

PFAS in Poultry
An Update for The Annual Meeting of One Health Committee, USAHA

Kasia Szymanska, MVB, MPH
 Assistant State Veterinarian
 November 2025

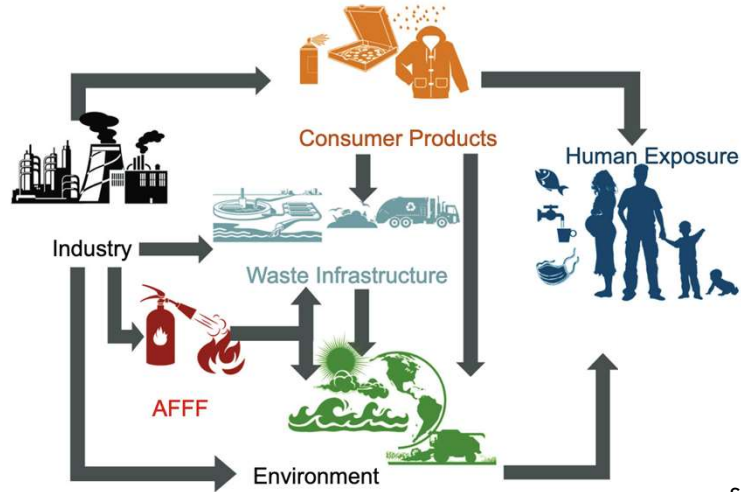
Amanda E. Beal Commissioner	Nancy McBrady Deputy Commissioner	Jo. D. Saffeir Deputy Commissioner	Meagan Hennessey Director, PFAS Response Program	18 Elkins Lane Augusta, ME 04333	(207) 287-3200 www.maine.gov/dacf
--------------------------------	---	--	--	-------------------------------------	--

1



2

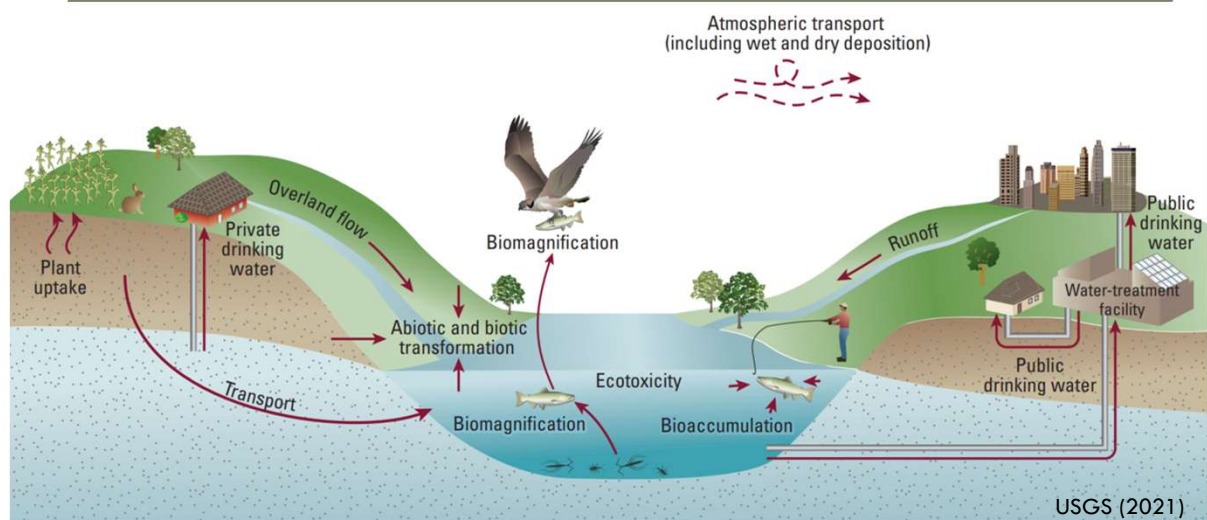
PFAS Contamination of Agricultural Land



Sunderland et al. (2019)

3

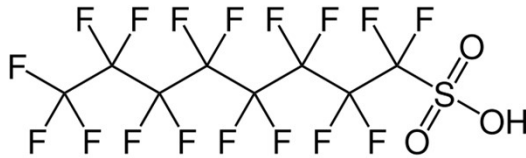
Environmental Fate and Transport



USGS (2021)

