

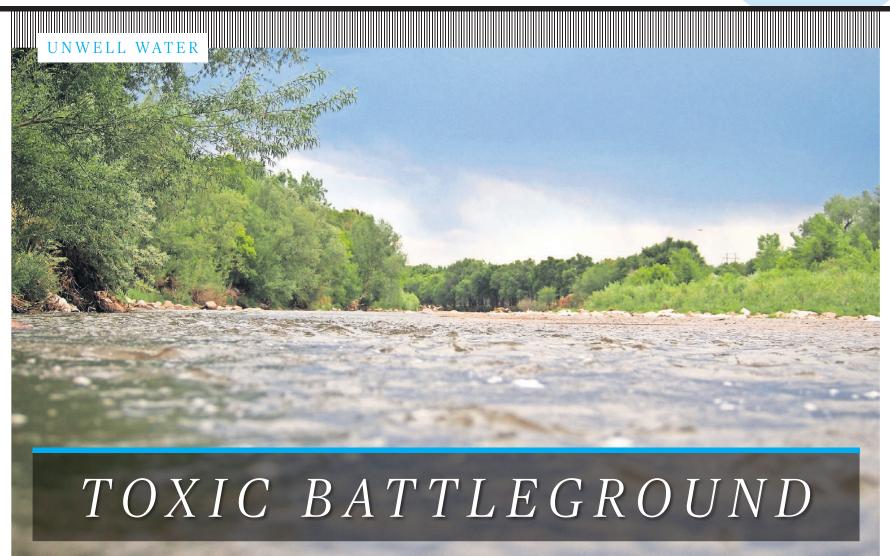
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The Fountain **Creek flows** near Peterson Air Force Base, Colorado. **Dozens of** drinking water wells in the area have been contaminated with PFAS from firefighting foam use. [KYLE BAGENSTOSE / STAFF]

Toxic firefighting chemicals continue to contaminate aquifers and waterways around military bases in Bucks and Montgomery counties, as well as Joint Base McGuire-Dix-Lakehurst in New Jersey. And while exposure to drinking water is largely cut off, there has been little effort by the military to begin cleaning the chemicals from creeks, streams and groundwater.

Environmental regulators are working on a plan in both states, with Pennsylvania just getting started and New Jersey set to soon create the nation's most stringent standards on the chemicals.

But there are ominous signs. In states that have already passed regulations, the Department of Defense is pushing back, ignoring violations or even suing in federal court. Experts say it's a troubling trend, and states need EPA backup.

Read the latest in our comprehensive coverage:

- Colorado, New Mexico and other states fight for more military response to clean up, A15
- EPA action could give states a boost, experts say, A17

#### About this series

Since 2014, 22 public wells and about 200 private wells have been shut down by contamination from perfluorooctanoic acid, or PFOA, and perfluorooctane sulfonate, or PFOS. Joint Base McGuire-Dix-Lakehurst is investigating the extent of contamination there, while a trio of current and former military bases in Montgomery County, Pennsylvania, are thought to be the source of the taint there.

Reporters Kyle Bagenstose and Jenny Wagner have been investigating and writing extensively on the topic, telling the stories of local people who believe they've been sickened by the chemicals, speaking with health experts on the potential toxicity of the chemicals, and examining the actions taken by local, state and federal agencies as they address the contamination.

For complete coverage of this issue, visit buckscountycouriertimes.com/unwellwater.

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## Trump cuts Central American aid

By Jonathan Lemire, Nomaan **Merchant and Colleen Long** The Associated Press

PALM BEACH, Fla. -Taking one drastic action against illegal immigration and threatening another, President Donald Trump moved to cut U.S. aid to three Central American nations whose citizens are fleeing north and declared he is likely to close America's southern border next week unless Mexico halts the flow of migrants.

