



# Why are the Navy and Marine Corps Sampling Drinking Water Wells Nationwide?

## The Navy and Marine Corps are addressing potential exposure to PFOA and PFOS in drinking water near MCAS Beaufort.

- In May 2016, the EPA established drinking water lifetime health advisories\* (70 ppt) for two PFAS (PFOA and PFOS).
- In response, the Navy and Marine Corps issued a policy in June 2016 to address PFOA and PFOS in drinking water.
- The Navy and Marine Corps' 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 and Marine Corps are investigating all of our installations to identify PFOA and PFOS exposure.



In June 2022, the EPA issued new, interim drinking water health advisories for PFOA and PFOS. Because these interim health advisories are based on draft analyses, are below detectable limits, and are non-regulatory levels, the Department of Defense (DOD) is instead looking to EPA to propose a regulatory drinking water standard, which is anticipated by the end of this year. 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 <https://go.usa.gov/xJgYA>  
or scan the QR code →

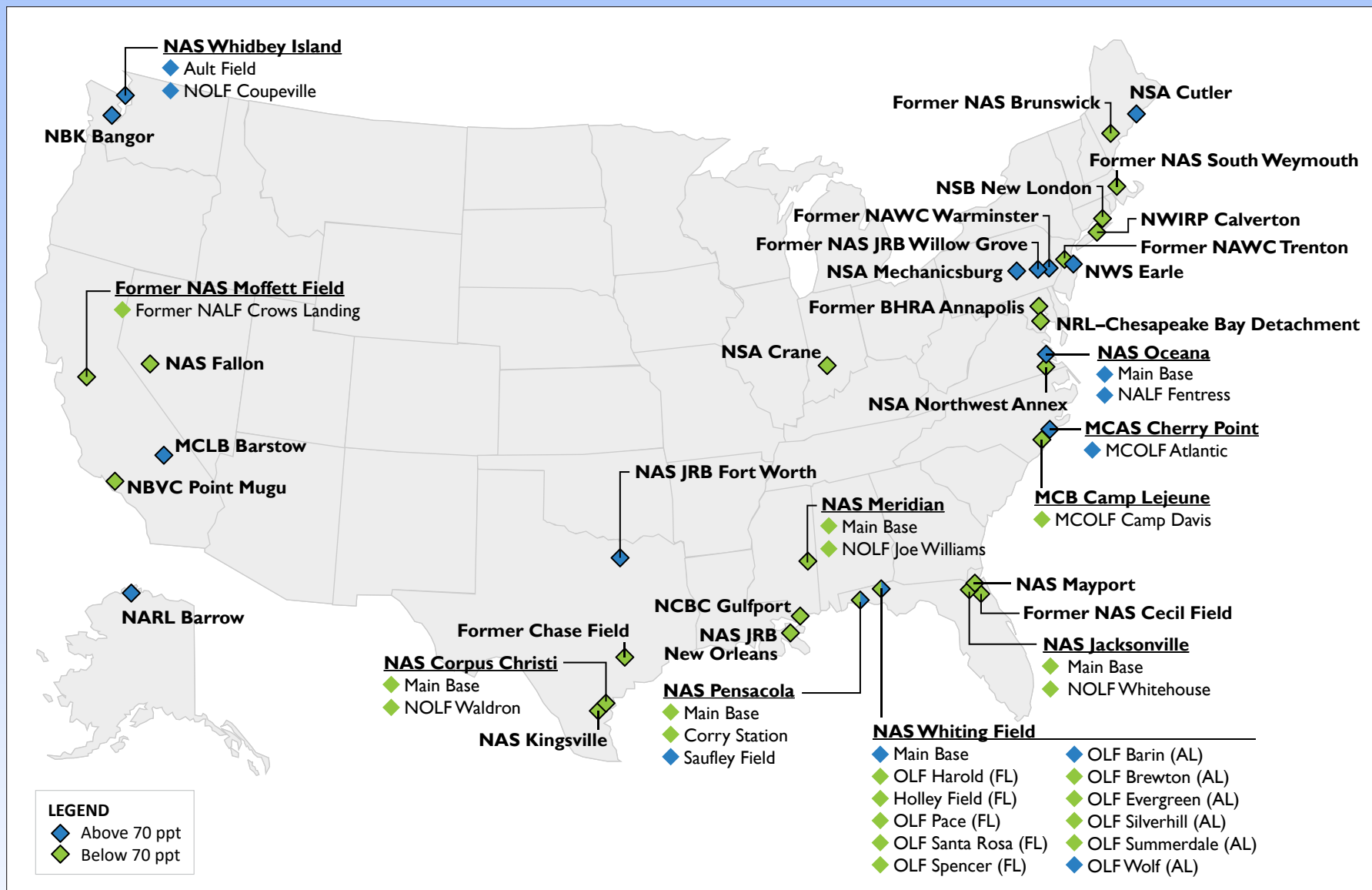


### ACRONYMS & ABBREVIATIONS

EPA	Environmental Protection Agency	PFAS	per- and polyfluoroalkyl substances
ppt	parts per trillion	PFOA	perfluorooctanoic acid
MCAS	Marine Corps Air Station	PFOS	perfluorooctane sulfonate



# Locations of Completed Off-Base Drinking Water Sampling for PFOA and PFOS



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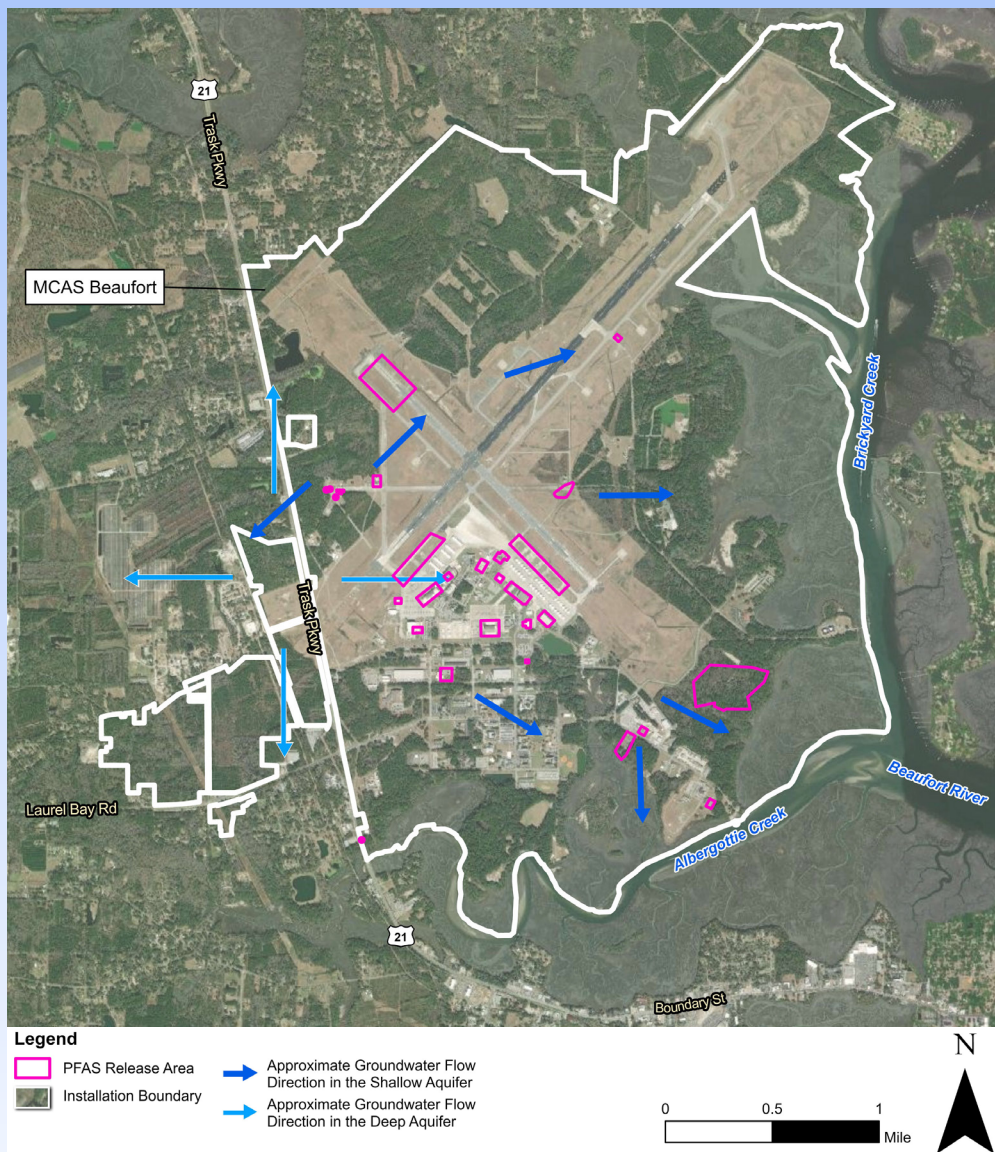


