

FROM THE FRONT PAGE

CONTAMINATION WARNING



State Representative Todd Stephens looks over a waterway running through Graeme Park in Horsham. Stephens has been a vocal critic of the military's efforts to clean up contamination from firefighting chemicals that have entered drinking water from area military bases. [KIM WEIMER / PHOTOJOURNALIST]

Why isn't the military cleaning up firefighting chemicals?

By Kyle Bagenstose
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In February 2017, after listening to military officials talk for more than an hour about ongoing environmental pollution in his hometown of Horsham, state Rep. Todd Stephens' frustrations boiled over.

Representatives of the Navy and Air National Guard had just freely admitted that toxic firefighting chemicals continued to pour off the former Naval Air Station Joint-Reserve Base Willow Grove and into surrounding waterways. It had been three years since major contamination was first discovered, and Stephens, R-151, wanted to know why the military still hadn't contained it.

"It is beyond my comprehension that these unbelievably talented and bright individuals can't figure out how to stop polluting our water ... and still don't even have a timeline," Stephens said then, of the military's array of contractors and engineers.

Years later, little has changed around the Willow Grove base, nor at the hundreds of other military bases across the country where per- and polyfluoroalkyl substances (PFAS) contamination has been found. With the exception of some limited cleanup efforts at Willow Grove, as well as at other high-profile facilities, the military

"They're very aware that the extent of the problem is very large. And once they do something voluntarily, there are a lot of dominoes that are going to fall."

Nathan Frey,
 policy advisor with the environmental law firm Marten Law

is still where it was before: studying the contamination, but largely leaving it in place.

This news organization spent a year reviewing military documents and talking to legal and environmental experts to determine why the military isn't cleaning up. The effort led through a dizzying maze of regulations and policies, but ultimately ended at a simple answer: Nobody is forcing the military's hand, and perhaps nobody can.

The Department of Defense estimates its cleanup costs could reach \$2 billion, and it's spending tens of millions of dollars studying cost-effective treatment systems and other technologies that could help. Nathan Frey, a policy advisor with the environmental law firm Marten Law, says the DOD appears to be wary that taking a cleanup action at one base before it's ready could set a precedent for others.

"They're very aware that the extent of the problem is very large," Frey said. "And once they do something voluntarily, there are a lot of dominoes that are going to fall."

Other experts say regulators like the Environmental Protection Agency don't have many clear-cut authorities to push the military, particularly

when it comes to the speed of a cleanup. Bill Muno, a former EPA Superfund director in the Midwest, says federal policy technically doesn't allow the EPA to order or sue the Department of Defense.

"There really is no Environmental Protection Agency authority to force the Department of Defense to expedite a cleanup," Muno said.

However, Muno said there are some steps the EPA can take, such as escalating disputes to the White House Office of Management and Budget, that could potentially work to influence the process.

Others agree the dynamic is complex. Charles Howland, a former EPA attorney and now head of the Environmental Group at the Curtis, Mallet-Prevost, Colt & Mosle law firm in New York City, said he butted heads with the DOD in numerous disputes during his 29 years with the agency. According to Howland, issues with PFAS, which have quickly risen to the top of the federal government's chemical priority list, aren't so different legally than past problems with spills of jet fuel and degreasing agents.

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Water flows off the former NAS-JRB Willow Grove property in July. It's been five years since the military first discovered widespread PFAS contamination at bases in Bucks and Montgomery counties, but the chemicals continue to pollute the aquifer and waterways like Park Creek and the Little Neshaminy. [KYLE BAGENSTOSE / STAFF PHOTOJOURNALIST]

Firefighting foam: A timeline

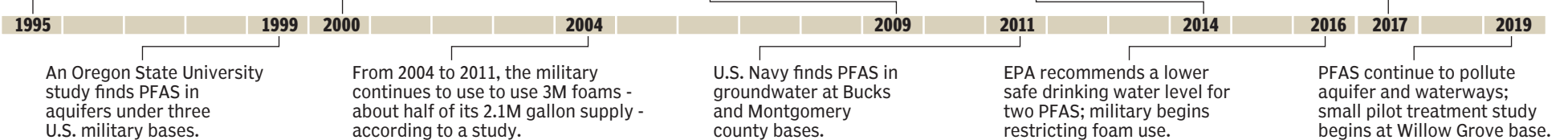
In a journal article, military experts detail environmental impacts and potential drinking water concerns of foam.

3M, the military's primary foam supplier, announces a phaseout of its products over toxicity concerns.

U.S. EPA recommends an initial safe drinking water level for two main types of PFAS.

