



# Why is the Navy Sampling Drinking Water Wells Nationwide?

**The Navy is addressing potential exposure to PFOA and PFOS in drinking water near Naval Air Station (NAS) Whidbey Island.**

- The Navy issued a policy in June 2016 to address PFOA and PFOS in drinking water.
- The Navy’s primary historical source of PFOA and PFOS was firefighting foam.
  - No longer released during training and testing.
  - Currently used for lifesaving emergency measures.
- The Navy is investigating all installations to identify PFOA and PFOS exposure.

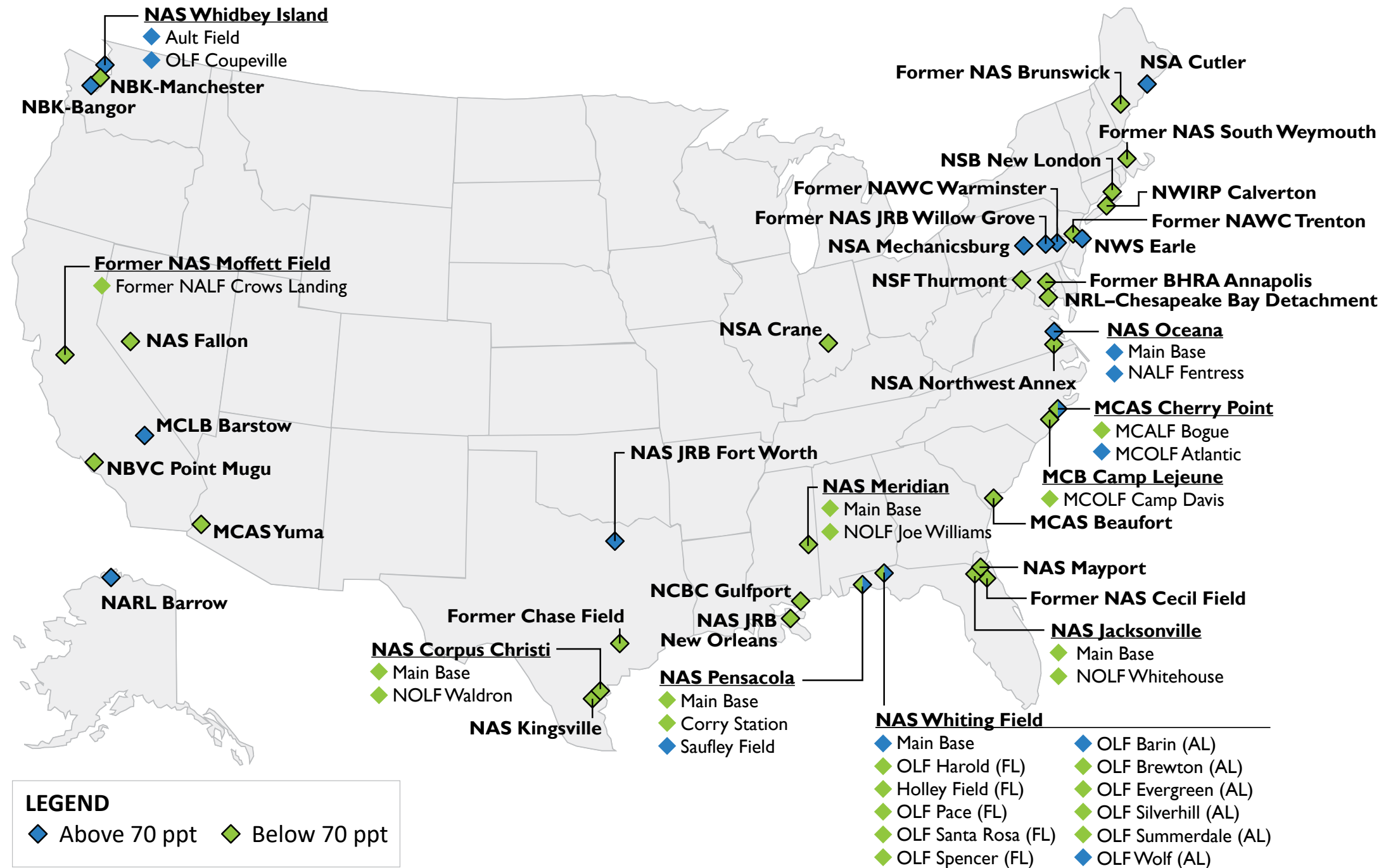
On March 14, 2023, **the EPA proposed a draft regulatory drinking water standard for certain PFAS**, including PFOA and PFOS. In response, the Department of Defense (DoD) has issued the following statement: “DoD respects and values the public comment process on this proposed nationwide drinking water rule and looks forward to the clarity that a final regulatory drinking water standard for PFAS will provide. In anticipation of the final standard that EPA expects to publish by the end of 2023, **the DoD is assessing what actions DoD can take to be prepared to incorporate EPA’s final regulatory standard** into our current cleanup process, such as reviewing our existing data and conducting additional sampling where necessary. In addition, **DoD will incorporate nationwide PFAS cleanup guidance, issued by EPA and applicable to all owners and operators under the federal cleanup law, as to when to provide alternate water when PFAS are present.**”

