# A 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 Yuma.

- In May 2016, the EPA established drinking water lifetime health advisories\* for PFOA and PFOS of 70 ppt.
- In response, the Navy and Marine Corps issued a policy in June 2016 to address PFOA and PFOS in drinking water.
- The primary historical source of PFOA and PFOS at MCAS Yuma was firefighting foam.
  - No longer used for firefighting training.
  - Currently only used for lifesaving emergency measures.
- The Navy and Marine Corps are 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."

**TO REQUEST** DRINKING WATER SAMPLING call 888-444-YUMA (888-444-9862)

FOR MORE INFORMATION visit http://www.navfac.navy.mil/YumaPFAS or scan the **QR code**  $\rightarrow$ 



ACRONYMS 8	ATION

EPA	U.S. Environmental Protection Agency	PFAS	per- a
MCAS	Marine Corps Air Station	PFOA	perfluc
ppt	part(s) per trillion	PFOS	perfluc

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and polyfluoroalkyl substances

orooctanoic acid

orooctane sulfonate

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



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

	ACRONYMS & AB	BREVI	ATION
EPA	U.S. Environmental Protection Agency	PFAS	per- ar
MCAS	Marine Corps Air Station	PFOA	perfluo
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nd polyfluoroalkyl substances

orooctanoic acid

orooctane sulfonate

# On-Base Drinking Water

# **PFOA and PFOS are** consistently below 70 ppt.

- Drinking water sources at MCAS Yuma are the Colorado River and an on-base supply well.
- Treated drinking water is tested every year for PFAS.

Test Date	PFOA (ppt)	PFOS (ppt)
May 2019	4.5	not detected
May 2020	2.67	0.89
March 2021	3.8	3.8
June 2021	3.0	not detected
September 2021	not detected	not detected
December 2021	3.8	not detected
March 2022	not detected	not detected
May 2023	awaiting results	



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ACRC	ONYMS & ABBREVIA	ATIONS
EPA U.S. Environmental Protect	ction Agency PFAS	per- and
MCAS Marine Corps Air Station	PFOA	perfluor
opt part(s) per trillion	PFOS	perfluor



### Wedge Aquifer

d polyfluoroalkyl substances

rooctanoic acid

prooctane sulfonate

# MCAS Yuma On-Base PFAS Release Areas



**TO REQUEST** DRINKING WATER

SAMPLING

call

888-444-YUMA

(888-444-9862)

- Basewide PFAS investigation is ongoing.
- Four PFAS investigation sites at MCAS Yuma.
  - All related to use of firefighting foam.
- PFOA and PFOS were detected in MCAS Yuma groundwater above 70 ppt.

FOR MORE INFORMATION

about on-base investigations, access the MCAS Yuma Administrative Record at https://go.usa.gov/xSJfa or scan the **QR code**  $\rightarrow$ 

### LEGEND

**Base Boundary** 

- Location Where PFOA and/or PFOS Were Detected Above 70 ppt in Groundwater Location Where PFOA and/or PFOS Were Not Detected Above 70 ppt in Groundwater
- PFAS Investigation Site
- Groundwater Flow Direction

	ACRONYMS & AE	BREVI	ATIONS
EPA	U.S. Environmental Protection Agency	PFAS	per- an
MCAS	Marine Corps Air Station	PFOA	perfluo
ppt	part(s) per trillion	PFOS	perfluo

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### **Off-Base PFAS Drinking Water Sampling** YUMA ARIZONA



# The Marine Corps needs your help to sample your drinking water well.

- If you have a drinking water well within the sampling area, you can request drinking water sampling.
  - The sampling area is 1 mile in the direction groundwater flows away from locations where PFOA and/or PFOS were detected above 70 ppt in groundwater on-base.
- If your drinking water is provided by the City of Yuma Water Utilities, your water does not need to be sampled by the Marine Corps.
- The sampling area may expand based on the results of the off-base drinking water sampling.

### LEGEND

- Base Boundary
- Location Where PFOA and/or PFOS Were Detected Above 70 ppt in Groundwater
- Location Where PFOA and/or PFOS Were Not Detected Above 70 ppt in Groundwater
- Groundwater Flow Direction
- 1-mile Downgradient of PFOA and/or PFOS Above 70
- Sampling Area

	ACRONYMS & AE	BREVI	ATION
EPA	U.S. Environmental Protection Agency	PFAS	per- ar
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**TO REQUEST** DRINKING WATER

SAMPLING

call

888-444-YUMA (888-444-9862)



ppt	<b>≜</b> N	0	0.25	0.5
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and polyfluoroalkyl su	Ibstan	ces		
orooctanoic acid				
orooctane sulfonate				