Drinking water contamination discovered in large public water systems near Bucks-Mont bases.

Military begins some limited cleanup actions at Bucks-Mont bases, including filtration and soil removal.



Source: Staff reporting

GATEHOUSE MEDIA

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“This is all old stuff,” Howland said.

He points to a critical moment in the history of EPA and DOD relations in 1986, when Congress amended the Superfund law and established the Defense Environmental Restoration Program. The change allowed the military to generally control cleanups on its own properties, but required it to follow Superfund regulations and obtain EPA’s agreement regarding cleanup decisions at Superfund sites. In practice, however, the military largely retains control over the pace and implementation of cleanups.

According to Howland, the EPA does have some options in its legal toolkit to try to exercise greater control, but some of them require sign-off by the Department of Justice and in practice are rarely used. Disputes in gray areas are often settled internally by political appointees, or the EPA prefers to hold its fire for fear of losing a court fight, and with it future authority.

“EPA is very reluctant, and DOJ is reluctant, to try to stretch a statute too far, because they don’t want a court putting in writing ‘Oh, you misinterpreted that, you definitely don’t have that authority,’” Howland said.

Others say that even when the military does not clean up contaminated sites to EPA standards, consequences do not always follow. Jessica Ferrell, a partner at Marten Law, has litigated against the military on pollution issues. In a legal analysis, Ferrell noted that the U.S. Government Accountability Office looked at the issue and found the military has in multiple cases across the country ignored or failed to meet EPA demands on a range of environmental issues.

“While DOD is subject to environmental laws ... its compliance with those statutes has sometimes lagged,” Ferrell wrote. “Despite EPA’s efforts, non-compliance continues at contaminated military facilities and, in some circumstances, DOD has moved forward with cleanup, albeit on its own terms.”

This news organization sent a list of questions to the Department of Defense and Environmental Protection Agency on Aug. 23 regarding this story. Neither had provided answers as of press time.

What the law says

One key distinction between firefighting chemicals and other common military pollutants is that PFAS are almost entirely unregulated at the state and federal levels.

Historically, many chemicals are officially regulated by the EPA as Superfund “hazardous substances,” triggering liability for their cleanup, or under the Safe Drinking Water Act. While the EPA is considering regulating PFAS under both programs, the chemicals still reside in a kind of toxic Wild West.

“The simplest thing for EPA to do with PFOS and PFOA, is just make it a hazardous substance and resolve the uncertainty,” Howland said, referring to the two most well-known PFAS substances.

But experts say legal language in the Superfund law still allows for the cleanup of unregulated pollutants or contaminants. Essentially, the process involves the EPA searching its own science programs, those of state regulators, or even independent studies to determine the safe amount of a chemical for humans. Then, the agency uses that number in a formula at a contaminated site to come up with a cleanup level for soil or water.

“The (Superfund) program could not possibly identify every contaminant, or every way to deal with a contaminant,” said Robert Frank, an environmental attorney with Holland & Knight in



Maureen Sullivan from the Department of Defense speaks during a meeting with the EPA at Hatboro-Horsham High School in July 2018. [ART GENTILE / STAFF PHOTOJOURNALIST]



Acting Environmental Protection Agency Administrator Andrew Wheeler speaks during a news conference in Philadelphia in February, announcing the agency’s plans to tackle PFAS contamination. [AP FILE PHOTO]

Philadelphia experienced in Superfund litigation. “But Congress gave EPA more latitude than what would be immediately apparent ... Because the statute doesn’t say it can only look at certain types of state or federal laws. It’s a broad grant of authority to EPA.”

A major distinction with PFAS at military bases, however, is that the decision on appropriate cleanup level primarily resides with the Department of Defense. Howland points out that the Superfund law technically says the EPA has to sign off on the cleanup levels selected at Superfund sites and that the EPA administrator ultimately gets to decide in the event of

a dispute.

But Taly Jolish, another former EPA attorney in California who left the agency in 2017, said high-profile disagreements become “very political determinations” that would in all likelihood be resolved internally within a presidential administration.

What about PFAS?

Exactly what kinds of conversations are taking place between the EPA and DOD on appropriate cleanup levels for PFAS isn’t public knowledge. But documents offer some insight into how the agencies have thought about the issue, particularly those obtained by Philadelphia environmental

attorney Mark Cuker, who is suing the military over the contamination at Willow Grove.

Discovery turned over to Cuker, who then provided it to this news organization, show high-ranking DOD environmental officials were scheduled to meet with the EPA to talk about PFAS in May 2015. An initial draft of talking points showed that DOD officials planned to tell the EPA they felt they were stumbling in the dark on PFAS and had a “concern there is no groundwater or toxicity value.” In addition, they were concerned there was no technology to clean PFAS from groundwater without pumping and treating it, which is expensive to do.

