



Why is the Navy Sampling Drinking Water Wells Nationwide?

The Navy is addressing potential exposure to PFOA and PFOS in drinking water near NWS Earle.

- In May 2016, the EPA established drinking water lifetime health advisories* (70 ppt) for two PFAS (PFOA and PFOS).
- In response, the Navy issued a policy in June 2016 to address PFOA and PFOS in drinking water.
- The Navy's main historical source of PFOA and PFOS was firefighting foam.
 - No longer used for firefighting training.
 - Currently only used for lifesaving emergency measures.
- The Navy is investigating all of our installations to identify PFOA and PFOS exposure.



On June 15, 2022, the EPA issued new interim drinking water health advisories for PFOA and PFOS. Because these interim health advisories are non-regulatory and are below detectable limits for certain PFAS, the Department of Defense (DoD) is instead looking to EPA to propose a regulatory drinking water standard, which is anticipated in 2023. DoD is currently evaluating its efforts to address PFAS in drinking water, and what actions we can take to be prepared to incorporate this standard.

FOR MORE INFORMATION
visit www.navfac.navy.mil/nwsearlepfas
or scan the QR code →



ACRONYMS & ABBREVIATIONS

EPA	Environmental Protection Agency	PFAS	per- and polyfluoroalkyl substances
ppt	parts per trillion	PFOA	perfluorooctanoic acid
NWS	Naval Weapons Station	PFOS	perfluorooctane sulfonate



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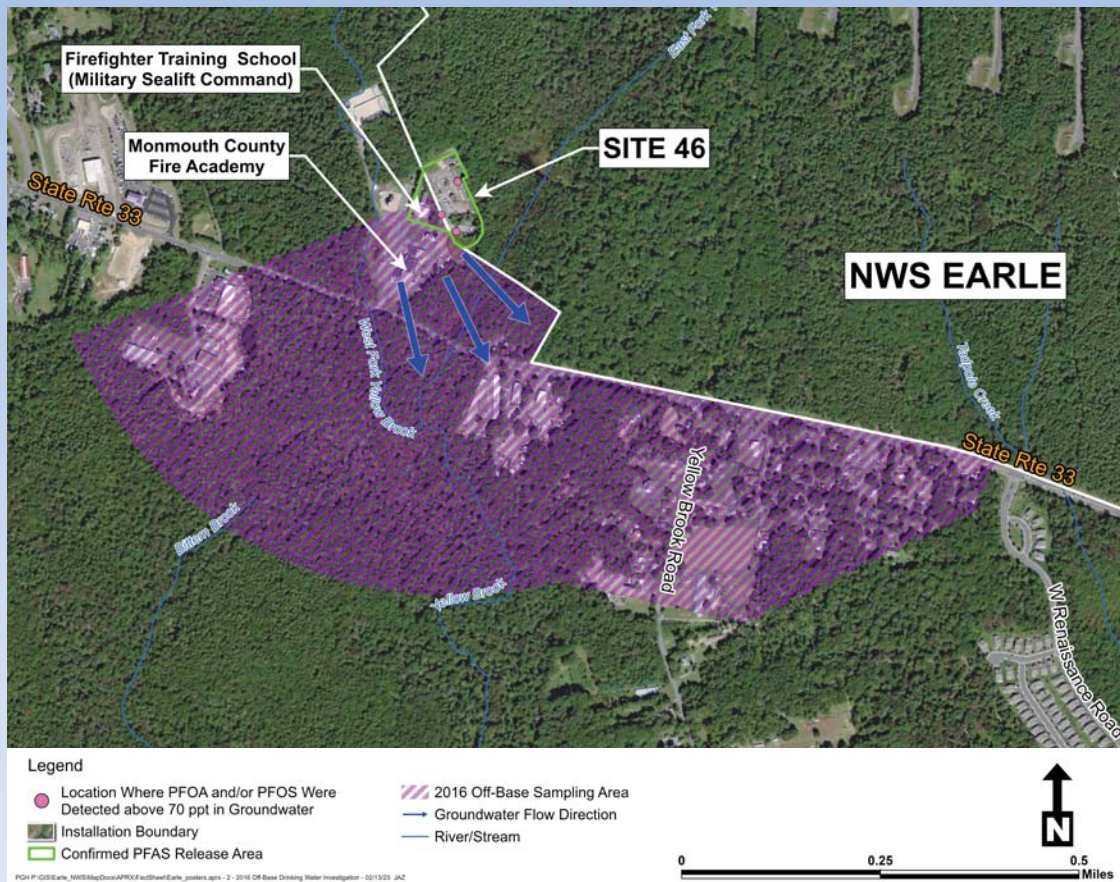