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**1-844-WHI-PFAS (1-844-944-7327)**  
 or email [naswi.pfas@jacobs.com](mailto:naswi.pfas@jacobs.com)

ACRONYMS & ABBREVIATIONS			
EPA	U.S. Environmental Protection Agency	PFOA	perfluorooctanoic acid
NAS	Naval Air Station	PFOS	perfluorooctane sulfonic acid
OLF	Outlying Landing Field	ppt	part(s) per trillion
PFAS	per- and polyfluoroalkyl substances		



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



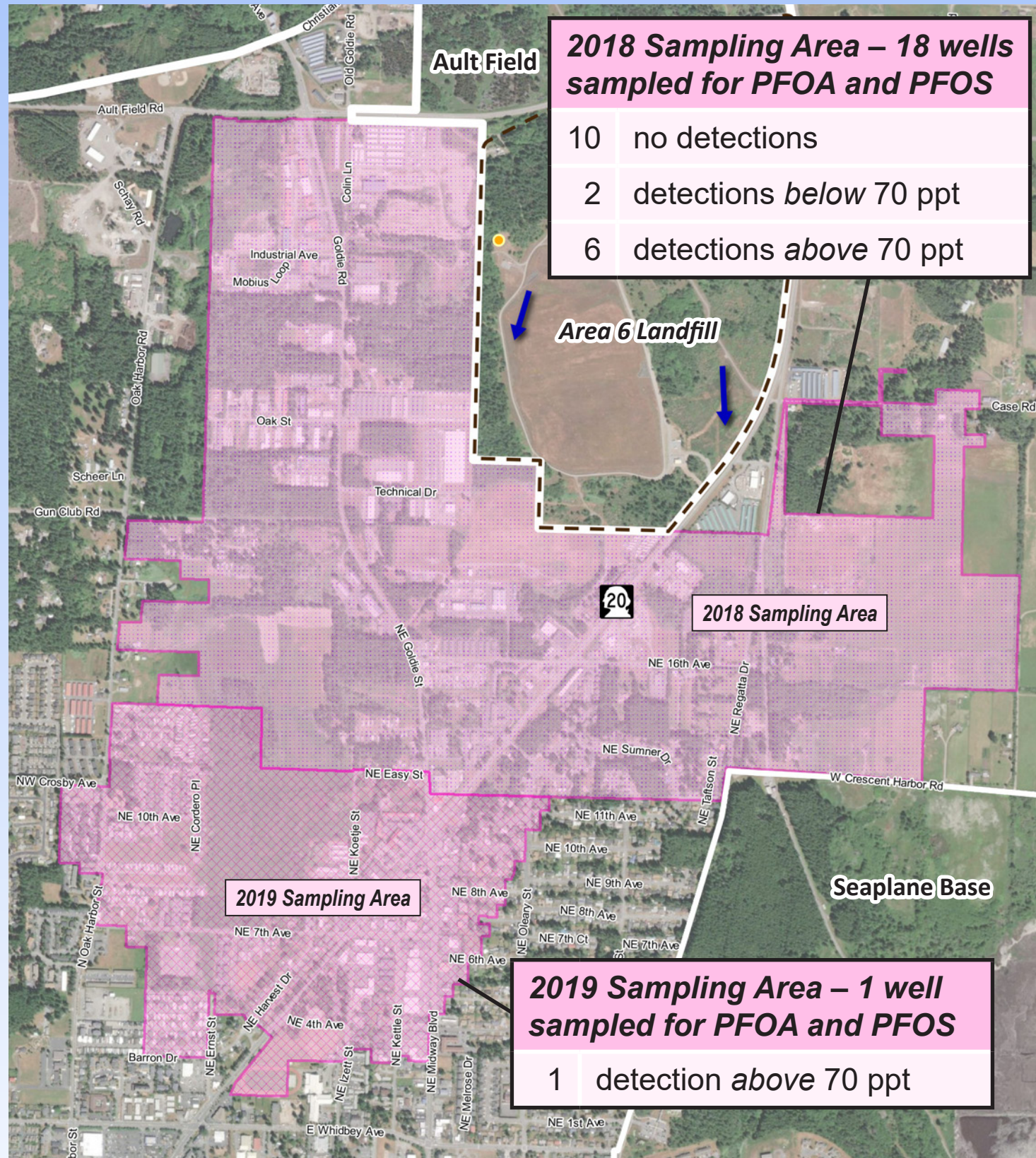
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# NAS Whidbey Island Area 6 Landfill 2018–2019 Off-Base Drinking Water Sampling



