

# **WELCOME**

## **Open House Meeting**

### **PFAS in Drinking Water Investigation**

#### **Former Grumman/Calverton Property**





# Why Is the Navy Sampling for PFOS and PFOA?

Additional information can be found online at  
[www.secnave.navy.mil/eie/pages/pfc-pfas.aspx](http://www.secnave.navy.mil/eie/pages/pfc-pfas.aspx)

For updates as more information becomes available, visit  
<https://go.usa.gov/xPCpj>

If you have specific questions, please contact  
[NAVFAC\\_ML\\_PAO@navy.mil](mailto:NAVFAC_ML_PAO@navy.mil) or 757-341-1410

## The Navy is identifying potential exposure to PFAS in drinking water from sources on Navy property.

- In 2016, the EPA established a drinking water lifetime health advisory level for two PFAS, specifically PFOS and PFOA.
- Navy policy is to identify and prioritize locations with the potential for exposure to PFOS/PFOA in drinking water.
- PFOS/PFOA, contained in firefighting foam, has been detected in groundwater at the former Grumman facility in Calverton.
- The goal is to protect residents from exposure to drinking water that has PFOS and/or PFOA that exceeds the EPA lifetime health advisory.



**The Navy needs your permission to sample your private drinking water well.**



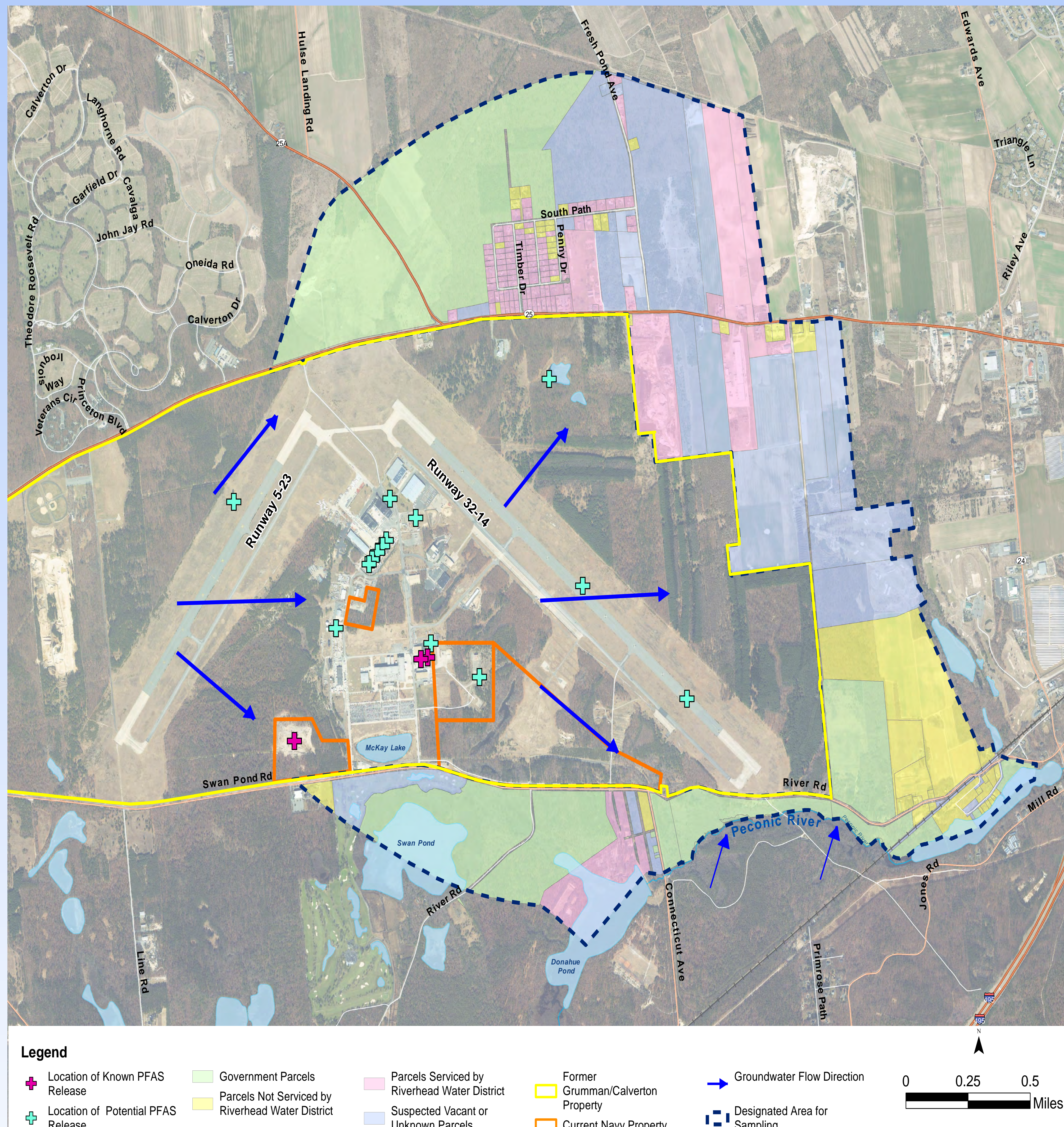


# Off-Property Drinking Water Well Sampling

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## Designated Area for PFAS Sampling

- The Navy is investigating historical use of firefighting foam on the former Grumman/Calverton property.
- Firefighting foam was used for:
  - Crash response
  - Equipment testing
  - Firefighting training
- Certain firefighting foams contain PFAS.
- PFAS may be present in private drinking water wells in nearby locations based on:
  - Historical releases
  - Groundwater flow
- Based on results the Navy may expand the sampling areas as needed.



