2 "Located near" may include but not be limited to an adjacent or abutting parcel, or where the farm is downgradient from the location where historic sludge or septage spreading was permitted, or where DEP advises hydrogeological attributes may indicate the potential for contaminated groundwater to impact the non-spread farm.

3 Based on producer feedback, DACF will no longer require that the self-tested sample results meeting the criteria listed above exceed state levels for PFAS in drinking water, beef, milk, or the CDC's crop specific soil screening levels.

IV. Concerning Test Results: Now What?

When an unsafe level of PFAS contamination is found in your farm's water, soil or products, DACF can provide technical and financial assistance to help prevent and/or mitigate the contamination's impact on farm products.

The discovery of PFAS on a farm is undeniably challenging, but with support, some farms can make adjustments that allow them to remain in business and ultimately produce safe food. Importantly, Maine has learned that PFAS does not have to mean the end of a farm.

A. Contamination – Understanding the Impact

1. Unsafe Levels of PFAS

With test results in hand, Maine's screening and action levels from Section II(C) can be referenced to obtain an initial understanding of the impacts to the farm.

Laboratory report details are explained by DEP:

Print Publication (included): ***How to Read and Interpret my PFAS Laboratory Data Report***

Website Link: How to Read and Interpret my PFAS Laboratory Data Report
Web Address: https://www.maine.gov/dep/spills/topics/pfas/PFAS-interpret-lab-report.pdf

DEP's contact information:

PFAS Laboratory Questions: Kelly Perkins, Chemist III, 207.641.9150 or kelly.perkins@maine.gov
General PFAS Inquiries: pfas.dep@maine.gov
Per- and Polyfluoroalkyl Substances (PFAS) page, Maine Department of Environmental Protection, PFAS section

2. Extent of Impact

The information and science of PFAS transfer factors from contaminated soil and groundwater to farm products is still in development, but the DACF Agricultural PFAS Specialists (APS) have been gathering data and developing broad understanding about impacts since investigations began in 2022. A transfer factor, or bioaccumulation factor, is the ratio of PFAS in the farm product of interest (such as edible plant parts or milk) compared to the contamination source medium (such as soil or forage). Additionally, toxicologists and research institutions throughout the world are studying transfer factors and the knowledge base has grown significantly and will continue to do so.

An initial conversational assessment, advice, and ideas about next steps can be accessed by contacting the DACF PFAS team: pfas.dacf@maine.gov and/or (207) 287-4514.

DACF Results Report – If a farm has chosen to work with DACF to characterize the amount and extent of contamination at the farm, the APS will put together a report that interprets test results and recommends steps to reduce the risk of product contamination. Potential mitigation strategies are site-specifically developed for the farm to incorporate. These recommendations typically involve adjustments to the farm's

management practices to the extent possible while still producing a safe end-product and are based on the specific contamination levels at that property.

B. Managing the First Couple of Weeks

If unsafe levels of contamination are found to affect a farm's products and the farm needs to change its operations in response, the next steps can be unclear. This guide outlines many of the considerations and resources that a farm may choose to utilize. First steps may include communicating with customers, seeking an administrative cost grant from DACF, and having a plan for publicity.

The discovery of PFAS on a farm is undeniably challenging, but with support, some farms can make adjustments that allow them to remain in business and ultimately produce safe food. Importantly, Maine has learned that PFAS does not have to mean the end of a farm.

1. PFAS Navigator Program

The PFAS Navigator Program connects farmers with technical, financial, and social assistance programs and resources throughout the PFAS discovery and recovery process. Program staff will be a "touch point" for farmers' questions and will also provide support to farmers as they navigate forms and applications for PFAS-related assistance programs. This is a voluntary, confidential, and no-cost program, managed by the University of Maine Cooperative Extension's Agricultural Mediator Program (MAMP) staff with funding from the PFAS Fund.

To connect with a Navigator or learn more about program services, please contact the Program Coordinator, Shiela Leonard, at um.PFASNavCoord@maine.edu or 207-955-1977 or visit: https://extension.umaine.edu/agriculture/agricultural-mediation/pfas-navigator-program/.

2. PFAS Fund Administrative Cost Grants

Upon the initial discovery of PFAS, a commercial farm that chooses to work with DACF staff to investigate the extent of contamination and its impact on the farm's products may be eligible for a one-time grant of $3,522. This grant is intended to partially compensate farms for time spent on activities common to most farms discovering PFAS contamination, such as working with DACF field staff, strategizing initial response steps, communicating with customers, arranging for new sources of feed, researching and applying for technical assistance, and similar actions in response to the new operational circumstances. Administrative Cost Grants are governed by rule 01-001 CMR c. 400 (2024).

Website Link: PFAS Assistance
Web Address: https://www.maine.gov/dacf/ag/pfas/pfas-assistance.shtml

Questions about administrative cost grants may be directed to Beth Valentine, PFAS Fund Director, at Beth.Valentine@maine.gov or 207-313-0962.

Eligibility

- ✓ Commercial farm
- ✓ DACF-confirmed unsafe levels of PFAS contamination in products, soil, or groundwater
- ✓ Agree to collaborate with DACF and grant access to the property for DACF to investigate and characterize the PFAS contamination, its source(s), extent and mitigation strategies.

Rule Download Link: Chapter 400 Administrative Cost Grants (DOCX)

Application

Printable Form (included): ***Application – Administrative Cost Grant***

Website Link: Master Application Section 2, Administrative Cost Grant (PDF)
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/application/2-administrative-cost-grants.pdf

3. Communicating with Customers

Communication with customers about steps the farm is taking to address this issue can help foster a greater level of trust in the farm's consumer products moving forward.

For livestock feed products, let your customers know about the presence of PFAS compounds in your farm's soil so that they can make an informed decision about how to use your hay or other forage to feed their herd. If they have specific questions, they can contact Maine DACF at pfas.dacf@maine.gov and/or (207) 287-4514.

University of Maine Cooperative Extension (UMaine Extension): Talking to Farm Customers About PFAS

UMaine Extension, within its overall website PFAS and the Maine Food System, includes a section that provides some basic information that can be shared with any customers that are not familiar with the PFAS issue.

Website Link: UMCE: Talking to Farm Customers About PFAS
Web Address: https://extension.umaine.edu/pfas/farm-customer-faq/

4. Public Relations

When facing a significant yet manageable challenge such as this, a prepared and organized approach to overall communication is best; below are a few questions, suggestions, and steps to consider.

Point Person

- Who will be the primary point of contact for inquiries about PFAS contamination?
- Will the same person be responsible for both internal and external communications (e.g., communications with employees versus communications with customers and the media)?
- Who will update your website or post information on social media?
- If an owner or manager is not comfortable being the point person (especially for media inquiries), consider asking whether a commodity group relevant to your business would be willing to field inquiries.

Modes of Communication

How will you reach your different audiences? Phone call? Email? Social media post? Announcement on your website? Press release?

Content for Press Release, Website Update, or Similar

This can be used for multiple requests from media and should be tailored slightly for specific media outlets.

- Prepare a written statement and review it with trusted staff and advisors. Allow plenty of time to write, proofread, and rewrite as needed. Include:
  - A brief description of the farm
  - A quote from the owner/farmer about the operations of the farm and the recovery of the farm in the face of PFAS contamination
  - A description of the work being done to recover from PFAS contamination
- Place the most important information in the first paragraph.
- Include contact information: name of primary point of contact, name of farm, website, email, phone number, social media links
- Craft a brief, clear, and to-the-point headline

Prepare a Public Relations Toolkit for Use Moving Forward

In addition to the Press Release or other content created as described above, this can include:

- Farm Fact Sheet – summarize a one-page overview of the farm, including the land use history of the farm, the current land use, key natural resources found on the farm, the size and age of the farm, and any other information that would best describe the farm and how it is managed; discuss the history of PFAS contamination and the efforts to recover from contamination; include owner names, farm name, address, phone, email, website, social media handles.
- Farmer Bio – write a brief overview of the farmer's background and experience; provide a quote that sums up the farming philosophy for media outlets to use; describe how PFAS has impacted the farm, life as a farmer, and what the future as a farmer looks like; briefly mention relevant information about farm workers.
- Index of Testimonials and Press Coverage – capture customer testimonials or reviews of your farm and products; maintain a list of press coverage of your farm with links to the articles and videos
- Photos – collect the best images that help illustrate the farm and the work that is done there; include photos of the progress made in recovering from PFAS contamination, if or when available.

Resources and Templates for Public Relations (PR) Toolkits

- FARM Media and Public Relations Tool Kit for Farmers - National Sustainable Agriculture Coalition: https://sustainableagriculture.net/take-action/farm-and-agriculture-resources-for-media-farm/farm-media-and-public-relations-tool-kit-for-farmers/
- Farm Fact Sheet Template: PressRoomTemplate-FactSheet.doc (live.com)
- Farmer Bio Template: PressKitTemplate-Bio.doc (live.com)
- Press Release Template: PressKitTemplate-PressRelease.doc (live.com)
- Real Maine Media Toolbox – Tips for busy farmers: your-real-maine-media-toolbox-june2020.pdf

C. Managing in the Short Term

Once a farmer has (i) taken initial steps to understand what their testing results mean, (ii) sought a grant from DACF to cover some of the administrative costs of the initial response, and (iii) formulated a way to talk to customers about the situation, the next steps will look different for vegetable/crop producers and those managing livestock.

1. Vegetable and Crop Producers

Depending on the season, the crops you grow, and your market, you may find limited options to mitigate contamination levels in your products in the short term. However, there are a few strategies that may be appropriate for your situation. Questions about the strategies below may be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795.

Water Deliveries

If your irrigation source is found to be impacting your products, DACF may be able to provide deliveries of clean water in the short term.

Product Testing

Depending on your specific contamination levels and what you are growing for vegetables, DACF may conduct additional sampling to determine the rate of transfer from your soil and/or irrigation water to that product.

Crop Selection

DACF may be able to assist you in identifying crops suitable for your contamination levels. Although this is not always a viable option to utilize in the short term, depending on the time of year and growing seasons, your market, etc., it can be useful in some situations.

2. Livestock Producers

Animals can gradually eliminate contamination from their body tissues (depurate) over time if the exposure routes can be identified and removed. It is important to work with DACF to understand the current level of contamination in your animals and what a reasonable timeline to bring them to safe levels

may be. The time required will vary from species to species, and may be different for individual age cohorts, as they will have received different levels of contamination during their lifespan.

United States Department of Agriculture (USDA) Farm Service Agency: Dairy Indemnity Payment Program (DIPP) for Milk

USDA's Dairy Indemnity Payment Program (DIPP) provides payments to dairy producers when a public regulatory agency directs them to remove their raw milk from the commercial market because it has been contaminated by pesticides, nuclear radiation or fallout or toxic substances and harmful chemical residues thereof. DIPP also provides cow indemnification to dairy producers when a public regulatory agency directs them to remove their raw milk from the commercial market because milk and dairy cows have been permanently contaminated.

DIPP payments for milk are based on the producer's average daily production during a specified base period (the calendar month immediately before the month the milk is removed from the commercial market). DIPP cow indemnity payments are paid on 100% of fair market value according to the Livestock Indemnity Program pay rate for the application claim year.

DIPP payments need to be approved at the national level. USDA strives to make payments within 30-45 days of receiving a completed application.

For more information, contact your local service center.

Web Link: USDA – Find Your Local Service Center
Web Address: https://www.farmers.gov/working-with-us/service-center-locator

Clean Feed Assistance

DACF PFAS Response can provide clean feed financial support if it determines, based on available farm data, that clean feed is necessary for the health and welfare of livestock and/or to achieve depuration goals in the absence of available clean feed from the farm. Clean feed includes organic and conventional feedstock.

Questions about clean feed assistance may be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795.

Eligibility

- ✓ Commercial farm
- ✓ DACF-confirmed unsafe levels of PFAS contamination in products, soil, or groundwater
- ✓ Agree to collaborate with DACF and grant access to the property for DACF to investigate and characterize the PFAS contamination, its source(s), extent, and mitigation strategies.

Application

Printable Form (included): ***Application – Clean Feed Assistance***

Website Link: Master Application Section 5, Clean Feed Assistance (PDF)
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/application/5-clean-feed-assistance.pdf

Clean Agricultural Water

Farm well water exceeding Maine's interim drinking water standard may or may not be acceptable for farm product use. DACF specialists can provide guidance specific to your farm's situation.

A Farm Water Treatment Program provided by DACF PFAS Response is included in Section V(A).

Payments for Livestock Depopulation

Although the use of clean feed to depurate (decontaminate) livestock can be useful on some farms, greater levels of PFAS contamination on others can make depuration infeasible. Animals may be contaminated at levels that are extremely difficult to depurate in a timely or economically feasible manner. Depending on the time required to reduce their contamination levels, you may also face space or other management challenges jeopardizing the welfare of your animals. In some instances, DACF will work closely with you to discuss these concerns, and it may be determined that it is in the best interest of the farm to humanely euthanize the impacted animals.

UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) FARM SERVICE AGENCY: DAIRY INDEMNITY PAYMENT PROGRAM (LIVESTOCK DEPOPULATION)

Dairy producers are eligible to receive a payment from USDA's Farm Service Agency (FSA) for the value of dairy cows that have been humanely euthanized because of contamination, including PFAS contamination. To learn more or to participate in DIPP, contact your local USDA Service Center or email Amanda May, Agricultural Program Specialist at Amanda.May@usda.gov.

Web Publication: ***Dairy Indemnity Payment Program Expanded to Assist with Livestock Losses due to Contamination***

Website Link: Dairy Indemnity Payment Program Expanded to Assist with Livestock Losses due to Contamination
Web Address: https://www.fsa.usda.gov/state-offices/Maine/news-releases/2021/dairy-indemnity-payment-program-expanded-to-assist-with-livestock-losses-due-to-contamination

DACF PFAS RESPONSE PAYMENTS FOR LIVESTOCK DEPOPULATION

DACF Response provides compensation for the value of those animals, with rates set by the United States Department of Agriculture (USDA). Note that DACF's funding may not cover dairy cows, as dairy producers who participate in the USDA's separate Dairy Indemnity Payment Program (DIPP, outlined above) will have the ability to seek such assistance under that program.

For questions about livestock depopulation, email pfas.dacf@maine.gov.

Print Publication (included): ***Commercial Farm PFAS Livestock Depopulation Payments***

Website Link: Commercial Farm PFAS Livestock Depopulation Payments
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/commercial-farm-pfas-livestock-depopulation-guidance-83122.pdf

Eligibility

- ✓ Commercial farm

- ✓ DACF-confirmed unsafe levels of PFAS contamination in products and groundwater
- ✓ Agreement to take cooperative management steps, to allow DACF to depopulate the animals and provide compensation, and for producer to pay all related taxes and any outstanding financial security obligations on the animals.

3. Moving Forward

Many assistance programs exist to help impacted farmers move through tough transitions and make necessary changes. Depending on the farm's needs, many available forms of assistance may be applicable. DACF and partner organizations, such as MOFGA/MFT and UMaine, are here to support you through this challenging process. In addition, the following sections provide tips and detail support you may access as you work toward longer term transitioning.

- Income Replacement

First, impacted farmers should be aware of the availability of income replacement from the PFAS Fund, its eligibility and documentation requirements as detailed in Section V(F). In addition to the Administrative Cost Grants already discussed in Section IV(B), this type of grant can help a farm with a bridge to regain sustainable viability.

After the sections focusing on farm assistance, there are also resources included in this Response Kit about:

- VI. Legal Services

Lists several resources for help with any and all legal questions, concerns, documents, etc.

- VII. Mental Health

Farming can be a high-stress profession. The discovery of PFAS contamination and related concerns about health effects, financial stability, and an uncertain future can amplify stress and anxiety. The PFAS Fund will develop a program to support access to mental health services for impacted farmers. For now, this section provides information about existing mental health resources, wellness tips, effects of stress and anxiety, and warning signs of more concerning situations.

- VIII. Physical Health

This section provides publications to help you understand exposures and ways to protect your health.

- IX. Research

The DACF PFAS Fund will establish a competitive research grant program. Funding will be directed toward research projects that have a strong likelihood of producing results that will help commercial famers make informed decisions about how to utilize agricultural property impacted by PFAS. The PFAS Fund will begin soliciting grant proposals in 2024.

IV. Concerning Test Results: Now What

Section IV Publication Attachments

How to Read and Interpret my PFAS Laboratory Data Report

Laboratory data reports may at first seem difficult to read and interpret. Although required information is included in the report, each laboratory may present the information in differing ways. In general, each laboratory report must include a cover page, a list defining abbreviations used in the report, a summary of issues that the laboratory may have had during sample analysis, a report of sample results including dates and times of sample collection, sample receipt, sample preparation and analysis, several sections summarizing laboratory quality control measurements, and a copy of the chain of custody form and related sample receipt documentation.

Result = The concentration of the compound detected

This number is compared to Maine's Interim Drinking Water Standard, which is currently 20 parts per trillion

Example Report of Sample Results:

Parameter	Result	Units	Qualifier	RL	MDL	Dilution Factor
Perfluorooctanoic Acid (PFOA)	21.2	ng/L		1.95	0.230	1
Perfluorooctane Sulfonic Acid (PFOS)	ND	ng/L	U	1.95	0.491	1

ND = Non-Detect

ND means the compound was not detected at a level high enough for the laboratory equipment to detect

RL = Reporting Limit

The RL is the limit to which the laboratory equipment can reliably report under normal laboratory conditions

MDL = Method Detection Limit

The MDL is the lowest concentration that the laboratory test equipment can detect a contaminant

Note: ng/L = Nanograms per liter or parts per trillion (ppt)

Laboratory Quality Control

A testing laboratory is required to implement a series of practices to ensure that results generated during the testing of samples are accurate and complete. Each laboratory report will include several pages of quality control information. This information can easily be confused with actual sample results. Actual sample results will be labelled as such and include a specific sample identification number, client identification number, and sample location. Quality control data will include terminology such as method blank analysis, batch quality control, lab quality control analysis, matrix spike analysis, and lab duplicate analysis. Each laboratory report is reviewed by qualified DEP staff prior to sending you the data to ensure that the data are of high quality and dependable. If not, DEP staff may ask to repeat the sampling and testing.

Common Laboratory Data Qualifiers

Each laboratory report should include a list defining abbreviations used in the report. Laboratories do not all use the same abbreviations, so it is important to check the list included in the report. The most common abbreviations, called data qualifiers, used by a laboratory are as follows:

Qualifier	Definition
B	The compound was detected in a blank sample. This is a quality control measure that defines whether there is uncertainty in the source of contamination. B qualifiers indicate the sample result may be biased high.
U	The compound was not detected at a level greater than the laboratory method detection limit (MDL).
J	The compound was detected at a level greater than the laboratory MDL and less than the reporting limit. J qualifiers indicate an unknown bias to the sample result.
E	The compound was detected at a level that exceeded the laboratory instrument calibration curve. E qualifiers generally indicate a low bias to the sample result. Compounds with an E qualifier will have another result reported for a diluted analysis to bring the compound within the laboratory calibration curve. This result is generally on a subsequent page in the report.
F, Q or I	F, Q or I qualifiers generally indicate a high bias to the sample result and the reported result should be considered a maximum concentration.

How is the Sum of 6 Calculated?

