



# Outlying Landing Field Santa Rosa Drinking Water Investigation

**Virtual Open House**  
***June–August 2021***



# Why Is the Navy Sampling Drinking Water Wells Nationwide?

## TO REQUEST SAMPLING

call  
844-NASWFLD  
(844-627-9353)

visit  
<http://go.usa.gov/xAEQF>

or scan the  
QR code ↓



## ACRONYMS & ABBREVIATIONS

EPA	U.S. Environmental Protection Agency
NAS	Naval Air Station
PFAS	per- and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate
ppt	part(s) per trillion

**The Navy is addressing potential exposure to PFOA and PFOS in drinking water around outlying landing fields for NAS Whiting Field.**

- In 2016, the EPA established a drinking water lifetime health advisory (70 ppt) for two PFAS, specifically PFOA and PFOS.
- The Navy issued a policy to address PFOA and PFOS in drinking water.
- The most common historical source of PFOA and PFOS was in firefighting foam, which is no longer used for firefighting training.
- The Navy initiated basewide investigations for all Navy installations to address potential exposure to PFOA and PFOS.





# Environmental Cleanup Process

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## ACRONYMS & ABBREVIATIONS

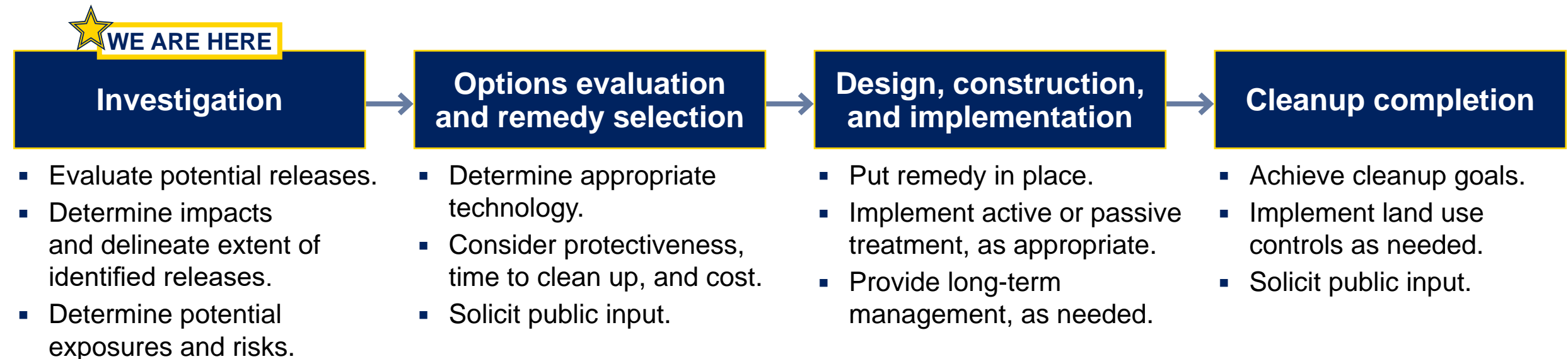
NAS Naval Air Station

PFAS per- and polyfluoroalkyl substances

## PRIORITY: Protect Human Health and the Environment

- The structured regulatory process, shown below, will be used to identify and clean up past environmental releases at outlying landing fields for NAS Whiting Field.
- The Florida Department of Environmental Protection is working closely with the Navy 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 can be lengthy.