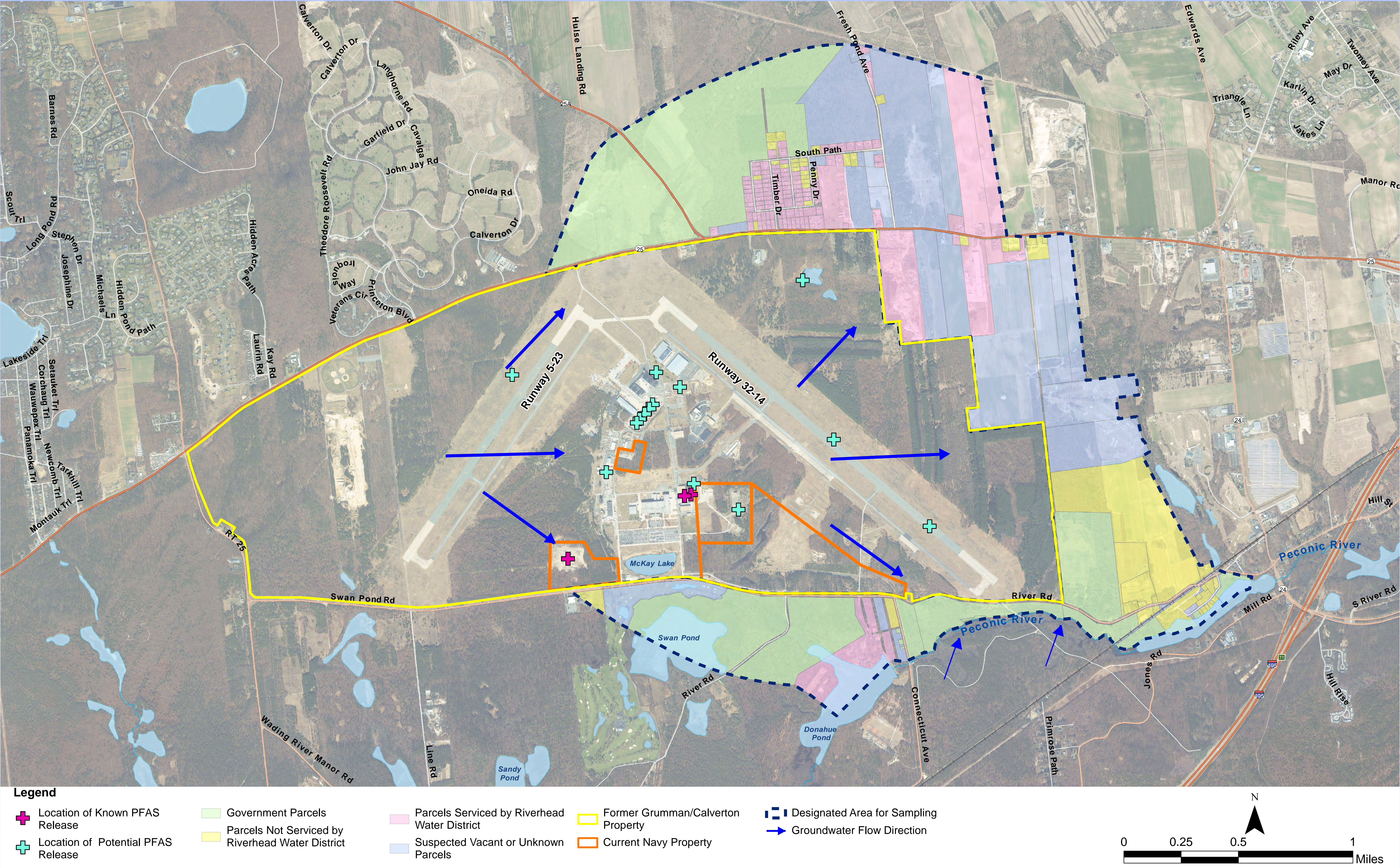


# Off-Property Drinking Water Well Sampling

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# Per- and Polyfluoroalkyl Substances (PFAS)

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## Where do PFAS come from?

- Man-made compounds, not found in nature
- Used since 1950s in many products
- Last a long time in the environment
- Found in people, animals, and fish around the world



firefighting foam



stain-resistant carpets



water-resistant fabrics



electroplating



nonstick cookware



food packaging

## What is an EPA Health Advisory?

- Establishes concentrations in drinking water that are protective of the most sensitive populations and the general public, even for lifetime exposure
