



EPA's Local Government Advisory Committee Per-and Polyfluoroalkyl Substances (PFAS)

Report-November 19, 2018



From the LGAC’s Charter, defining general goals:

The LGAC is a policy oriented- committee. To assist the agency in ensuring that its regulations, policies, guidance and technical assistance improve the capacity of local governments to carry out these programs, the LGAC provides advice and recommendations to the EPA Administrator.

PFAS contamination is a concern for all of our communities. As local officials we look to EPA to provide leadership on actions necessary to protect our citizens.
Bob Dixon, Chair of LGAC



Emerging unregulated contaminants pose a threat to clean and safe water for drinking, irrigation and recreational use. EPA’s leadership, in collaboration with federal and state partners, is needed to develop consistent and credible guidance for assessing risk and mitigating exposure at the local level.

*Susan Hann, Chair
LGAC Water Workgroup*



One of the most critical aspects of the EPA’s role is to protect citizens from contaminants. As local officials, we see the impact of these substances first hand. We are pleased that Acting Administrator Wheeler has sought the advice of the Local Government Advisory Committee and look forward to working with federal, state and other officials to safeguard citizens’ health.

*Mayor Karen Freeman-Wilson, Chair
LGAC Revitalizing Communities Workgroup*





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Executive Summary

The Local Government Advisory Committee (LGAC) is a federal advisory committee chartered to provide recommendations to the EPA Administrator representing the views of local government stakeholders. On May 29, 2018, the LGAC was charged by the EPA Acting Administrator Andrew Wheeler to provide recommendations and input on EPA's development of the National Plan to Manage Per- and Polyfluoroalkyl Substances (PFAS). Currently, the LGAC is the only EPA federal advisory committee charged to give advice on PFAS.

In this report, the LGAC presents its findings based on our working experience as local, state and tribal officials. This issue is urgent to local officials, who are directly engaged in all aspects of public health and environmental stewardship. Water is a primary resource and must be a priority for action. In the spirit of cooperative federalism, we must move swiftly together to assess and manage the emerging contaminant issue, especially with respect to protecting our nation's drinking water.

This report provides a detailed response to the EPA PFAS charge based on experiences and concerns facing local, state and tribal officials. There were strong and consistent themes from diverse stakeholders regarding emerging contaminants such as PFAS.

In the mounting concerns of environmental and public health threat of PFAS, EPA should prioritize their efforts using a risk-based approach to address PFAS contamination issues. Those communities at greatest risk and actions to avert that potential harm should be the highest priority to address in a national management strategy.

Here are the major themes captured in our work:

- Every American citizen values clean water and a safe environment. These are drivers for our nation's public health, economic prosperity and quality of life.
- Finding the resources needed to provide clean water and a safe environment is a complex issue. Emerging contaminants like PFAS pose a significant health threat to already financially burdened communities. The ability to pay (on an individual and community basis) can be a barrier to delivering safe, clean potable water across the nation.
- Education and risk communication are paramount to ensure that local community actions are appropriate and effective when managing an emerging contaminant issue such as PFAS at the local level. Local and tribal government officials are closest to the public and need the tools to effectively advise their citizens regarding emerging contaminants such as PFAS.



- The depth and breadth of the issues presented by PFAS and other emerging contaminants are enormous and will not be solved in the short-term. However, there is an urgent need for EPA to take steps now to address PFAS. EPA acting alone cannot address all of the related issues, and the LGAC encourages EPA to engage and perhaps lead an interagency effort to address PFAS.
- New ways of doing business, such as developing partnerships with industry, businesses and military sectors, with a ‘good neighbor’ way of thinking will be needed for effective solutions. And we need to recognize and communicate health risks, testing guidance and prevention measures for state and local communities as well declare PFAS as hazardous materials and their maximum contaminant level (MCL).
- Integrated planning at the local level has been successful under the Clean Water Act. Opportunities to use an integrated planning approach under the Safe Drinking Water Act, and other programs such Clean Air Act, CERCLA and RCRA should be explored as well.

Introduction

This report is a compilation of our perspectives of local, state and tribal government representing urban areas, rural and agricultural communities, coastal and port communities, special districts, border communities, financially struggling communities, and many others. Many common themes emerged, as well as the urgent need to prioritize key actions such as setting a national federal standard for drinking water and getting information out to local communities on communicating risk. Other actions to promote partnerships to assist with funding and clean-up are also critical, along with longer-term processes and monitoring for these actions, are also important.