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# MCAS Beaufort On-Base PFAS Release Areas



- 28 PFAS release areas were identified on MCAS Beaufort.
- Types of PFAS release areas on MCAS Beaufort include:
  - Emergency response areas
  - Hangars and buildings with fire suppression systems
  - Firefighting training areas
  - Fire stations
  - Sewage treatment plant and sludge disposal area
  - Landfill
- PFOA and PFOS have been detected above 70 ppt in groundwater at MCAS Beaufort.
- PFOA and PFOS may move from shallow to deep groundwater.
- Groundwater may flow off-base.

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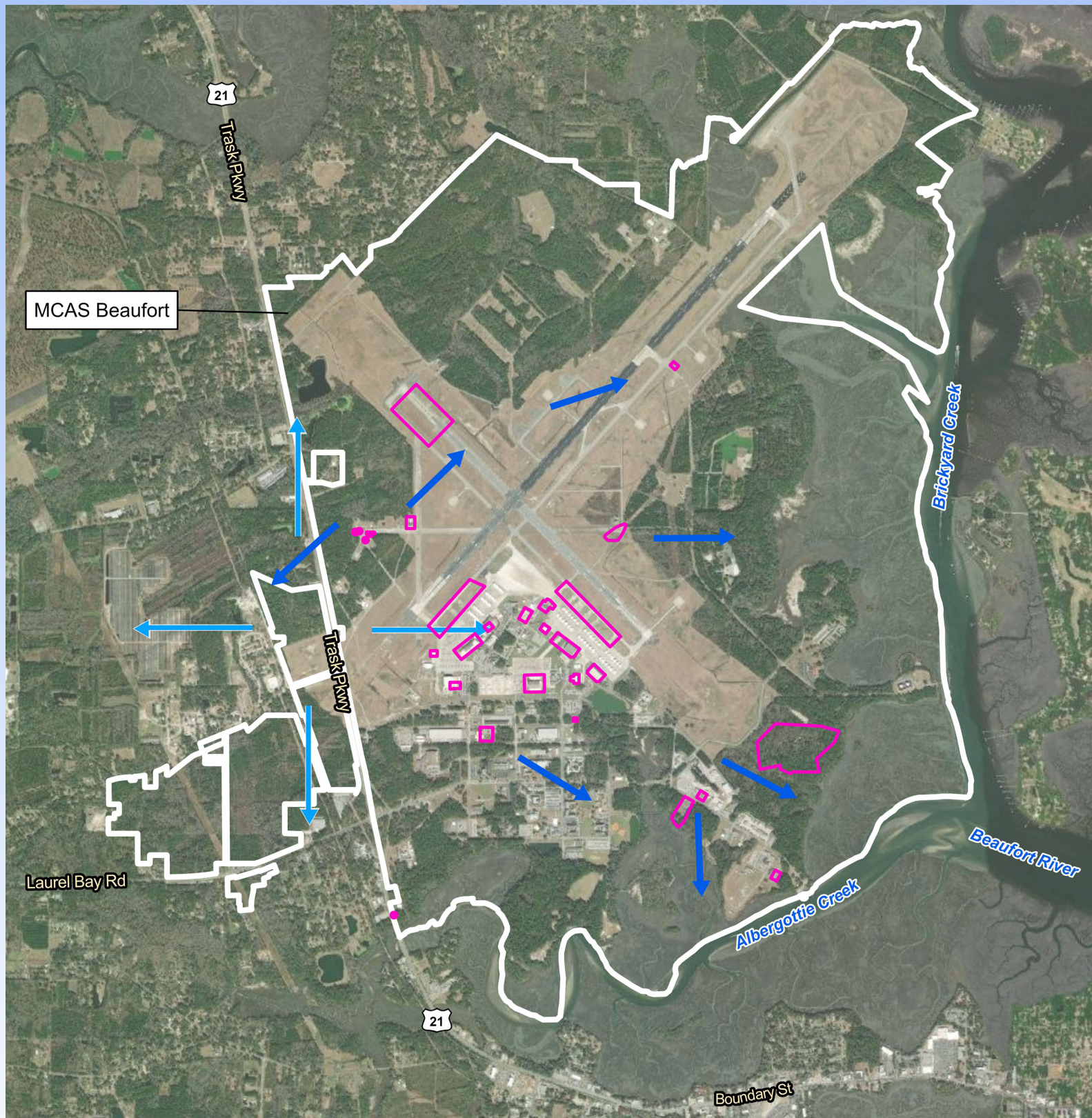