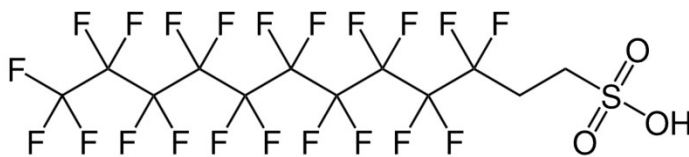
4

Compounds of Interest



PFOS

Legacy compound, phased out of production and regulated



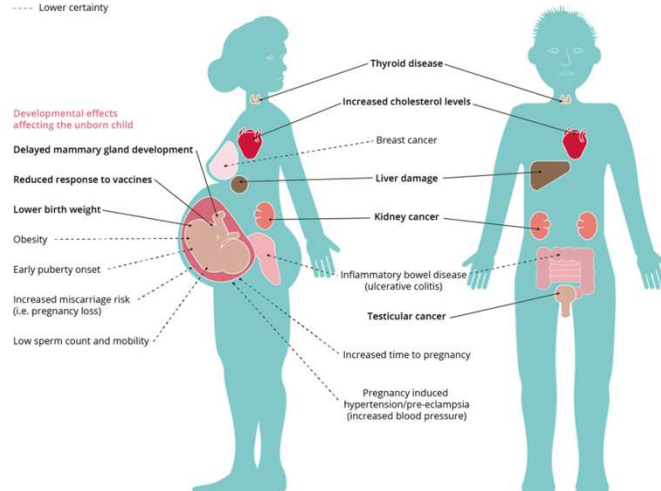
10:2 FTSA

Replacement compound, unregulated

5

Health Impacts

— High certainty
- - - Lower certainty



6

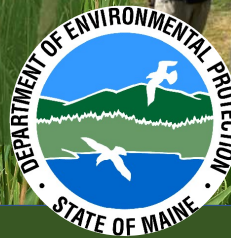
DACF's Farm Specific Response

A specific and collaborative response

DACF coordinates with:

Department of Environmental Protection (DEP) and Maine Centers for Disease Control and Prevention (CDC) where agricultural locations are involved

Many other partner organizations



DEPARTMENT OF
Agriculture, Conservation & Forestry

9

DACF's Farm-Specific Response

We support farms by **identifying** PFAS contamination, pursuing strategies to **reduce or eliminate** PFAS, and providing **technical and financial assistance** to retain farm viability.

DEPARTMENT OF
Agriculture, Conservation & Forestry

10

DACF's Farm-Specific Response

- Gather Farm Information**
Inputs, products, operations, animal management, etc.
- Sampling plan** created. DACF conducts testing.
Time Few labs, potentially long wait times.
- Result(s) interpretation** Results validated and assessed inter-agency.
- Mitigation recommendations** presented with follow-up testing. CDC input.
- Financial assistance** to farms.
- Mental health** and other support resources exist through DACF and partner organizations.

DEPARTMENT OF
Agriculture, Conservation & Forestry

11

Maine PFAS Screening and Action levels

MAINE PFAS SCREENING LEVELS July 2025

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
HFPO-DA	0.00081	0.32	4.8	0.9	1.1	10

Screening Levels

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

Chicken Eggs ⁶ (ng/g or ppb)	
Compound	Action Level
PFOS	4.7

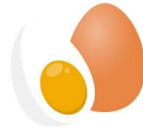
Action Levels

DEPARTMENT OF
Agriculture, Conservation & Forestry

12

Egg Action level


The action level for chicken eggs is **4.7 parts per billion (ppb) PFOS**
Action levels may be changed in the future and may include additional PFAS compounds



Helpful practices to avoid exposing poultry to PFAS:

- Maine DACF suggests that where land has higher than background level PFAS, producers of commercial flocks work with DACF for ongoing flock management and egg testing
- **Do NOT allow birds that have been exposed to PFAS to consume their eggs**
- Use wood chips, wood shavings, or straw or hay from non-detect fields for bedding
- Increase grain rations

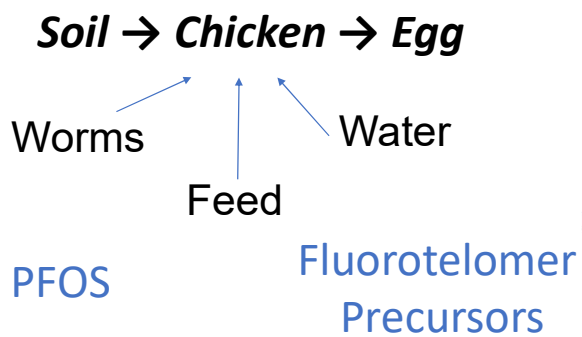

w


 DEPARTMENT OF
 Agriculture, Conservation & Forestry

13

Understanding and Managing the Transfer of Diverse PFAS in Biosolids Impacted Soils to Poultry and Eggs