NWS Earle Site Map





2016 Off-Base PFAS Drinking Water Investigation



■ Site 46 - Firefighter Training School (Military Sealift Command)

- In 2015, PFAS were detected in shallow groundwater.
- Off-base sampling was needed because groundwater flowing away from Site 46 could have impacted drinking water wells.
- Two properties with PFOA + PFOS above 70 ppt were connected to public water in 2016.

2016 Off-Base PFAS Drinking Water Investigation Summary

Number of Wells Sampled	PFOA + PFOS not detected	PFOA + PFOS below 70 ppt	PFOA + PFOS above 70 ppt
29	23	4	2

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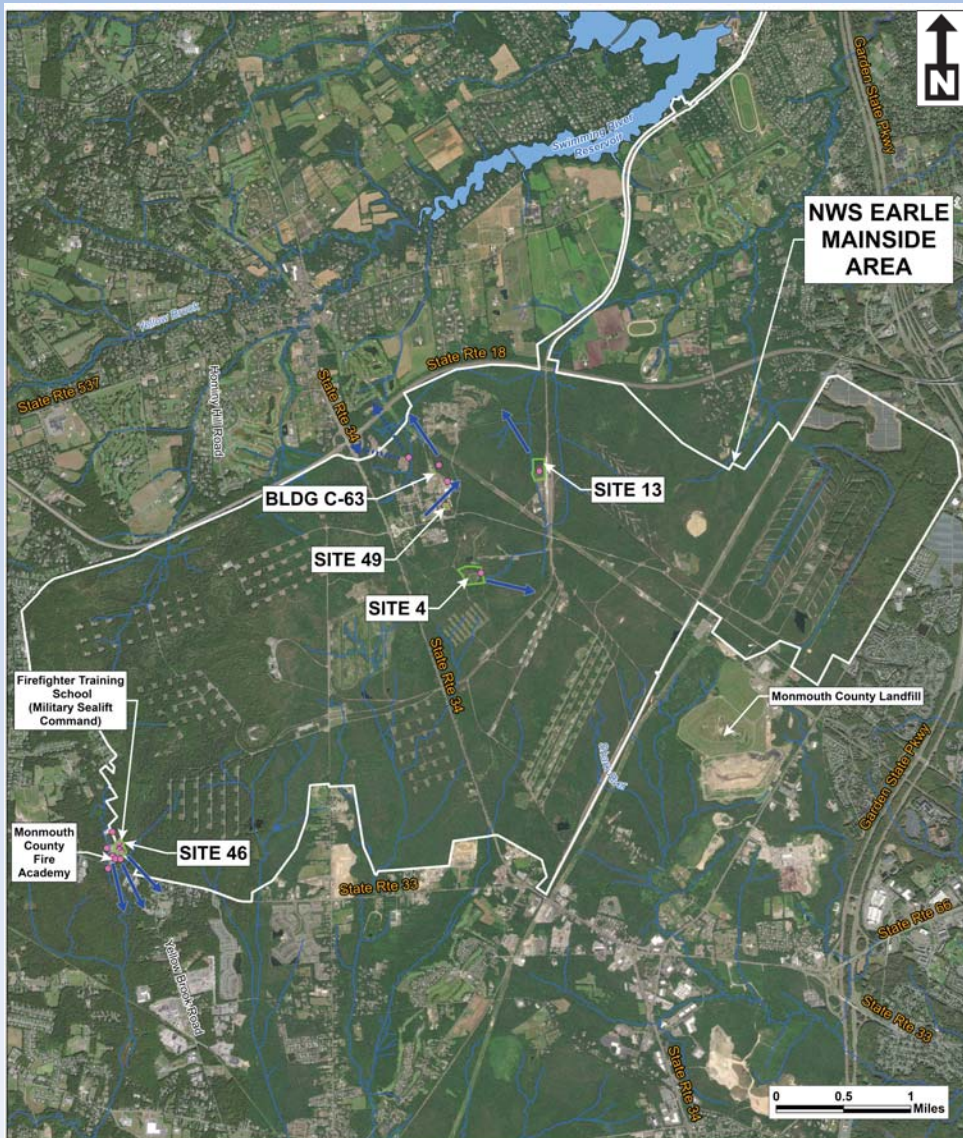
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ppt parts per trillion
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On-Base PFAS Release Areas