LGAC Charge and Role

The EPA charge outlines the content areas where the LGAC’s advice and recommendations are requested. The public concerns regarding PFAS are increasing with each report of contamination and inferences linking PFAS to health effects. The LGAC charge relating to this issue establishes a role for the LGAC to provide recommendations to EPA for the PFAS Management Plan to identify the most critical tools states and communities need to protect the public from PFAS contamination. The LGAC will consider the following:

- Identify specific actions and tools that states, local governments and tribal communities need to address PFAS contamination.



- Identify the critical risk communication needs that state, local and tribal governments face when addressing the public concerns of PFAS and best practices that state, local and tribal officials have used to address public health concerns in the face of uncertainty.

Public Meetings

The EPA held PFAS Community Engagement events to facilitate conversation with impacted communities and to share PFAS risk and health communication information and receive input from community members. Meetings were held in Exeter (New Hampshire); Horsham (Pennsylvania); Colorado Springs (Colorado); Fayetteville (North Carolina); and Leavenworth (Kansas). Information from community engagement events, the National Leadership Summit and public input will also be utilized towards development of a PFAS Management Plan managed by the EPA.

PFAS Background

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that includes PFOA, PFOS, GenX, and many other chemicals. PFAS have been manufactured and used in a variety of industries around the globe, including in the United States since the 1940s. PFOA and PFOS have been the most extensively produced and studied of these chemicals. Both chemicals are very persistent in the environment and in the human body – meaning they don't break down and can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects. Certain PFAS chemicals are no longer manufactured in the United States as a result of phase-outs, including the PFOA Stewardship Program in which eight major chemical manufacturers agreed to eliminate the use of PFOA and PFOA-related chemicals in their products and as emissions from their facilities. Although PFOA and PFOS are no longer manufactured in the United States, however, there are many PFAS compounds still used and many compounds that are still produced internationally and can be imported into the United States in consumer goods such as carpet, leather and apparel, textiles, paper and packaging, coatings, rubber and plastics.

Public Health: Preliminary studies show that certain PFAS compounds are persistent in the environment and is found in the blood of humans and animals worldwide. Most people in the United States have one or more specific PFAS compounds in their blood, especially PFOS and PFOA. It is difficult to quantify potential exposure pathways or confirm potential sources due to the many sources of PFAS. There are many unknowns regarding the health and toxicology related to PFAS compounds (which some estimate to be about 4,500 compounds). PFAS can accumulate and stay in the human body for long periods of time. There is evidence that exposure to PFAS can lead to adverse health outcomes in humans. The most-studied PFAS



chemicals are PFOA and PFOS. Studies indicate that PFOA and PFOS can cause reproductive and developmental, liver and kidney, and immunological effects in laboratory animals. Both chemicals have caused tumors in animals. The most consistent findings are increased cholesterol levels among exposed populations, with more limited findings related to low infant birth weights, effects on the immune system, cancer (for PFOA), and thyroid hormone disruption (for PFOS).

Urgency: Emerging unregulated contaminants in the environment are an issue that is gathering public awareness and concern. Citizens expect and demand that their water is safe to drink and use for irrigation and recreation. Citizens also expect that the air and land will not be contaminated. Local officials are not yet equipped to respond to this issue and there is little definitive guidance for those that are already involved. It is imperative that EPA and its state and federal partners act quickly to provide the guidance needed at the local level especially among exposed and vulnerable populations. Both findings are important to evaluate through interagency collaboration to develop better science exchange between EPA, Health and Human Services and the Center for Disease Control (CDC).

LGAC Response to Charge

PFAS Management Plan

Coordinated Solutions for Addressing PFAS- PFAS contamination in water, land and air can create substantial challenges for state, local, and tribal communities. Local governments advocate for a coordinated effort and dedicated resources to collect and compile federal and state data and take action to share information on innovative ways to address PFAS contamination. The LGAC believes that developing solutions for addressing PFAS must be a cross-program effort. There has been an emphasis on the need for guidance designed to help communities understand funding options for treatment and monitoring programs. In order to inform community leaders on the dangers of PFAS and possible solutions to address it, there needs to be more ways to support decision makers by enabling more ready access to public health information.

Interagency Coordination: EPA is working with an interagency workgroup to coordinate actions to address PFAS. An interagency taskforce could potentially provide the unified federal approach on the risks posed by PFAS substances. This effort could be aimed at providing a foundation of common knowledge across federal agencies, and to facilitate future information-sharing across federal agencies. The EPA must work in partnership with other agencies and states as part of a national action plan to engage and leverage other agencies in identifying resources, utilizing authorities and



providing technical assistance. With the abundance of information available on the internet, communities and their residents are understandably confused. A coordinated effort must be undertaken with EPA in a leadership role.