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# MCAS Beaufort On-Base PFAS Release Areas



## Legend

- PFAS Release Area
- Installation Boundary

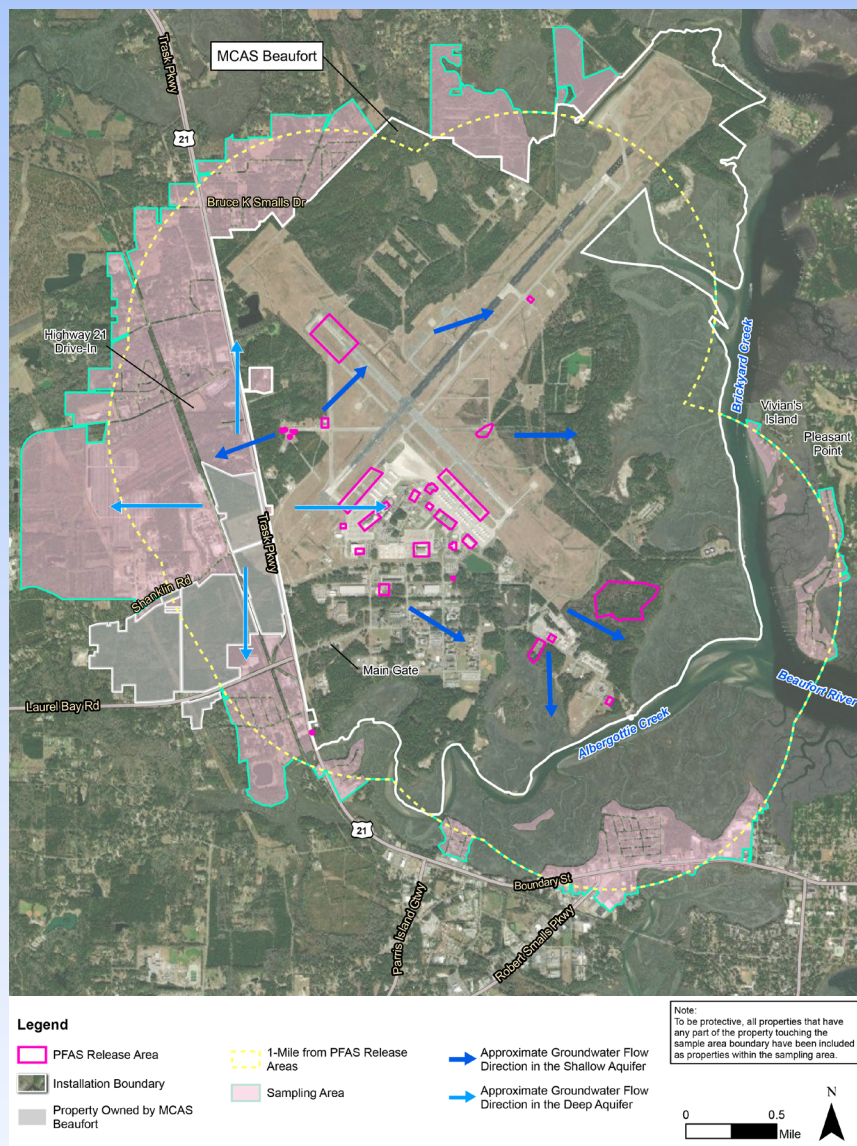
- Approximate Groundwater Flow Direction in the Shallow Aquifer
- Approximate Groundwater Flow Direction in the Deep Aquifer

0 0.5 1  
Mile





# Off-Base PFAS Drinking Water Sampling



**The Navy and Marine Corps need your help to sample your drinking water well.**

- The sampling area is in the direction that groundwater likely flows away from the PFAS release areas.
- If your drinking water is provided by the Beaufort-Jasper Water & Sewer Authority, your water does not need to be sampled by the Navy and Marine Corps.
- The Navy and Marine Corps may expand the sampling area based on the results of the off-base drinking water well sampling.