In June 2021, the Department began applying an interim standard of 20 ppt (ng/L) for the sum of 6 PFAS in drinking water. These compounds are PFOA, PFOS, PFNA, PFHpA, PFHxS and PFDA.

Results above the reporting limit are used in the calculation as reported in the laboratory report. Results reported with a "J" qualifier are below the reporting limit and above the laboratory method detection limit (MDL) and are used in the calculation as shown in the laboratory report. Non-detect (ND) results are below the laboratory MDL, and a value of zero is used in the calculation.

The table below illustrates how the Sum of 6 is calculated:

Compound	Result from Lab Report (ng/L)	Qualifier	Reporting Limit (ng/L)	Result used in Calculation (ng/L)
PFOA	170		1.8	170
PFOS	185	B	1.8	185
PFNA	10		1.8	10
PFHpA	142		1.8	142
PFHxS	0.242	J	1.8	0.242
PFDA	ND	U	1.8	0
			Calculated Sum of 6	**507**

Where can I find more information?

PFAS Laboratory Questions:

Kelly Perkins, Chemist III - (207) 641-9150 or kelly.perkins@maine.gov

General PFAS Inquiries: pfas.dep@maine.gov

Maine DEP PFAS webpage: www1.maine.gov/dep/spills/topics/pfas/index.html

Date of Application: _____

Section 2. Administrative Cost Grant

Upon the initial discovery of PFAS, a commercial farm that chooses to work with DACF staff to investigate the extent of contamination and its impact on the farm's products may be eligible for a one-time grant of $3,522. This grant is intended to partially compensate farms for time spent on activities common to most farms discovering PFAS contamination, such as working with DACF field staff, strategizing initial response steps, communicating with customers, arranging for new sources of feed, researching and applying for technical assistance, and similar actions in response to the new operational circumstances. Administrative Cost Grants are governed by rule 01-001 CMR c. 400 (2024).

Questions about administrative cost grants may be directed to Beth Valentine, PFAS Fund Director, at Beth.Valentine@maine.gov or 207-313-0962.

Required Documentation – Section 2

The following information must be submitted with this Section of the application:

A. Section 1. Applicant General Information with all specified attachments, including a narrative statement.

Additional Information Requested – Section 2

1. Date of initial meeting with DACF staff: _____
2. Topics discussed:

3. Next steps identified:

4. Other assistance the farm is considering or is applying for:

Date of Application: _____

Application Review – Section 2

Applications for administrative cost grants will be reviewed by DACF's PFAS Fund Director. The Director may request input from members of the DACF PFAS Response Program, including Agricultural PFAS Specialists (APS) and specialized consultants acting on the Program's behalf and that have worked with the farm and have knowledge of the applicant's operations. DACF will rely on all available information about the farm to assess the request. DACF reserves the right to request any additional supporting documentation that is necessary to evaluate the request for assistance. Decision-making authority rests with the PFAS Fund Director.

Signature Block – Section 2

I certify that the information given in this Administrative Cost Grant application is correct and complete to the best of my knowledge.I acknowledge that payments may represent reportable income for tax purposes.

Applicant's Signature	Date
Applicant's Name (printed)	Title
Applicant's Signature	Date
Applicant's Name (printed)	Title

Please complete if someone assisted the applicant to complete this form:

Preparer Name (If not applicant)	Preparer's relationship to applicant

Permission to discuss application with Preparer: ☐ YES ☐ NO

Date of Application: _____ Farm Name: _____

Section V. Clean Feed Assistance

DACF can provide clean feed financial support if it determines, based on available farm data, that clean feed is necessary for the health and welfare of livestock and/or to achieve depuration goals in the absence of available clean feed from the farm. Clean feed includes organic and conventional feedstock.

Questions about clean feed assistance may be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795.

Documents to Attach and Submit with Section V:

The following information must be submitted with this Section of the application:

A. Section I. Applicant General Information with all specified attachments

B. An estimate, invoice, or receipt from a product provider describing product, source, and amount

C. Updated Herd List, including number of pregnancies

D. Current inventory of feed available at the farm, including sources

E. If requesting a direct reimbursement, provide proof of payment

F. PFAS test results from clean feed product provider, if available

G. Any additional supporting documentation requested by DACF that DACF determines is necessary to review the request for feed.

Please provide the following information:

FEED TYPE AND VOLUME OF FEED NEEDED:

_____

_____

ESTIMATE OF HOW LONG THIS PURCHASE OF FEED WILL PROVIDE FOR YOUR HERD:

_____

TOTAL AMOUNT OF SUPPORT REQUESTED: $_____

Has the clean feed provider conducted PFAS testing on its feed and/or soil? ☐ YES ☐ NO

Payment Options – please check which one is requested:

☐ DACF reimburses the applicant for approved project costs

☐ DACF contracts with and pays applicant's approved vendors/contractors

☐ DACF reimburses a nonprofit for payment of approved project costs made on the applicant's behalf

Signature Block

I certify that the information given in this Clean Feed Assistance application is correct and complete to the best of my knowledge.

I acknowledge that payments may represent reportable income for tax purposes.

Applicant's Signature	Date
Applicant's Name (printed)	Title
Applicant's Signature	Date
Applicant's Name (printed)	Title

Please complete if someone assisted the applicant to complete this form:

Preparer Name (If not applicant)	Preparer's relationship to applicant

Permission to discuss application with Preparer: ☐ YES ☐ NO

Clean Feed Assistance Application Review

Payment is subject to factors including herd size, contamination level, projected depuration timeframe, volume of feed needed over what time period, price (including transport and delivery), ability of farm to raise clean feed in the future, and PFAS-free status of replacement feed.

DACF will consider the total cost and whether the clean feed is essential to the viability of the farm. This could include the likelihood of success or return on investment and other relevant factors.

Other criteria for consideration include: total cost, timing, alternative options, level of risk, producer's demonstrated lack of available financial capacity, number of other requests for DACF support by other producers.

DACF reserves the right to cap the amount of funding for all requests based on available resources and other factors.

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
BUREAU OF AGRICULTURE, FOOD & RURAL RESOURCES
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

COMMERCIAL FARM PFAS LIVESTOCK DEPOPULATION PAYMENTS

The Department of Agriculture, Conservation and Forestry (DACF) will work with commercial farms raising livestock found to be contaminated with PFAS in an effort to depurate (reduce) contamination levels. However, in some instances this effort may not be expected to be successful in a timely or economically feasible manner. In these cases, DACF may recommend humane euthanasia of impacted animals. Factors the DACF will consider in making that recommendation include but are not limited to: level of PFAS contamination at the farm across media (soil, water, feed, animals); farm management capacity to obtain and maintain clean feed and water; and ability to maintain acceptable animal health and welfare, as determined by state animal health officials, during the depuration process. In recognition of the loss of the value of these important and valued animals to the farm's operations, compensation may be available. Note that DACF may recommend that dairy farms (cows) who are receiving Dairy Indemnification Payment Program (DIPP) payments from USDA's Farm Service Agency pursue depopulation assistance via that program.

What are the requirements? ?

1. You must be a commercial farm that has DACF-confirmed unsafe levels of PFAS contamination.
    a. A water test result of 20 ppt or higher for wells servicing the farm or fields **and**
    b. One or more samples of farm products showing PFAS at levels deemed of concern by the Maine CDC.
2. DACF will document the level of contamination, the basis for its recommendation, and requirements in a letter where the producer agrees to allow DACF to depopulate the animals. The requirements include:
    a. Producer management steps, i.e., conducting real-time inventories of animals
    b. Instructions that the producer must pay all relevant taxes and satisfy any outstanding financial security obligations on those animals that may result due to receipt of a payment by DACF.

What costs are covered? $

1. The value of the animals will be determined utilizing an established USDA indemnification calculator.
    a. Currently, DACF is utilizing the USDA's Veterinary Services Center for Animal Epidemiology and Health's Indemnity Calculator.

What else is needed?

1. An Agreement Letter signed by the producer.
2. A completed State of Maine Vendor Authorization form.

DACF reserves the right to amend program parameters and criteria at any time. Commercial Farm Livestock Depopulation Program payments are subject to the availability of DACF's PFAS funding.

Contact DACF staff at pfas.dacf@maine.gov

maine DEPARTMENT OF Agriculture Conservation & Forestry

V. Planning & Transitioning for the Long Term

The discovery of PFAS on a farm is undeniably challenging, but with support, some farms can make adjustments that allow them to remain in business and ultimately produce safe food. Importantly, Maine has learned that PFAS does not have to mean the end of a farm.

A. Water Treatment

1. Farm Well Water

DACF PFAS Response can provide a water filtration system for farm water (not residential water; Maine DEP handles residential water systems) if it determines, based on available farm data, that a system is necessary for safe farm products. Support includes yearly maintenance, testing, and replacement parts, until funding is no longer available.

Questions about farm water assistance may be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795.

Print Publication (included): ***PFAS Response Commercial Farm Water Treatment Program Guidance***

Website Link: Additional DACF Financial Assistance
Web Address: https://www.maine.gov/dacf/ag/pfas/pfas-assistance.shtml#additionalfunding

2. Residential Well Water

Maine DEP: Where residential drinking water wells exceed Maine's interim drinking water standard for the sum of 6 PFAS (PFOA, PFOS, PFNA, PFHxS, PFHpA, and PFDA), and contamination is likely due to the land application of sludge or septage, DEP will work with homeowners to ensure that they have clean water to drink. In these circumstances, DEP will provide homeowners with bottled water until a filtration system can be installed and determined to be effective.

Frequently Asked Questions (FAQs) addresses where DEP tests water wells and why, considerations for sampling your own water supply, and information about DEP's installation of water filtration systems.

Web Publication: ***DEP PFAS Landing Page: FAQs***

Website Link: DEP PFAS Landing Page: FAQs
Web Address: https://www.maine.gov/dep/spills/topics/pfas/ (scroll to bottom of page)

B. Business Planning

A long-term vision, supported by market and supply research and profit projections, can not only help a farm move in the right direction in response to PFAS, but it can also help the farm apply for big-picture financial assistance programs.

Local business mentors are available free of charges to assist in planning:

Web Publication: ***Get Free Business Advice from a SCORE Mentor***

Website Link: Get Free Business Advice from a SCORE Mentor
Web Address: https://www.score.org/find-mentor

The University of Maine Cooperative Extension's Farm Coaching team has a suite of online resources for farmers to access.

Web Publication: ***Maine Farmer Resource Network: Farm Coaching***

Website Link: Maine Farm Coaching
Web Address: https://extension.umaine.edu/maine-farmer-resource-network/farm-coaching-supporting-relationships-for-farm-success/

Additionally, a program for Personal and Financial Health and Communication in 2024 is open to mid to late career farmers and farm teams in Maine with at least five years' experience. As farm businesses grow beyond start-up and move into the "re-strategizing phase," risks become more complex. What worked in the beginning requires culling and refinement as the business grows.

1. Business Plan Resources

Several resources are available to help farmers understand the elements of a good business plan. Below is an outline of elements and aspects of a farm business plan as provided by the USDA, an updated general business plan template from SCORE, and a few specific agricultural business plan examples from Oregon State.

Web Publication: ***USDA – How to Start a Farm: Plan Your Operation***

Includes a step-by-step business planning tool, information about special considerations and additional resources.

Website Link: USDA – How to Start a Farm: Plan Your Operation
Web Address: https://www.farmers.gov/your-business/beginning-farmers/business-plan

Content from this site includes the below business plan outline elements:

BUILD A FARM BUSINESS PLAN

These six categories can be utilized as section headings in a business plan. The USDA website also provides financial worksheets and other resources for organic, urban, value-added and cooperative farm business considerations.

BUSINESS HISTORY

Are you starting a new farm or ranch, or are you already in business? If you are already in business:

- What products do you produce?
- What is the size of your operation?
- What agricultural production and financial management training or experience do you, your family members, or your business partners have?
- How long have you been in business?

MISSION, VISION, AND GOALS

This is your business. Defining your mission, vision and goals is crucial to the success of your business. These questions will help provide a basis for developing other aspects of your business plan.

- What values are important to you and the operation as a whole?
- What short- and long-term goals do you have for your operation?
- How do you plan to start, expand, or change your operation?
- What plans do you have to make your operation efficient or more profitable?
- What type of farm or ranch model (conventional, sustainable, organic, or alternative agricultural practices) do you plan to use?

ORGANIZATION AND MANAGEMENT

Starting your own business is no small feat. You will need to determine how your business will be structured and organized, and who will manage (or help manage) your business. You will need to be able to convey this to others who are involved as well.

- What is the legal structure of your business? Will it be a sole proprietorship, partnership, corporation, trust, limited liability company, or other type of entity?
- What help will you need in operating and managing your farm or ranch?
- What other resources, such as a mentor or community-based organization, do you plan to use?

MARKETING

Marketing is a valuable tool for businesses. It can help your businesses increase brand awareness, engagement and sales. It is important to narrow down your target audience and think about what you are providing that others cannot.

- What are you going to produce?
- Who is your target consumer?
- Is there demand for what you are planning to produce?
- What is the cost of production?
- How much will you sell it for and when do you expect to see profit?
- How will you get your product to consumers? What are the transportation costs and requirements?
- How will you market your products?
- Do you know the relevant federal, state, and local food safety regulations? What licensing do you need for your operation?

OPERATION

Today there are many types of land, tools, and resources to choose from. You will need to think about what you currently have and what you will need to obtain to achieve your goals.

- What resources do you have or will you need for your business?
- Do you already have access to farmland? If not, do you plan to lease, rent, or purchase land?
- What equipment do you need?
- Is the equipment and real estate that you own or rent adequate to conduct your operation? If not, how do you plan to address those needs?
- Will you be implementing any conservation practices to sustain your operation?
- What types of workers will you need to operate the farm?
- What additional resources do you need?

FINANCIAL

Now that you have an idea of what you are going to provide and what you will need to run your operation you will need to consider the finances of your operation.

- How will you finance the business?
- What are your current assets (property or investments you own) and liabilities (debts, loans, or payments you owe)?
- Will the income you generate be sufficient to pay your operating expenses, living expenses, and loan payments?
- What other sources of income are available to supplement your business income?
- What business expenses will you incur?
- What family living expenses do you pay?
- What are some potential risks or challenges you foresee for your operation? How will you manage those risks?
- How will you measure the success of your business?

Web Publication: ***SCORE – Business Plan Template for a Startup Business***

This is a general business template download, not specifically tailored for farms:

Website Link: SCORE – Business Plan Template for a Startup Business
Web Address: https://www.score.org/resource/template/business-plan-template-a-startup-business
Document Download: SCORE – Startup Business Plan Template (Updated June 23, 2024)

Web Publication: ***Oregon State Univ. College of Agricultural Sciences: Sample Business Plans***

Links to specific examples of different farm business plans:

Website Link: Oregon State Univ. College of Agricultural Sciences: Sample Business Plans
Web Address: https://smallfarms.oregonstate.edu/smallfarms/sample-business-plans

2. Business Planning Financial Assistance

DACF provides business planning support as one of the services available through the PFAS Fund.

Eligibility

- ✓ Commercial farm
- ✓ DACF-confirmed unsafe levels of PFAS contamination in products, soil, or groundwater
- ✓ Agree to collaborate with DACF and grant access to the property for DACF to investigate and characterize the PFAS contamination, its source(s), extent and mitigation strategies.

Rule Link: Chapter 402 Support for No Cost Technical Assistance (PDF)

Application

Printable Form (included): ***Application – Technical Assistance / Professional Services***

Website Link: Master Application Section 4, Technical Assistance / Professional Services (PDF)
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/application/4-technical-assistance.pdf

3. Maine Farms for the Future Program[8]

The Maine Farms for the Future Program[9] is a competitive grant program that provides selected farms with business planning assistance and investment support.

The goal is to provide grants to for farm business owners to conduct research and strategic business planning on their "Ideas for Change" that might increase Farm Vitality, which is defined as, "an increase in long-term, maintainable, farm profitability and net worth."

Website: Maine Farms for the Future Program
Web Address:
https://www.maine.gov/dacf/ard/business_and_market_development/farms_for_future/index.shtml

C. Assistance for Professional Services

1. No-Cost Technical Assistance / Professional Services

In addition to business planning, the PFAS Fund can support other forms of technical assistance. Eligible producers may work with service providers to obtain expert advice, estimates, drawings, plans, research, and technical or professional assistance related to modifying their operations in response to PFAS contamination. Service providers may be marketing consultants, accounting firms, farm and/or business support organizations, engineering firms, law firms, and other organizations that DACF determines may

[8] Found at: https://www.maine.gov/dacf/ard/business_and_market_development/farms_for_future/index.shtml; last visited January 12, 2024.
[9] https://www.maine.gov/dacf/ard/business_and_market_development/farms_for_future/index.shtml

provide valuable services that support sustained farm viability. Technical Assistance is governed by rule 01-001 CMR c. 402 (2024).

Questions about no-cost technical assistance may be directed to Beth Valentine, PFAS Fund Director, at Beth.Valentine@maine.gov or 207-313-0962.

Eligibility

- ✓ Commercial farm
- ✓ DACF-confirmed unsafe levels of PFAS contamination in products, soil, or groundwater
- ✓ Agree to collaborate with DACF and grant access to the property for DACF to investigate and characterize the PFAS contamination, its source(s), extent and mitigation strategies.

Rule Link: Chapter 402 Support for No Cost Technical Assistance (PDF)

Application

Printable Form (included): ***Application – Technical Assistance / Professional Services***

Website Link: Master Application Section 4, Technical Assistance / Professional Services (PDF)
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/application/4-technical-assistance.pdf

2. MFT/MOFGA Tax Preparation Support

Publication Website: ***PFAS Emergency Relief Fund***

Website Link: PFAS Emergency Relief Fund
Web Address: https://www.mofga.org/pfas/pfas-emergency-relief-fund/

Farms that have received funding from DACF, the Maine PFAS Fund and/or the Maine Farm Emergency Relief Fund for PFAS face new tax implications as a result. MOFGA and MFT are able to provide financial support to these farms to navigate the implications of their participation in PFAS-related support programs.

The funds are used to directly pay a tax advisor or reimburse a farmer for tax advice or preparation services related to their participation in PFAS financial support programs.

Eligibility

- ✓ Farms have participated in the Maine Farm Emergency Relief Fund (MFEF) for PFAS income replacement or infrastructure programs or received equivalent types of funding from State of Maine programs. Participants in the MFEF testing and mental health programs alone are not eligible for support.

Application

Online Form: ***Tax Preparation Reimbursement for farmers participating receiving PFAS support***

Website Link: Tax Preparation Reimbursement for farmers participating receiving PFAS support
Web Address: https://docs.google.com/forms/d/e/1FAIpQLSeKwvDjn0PZ8sL2iJ52-yjBSvFR-1gCL3faiJhdBjXOdyaR4A/viewform

D. Equipment and Input Cost Assistance

A farm proposing to convert its operations to accommodate new products and production methods can apply for funding for equipment and related input costs necessary to enable this change. This can include input costs (such as new seed stock) or equipment for the successful planting, harvesting, handling, processing, or packaging of the resulting product. Larger investment proposals may require a business plan to demonstrate the viability of the project.

Questions about equipment and input costs may be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795.

Eligibility

- ✓ Commercial farm
- ✓ DACF-confirmed unsafe levels of PFAS contamination in products, soil, or groundwater
- ✓ Agree to collaborate with DACF and grant access to the property for DACF to investigate and characterize the PFAS contamination, its source(s), extent and mitigation strategies.