## PFAS Environmental Cleanup Process



**The Outlying Landing Field PFAS evaluation is in its early stages. The first step is to identify potential sources of PFAS. The second step is to determine where PFAS are actually present.**





# NAS Whiting Field Outlying Landing Fields

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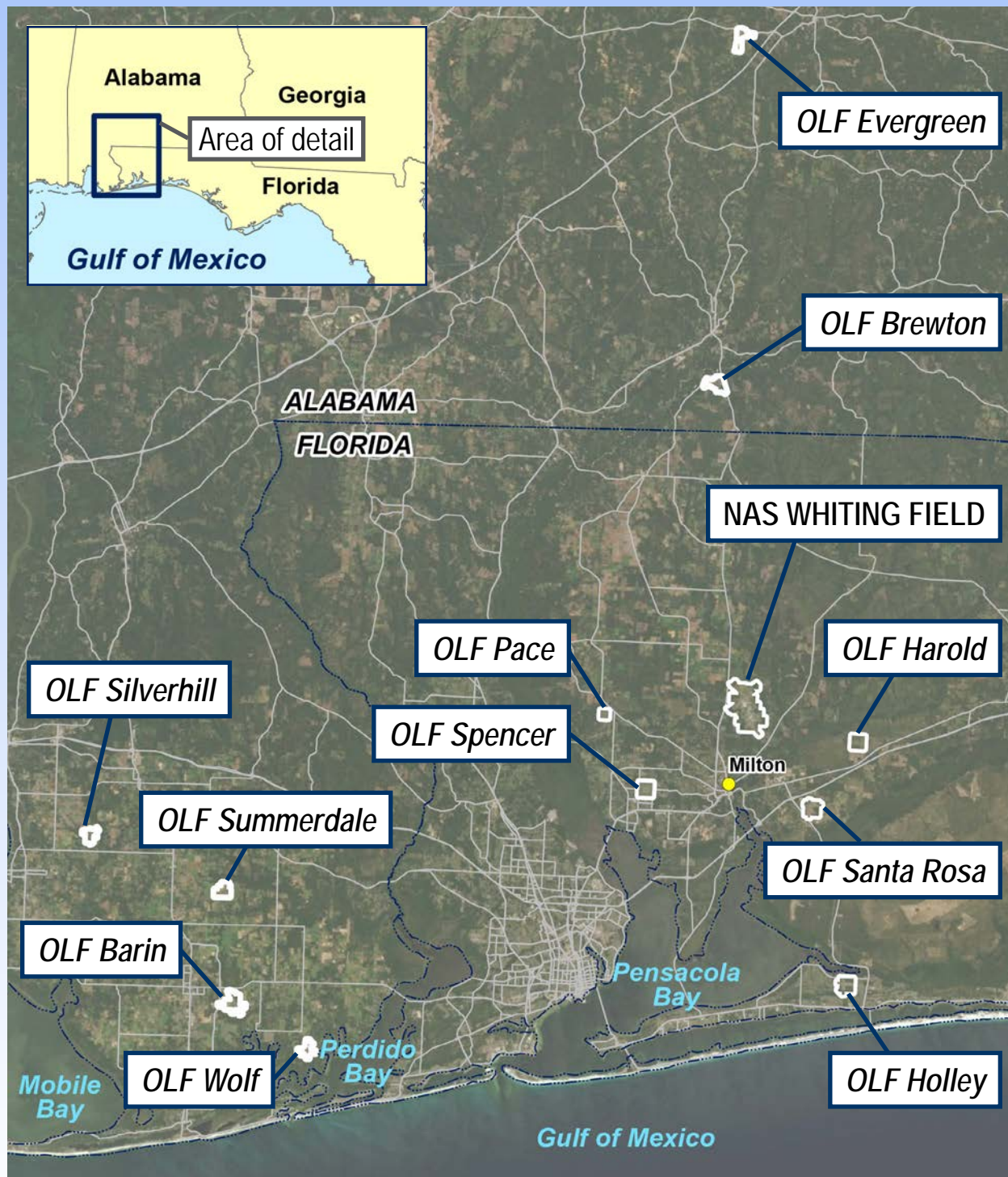
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## ACRONYMS & ABBREVIATIONS

NAS	Naval Air Station
OLF	Outlying Landing Field
PFAS	per- and polyfluoroalkyl substances