- Based on the latest available studies of lab animals and exposed human populations
- Provides information to state agencies and public health officials on health effects and water treatment so they can take steps to reduce exposures
- Non-enforceable

## What is EPA Health Advisory for PFOA and PFOS?

- The health advisory is exceeded if the amount of PFOA and PFOS (combined or individually) is greater than 70 parts per trillion.
- Parts per trillion is equivalent to one grain of sand in an olympic-sized pool.





# Exposure and Health Effects

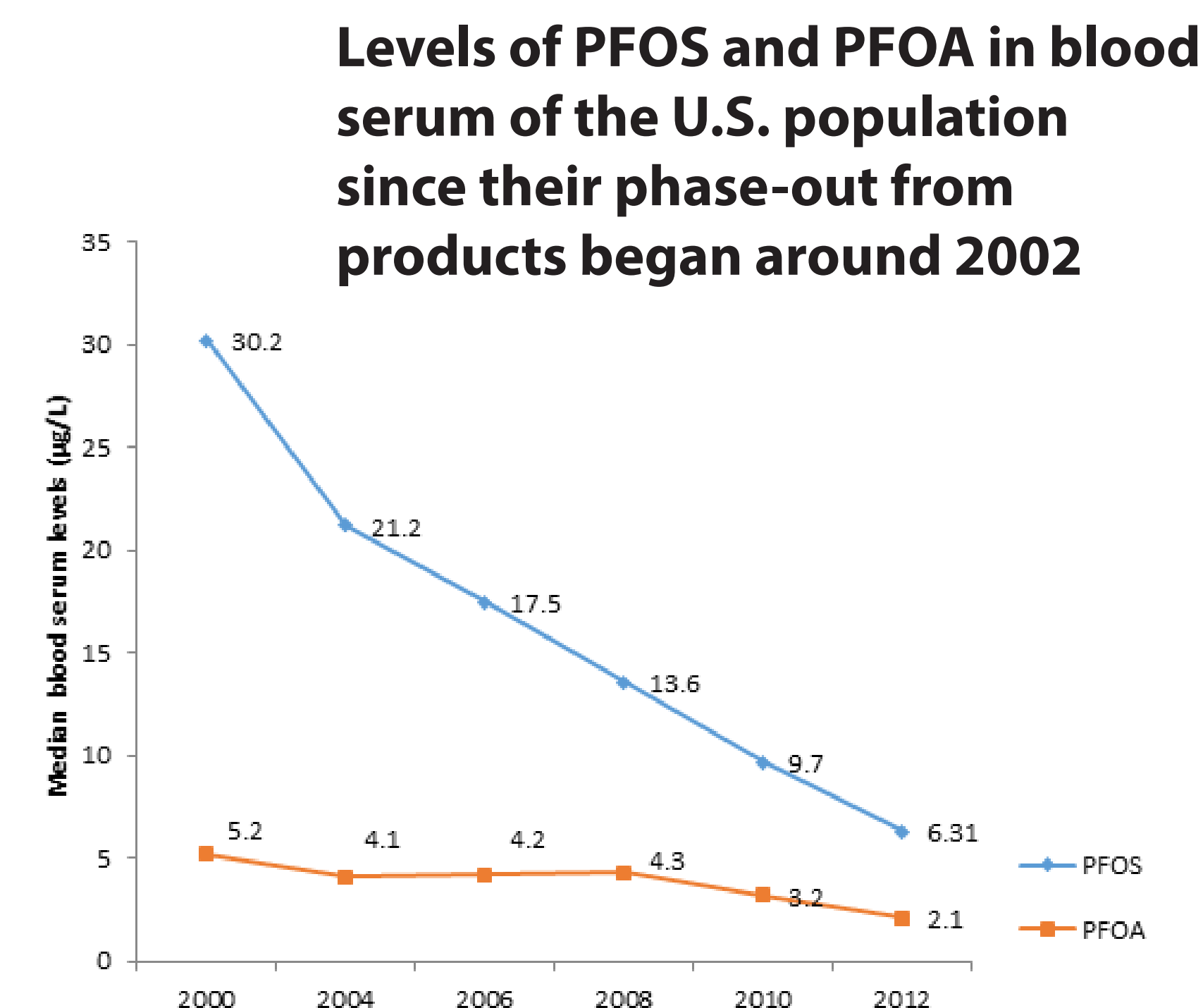
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## PFAS in People