Though Trump has previously threatened to close the border and has not followed through, his administration moved to cut direct aid to El Salvador, Guatemala and Honduras. The State Department said in a statement that it will work with Congress to suspend 2017 and 2018 payments to the trio of nations, which have been home to some of the migrant caravans that have marched through Mexico to the U.S.

border. The president emphasized "I am not kidding around" about closing the border, even though such a severe move could hit the economies of

both countries. "It could mean all trade" with Mexico, Trump said when questioned on Friday by reporters in Florida. "We will close it for a long time."

Amplified by conservative media, Trump has made those caravans the symbol of what he says are the dangers of illegal immigration, making them a central theme of his midterm campaigning last fall. Now with the special counsel's Russia probe seemingly behind him, Trump has revived his warnings of their presence.

Trump has been promising for more than two years to build a long, impenetrable wall along the border to stop illegal immigration, though Congress has been reluctant to provide the money he needs. In the meantime, he has repeatedly threatened to close the border, but this time, with a new group of migrants heading north, he gave a definite timetable and suggested a visit to the border within the next two weeks.

A substantial closure could have an especially heavy impact on cross-border communities from San Diego to South Texas, as well as supermarkets that sell Mexican produce, factories that rely on imported parts, and other

businesses across the U.S. The U.S. and Mexico trade about \$1.7 billion in goods daily, according to the U.S. Chamber of Commerce, which

said closing the border would be "an unmitigated economic debacle" that would threaten

5 million American jobs. Trump tweeted Friday morning, "If Mexico doesn't immediately stop ALL illegal immigration coming into the United States through our Southern Border, I will be CLOSING the Border, or large sections of the Border, next week."

He said several times that it would be "so easy" for Mexican authorities to stop immigrants passing through their country and trying to enter the U.S. illegally, "but they just take our money and 'talk.'"

Sen. Bob Menendez, D-N.J., ranking member of the Senate Foreign Relations Committee, spoke out Saturday against cutting off aid to Central

See TRUMP, A8



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# States are trying to make the military clean up toxic chemicals. Now the Department of Defense is fighting back.

#### By Kyle Bagenstose and Jenny Wagner

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The U.S. Department of Defense has quietly begun battling environmental regulators in several states, after the agencies attempted to force the military to clean toxic firefighting chemicals from polluted streams, marshes and aquifers.

The efforts mark the opening acts of what could turn into a nation-wide war on legal liabilities, which the Pentagon estimates could reach into billions of dollars as it investigates the presence of the chemicals at hundreds of bases across all 50 states.

The chemicals, per- and polyfluoroalkyl substances, or PFAS, have burst onto the national radar in recent years. Originally produced by companies 3M and DuPont, PFAS are used in everything from Teflon pans to food packaging to water-resistant clothing. Scientists have linked some PFAS chemicals to health effects, including ulcerative colitis, thyroid disease, reproductive issues and some cancers.

Few producers or users of PFAS face potential liabilities as great as the U.S. military, which already has spent more than \$200 million over the past half-decade to start investigations of chemical family members perfluorooctane sulfonate, or PFOS, and perfluorooctanoic acid, or PFOA, at more than 400 military bases across the country. Both chemicals, particularly PFOS, were ingredients in firefighting foams used widely by the military during training and emergencies since the 1970s.

There are thousands of PFAS chemicals, but PFOS and PFOA are believed to be among the most harmful, and are the only two for which the U.S. Environmental Protection Agency has set an advisory limit for drinking water.

To date, the military has focused on filtering drinking water containing PFAS above the EPA's advised limit of 70 parts per trillion, after finding the chemicals in excess of that limit in more than 560 private and public drinking water supplies around 51 bases. But impacted communities worry that continued environmental contamination is impacting wildlife, property values, municipal taxes and even human health.