Application

Printable Form (included): ***Application – Equipment and Input Costs***

Website Link: Master Application Section 6, Equipment and Input Costs
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/application/6-equipment-and-inputs.pdf

E. Infrastructure Grants

Commercial farms that have DACF-confirmed unsafe levels of PFAS may apply to DACF for grant funding for infrastructure projects that will help the commercial farm transition to new production methods or new types of production. Infrastructure grants are governed by rule 01-001 CMR c. 403 (2024).

Questions about infrastructure projects valued up to $150,000 may be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795. Questions about infrastructure projects valued above $150,000 may be directed to Beth Valentine, PFAS Fund Director, at Beth.Valentine@maine.gov or 207-313-0962.

Eligibility

- ✓ Commercial farm
- ✓ DACF-confirmed unsafe levels of PFAS contamination in products, soil, or groundwater
- ✓ Agree to collaborate with DACF and grant access to the property for DACF to investigate and characterize the PFAS contamination, its source(s), extent and mitigation strategies.

PFAS Fund Rule Link: Chapter 403 Infrastructure (PDF)

Application

Printable Form (included): ***Application – Infrastructure Grants***

Website Link: Master Application Section 7, Infrastructure (PDF)

Web Address: https://www.maine.gov/dacf/ag/pfas/docs/application/7-infrastructure.pdf

F. Income Replacement

1. PFAS Fund

Commercial farms that stop selling some or all products due to PFAS contamination may apply to the DACF for up to a total of 24 months of lost income, adjusted for inflation.

Assistance is based on actual losses. Farms must provide evidence of amount of actual loss with the specified financial records. Income Replacement is governed by rule 01-001 CMR c. 401 (2024).

Farms that anticipate losses while transitioning the business management or approach in response to PFAS should keep excellent financial records for a potential future application.

Questions about income replacement may be directed to Beth Valentine, PFAS Fund Director, at Beth.Valentine@maine.gov or 207-313-0962.

Eligibility

- ✓ Commercial farm
- ✓ DACF-confirmed unsafe levels of PFAS contamination in products, soil, or groundwater
- ✓ Agree to collaborate with DACF and grant access to the property for DACF to investigate and characterize the PFAS contamination, its source(s), extent and mitigation strategies.
- ✓ ADDITIONAL ELIGIBILTIY TERMS ARE DESCRIBED IN THE APPLICATION

Rule Link: Chapter 401 Income Replacement (PDF)

Application

Printable Form (included): ***Application – Income Replacement***

Website Link: Master Application Section 3, Income Replacement (PDF)
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/application/3-income-replacement.pdf

G. Debt Service on Existing Loans

DACF PFAS Response: Farms may have made recent structural investments or taken on equipment loans that, absent PFAS, would likely have enhanced operations and/or increased sales. Examples may include but not be limited to a new high-tunnel, greenhouse, farm store, milking parlor, or barn. Although DACF offers Income Replacement payments, if the anticipated return on investment had not yet been realized when PFAS were discovered, the farm is likely to have difficulty making timely and/or full payments on these notes regardless of receiving Income Replacement assistance.

DACF can review farm finances and other information and, depending on the circumstances, may pay notes directly related to farm infrastructure built and/or installed generally within two to five years prior to the discovery of PFAS contamination.

Questions about debt service on existing loans may be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795.

Eligibility

- ✓ Commercial farm
- ✓ DACF-confirmed unsafe levels of PFAS contamination in products, soil, or groundwater
- ✓ Agree to collaborate with DACF and grant access to the property for DACF to investigate and characterize the PFAS contamination, its source(s), extent and mitigation strategies.

Application

Printable Form (included): ***Application – Debt Service on Existing Loans***

Website Link: Master Application Section 8, Debt Service on Existing Loans (PDF)
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/application/8-debt-service.pdf

H. New Loan Assistance

PFAS Fund: Commercial farms that have DACF-confirmed unsafe levels of PFAS may apply to DACF for assistance covering the cost of obtaining a guaranteed loan, commercial loan insurance, or environmental site assessments required by a lending institution when a new loan is necessitated by the discovery of PFAS contamination on the commercial farm and the new loan is related to the farm business. New Loan Assistance is governed by rule 01-001 CMR c. 404 (2024).

Questions about new loan assistance may be directed to Beth Valentine, PFAS Fund Director, at Beth.Valentine@maine.gov or 207-313-0962.

Eligibility

- ✓ Commercial farm
- ✓ DACF-confirmed unsafe levels of PFAS contamination in products, soil, or groundwater
- ✓ Agree to collaborate with DACF and grant access to the property for DACF to investigate and characterize the PFAS contamination, its source(s), extent and mitigation strategies.

Rule Link: Chapter 404 Loan Assistance (PDF)

Application

Printable Form (included): ***Application – New Loan Assistance***

Website Link: Master Application Section 9, New Loan Assistance (PDF)
Web Address: https://www.maine.gov/dacf/ag/pfas/docs/application/9-new-loans.pdf

I. USDA FSA Loans

The Farm Service Agency offers loans to help farmers and ranchers get the financing they need to start, expand or maintain a family farm.

At this site, farmers can use the Loan Assistance Tool to check your eligibility for FSA Loans, discover FSA loan types, learn about FSA Loan requirements, and walk through the easy-to-understand instructions when completing the forms.

Publication Website: ***Farm Loan Programs***

Website Link: USDA FSA Farm Loan Programs
Web Address: https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/index

J. USDA FSA Conservation Reserve Program

The Conservation Reserve Program (CRP)is a land conservation program administered by the Farm Service Agency (FSA). In exchange for a yearly rental payment, farmers enrolled in the program agree to remove environmentally sensitive land from agricultural production and plant species that will improve environmental health and quality. Contracts for land enrolled in CRP are from 10 to 15 years in length. The long-term goal of the program is to re-establish valuable land cover to help improve water quality, prevent soil erosion, and reduce loss of wildlife habitat.

Publication Website***: Conservation Reserve Program***

Website Link: Conservation Reserve Program
Web Address: https://www.fsa.usda.gov/programs-and-services/conservation-programs/conservation-reserve-program/index

K. Sale of Land

To assist farmers who wish to sell their contaminated property, the PFAS Fund will purchase eligible properties at the fair market value as if there were no PFAS contamination. To be eligible, a property must be a commercial farm that has confirmed contamination and has partnered with DACF to investigate the extent of PFAS contamination. Additionally, the current landowner(s) must have owned the real estate prior to the discovery of PFAS (with two narrow exceptions). Once acquired by the State, these properties will be managed with a long-term goal of returning the land to agricultural production whenever possible.

Rule Link: Chapter 405 Real Estate Purchases (PDF)

Printable Form (included): ***Land Acquisition and Stewardship Inquiry & Information Form***

Website Link: PFAS Fund: Land Acquisition and Stewardship
Web Address: https://www.maine.gov/dacf/ag/pfas/pfas-assistance.shtml#pfasfund

V. Planning & Transitioning for the Long Term

Section V Publication Attachments

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
BUREAU OF AGRICULTURE, FOOD & RURAL RESOURCES
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

COMMERCIAL FARM PFAS WATER TREATMENT PROGRAM

Currently, the most effective means for providing clean water where groundwater is impacted by PFAS is through installation of an on-farm water filtration system. This technology removes PFAS chemicals to safe drinking water standards, currently set at 20 parts per trillion (ppt) by state law. The size and scope of the system needed depends on daily water usage and the level of contamination. The Department of Agriculture, Conservation and Forestry (DACF) is prepared to help cover the costs of these systems for farm operations, plus yearly maintenance and repair parts, if a filtration system is deemed necessary. Alternative options will also be considered as necessary.

What are the requirements? ?

1. You must be a commercial farm that has DACF-confirmed unsafe levels of PFAS contamination.
    a. A water test result of 20 ppt or higher for wells servicing the farm or fields **and**
    b. One or more samples of farm products showing PFAS exceeding current action levels or at levels deemed of concern by the Maine CDC.

What costs are covered? $

1. The installation of a water filtration system of appropriate size and design for the farm. DACF will directly contract with experienced water treatment consultants to ensure that an appropriately sized and designed system is selected and installed.
2. Ongoing water testing and maintenance costs, including replacement parts, until such time as DACF funding is not available.
    a. For installations done prior to DACF involvement, reimbursement is possible but will have maximum limits.

What needs to be submitted?

1. If the system will be installed by DACF:
    a. DACF will communicate with the farm regarding their water usage and other specific factors.
    b. Once a filter system and plan are confirmed, a Water Filtration Agreement that establishes expectations between DACF and the farmer, must be signed and returned to DACF prior to system installation.
2. If DACF is reimbursing for a system installed previously:
    a. All paid receipts for the system, past maintenance fees, and replacement parts.
    b. A completed State of Maine Vendor Authorization form.

COMMERCIAL FARM PFAS WATER TREATMENT PROGRAM

What about residential water?

1. DEP is the agency working with residential water systems. Contact pfas.dep@maine.gov.
2. If a water system services both a residence and a farm, DACF and DEP will work in conjunction to determine an appropriate system and may jointly cover the associated expenses.

DACF reserves the right to not pay for the installation of a water treatment system when the size, scope, maintenance, and cost exceed, in DACF's professional judgment, the ultimate effectiveness and benefit of the system. In these instances, DACF can help investigate other options, which could include siting and drilling a new well on the property if determined there is a high likelihood the new well would not have similar contamination. Payment for new wells may be covered by DACF's Farm Viability Fund.

DACF reserves the right to amend program parameters and criteria at any time. Commercial Farm Water Treatment Program payments are subject to the availability of DACF's PFAS funding.

Contact DACF staff at pfas.dacf@maine.gov

DEPARTMENT OF Agriculture Conservation & Forestry

Date of Application: _____

Section 4. Technical Assistance / Professional Services

Commercial farms that have DACF-confirmed unsafe levels of PFAS may apply to DACF for no-cost technical assistance to help guide their response to the discovery of PFAS and/or to implement mitigation strategies. Eligible producers may work with service providers to obtain expert advice, estimates, drawings, plans, research, and technical or professional assistance related to modifying their operations in response to PFAS contamination. Service providers may be marketing consultants, accounting firms, farm and/or business support organizations, engineering firms, law firms, and other organizations that DACF determines may provide valuable services that support sustained farm viability. Technical Assistance is governed by rule 01-001 CMR c. 402 (2024).

Questions about no-cost technical assistance may be directed to Beth Valentine, PFAS Fund Director, at Beth.Valentine@maine.gov or 207-313-0962.

Required Documentation – Section 4

The following information must be submitted with this Section of the application:

2. Section 1. Applicant General Information with all specified attachments.
3. An estimate, invoice, or receipt from a service provider describing the scope of work, estimated timeline, and total cost;
4. If requesting a direct reimbursement, provide Proof of Payment; and,
5. Any additional supporting documentation requested by DACF that DACF determines is necessary to review the request for assistance.

Additional Information Requested – Section 4

1. Describe the impacts PFAS contamination has had on the farm as it relates to the requested technical assistance/professional services:

Date of Application: _____

2. Describe the problem technical/professional services will address:

3. A detailed description of the product the technical service provider will deliver. For example, a business planner may be asked to produce a comprehensive business plan that describes the farm, including its history, products, operations, and management; market analysis; proposed business ideas and strategies; financial analysis and projections; and an implementation plan. An engineer may be asked to render a plan for a new well or structure. A marketing firm may be asked to produce social media content and photography.

Date of Application:_____

4. Description of next steps anticipated after obtaining the information sought from technical/professional services:

5. Total amount of support requested: $_____

6. Estimated start and end dates of service. Indicate whether there are any time constraints (e.g., approval is needed prior to spring planting):

7. **Payment Options – please check which one is requested:**

☐ DACF reimburses the applicant for approved project costs

☐ DACF contracts with and pays applicant's approved vendors/contractors

☐ DACF reimburses a nonprofit for payment of approved project costs made on the applicant's behalf

Date of Application: _____

Application Review – Section 4

Evaluation criteria may include but not be limited to the degree to which the farm has been negatively impacted by PFAS, likelihood of success, return on investment, total cost, timing, alternative options, level of risk, producer's demonstrated lack of available financial capacity, number of other requests for DACF support by the applicant and by other producers, and the farm's capacity and commitment to continue farming on the impacted property.

Evaluation criteria will also include an assessment by DACF of whether a given service provider is appropriately qualified to provide the particular type of technical assistance being sought.

DACF reserves the right to limit the amount of funding for all requests based on available resources and the evaluation criteria listed above.

Applications for technical assistance and professional services will be reviewed by DACF's PFAS Fund Director. The Director may request input from members of the DACF PFAS Response Program, including Agricultural PFAS Specialists (APS) and specialized consultants acting on the Program's behalf and that have worked with the farm and have knowledge of the applicant's operations. DACF will rely on all available information about the farm to assess the request. DACF reserves the right to request any additional supporting documentation that is necessary to evaluate the request for assistance. Decision-making authority rests with the PFAS Fund Director

Payment Restrictions

DACF may pay for technical assistance costs directly related to a commercial farm's response to PFAS contamination. DACF will not pay for a commercial farm's technical assistance costs that are associated with routine operations that are unrelated to PFAS response.

(Section 4 Signature Block on Next Page)

Date of Application: _____

Signature Block – Section 4

I certify that the information given in this Technical Assistance / Professional Services application is correct and complete to the best of my knowledge.

I acknowledge that payments may represent reportable income for tax purposes.

Applicant's Signature	Date
Applicant's Name (printed)	Title
Applicant's Signature	Date
Applicant's Name (printed)	Title

Please complete if someone assisted the applicant to complete this form:

Preparer Name (If not applicant)	Preparer's relationship to applicant

Permission to discuss application with Preparer: ☐ YES ☐ NO

Date of Application:_____

Section 6. Equipment and Input Costs

A farm proposing to convert its operations to accommodate new products and production methods can apply for funding for equipment and related input costs for the successful harvesting, handling, processing, or packaging of the resulting product.

Questions about equipment and input costs may be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795.

Required Documentation – Section 6

The following information must be submitted with this Section of the application:

A. Section 1. Applicant General Information with all specified attachments

B. Narrative – Equipment Focus. A statement, one page or less, describing and explaining:

1. The impacts PFAS contamination has had on the farm as it relates to the need for new equipment and/or input costs;
2. The proposed equipment and how it will address the impacts stated above;
3. A justification of equipment chosen (including the product type or model chosen); and,
4. The anticipated result/outcome achieved by receiving this assistance from DACF.

C. An estimate, invoice, or receipt from an equipment provider describing the equipment and related input costs, and amount, including any taxes or transportation fees

D. If requesting a direct reimbursement, provide proof of payment

E. Supporting documentation, such as:

1. Equipment information, model, specifications, drawings or similar; and
2. Cost quotes or estimates with relevant details and equipment and input cost details from at least two separate vendors.

F. Any additional supporting documentation requested by DACF that DACF determines is necessary to review the request for feed.

Additional Information Requested – Section 6

1. TOTAL AMOUNT OF SUPPORT REQUESTED FOR SECTION 6 COSTS: $_____

2. **Payment Options –** Please check which one is requested:

☐ DACF reimburses the applicant for approved project costs

☐ DACF contracts with and pays applicant's approved vendors/contractors

☐ DACF reimburses a nonprofit for payment of approved project costs made on the applicant's behalf

Date of Application: _____

Application Review – Section 6

DACF will consider the total cost and whether the equipment is essential to the viability of the farm. This could include the likelihood of success or return on investment and other relevant factors.

Other criteria for consideration include: total cost, timing, alternative options, level of risk, producer's demonstrated lack of available financial capacity, number of other requests for DACF support by other producers.

DACF reserves the right to request a business plan first be developed for the farm and submitted to DACF to support an equipment and input costs application. Business plan assistance can be applied for via the Technical Assistance Grant (Part 4).

DACF reserves the right to cap the amount of funding for all requests based on available resources and other factors.

Signature Block – Section 6

I certify that the information given in this Equipment and Input Costs application is correct and complete to the best of my knowledge.

I acknowledge that payments may represent reportable income for tax purposes.

Applicant's Signature	Date
Applicant's Name (printed)	Title
Applicant's Signature	Date
Applicant's Name (printed)	Title

Please complete if someone assisted the applicant to complete this form:

Preparer Name (If not applicant)	Preparer's relationship to applicant

Permission to discuss application with Preparer: ☐ YES ☐ NO

Date of Application: _____ Farm Name: _____

Section VII. Infrastructure

Commercial farms that have DACF-confirmed unsafe levels of PFAS may apply to DACF for grant funding for infrastructure projects that will help the commercial farm transition to new production methods or new types of production. Infrastructure grants are governed by rule 01-001 CMR c. 403 (2024).

Questions about infrastructure projects valued up to $150,000 may be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795. Questions about infrastructure projects valued above $150,000 may be directed to Beth Valentine, PFAS Fund Director, at Beth.Valentine@maine.gov or 207-313-0962.

Documents to Attach and Submit with Section VII:

The following information must be submitted with this Section of the application:

A. Section I. General Information and all specified attachments

B. If requesting a direct reimbursement, provide proof of payment

C. Supporting documentation, such as:

   1. A business plan that illustrates how the planned infrastructure will contribute to the farm's long-term viability (business plans are advisable for all applicants and are required for all requests above $150,000);

   2. Building plans and/or engineering drawings; and

   3. Cost quotes or estimates with relevant details and contractor details, including a Statement of Qualifications, from at least two separate contractors

D. Project Narrative. A statement, one page or less, describing and explaining the proposed infrastructure, project justification, and the anticipated result/outcome achieved.

E. Any additional supporting documentation requested by DACF that DACF determines is necessary to review the request for assistance.

Please provide the following information:

TOTAL AMOUNT OF SUPPORT REQUESTED: $_____

Payment Preference – please check which one is requested:

☐ DACF reimburses the applicant for approved project costs

☐ DACF contracts with and pays applicant's approved vendors/contractors

☐ DACF reimburses a nonprofit for payment of approved project costs made on the applicant's behalf

Terms and Conditions of Infrastructure Investment Grant

By applying for an infrastructure investment grant, the applicant agrees to the following conditions:

- The grantee will continue to ensure that the infrastructure purchased is maintained in a safe condition and in good repair.
- DACF has the sole discretion to determine if expenditures are reasonable and prudent, and whether the grantee has complied with these terms and conditions and all applicable laws, rules, and regulations.
- The State shall have no responsibility for the use, maintenance, or fitness of the infrastructure.
- The grantee agrees not to assign, transfer, lease or encumber its rights or obligations under the agreement without DACF's prior written consent. The grantee shall indemnify, defend, save and hold the State and its employees harmless from and against any claims, losses, liabilities, costs, expenses, damages, or other obligations of any nature in any way arising out of the use, operation, maintenance, or repair of the infrastructure.
- The grantee must retain ownership and use the infrastructure for a period consistent with the relevant recovery period for standard farming assets as depicted in Internal Revenue Service (IRS) Publication 225 (Farmer's Tax Guide), Table 7-1, Farm Property Recovery Periods; or the grantee must notify DACF in writing within 30 days of any sale, trade, destruction, or abandonment of infrastructure purchased under the infrastructure investment grant program if such sale, trade, destruction, or abandonment occurs within the relevant recovery period for standard farming assets as depicted in IRS Publication 225 (Farmer's Tax Guide), Table 7-1, Farm Property Recovery Periods.
- If the infrastructure is sold, traded, abandoned, or destroyed within the relevant recovery period noted above, DACF may seek reimbursement from the grantee for the remaining value of the infrastructure as calculated using generally accepted accounting principles. In deciding whether to seek reimbursement, DACF will consider whether the events leading to the sale, trade, abandonment, or destruction were within the grantee's control and will not penalize grantees for forces beyond their control.
- The State may inspect any facilities or infrastructure funded through an infrastructure investment grant at any time within the relevant recovery period.
- All grantees will purchase and maintain insurance to cover the value of the infrastructure from loss during the relevant recovery period.