- CDC monitoring indicates that most people in the U.S. have PFAS in their bodies.
- Levels of PFOS and PFOA have been decreasing over time following their phase-out from use.
- Some PFAS stay in the body a long time – there is no recommended medical treatment to reduce PFAS in the body.



Source: CDC National Health and Nutrition Examination Survey

## Exposures to PFAS

- Is widespread around the world
- Is primarily through:
  - Ingestion of contaminated food, water, or soil
- Will build up in the body until exposure stops
- Can reach unborn babies or nursing infants of mothers who are exposed
- Is not significant through skin contact when bathing or showering

## Potential Health Effects

- Research is needed to learn more about the possible links between PFAS exposure and health effects.
- Animals exposed to high levels of PFAS had changes in liver, thyroid, and pancreas function; altered hormone levels; and increased rates of certain cancers.
- Based on available studies of people who have experienced high levels of exposure, potential health effects include:
  - Increased cholesterol levels
  - Changes in growth, learning, and behavior of the developing unborn baby and child
  - Immune system changes
  - Decreased fertility
  - Altered hormone function
  - Increased risk of certain types of cancer
- The levels of PFOS or PFOA in drinking water do not predict what, if any, health impact might occur as a result of exposure.

CDC Centers for Disease Control and Prevention  
EPA U.S. Environmental Protection Agency  
PFAS per- and polyfluoroalkyl substances  
PFAS per- and polyfluoroalkyl substances

PFOA perfluorooctanoic acid  
PFOS perfluorooctane sulfonate  
ppt parts per trillion