"There's been very little focus to date on cleanup standards or cleanup guidelines," said Rob



ABOVE: Deputy Assistant Secretary of Defense for Environment Maureen Sullivan testifies at a House Oversight and Reform subcommittee hearing on PFAS chemicals and their risks on March 6 on Capitol Hill in Washington. In 2018, Sullivan testified that state environmental standards would be "rolled in" to the military's cleanup considerations at bases. Yet that does not appear to be happening. [SAIT SERKAN GURBUZ / THE ASSOCIATED PRESS]

TOP: In this June 7, 2018, photo, PFAS foam gathers at the Van Etten Creek dam in Oscoda, Michigan, near Wurtsmith Air Force Base. Michigan, Colorado, New Mexico and New York are among states that have emerged as battlegrounds in the continuing fight to have the Department of Defense clean up the chemicals, which were widely used in firefighting foam on military bases. Cleanup could cost the military more than \$2 billion. [JAKE MAY / THE FLINT JOURNAL VIA AP]

Bilott, an Ohio attorney who has litigated PFAS issues for decades. "Once you've stopped the ongoing exposure to people ... what do you do with what's left? And that's a much, much bigger issue."

Because the EPA has yet to set any formal PFAS regulations, an increasing number of state environmental agencies are taking matters into their own hands, creating their own standards to compel polluters to begin cleaning up the chemicals within their borders. In Pennsylvania, where some of the nation's highest PFAS levels have been discovered in Bucks and Montgomery counties, regulators recently announced they would create a state drinking water standard, and lawmakers are mulling legislative solutions. New Jersey is further ahead, with regulators preparing to implement the lowest PFOS and PFOA drinking water standards in the country.

But in several cases where states already acted, the military is resisting or even taking the issue to court.

Erik Olson, a senior director at the Natural Resources Defense Council, noted the efforts appear to double back on promises made by Maureen Sullivan, a deputy assistant secretary for the environment at the Department of Defense, during a 2018 congressional hearing. Sullivan testified that state standards would be "rolled in" to the military's cleanup considerations at bases.

"The Defense Department is going back on its word ... and appears to be arrogantly refusing to comply with state laws," Olson said. "This is a very worrisome trend."

trend."
On March 14, this news organization emailed the Department of Defense a list of questions about its efforts. Department spokeswoman Heather Babb responded

Monday with statements that did not address many of the specific questions

questions.

"DOD, like any federal agency engaged in certain activities, such as owning or operating a public water system, must comply with all federal, state, interstate, and local safe drinking water requirements, in accordance with the Safe Drinking Water Act," Babb wrote.

"DOD takes our cleanup responsibility seriously. We work with regulatory agencies and local communities to ensure we can share information in an open and transparent manner."

#### STATES OF CONTROVERSY

Nowhere is the issue more contentious than in New Mexico, where the state Environment Department and the U.S. Air Force are suing

See TOXIC A16



Peterson Air Force Base near Colorado Springs, Colorado. [KYLE BAGENSTOSE / STAFF]

#### COLORADO

#### **THE SITUATION**

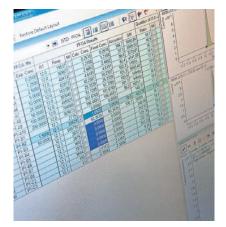
Widespread PFAS contamination was found near Colorado Springs, flowing from Peterson Air Force Base.

#### WHAT DID COLORADO DO?

It added PFOS/PFOA to a state list of hazardous substances, and created a 70 parts per trillion (ppt) standard for the aquifer beneath Peterson.

#### WHAT DID THE DOD DO?

The Air Force sent a letter calling the aquifer standard "discriminatory" and saying it "may not qualify" as a cleanup standard.



Equipment to test for PFAS, in drinking water at Trident Laboratories in Holland, Michigan. [AP FILE PHOTO]

#### **MICHIGAN**

#### **THE SITUATION**

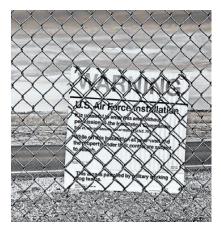
PFAS from the former Wurtsmith Air Force Base have spread into surrounding waterways and marshland, contaminating game, fish and deer.

#### WHAT DID MICHIGAN DO?

It created a 12-ppt PFOS standard where groundwater enters surface water, and issued a violation to the Air Force to increase cleanup.

