



# New Mexico Environment Department

## PFAS Contamination & Remediation in New Mexico Radioactive and Hazardous Waste Materials Committee

*Stephanie Stringer, Resource Protection Division Director*

*November 4, 2019*





# What are PFAS?

- Perfluoroalkyl and polyfluoroalkyl substances (PFAS) are a family of man-made chemicals
- PFAS are mobile and persistent in groundwater
- PFAS are known as “emerging contaminants”
  - Risks to human health and the environment are not fully understood
  - Lacking peer-reviewed human health standards
  - Evolving federal and state standards and regulations
  - No national EPA standards



# PFAS Uses and Applications



**Aqueous Film-Forming Foam**



**Apparel**



**Building and construction**



**Chemicals and pharmaceuticals**



**Electronics**



**Oil and gas**



**Energy**



**Healthcare and hospitals**



**Aerospace**



**Semiconductors**



# Public Health Impacts

Evidence that exposure to PFAS can lead to adverse health outcomes in humans:

- Reproductive and developmental, liver and kidney, and immunological effects.
- Increased cholesterol levels among exposed populations.
- Limited findings related to:
  - Low infant birth weights;
  - Effects on the immune system;
  - Cancer (for PFOA); and
  - Thyroid hormone disruption (for PFOS).



# Federal Role - US EPA

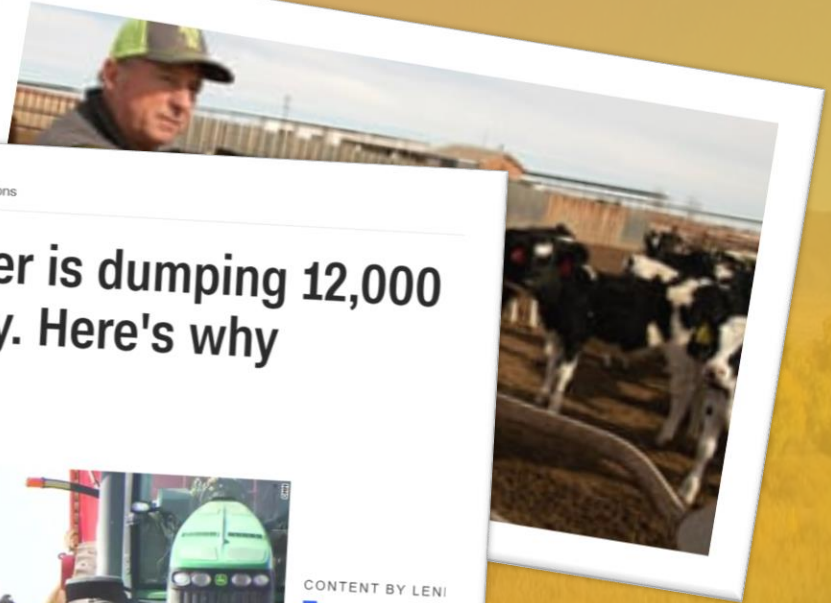
- Health advisory levels = 70 parts per trillion for PFOA and PFOS (non-enforceable, non-regulatory)
  
- In February 2019, the U.S. Environmental Protection Agency (EPA) announced its PFAS “action plan,” which includes moving forward with maximum contaminant level (MCL) development process.
  - Process begins with assessing whether to proceed with the development of MCLs for PFOS and PFOA under the Safe Drinking Water Act; process to start at the end of 2019.



# NMED's Role in PFAS Contamination

- NMED has primacy in enforcing hazardous waste regulations under the Resource Conservation and Recovery Act (RCRA).
- NMED has authority to protect groundwater under the state Water Quality Act (WQA).
- NMED does not clean up RCRA contaminated sites itself, but instead requires and reviews clean-up to be undertaken by responsible parties.

# Cannon Air Force Base



**CNN** politics 45 Congress SCOTUS Facts First 2020 2019 Elections

## A New Mexico farmer is dumping 12,000 gallons of milk a day. Here's why

By [Rene Marsh](#), CNN  
Updated 6:39 PM ET, Thu August 22, 2019



CONTENT BY LENI

Refi rates at 2.875% Af qualify?