Agreement to Terms and Conditions of Infrastructure Investment Grant

By submitting this application for an Infrastructure Grant, the undersigned agrees to these Terms and Conditions. I certify that the information given in this Infrastructure application is correct and complete to the best of my knowledge. I acknowledge that payments may represent reportable income for tax purposes.

Applicant's Signature	Date
Applicant's Name (printed)	Title
Applicant's Signature	Date
Applicant's Name (printed)	Title

Please complete if someone assisted the applicant to complete this form:

Preparer Name (If not applicant)	Preparer's relationship to applicant

Permission to discuss application with Preparer: ☐ YES ☐ NO

Payment Restrictions

DACF may pay for infrastructure costs directly related to a commercial farm's response to PFAS contamination. DACF will not pay for a commercial farm's infrastructure costs that are associated with routine operations that are unrelated to PFAS response.

Infrastructure Application Review

Evaluation criteria, regardless of cost, may include but not be limited to the degree to which the farm has been negatively impacted by PFAS, likelihood of success, return on investment, total cost, timing, alternative options, level of risk, producer's demonstrated lack of available financial capacity, number of other requests for DACF support by the applicant and by other producers, and the farm's capacity and commitment to continue farming on the impacted property. Additionally, DACF will consider all available information it has compiled on the farm to assess the request. DACF reserves the right to request any additional supporting documentation that is necessary to evaluate the request for assistance.

Applications for projects valued up to $150,000 will be reviewed by the PFAS Response Director. The PFAS Response Director may request staff input based on staff's knowledge of the applicant's operations. Decision-making authority for projects valued up to $150,000 rests with the PFAS Response Director.

Applications for projects valued above $150,000 will be reviewed by an ad-hoc application review panel that will be established by the DACF Commissioner and, at a minimum, will be composed of DACF PFAS Response staff, and a case-specific expert based on the scope or type of project. (e.g., dairy, water, finance). The role of the application review panel is to advise DACF on the merits of proposals. Decision-making authority for projects valued above $150,000 rests with the PFAS Fund Director.

DACF reserves the right to limit the amount of funding for all requests based on available resources and the evaluation criteria listed above.

Date of Application: _____

Section 3. Income Replacement

Commercial farms that have stopped selling some or all products due to PFAS contamination may apply to the DACF for up to a total of 24 months of lost income, adjusted for inflation. Income Replacement is governed by rule 01-001 CMR c. 401 (2024).

Questions about income replacement may be directed to Beth Valentine, PFAS Fund Director, at Beth.Valentine@maine.gov or 207-313-0962.

Eligibility

The baseline eligibility requirements found in the *Eligibility and Instructions* Section of this Master Application must be met. As further defined therein, the farm must be a commercial farm with confirmed PFAS contamination that collaborates with and grants access to the farm for DACF staff. Additionally, the farm must have a demonstrated loss of income due to stopping or reducing sales of farm products at the order, written recommendation, or with the consent of DACF because of PFAS contamination.

Also, farms that (1) have a history of land application of residuals or other reasonable expectation that their farm product(s) contain unsafe levels of PFAS and (2) have pulled their products from the market while test results are pending, may apply for income replacement.

Required Documentation – Section 3

The following information must be attached and submitted with this Section of the application:

A. Section 1. Applicant General Information with all specified attachments;

B. A statement, one-page or less, describing how the farm's income has been impacted by PFAS and what steps the farm is exploring to regain/reestablish income.

C. Complete copy of the applicant's federal income tax return(s) for the year(s) associated with the calculation of gross income as described above;

D. Profit and loss statements by month for all relevant time periods;

E. Copy of application(s) for USDA Dairy Indemnity Payment Program (DIPP) payments or other federal assistance programs, if applicable;

F. Other relevant documentation demonstrating loss of sales and current financial situation;

G. Documentation by month of all financial payments received, including payments related to PFAS assistance from state, federal, private, and non-profit entities, including by/from USDA, insurance companies, and Maine-based nonprofit organizations.

DACF reserves the right to waive the requirement for certain documents for good cause.

Date of Application: _____

Additional Information Requested – Section 3

Gross Income

There are a few options for calculating the farm's gross income; a commercial farm may use the option that is most advantageous. DACF can help to determine the best option for you.

DACF will rely primarily on Internal Revenue Service (IRS) Schedule F (Profit or Loss from Farming), Schedule C (Profit or Loss from Business), and/or Schedule E (Supplemental Income and Loss) to determine gross farm income. Gross farm income typically does not include long-term capital gains such as those reported on IRS Form 8949. Gross farm income may include sales of business property reported on IRS Form 4797 when the sale is part of routine farm operations (e.g., sales of dairy cows).

Please choose which option to apply:

☐ The gross income of the year PFAS was discovered, as documented on a filed federal income tax return;

☐ The gross income of the year immediately preceding the year PFAS was discovered, as documented on a filed federal income tax return;

☐ The average of the top three grossing years out of the five years that include the year PFAS was discovered and the four years immediately preceding the year PFAS was discovered, as documented on filed federal income tax returns; or

☐ The average of the top three grossing years out of the five years immediately preceding the year PFAS was discovered, as documented on filed federal income tax returns.

Please choose from the following:

If this application for Income Replacement is approved, and the commercial farm continues to produce any farm product with the intent that the farm product be sold or otherwise disposed of to generate income, one of the following options may be selected **(options continue on next page)**:

☐ DACF will issue an initial payment of 30 percent of the established baseline income plus the inflationary factor. DACF will issue subsequent payments based on documentation of actual losses; or

☐ DACF will not make an upfront payment. Instead, the commercial farm will submit documentation of actual losses and DACF will make corresponding payments.

☐ Where a third-party entity has made income replacement payments to a commercial farm because of PFAS contamination and DACF has an existing reimbursement agreement with that third-party entity, DACF is authorized to reimburse the third-party entity according to the same terms as if the payment was made directly to the commercial farm. The amount of the payment to the third-party entity will be counted toward the commercial farm's maximum payment.

Date of Application: _____

Application Review and Limitations - Section 3

The PFAS Fund Director will establish an application review panel comprised of DACF staff and at least one external member familiar with agricultural accounting and tax filings. The role of the application review panel is to review applications, verify baseline income calculations, advise DACF on the sufficiency of the supporting documentation, and recommend the schedule of payments for each farm.

DACF reserves the right to consult with external persons with relevant expertise as part of the process.

DACF reserves the right to limit the amount of funding for all requests based on available resources.

Method of Calculating Income Replacement Payments

Baseline Income. DACF will calculate baseline income by subtracting an amount equal to any non-revenue payments received by the farm from the farm's gross income. For instance, DACF will subtract any "irregular" (or one-time) payments, such as prior state or federal grant awards reported in the farm's tax filing(s), from the farm's gross income.

Inflationary Factor. DACF will account for inflation by referencing the Consumer Price Index (CPI-U, CUUR0000SA0) as published by the U.S. Bureau of Labor Statistics. In January of each year, DACF will calculate the average annual CPI-U percentage increase of the prior five most recent years. This average will be the inflationary factor for all income replacement applications processed within that calendar year.

DACF will calculate income replacement payments using the following method:

Baseline Income + (Inflationary Factor x Baseline Income) – Income after PFAS discovery

Payments are limited to actual losses. Income replacement payments will be the sum of baseline income plus the product of baseline income times the inflationary factor, minus current income generated by the farm through the sale of products or services not impacted by PFAS and other income, e.g., DIPP payments, gifts and donations above the federal gift tax exclusion, and income replacement payments made by another entity.

Overpayments. If income replacement payments exceed a commercial farm's documented losses from the impacts of PFAS, the commercial farm shall reimburse DACF an amount equal to the overpayment.

Maximum Payments. Total income replacement payments for any twelve-month period shall not exceed the total of baseline income plus the product of baseline income times the inflationary factor. An applicant may apply for up to 24 months of income replacement payments. The initial baseline income will be used for any subsequent applications.

Limitations

No farm is eligible for more than 24 months of income replacement payments, calculated as described above. A commercial farm that permanently ceases operation within 12 months of the discovery of PFAS is eligible for the receipt of one year's lost income. A commercial farm that permanently ceases operation more than 12 months but less than 24 months after the discovery of PFAS is limited to receipt of income corresponding to the timeframe during which it remained in operation.

Date of Application: _____

When has a farm ceased operations?

Elimination of Herd. If a commercial farm produces one primary product from a herd of livestock and then depopulates or depurates and sells the herd because of PFAS contamination, and the farm has not initiated a plan that is satisfactory to DACF to transition to a new form or type of production within 180 days of depopulation or sale, the commercial farm will be deemed to have ceased operations on the date the majority of the herd was depopulated or sold. When determining whether a plan is satisfactory, DACF will consider factors such as whether the farm is working with a business planner or other service provider and the degree of cooperation with DACF staff.

Confirmation in Writing. A commercial farm will be deemed to have ceased operations when the farm confirms in writing that it no longer produces any farm product with the intent that the farm product be sold or otherwise disposed of to generate income presently or in the future.

Not Economically Viable. DACF reserves the right to determine that a farm has ceased operations when analysis conducted by DACF in conjunction with a service provider with a degree or professional experience in business planning indicates that continued operation is not economically viable.

Signature Block – Section 3

I certify that the information given in this Income Replacement application is correct and complete to the best of my knowledge. I acknowledge that payments may represent reportable income for tax purposes.

Applicant's Signature	Date
Applicant's Name (printed)	Title
Applicant's Signature	Date
Applicant's Name (printed)	Title

Please complete if someone assisted the applicant to complete this form:

Preparer Name (If not applicant)	Preparer's relationship to applicant

Permission to discuss application with Preparer: ☐ YES ☐ NO

Date of Application: _____

Section 8. Debt Service on Existing Loans

Farms may have made recent structural investments or taken on equipment loans that, absent PFAS, would likely have enhanced operations and/or increased sales. Examples may include but not be limited to a new high-tunnel, greenhouse, farm store, milking parlor, or barn. Although DACF offers Income Replacement payments, if the anticipated return on investment had not yet been realized when PFAS were discovered, the farm is likely to have difficulty making timely and/or full payments on these notes regardless of receiving Income Replacement assistance.

DACF can review farm finances and other information and, depending on the circumstances, may pay notes directly related to farm infrastructure built and/or installed generally within two to five years prior to the discovery of PFAS contamination.

Questions about debt service on existing loans may be directed to Meagan Hennessey, PFAS Response Director, at Meagan.Hennessey@maine.gov or 207-592-3795.

Required Documentation – Section 8

The following information must be submitted with this Section of the application:

1. Section 1. Applicant General Information with all specified attachments
2. A narrative, one-page or less, which includes the following information:
    1. Date the loan was acquired and for what purpose,
    2. The amount initially borrowed and the outstanding principal balance, and
    3. An explanation of how the discovery of PFAS has impacted the original plan for this investment
3. If requesting a direct reimbursement, provide Proof of Payment
4. Supporting documentation, such as:
    1. The debt agreement, including date incurred and terms; and
    2. Invoice(s) or receipt(s) from the debt service provider from the relevant timeframe including payment date and amount

DACF reserves the right to cap financial assistance at $50,000 in this category. DACF reserves the right to cap the amount of funding for all requests based on available resources and other factors.

Additional Information Requested – Section 8

A. Payment Options – please check which one is requested:

☐ DACF reimburses the applicant for approved project costs

☐ DACF contracts with and pays applicant's approved vendors/contractors

☐ DACF reimburses a nonprofit for payment of approved project costs made on the applicant's behalf

Date of Application:_____

B. Total amount of support requested in section 8: $_____

Application Review – Section 8

DACF will consider the total cost and whether the debt payment is essential to the viability of the farm. This could include the likelihood of success or other relevant factors.

Other criteria for consideration include: total cost, timing, alternative options, level of risk, producer's demonstrated lack of available financial capacity, number of other requests for DACF support by other producers.

Limitations

The debt must be directly related to farm infrastructure built and/or installed within two to five years prior to the discovery of PFAS contamination.

Signature Block – Section 8

I certify that the information given in this Debt Service on Existing Loans application is correct and complete to the best of my knowledge.

I acknowledge that payments may represent reportable income for tax purposes.

Applicant's Signature	Date
Applicant's Name (printed)	Title
Applicant's Signature	Date
Applicant's Name (printed)	Title

Please complete if someone assisted the applicant to complete this form:

Preparer Name (If not applicant)	Preparer's relationship to applicant

Permission to discuss application with Preparer: ☐ YES ☐ NO

Date of Application: _____

Section 9. New Loan Assistance

Commercial farms that have DACF-confirmed unsafe levels of PFAS may apply to DACF for assistance covering the cost of obtaining a guaranteed loan, commercial loan insurance, or environmental site assessments required by a lending institution for new loans when a new loan is necessitated by the discovery of PFAS contamination on the commercial farm and the new loan is related to the farm business. New Loan Assistance is governed by rule 01-001 CMR c. 404 (2024).

Questions about new loan assistance may be directed to Beth Valentine, PFAS Fund Director, at Beth.Valentine@maine.gov or 207-313-0962.

Required Documentation – Section 9:

The following information must be submitted with this Section of the application:

1. Section 1. General Information and all specified attachments
2. A narrative, one-page or less, which includes the following information:
    1. The purpose and amount of the loan being sought,
    2. How the need for the loan relates to the presence of PFAS on your property,
    3. The name of the lending institution,
    4. The particular support you are seeking, e.g., fees to cover the cost of commercial loan insurance, and
    5. Total amount of support requested.
3. Supporting documentation, such as:
    1. A completed loan application,
    2. A statement from a lender identifying fees, and/or
    3. A statement from a commercial lender advising the applicant that a Phase I and/or Phase II environmental site assessment (ESA) is required before the lender will act on the applicant's loan application.
4. Any additional supporting documentation requested by DACF that DACF determines is necessary to review the request for assistance.

Application Review and Payment Restrictions – Section 9

DACF will not pay for costs associated with the investigation of contaminants other than PFAS. DACF may pay for the cost of a Phase I Environmental Site Assessment when a lender needs the study to make a lending decision. DACF may pay for a Phase II Environmental Site Assessment when the PFAS soil and groundwater samples collected by the State are insufficient for the lender's purposes.

DACF payments to a lender or insurance company shall be in accordance with that entity's published fees.

Date of Application: _____

Where a third-party entity has paid a fee on behalf of a PFAS-impacted farm and DACF has an existing reimbursement agreement with that third-party entity, DACF is authorized to reimburse the third-party entity according to the same terms described herein.

New Loan Assistance Application Review

Evaluation criteria may include but not be limited to the degree to which the farm has been negatively impacted by PFAS, likelihood of success, return on investment, total cost, timing, alternative options, level of risk, producer's demonstrated lack of available financial capacity, number of other requests for DACF support by the applicant and by other producers, and the farm's capacity and commitment to continue farming on the impacted property.

Applications will be reviewed by DACF's PFAS Fund Director. The PFAS Fund Director may request staff input based on the staff's knowledge of the applicant's operations. DACF will rely on all available information it has compiled on the farm to assess the request. DACF reserves the right to request any additional supporting documentation that is necessary to evaluate the request for assistance. Decision-making authority rests with the PFAS Fund Director.

DACF reserves the right to limit the amount of funding for all requests based on available resources and the evaluation criteria listed above.

Signature Block – Section 9

I certify that the information given in this New Loan Assistance application is correct and complete to the best of my knowledge. I acknowledge that payments may represent reportable income for tax purposes.

Applicant's Signature	Date
Applicant's Name (printed)	Title
Applicant's Signature	Date
Applicant's Name (printed)	Title

Please complete if someone assisted the applicant to complete this form:

Preparer Name (If not applicant)	Preparer's relationship to applicant

Permission to discuss application with Preparer: ☐ YES ☐ NO

FUND TO ADDRESS PFAS CONTAMINATION
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY

Land Acquisition and Stewardship

Inquiry & Information Form

The Department of Agriculture, Conservation and Forestry (DACF), through the PFAS Fund, may purchase PFAS-contaminated property from eligible commercial farmers who wish to sell. Whether a property will be purchased depends on (1) eligibility, (2) the results of an initial evaluation by DACF, guided by prioritization criteria and with input from an advisory panel,[1] and (3) agreement of both parties following the completion of an appraisal and a due diligence process (including, as necessary, a title search, boundary survey and environmental site assessment).

Farm property is eligible to be considered for purchase if these initial requirements are met:

- Commercial Farming – the farm had documented farm product income prior to PFAS discovery;
- DACF Partnership – the commercial farm has established a working relationship with DACF;
- Confirmed PFAS Contamination – unsafe levels of PFAS in the soil or water are confirmed by DACF;
- Ownership Prior to PFAS Discovery – the property was owned by the current owner(s) before unsafe PFAS contamination was found (two exceptions).

Questions about land acquisition may be directed to Melissa Hamlin, PFAS Fund Management Specialist, at Melissa.Hamlin@Maine.gov or 207-592-1080.

Commercial farmers seeking to sell their PFAS-contaminated property to DACF must complete this Inquiry Form and provide all requested attachments. Please submit this form and attachments to Melissa Hamlin at the email address above, or mail to:

PFAS Fund, Attn. M. Hamlin
22 State House Station
Augusta, ME 04333-0022

Farm and Contact Information

BUSINESS ENTITY'S LEGAL NAME: _____

STATE OF INCORPORATION AND CHARTER NUMBER: _____

FARM'S PRIMARY PRODUCT(S): _____

CONTACT NAME: _____

MAILING ADDRESS: _____

PROPERTY ADDRESS (if different): _____

PHONE: _____ EMAIL: _____

NAME OF DACF STAFF WORKING WITH THE FARM: _____

Does this farm currently produce any farm product with the intent that the farm product be sold or otherwise disposed of to generate income? ☐ YES ☐ NO
If no, approximate date the farm stopped producing farm products for sale: _____

[1] 01-001 C.M.R. ch. 405 (2024).