#### WHAT DID THE DOD DO?

The Air Force sent a letter calling the notice of violation "inappropriate," said it would take no new action, and has not waived sovereign immunity.



Holloman Air Force Base in New Mexico. [COURTESY DON USNER/ SEARCHLIGHT NEW MEXICO]

#### NEW MEXICO

#### THE SITUATION

PFAS contamination from a pair of Air Force bases has spread to surrounding areas, impacting drinking water, farms and a golf course.

#### WHAT DID NEW MEXICO DO?

It issued two violation notices under its state Water Quality Act and Hazardous Waste Act, and asked for more robust testing and a cleanup contingency plan.

#### WHAT DID THE DOD DO?

The Air Force sent a letter saying it would not comply with one violation and filed a lawsuit in federal court.



**Stewart Air National Guard Base in Newburgh, New York.** [AP FILE PHOTO]

#### NEW YORK

#### THE SITUATION

At Stewart Air National Guard Base, PFAS are leaking into the surrounding environment and potentially impacting nearby water supplies.

#### WHAT DID NEW YORK DO?

Designated PFOS and PFOA as hazardous wastes and added Stewart to the state Superfund list, spending \$50 million on clean drinking water. The state is seeking reimbursement and more robust investigations and cleanup.

#### WHAT DID THE DOD DO?

The DOD has not yet provided reimbursement and declined to enter into an expanded cleanup agreement. It also disputes full liability for PFAS contamination.





ABOVE: Granular activated carbon (GAC) filter systems, such as the one seen here at the CFPUA Sweeney Water Treatment Plant in North Carolina, is one method water systems are using to treat PFAS and other chemicals. [STARNEWS FILE]

TOP: The Sand Creek (top) flows into the Fountain Creek (left to right) near Colorado Springs, Colorado. This confluence is located about 5 miles from Peterson Air Force Base, a site of significant PFAS contamination. [KYLE BAGENSTOSE / STAFF]

#### **TOXIC**

From Page A15

each other over widespread PFAS contamination near two bases.

Last July, the state's Water Quality Control Commission added PFOS and PFOA to a list of regulated substances, after which its environmental department issued violations to Cannon and Holloman Air Force bases.

The notice at Cannon said the Air Force failed to sample some nearby water supply wells, was too limited in which PFAS it tested for, and failed to submit a proposal for extended testing of aquifer contamination.

At Holloman, the second violation notice added that 137 ppt of PFAS had been detected at the nearby Apache Mesa Golf Course, a violation of the standard, and asked that a contingency plan be submitted.

In January, the Air Force submitted a letter to New Mexico saying it could not comply.

"Legal constraints limit the Air Force's authority and ability to investigate and mitigate PFAS compounds under the New Mexico Water Quality Act," the Air Force wrote.

A week later, the Air Force filed a suit seeking relief in the U.S. District Court of New Mexico, calling the state standard "arbitrary, capricious, an abuse of discretion, and not supported by substantial evidence."

On March 5, New Mexico filed its own suit in the same court against the Air Force and federal government, seeking a declaration that the Air Force had violated its law, would have to comply, and would be held liable for applicable fines and penalties. The cases are ongoing.

There is similar contention in Michigan, where environmental regulators say the Air Force is violating state standards near the former Wurtsmith Air Force Base, as PFAS seep into nearby waterways and marshes.

To combat the issue, Michigan created a 12-ppt PFOS standard for groundwater where it enters surface water, and a 70-ppt standard for aquifers that are used for drinking water.

Citing the regulations in early 2018, Michigan's Department of Environmental Quality issued a notice of violation to the Air Force for failing to install a water treatment system. After some resistance, the Air Force agreed to construct the unit.

But a second violation issued in October received greater resistance. Again citing the water standards, the Michigan department told the Air Force to increase treatment of groundwater, expand the area needing treatment, conduct monthly samplings, and stop pumping PFAS-laden water into a pit.