Recommendations:

- The LGAC recommends establishment of an Interagency Task Force that should be chartered with the mission to provide a unified federal approach on the risks posed by per- and polyfluoroalkyl substances (PFAS), a class of emerging contaminants that states and local governments need.
- The Interagency Task Force would be encouraged to consider an Executive Order aimed at agency actions to accelerate identifying PFAS contamination; solutions to prevent and treat contamination; sharing data and communicating risk; and provide innovative funding to states and communities impacted by PFAS. The interagency group needs to also include CDC (ATSDR).
- The Interagency Task Force should include states and local communities in their meetings on PFAS. States that have already taken action on PFAS should be included on the task force to ensure coordinated and consistent outcomes. The goal is to convene federal, state and local partners with appropriate expertise to develop best practices for responding to emerging contaminant issues.
- The Interagency Task Force should be chaired by EPA and the goal would be an Action Plan be developed for each of the federal agencies to address PFAS.
- The Action Plan should build on current programs and activities underway and propose new actions to strengthen and protect communities from PFAS.
- The Action Plan should include the following:
 - ❖ Support for locally led partnerships that include federal agencies, states, tribes, communities, businesses and citizens.
 - ❖ Increased financial and technical assistance to states, tribes and local governments.
 - ❖ Assistance to states, tribes and local governments to identify and clean up PFAS areas of contamination.
 - ❖ Health risk education and communication to provide prevention and testing guidance for state tribal and local communities.
- The Action Plan should build on:
 - ✚ **Watershed Approach**- This approach would utilize land and water connection and the concept of partnerships to build a set priority for identifying local actions needed.



- ✚ **Stewardship**-Identification and clean up involves actions of many levels of government but also industries, businesses, federal facilities and private land. Identification of PFAS problems will depend on the cooperation of businesses and good stewardship practices.
 - ✚ **Informed Officials and Citizens**-Clear and accurate information is the foundation for accountable actions so that better decisions can be made. An Action Plan calling on ways to improve information about the health and safety regarding PFAS areas.
- EPA should work with the Department of Defense and other agencies to identify potential hotbed areas of PFAS contamination and facilitate partnerships with local governments and tribes to address individualized site contamination and clean up issues for groundwater, drinking water, soil, landfills etc.
 - EPA should work on water reuse guidance to assess PFAS issues on water reuse plans such as land application of sludge, fertilizer, treated stormwater and wastewater, and other uses.

Specific Actions and Tools

Identifying PFAS in Communities-PFAS is ubiquitous and persistent in the environment. Identifying sources of contamination pathways is challenging and complex. Currently, there is no federal mandate to monitor for PFAS compounds, although six PFAS were monitored in drinking water under the Unregulated Contaminant Monitoring rule from 2013-2015. PFAS poses a substantial monitoring challenge because it is a very broad class of compounds. Communities need technical and financial assistance to enable identification of sources of contamination and to establish sampling and monitoring protocols for PFAS. Monitoring data could help to inform future standards for testing and assist local governments in notifying citizens to reduce the risk of exposure.

Recommendations:

- EPA should immediately identify effective monitoring strategies for PFAS which should be shared with state, local and tribal partners.
- At a minimum, EPA should develop a risk-based approach to identify 'at risk' public drinking water supply systems and/or ground water private wells that should be monitored.
- States should be required to provide reports to EPA on their findings of PFAS within six months.
- There is an urgent need to get MCL for PFAS, testing guidance and costs, risk and health threats based on current science.



- EPA should publish a map indicating current monitoring and potential sources of PFAS contamination and make that available on EPA's website.
- EPA should accelerate efforts to monitor PFAS pursuant to the Unregulated Contaminant Monitoring Rule that requires all large systems serving 10,000 and more people to be monitored. For small drinking water systems, a representative sample of small water systems (for about 800 systems across the country) is used to be representative of the small drinking water systems. This includes monitoring for PFAS and up to 30 different unregulated contaminants.