**Potential PFAS release areas and sampling areas are included on OLF-specific posters, which can be viewed on the OLF pages.**

## LEGEND

- Installation boundary
- State boundary
- Major road

0 10 20 miles





# OLF Santa Rosa Confirmed and Potential PFAS Release Areas

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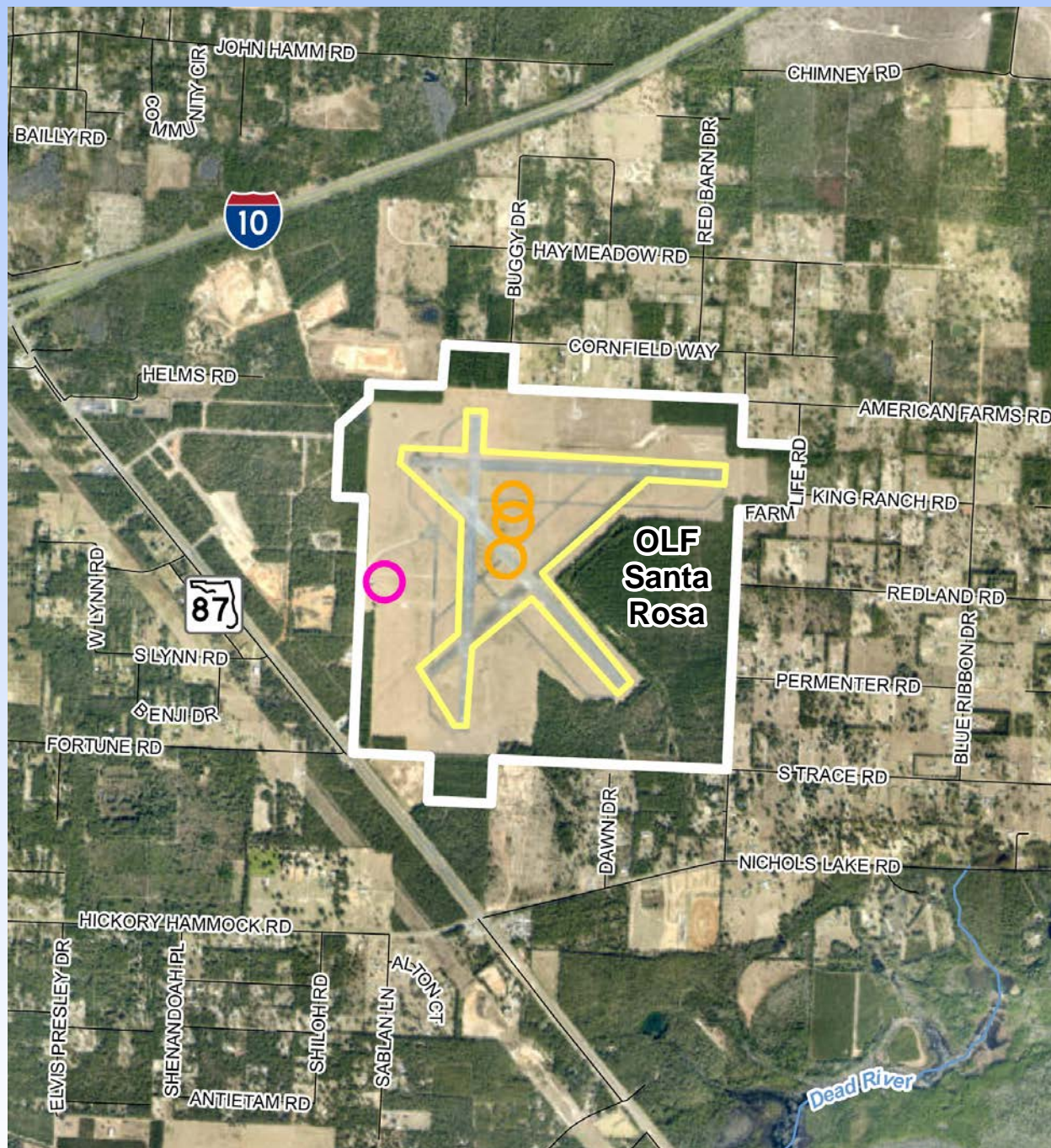
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## ACRONYMS & ABBREVIATIONS