Property Information

I am interested in selling (choose one):

☐ The entire parcel / all of my real property ☐ Only part of my parcel / part of my real property

The property being offered for sale includes the following (check all that apply):

☐ Land: _____acres, formerly used for _____

_____

☐ Barn and/or other structures/improvements; briefly describe:

_____

_____

☐ Residence(s); briefly describe:

_____

_____

List all individuals and entities who own the property or have an interest in the property (e.g., joint ownership, lease, easement, license, life estate, right of first refusal, lien holder such as mortgage lender):

Name	Property Interest

Document Attachments to Submit:

The following information, if DACF does not already have it, must be submitted with this Inquiry Form. Please obtain and provide:

A. Proof of Contamination:

1. Information about who obtained the samples and the methodology / procedure used, and
2. Test results from an approved laboratory showing the commercial farm has DACF-confirmed unsafe levels of PFAS contamination, defined as (screening levels also linked below):
   - groundwater test results exceeding Maine's enforceable interim drinking water standard for PFAS until superseded by either Maine's Maximum Contaminant Level (MCL) for PFAS or a federal MCL for PFAS, whichever is lowest, for wells servicing the farm or fields; and/or
   - soil test results exceeding any current Maine CDC crop-specific screening level.

www.maine.gov/dep/spills/topics/pfas/Maine%20PFAS%20Screening%20Levels_Rev_12_4_23.pdf

B. Date of Discovery: Documentation showing the date unsafe levels of PFAS contamination were first discovered on the commercial farm.

C. Documentation of the Subject Property:

This information is necessary for DACF to evaluate the potential purchase. Please provide all items that you have or can obtain with reasonable effort. If there are items below that are unduly difficult to obtain, this form may be submitted without them if it is otherwise complete and the items in A and B above are provided. DACF staff may be able to help pull together remaining information.

1. The deed to your property. Each county's registry of deeds can be found at this link: https://www.maineregistryofdeeds.com/;
2. Any other recorded current or future property interest (easement, right of first refusal, etc.);
3. The tax assessment of your property, including:
   - A copy of your Property Record Card, including description, measurements of land and improvements, and assessed values;
   - If the land is enrolled in Farmland under the Current Use Law, please obtain and provide a withdrawal penalty estimate. These items will typically come from your town's Tax Assessor.
   - A copy of your last annual tax bill, typically from your town Treasurer. Information can often be found online or by calling your local office.
4. If you have any of the following: title opinion, appraisal (completed within approximately the last year), boundary survey, environmental site assessment (completed within the last two years).
5. If available, (1) Evidence of the percentage of soils classified by the United States Department of Agriculture (USDA) as prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance; and (2) The results of onsite soil tests confirming the same.

6. A narrative of no more than one page describing any information about or characteristics of the property that might be relevant to potential future uses. As the current landowner, you have personal knowledge of aspects that may be distinctive, special, unique or exceptional about your property or its value to your community or within your region. For example, some relevant aspects could include:

   - Features of the property or its location which, but for contamination, make it valuable for agricultural use;
   - Any known natural resource values associated with the property, including farmland zoning or other local open space recognition, forested land, wetlands, riparian buffers, and/or wildlife habitat;
   - Potential recreational uses;
   - Nearby features such as conservation areas, electricity substations or landfills; or other regional considerations.

Consent and Certification

By submitting this form, the undersigned:

- Acknowledges that they are initiating a process to sell their real property as described herein to DACF. The undersigned's offer to sell will not be legally binding unless and until a Purchase and Sales Agreement is signed by all parties.
- Agrees to partner with DACF to investigate the scope of contamination at the farm and grants ongoing access such that DACF staff are able to develop an understanding of the farm, its PFAS contamination, and potential strategies for recovery;
- Authorizes DACF or its agents to inspect the property for the purposes of investigating its potential sale to the state, including for conducting any necessary inspections, assessments, appraisals, or surveys;
- Authorizes DACF to receive information from and share information with other organizations when the information is necessary for DACF to make a decision about a potential purchase, including the Maine Department of Environmental Protection (DEP), Maine Center for Disease Control and Prevention (MECDC), USDA Farm Service Agency, Maine Farmland Trust, and Maine Organic Farmers and Gardeners Association;
- Acknowledges that DACF reserves the right to request any additional supporting documentation that is necessary to evaluate the undersigned's offer to sell real property to DACF;
- Acknowledges that DACF reserves the right to discontinue consideration of a potential property purchase, or decline an offer to purchase real estate, at any time, for any reason consistent with DACF Rule 01-001 C.M.R. ch. 405 (2024) and the PFAS Fund Implementation Plan.

I certify that the information provided is correct and complete to the best of my knowledge.

I certify that I am authorized by _____ (business name) to sign as its representative.

_____

Property Owner's Signature Date

_____

Property Owner's Name (printed) Title

_____

Property Owner's Signature Date

_____

Property Owner's Name (printed) Title

Please complete if someone assisted the property owner to complete this form:

_____

Preparer Name (if not property owner) Preparer's relationship to property owner

Permission to discuss form with Preparer: ☐ YES ☐ NO

Next Steps

Generally, the land acquisition process for an entire property to be purchased includes:

(1) Initial review for completeness and eligibility,
(2) Preliminary review process involving the land acquisition and management advisory panel,
(3) Appraisal,
(4) Purchase and sale agreement,
(5) Due diligence process, involving as needed a survey, title search, and/or an environmental site assessment, along with any other identified due diligence needs,
(6) Closing

This process is anticipated to take several months. If a parcel will be divided, further steps are required. Upon confirmation of eligibility, if each step of the process is successful, a minimum of six months, and likely more, should be anticipated for the sale to be completed. The transaction timeline is dependent upon the completeness of your submittals, availability of any appraiser, surveyor and other professionals needed for the transaction, the value of the property and other factors.

(1) Eligibility Review – your information and submittals are reviewed for consistency with the eligibility requirements of the PFAS Fund's rules and policies.

As part of this review stage, DACF staff will schedule a time to discuss your property and documentation with you. If eligibility parameters are met, DACF will notify you and the inquiry will move on to the Preliminary Review process. If eligibility parameters are not met, DACF will notify you and provide the reasons the property is not eligible under the defined parameters.

(2) Preliminary Review – DACF makes an interim determination, in consultation with an advisory panel, as to whether the property may be an appropriate candidate to move forward in the purchase process based on defined prioritization criteria and other considerations.

If a property proceeds to the next steps, the professional services will be paid for by the PFAS Fund.

(3) Appraisal – DACF and the landowner specify the scope of the property to be appraised for the potential sale, DACF hires an appraiser through a bid process and coordinates with the landowner for its completion. Once the appraisal report is available, DACF will share it with the landowner.

(4) Purchase and Sale Agreement – once the terms are agreed, a Purchase and Sale Agreement (PSA) is signed by both parties. The PSA states the due diligence steps upon which the sale is contingent.

(5) Due Diligence – DACF will complete the due diligence steps during the contract period. These are typically a title search, boundary survey, and an environmental site assessment.

Title Search – DACF will confirm there is clean title and confirm the extent of rights in the property.

Property Survey – if there is not an existing survey, DACF will hire a surveyor through a bid process and coordinate with the farm for completion of the survey.

Environmental Site Assessment & VRAP – DACF will hire an environmental consultant through a bid process to characterize the nature and extent of the PFAS contamination. If findings warrant it, a Phase II environmental study may also be pursued to obtain additional information.

(6) Closing – upon satisfactory completion of due diligence, the purchase can be concluded. DACF will coordinate with the landowner to finalize the transfer.

VI. Legal Services

A. The Legal Food Hub

The Legal Food Hub is a free service that connects eligible farmers, food entrepreneurs, and food/farm organizations in New England to volunteer attorneys for free assistance on transactional legal issues. The Hub can support applicants in any language.

Publication Website: ***Legal Food Hub: A project of Conservation Law Foundation***

Website Link: Legal Food Hub: A project of Conservation Law Foundation
Web Address: https://www.legalfoodhub.org/

Online Application Web Address: ***https://www.legalfoodhub.org/legal-food-hub-intake-form/***

Participants have used the Legal Food Hub to gain assistance with the following transactional legal matters:

Contracts	Drafting contracts, including an animal purchase agreement and a membership agreement for a food co-op
Corporate	Drafting and filing articles of incorporation for corporations and co-operatives Drafting an equity investment or joint venture agreement between business owner and potential investors for start-up funding needs Complying with securities laws for new business's direct public offering (DPO) Filing application to obtain 501(c)(3) status with the Internal Revenue Service (IRS) Completing a successful merger and acquisition transaction between two small food businesses
Employment	Navigating employment law and fiduciary duties with regard to responsibilities of nonprofit Board of Directors
Intellectual Property	Establishing a trademark for a small food business's name and logo
Litigation	Any litigation stemming from a transactional legal issue
Real Estate	Carrying out successful real estate transactions to purchase or lease land Negotiating a commercial real estate lease Complying with or enrolling in the Massachusetts Agricultural Preservation Program (APR) Complying with conservation easements
Limited Regulatory Issues	Food Safety, Labor Renewable energy siting where the energy will be used only on-site

B. Maine Agricultural Mediation Program (MAMP)

The Maine Agricultural Mediation Program or "MAMP" is a certified USDA Agricultural Mediation Program. The MAMP staff and mediators provide conflict resolution to farmers, their lenders, and others directly affected by the actions of certain USDA agencies, neighbor disputes, and workplace and family disagreements that affect their lives and work.

Additionally, where members of farm management may have differing viewpoints, producers may find MAMP's services particularly useful to help navigate these conversations around transitioning farm management practices.

Publication Website: ***MAMP Mediation Q&A***

Website Link: MAMP About Us and FAQs
Web Address: https://extension.umaine.edu/agriculture/agricultural-mediation/about/

MAMP provides mediation services if you have a dispute or difficulty with:

Agricultural loans, whether made by USDA or commercial lenders	Business loans
Disputes involving USDA actions on farm and conservation programs	Family farm transition
Wetland determinations	Lease issues, including land and equipment leases
Rural water loan programs	Farm neighbor disputes or disagreements
Grazing on national forest system lands	The National Organic Program
Pesticides	Worker/employer disagreement
Rural housing	

C. Additional Legal Resources

Farmers' Legal Action Group

Farmers' Legal Action Group (FLAG) is a nonprofit law firm providing legal services and support to family farmers and their communities to help keep family farmers on the land. FLAG partners with many legal providers in the Northeastern United States and can provide attorney referrals, as well as brief legal advice on certain issues, to farmers in the Farm and Ranch Stress Assistance Network (FRSAN) Northeast Region. FLAG can be contacted toll-free at 877-860-4349 or emailed at lawyers@flaginc.org. web: flaginc.org CLF, Legal Services Food Hub, Home - Legal Food Hub

Website Link: Farmers' Legal Action Group
Web Address: http://www.flaginc.org/

Pine Tree Legal

Access to self-help tools:

Website Link: Pine Tree Legal Assistance
Web Address: https://www.ptla.org/#

Cumberland Legal Aid Clinic

From the University of Maine School of Law:

Website Link: Cumberland Legal Aid Clinic
Web Address: https://mainelaw.maine.edu/public-service/clac/

Maine Volunteer Lawyers Project

Free legal assistance for low-income Mainers:

Website Link: Maine Volunteer Lawyers Project
Web Address: https://www.vlp.org/

VI. Legal Services

Section VI Publication Attachments

VII. Mental Health

Farming can be a high-stress profession. The discovery of PFAS contamination and related concerns about health effects, financial stability, and an uncertain future can amplify stress and anxiety. The PFAS Fund will develop a program to support access to mental health services for impacted farmers, farm workers, and non-farm residents whose exposure to PFAS can be reasonably linked to the land application of biosolids. For now, this section provides information about existing mental health resources, wellness tips, effects of stress and anxiety, and warning signs of more concerning situations.

A. DACF Mental Health Resources

1. DACF PFAS Response

   Publication (Included): ***Mental Health Resources for Farmers and Farmworkers***

2. DACF's Bureau of Agriculture, Agricultural Resource Development Division (ARDD)

   Website Link: ARDD: Mental Health Resources
   Web Address: https://www.maine.gov/dacf/ard/resources/mental-health.shtml

Wellness Tips

MAINTAIN A SOCIAL NETWORK

- Take 15 minutes each day to have an uninterrupted conversation with a family member or friend.
- Don't shut out family members from your life.
- Maintain friendships and seek opportunities to connect or reconnect with old friends.

BE AWARE

- Know your stressors and how stress manifests in your life.
- Accept that some stress is out of your control. However, make a plan on working towards a solution instead of focusing on what you can't control.

NURTURE YOURSELF

- Exercise
- Eat healthy
- Get outside and get fresh air
- Get enough sleep
- Find hobbies and activities you enjoy

SET GOALS

- Set aside time to plan your day and prioritize your tasks.
- Plan ahead for difficult seasons and delegate work.
- Discuss farm operational needs but don't let them occupy all other aspects of life.
- Seek constructive feedback on farm operations for ways to grow or improve.
- If you are feeling overwhelmed step back. Take a moment to assess the situation and brainstorm solutions. Break those solutions up into manageable steps and take it one step at a time.

CULTIVATE A PRODUCTIVE MIND

- Give yourself a break. Take regular 5-10 minute breaks to relax and recharge.
- Reach out to professionals and counselor with concerns.
- Practice deep breathing and meditation to relax your mind in stressful times and when trying to sleep.

How Stress Can Physically Affect You

- High heart rate, high blood pressure
- Shortness of breath, tightness in the chest
- Nausea, upset stomach, dizziness, legs feel shaky
- Sweaty palms, tapping fingers, grinding teeth
- Headache, backache, fatigue
- Loss or increased appetite

Warning Signs and Symptoms of a Crisis

IF YOU ARE FEELING:

- You are a burden to others
- Hopeless or feeling trapped
- Thoughts of suicide or ending your life
- Unbearable pain

IS THIS HAPPENING?

- Increase in farm-related accidents
- Loss of farm production
- Too much or too little sleep
- Decline in care of crops, animals, or farm
- Decline in care of tending the land or business
- Searching for resources/means online for ending one's life
- Increased drug or alcohol use
- Withdrawing from activities once enjoyed and isolating from family and friends
- Exhibiting signs of aggression, fatigue, and excessive worrying or fear
- Making final arrangements and saying goodbyes
- Poor hygiene
- Forgetfulness, inability to concentrate, or make decisions

IS YOUR MOOD:

- Depressed, loss of interest
- Anger, rage, irritation that is irrational
- Extreme anxiety
- Mood changes with uncontrollable highs and lows

Help Numbers and Crisis Hotlines

If you or a loved one are in danger of injuring yourself or others, please call 911 (emergency) or 988 (National Crisis & Suicide Lifeline).

211maine.org: Dial 211 – find resources when you don't know where else to go – information about financial services, healthcare, prescription assistance and medical transportation, aging programs, elderly assistance, and help with basic needs and crisis support.

Website Link: 211maine.org
Web Address: https://211maine.org/

Maine Crisis Services: (888) 568-1112 – available 24/7 – support by telephone, text and chat.

Website Link: Maine Crisis Services
Web Address: https://www.maine.gov/dhhs/obh/support-services/mental-health-services/crisis-services

National Crisis & Suicide Lifeline: Dial 988 – provides 24/7, free and confidential support for people in distress; prevention and crisis resources for you or your loved ones.

Website Link: National Crisis & Suicide Lifeline
Web Address: https://988lifeline.org/

Disaster Distress Helpline: 800-985-5990 – The helpline is open to anyone experiencing emotional distress related to disasters. This includes survivors of disasters; loved ones of victims; first responders; rescue, recovery, and relief workers; clergy; and parents and caregivers. You may call for yourself or on behalf of someone else.

Website Link: Disaster Distress Helpline
Web Address: https://www.samhsa.gov/find-help/disaster-distress-helpline

Peer Support Line: 866-771-9276 – It may not be a crisis, but there are times when talking with a peer support specialist who has experience in recovery can make a big difference. Mainers 18 and older experiencing moments of difficulty, despair, or conflict can call from anywhere in Maine at any time, day or night, and be connected with a specialist. Particularly for people in recovery, these compassionate, helpful conversations can keep manageable issues from escalating into a crisis.

Website Link: Peer Support Line
Web Address: https://www.sweetser.org/programs-services/services-for-adults/peer-services/peer-support-line/

Teen Text Support Line: Text 207-515-8398 Mon-Fri: 2pm-10pm & Sat-Sun: 12pm-10pm EST (Eastern Standard Time) – a free, confidential resource for youth from 13-23 years of age. Staffed by trained support specialists 18-24 years old. Please Note: The Teen Text Support Line is not a crisis line. In addition, the Teen Text Support Line cannot support users with international phone numbers.

Website Link: Teen Text Support Line
Web Address: https://namimaine.org/teentextline/

Agricultural-Focused Resources for Managing Mental Health

University of Maine Cooperative Extension: Agriculture - Wellness and Resilience:

Website Link: Agriculture: Wellness and Resilience
Web Address: https://extension.umaine.edu/agriculture/maine-frsan/agricultural-resilience/

Maine Farmer Resource Network: a coalition of Maine agricultural organizations and agencies working together to connect farmers to resources for farm business success.

The Network's Farm Coaching project provides articles that support farmers' mental health. "Small Bites" are short, informational articles with practical ideas about stress reduction, improved communication, and farm and family well-being. They are written by coaches from UMaine Extension's Farm Coaching team.

Website Link: Maine Farmer Resource Network: Small Bites – Practical Tips for Farm Resiliency
Web Address: https://extension.umaine.edu/maine-farmer-resource-network/farm-coaching-supporting-relationships-for-farm-success/small-bites/

Maine AgrAbility is part of the Maine Farmer Resource Network, and supports the overall wellness of agricultural community members, including mental health and stress management for farmers as well as physical health and injury support.

Website Link: Maine AgrAbility: Mental Health and Stress Management
Web Address: https://extension.umaine.edu/agrability/solutions-and-resources/farmer-health/mental-health/

AgriSafe Network: A non-profit founded by rural nurses provides an extensive collection of current factsheets and webinars to improve the health and safety or farmers and ranchers.

Website Link: AgriSafe Network
Web Address: https://www.agrisafe.org/healthcare/mental-health/

Farm Aid: Supporting Family Farmers: Referral hotline provides support services to farm families in crisis. Financial assistance for natural disasters is also available. Phone number: 1.800.327.6243 or FARM.AID. Available in Spanish or English. Mon-Fri: 9am-10pm.

Website Link: Farm Aid: Supporting Family Farmers
Web Address: https://www.farmaid.org/our-work/supporting-family-farmers/

Identifying Signs of Stress in Farm Families (NY FarmNet .pdf): How to identify farm family stress and how to offer your support.