Primary pathway



 DEPARTMENT OF
 Agriculture, Conservation & Forestry

14

Preliminary Sampling & Study System

4 sample locations

2 'control' sites – **Barn** w/ no soil,
Production field w/ limited contamination

2 'impacted' sites – **Ropes** field w/ PFOS,
Home farm w/ fluorotelomers

Number of samples

Impacted sites - 5 eggs every 10 days

Control sites - 2 eggs every 10 days

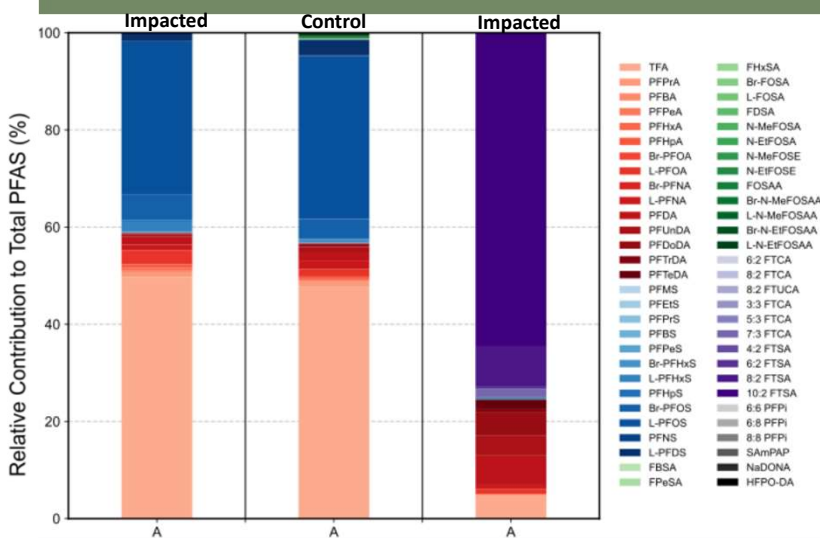
Additional soil, vegetation, bedding,
 air particles, insect samples
 collected