In December, the Air Force issued a letter stating it would not comply for various reasons, including that it had not waived sovereign immunity and that the chemicals do not appear on a list of hazardous substances under the federal Superfund law.

"That's their way of fighting back," Arnie Leriche, a veteran and retired environmental engineer with the EPA who lives near the base, said in a conference call with an environmental organization in March.

Scott Dean, a spokesman for the Michigan department, said the agency isn't backing down.

"The slow response by the Air Force to the Wurtsmith contamination is having an increasingly negative impact on the people, wildlife and environment," Dean said.

"Although Michigan seeks to work

cooperatively with the Air Force, slow response to PFAS contamination is not acceptable."

New York has faced similar issues. In 2016, the state Department of Environmental Conservation added several PFAS sites, including Stewart Air National Guard Base, to its list of state Superfund sites.

It then spent about \$50 million to provide clean drinking water to the city of Newburgh, located near the base.

The conservation department submitted a claim to the Department of Defense for reimbursement, but said it had not received a response as of late February. The state also filed a claim under the Federal Tort Claims Act, a precursor to potential legal action, and demanded the military enter into a robust cleanup program. The Air National Guard declined.

"In absence of needed federal action, New York is continuing to ensure aggressive actions are taken to protect the residents of Newburgh," conservation department spokesman Jomo Miller said.

Alan Knauf, an attorney representing Newburgh in a lawsuit against the military, said residents want the Air National Guard to pay for a connection to an aqueduct that carries pure water from the Catskill Mountains to New York City, as opposed to using PFAS-laden water from nearby Washington Lake.

"Try telling people on the East Side of Manhattan they have to drink toxic water that goes through a filter that might not catch everything," Knauf said. "I don't think so."

Issues also are coming to a head in Colorado, where the Department of Public Health and the Environment last year added PFOS and PFOA to a state listing of hazardous substances.

The state also created a 70-ppt groundwater standard for the aquifer underlying Peterson Air Force Base near Colorado Springs.

In a letter, the Air Force warned regulators that the water standard "may not qualify as a cleanup standard" because it does not apply across the whole state, and said its legal immunities are only waived "when state regulation is non-discriminatory."

State regulators have not issued any violations or orders under the statutes, but said they expect the Air Force to comply when it does begin cleanup activities.

Anthony Spaniola, a Michigan attorney who has tracked state PFAS issues, said he thinks states that are expecting automatic compliance with their laws are in for a surprise."They're wrong," Spaniola said. "Those states better get their head out of the sand."

# STATES, EXPERTS SAY EPA ROLE ON CHEMICALS IS CRUCIAL

By Kyle Bagenstose and Jenny Wagner

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Even as states across the country work to address toxic per- and polyfluorinated substances (PFAS) by creating their own drinking water protections, legal experts and regulators say the U.S. Environmental Protection Agency plays a crucial role. The dynamic is particularly important where the military is the polluter, since the EPA also holds federal authority.

"Failure to address PFAS at a national level will really put public health at risk," said Lisa Daniels, director of the Pennsylvania Department of Environmental Protection's Bureau of Safe Drinking Water, at a public meeting last year. "EPA must take a leadership role."

In February, EPA Administrator Andrew Wheeler visited Philadelphia to announce a PFAS Action Plan, which included an "intention" to set a federal drinking water standard for PFOS and PFOA. Wheeler also revealed a proposal to declare the chemicals hazardous substances under the federal Superfund law, and touted a scheduled release of groundwater cleanup recommendations.

But the plan received a lukewarm reception from several states, which felt it lacked hard commitments or deadlines. Immediately following the Feb. 14 announcement, Pennsylvania became the latest state to say it would set its own standards, with a spokesman declaring the state "cannot wait" for the EPA.

Several attorneys said listing PFAS as hazardous substances under Superfund, the nation's primary law governing areas of major chemical contamination, would help most in pursuing cleanup actions.