Website Link: Identifying Signs of Stress in Farm Families
Web Address:
https://static1.squarespace.com/static/58adcb9ad1758e0d44e9e6a8/t/5a872db0085229471a111e28/1520451456885/Identifying+Stress+on+Farm+Families.pdf

VII. Mental Health

Section VII Publication Attachments

Mental Health Resources for Farmers and Farmworkers

Organization or Program	Description	Contact or website information
Farm Coaching	Supporting relationships for farm success	Tel: 207-353-5550 or 800-287-1458 Website: https://extension.umaine.edu/maine-farmer-resource-network/farm-coaching-supporting-relationships-for-farm-success/
Farm State of Mind	Resource for Farmers going through challenging and stressful times	Tel: 202- 406-3600 Website: https://www.fb.org/initiative/farm-state-of-mind
FarmAid Crisis Support	Crisis support for Farmers, Monday-Friday 9am-5pm	Tel: 1-800-FARM-AID
Farmer Resources Network	Free search tool to find organizations and useful resources for farmers	Tel: 207-353-5550 or 800-287-1458 Website: https://farmaid.my.site.com/FRN/s/
Farmstrong	Nationwide well-being program for the rural community, based in New Zealand	Website: https://farmstrong.co.nz/
Maine AgrAbility	Mental health and stress management for Farmers	Tel: 1-800-287-1478 Website: https://extension.umaine.edu/agrability/solutions-and-resources/farmer-health/mental-health/
Maine Agricultural Mediation Program	Conflict Resolution/ Support with difficult conversations and transitions.	Tel: 207-581-3487 Email: maineasmediation@maine.edu
PFAS Navigator Program	Provides one-on-one assistance and support to PFAS-impacted farmers.	Tel: 207-955-1977 Email: um.PFASNavCoord@maine.edu
Maine Mobile Health Program	For seasonal Farmworkers in Maine, Mon-Thur 2pm-9pm	Tel: 1-888-351-9634 Website: mmhp@mainemobile.org
Maine PFAS Farmer Wellness Fund	Fund to holistically support Maine Farmers and Farmworkers impacted by PFAS contamination	Tel: 207-338-6575 Website: https://www.mainefarmlandtrust.org/farm-network/pfas-emergency-relief-fund
Maine Statewide Crisis and Suicide Prevention Hotline	Available 24/7	Tel: 1-888-568-1112, TTY Users dial 711, then the 888 number listed.
Rural Health Information Hub	Rural response to Farmer mental health	Tel: 1-800-270-1898 Email: info@ruralhealthinfo.org Website: https://www.ruralhealthinfo.org/topics/farmer-mental-health
StrengthenME	Mental health assistance, Every day 8am-8pm	Tel: 207-221-8198
Substance Abuse and Mental Health Services Administration (SAMHSA)	Free national helpline, confidential, 24/7	Tel: 1-800-662-4357 Website: https://www.samhsa.gov/

VIII. Physical Health

A. PFAS Fund

During 2024, the PFAS Fund will begin contracting with medical laboratories to pay costs not otherwise covered by health insurance for PFAS blood serum testing for persons who were exposed to PFAS through the land application of biosolids in Maine (i.e., farmers, farm workers, and non-farm residents served by private wells).

Additionally, the PFAS Fund is collaborating with the Maine Center for Disease Control and Prevention (MECDC) on a number of health-related initiatives. MECDC will establish rules to make PFAS blood test results reportable, much like childhood lead test results are currently reportable. Once implemented, MECDC toxicologists will be able to follow up with patients with elevated levels of PFAS to help determine whether exposure pathways are known, recommend strategies to minimize further exposure, and provide guidance to impacted individual's medical providers. MECDC will also develop educational resources for clinicians and the public.

MECDC is in the early stages of a farmer and farm worker soil exposure study to determine whether soil exposure through inhalation, ingestion, and/or skin contact is a cause for concern. It is also exploring options for a clinical trial of methods to speed up the removal of PFAS from the human body.

Print Publication (Included): ***Health-Related Initiatives to be Supported by the PFAS Fund***

B. Agency for Toxic Substances and Disease Registry (ATSDR)

The Agency for Toxic Substances and Disease Registry (ATSDR), based in Atlanta, Georgia, is a federal public health agency of the U.S. Department of Health and Human Services. ATSDR protects communities from harmful health effects related to exposure to natural and man-made hazardous substances.

Publication Website: ***ATSDR – Per- and Polyfluoroalkyl Substances (PFAS) and Your Health***

Website Link: ATSDR Per- and Polyfluoroalkyl Substances (PFAS) and Your Health
Web Address: https://www.atsdr.cdc.gov/pfas/index.html

Publication Website: ***ATSDR – What are the health effects of PFAS?***

Website Link: ATSDR – What are the health effects of PFAS?
Web Address: https://www.atsdr.cdc.gov/pfas/health-effects/index.html#print

This website also provides access to research published in 2016 by the U.S. Department of Health and Human Services National Toxicology Program, named: *Systematic Review of Immunotoxicity Associated with Exposure to PFOA or PFOS*.

From the ATSDR websites:

Research is ongoing to understand the mechanisms of PFAS toxicity. The epidemiological evidence suggests associations between increases in exposure to (specific) PFAS and certain health effects.

- Increases in cholesterol levels
- Lower antibody response to some vaccines
- Changes in liver enzymes
- Pregnancy hypertension and preeclampsia
- Small decreases in birth weight
- Kidney and testicular cancer

The risk of health effects associated with PFAS depends on:

- Exposure factors (e.g., dose, frequency, route, and duration)
- Individual factors (e.g., sensitivity and disease burden)
- Other determinants of health (e.g., access to safe water and quality healthcare)

At this time, scientists are still learning about the health effects of exposures to mixtures of different PFAS. Additional research may change our understanding of the relationship between exposure to PFAS and human health effects.

Clinical Guidance for Physicians

Guidance for physicians and more in-depth information can be found at the site link provided below. The printable factsheet is a two-page summary of key information for clinicians.

Publication Website: ***ATSDR – PFAS Information for Clinicians – 2024***

Website Link: ATSDR – PFAS Information for Clinicians – 2024
Web Address: https://www.atsdr.cdc.gov/pfas/resources/pfas-information-for-clinicians.html

Publication (included): ***PFAS Factsheet – Information for Clinicians***

Website Link: PFAS Factsheet – Information for Clinicians
Web Address: https://www.atsdr.cdc.gov/pfas/docs/PFAS-info-for-clinicians-factsheet-508.pdf

C. The PFAS Exchange

An online resource center about PFAS contaminants in drinking water—helping communities understand their exposures and take action to protect their health.

Publications (included):

How to Reduce Your Exposure to PFAS

How Can PFAS Affect Your Health?

PFAS and the Immune System: What Do We Know?

PFAS and Drinking Water: What You Should Know

PFAS: A Word About Drinking Water Guidelines

Vaccine Response and PFAS Exposure:

For people in PFAS-impacted communities

PFAS blood testing: What you need to know:

For people in PFAS-impacted communities and occupations

D. STEEP

The University of Rhode Island's "Sources, Transport, Exposure & Effects of PFAS" informational page, supported by the National Institute of Environmental Health Sciences:

Printable Publication: ***STEEP: Tips for Infants***

Website Link: STEEP: Tips for Infants
Web Address: https://web.uri.edu/steep/tips-for-infants/

VIII. Physical Health

Section VIII Publication Attachments

Health-Related Initiatives to be Supported by the PFAS Fund

The PFAS Fund is administered by the Maine Department of Agriculture, Conservation and Forestry. It will provide financial and technical assistance to PFAS-impacted commercial farmers, purchase contaminated farmland from willing sellers, fund research, and support an array of health initiatives.

BLOOD TESTING

The PFAS Fund will pay for blood testing costs not covered by insurance for eligible individuals.[1]

PUBLIC HEALTH OVERSIGHT OF BLOOD TEST RESULTS

Using its notifiable condition rule, MECDC will establish public health oversight of PFAS blood test results; *i.e.*, it will require commercial laboratories to report all PFAS blood test results of any Maine resident to MECDC.

PUBLIC HEALTH EDUCATION

Maine CDC will work to improve healthcare provider education on blood testing and health monitoring by developing, evaluating, and updating health communication materials related to PFAS and distributing materials to clinical and lay audiences.

MENTAL HEALTH SERVICES

The Fund will establish a program to provide access to mental health services for eligible individuals.[1]

SOIL EXPOSURE STUDY

Maine CDC will undertake a study to investigate whether certain levels of PFAS-contaminated soil represent a significant source of ongoing exposure to people who work with soil (e.g., through incidental ingestion, inhalation, and skin contact).

CLINICAL TRIAL

The PFAS Fund may support a clinical trial of one or more PFAS body burden reduction modalities. Phase I is to explore options for what sort of trial is feasible given budgetary and other constraints (*e.g.*, a standalone trial or collaboration with an ongoing trial).

MEDICAL MONITORING

A long-term goal of the PFAS Fund is to pay for medical monitoring costs not covered by health insurance for eligible persons whose PFAS blood level is greater than the general population, defined as ≥ 20 ng/mL (using NASEM guidelines for summing results).

[1]DACF's rules state that access to PFAS blood serum testing and mental health services supported by the PFAS Fund is limited to (1) commercial farmers and their household members, farm workers, and residential inhabitants served by private wells who lived or worked (2) on PFAS-contaminated property (3) for any portion of the ten-year period preceding the discovery of PFAS contamination, (4) when the PFAS contamination is reasonably determined to be the result of the land application of residuals.

For more information, contact:
Beth Valentine, PFAS Fund Director
beth.valentine@maine.gov
207-313-0962

MAINE DEPARTMENT OF AGRICULTURE CONSERVATION & FORESTRY

PFAS

Information for Clinicians

Properties

- Per- and polyfluoroalkyl substances (PFAS) are a family of thousands of synthetic chemicals; relatively few have been studied for their effect on health
- Used widely to reduce friction or resist oil, water, and stains
- Widespread and persistent in the environment
- Among studied PFAS: absorbed in intestines and lungs; bind to serum and tissue proteins; most not metabolized; half-lives range from a few days to 8+ years

Human Exposure

- Nearly all people in the U.S. have had exposure to PFAS
- PFOS, PFOA, and PFHxS exposure is decreasing in the U.S. population, in part because of production phase-outs
- Population exposures to substitute PFAS (e.g., GenX) are not well studied
- Communities with PFAS contamination of water or food are often near facilities that have manufactured, used, or handled PFAS
- Ingestion of PFAS in water and food is a main route of exposure; ingestion of dust and residue from PFAS-containing products can also result in exposure
- Inhalation is not a typical route of exposure for the general population but can occur with PFAS-containing dust, aerosols, or fumes
- Children can be exposed by drinking formula mixed with PFAS-containing water, drinking breastmilk from persons exposed to PFAS, ingesting dust or dirt, and through hand to mouth behaviors with textiles treated with stain protectants
- Some PFAS cross the placenta and enter umbilical cord blood

Health Effects

- Research is ongoing to understand the mechanisms of PFAS toxicity
- The epidemiological evidence suggests associations between increases in exposure to (specific) PFAS and certain health effects
  - Increases in cholesterol levels (PFOA, PFOS, PFNA, PFDA)
  - Small decreases in birth weight (PFOA, PFOS)
  - Lower antibody response to some vaccines (PFOA, PFOS, PFHxS, PFDA)
  - Kidney and testicular cancer (PFOA)
  - Pregnancy-induced hypertension or preeclampsia (PFOA, PFOS)
  - Changes in liver enzymes (PFOA, PFOS, PFHxS)
- The risk of health effects associated with PFAS depends on
  - Exposure factors (e.g., dose, frequency, route, and duration)
  - Individual factors (e.g., sensitivity and chronic disease burden)
  - Other determinants of health (e.g., access to safer water and quality healthcare)

Clinical Evaluation and Management

- Main goals are to
  - Identify and reduce PFAS exposures
  - Promote standard age-appropriate preventive care measures for physical health, mental health, and wellness
- Clinical presentation: PFAS toxicity is not associated with characteristic signs or symptoms
- Taking an exposure history can help identify PFAS exposures and determine actions to reduce exposures; ask about possible current and past PFAS exposure sources, durations, frequency, and magnitude

Clinical Evaluation and Management *(continued)*

- Exposure reduction strategies follow from the exposure history; examples include
  - Installing water filtration system or using an alternative water source
  - Limiting or avoiding consumption of contaminated fish, meat, eggs, or dairy
  - Choosing products without PFAS when possible
- Breastfeeding is optimal due to its many benefits; clinicians can assist patients in their decision to breastfeed based on factors specific to the patient and child
- Clinicians can counsel patients on whether to pursue blood testing with an understanding of the benefits and limitations of PFAS testing:
  - Results (current levels of PFAS in the blood) could reflect recent exposures or past exposures in the case of PFAS with long half-lives
  - PFAS blood test results do not identify sources of exposure
  - Results do not indicate whether a current illness can be attributed to PFAS exposure or predict future health problems
  - Comparing PFAS results across laboratories can be difficult
  - Potential relief from psychological distress if PFAS levels are normal
  - Having information that could guide exposure reduction decisions
  - Potential for false positives from screening based on PFAS blood test results and iatrogenic complications from additional evaluation and treatment
- ATSDR has not developed health-based screening blood levels for PFAS
- No approved medical treatments are available to remove PFAS from the body

Additional Expertise

- Other professionals can help with exposure histories and reduction methods, and patient evaluation and monitoring/treatment plans:
  - Board-certified clinicians specializing in occupational and environmental medicine, medical toxicology, and pediatric environmental health
  - Occupational health clinicians
  - State or local health/environmental departments

More Resources

- **ATSDR PFAS Information for Clinicians (full document)**
- American College of Medical Toxicology
- American College of Occupational and Environmental Medicine
- ATSDR Toxicological Profile for PFAS
- ATSDR PFAS and Your Health
- ATSDR PFAS Blood Level Estimation Tool
- ATSDR Minimal Risk Levels for PFAS
- CDC's Breastfeeding: Why it Matters
- CDC National Report on Human Exposure to Environmental Chemicals
- EPA's Meaningful and Achievable Steps You Can Take to Reduce Your Risk
- NASEM Guidance on PFAS Testing and Health Outcomes
- National Institute for Occupational Safety and Health PFAS webpage
- Pediatric Environmental Health Specialty Units

Acronyms:

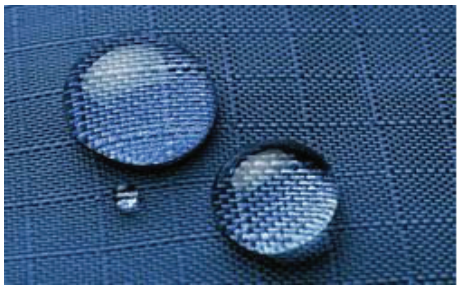
PFAS:	Per- and polyfluoroalkyl substances	PFNA:	Perfluorononanoic acid
PFDA:	Perfluorodecanoic acid	PFOA:	Perfluorooctanoic acid
PFHxS:	Perfluorohexane sulfonic acid	PFOS:	Perfluorooctane sulfonic acid

Last updated 1/18/2024

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
Agency for Toxic Substances and Disease Registry

How to Reduce Your Exposure to PFAS

PFAS-REACH
PFAS Research, Education, and Action for Community Health



PFAS (per- and polyfluoroalkyl substances) are a class of chemicals that companies add to consumer products to make them nonstick, waterproof, and stain-resistant. They are found in carpets and upholstery, waterproof apparel, non-stick cookware, grease-proof food packaging, and even dental floss. They are also used in firefighting foams for putting out fuel fires.

Unfortunately, studies have linked these chemicals with a range of health problems including thyroid disease, cancer, high cholesterol, obesity, and effects on the immune system. Luckily, there are simple steps you can take to reduce your everyday exposure to PFAS and create a healthier environment for you and your community.

In your personal life:

- ✓ Avoid stain-resistant carpets and upholstery, as well as stain-resistant treatments and waterproofing sprays.
- ✓ Avoid products with the ingredient PTFE or other “fluoro” ingredients listed on the label.
- ✓ Choose cookware made of cast iron, stainless steel, glass, or enamel instead of Teflon.
- ✓ Filter your drinking water with an activated carbon or reverse osmosis filtration system.
- ✓ Eat more fresh foods to avoid take-out containers and other food packaging.
- ✓ Avoid microwave popcorn and greasy foods wrapped in paper.
- ✓ Look for nylon or silk dental floss that is uncoated or coated in natural wax.

In your community:

- ✓ Tell retailers and manufacturers you want products made without PFAS.
- ✓ Urge your local water utility to test for PFAS.
- ✓ Ask your state legislators to set up a statewide water and blood testing program.
- ✓ Encourage your state to follow the lead of other states in creating more health protective drinking water limits.
- ✓ Ask your elected officials to support restrictions on PFAS in consumer products and remediation of contaminated sites.
- ✓ Find out about local groups working to protect water quality by visiting:

www.pfas-exchange.org

NIH NIEHS
PFAS-REACH is a five-year project funded by the National Institute of Environmental Health Sciences (NIEHS) under grant R01ES028311.

PFAS-REACH is led by Silent Spring Institute in collaboration with Northeastern University and Michigan State University. Community partners include Testing for Pease, Massachusetts Breast Cancer Coalition, and Slingshot.

How Can PFAS Affect Your Health?

PFAS-REACH
PFAS Research, Education, and Action for Community Health

PFAS (per- and polyfluoroalkyl substances) are among the most ubiquitous synthetic chemicals in the world. Approximately 98 percent of Americans have PFAS in their bodies. People can be exposed to these chemicals in many different ways—through the water they drink, the products they use, the air they breathe, and the food they eat. During pregnancy, PFAS can pass from the mother to the fetus through the umbilical cord, and babies can be exposed through breast milk or formula made with contaminated water.

Their strong chemical bonds and unique structures make them very effective at repelling water and oil even at high temperatures. These same characteristics also make PFAS extremely persistent, meaning they don't break down in the environment. Even more concerning, some PFAS can remain in the body for years, and people continue to be exposed to the chemicals.

Because of their persistence and because exposures are so widespread, scientists are concerned about the potential health impacts. Most health studies have looked at PFOA and PFOS, the two most commonly found PFAS. However, new research suggests other types of PFAS have similar health effects.

Learn more: www.pfas-exchange.org

Although the science on health effects is still evolving, scientists are increasingly concerned about low-dose exposures, as they continue to find health effects at lower and lower levels. More research is needed on other PFAS chemicals, in particular ones that companies have developed to replace PFOA and PFOS. Because people are exposed to multiple PFAS from multiple sources, researchers are beginning to investigate the effects of mixtures of PFAS on human health.

Studies have linked exposure to PFAS with:

Human studies

- High cholesterol
- Ulcerative colitis
- Cancer (testicular, kidney)
- Preeclampsia
- Liver damage
- Thyroid disease
- Decreased vaccine response
- Asthma
- Decreased fertility
- Lower birth weight

Animal studies

- Cancer (testicular, liver, pancreatic)
- Liver damage
- Delayed mammary gland development
- Developmental problems
- Effects on brain development
- Immune system effects
- Changes in cholesterol levels
- Changes in thyroid hormones
- Low birth weight

NIH NIEHS
PFAS-REACH is a five-year project funded by the National Institute of Environmental Health Sciences (NIEHS) under grant R01ES028311.

PFAS-REACH is led by Silent Spring Institute in collaboration with Northeastern University and Michigan State University. Community partners include Testing for Pease, Massachusetts Breast Cancer Coalition, and Slingshot.

PFAS and the Immune System: What Do We Know?

PFAS-REACH
PFAS Research, Education, and Action for Community Health

PFAS (per- and polyfluoroalkyl substances) are a class of chemicals that manufacturers add to a wide variety of consumer products to make them non-stick, waterproof, and stain-resistant. There are currently at least 9,000 different chemicals classified as PFAS, making them among the most ubiquitous synthetic chemicals in the world. Scientists are concerned about people's exposures to PFAS because they have been linked to a range of health effects including high cholesterol and cancers, even at low levels of exposure.

There is also growing evidence that PFAS can affect the immune system by suppressing the ability of the immune system to make antibodies critical to fighting infectious diseases. In light of the current COVID-19 pandemic and the many risks facing communities, scientists are starting to consider whether communities with higher exposures to PFAS, whether through contaminated drinking water or other sources, may be more vulnerable to COVID-19 and other infectious diseases.

What is the state of the science?