LEGEND

- Location Where PFOA and/or PFOS Were Detected above 70 ppt in Groundwater
- Confirmed PFAS Release Area
- Shallow Groundwater Direction
- Installation Boundary
- Approximate Groundwater Flow Direction

- The Navy is conducting a basewide PFAS investigation.
- PFOA and PFOS were found in groundwater greater than 70 ppt at five areas:
 - Site 46* - Firefighter Training School (Military Sealift Command)
 - Building C-63 - Hazardous Waste Storage Building
 - Site 4 - Landfill West of "D" Group
 - Site 13 - Defense Property Disposal Yard
 - Site 49 - Shed S-469 and Wooded Area

*Site 46 investigation process began before the other sites.

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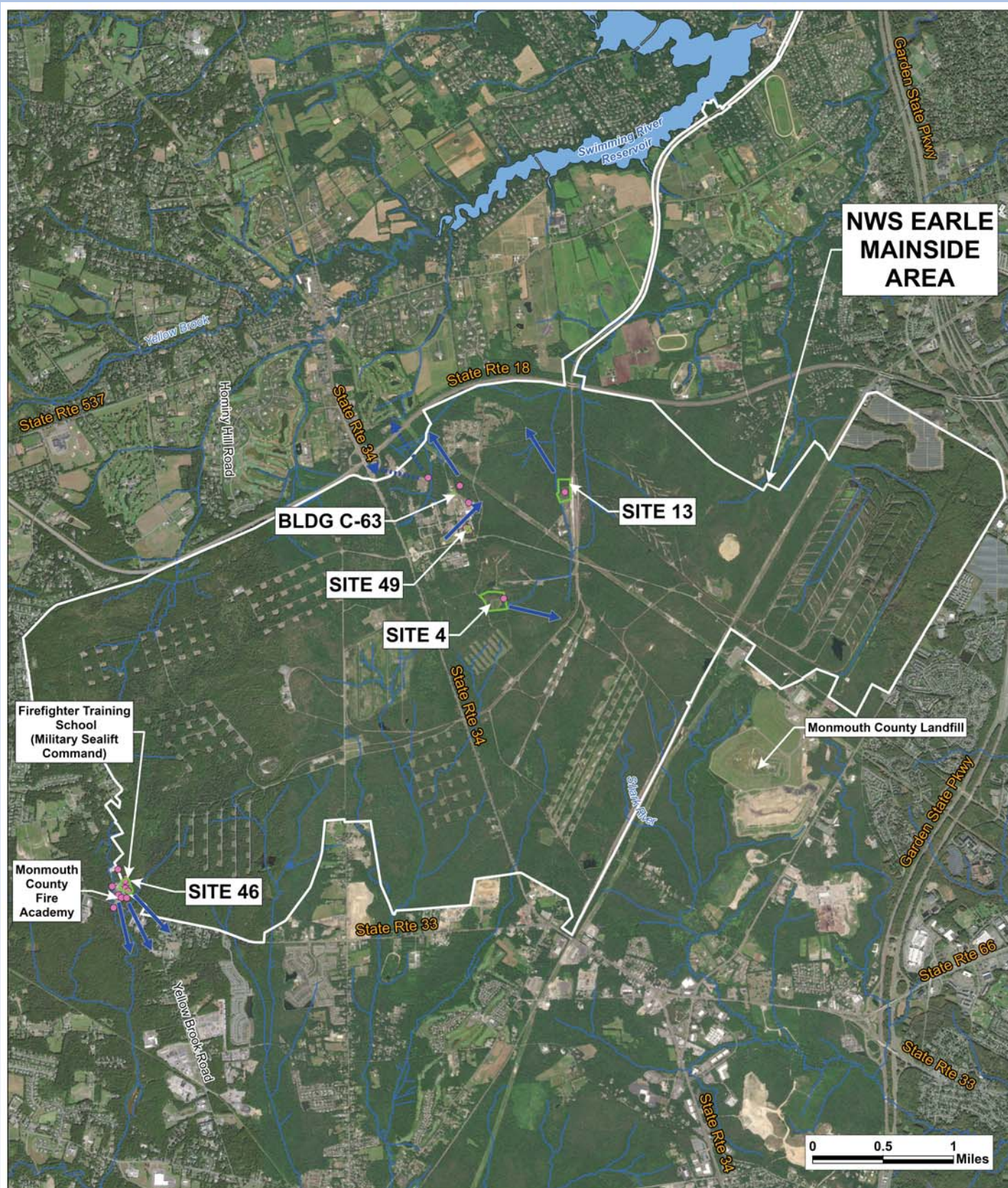