"We have sued under (Superfund). We believe it's a hazardous substance, but you don't see it on the list," attorney Alan Knauf said of his efforts in representing Newburgh, New York, in a lawsuit against the military over clean drinking water. "If it were put on the federal list, that would tremendously help us."

Heather Babb, a Department of Defense spokeswoman, said the department also supports federal regulation.

"DOD supports EPA establishing regulatory standards and a consistent cleanup approach for PFOS/PFOA based on (Superfund)," Babb wrote in an email. "We want a standard risk-based cleanup approach that is based on science and applies to everyone."

Some attorneys say they think the EPA already has authorities it could use more aggressively.

Tim Bergére, an environmental attorney with Philadelphia's Montgomery McCracken Walker & Rhoads, pointed out that the EPA previously used an "imminent and substantial" endangerment clause under the Safe Drinking Water Act to compel the military to act on PFAS at the Naval Air Warfare Center Warminster and Horsham Air Guard Station. The EPA has issued eight such orders for PFAS nationwide.

Bergére added that many states have laws that are more stringent than federal standards and aren't limited by sovereign immunity, such as a Clean Streams Law in Pennsylvania that he said could be used to force the cleanup of PFAS around the bases in Bucks and Montgomery counties.

"The Navy's sovereign immunity ... does not extend to discharges once they

move off the site," Bergére said.
Other attorneys said states can generally use powers delegated by the EPA to force actions by polluters, including through the issuance of water discharge permits under the federal Clean Water Act and the over-

sight of hazardous waste removal.

"Since the feds are not doing anything, the states have the authority and, we think, frankly, the obligation to step into the vacuum," said Erik Olson, a senior director at the Natural Resources Defense Council.

But recent Department of Defense actions to challenge state regulations underscore the pitfalls of states taking the lead. In New Mexico, regulators sought to force the Air Force to clean up PFAS using a federally delegated hazardous waste authority. The Air Force responded by arguing in court that the state incorrectly applied the law.

Adam Sowatzka, an attorney with the Atlanta-based firm King & Spalding and a former EPA lawyer, said federal regulations are needed to ensure a strong legal



Acting Environmental Protection Agency Administrator Andrew Wheeler, right, and Mid-Atlantic Region administrator Cosmo Servidio, listen to a question during a news conference in Philadelphia in February. Under strong pressure from Congress, the EPA has said that it will move ahead this year with a process that could lead to setting a safety threshold for a group of highly toxic chemicals in drinking water. But some states say the EPA is not moving quickly enough. [AP FILE PHOTOS]



Equipment used to test for perfluoroalkyl and polyfluoroalkyl substances, known collectively as PFAS, in drinking water is seen at Trident Laboratories in Holland, Michigan. As part of its attempt to clean up the chemical, the military is spending millions on research to better detect, understand and filter the chemicals.

case. Without such standards, even the EPA has to go to great lengths to make an effective argument while using emergency powers, he said.

"If you look at what EPA has to do, and all the administrative hurdles, and the case it needs to develop to bring an imminent and substantial endangerment (order), it's a very, very difficult task," Sowatzka said.

A new state battleground could be opening soon, as the New Jersey Department of Environmental Protection is on track to institute drinking water standards of 13 parts per trillion (ppt) for PFOS and 14 ppt for PFOA within a year. Those levels would be the strictest in the nation, and a fraction of the EPA's 70-ppt advisory for drinking water.

Under New Jersey law, the levels also would become groundwater standards, and spokesman Larry Hajna said his department believes the military would have to comply while cleaning up sites like Joint Base McGuire-Dix-Lakehurst.

However, there are signs of potential issues. In 2018, the U.S. Air Force commented on a DEP standard for a chemical cousin, perfluorononanoic acid, or PFNA, questioning its legitimacy.

"Standards based on poor scientific methodologies are often the subject of litigation because they are arbitrary," the Air Force wrote.

