



# Why is the Navy Sampling for PFAS?

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

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

If you have specific questions, please contact [PAO\\_feedback@navy.mil](mailto:PAO_feedback@navy.mil) or 360-396-1030

**The Navy is being protective by identifying potential exposure to PFAS in drinking water.**

**The Navy is taking responsibility for our previous operations.**

- The EPA established a lifetime health advisory (70 ppt) for two PFAS, specifically PFOA and PFOS.
- Navy policy is to identify and prioritize locations with the potential for exposure.
  - The Navy used AFFF in many operations, specifically in fire fighting.
- We want to perform environmental sampling nationwide.
- We want to:
  - Determine if PFAS is present in off-base drinking water
  - Ensure people are not exposed to PFOA and PFOS resulting from Navy operations



CDC Amanda Mills

AFFF aqueous film forming foam  
 EPA U.S. Environmental Protection Agency  
 PFAS per- and polyfluoroalkyl substances

PFOA perfluorooctanoic acid  
 PFOS perfluorooctane sulfonate  
 ppt parts per trillion



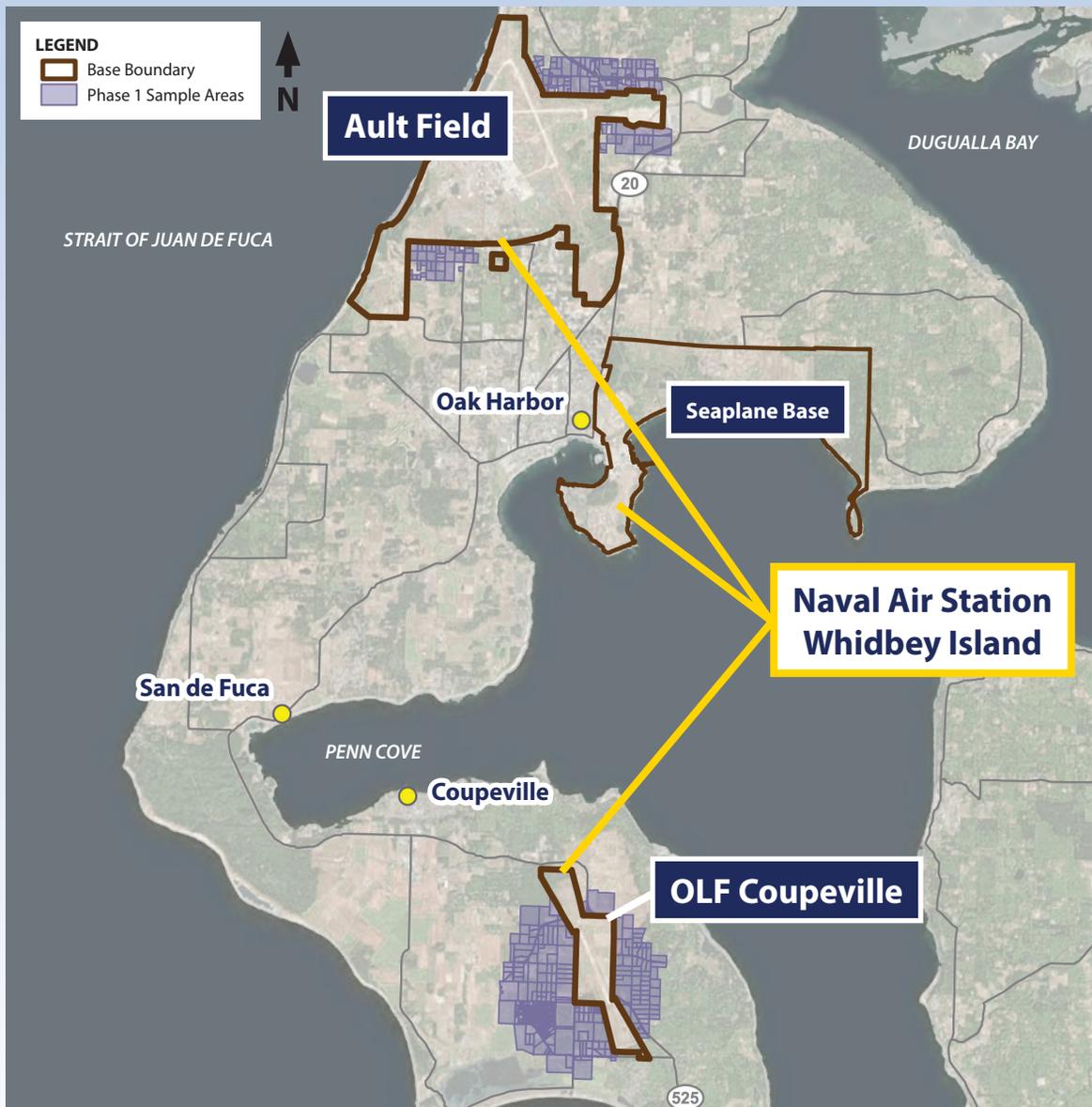
# Upcoming Sampling at NAS Whidbey Island – Ault Field and OLF Coupeville

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- Drinking water and groundwater investigations for Naval Air Station Whidbey Island are planned because of past confirmed release of AFFF at Ault Field.
- AFFF is present in groundwater on Ault Field as a result of former fire fighting training and emergency response operations using AFFF.
- Historical AFFF usage at OLF Coupeville is not confirmed. PFAS were detected in groundwater within one well located at the air field, requiring further investigation.