# Off-Base PFAS Drinking Water Sampling





### LEGEND

Base Boundary

Location Where PFOA and/or PFOS Were Detected Above 70 ppt in Groundwater

 Location Where PFOA and/or PFOS Were Not Detected Above 70 ppt in Groundwater

Groundwater Flow Direction

1-mile Downgradient of PFOA and/or PFOS Above 70 ppt

Sampling Area

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FOR MORE INFORMATION visit <u>http://www.navfac.navy.mil/YumaPFAS</u> or scan the **QR code** →



### **ACRONYMS & ABBREVIATIONS**

EPAU.S. Environmental<br/>Protection AgencyMCASMarine Corps Air Stationpptpart(s) per trillion

PFAS	per- and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid

PFOS perfluorooctane sulfonate

# Environmental Cleanup Process

### **PRIORITY: Protect Human Health and the Environment**

- The cleanup process shown below, which takes time, is being used to identify and clean up past environmental releases at MCAS Yuma.
- Public input is welcome throughout the process and will be formally solicited at certain points.
- The Marine Corps is working closely with EPA and Arizona Department of Environmental Quality, who oversee the process.

### **PFAS Environmental Cleanup Process**

DRINKING WATER

SAMPLING

call

888-444-YUMA

(888-444-9862)



FOR MORE INFORMATION

visit http://www.navfac.navy.mil/YumaPFAS

or scan the **QR code**  $\rightarrow$ 

**Cleanup complete** 

 Achieve cleanup goals. Implement land use controls, as needed.

U.S. Environmental Protection Agency

MCAS Marine Corps Air Station

part(s) per trillion

EPA

ppt

PFAS per- and polyfluoroalkyl substances

PFOA perfluorooctanoic acid

PFOS perfluorooctane sulfonate

# **Exposure to Per- and Polyfluoroalkyl Substances (PFAS)**

## What Are PFAS?

- Family of manufactured chemicals.
- PFOA and PFOS are the most studied.
- 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 and in the human body.
- 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?

- PFAS may be in drinking water, food, indoor dust, some consumer products, and workplaces.
- Most community 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.

EPA

ppt

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**  $\rightarrow$ 

### **ACRONYMS & ABBREVIATIONS** U.S. Environmental Protection Agency MCAS Marine Corps Air Station PFOA perfluorooctanoic acid part(s) per trillion

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PFAS per- and polyfluoroalkyl substances

PFOS perfluorooctane sulfonate

# **Health Effects**

## What Are the Potential Health Effects?

- Scientists are still learning about how exposure to PFAS affects people's health.
- Studies indicate possible health effects could include:
  - Increased cholesterol levels
  - Increased risk of certain types of cancers (testicular and kidney)
  - 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
- Changes in liver enzymes
- Levels of PFAS in drinking water do not predict health impacts.

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

## **Are Blood Tests Available for PFAS?**

- Blood testing for PFAS is available from some private specialty labs.
  - Blood test results will not tell you if PFAS exposure will cause current or future health problems.
  - Blood tests results cannot provide information on treatment.
  - Individuals interested in PFAS blood testing are encouraged to discuss it with their doctors.

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	ACRONYMS & AE	BREVI	ATIONS
A U	S. Environmental Protection Agency	PFAS	per- an
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ра	art(s) per trillion	PFOS	perfluo





nd polyfluoroalkyl substances

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prooctane sulfonate

# 🖉 🔬 Drinking Water Sampling Results Timeline

Sequence of Events	<b>Approximate Timel</b>
<ol> <li>Marine Corps receives preliminary results.</li> </ol>	30 days after samp
2. Marine Corps calls property owner and tenant with results.	<ul> <li>Within 24 hours of results received.</li> </ul>
<ol> <li>Bottled water is delivered if PFOA and/or PFOS are above 70 ppt.</li> </ol>	<ul> <li>Within 24 hours of results received.</li> </ul>
<ol> <li>Lab data are verified and Marine Corps mails final lab data to property owner and tenant.</li> </ol>	<ul> <li>3 months after sam</li> </ul>

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

EPA

MCAS

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ACRONYMS & AB	BREVI	ATIONS
U.S. Environmental Protection Agency	PFAS	per- and
Marine Corps Air Station	PFOA	perfluor
part(s) per trillion	PFOS	perfluor

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orooctane sulfonate

# **A** Sign Up for Your Drinking Water Sampling

## **Sampling Appointment**

- No cost to you.
- Available daily Thursday, May 25, through Saturday, May 27, 2023, 8:00 a.m. to 5:00 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.

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

## **Sampling Process**

- Samples will be collected by a team of two experienced contractors:
  - Takes less than an hour.
  - Collected as close to the 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 health precautions if requested.

To schedule an appointment after the Open House, call 888-444-YUMA (888-444-9862).

	ACRONYMS & ABBREVIATIONS			
	U.S. Environmental Protection Agency	PFAS	per- and	
S	Marine Corps Air Station	PFOA	perfluoro	
	part(s) per trillion	PFOS	perfluoro	



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