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On-Base PFAS Release Areas



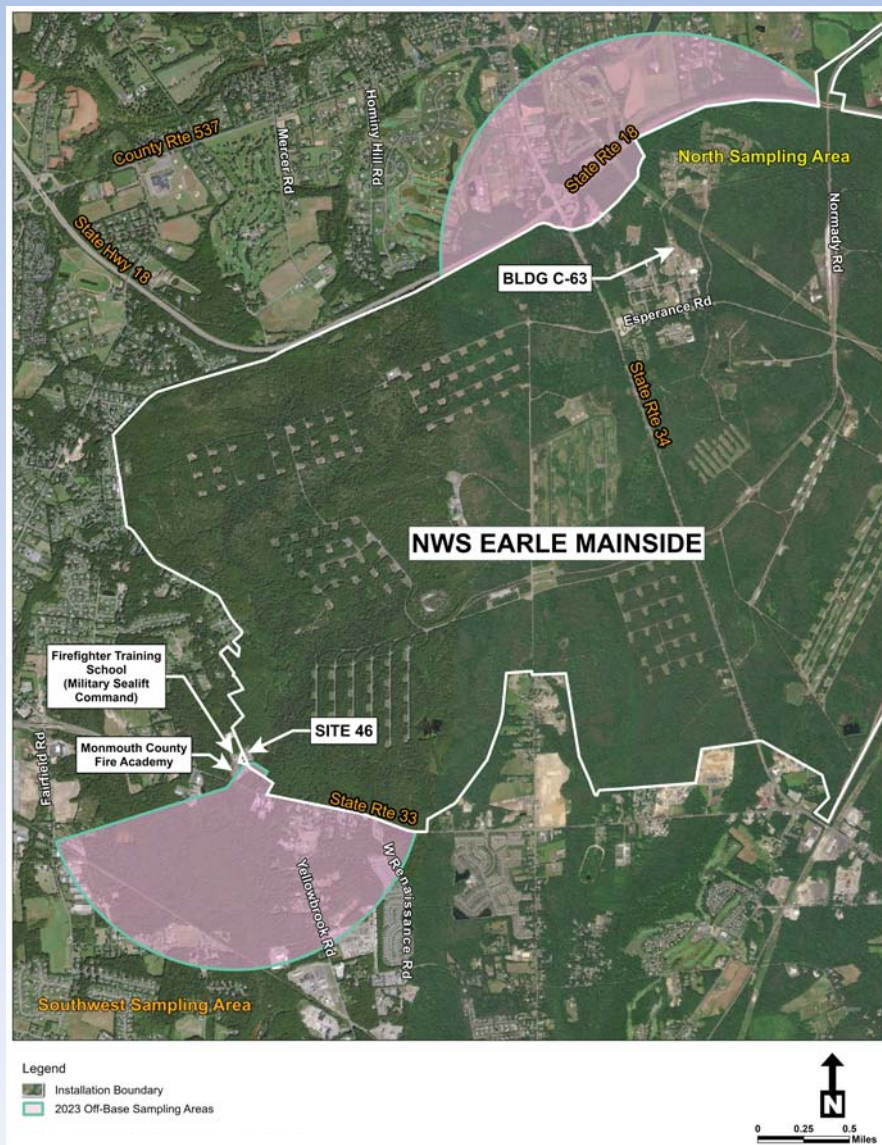
Legend

- | | | |
|---|--|------------------------------------|
| Location Where PFOA and/or PFOS Were Detected above 70 ppt in Groundwater | Confirmed PFAS Release Area | Shallow Groundwater Flow Direction |
| Installation Boundary | Approximate Groundwater Flow Direction | |





2023 Off-Base PFAS Drinking Water Sampling



The Navy needs your help to sample your drinking water well.

- PFOA and/or PFOS were detected in groundwater above 70 ppt at two locations on base.
- Two off-base drinking water sampling areas were established as areas 1 mile in the direction that groundwater flows away from Site 46 (Southwest Sampling Area) and Building C-63 (North Sampling Area).
- If your drinking water is provided by the New Jersey American Water Company, your water does not need to be sampled by the Navy.
- The Navy may expand the sampling area based on the results of the off-base drinking water well sampling investigation.