AFFF	aqueous film forming foam	PFAS	per- and polyfluoroalkyl substances	PFOS	perfluorooctane sulfonate
EPA	U.S. Environmental Protection Agency	PFOA	perfluorooctanoic acid	ppt	parts per trillion



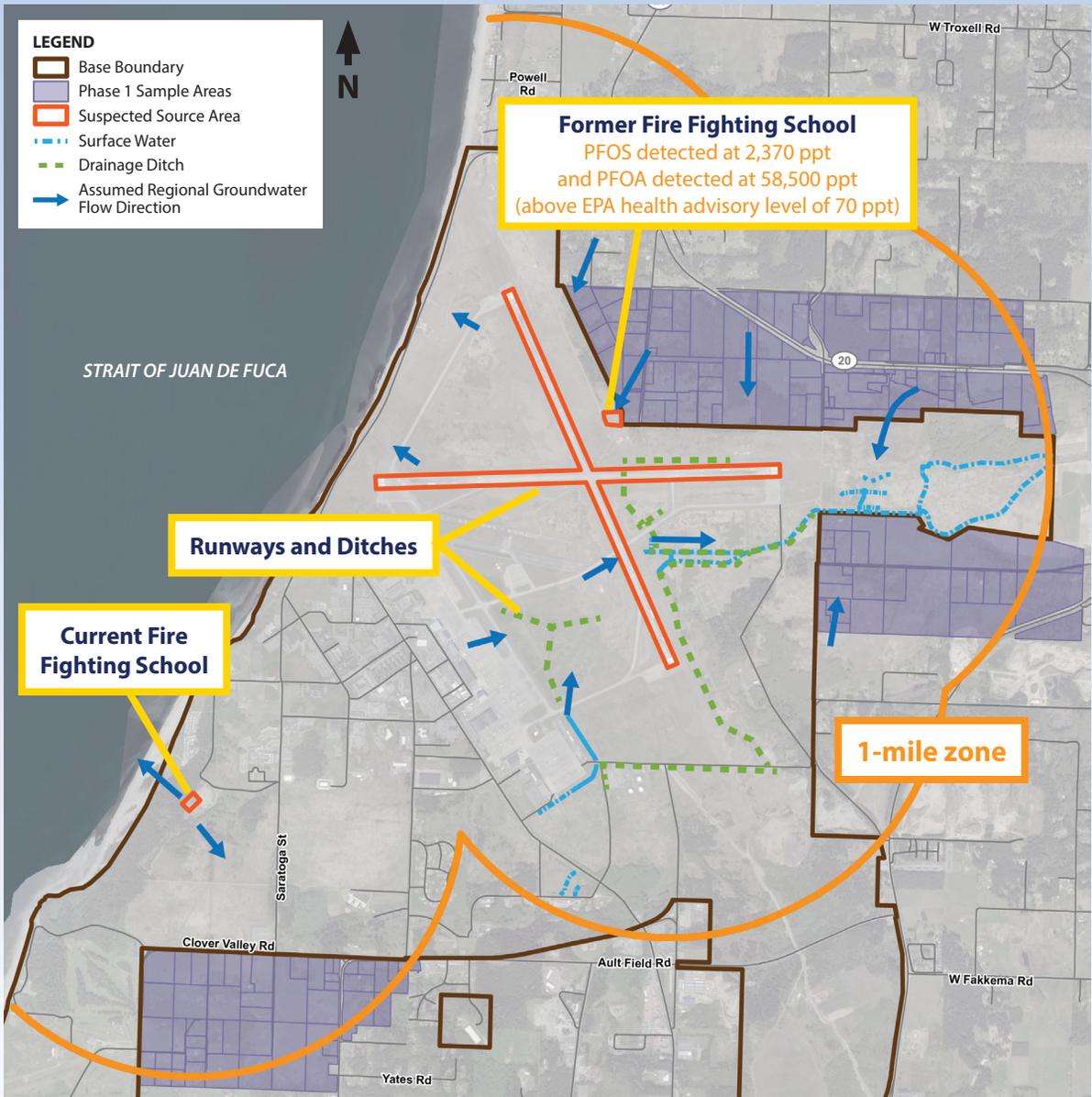
# Ault Field Investigation – Off-Base Drinking Water Sampling

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- AFFF was used at the Former Fire Fighting School.
- AFFF was used on runways and is thought to have migrated into the adjacent runway ditches.
- AFFF was used at the Current Fire Fighting School; however, no groundwater sampling has been conducted to date.
- PFAS exceeded the EPA health advisory at two monitoring wells at the Former Fire Fighting School.
- PFAS was not detected at one monitoring well sampled within the runway ditches.
- All identified drinking water wells within the sampling area will be sampled.
- The Navy has cautiously expanded the sampling area one-half mile upgradient to the regional groundwater flow at the Former Fire Fighting School.
- The next step will be based on the results of Phase 1.