**2018 Sampling Area – 18 wells sampled for PFOA and PFOS**

10	no detections
2	detections <i>below</i> 70 ppt
6	detections <i>above</i> 70 ppt

**2019 Sampling Area – 1 well sampled for PFOA and PFOS**

1	detection <i>above</i> 70 ppt
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## 2017

- PFOA detected above 70 ppt in groundwater at Area 6 Landfill in 1 well

## 2018

- Off-base drinking water sampling conducted
- Sampling area was established in the direction that groundwater flows away from the Area 6 Landfill
- 18 drinking water wells sampled:
  - PFOA and/or PFOS **not detected** in 10 wells
  - PFOA and/or PFOS **detected below 70 ppt** in 3 wells (6.92–35.49 ppt)
  - PFOA and/or PFOS **detected above 70 ppt** in 5 wells (73.8–121.8 ppt)

## 2019

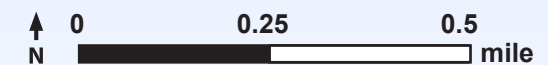
- Off-base drinking water sampling area expanded to the south
- 1 drinking water well sampled:
  - PFOA and/or PFOS **detected above 70 ppt** (278 ppt)
- Navy began sampling drinking water wells at certain properties twice per year

## 2023

- As part of the twice per year sampling program, a drinking water well within the 2018 sampling area had PFOA and/or PFOS **detected above 70 ppt** (80.1 ppt)