There is no evidence the Air Force acted on the warning, but PFOS and PFOA present much greater liabilities than PFNA, which was not a major ingredient in fire-fighting foams. New Jersey also recently implemented interim groundwater standards of 10 ppt for PFOS and PFOA, and a spokesperson said the state expects the Air Force to comply. An Air Force spokesperson said the agency is still reviewing the standard.

THE CRAWL OF CLEANUP

Environmental attorneys said there also is room for legal jousting as the military

decides to what extent, and how quickly, it will clean PFAS from the environment. That's because while the EPA typically has broad authority to drive cleanup at contaminated sites, federal law puts the Department of Defense in the driver's seat at military bases.

at military bases.

"Fundamentally, EPA and DOD are part of the 'unitary executive,' meaning EPA can't take DOD to court and so doesn't have the same leverage as it would at a private site," said Taly Jolish, a recently retired Superfund attorney for the EPA in California

In several cases where states have created their own environmental standards, the military has said it will consider the limits as "ARARs." Short for Applicable or Relevant and Appropriate Requirements, the acronym refers to a process under the federal Superfund law that determines to what level a polluter must clean up a chemical in water or soil.

Several attorneys agreed that the EPA or state regulators typically have authority in selecting an ARAR level for an unregulated chemical at a contaminated site. While some experts said regulators still have to sign off on such decisions at military bases, those with experience in the area said disagreements get messy.

"It becomes basically a political knife fight between DOD and EPA," Olson said. Jolish also said such decisions are "very

political determinations."

Tensions between the EPA and military apparently already exist. On March 13, U.S. Sen. Tom Carper, D-Delaware, authored a letter in which he cited sources saying the military and other federal agencies were pressuring the EPA to relax draft groundwater cleanup recommendations from 70 ppt to 400 ppt. The numbers have not yet been released publicly, and Carper urged the EPA to resist the alleged pressure.

"Such levels would, among other consequences, subject fewer sites that were contaminated through the military's use



Bergère

of PFOA/PFOS from having to be remediated in the first place," Carper wrote.

Further complicating matters is that the EPA has even less authority to control how long it takes

the military to make cleanup decisions, experts said. The issue is playing out at bases across the country, where the military has spent years studying the extent of the PFAS contamination but has done far less to actually remove the chemicals. Officials have commonly cited the need to do more studies before they reach the point of selecting an ARAR.

"I suspect the cause of delay at the federal level is the concern that the Department of Defense is going to have to spend hundreds of millions, and maybe even billions of dollars, responding to these PFOS sites," said David Engel, an environmental attorney litigating PFAS in New York.

Maureen Sullivan, a deputy assistant secretary for the environment at the Department of Defense, suggested in an early March congressional hearing that the department is holding off on containing PFAS releases until it further studies the issue. She also gave a "back of the envelope" estimate of needing \$2 billion for PFAS cleanup.

"Right now, we're trying to determine the extent of the presence in the groundwater around our bases, how far it is, where it's flowing, so we can design the right system to contain it," Sullivan said.

Babb, the DOD spokeswoman, said the department "has proactively addressed PFOS and PFOA and follows the federal cleanup law."

"DOD's priority is to quickly address PFOS and PFOA in drinking water from DOD activities," she added.

The military also is pushing about \$60 million into research on methods to better detect, understand and filter PFAS chemicals, with many studies not due until 2021. Jennifer Field, an Oregon State University PFAS expert whose work has been funded by the military, said there are about 50 ongoing projects, many of them looking for novel and cost-effective ways of destroying PFAS.

"There are definitely some higherenergy processes that look promising, but the problem is practical aspects have to be worked out," Field said. "I haven't heard of the stunning breakthrough that's going to revolutionize (cleanup). Not yet."

But Engel thinks the military can already act more robustly with current technologies, citing its \$700 billion annual budget.

"Let's say it's a \$10 billion (liability). My response is, 'So what?' "Engel said. "If the purpose of the Department of Defense is to defend the United States and the people living in it, you would think that a good thing for them to do would be to defend the people who are drinking water contaminated by these facilities."