Nationwide Standard-There are no federal drinking water rules for PFAS compounds. PFAS compounds are not regulated under the Safe Drinking Water Act (SDWA). The only federal guideline is a non-enforceable "health advisory level" of PFOS and PFOA in drinking water of 70 parts-per-trillion (ppt). EPA's role is to identify contaminants and regulate when it meets these criteria:

- 1) The contaminant may have an adverse effect on the health of persons;
- 2) The contaminant is known to occur or there is substantial likelihood the contaminant will occur in public water systems with a frequency and at levels of public health concern;
- 3) In the sole judgment of the Administrator, regulation of the contaminant presents a meaningful opportunity for health risk reductions for persons served by public water systems.

Currently, there are no actual cleanup standards that state and federal officials can use. States have taken proactive approaches to develop their own standard. For example, Michigan established enforceable standards that mirror the EPA advisory level for PFOS and PFOA in groundwater that is used for drinking water. This state by state approach creates confusion and a lack of clarity as to what is a safe level of PFAS in drinking water and ground water. Communities need to know what is safe once this contaminant is detected in water supplies. However, more information may be needed to develop an effective science-based approach for a national drinking water standard.

Recommendations:

- EPA must continue to determine health impacts of PFAS and develop levels of toxicity. The aim should be to promote sound science regarding potential exposures and toxicity of PFOS and PFOA, among other activities. There is a need for MCL for PFOS and PFOA, testing guidance and costs, risk and health threats based on current science.
- Broadened testing methodologies are needed so that screening of public water supplies and surface water for PFAS can be done easily, readily and at low cost.



- EPA should communicate the health impacts and known toxicity levels to states, tribes and local communities when the toxic level is established and public health effects are determined. This will be an important benchmark for states and local governments.

EPA Certification for Laboratories- Many communities have raised issues about local methods and laboratories that can do the monitoring for PFAS. The LGAC has expressed concerns with finding consistency in certification with regard to the utilization of laboratories. The EPA is currently working on new methods to detect contamination in different bodies of water which can be used for certification purposes.

Recommendations:

- EPA should work on approved methods that provide consistent procedures laboratories should follow to assure consistent results.
- EPA should work on laboratory certification programs. Currently there are none, and this laboratory certification should be consistent.
- EPA should continue to work on certification programs for soils, rivers, streams, groundwater and other sources of drinking water.

Cost and Funding -Participants in the PFAS National Leadership Summit stated that funding discussions should be tied specifically to identification of monitoring goals and priorities. More sources of funding are needed to address the expanded monitoring that is required for PFAS. It is suggested that priority areas for the EPA to focus on when it comes to funding are looking at the relationship between 'regulatory backing' and the ability to fund monitoring efforts. There also needs to be more funding for private wells, especially because they have been identified as a current, unfunded gap in monitoring efforts. Participants also brought up a concern with laboratory capacity as monitoring efforts expand.

Many communities, especially small and low-income communities, lack adequate resources to meet current needs. Additional assessments, monitoring and treatment for contaminants such as PFAS would stretch their communities beyond their means. Local governments and officials are concerned with additional mandates and investments to treat PFAS that can impact our citizens. At its core, this is an environmental justice issue, in which many residents and communities who do not have the resources for high-technology water infrastructure could be left with drinking water that is not clean and safe or other sources of contamination whether it be soil, air or products that are unsafe.

Local officials question how funding and other resources will be provided to support these communities. Residents themselves can hardly be expected to cover the full cost of clean-up of contaminated drinking water or other sources of contamination. Therefore, state and federal government resources will be needed to deliver the necessities that they require.



Programs such as increased funding and grant opportunities and incentivizing the private sector to invest at-risk areas are all strong methods that can relieve the financial burden of clean drinking water on locals. Efforts to identify the source of contamination and making polluters responsible is also very important aspect of funding clean up. The LGAC also puts forward that local partnerships are the best way to move forward drive good stewardship aims in funding clean ups and treatment.

Example: Partnership in Colorado Springs- Amidst the rising cases of PFAS and PFOA contamination, affected communities have been struggling to not only eradicate or lower traces of PFAS and PFOA but also to obtain other water supplies. Both the costs of infrastructure and alternate sources of water supplies have become economic burdens on communities. The Colorado Springs Security Water District partnered with the United States Air Force to mitigate the impact of PFAS in the District’s source water aquifer that appears to have originated from the historic use of firefighting foam at the Peterson Air Force Base.