## LEGEND

- Navy groundwater well with PFOA and/or PFOS above 70 ppt
- ▭ Area 6 Landfill boundary
- ➔ Groundwater flow direction as understood in 2019
- ▭ 2018–2019 Sampling Area
- ▭ Base boundary



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# NAS Whidbey Island Area 6 Landfill Current PFAS Investigation



## 2023–2024 PFAS Remedial Investigation

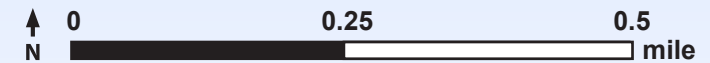
- 40 groundwater samples collected
- PFOA and/or PFOS detected above 70 ppt in 12 groundwater samples

PFAS	Concentration range (ppt)
PFOA	1.16–688
PFOS	1.04–76

- New information collected about the direction of groundwater flow
- Final report will be available to the public

### LEGEND

- Yellow dot: Navy groundwater well with PFOA and/or PFOS above 70 ppt
- Blue dot: Navy groundwater well with PFOA and/or PFOS below 70 ppt
- Green line: Base boundary
- Dashed line: Area 6 Landfill boundary
- Light blue arrow: Groundwater flow direction



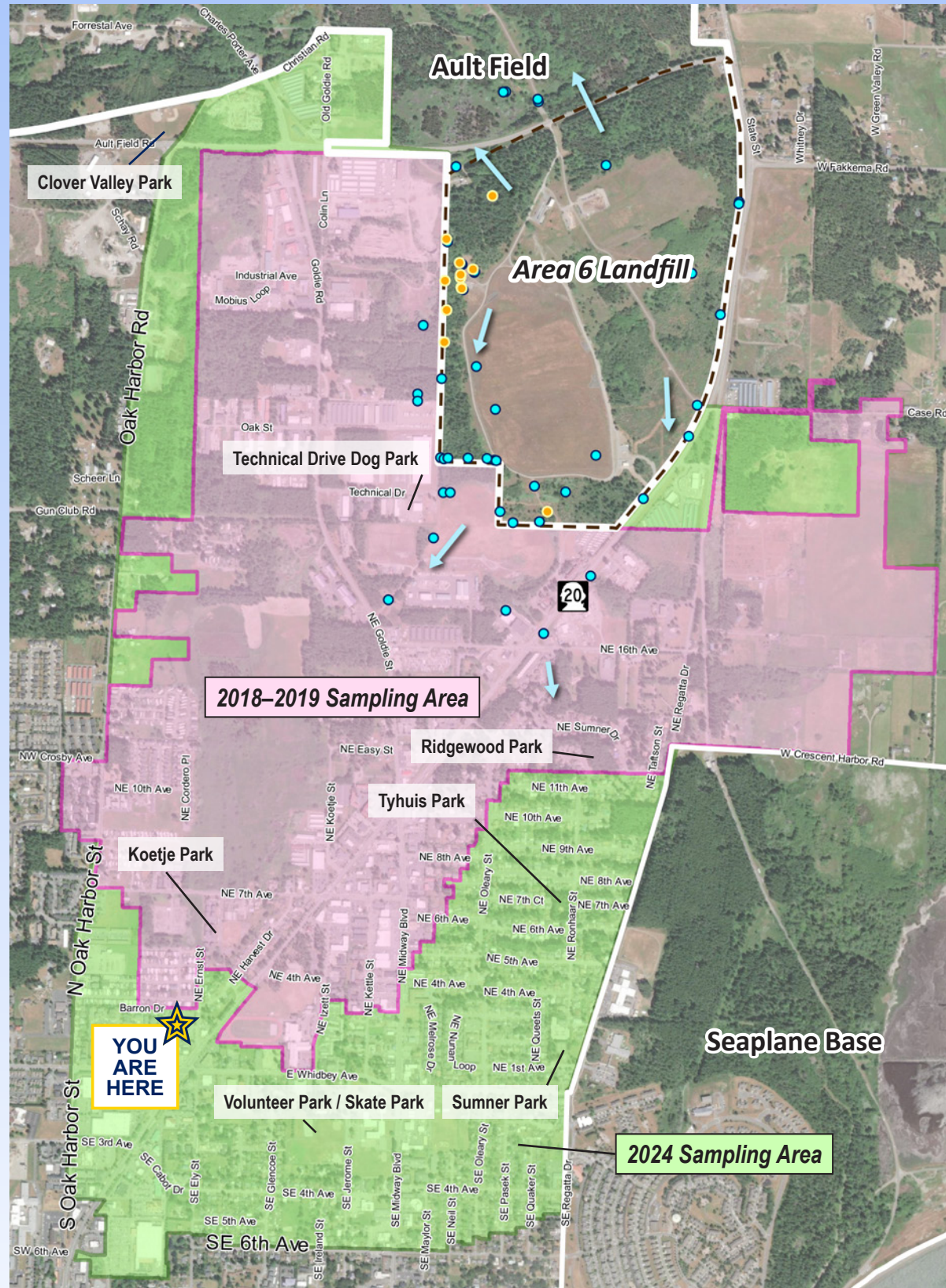
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# NAS Whidbey Island Area 6 Landfill 2024 Off-Base PFAS Drinking Water Sampling