OLF Outlying Landing Field

PFAS per- and polyfluoroalkyl substances



- Further investigation is underway because of previous uses of firefighting foam at OLF Santa Rosa.
- The Navy is following the well-established federal statutory/regulatory environmental cleanup process for assessment of and response to PFAS releases.
- Four on-base areas have been identified as confirmed or potential PFAS release areas.
- Findings are documented in a Preliminary Assessment Report, which will be completed in 2021 and available in the Administrative Record:  
<http://go.usa.gov/xAEQF>.

## LEGEND

- Confirmed PFAS release area
- Potential PFAS release area
- Runways
- Installation boundary
- Surface water

0 0.5 1 mile





# Off-Base PFAS Drinking Water Investigation

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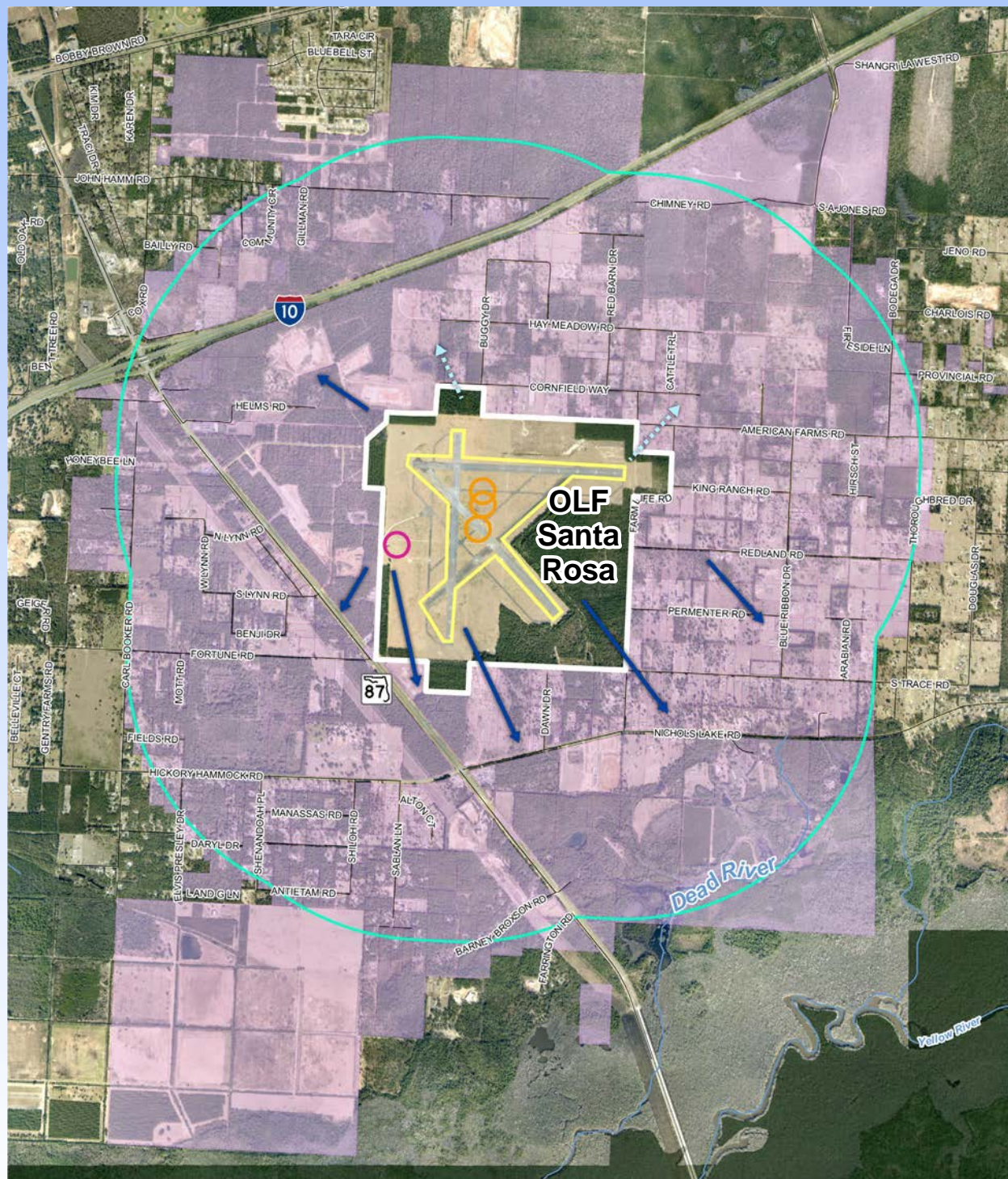
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## ACRONYMS & ABBREVIATIONS