AFFF aqueous film forming foam PFAS per- and polyfluoroalkyl substances PFOS perfluorooctane sulfonate  
 EPA U.S. Environmental Protection Agency PFOA perfluorooctanoic acid ppt parts per trillion





# We Need Your Help – Drinking Water Sampling Process

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## Sampling Process

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

## Other Ways to Schedule an Appointment

To schedule an appointment for sampling your drinking water, please contact:  
**[PAO\\_feedback@navy.mil](mailto:PAO_feedback@navy.mil) or 360-396-1030**



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# Next Steps

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## The Navy will notify residents of results beginning in January 2017.

Is the result **at or above** the health-based level?



The Navy will provide an alternate water source.

Is the result **below** the health-based level?



No further action is needed at this time.



**The Navy is fully committed to address potential PFAS exposure due to Navy activity in a timely manner. The Navy will be involved until necessary actions are complete.**

### Future Actions

- Potentially expand drinking water sampling area
- We need your help!
  - To locate undocumented wells
  - To access wells
- Continue to monitor the science and regulations related to PFAS
- Continue to communicate with residents through the press, websites, emails, and Restoration Advisory Board
- Address PFOA and PFOS exceedances in drinking water to limit exposure
- Further investigate groundwater to determine the source and location of PFAS exceedance
- Continue to partner with EPA; Washington State Department of Health; and local, state, and federal health agencies to determine the best path forward

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# Per- and Polyfluoroalkyl Substances (PFAS)

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## Where do PFAS come from?

- Man-made compounds
- Used since 1950s in many products, including:



AFFF



paints and stains



grease



carpets and fabrics

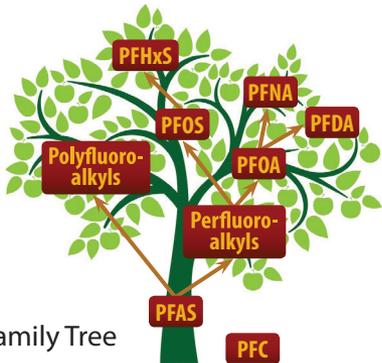


nonstick cookware



food packaging

- Break down slowly and last a long time in the environment
- Globally distributed and detected in people, wildlife, and fish



PFAS Family Tree

## EPA Health Advisory Level for PFAS

- PFAS are emerging contaminants of concern that are now being sampled in public water systems.
- In 2016, the EPA developed a lifetime health advisory level for drinking water:
  - Combined level of two PFAS – PFOS and PFOA
  - 70 ppt
- The advisory level:
  - Is non-enforceable
  - Provides a margin of protection for people throughout their lifetimes
  - Does not represent a definitive cutoff between safe or unsafe conditions
  - Informs states, agencies, and public health officials on health risks of PFOS and PFOA so they can take steps to reduce exposures
- If water contains PFOS and PFOA above the health advisory level, you can reduce exposure by using a different water source for drinking, cooking, brushing teeth, etc.

## How the Health Advisory is Calculated

- Based on best available peer-reviewed studies on health effects of PFOS and PFOA on laboratory animals
- Animals and humans do not process PFAS the same way. Scientific methods account for these differences to be protective of the public.
- Informed by studies with people exposed to different PFAS levels and sources
- Assumed 80% of exposures from food, dust, and air; drinking water makes up 20% of exposure
- Protects sensitive populations including the fetuses or nursing infants of mothers who are exposed

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# Exposure and Health Effects

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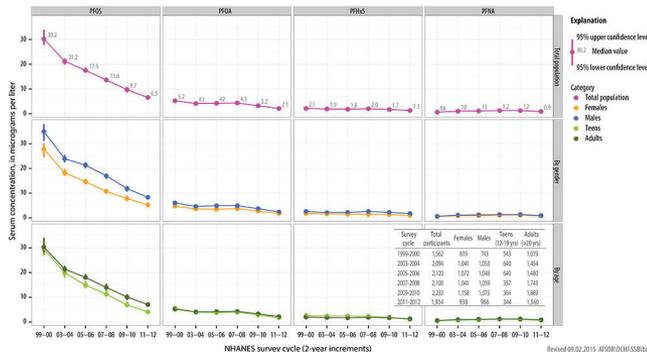
## Exposures to PFAS

- Appear to be widespread across the globe
- Are primarily through ingestion:
  - Food, water, breast milk
  - Consumer products treated to repel water or resist stains
  - Dust and soil
- Will build up in the body over a lifetime until exposure stops
- Reach the fetuses or nursing infants of mothers who are exposed
- Are not significant through skin contact when bathing or showering

## PFAS in People

- More than 98% of the U.S. population have PFAS in their bodies. Levels are going down because some PFAS have been phased out of production.
- Some PFAS stay in the body a long time – there is no medical way to reduce PFAS in the body.