Fed just dropped mortg



# Cannon Air Force Base (CAFB)

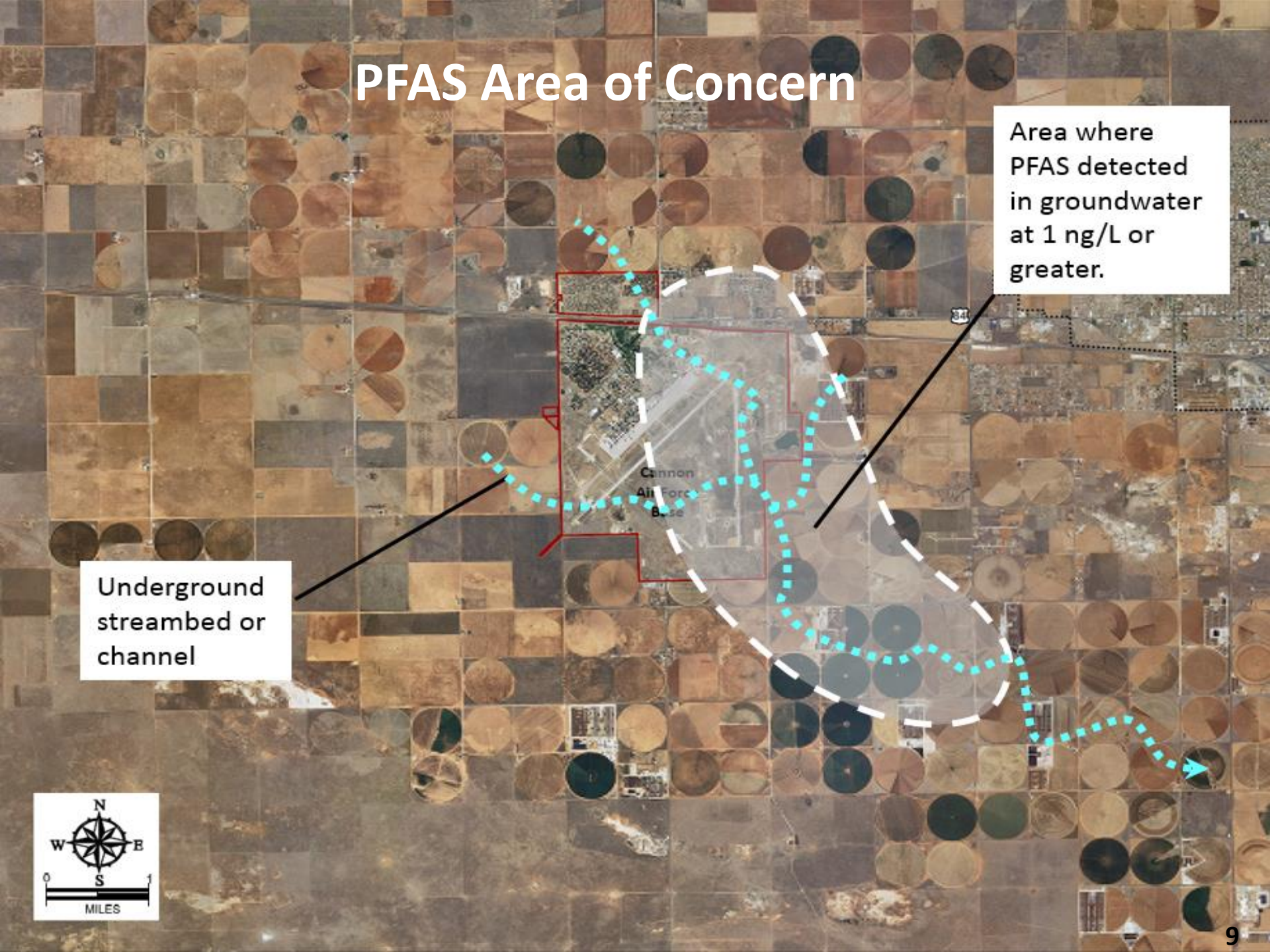
- **2015** - The United States Air Force (USAF) begins studying the potential for PFAS releases at CAFB.
- **August 2018** -The USAF discloses the results of their study to NMED.
- **November 2018** – NMED issues Notice of Violation under authority of the Water Quality Act to the USAF for failing to contain and remove/mitigate the damage caused by its discharge of PFAS into groundwater.
- **December 2018** – NMED requires the USAF to conduct corrective actions pursuant to its hazardous waste permit.
- **January 2019** – USAF challenges NMED’s authority to require corrective action pursuant to their hazardous waste permit.
- **March 2019** – NMED and the N.M. Office of the Attorney General sue the USAF seeking action on the imminent and substantial endangerment caused by PFAS pollution.