OLF Outlying Landing Field

PFAS per- and  
polyfluoroalkyl  
substances



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

- The sampling area includes properties within 1 mile in the direction of groundwater flow from the installation boundary.
- Although the runways were not identified as potential release areas, they were used to determine the sampling area to be conservative.
- If your drinking water is provided by Holley-Navarre Water System or East Milton Water System, the Navy does not need to sample your water.
- The Navy may expand the sampling area based on the results of the current sampling of drinking water wells.

## LEGEND

- Confirmed PFAS release area
- Potential PFAS release area
- Runways
- Installation boundary
- Surface water
- Estimated groundwater flow direction
- Potential groundwater flow direction under pumping conditions
- Designated sampling area boundary
- Designated sampling area

0 0.5 1 mile  
N



# Per- and Polyfluoroalkyl Substances (PFAS)

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ACRONYMS & ABBREVIATIONS	
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PFAS	per- and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
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ppt	part(s) per trillion

## What Are PFAS?

- Family of manufactured chemicals, no natural occurrence.
- 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 1940s in many products, such as:



Image: U.S. Navy / Photographer's Mate 3rd Class Tommy Gilligan  
firefighting foam



Image: freepik.com  
stain-resistant carpets and fabrics



Image: Kyle Boone / unsplash  
water-resistant fabrics



Image: freepik.com  
personal care products



Image: Valeria\_Aksakova / freepik  
nonstick cookware



Image: freepik.com  
food packaging

## What Is the EPA Lifetime Health Advisory for PFOA and PFOS?

- It is a combined level of PFOA and PFOS of 70 ppt in drinking water.
- It is intended to protect against harmful health effects to sensitive populations and the general public, for lifetime exposure.

## How Was the EPA Lifetime Health Advisory Calculated?

- It is based on studies of health effects from PFOA and PFOS in laboratory animals.
- It assumes 20 percent of overall exposure is from drinking water, and 80 percent of overall exposure is from other sources.
- It considers information regarding health effects in people exposed to PFOA and PFOS, including the fetuses or nursing infants of mothers who are exposed.

# Exposure and Health Effects

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ACRONYMS & ABBREVIATIONS	
CDC	Centers for Disease Control and Prevention
OLF	Outlying Landing Field
PFAS	per- and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate

## PFAS in People

- CDC estimates that most people in the U.S. have PFAS in their bodies.
- Levels of PFAS are decreasing following their phase-out from use.
- PFAS will build up in the body until exposure stops.

## Exposures 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.
- PFAS reach the fetuses or nursing infants of mothers who are exposed.
  - However, based on current science, the benefits of breastfeeding appear to outweigh the risks for infants exposed to PFAS in breastmilk.