Median Concentrations of Selected PFAS in Blood Serum over Time (1999–2012) in the U.S.



Source: Centers for Disease Control and Prevention National Health and Nutrition Examination Survey (NHANES) [https://www.atsdr.cdc.gov/pfc/sources\\_of\\_exposure.html](https://www.atsdr.cdc.gov/pfc/sources_of_exposure.html)

## Should I Have My Blood Tested?

ATSDR and CDC understand and acknowledge that you may want to know the level of PFAS in your body. However, there are some limitations with blood tests:

- Test results will not provide clear answers for existing or possible health effects.
- Most of the U.S. population has one or more PFAS in their blood, especially PFOS and PFOA.
- Blood testing for PFAS is not a routine test that health care providers offer.

## Health Effects

- Scientists are not yet certain about possible health effects from levels found in our water and food.
- PFOS and PFOA have been studied more than other PFAS.
- Some but not all studies with people show that certain PFAS:
  - May increase cholesterol levels
  - May affect the developing fetus and child including possible changes in growth, learning and behavior
  - May decrease fertility and interfere with the body's natural hormones
  - May affect the immune system
  - Suggest an increased cancer risk (results are inconclusive)
- In studies, animals given large doses exhibit developmental, reproductive, and liver effects and increased cancer.
- More research is needed to confirm or rule out possible links between exposure and health effects.

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# Private Well Testing

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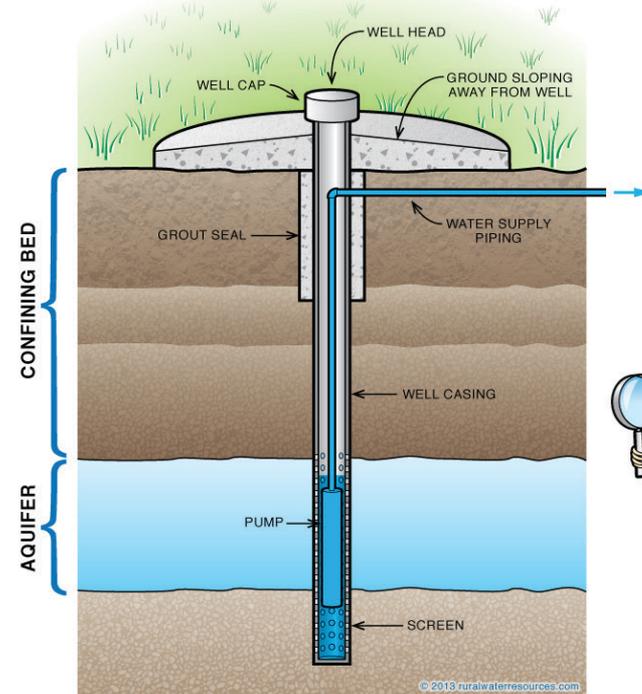
## Managing the Risks

- Circumstantial analytical testing of private wells may be required by law to ensure water quality.
- Testing once a year is a good idea. Regular testing can tell you the quality of the water.
- More frequent testing is recommended if you have a change in taste, odor, appearance, recurrent incidences of gastrointestinal illness, infants living in the home, or a failing septic system.
- The National Groundwater Association recommends you test for bacteria, nitrates/nitrites and any other contaminants of local concern.
- Never connect a private well to a public water supply.
- If using water conditioner (aka, "water softener") equipment, it should be maintained and kept in working order.
- Do not dispose of hazardous materials or chemicals on your property or near your well.

## For More Information...

Additional information can be found online at: [www.islandcounty.wa.gov/health](http://www.islandcounty.wa.gov/health) or [www.ecy.wa.gov](http://www.ecy.wa.gov)

## Typical Well Design



Information gathered from Sonoma County Dept. of Health Services

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# Sign Up for Sampling Appointments Here

- Drinking water samples will be collected  
**Monday–Saturday, November 28–December 21.**
- Sampling appointments are available  
**Monday–Friday, 9 a.m.–7 p.m. and Saturday, 9 a.m.–1 p.m.**
- Sampling takes less than an hour.
- An adult resident (18 years of age or older) must be present during sampling.