**The Navy would like to sample your drinking water well.**

- The Navy is expanding the Area 6 Landfill sampling area in 2024 to include an area 1 mile in the direction of groundwater flow from where PFOA and/or PFOS were detected above 70 ppt in groundwater.
- Sampling also includes drinking water wells in the 2018–2019 area not previously sampled by the Navy.
- If your drinking water is provided by the City of Oak Harbor water system, the Navy does not need to sample your water.

**LEGEND**

- Navy groundwater well with PFOA and/or PFOS above 70 ppt
- Navy groundwater well with PFOA and/or PFOS below 70 ppt
- 2018–2019 Sampling Area
- 2024 Sampling Area
- Base boundary
- Area 6 Landfill boundary
- ➡ Groundwater flow direction

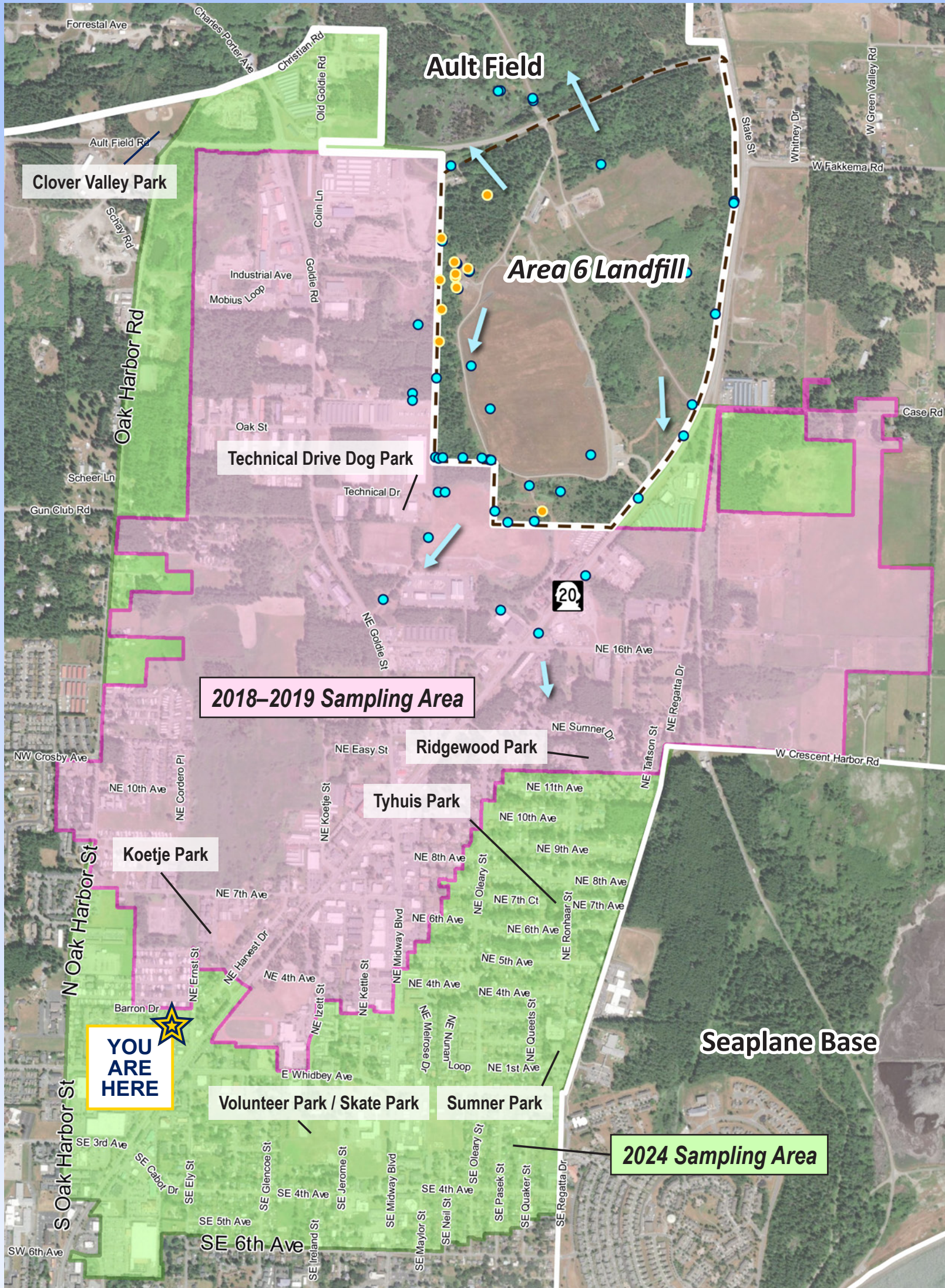
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# NAS Whidbey Island Area 6 Landfill 2024 Off-Base PFAS Drinking Water Sampling