## How to Reduce Exposure

- There are no medical treatments that will remove PFAS from the body.
- The best intervention is to stop the source of exposure (such as drinking water).
- There are at-home treatment systems that can reduce PFAS in drinking water, such as certain filters certified for PFAS removal.
  - 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.

for more information about  
PFAS filtration, scan the  
QR code ↓



## Potential Health Effects

- At this time, scientists are still learning about how exposure to PFAS might affect people's health.
- Studies indicate possible health effects could include:
  - Increased cholesterol levels.
  - Increased risk of high blood pressure and preeclampsia in pregnant women.
  - Changes in growth, learning, and behavior of the developing fetus and child.
  - Small decrease in infant birth weight.
  - Immune system effects (possible decreased response to some vaccines).
  - Decreased fertility.
  - Altered hormone function.
  - Increased risks of certain types of cancers (testicular, kidney, and prostate).
- The levels of PFOA or PFOS in drinking water do not predict what, if any, health impact might occur as a result of exposure.

## Should I Have My Blood Tested?

- Blood testing for PFAS is available but is not a regular test offered by a doctor.
  - PFAS blood tests will not provide information on health problems, nor will they provide information for treatment.
  - PFAS blood test results can't tell you if PFAS exposure has caused your health condition.





# Drinking Water Sampling Process

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## ACRONYMS & ABBREVIATIONS

COVID-19 coronavirus  
disease 2019

EPA U.S.  
Environmental  
Protection Agency

## Drinking water well sampling is voluntary.

### Sampling Process

- We need the property owner's help to:
  - Make the sampling appointment.
  - Fill out the questionnaire prior to the appointment.
- An adult (18 years or older) must be present at the property during sampling.
- Samples will be collected by a team of experienced contractors:
  - Team will consist of two members.
  - The water sample will be collected as close to well as possible.
  - Water will run for 3 to 5 minutes prior to collection.
- Samples will be collected and analyzed according to EPA guidelines.
- Sampling takes less than an hour.

### COVID-19 Precautions

- The sampling team will take the necessary precautions to minimize exposure.
  - A sampling team member will call you upon arrival; you do not need to directly interact with the team.
  - Sampling team members may arrive in separate cars.
  - Sampling team members will be wearing masks and gloves.
  - One team member will collect the sample; the second team member will likely remain in the car to assist with documentation.
  - Upon completion of sampling, a team member will call you to let you know that sampling is complete.



# Sampling and Results Timeline

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## ACRONYMS & ABBREVIATIONS

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PFOS perfluorooctane  
sulfonate

ppt part(s) per trillion

## Sequence of Events

## Approximate Timeframe

1. Property owner signs up for drinking water well sampling.	■ Beginning May 29, 2021.
2. Navy contractor samples well.	■ June 11–18, 2021.
3. Navy receives preliminary results.	■ Approximately 1 month after sample collected.
4. Navy calls property owner with results.	■ Within 24 hours of results received. ■ Bottled water delivered if PFOS and/or PFOA are above the EPA lifetime health advisory (70 ppt).
5. Lab data is verified and Navy mails final lab data to property owner.	■ Approximately 3 months from sampling.





# Sign Up for Your Sampling Appointment

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## Off-Base Drinking Water Well Sampling

- The Navy will be sampling drinking water wells in the designated sampling area.
- Sampling is at no cost to you.
- Drinking water samples will be collected **Friday, June 11 through Friday, June 18, 2021.**
- Sampling appointments are available on these days **8 a.m.–6 p.m.**
- The property owner must give permission for sampling and complete the questionnaire and permission slip.
- Sampling takes less than an hour.
- An adult (18 years or older) must be present at the property during sampling.

*Additional times are  
available upon request*

**The Navy will provide bottled water for cooking and drinking if PFOA and/or PFOS exceed the EPA lifetime health advisory (70 ppt).**

## Off-Base Drinking Water Sampling Activity Timeline – 2021