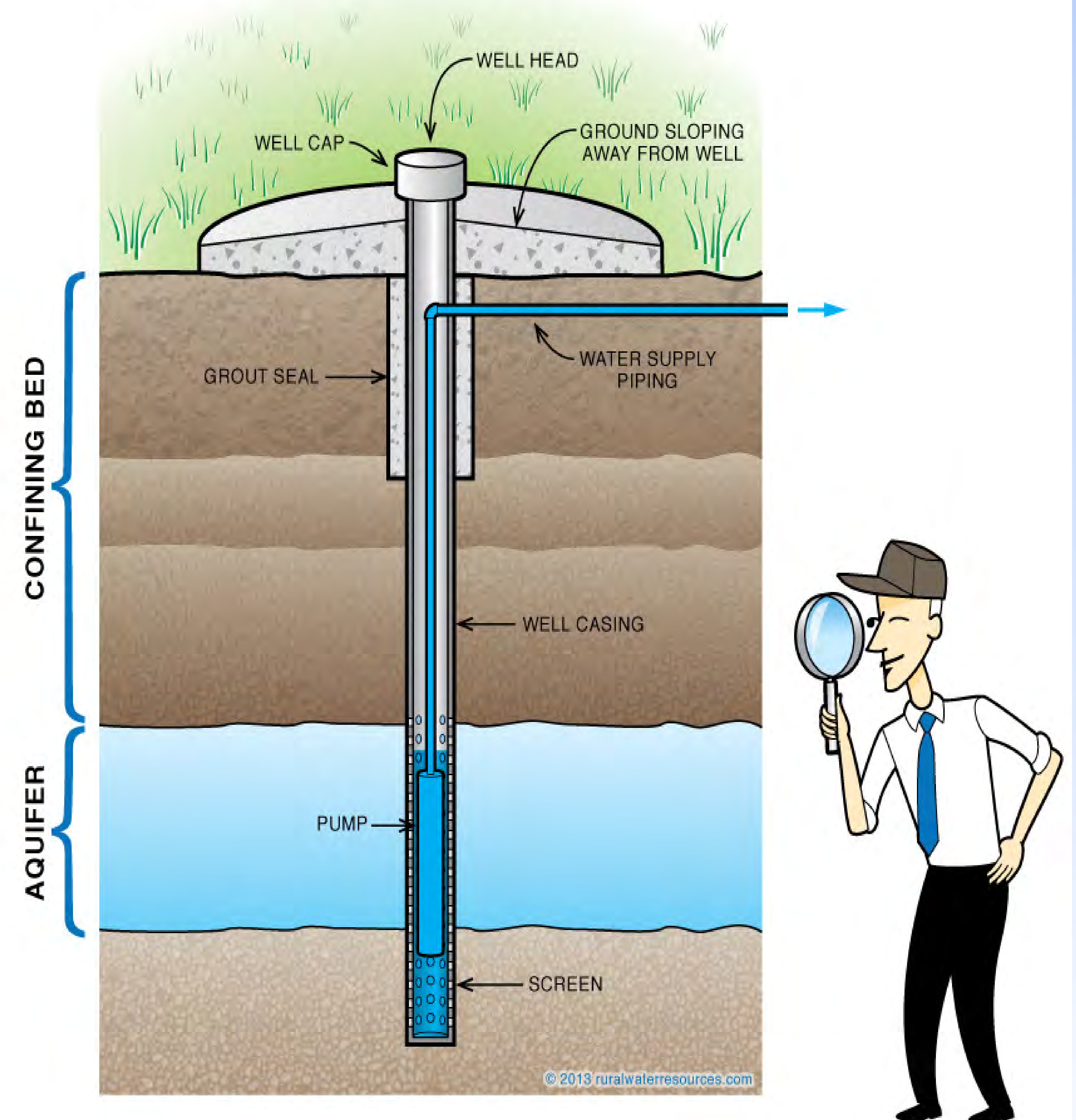
# Managing Your Private Well

## Managing Your Drinking Water Well

**Testing of private wells is recommended to ensure water quality.**

- Bacteriological testing once a year is a good idea. Regular testing can tell you the quality of the water.
- More frequent testing is recommended if your water changes in taste, odor, or appearance or if you have recurrent incidences of gastrointestinal illness.
- The National Groundwater Association recommends you test annually for bacteria, nitrates/nitrites, and any other contaminants of local concern.
- If using water conditioner (e.g., water softener) equipment, it should be maintained and kept in working order.
- Do not dispose of or store hazardous materials or chemicals on your property or near your well.