1. The Security Water District provides water service to an unincorporated community with a population of approximately 19,000 immediately south of Colorado Springs in south-central Colorado. The District, which was formed in 1954, has been impacted by PFAS contamination of groundwater supplies, along with the neighboring unincorporated communities of Stratmoor Hills and Widefield, the City of Fountain as well as numerous private well owners. Until early 2016, the Security Water District relied on groundwater supplies for nearly half of its water supply. PFOS and PFOA contamination from the Peterson Air Force Base exceeded EPA’s 2016 Health Advisories. In response, the Security Water District began to shut down its wells in the spring of

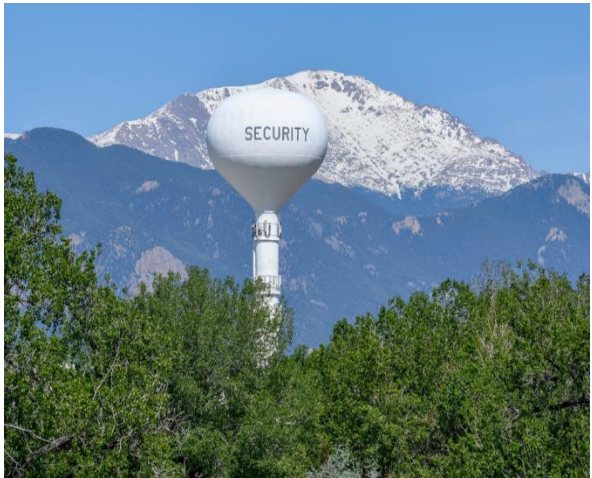


Photo: Colorado Springs Water Security District

2016. By September 2016, the Security Water District shut down all 24 wells. Security made up for the shortfall by purchasing water from other sources at a substantially higher cost than drawing from the groundwater supplies. In addition, it was necessary to construct nearly two miles of new pipelines and other improvements in order to utilize additional surface water available from Colorado Springs Utilities. Through the end of 2017, the Security Water District spent more than \$6 million to mitigate groundwater contamination. These

actions created a tremendous ongoing financial burden for the District and its ratepayers.



Through further collaborating and negotiating, the Security Water District and the United States Air Force (USAF) were able to enter agreements in 2018. The United States Air Force and Security Water District finalized a MOU in which the USAF will attempt to procure alternate water supplies, including treatment options for groundwater, for Security. The USAF has also agreed to pay approximately \$1 million for summer 2018 costs for additional Southern Delivery System water to replace water supplies that had historically been supplied by wells. Security and the USAF have finalized an agreement to pay for future alternate and supplemental water supply costs after Rapid Response Funds are exhausted. Ideally, this funding will continue until a treatment system is in place in approximately 2020. Security and the USAF are currently evaluating groundwater treatment options and developing a plan for implementation. Initial scoping work has been completed. An additional contract for the construction of the treatment system will be necessary, which parties are attempting to execute by September 30, 2018. Security aims to install treatment by 2020 with filter replacement costs.

Recommendations:

- The LGAC recommends that the State Revolving Loan Fund (SRF) program be eligible to address PFAS as a water quality issue, and that the Drinking Water SRF be used to address PFAS in drinking water systems and wells.
- An interagency taskforce can be tasked to identify potential grant, loan and other funding mechanisms to identify, test, monitor and implement actions for PFAS clean up in water supplies, groundwater, private wells, source water, contaminated soil and other PFAS contaminated sites.

Critical Risk Communication

Clearinghouse for PFAS Information- Communities need a clearinghouse of definitive and consistent information regarding PFAS contamination and related health effects.

Communities are struggling with these questions:

- How do we determine if our drinking water is contaminated?
- How do we determine if our ground water is contaminated?
- What actions do we need to take if we find contaminants in our drinking water?
- What actions do we need to take if we find contaminants in our ground water?
- What are the health effects of exposure?



- What do citizens need to do to minimize future risk and mitigate prior risks?

Answers are needed to address these questions on a regional level, community level and backyard level. Communities facing these issues are grappling with questions regarding irrigated sports fields, swimming pools, community gardens and fresh produce from the grocery store or local grower.