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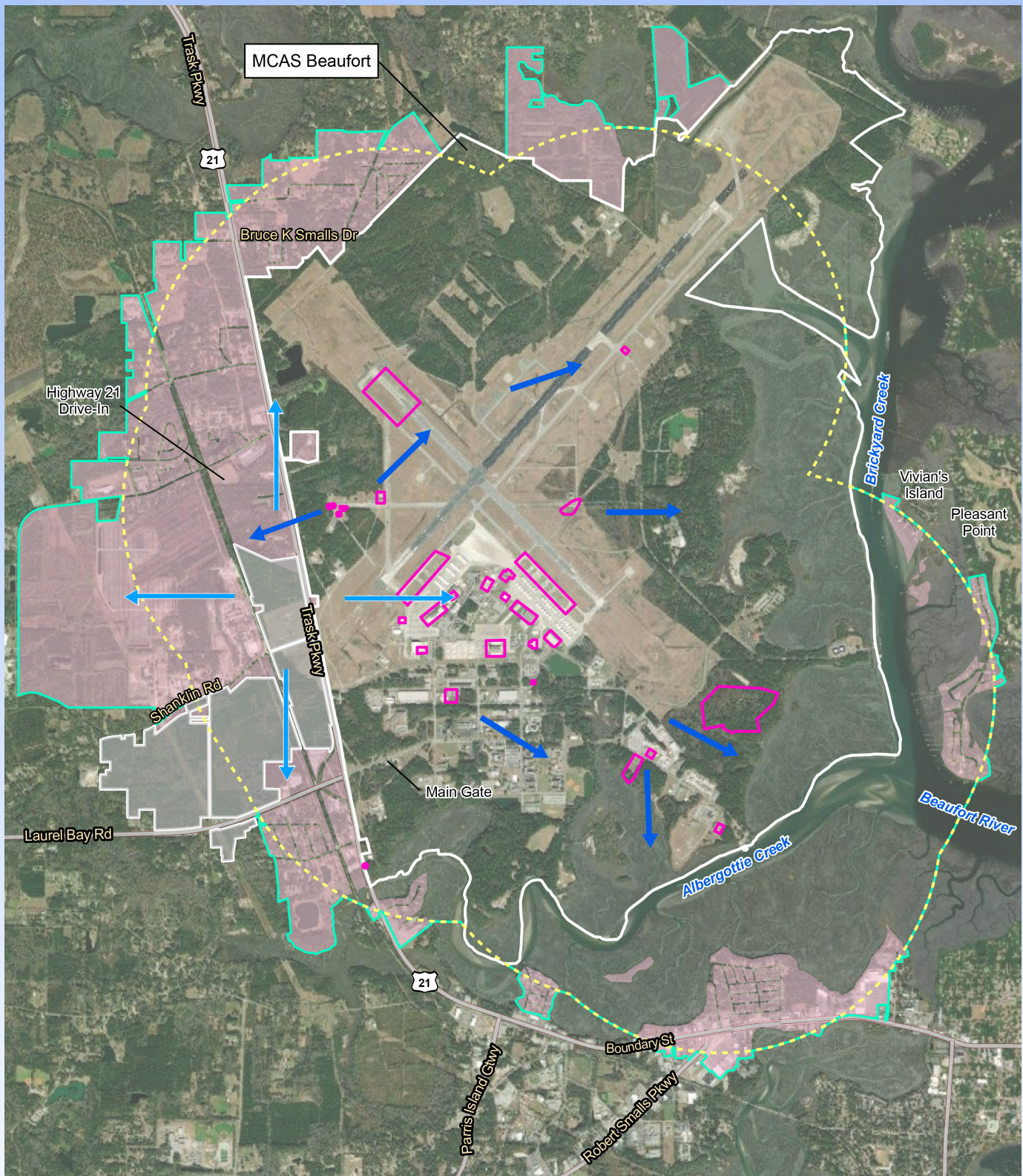


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# Off-Base PFAS Drinking Water Sampling



## Legend

PFAS Release Area

Installation Boundary

Property Owned by MCAS Beaufort

1-Mile from PFAS Release Areas

Sampling Area

Approximate Groundwater Flow Direction in the Shallow Aquifer

Approximate Groundwater Flow Direction in the Deep Aquifer

Note:  
To be protective, all properties that have any part of the property touching the sample area boundary have been included as properties within the sampling area.