## LEGEND

- Navy groundwater well with PFOA and/or PFOS above 70 ppt
- Navy groundwater well with PFOA and/or PFOS below 70 ppt
- 2018–2019 Sampling Area
- 2024 Sampling Area
- Base boundary
- Area 6 Landfill boundary
- ➔ Groundwater flow direction



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# NAS Whidbey Island Off-Base Drinking Water Sampling Areas



## The Navy would like to sample your drinking water well.

- The Navy would like to sample drinking water wells, if not previously sampled, within sampling areas near Ault Field and Outlying Landing Field (OLF) Coupeville.
- If drinking water is provided by the City of Oak Harbor or the Town of Coupeville, the Navy does not need to sample your water.
- Ault Field sampling areas have not changed since 2019.
- Area 6 Landfill sampling areas have changed since 2019.
- OLF Coupeville sampling areas have not changed since 2017.

**LEGEND**

Area 6 2018–2019 Sampling Area	2016–2017 OLF Coupeville Sampling Area
Area 6 2024 Sampling Area	Base boundary
2016–2019 Ault Field Sampling Area	Area 6 Landfill boundary

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# Ault Field Off-Base PFAS Drinking Water Sampling

**Ault Field sampling areas have not changed since 2019.**

**2016 Initial Sampling Area (North) – 49 drinking water wells sampled for PFOA and PFOS**

47 no detections  
2 detections below 70 ppt

**2016 Initial Sampling Area (East) – 13 drinking water wells sampled for PFOA and PFOS**

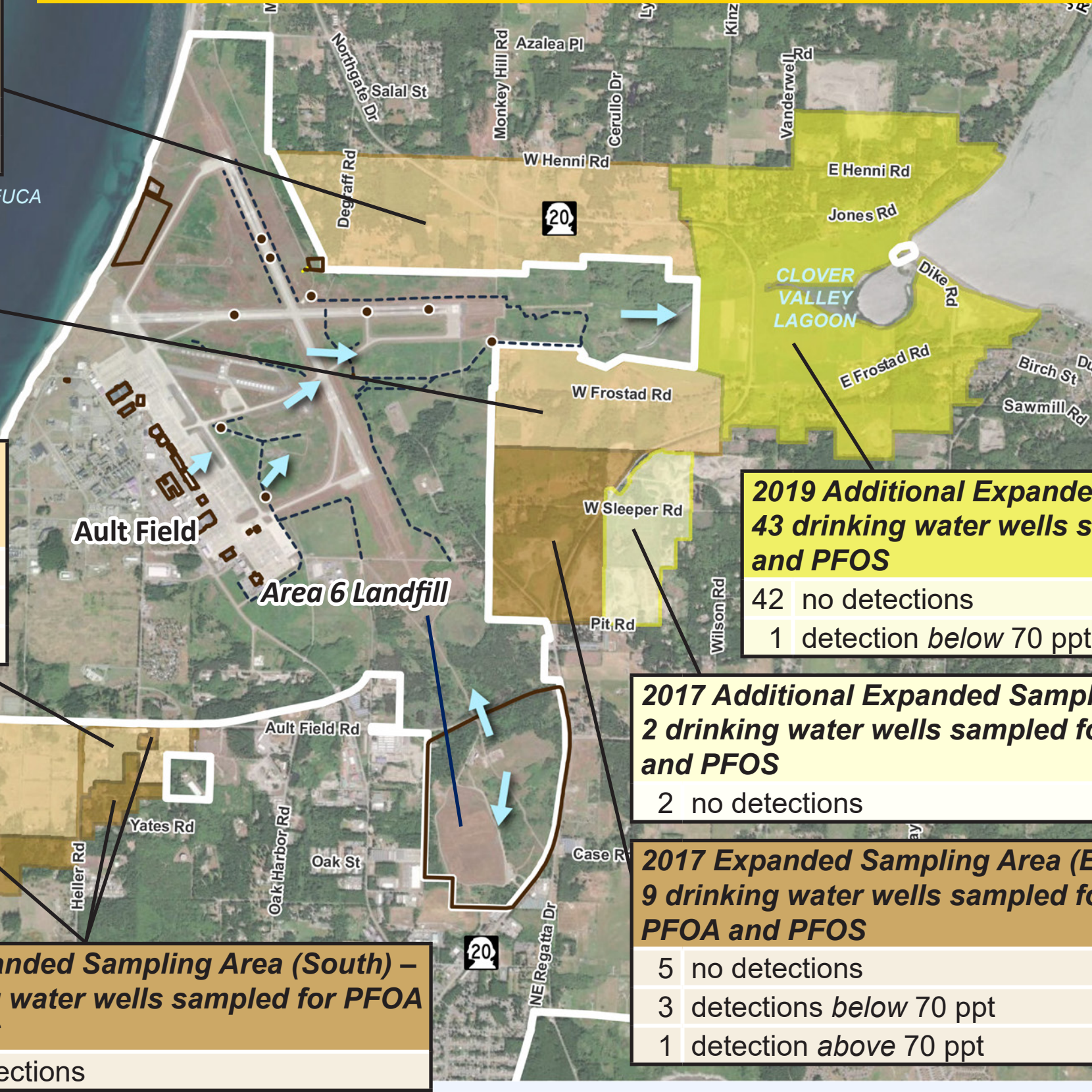
12 no detections  
1 detection below 70 ppt

**2016 Initial Sampling Area (South) – 29 drinking water wells sampled for PFOA and PFOS**

27 no detections  
1 detection below 70 ppt  
1 detection above 70 ppt

**2017 Expanded Sampling Area (South) – 9 drinking water wells sampled for PFOA and PFOS**

9 no detections



**2019 Additional Expanded Sampling Area – 43 drinking water wells sampled for PFOA and PFOS**

42 no detections  
1 detection below 70 ppt

**2017 Additional Expanded Sampling Area – 2 drinking water wells sampled for PFOA and PFOS**

2 no detections

**2017 Expanded Sampling Area (East) – 9 drinking water wells sampled for PFOA and PFOS**

5 no detections  
3 detections below 70 ppt  
1 detection above 70 ppt

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# OLF Coupeville Off-Base PFAS Drinking Water Sampling

**OLF Coupeville sampling areas have not changed since 2017.**

## LEGEND

- 2016 Initial Sampling Area
  - 2017 Expanded Sampling Area
  - Base boundary
  - PFAS release area
  - Groundwater flow direction
- ↑ N 0 0.5 1 mile