“So contain contamination,” the draft talking points offered as an alternative.

After receiving comments from the Air Force, Army and Navy, the May 2015 documents appear to show DOD staff scrapped the original talking points. Instead, emails show that Maureen Sullivan, the top environmental official with the Department of Defense, preferred to refer directly to a 2009 DoD policy that laid out how the military handles “emerging contaminants” like PFAS.

The 2009 document, which is publicly available, says that the DOD uses a three-tiered process “for selecting toxicity values” for unregulated chemicals, from which it can then develop cleanup levels. The first two preferences are to find safety levels developed by a pair of EPA programs, which don’t have values for PFAS.

A third tier offers a catch-all category. Until the policy was updated on Sept. 4 just prior to publication of this report, the category included looking for data from California’s chemical database, health values from the U.S. Centers for Disease Control and Prevention, or even Google.

“Values may also be found by using an Internet search engine to search for ‘toxicity values’ for a specific chemical,” the policy stated.

The Sept. 4 update removed that language and instead said Tier 3 now consists of “additional EPA and non-EPA sources of toxicity information,” that meet a list DOD recommendations. A subsequent list of six recommendations calls for peer-reviewed, “transparent” studies that “are consistent with the duration of the human exposure being assessed.”

“In addition, if gaps in human health science exist, the DOD can make recommendations to appropriate State agencies, the EPA, or other agencies for additional studies to reduce uncertainty,” it adds.

How, or even if, the DOD has gone through this process for PFAS is unclear. The 2015 emails showed there appeared to be some uncertainty within the DOD about whether it had the data it needed to generate cleanup levels.

The issue was highlighted in a series of Air Force “point papers” on PFAS, written by Janet Anderson, whose online biography identifies her as toxicologist with 15 years of experience working for “federal agencies and industries.”

Anderson wrote that PFOS and PFOA “have toxicity values from which human risk can be assessed,” and that the military’s primary environmental program “does not require promulgated standards for determination of cleanup levels.” Instead, the military can use its three-tiered process to select a cleanup level, she wrote.

Anderson further pointed to a 2013 assessment from the EPA. The document states the EPA came up with a Tier 3 toxicity value for PFOS and PFOA following a request from its Atlanta regional office. The values were created “so that they could be used to derive removal action levels or screening levels for water and other media” the EPA document states.

But in her Air Force point papers, Anderson appeared to cast doubt on the EPA’s science, writing that “underlying toxicity data ... is too uncertain and dynamic to drive groundwater cleanup at this time.”

“The science supporting these (EPA) values is highly uncertain, dynamic, and the EPA (Office of Water) is currently revising their assessments,” Anderson wrote.

Asked about her work and whether it influenced the Air Force or Department of Defense’s response to PFAS, Anderson wrote in an email to this news organization she would be “unable to provide comment.”

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Other records show the DOD continued to keep tabs on the EPA's actions. In June 2016, an environmental restoration director with the Army forwarded colleagues at the Department of Defense a news article that reported the EPA was planning to further develop official screening and "removal levels" for PFOS and PFOA.

"In case you haven't seen..." the Army official wrote in his email to colleagues, before pasting the article.

Department of Defense officials have more recently signaled that they are still waiting on the EPA.

"DOD supports EPA establishing regulatory standards and a consistent cleanup approach for PFOS/PFOA based on the federal cleanup law," Heather Babb, a spokeswoman for DOD, told this news organization in March. "We want a standard risk-based cleanup approach that is based on science and applies to everyone."

Behind the scenes

While DOD officials have publicly said they are waiting on the EPA to develop PFAS safety numbers, some say they see signs the military is working to bend the process to its advantage.

Betsy Southerland, a former director of science and technology in the EPA's Office of Water who worked on PFAS until her departure in 2017, said DOD officials had been "fighting like crazy" to influence draft groundwater cleanup recommendations that the EPA released for PFOS and PFOA earlier this year.

Southerland said an early draft of the recommendations included an emergency action level that would have required immediate treatment of any groundwater above 400



State Representative Todd Stephens is reflected in a pond as he talks about the military's actions in cleaning up PFAS contamination in the area's waterways. [KIM WEIMER / PHOTOJOURNALIST]

parts per trillion (ppt) of the chemicals, an amount regularly eclipsed at sites of PFAS pollution, including at Bucks and Montgomery County military bases. Southerland said that would have required the DOD to take "immediate action" without having to finish environmental studies.