## Typical Well Design





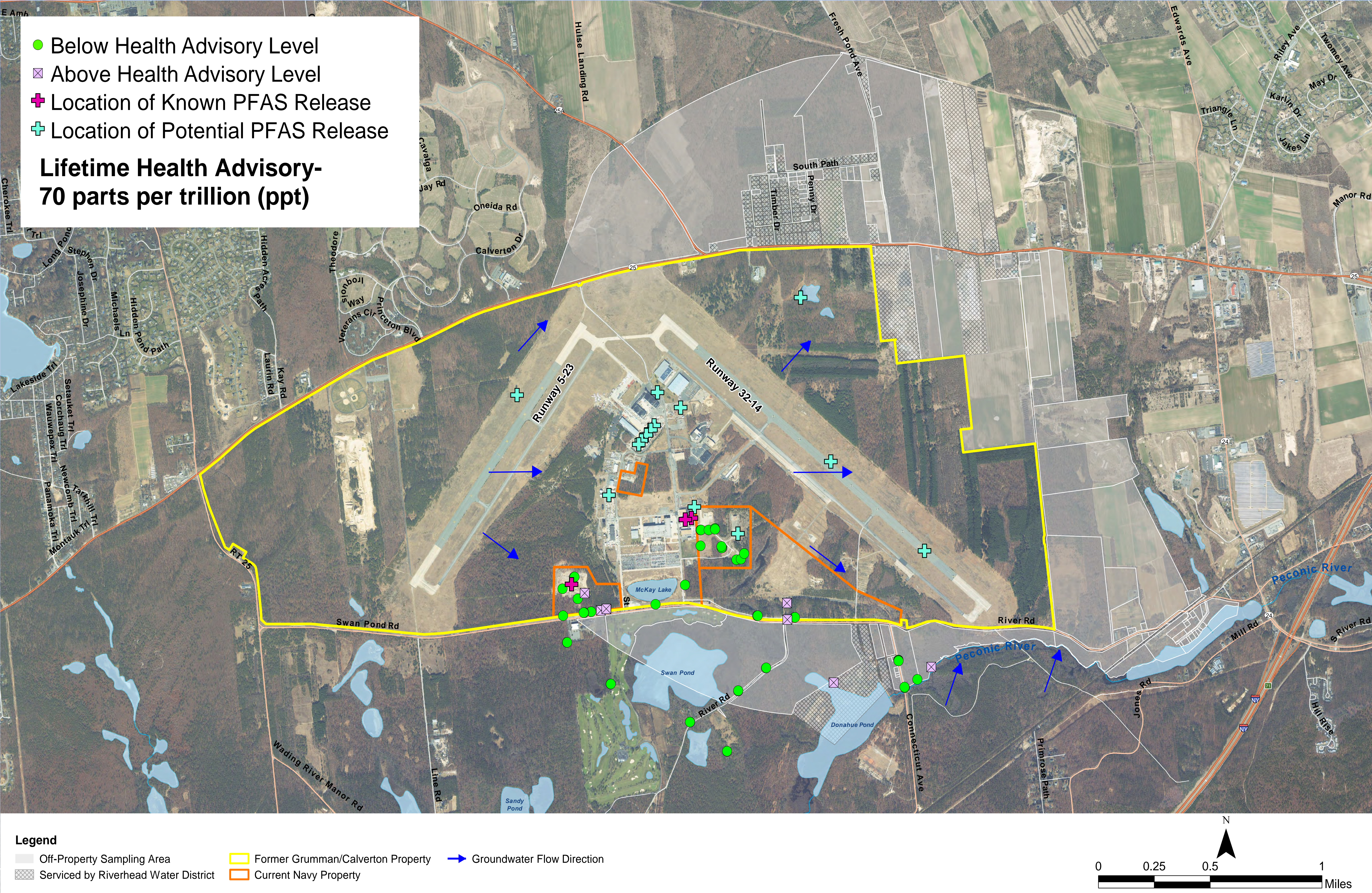


# Preliminary Groundwater Investigation

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# Community Involvement and Environmental Cleanup