PFOS and PFOA—two of the most common PFAS—are each "presumed to be an immune hazard to humans." That was the conclusion of a 2016 report by the National Toxicology Program (NTP 2016). The federal body reviewed 153 studies in humans, animals, and other laboratory experiments, and found evidence linking exposures with a range of immune system effects. The evidence is stronger for some effects than others:

- Effects for PFOA and PFOS (stronger evidence): Suppressed production of antibodies, including suppressed response to vaccines
- Effects for PFOA (weaker evidence): Increased rates of hypersensitivity-related outcomes, which can include conditions like asthma, allergic responses, and rhinitis (runny nose, sneezing, and stuffiness)
- Effects for PFOS (weaker evidence): Increased occurrence of infectious diseases and suppressed activity of natural killer cells—immune cells that are important for warding off viruses and cancer cells

Children may be especially sensitive to the effects of PFAS because their immune systems are still developing. In a 2017 review by the US Environmental Protection Agency (EPA), scientists looked at 64 studies in children and found links between prenatal and/or childhood exposure to PFAS and a variety of health effects, including a diminished response to vaccines (Rappazzo 2017):

NIH NIEHS
PFAS-REACH is a five-year project funded by the National Institute of Environmental Health Sciences (NIEHS) under grant R01ES028311.

PFAS-REACH is led by Silent Spring Institute in collaboration with Northeastern University and Michigan State University. Community partners include Testing for Pease, Massachusetts Breast Cancer Coalition, and Slingshot.

- Studies in the Faroe Islands found children with higher blood levels of PFAS had lower levels of diphtheria and tetanus antibodies two years after receiving their DTaP vaccination at age five (Grandjean 2012).
- Study of US children ages 12 to 19 found those with higher levels of PFOS also had lower levels of antibodies to rubella as well as mumps (Stein 2016).
- In Norway, researchers found that children at age three, whose mothers had higher blood levels of PFAS at the time of their birth, experienced more colds and episodes of gastroenteritis. The children also had lower levels of antibodies to rubella (Granum 2013).

Recent studies have found the effects of PFAS on the efficacy of childhood vaccinations may persist through early adolescence (Grandjean 2017), and other studies are now suggesting a possible link between PFAS and asthma in children (Dong 2013, Averina 2019). New research in animals continues to strengthen the link between PFAS and the immune system and more studies are underway, such as the Multi-site Health Study by the Centers for Disease Control and Prevention's (CDC) Agency for Toxic Substances and Disease Registry (ATSDR).

What are the implications?

Because PFAS can interfere with the immune system, scientists are concerned that exposures to these contaminants could make populations more vulnerable to infectious diseases, such as COVID-19, and may reduce the effectiveness of routine vaccinations. Additionally, changes to the developing immune system early in life could affect health later in life. Given the evidence, leading experts say current drinking water guidelines are not adequately protective, especially for young children (Grandjean 2015). What's more, contaminated drinking water often contains many types of PFAS, therefore more research is needed to better understand the health of effects of these complex mixtures.

For more information about PFAS contaminants in drinking water, sources of exposures, and how to protect your health, visit the PFAS Exchange at **www.pfas-exchange.org**.

References

Agency for Toxic Substances and Disease Registry (ATSDR). (2020, June 24). What are the health effects of PFAS? Statement on Potential Intersection between PFAS Exposure and COVID-19. Retrieved from https://www.atsdr.cdc.gov/pfas/health-effects/

Averina M, et al. 2019. Serum perfluoroalkyl substances (PFAS) and risk of asthma and various allergies in adolescents. The Tromsø study Fit Futures in Northern Norway. *Environmental Research*. 169: 114-121. DOI: 10.1016/j.envres.2018.11.005

Dalsager L, et al. 2016. Association between prenatal exposure to perfluorinated compounds and symptoms of infections at age 1–4 years among 359 children in the Odense Child Cohort. *Environment International*. 96: 58-64. DOI: 10.1016/j.envint.2016.08.026

Dong GH, et al. 2013. Serum polyfluoroalkyl concentrations, asthma outcomes, and immunological markers in a case-control study of Taiwanese children. *Environmental Health Perspectives*. 121:507–13. DOI: 10.1289/ehp.1205351

PFAS-REACH is a five-year project funded by the National Institute of Environmental Health Sciences (NIEHS) under grant R01ES028311.

PFAS-REACH is led by Silent Spring Institute in collaboration with Northeastern University and Michigan State University. Community partners include Testing for Pease, Massachusetts Breast Cancer Coalition, and Slingshot.

Fromme H, et al. 2017. ADONA and perfluoroalkyl substances in plasma samples of German blood donors living in South Germany. *International Journal of Hygiene and Environmental Health*. 220: 455-460. DOI: 10.1016/j.ijheh.2016.12.014

Grandjean P, et al. 2012. Serum vaccine antibody concentrations in children exposed to perfluorinated compounds. *Journal of the American Medical Association*. 307: 391-7. DOI: 10.1001/jama.2011.2034

Grandjean P and Clapp R. 2015. Perfluorinated alkyl substances: emerging insights into health risks. *New Solutions*. 25(2): 147–163. DOI: 10.1177/1048291115590506

Grandjean P, et al. 2017. Serum vaccine antibody concentrations in adolescents exposed to perfluorinated compounds. *Environmental Health Perspectives*. 125(7): 77018. DOI: 10.1289/EHP275

Granum B, et al. 2013. Pre-natal exposure to perfluoroalkyl substances may be associated with altered vaccine antibody levels and immune-related health outcomes in early childhood. *Journal of Immunotoxicology*. 10(4): 373-379. DOI: 10.3109/1547691X.2012.755580

National Toxicology Program (NTP). 2016. Systematic Review of Immunotoxicity Associated with Exposure to Perfluorooctanoic Acid (PFOA) or Perfluorooctane sulfonate (PFOS); Office of Health Assessment and Translation, Division of the National Toxicology Program, National Institute of Environmental Health Sciences: Research Triangle Park, NC. https://ntp.niehs.nih.gov/ntp/ohat/pfoa_pfos/pfoa_pfosmonograph_508.pdf

Pennings JL, et al. 2016. Cord blood gene expression supports that prenatal exposure to perfluoroalkyl substances causes depressed immune functionality in early childhood. *Journal of Immunotoxicology*. 13(2): 173-180. DOI: 10.3109/1547691X.2015.1029147

Rappazzo KM, et al. 2017. Exposure to perfluorinated alkyl substances and health outcomes in children: A systematic review of the epidemiologic literature. *International Journal of Environmental Research and Public Health.* 14: 691. DOI: 10.3390/ijerph14070691

Stein CR, et al. 2016. Perfluoroalkyl and polyfluoroalkyl substances and indicators of immune function in children aged 12-19 y: National Health and Nutrition Examination Survey. *Pediatric Research.* 79(2): 348-357. DOI: 10.1038/pr.2015.213

Learn more: ww.pfas-exchange.org

NIH NIEHS

PFAS-REACH is a five-year project funded by the National Institute of Environmental Health Sciences (NIEHS) under grant R01ES028311.

PFAS-REACH is led by Silent Spring Institute in collaboration with Northeastern University and Michigan State University. Community partners include Testing for Pease, Massachusetts Breast Cancer Coalition, and Slingshot.

PFAS and Drinking Water: What You Should Know

PFAS-REACH
PFAS Research, Education, and Action for Community Health

As more and more communities across the U.S. learn their drinking water contains PFAS (per- and polyfluoroalkyl substances), you may be wondering if your drinking water contains these contaminants as well. Here's what you should know:

Does my tap water contain PFAS?

If you're concerned about PFAS in your drinking water or you live near one of the contamination sites listed on our PFAS Exchange, find out if your water has been tested for PFAS by contacting your local water utility or your health department.

The Environmental Working Group (EWG) has a searchable national tap water database that collects drinking water quality data, including information on PFAS, from public water utilities across the country. The data on PFAS, however, is mainly limited to large water supplies and is based on testing conducted between 2013 and 2015. Most smaller supplies have not been tested for PFAS.

If you have a private well, consider having your water tested. Be aware that water testing by a private lab can be costly and not all labs offer PFAS testing.

Contact your local health department to learn about routine testing services in your state. Or, find an accredited testing lab through The Nelac Institute (TNI)'s database.

Include in your search criteria the testing method "EPA 537" or "EPA 537.1"—the certified methods used for analyzing water samples for PFAS.

Can I treat my water?

There are two main types of water treatment systems that work best at removing PFAS from drinking water in people's homes. These systems can be installed at the point-of-entry, where the water enters your home, or at the point-of-use, such as your kitchen sink.

- Granular activated carbon (GAC) or solid carbon block filters are a relatively low-cost option. They are effective at removing long-chain PFAS (PFOA and PFOS are the two most often found in water) but are less effective at capturing the shorter-chain varieties.
- Reverse osmosis is considered the most effective technology for removing a wide range of PFAS, including short-chain chemicals. It is also the more expensive option and produces a significant amount of waste water, so these types of systems are typically only used at the point-of-use.

When choosing a filtering system, look for one that is NSF P473 certified, or meets the NSF/ANSI 53 standard for activated carbon filters and the NSF/ANSI 58 standard for reverse osmosis. Be sure to follow the manufacturer's instructions and replace the cartridges or membranes as recommended.

A word about bottled water

Be aware that bottled water may not be a better option than tap water as many bottling companies get their water from municipal water supplies and are not required to test or treat for PFAS chemicals.

Contact your state environment or health department to find out if there's been any government testing of bottled water products sold in your state.

Learn more: www.pfas-exchange.org

NIH NIEHS

PFAS-REACH is a five-year project funded by the National Institute of Environmental Health Sciences (NIEHS) under grant R01ES028311.

PFAS-REACH is led by Silent Spring Institute in collaboration with Northeastern University and Michigan State University. Community partners include Testing for Pease, Massachusetts Breast Cancer Coalition, and Slingshot.

PFAS: A Word About Drinking Water Guidelines

PFAS-REACH
PFAS Research, Education, and Action for Community Health

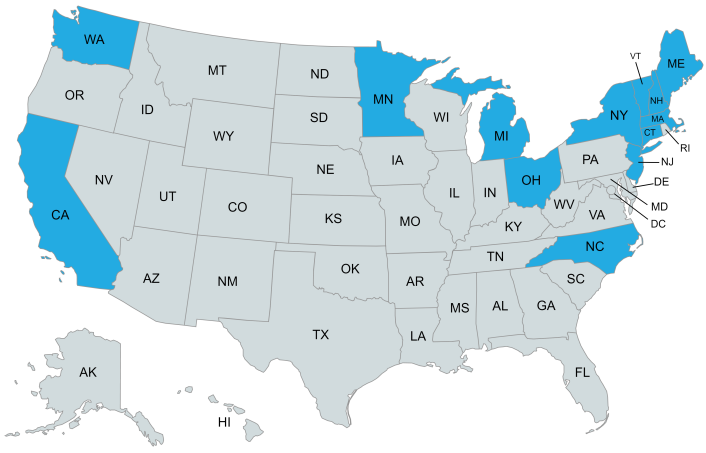
Are PFAS regulated in drinking water?

PFAS (per- and polyfluoroalkyl substances) are currently not regulated under the Safe Drinking Water Act. This means there are no federal drinking water standards and public water supplies do not have to test or treat their water for PFAS under federal law.

The U.S. Environmental Protection Agency (EPA) has set a non-enforceable health-based guideline level of 70 parts per trillion (ppt) for PFOA and PFOS, individually or combined.

However, many scientists and regulators believe this guideline is not protective enough of human health. As a result, some states have developed their own guideline levels for PFAS that are stricter than EPA's, and some have set, or are in the process of setting, enforceable standards.

Although guideline levels are not enforceable, meaning water utilities are not required to test or treat the water, they do offer some protection.



13 states with drinking water guidelines that are more restrictive than EPA's.

Why do guidelines vary?

Guideline levels are created when regulators, after reviewing the science, calculate a level of exposure below which health effects are not expected to occur. Regulators consider different types of evidence and factors when developing guideline levels:

- Studies linking exposure to PFAS with various health effects (for instance, effects on the immune system, liver, or mammary gland development).
- The impact on vulnerable populations such as infants or pregnant women.
- How much water people drink in a day.
- How much exposure likely comes from drinking water versus diet and consumer products.
- Molecular studies that show what happens to PFAS after the chemicals enter the body.

Although some variation is expected among the different state guideline levels, more recent guidelines are being set at similarly lower levels.

Learn more: www.pfas-exchange.org

NIH NIEHS

PFAS-REACH is a five-year project funded by the National Institute of Environmental Health Sciences (NIEHS) under grant R01ES028311.

PFAS-REACH is led by Silent Spring Institute in collaboration with Northeastern University and Michigan State University. Community partners include Testing for Pease, Massachusetts Breast Cancer Coalition, and Slingshot.

PFAS-REACH
PFAS Research, Education, and Action for Community Health

Vaccine Response and PFAS Exposure

For people in PFAS-impacted communities

Purpose

This document is intended to inform discussions between clinicians and families who live in an area where the drinking water has been contaminated with PFAS or who have had a substantial exposure to PFAS from another source.

What are the concerns about PFAS and immune health?

Vaccinations protect adults and children from many preventable illnesses. There is strong evidence that exposure to PFAS can suppress the ability of the immune system to produce antibodies in response to vaccinations. Doctors can check vaccine effectiveness by measuring antibody levels (titer) and may consider additional boosters if antibody levels are low. Research on the need for additional boosters in PFAS-exposed people is ongoing. In general, current medical guidance from the Centers for Disease Control and Prevention (CDC) does not recommend revaccination in response to low antibody levels.

How to discuss PFAS exposure with your doctor

Consider discussing whether exposure to PFAS may have impacted the effectiveness of your vaccinations.

- Prior studies have found that people with higher levels of PFAS in their bodies also have lower production of antibodies after receiving routine vaccinations (see below).

Ask about an "antibody titer" test, to determine whether your levels of antibodies are within the normal range.

- For routine and well-established vaccinations, like tetanus and measles, you can compare your results to normal antibody ranges provided by the laboratory. For COVID-19, scientists do not yet know exactly what level of antibodies is considered protective against COVID-19 illness.

Following an antibody titer test, find out whether revaccination is the right option for you.

- Revaccination is a personal decision to discuss with your clinician. It is not clear that low levels of antibodies would mean that you are more likely to get sick, and it is also not clear whether a booster would raise antibody levels. The current standard of care does not call for revaccination based on low titer test results.

Discuss continued monitoring of your health.

- Ask your clinician about monitoring for health problems and early signs of health effects that have been associated with PFAS exposure. The PFAS-REACH study has developed medical screening guidance for clinicians (available at www.pfas-exchange.org/resources).

A note about low antibody levels

In the general population, 2-10% of healthy individuals fail to mount the expected antibody response to routine vaccines for unknown reasons (Wiedermann 2016).

What is the evidence that PFAS can harm the immune system?

- A systematic review by the National Toxicology Program concluded that two PFAS chemicals, PFOS and PFOA, "are presumed to be an immune hazard to humans" (NTP 2016).
- A 2012 study found lower levels of tetanus and diphtheria antibodies in children ages 5 to 7 with higher levels of PFAS exposure (Grandjean 2012). Other studies have similarly also found lower levels of antibodies for rubella, mumps, and influenza in children with higher levels of exposure (Abraham 2020, Granum 2013, Stein 2016).
- Controlled laboratory studies have also found lower levels of antibody production among animals dosed with PFAS (DeWitt 2008, Dong 2009).

This fact sheet is a product of the PFAS-REACH (Research, Education, and Action for Community Health) study. PFAS-REACH is funded by the National Institute of Environmental Health Sciences (Grant No. R01ES028311).

February 2022

Frequently asked questions

1. **How do I know if my vaccinations are still effective given their exposure to PFAS?**

   You can talk with your doctor about performing an **antibody titer test**, which measures the levels of specific antibodies in your body. For example, you can measure antibodies to the measles virus. The results of this test can help determine if the levels of antibodies in your body following previous immunizations fall within the normal range for protecting against that disease.

2. **What is an antibody?**

   An antibody is what the immune system makes when it encounters a foreign substance like a virus inside the body. The surfaces of viruses, bacteria, and other pathogens have markers called antigens. A vaccine works by telling your body to create antibodies that work against a particular antigen, so that if you are exposed to that pathogen, your body can quickly overcome it, often with little to no symptoms of illness.

3. **Where can I get an antibody titer test?**

   Typically, antibody titer tests can be ordered by your healthcare provider. This requires taking a blood sample and having it tested in a medical lab. Ask your healthcare provider for more information on how to get the test.

   For more information on the testing process, visit the MedlinePlus resource center at: https://medlineplus.gov/ency/article/003333.htm.

4. **Are antibody titer tests covered by health insurance?**

   A titer test is often not covered by health insurance unless you have certain symptoms that would prompt a clinician to order these tests. Talk with your doctor to see whether the test would be covered by insurance, and confirm with your insurance provider's billing team prior to agreeing to the blood draw.

5. **Is there evidence that PFAS exposure will affect the efficacy of the COVID-19 vaccine?**

   Because PFAS can interfere with the immune system, scientists are concerned that exposure to these contaminants could make populations more vulnerable to infectious diseases and may reduce the effectiveness of routine vaccinations. The U.S. Centers for Disease Control and Prevention (CDC) has recognized that there is concern about how PFAS exposure may affect risk of COVID-19 infection in contaminated communities (CDC 2020). Early evidence from a study in Denmark suggests that COVID-19 may be more severe in adults who have had higher PFAS exposure (Grandjean 2020). No studies to date have examined the impact of PFAS exposure on the effectiveness of the COVID-19 vaccine, but research is underway to answer these questions.

   There is no evidence that anyone should refrain from being vaccinated against COVID-19 due to prior PFAS exposure. All groups are strongly advised to follow updated CDC advice on COVID-19 vaccinations, which is based on up-to-date research findings.

References

Abraham K et al. 2020. Archives of Toxicology. 94: 2131–2147. http://dx.doi.org/10.1007/s00204-020-02715-4.

Centers for Disease Control and Prevention (CDC). 2017. Per- and Polyfluorinated Substances (PFAS) Factsheet. https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html.

Center for Disease Control and Prevention (CDC). 2020. Statement on Potential Intersection between PFAS Exposure and COVID-19. https://www.atsdr.cdc.gov/pfas/health-effects/index.html.

Dewitt JC et al. 2008. Environmental Health Perspectives. 116: 644-650. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2367677/.

Dong GH et al. 2009. Archives of Toxicology. 83: 805-815. https://pubmed.ncbi.nlm.nih.gov/19343326/.

Grandjean P et al. 2012. Journal of the American Medical Association. 307: 391-397. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4402650/.

Grandjean P et al. 2020. PLoS ONE. 15: e0244815. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0244815.

Granum B et al. 2013. Journal of Immunotoxicology. 10: 373-379. https://pubmed.ncbi.nlm.nih.gov/23350954/.

National Toxicology Program (NTP). 2016. Immunotoxicity Associated with Exposure to Perfluorooctanoic Acid (PFOA) or Perfluorooctane Sulfonate (PFOS). https://ntp.niehs.nih.gov/ntp/ohat/pfoa_pfos/pfoa_pfosmonograph_508.pdf.

Stein CR et al. 2016. Pediatric Research. 79: 348-357. https://pubmed.ncbi.nlm.nih.gov/26492286/.