"The (released) draft guidance ... deleted the 400 ppt removal action in EPA's original draft," Southerland said. "It stated instead that a removal action level would be decided for each site on a case-by-case basis with EPA Regional Offices consulting with EPA headquarters."

U.S. Sen. Tom Carper, D-Delaware, and a story in The New York Times also focused on a lack of clarity as to whether the military had agreed to clean up groundwater at 70 or 380 ppt, after the DOD suggested in a 2018 document that the latter number would be appropriate.

"After languishing in inter-agency review for months, the draft guidance finally released by EPA fails to adequately protect public health from this emerging crisis," Carper said of the EPA's groundwater recommendations.

The controversy over the groundwater recommendations was not the first time the DOD had been accused of poking its nose into another agency's PFAS business. As

reported in 2018, the nonprofit Union of Concerned Scientists obtained White House emails that appeared to show both the DOD and EPA trying to influence the U.S. Agency for Toxic Substances and Disease Registry's (ATSDR) release of PFAS safety levels, which were several times lower than the EPA's own health advisories.

"The public, media, and Congressional reaction to these new numbers is going to be huge," one email stated. "We (DoD and EPA) cannot get ATSDR to realize the potential public relations nightmare this is going to be."

The military's 2009 policy, along with other documents obtained by Cuker, show DOD officials are aware they could technically use ATSDR safety levels as a Tier 3 criteria to develop cleanup levels at bases, which would likely result in some of the strictest possible cleanup requirements. Whether they will remain to be seen: the ATSDR's numbers were ultimately released, but remain in draft status.

Cuker said he thinks the actions show duplicity by the Department of Defense.

"The DOD seems to be talking out of both sides of its mouth," Cuker said. "While claiming to seek clear and decisive guidance, it slows the EPA down, drags its feet and has still failed to stop its toxic

discharges into our waters."

The DOD has also already demonstrated its willingness to challenge state environmental agencies, which hold less clout and power than the EPA. Several environmental attorneys interviewed said federal law requires the DOD to follow state standards that are stricter than federal standards, and that the military typically goes along.

But the military has pushed back on state regulators in New Mexico, Michigan and New York, saying the states' standards are improper or claiming sovereign immunity. The dispute has reached the courts in New Mexico, where Democratic Gov. Michelle Lujan Crisham recently wrote a letter to the EPA accusing it of failing to uphold the DOD's "compliance with federal environmental laws," according to the news website Politico. EPA officials had previously told the state they were barred by policy from suing another federal agency.

Uncertainty about uncertainty

For all the criticism leveled at the federal government over its approach to PFAS cleanup, not all think the issue is so clear cut. Frank, the Philadelphia attorney, offered that research around PFAS just isn't as advanced as it is for other chemicals.

"Right now, the fumbling around that all of these agencies are engaging in, is really driven by literally not knowing basic answers to basic questions," Frank said. "That level of uncertainty will paralyze a cleanup at any level."

Others pointed out that the EPA hasn't yet finalized its guidance or set regulations, and said it would be unfair for any polluter to have to perform robust cleanup before it does so.

"The thought of EPA acting without the science, I think is scary," said Adam Sowatzka, an attorney with the Atlanta-based firm King & Spalding

and a former EPA lawyer. "I think there's a real gap here, without fixes in the regulatory program."

Babb, the DOD spokeswoman, also recently said the military has already spent more than \$530 million dollars on investigating PFAS contamination at bases across the country. Sullivan also told a panel of congressional lawmakers in March that the DOD is plowing \$60 million into PFAS research, studying everything from how to better detect the chemicals, to how to track them in the environment, to how to destroy them. Several of the studies have local ties, such as an ongoing pilot study with a robust water treatment system at Willow Grove and a planned study on how PFAS impact local plants and animals.


But others remain critical. Melanie Benesh, legislative attorney for the nonprofit Environmental Working Group, said PFOS and PFOA in particular are already "incredibly well-studied" chemicals, for which there is little doubt about toxicity.

"This comes up a lot, where people say, 'Well there's not enough research, we need to know more about these chemicals,'" Benesh said. "But there is a lot of science already."

For now, it appears the military is comfortable in its position. At the March congressional hearing, U.S. Rep. Harley Rouda, D-Ohio, closed the session by asking Sullivan point blank if there is "Anything preventing the DOD from cleaning up all these sites and contaminated soils immediately?"

Sullivan stayed on message. "We've been moving out for almost three years, very aggressively," Sullivan responded. "We're actively investigating sites, we've cut off exposure already through drinking water, and are installing remedies across the nation."

Staff writer Jenny Wagner contributed to this report.



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