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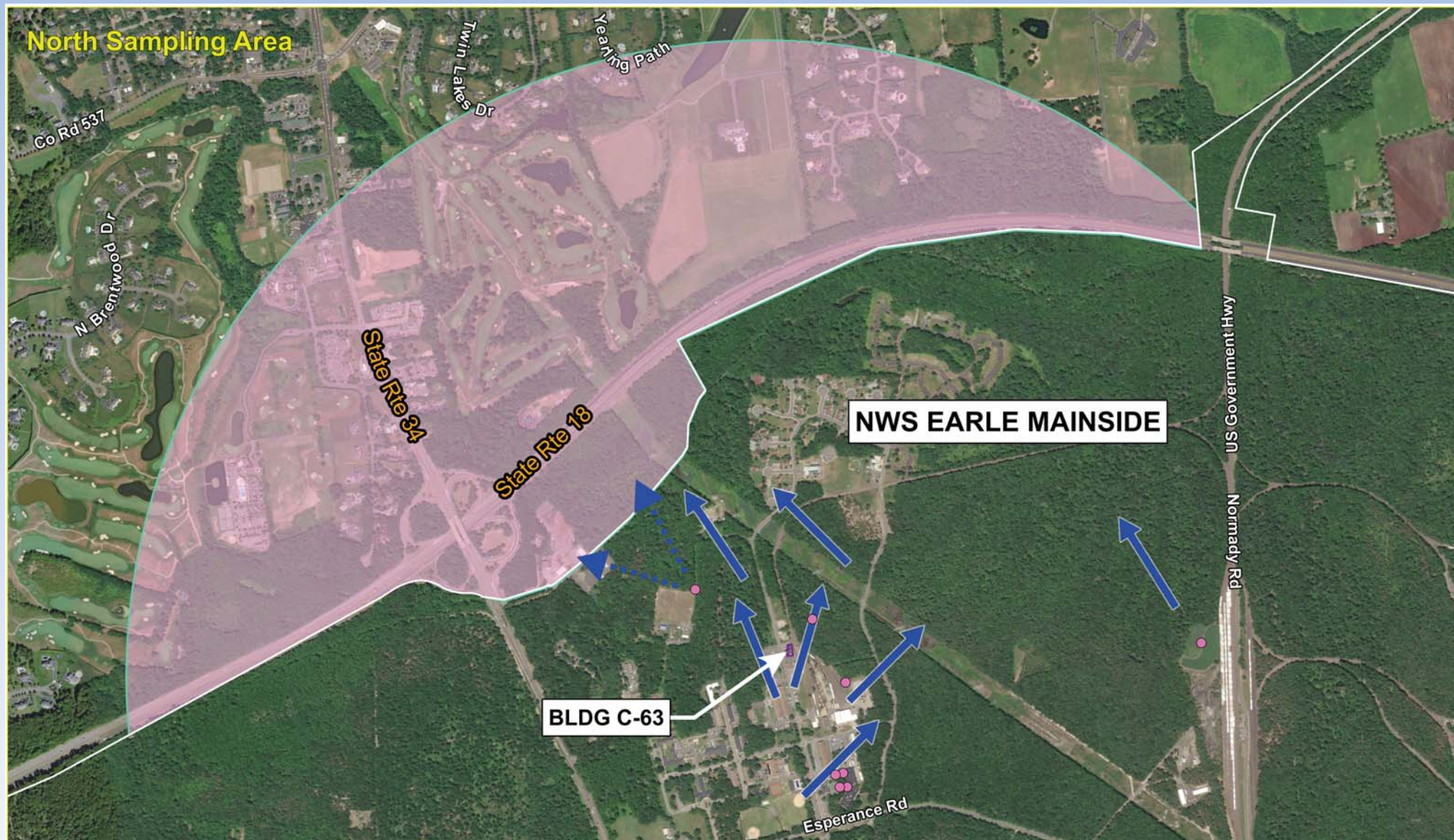


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2023 Off-Base PFAS Drinking Water Sampling (North Sampling Area)