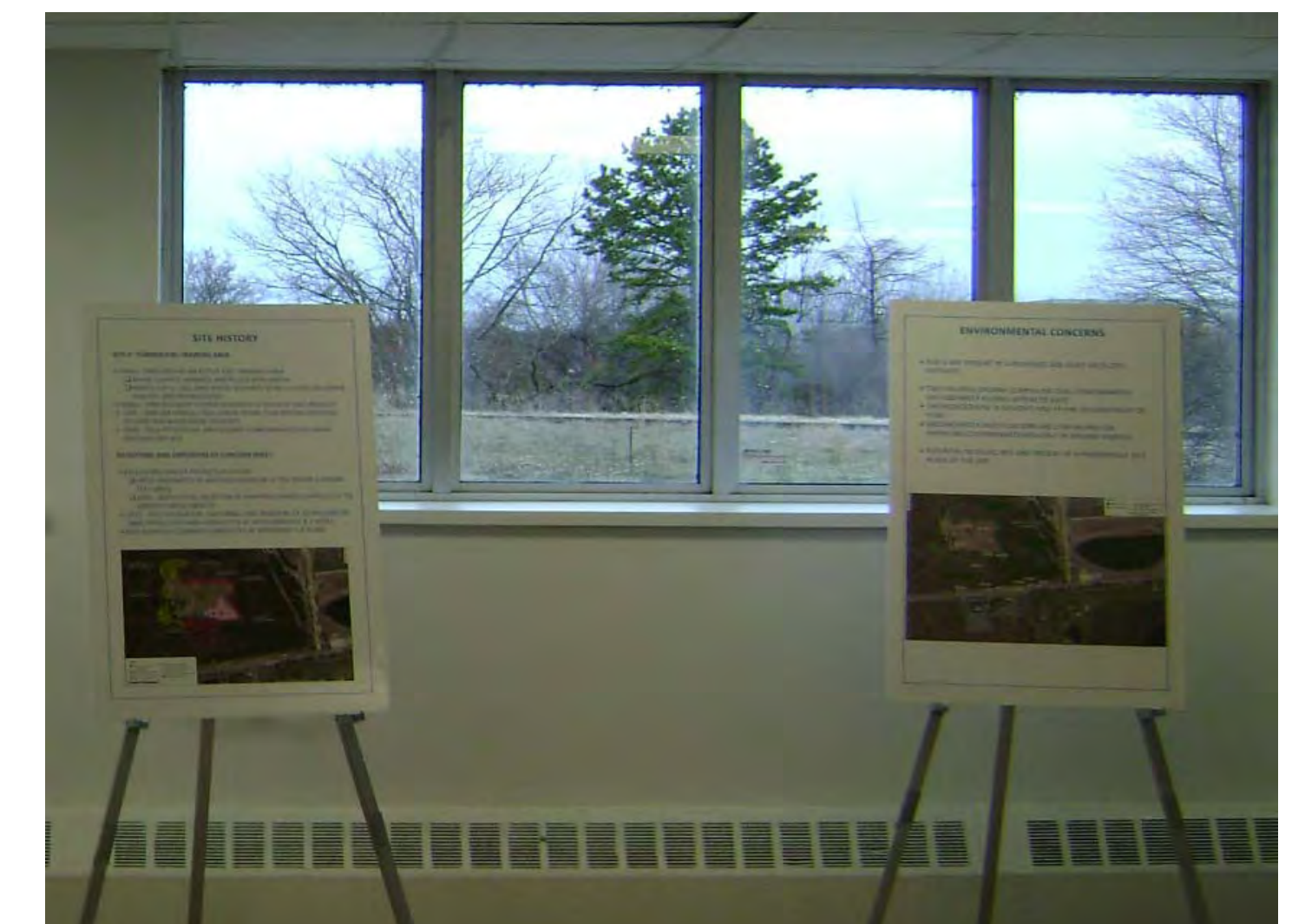
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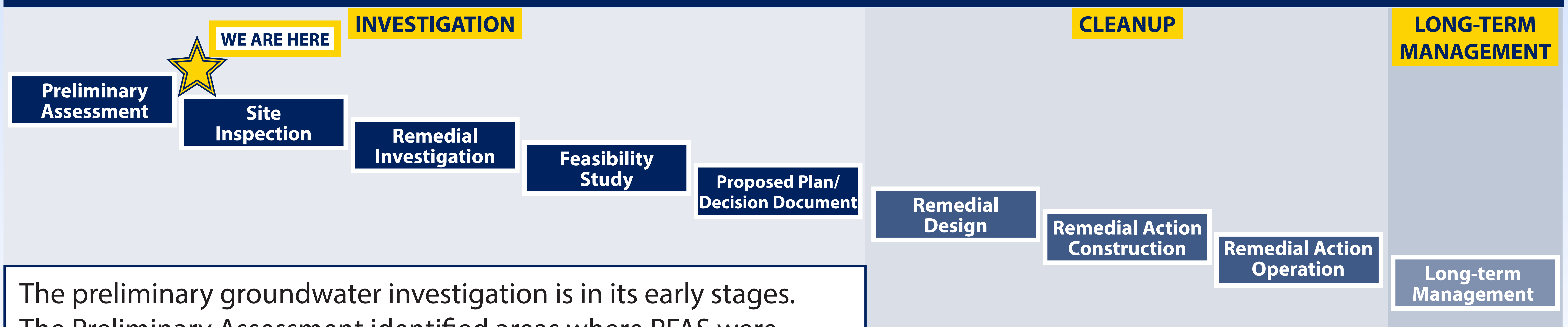
## Former Grumman/Calverton Community Involvement

- In 1997, a Restoration Advisory Board (RAB) was established for Naval Weapons Industrial Reserve Plant Calverton. The RAB is comprised of members of the community, local environmental groups, and local, state and federal officials that meet semi-annually to inform the community on environmental issues at the former Grumman/Calverton property.
- The RAB provides an opportunity to offer input and provides an avenue for discussion and information exchange for the environmental clean up program.
- This process helps to address concerns of public stakeholders and the community near the former Grumman/Calverton property.
- The RAB meets twice per year, in April and November.



## PFAS Environmental Cleanup Process

Activity boxes do not indicate the relative length of any activity.



