



## Massachusetts PFAS & Your Health Study

# Hyannis residents needed for Massachusetts PFAS & Your Health Study

Laurel Schaider, PhD

Senior Scientist, Silent Spring Institute

Barnstable Town Council, February 17, 2022



**SILENT SPRING INSTITUTE**

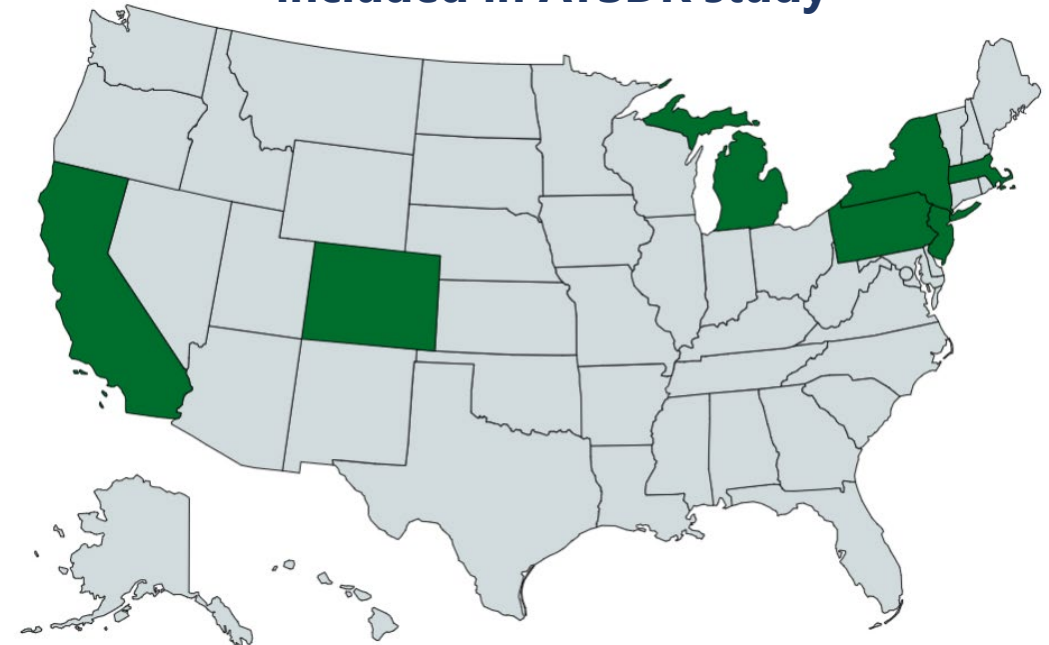
Researching the Environment and Women's Health

# Multi-site Health Study



- Funded by Centers for Disease Control and Prevention (**CDC**) and Agency for Toxic Substances and Disease Registry (**ATSDR**)
- Includes communities in 7 states with PFAS contamination of drinking water supplies
- Goal: improve understanding of PFAS-related health effects

Communities in 7 states included in ATSDR study



# MA PFAS and Your Health Study



- Hyannis and Ayer, MA
- Aiming to recruit 1000 adults and 300 children (ages 4-17)
- Enrollment started Fall 2021
- Including current and former residents of Hyannis

## Study partners

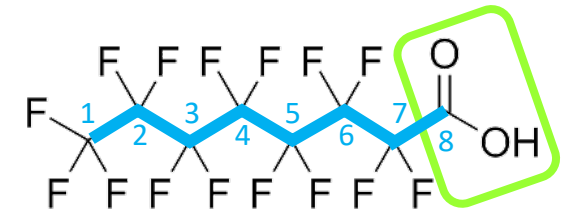
- Silent Spring Institute (lead)
- Harvard School of Public Health
- Eastern Research Group
- Mass. Breast Cancer Coalition
- People of Ayer Concerned about the Environment



# What are PFAS?

- Per- and polyfluoroalkyl substances
- Class of over 9,000 compounds
- Extremely resistant to degradation
- Mobile in environment
- Used in consumer products since 1950s
- Emerged as common drinking water pollutants around 2010-2015

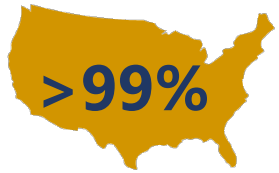
## PFOA ("C8")



8 carbon chain

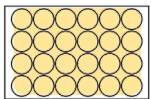


# Exposure and health concerns



## PFAS exposures are common

- PFAS have been detected in over 99% of Americans



## Harmful health effects linked to PFAS exposures

- Cancer (kidney, testicular)
- Thyroid disruption
- Elevated cholesterol
- Decreased birth weight
- Developmental effects
- Changes in liver enzymes
- Ulcerative colitis
- Preeclampsia
- Immunotoxicity, including decreased vaccine response



# Why is this study important?



- Certain PFAS have been linked to a range of health outcomes
- Gaps in our understanding of full range of health effects and effects of PFAS mixtures
- Results of the Massachusetts study will be combined with results from 6 other states
- Overall findings will inform drinking water standards and other future regulations



# PFAS in Hyannis drinking water

- **2010**: Silent Spring found 2 PFAS in Hyannis public wells and in other Cape public wells.
- **2014**: PFOS levels found above U.S. EPA guideline. Carbon treatment installed.
- **2016**: U.S. EPA issued new guideline. Temporary advisory in Hyannis Purchasing agreements with other water supplies
- **After 2016**: Additional treatment to meet new stricter Mass. regulations
- **2020**: New Mass. standard (20 ppt) in October 2020



**Hyannis Water System  
Superintendent Hans Keijser**

## **Important note**

Hyannis drinking water is now being treated to remove PFAS chemicals and meets the new strict Massachusetts standard