Legend

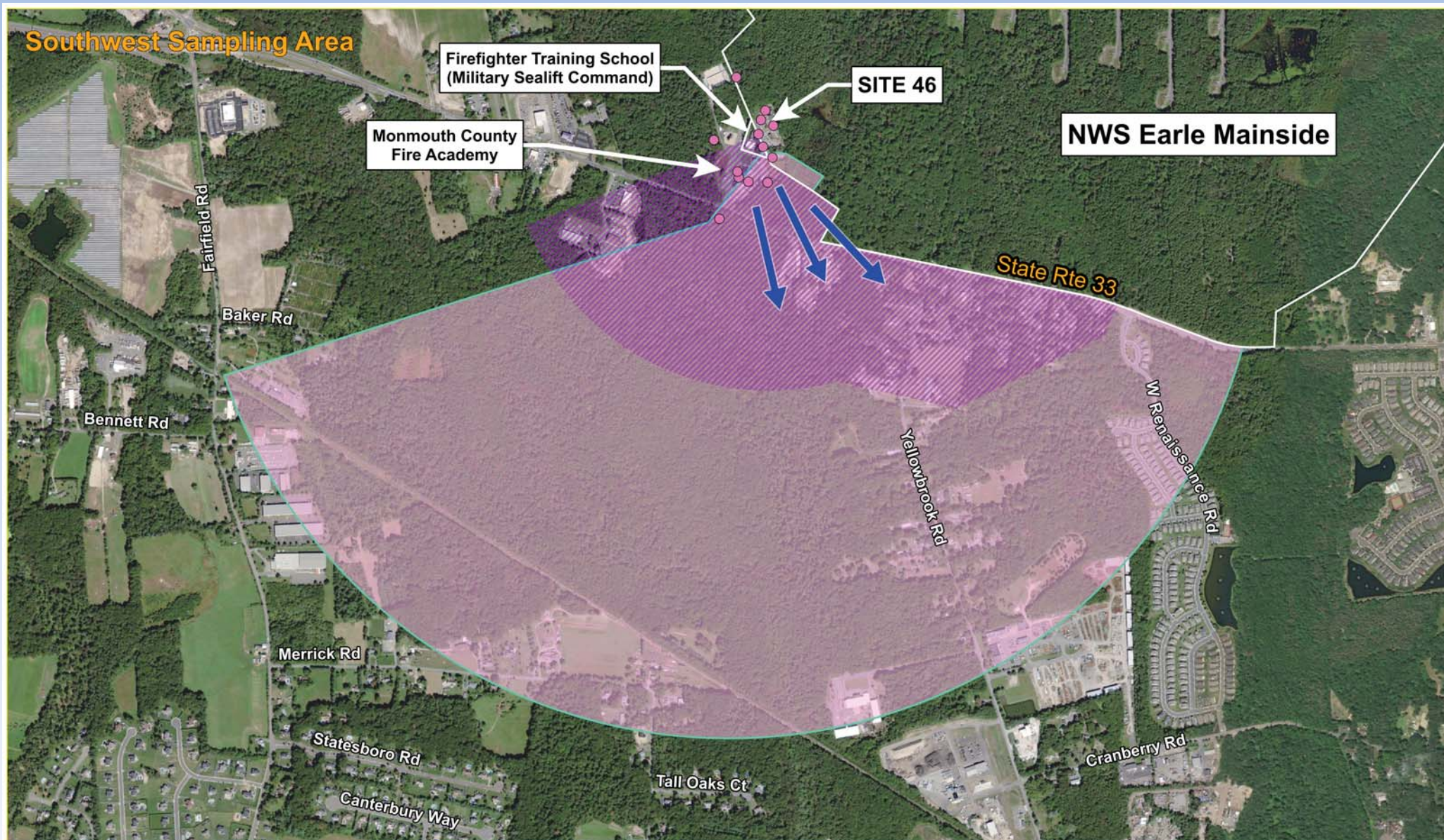
- Location Where PFOA and/or PFOS Were Detected above 70 ppt in Groundwater
- Installation Boundary
- Groundwater Flow Direction
- 2023 Off-Base Sampling Areas
- ⋯→ Approximate Groundwater Flow Direction

0 0.25 0.5 Miles





2023 Off-Base PFAS Drinking Water Sampling (Southwest Sampling Area)



Legend

- Location Where PFOA and/or PFOS Were Detected above 70 ppt in Groundwater
- Installation Boundary
- 2023 Off-Base Sampling Areas
- 2016 Off-Base Sampling Area
- Groundwater Flow Direction



0 0.25 0.5 Miles

Exposure to Per- and Polyfluoroalkyl Substances (PFAS)

What are PFAS?

- Family of manufactured chemicals.
- PFOA and PFOS are the most studied and understood.
- Found in the environment around the world (in air, water, soil, animals, plants, as well as in people).
- Last a long time in the environment.
- Used on a large scale since the 1950s in many products, such as:



firefighting foam



water-resistant fabrics



stain-resistant carpets



some nonstick cookware



personal care products



food packaging

How Can People Be Exposed to PFAS?

- PFAS may be in drinking water, food, indoor dust, some consumer products, and workplaces.
- Most non-occupational exposures occur by drinking water or eating food that contain PFAS.
- Exposure is minor through skin contact when bathing, showering, or swimming.
- Mothers with PFAS in their bodies can transfer PFAS to their fetuses or nursing infants.
- Based on current science, the benefits of breastfeeding appear to outweigh the risks for infants exposed to PFAS in breastmilk.