# PFAS Area of Concern

Area where PFAS detected in groundwater at 1 ng/L or greater.

Underground streambed or channel





# CAFB Area Water Testing

- State agencies collected 90 water samples from owners of private wells within 4 miles of the CAFB boundary.
- PFAS were detected in 1 house served by a public water cooperative and in 2 private domestic wells.
- No PFAS were detected at entry points (where water enters the system to be delivered to customers) in Cannon's or Clovis' drinking water system.
- Sampling data can be found at:  
<https://www.env.nm.gov/pfas/data/>

# Holloman Air Force Base

AIR FORCE  
**2018 report shows off-the-charts  
contamination in Holloman AFB water**

By Laura Paskus

[Tweet](#) [Recommend 22](#)





# Holloman Air Force Base (HAFB)

- **2015** - The United States Air Force (USAF) begins studying the potential for PFAS releases at HAFB.
- **November 2018** -The USAF discloses the results of their study to NMED.
- **January 2019** – USAF challenges NMED’s authority to require corrective action pursuant to their hazardous waste permit.
- **February 2019** – NMED issues Notice of Violation (NOV) under authority of the Water Quality Act to the USAF for failing to contain and remove/mitigate the damage caused by its discharge of PFAS into groundwater.
- **March 2019** – NMED and the N.M. Office of the Attorney General sue the USAF seeking action on the imminent and substantial endangerment caused by PFAS pollution.



# HAFB Area Water Testing

- Extremely high levels detected at Holloman Lake; USAF refused to restrict access; NMDOH issued advisory for the outdoor recreation area around the lake, recommending visitors to this area do not:
  - Ingest water or foam from the lake;
  - Swim in the lake; or
  - Touch the water if possible.
- State agencies collected 25 water samples from owners of private wells within 4 miles of the CAFB boundary
- PFAS were detected at 9 private domestic wells; 4 above EPA's health advisory level.
- PFAS were not detected in surrounding public water supplies.
- Sampling data can be found at:  
<https://www.env.nm.gov/pfas/data/>



# Relief Sought

- An order declaring that Defendants violated the HWA and RCRA;
- Injunctive relief requiring the abatement of the imminent and substantial endangerment claims;
- A permanent injunction directing the Defendants to take steps necessary to achieve compliance with HWA and RCRA;
- Civil penalties under applicable statutes; and
- Costs incurred by the State to date and into the future.



# Path Forward

- PFAS contamination is a high priority and state agencies will continue protecting public health and the environment (NMED with Departments of Health and Agriculture).
- NMED maintains a PFAS website with data and information <https://www.env.nm.gov/pfas/main/>
- NMED will continue to use science to inform decisions and take whatever options available to hold the Air Force and other Responsible Parties accountable.



# Additional NMED Planning

- PFAS contamination in NM is one of the Governor's and the New Mexico Environment Department's top priorities.
  
- NMED using available resources and seeking additional resources to:
  - Monitor PFAS at LANL for conformational purposes of PFAS monitoring being conducted by DOE LANL
  - Conduct Alamogordo groundwater investigation
  - Analyze regulation development
  - Incorporate PFAS monitoring into:
    - RCRA permits
    - GW discharge permits
    - NPDES permits (via N.M. certification)
  - Conduct surface and drinking water source monitoring



# QUESTIONS?

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