Weidermann U et al. 2016. Human Vaccines & Immunotherapeutics. 12: 239-243. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4962729/

For more information, visit: www.pfas-exchange.org

PFAS-REACH
PFAS Research, Education, and Action for Community Health

PFAS blood testing: What you need to know

For people in PFAS-impacted communities and occupations

Purpose

This document is intended as a guide for individuals who are seeking PFAS blood testing. Residents of communities with local sources of contamination and people who may have been exposed to high levels of PFAS at their workplace may seek a PFAS blood test to learn more about their exposure. This document provides information about what you can and can't learn from a PFAS blood test, how to find a lab to conduct the testing, questions to ask a lab about their services, and tools to help you with interpretation and action.

What can I learn from a PFAS blood test?

A PFAS blood test measures the levels of certain PFAS chemicals in a person's blood at the time of the test. The results provide an indication of how much PFAS has entered your body over time. You can compare your results to levels found in other groups of people to determine whether your levels are elevated. Results can also provide a baseline so you can monitor changes over time, and they can support actions by agencies to reduce community exposures.

Results can be shared with your doctor for consideration as a risk factor for associated health outcomes and can inform conversations about reducing PFAS exposure and monitoring your health.

What won't a PFAS blood test tell me?

A PFAS blood test can't tell you where the PFAS in your body came from or how long you've been exposed. PFAS can come from many different sources including drinking water, food, and consumer products. Nearly everyone has some measurable amount of PFAS in their blood.

A blood test also doesn't directly indicate whether any health conditions you are experiencing were caused by PFAS exposure or definitively predict whether you are likely to develop certain health problems in the future.

How do I get a PFAS blood test?

Your doctor may be able to order a PFAS blood test. Providers should use ICD-10 diagnosis code Z13.88, and if ordering a test through Quest, they should use Test Code 39307 and CPT code 82542. Let your provider know you prefer a lab that measures both linear and branched isomers and a comprehensive panel that includes many compounds (see explanation on next page).

If your doctor cannot order the test, ask if they can help with a blood draw. Either way, you can contact a lab directly to request the test.

How do I find a lab?

Several labs in North America currently offer PFAS blood testing to individuals: AXYS Analytical, EmpowerDX, and Eurofins. AXYS and Eurofins measure PFAS in blood serum, and EmpowerDX offers a home finger-prick test. NMS Labs does not offer tests to directly to individuals, but does provide blood testing to other entities, including Quest and LabCorp that do offer testing to individuals through clinicians.

For information about price, specific chemicals tested, and lab requirements, see our online guide (**bit.ly/pfas-blood-test**).

Blood draw vs. finger-prick tool

- Most labs require a **blood draw** by a phlebotomist so they can test a large amount of your blood. This has been preferred for many years, is well studied, and may have legal benefits.
- EmpowerDX (part of Eurofins) offers a **finger-prick tool** that allows you to collect a sample at home and will test your whole blood. Note that if PFAS levels in your blood are low, this test may be less likely to detect the PFAS.

Limitations you may encounter

- Health insurance may not cover costs.
- The maximum number of PFAS that can be tested is around 40. This is a small number compared to the thousands of PFAS that exist.

A note about litigation

If you are considering legal action, consult a lawyer before testing your blood. Discovery of PFAS in blood may start the clock on a statute of limitations that could prevent you from litigating in the future. Note that certain documentation may be required in legal settings, so you may need a blood draw (rather than a finger-prick) by a phlebotomist who can serve as a documented witness.

This fact sheet is a product of the PFAS-REACH (Research, Education, and Action for Community Health) study. PFAS-REACH is funded by the National Institute of Environmental Health Sciences (Grant No. R01ES028311).

May 2022

Questions to ask when choosing a lab

Selecting a laboratory to conduct PFAS blood testing can be a confusing process. Here are some questions that you may want to keep in mind as you ask for information from blood testing laboratories.

1. **What is the cost? Does it include shipping and blood draw?** PFAS blood testing can be expensive. Depending on the lab and the number of chemicals tested, the test typically costs in the range of $400-$600.
2. **Do you conduct testing for individuals or only for multiple samples?** Some labs will send a kit for an individual to provide one blood sample for analysis. Others require a larger group of people.
3. **How do I get a blood sample? Are there clinics you work with? Can you help find one? Can a clinic handle shipping or would I need to do that myself?** Finding a phlebotomy clinic to do the blood draw, process the sample, and send it to a lab can be a challenge. Sometimes the lab or your doctor may be able to help. If the clinic does not handle shipping, you can also ask if there are specific instructions for sending your sample. A blood sample drawn at a clinic by a phlebotomist should typically be shipped overnight on dry ice (which requires special handling), whereas a finger-prick sample can be shipped at room temperature or overnight on regular ice.
4. **How many PFAS chemicals does the lab test for, and which ones?** Some labs only test for a few PFAS chemicals, while others test for over 40. Two of the most common are PFOA and PFOS. Testing for more PFAS at low detection limits will help you understand your exposure to a broader range of PFAS.
5. **What are the lab's detection limits?** Detection limits refer to the lowest levels of PFAS in blood that a lab can identify and measure. Lower detection limits are preferable because they indicate that the test measures lower levels of PFAS. Our online guide to PFAS lab testing provides detection limits for specific labs in North America. Detection limits are often in the range of 0.1 to 1 parts per billion (ppb), also written as nanograms per milliliter (ng/mL). Note that the levels of PFAS in whole blood are around half the levels in serum (the liquid part of blood), since PFAS tend to be more concentrated in serum. If you have whole blood tested (for instance, with a finger-prick tool), the test will be less sensitive than a test that measures serum, and you will need to be sure that you take this into account when comparing your result to other results.
6. **Does the lab test both linear and branched isomers?** Some PFAS chemicals are present in blood as a mixture of related chemical structures called **isomers**. Most labs will report the total amount of linear and branched isomers, but some labs only report linear isomers. Measuring only linear isomers will underestimate the amount of these PFAS chemicals in your blood. Results for the general population reported by the CDC's NHANES testing program are based on the sum total of both linear and branched isomers, and can't be directly compared to the results of testing that only includes linear isomers.
7. **How long does it take to get my results?** This may take 1-4 weeks or longer, and may vary by lab.
8. **Does your lab work with any insurance companies?** The top PFAS labs currently cannot take insurance. In some cases, insurance companies will cover the cost of PFAS testing but the lab options may be limited. You can talk with your doctor's office or health insurance provider to determine what steps are needed for the cost of the test to be covered. New Hampshire requires insurance provides to cover test costs.

How can I interpret my PFAS blood test results?

- **Compare your results**. Our PFAS-REACH "**What's My Exposure**" tool will compare your PFAS blood levels with others in the U.S. and provide other useful information.
- **Talk to your doctor**. Our PFAS-REACH medical screening guidance, "**PFAS Exposure: Information for patients and guidance for clinicians**," has information to help you discuss PFAS blood testing with your doctor.

For more information about labs

Our online guide, "**Information about PFAS blood testing laboratories for individuals**," provides updated information about blood testing labs in North America.

bit.ly/pfas-blood-test

For more information, visit: www.pfas-exchange.org

IX. Research

The DACF PFAS Fund will establish a competitive research grant program. Funding will be directed toward research projects that have a strong likelihood of producing results that will help commercial famers make informed decisions about how to utilize agricultural property impacted by PFAS. The PFAS Fund will begin soliciting grant proposals in 2024. Grant applications will be evaluated on several criteria, with preference for projects that:

- Specifically target the development of agricultural solutions applicable to Maine farmers;
- Involve research that collaborates with Maine farmers or agricultural producers; and,
- Proposes collaboration with or will occur at Maine-based research institutions.

PFAS research is very important for the future of Maine farms, especially when the research steps outside of the laboratory setting. Real-world farms are complicated, which means that real-world solutions must take these conditions into account. Factors like soil composition, weather, crop choice, and water movement are unique to each farm and difficult to replicate accurately in a lab setting. Solutions tailored to understand the interaction of these variables are more likely to be successful. On-farm research is also impactful as researchers are more likely to consider the real world economic and social aspects of farming, such as the costs of mitigation strategies, the impact on crop yields, and the implications for farmer livelihoods. On-farm research has the potential to ensure that recommendations from research are not only scientifically sound but also economically viable and socially acceptable to agricultural producers in Maine.

Examples on-farm research projects include testing of new remediation tactics, the effect of different variables on herd depuration, and uptake rates of PFAS from soil and water in specific plants. Some researchers may be willing to pay a reasonable fee to utilize land and equipment and may pay for farm owners or employees to participate or maintain installations such as research plots or herds.

Contact the PFAS Fund if you are interested in hosting research on your farm. As requests from researchers come in, DACF will share information about research opportunities with farms who have expressed an interest in hosting research.

If there is mutual interest on the part of the farmer and the researcher, they should come to an agreement about each party's roles and responsibilities, and the terms and conditions for use of land and/or equipment. An example of a PFAS Site License agreement is included here as a template that can be tailored as necessary.

If you have any questions about farm research sites or if you are interested in being added to the potential research site list, please contact Maddy Bruno, PFAS Fund Management Specialist, at madeline.s.bruno@maine.gov or call (207) 287-7601.

Sample Research Agreement (included): ***Example of a PFAS Site License Agreement****

IX. Research

Section IX Publication Attachments

PFAS SITE LICENSE AGREEMENT

This Agreement is made and entered into this (date) day of (month), (year), by and between the RESEARCH INSTITUTION, (hereinafter the "Licensee") and Farm or Farmer (hereinafter the "Licensor").

1. Premises. The Licensor agrees to furnish, for the purposes hereinafter named, certain premises located on Licensor's farm at ADDRESS (the "Farm"), selected by the Licensee (the "Premises") described as set forth in Attachment A, which is hereby incorporated by reference.

2. Term. The term of this license shall be from (start date) until (end date). The Premises will be available to the Licensee for use during this term only.

3. Fees. Fees for the use of the Premises are not to exceed $X,XXX.xx for the term. Fees for use of the Premises are to be paid (monthly/quarterly/annually) with the first payment to occur on (date, month, year) *OR* The Licensee shall pay a one-time fee in the amount of $X,XXX.xx for use of the Premises. Fees for use of the Premises do not include any direct support by Licensor. *AND/OR* Any direct support in the form of labor by Licensor is to be carried out according to the terms and conditions provided in Attachment B: Licensor Labor Agreement, which is hereby incorporated by reference.

4. Use of Premises. The Licensee shall use the Premises for the following purpose(s) as described in Attachment C: Scope of Work, which is hereby incorporated by reference. The Licensee shall not conduct or agree to any unlawful, improper, or offensive use of the Premises, or any use or occupancy thereof contrary to any law of the United States, the State of Maine, the County of (county) or any ordinance of the Town/City of (Town/City), Maine, now or hereafter made, or which shall be injurious to any person or property, or which shall endanger or affect any insurance on the said Premises or increase the premium thereof. The Licensee shall secure at its expense all licenses and permits required for the use of the Premises under this Agreement.

5. Program Personnel. The Licensee agrees that it will provide all personnel needed for the "Use of Premises". Any labor support to be provided by the Licensor shall be clearly described in Attachment B: Labor Agreement. The Licensee shall maintain Workers Compensation Insurance for its employees in accordance with applicable law. The Licensee shall ensure that all personnel have been properly trained and are able to perform the duties outlined in Attachment C, Scope of Work in a safe manner. (Research Point of Contact) is the technical point of contact for the work described in Attachment C, Scope of Work. Further, the Licensee shall ensure that all applicable health and safety protocols are followed, and all current health and safety recommendations are applied as needed.

6. Facilities and Equipment. The Licensor agrees to furnish, for the purposes hereinafter named, the facilities and equipment selected by the Licensee (the "Equipment") described as set forth in Attachment D, which is hereby incorporated by reference. If applicable, the Licensee shall provide proof of training or operators license for employees or agents who plan to use Equipment which requires it (e.g. forklift). The Licensee agrees to reimburse the Licensor for any loss, theft or damage of Licensor's Equipment caused by the Licensee, its employees or agents, during the time the Licensee has use of the Premises and Equipment.

7. Insurance. The Licensee agrees that during the term of this Agreement it will maintain the following insurance coverage:

Insurance Type	Coverage Limit
Commercial General Liability (written on an Occurrence-based form)	$400,000 per occurrence or more (Bodily Injury and Property Damage)
Workers Compensation	In compliance with Maine law
Automobile Liability (Including Hired and Non-Owned)	$400,000 per occurrence or more (Bodily Injury and Property Damage)

The Licensee shall provide the Licensor with Certificates of Insurance for the insurance required by this section. Said certificates, in addition to proof of coverage, shall contain a statement pertaining to written notification to the Licensor in the event of cancellation, with a thirty (30) day notification period.

8. Liability. Licensee agrees to indemnify, defend and hold harmless Licensor and their representatives from and against any and all damages arising out of or relating to this Agreement.

9. Applicable Law. This Agreement shall be interpreted and governed according to the laws of the State of Maine.

10. Termination. Either party may terminate this Agreement at any time upon forty-five (45) days prior written notice to the other party. If Licensee initiates termination of this Agreement prior to the end date, Licensee is responsible to pay Licensor 50% of the fees applicable to the unfulfilled term duration. If Licensor terminates this Agreement prior to the end date, Licensee is not responsible to pay any fees applicable to the unfulfilled term duration, but is responsible to fully vacate the premises, to the satisfaction of Licensor, by the new termination date.

11. Assignment. Solely in the case of a transfer of ownership of the Premises, this Agreement may be assigned or transferred with the prior written consent of the other party and such assignment shall not be unreasonably withheld. The preceding notwithstanding, this Agreement may not be assigned, transferred or conveyed, in whole or in part, by either party.

12. Non-discrimination. The parties shall not discriminate and shall comply with applicable laws prohibiting discrimination on the basis of race, color, religion, sex, sexual orientation, transgender status, gender expression, national origin or citizenship status, age, disability, genetic information or veteran status.

13. Non-waiver. The failure of either party to exercise any of its rights under this Agreement for a breach thereof shall not be deemed to be a waiver of such rights, and no waiver by either party, whether written or oral, express or implied, of any rights under or arising from this Agreement shall be binding on any subsequent occasion; and no concession by either party shall be treated as an implied modification of the Agreement unless specifically agreed in writing.

14. Severability. In the event one or more clauses of this Agreement are declared invalid, void, unenforceable or illegal, that shall not affect the validity of the remaining portions of this Agreement.

15. Entire Agreement. This Agreement sets forth the entire agreement of the parties and replaces and supersedes any previous agreement between the parties on the subject, whether oral or written, express or implied. This Agreement may be amended or modified only by a writing signed by both parties.

16. Force Majeure. Neither party to this Agreement shall be liable for non-performance of any obligation under this Agreement if such non-performance is caused by a Force Majeure. "Force Majeure" means an unforeseeable cause beyond the control of and without the negligence of the party claiming Force Majeure, including, but not limited to, fire, flood, other severe weather, acts of God, labor strikes, interruption of utility services, war, acts of terrorism, and other unforeseeable accidents.

17. Independent Status. The Licensee is an independent licensee of the Licensor, not a partner, agent or joint venture of the Licensor and neither party shall hold itself out contrary to these terms by advertising or otherwise, nor shall either party be bound by any representation, act or omission whatsoever of the other.

18. Personal Property. The Licensee agrees that the Licensor shall not be responsible for any damages, theft or loss of personal property or equipment suffered by the Licensee, its employees or agents, in connection with the Licensee's use of the Premises under this Agreement.

19. Binding Effect. This Agreement shall be binding upon, and shall extend to the benefit of, the parties hereto and their respective permitted successors and assigns.

20. Notice. Any notice or other communication required, or which may be given, pursuant to this Agreement, shall be in writing. Any such notice shall be deemed delivered (i) on the day of delivery in person; (ii) five (5) days after deposit in first class registered mail, with return receipt requested; (iii) on the actual delivery date if deposited with an overnight courier; or (iv) on the date sent by facsimile, if confirmed with a copy sent contemporaneously by first class, certified, registered or express mail; in each case properly posted and fully prepaid to the appropriate address set forth below, or such other address as a party may provide notice of in accordance with this section:

21. Publicity, Publication, Reproduction and use of Licensee's Products or Materials: Unless otherwise provided by law or the Licensee, title, intellectual property rights and possession of all data, reports, programs, software, equipment, any other documentation or product created by the Licensee shall vest with the Licensee. Licensor shall be furnished copies of any proposed publication or presentation arising from the research on the Premises pursuant to this Agreement at least 60 days before submission of such proposed publication or presentation. At Licensor's request, publication or presentation of research findings may be delayed for an additional time period mutually agreed to by the parties in writing.

IN WITNESS WHEREOF, the authorized representatives of the parties have executed this License Agreement this day of (date).

LICENSEE, Acting through the RESEARCH INSTITUTION	LICENSOR
_____	_____
By:_____	By: _____
Date:_____	Date:_____
Title:_____	Title: _____
Address:_____ _____	Address:_____ _____

ATTACHMENT A

DESCRIPTION OF THE PREMISES

Licensee shall be permitted to access, according to the Schedule described in Attachment C, the following premises during the term of this Agreement:

Description of premises: size, type of land, buildings, how to enter property, boundaries. Note any locations where access is restricted, by permission only, or where access notification is required.

(Image or Map to be included)

ATTACHMENT B

LICENSOR LABOR AGREEMENT

Use: If the research body is paying the farmer for services or labor, it is recommended that a copy of the employment or subcontractor agreement be included as Attachment B of this document.

ATTACHMENT C

LICENSEE'S SCOPE OF WORK DURING USE OF THE PREMISES

The description of the research may vary by institution and project type, but it is suggested that the following items be included to ensure both parties are aligned:

Introduction and Background: Provide context and background information on the research.

Statement of Work: Clearly define the research goals and expected outcomes.

Milestones and Task: Outline relevant milestones and list specific tasks that must be completed to consider the project finished.

Description of Work: Describe the planned day-to-day activities to be performed onsite.

Health and Safety/Training Plan: Any relevant information about required training and health and safety protocol that Licensee will ensure staff on Site have (e.g. animal welfare, ethics, heavy equipment operation, OSHA HAZCOM, etc.)

Schedule: Include a general work schedule (times and days of the week), terms applicable to work outside of the regularly scheduled hours (e.g. not allowed, by permission only, with 24 hours notification, or other), and an estimated completion timeframe.

Staffing: Estimate the number of staff and/or subcontractors the Licensor can expect to access the site. If applicable, estimate number of hours the Licensor should expect to provide direct support to the Licensee (reference Attachment B).

Accommodations: Detail any accommodations the Licensee plans to bring in, such as clean water if not available on-site, and specify if the Licensor will provide facilities like restrooms and hand/boot washing stations if not listed in Attachment D.

Site Maintenance and Restoration: Include provisions for maintaining the site and equipment during research and restoring it to its original condition afterward.

Communication Protocols: Establish regular communication protocols and pathways (in-person meetings, email, text, call) to keep both parties informed about the use of the Premises and any changes in project timeline.

Publication Timing: Indicate the timing for potential published work or deliverables upon project completion.

ATTACHMENT D

DESCRIPTION OF THE FACILITIES AND EQUIPMENT TO BE USED

Licensee shall be permitted to access and use the following facilities and equipment during the term of this Agreement:

1. equipment/building
2. equipment/building
3. equipment/building
4. equipment/building
5. building/building