How Can People Reduce Exposure to PFAS in Drinking Water?

- Use an alternative water source for drinking, cooking, brushing teeth, and making baby formula.
- Certain certified filters can reduce PFAS in drinking water.

FOR MORE INFORMATION
about PFAS filtration systems
certified by NSF International, a
public health organization, visit
<http://www.nsf.org>
or scan the QR code. →



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Health Effects

What are the Potential Health Effects?

- Scientists are still learning about how exposure to PFAS might affect people's health.
- Studies indicate possible health effects could include:
 - Increased cholesterol levels.
 - Changes in liver enzymes.
 - Increased risk of high blood pressure and preeclampsia in pregnant women.
 - Small decrease in infant birth weight and changes in growth.
 - Immune system effects.
 - Increased risks of certain types of cancers (testicular and kidney).
- Levels of PFAS in drinking water do not predict health impacts.

Are Blood Tests Available for PFAS?

- Blood testing for PFAS is available but is **not** a regular test offered by a doctor.
 - Blood test results can't tell you if PFAS exposure will cause current or future health problems.
 - Blood test results can't provide information on treatment.

Chemical exposures do not always lead to health effects.

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On-Base Environmental Cleanup Process

PRIORITY: Protect Human Health and the Environment

- The structured regulatory process, shown below, is being used to identify and clean up past environmental releases at NWS Earle.
- The EPA and New Jersey Department of Environmental Protection (NJDEP) are working closely with the Navy, providing oversight at every step of the process.
- Public input is welcome throughout the process and is formally requested at certain points.
- From the beginning to the end, this process will be lengthy.

PFAS Environmental Cleanup Process

 **WE ARE HERE**

INVESTIGATE

- Evaluate potential releases.
- Determine impacts and extent of identified releases.
- Determine potential exposures and risks.



EVALUATE REMEDIAL OPTIONS

- Determine appropriate technology.
- Consider protectiveness, time to clean up, and cost.
- Solicit public input.



DESIGN, CONSTRUCT, AND IMPLEMENT

- Put remedy in place.
- Implement treatment, as appropriate.
- Provide long-term management, as needed.



CLEANUP COMPLETE

- Achieve cleanup goals.
- Put controls in place.
- Solicit public input.

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Sampling Results Timeline

Sequence of Events

Approximate Schedule

1. Navy receives preliminary results.

- Approximately 1 month after sample collected.

2. Navy calls with results.

- Within 24 hours of results received by the Navy.

3. Bottled water delivered if PFOA and/or PFOS are above 70 ppt.

- Within 24 hours of results notification.

4. Lab data is verified and Navy mails final lab data to homeowner and/or tenant.

- Approximately 3 months after sampling.

Drinking Water Sampling and Preliminary Results Timeline



WE ARE HERE

Open House Public Meeting

February 23, 2023

(Sign Up for Sampling)

**Off-base Drinking
Water Well Sampling**

February 24 through March 10, 2023

**Off-base Drinking Water Well
Preliminary Results Available**

by Late-March to Mid-April 2023

February 2023

March 2023

April 2023

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Sign Up for Your Sampling Appointment

Sampling Appointment

- At no cost to you.
- Available daily from **February 24, 2023** through **March 10, 2023** from **8:00 a.m. to 6:00 p.m.**

Additional times are available upon request.

What We Need From You

- Signed access authorization form.
- An adult must be present at the property during sampling.

**To schedule an appointment
after today, call
833-737-7267 (833-REQSAMP)**

Sampling Process

- Samples will be collected by a team of two experienced contractors:
 - Sampling takes less than an hour.
 - Water sample will be collected as close to well as possible.
 - Water will run for 5 minutes prior to sample collection.
- Samples will be collected and analyzed according to EPA guidelines.
- Team will take COVID precautions if requested.

**The Navy will provide
bottled water for cooking and
drinking if PFOA and/or
PFOS are above 70 ppt.**

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