# Who is eligible?



- **Adults (ages 18+):**

- Lived in Hyannis between May 2006 and July 2016

- **Children (ages 4-17):**

- Lived in Hyannis between May 2006 and July 2016 and/or their mothers lived in Hyannis during this time prior to child's birth
- Firefighters and others exposed through their job are not eligible
- Multiple members of same household can participate
- Former residents may be eligible





# What we'll ask you to do



- **Office visit**
  - Blood and urine sample
  - Body measurements (height, weight, blood pressure)
- **Questionnaire (by phone)**
  - Residential and work history
  - Water consumption patterns to reconstruct exposures
  - Health history
- **Neurobehavioral tests (children ages 5-17)**
  - Activities to assess learning, memory, and attention



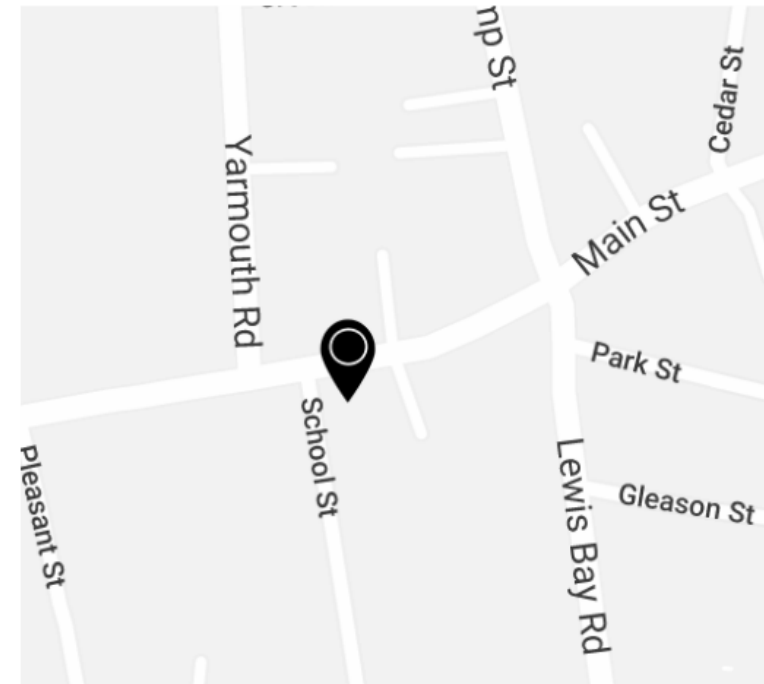
# What are we testing for?



- **Core elements** (required by ATSDR, all participants)
  - 12 PFAS chemicals measured at the CDC lab
  - Markers of health effects (such as cholesterol, thyroid hormones, sex hormones, markers of liver function)
- **Additional tests** (some participants)
  - Additional measures of PFAS exposure (such as non-targeted analysis, total organofluorine)
  - Other measures of health effects (such as metabolomics, cholesterol subfractions, COVID antibodies)



# Hyannis office: 171 Main Street



**\*\* We follow extensive COVID-19 precautions in our study office \*\***



# What will participants receive?



- **Satisfaction** of supporting a high-impact study on chemicals of widespread concern
- **Gift cards** as our way of saying thanks:
  - Adults: \$50 in gift cards for completing all parts of study
  - Children: \$75 in gift cards for completing all parts of study (including neurobehavioral testing)
- **Report** with test results that can be shared with your doctor



# Come to our Open House!



**This Saturday  
February 19, 2022  
11:00 am–1:30 pm**

**171 Main Street  
Hyannis, MA**

- Meet our study team
- Tour the office
- Sign up to participate
- Talk with Hyannis Water Superintendent Hans Keijser



# We need your help



- Attend our Open House
- If eligible, sign up to participate
- Share study information with residents of your precincts
- Invite our team to community events
- Share your ideas for recruitment



# Learn more and contact us



## Visit our website:

- ▶ <https://bit.ly/MA-PFAS>

## Call or text:

- ▶ (508) 296-4298

## Send an email:

- ▶ [pfas-health-study@silentspring.org](mailto:pfas-health-study@silentspring.org)



### Massachusetts PFAS & Your Health Study

How do PFAS chemicals in drinking water affect the health of adults and children?

### Did you or your family live in Hyannis between May 2006 and July 2016?

Silent Spring Institute  
171 Main Street,  
FL1, Rear Entrance,  
Hyannis, MA 02601

Silent Spring Institute is recruiting for the Massachusetts PFAS & Your Health Study! Adults will receive up to \$50 in gift cards. Children will receive up to \$75 in gift cards.

#### To learn more or sign up:

Email: [pfas-health-study@silentspring.org](mailto:pfas-health-study@silentspring.org)

Call/Text: (508) 296-4298

Website: <http://bit.ly/MA-PFAS>



Se habla español.  
Falamos Português.



Funded by the Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry



# A second PFAS health study in Hyannis

- **PFAS-REACH** is currently recruiting children ages 3-8 whose mothers lived or worked in Hyannis prior to 2016
- Eligible children can participate in both studies

**Email:** [pfas-reach@silentspring.org](mailto:pfas-reach@silentspring.org)

**Call or text:** 617-221-6428

**Web:** [www.pfas-exchange.org/childrenstudy](http://www.pfas-exchange.org/childrenstudy)





# Thank you!

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## RESOURCES:

- ▶ Silent Spring Institute: [www.silentspring.org](http://www.silentspring.org)
- ▶ MA PFAS Study: [bit.ly/ma-pfas](http://bit.ly/ma-pfas)
- ▶ PFAS Exchange: [www.pfas-exchange.org](http://www.pfas-exchange.org)



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