The preliminary groundwater investigation is in its early stages. The Preliminary Assessment identified areas where PFAS were released into the environment. The on-going Site Inspection will generate data and other information to assist in determining future investigations and potential clean-up actions.

EPA U.S. Environmental Protection Agency  
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# Next Steps

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## Starting in October 2018, the Navy will notify residents of their results

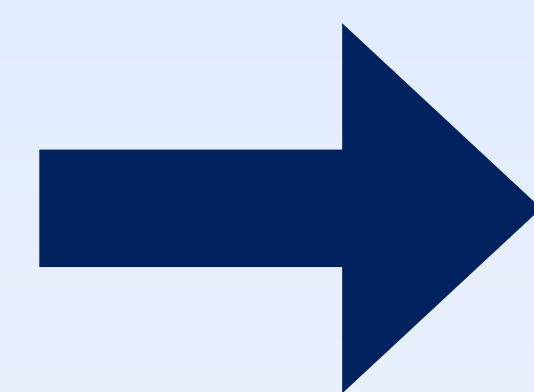
### Sequence of Events:

- Navy receives preliminary results, typically within a few weeks of sampling.
- Navy calls the property owner within 24 hours of receiving preliminary results.
- Preliminary results are validated by an independent 3rd party in about a month.
- After the Navy receives the final validated results, then the results will be mailed to property owners.

### Ongoing Actions:

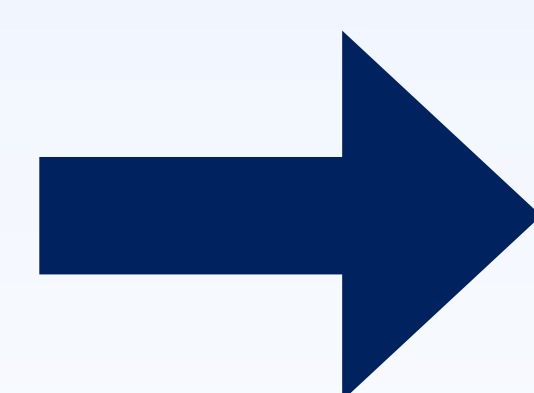
- Respond to PFOS and PFOA results above the EPA lifetime health advisory in drinking water.
- Continue to keep the community informed.
- Potentially expand sampling area(s) based on sampling results.
- Continue to partner with local, state, and federal agencies.

If the test results are **above** the lifetime health advisory



The Navy will provide bottled water for drinking and cooking **(within 24 hours)**

If the test results are **at or below** the lifetime health advisory



No immediate action is needed

### We need your cooperation:

- **To sample your drinking water wells**
- **To identify other drinking water wells in the designated area**

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PFAS per- and polyfluoroalkyl substances  
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# Drinking Water Sampling Process

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## Sampling Process

- We need your cooperation to:
  - Make your appointment (sampling will typically take less than an hour)
  - Review and fill out the questionnaire
- A team of qualified professionals will:
  - Collect cold water from a sample point (water will need to run for 3–5 minutes)
  - Analyze the sample at a certified laboratory according to EPA guidelines



## Ways to Schedule an Appointment

1. Make your appointment today at this meeting,
- or
2. To request an appointment for sampling your drinking water well in the designated area, please call and leave a message:

**1-833-737-7267 (1-833-REQ-SAMP)**

You will receive a response within one business day to schedule a day and time for sampling

EPA U.S. Environmental Protection Agency  
PFAS per- and polyfluoroalkyl substances  
PFOA perfluorooctanoic acid

PFOS perfluorooctane sulfonate  
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# Sign Up for Your Sampling Appointment Here

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## Off-base Drinking Water Well Sampling

- The Navy is currently sampling drinking water wells in designated areas only.
- Drinking water samples will be collected starting **September 26, 2018**.
- Sampling appointments are available **8 a.m. – 8 p.m. daily until October 5, 2018**.
- The property owner must give permission for sampling.
- Sampling typically takes less than an hour.
- An adult resident (18 years of age or older) must be present during sampling.

## Drinking Water Sampling Activity Timeline



**Open House Public Meeting**  
**September 25, 2018 (4 - 7 p.m.)**  
(Sign Up for Sampling)

**Off-property Drinking  
Water Well Sampling**  
**September 26, 2018**

**Off-property Preliminary Drinking Water  
Well Sampling Results Available**  
about 3 weeks from sample collection

**SEPTEMBER**

**OCTOBER**

**NOVEMBER**