**2016 Initial Sampling Area (West) – 42 drinking water wells sampled for PFOA and PFOS**

41	no detections
1	detection above 70 ppt

**2016 Initial Sampling Area (South) – 26 drinking water wells sampled for PFOA and PFOS**

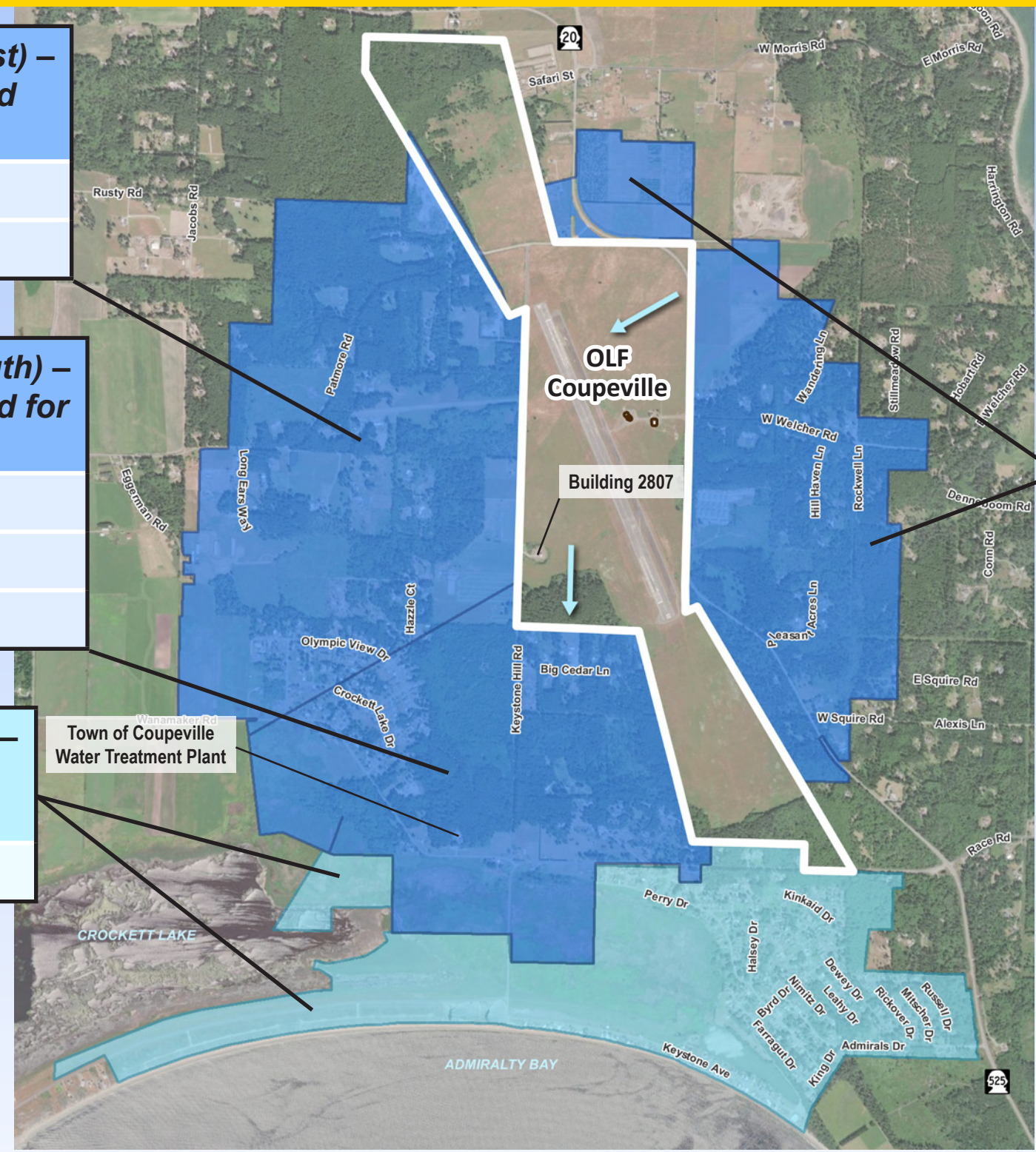
14	no detections
4	detections below 70 ppt
8	detections above 70 ppt

**2017 Expanded Sampling Area – 9 drinking water wells sampled for PFOA and PFOS**

9	no detections
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**2016 Initial Sampling Area (East) – 41 drinking water wells sampled for PFOA and PFOS**

41	no detections
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PFOS	perfluorooctane sulfonic acid
ppt	part(s) per trillion

# 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 air, water, soil, animals, plants, as well as in people.
- Last a long time in the environment.
- Widely used since 1950s in many products, such as:



firefighting foam



stain-resistant carpets and fabrics



water-resistant fabrics



personal care products



nonstick cookware



food packaging

## How Can People Be Exposed to PFAS?

- When PFAS are present in drinking water, they can be a primary source of exposure.
- Exposure is minor through skin contact when bathing, showering, or swimming.
- Mothers with PFAS in their bodies can transfer PFAS to their fetuses or breastfeeding infants.

## How Can People Reduce Exposure to PFAS in Drinking Water?

- **Get your drinking water well tested.**
- Use an alternative water source for drinking, cooking, 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 affects people's health.
- Exposure to PFAS could increase the risk of:
  - ♥ Higher cholesterol levels.
  - 🍃 Changes in liver enzymes.
  - 👶 Higher blood pressure and preeclampsia in pregnant women.
  - 👶 Lower infant birth weight and changes in growth.
  - 📄 Decreased vaccine response.
  - 🎗️ Certain types of cancers (testicular and kidney).

**Chemical exposures do not always lead to health effects.**

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# State Action Levels for PFAS in Drinking Water

## State drinking water standards

The Washington State Board of Health set State Action Levels (SALs) for five PFAS in October 2021. These standards:

- ◆ Require most **public water systems** to test for PFAS and take certain actions, like monitoring and public notice, if they find PFAS.
- ◆ Recommend when to take action to reduce PFAS in drinking water
- ◆ SALs are health protection levels for long-term drinking water. They also apply to shorter periods for sensitive groups.