Blood sampling before movement to Ropes

Tissue collection at end of study

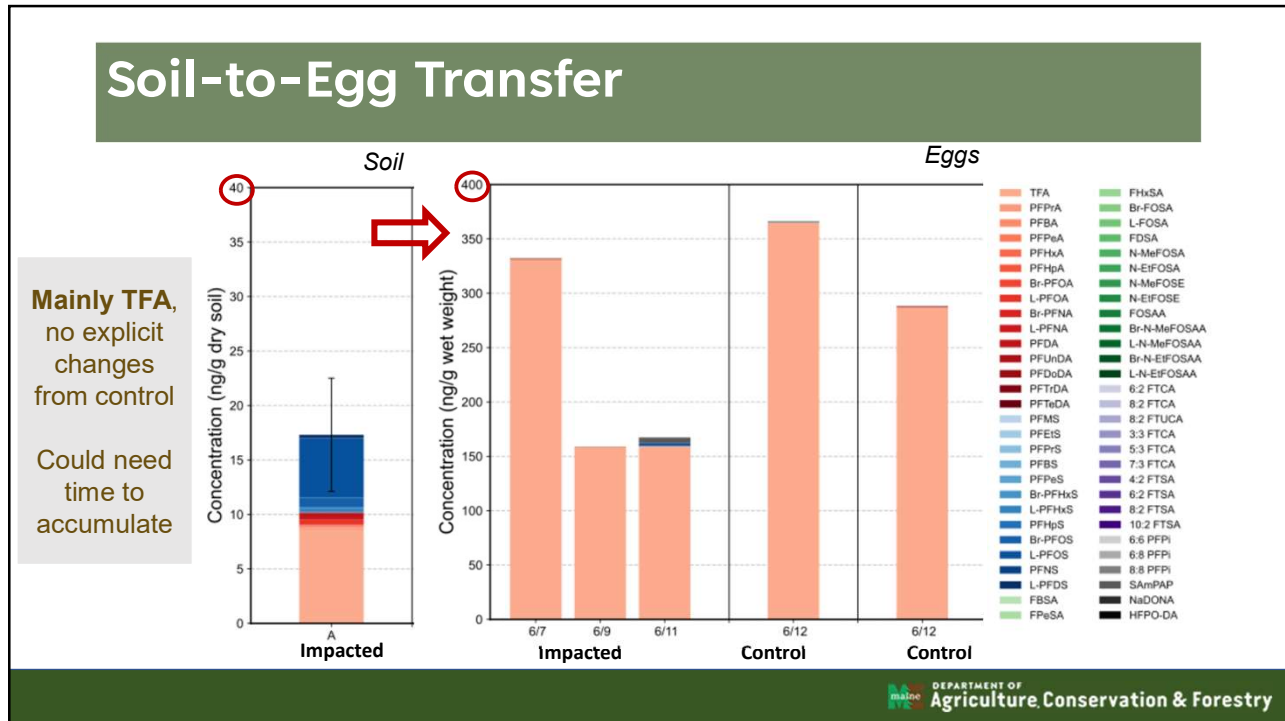
15

Composition Differences between Sites-Contributions

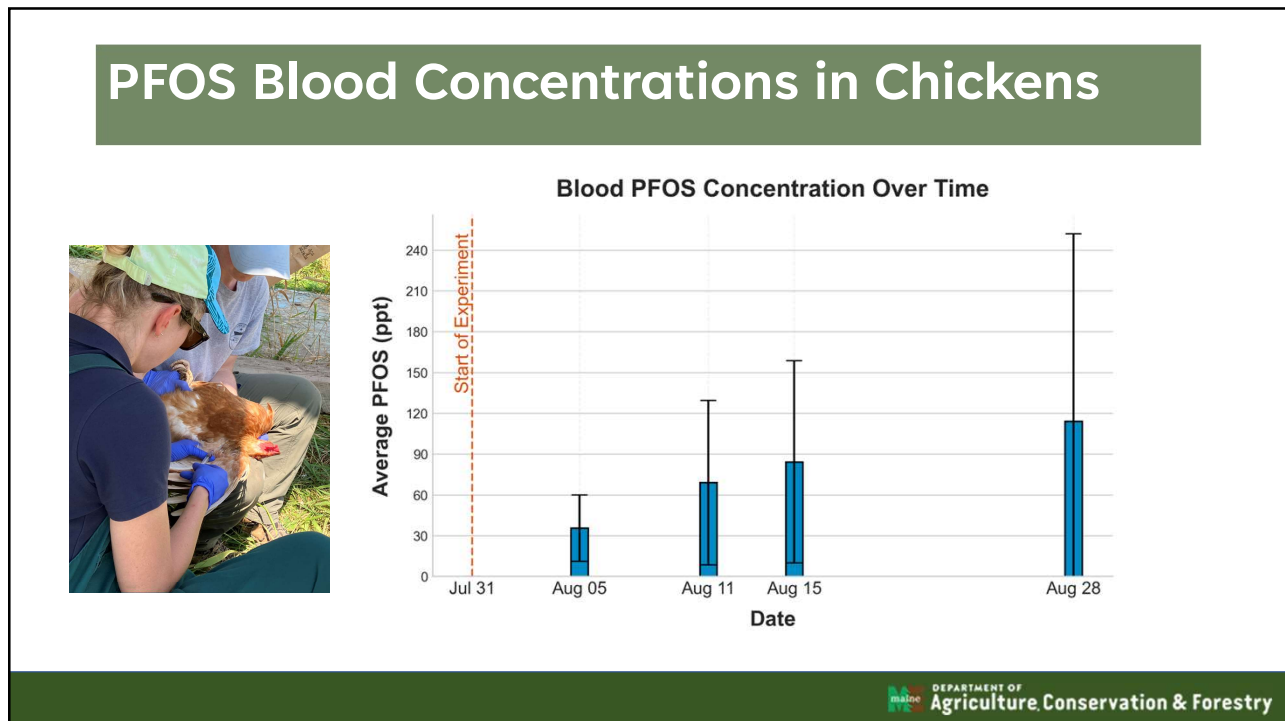


One of the impacted fields and control fields have similar profiles of contamination

16



17



18

Thanks to colleagues at:
DHHS
Dr. Andy Smith, Maine State Toxicologist
Dr. Thomas Simones, Assistant State Toxicologist

Harvard John A. Paulson School of Engineering and Applied Sciences and
Harvard Biogeochemistry of Global Contaminants Research Group
Dr. Elsie Sunderland, Professor
Dr. Euna Kim, Postdoctoral Fellow
Ethan Sontarp, Graduate Student

Laura Sofen, Research Scientist




Thank you

Kasia Szymanska, MVB, MPH
 Assistant State Veterinarian
 Kasia.Szymanska@Maine.gov