0 0.5  
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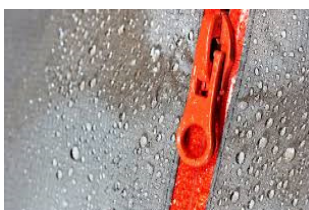
# Exposure to Per- and Polyfluoroalkyl Substances (PFAS)

## What are PFAS?

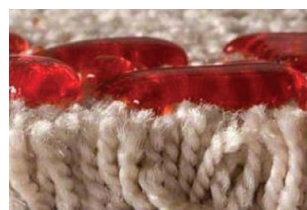
- Family of manufactured chemicals.
- PFOA and PFOS are the most studied and understood.
- Found in the environment around the world (in air, water, soil, animals, plants, as well as in people).
- Last a long time in the environment.
- Used since 1950s in many products, such as:



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>  
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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.
  - Altered hormone function.
  - 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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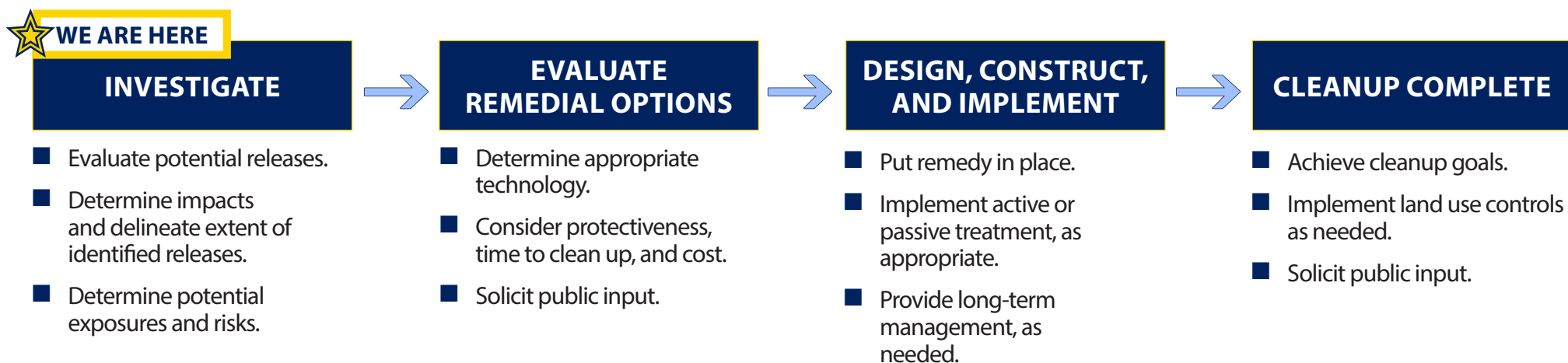


# On-Base Environmental Cleanup Process

## 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 MCAS Beaufort.
- The South Carolina Department of Health and Environmental Control is working closely with the Navy and Marine Corps and providing oversight at every step of the process.
- Public input is welcome throughout the process and is formally solicited at certain points.
- From the beginning to end, this process will be lengthy.

## PFAS Environmental Cleanup Process



**The on-base PFAS evaluation is in its early stages.**

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# Sign Up for Your Sampling Appointment

## Off-Base Drinking Water Well Sampling

- The Navy will be sampling drinking water wells in the sampling area.
- Sampling is at no cost to you.
- Drinking water samples will be collected:

**Friday, December 9 through  
Wednesday, December 21, 2022.**

- Sampling appointments are available from:  
**8:00 a.m. to 6:00 p.m.**

*Additional times are available upon request.*

- The property owner or tenant must give permission for sampling by signing the access authorization form and will be asked to complete the questionnaire.
- Sampling takes less than an hour.
- An adult must be present at the property during sampling.

## Sampling Process

- Samples will be collected by a team of experienced contractors:
  - Team will consist of two members.
  - 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 during sampling 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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# 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. • Bottled water delivered if PFOA and/or PFOS are above 70 ppt.
3. Lab data is verified and Navy mails final lab data.	• Approximately 3 months after sampling.

## Drinking Water Sampling and Preliminary Results Timeline



### Open House Public Meeting

December 8, 2022  
(Sign Up for Sampling)

### Off-base Drinking Water Well Sampling

December 9 through December 21, 2022

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

by Mid- to Late-January 2023

**December 2022**

**January 2023**

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