## State Action Levels (SALs)

<b>PFOA</b>	10
<b>PFOS</b>	15
<b>PFNA</b>	9
<b>PFHxS</b>	65
<b>PFBS</b>	345

SAL units are in parts per trillion (ppt)

### Acronyms

PFAS	per and polyfluoroalkyl substances	PFNA	perfluorononanoic acid
PFOA	perfluorooctanoic acid	PFHxS	perfluorohexane sulfonic acid
PFOS	perfluorooctane sulfonic acid	PFBS	perfluorobutane sulfonic acid



## How to minimize exposure when PFAS exceed a SAL in your tap water

- ◆ Use an alternate or treated water source for drinking and cooking if you are pregnant, breastfeeding or mixing infant formula.
- ◆ Install a home filter to remove PFAS from your water.
- ◆ At high concentrations, consider filtering garden and livestock water.
- ◆ Connect to a nearby public water system or well that doesn't have PFAS.
- ◆ For more information go to [doh.wa.gov/pfas](https://doh.wa.gov/pfas).

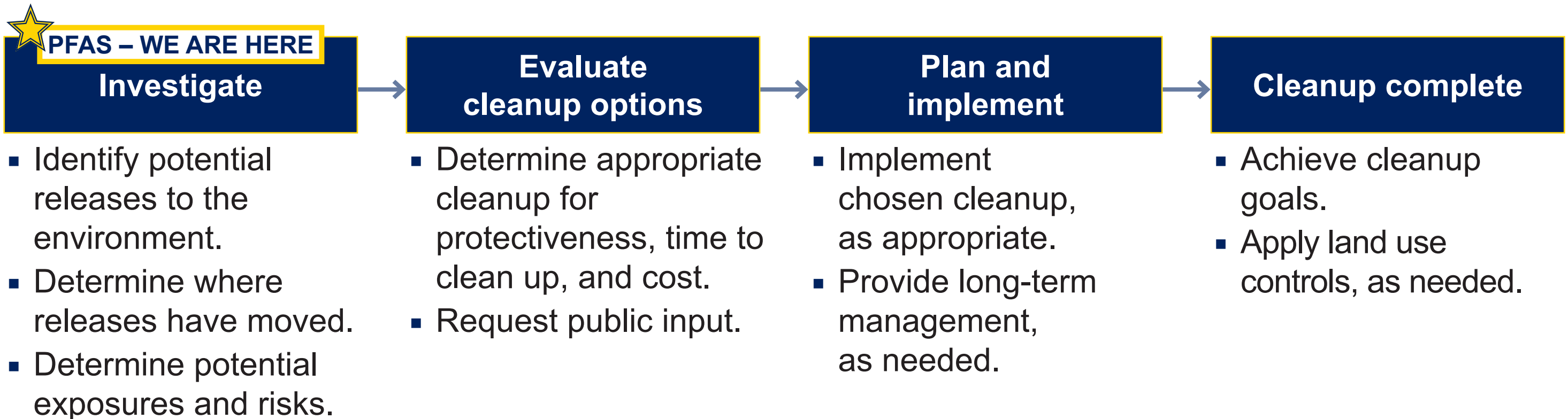


# Environmental Cleanup Process

## PRIORITY: Protect Human Health and the Environment

- The structured regulatory process, shown below, is used to identify and clean up past environmental releases.
- At NAS Whidbey Island, the Washington State Department of Ecology and EPA work closely with the Navy to provide oversight throughout the process.
- Public input is welcomed throughout the process and formally requested at certain times.
- This process will take years.

## Environmental Cleanup Process



Sign up for Restoration Advisory Board emails to keep informed about ongoing environmental cleanup at NAS Whidbey Island.

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# Drinking Water Sampling Results Timeline

The Navy would like to sample your drinking water well.

Sequence of Events	Approximate Timeline
1. Navy receives preliminary results	Within 1 month after sample collected
2. Navy calls to inform if PFOA and/or PFOS are above or below 70 ppt	Within 24 hours of results received by the Navy
3. If PFOA and/or PFOS are above 70 ppt, Navy delivers bottled water for <b>drinking and cooking</b>	Within 24 hours of results notification
4. Navy mails verified lab data (final results) to property owners and tenants	Within 3 months of sampling

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# Sign Up for Your Sampling Appointment

## Sampling Appointment

- No cost to you
- Available daily **Friday, February 2,** through **Friday, February 9, 2024,** **8:00 a.m. to 5:00 p.m.**

*Additional times are available upon request*

## What We Need from You

- Right-of-Entry Agreement signed by homeowner
- Completed homeowner questionnaire
- An adult must be present at the property during sampling

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

## Sampling Process

- Samples collected by a team of two experienced contractors:
  - Takes less than an hour
  - Collected as close to well as possible
  - Will run water prior to sample collection
- Samples will be collected and analyzed according to EPA guidelines
- Team will take health precautions during sampling, if requested

## ***TO SCHEDULE AN APPOINTMENT AFTER TODAY***

- Leave a message at **1-844-WHI-PFAS (1-844-944-7327)** with your name, property address, and telephone number
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