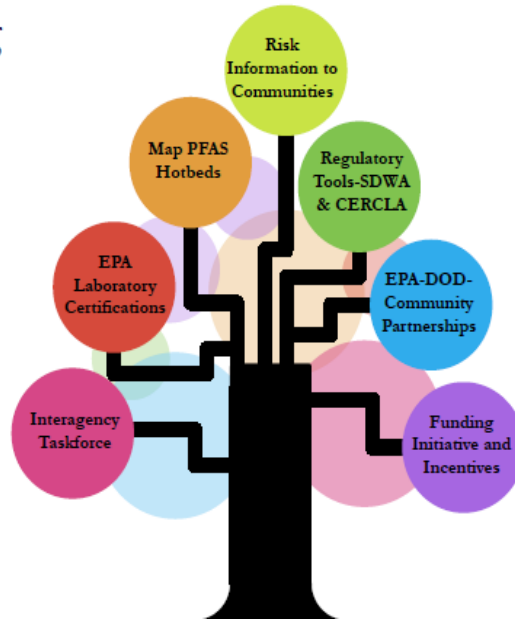
Recommendations:

- The EPA Regions should coordinate with the states to identify a single point of contact and repository of information so communities can easily find the most up to date information regarding the state of the issue.
- The EPA should develop a template or checklist around key indicators that there may be an issue – such as presence of a major airport, air force base (give multiple examples)
- The EPA Regions should coordinate with the states to develop a risk “heat map” – that uses a gradient to indicate likely levels of risk for easy reference for communities, tribes and citizens.
- EPA should continue to work on current agency actions as well as through its interagency work to provide the most accurate and best information to date on EPA and the best ways to share information.
- There needs to be a clearing house for consistent and simple communication and information on risk, health impacts and toxicity of PFAS.
- EPA should provide a regional breakout of where PFAS is an emerging issue.
- EPA should devise a set of options for the best platforms to communicate critical methodologies for use with PFAS.
- EPA, along with other federal agencies, should design a dashboard that can be made available so that people can understand in their communities what the level of toxicity is for each source of contamination.
- EPA should continue efforts underway to engage communities across the country impacted by PFAS contamination; efforts to assist communities that have identified contamination issues should be focused on immediately.
- Many local governments are not aware of PFAS and the potential harm to their communities. EPA’s public engagement meetings are a good first start; however, EPA should



accelerate efforts to work with state, local and tribal governments to notify them of potential contamination issues and partner on potential solutions.

PFAS –Growing Solutions



Growing PFAS Solutions

Solutions to the PFAS challenge will take time and with the diligent work of many levels of government working together. EPA, working with states and local governments, can work on a tiered approach to address the highest priorities. As local government officials, the highest priority is the health and well-being of our citizens. Therefore, the most important actions revolve around getting information out to our citizens to protect them from potential exposure to PFAS. However, as information is out in the public we must also offer solutions to address the critical issues so that citizens can be assured and trust that the government at all levels is working in the best interest of those we serve-our citizens.

States to Follow

Many states are taking action on solutions to PFAS. The LGAC would like to highlight the following states where contamination has occurred and critical actions have been taken at the state and local level to address the concerns.

New Hampshire-The state of New Hampshire has taken extensive measures to find the best treatment options, facilitate effective risk communication and guarantee sources of clean water



to affected communities. At a contaminated site, the state worked with the Air Force to remove solvent-containing drums, contaminated soil and established pilot groundwater extraction and treatment plants at different buildings on the site. To manage further site contamination, the Air Force extracted jet fuel that was floating on the groundwater, utilized vapor extraction and executed air sparging on subsurface soils. Institutional controls were also implemented to limit exposure to contaminants through diminished land or resource usage. The current design of the Pease International Trade port includes a resin and carbon filters. Alongside treatment, the New Hampshire Department of Environmental Services released press releases tracking the clean-up process, held public meetings with affected communities and presented data and analysis to city and state officials. The Department of Environmental Services has also provided guidance on appropriate laboratory certification and how to input data into the Environmental Monitoring Database. As some communities are still affected by the contamination, some areas qualify for bottled water delivery. The state also encourages homeowners to install in-home water filtration devices that use either granular activated carbon or reverse osmosis. The Pease International Trade port now sits on top of the clean-up Superfund site and boasts 250 businesses and 9,500 employees. Part of the Superfund site has also been transformed into a wildlife refuge. For more information on the Superfund site, go to:

<https://cumulis.epa.gov/supercpad/cursites/csinfo.cfm?id=0101213>

For more information on the State of New Hampshire PFAS activities go to:

<https://www4.des.state.nh.us/nh-pfas-investigation/>

Pennsylvania-The State of Pennsylvania is dealing with two active contamination sites located at the Naval Air Development Center in Warminster Township and Willow Grove Naval Air and Air Reserve Station in Horsham. In Warminster Township, the Navy installed water treatment systems in more than 40 homes and connected over 20 households to public water systems. The EPA assisted the Navy and added an additional 40 households to a public water system. The Navy is also collaborating with local municipalities and water authorities to aid residents with well contamination by testing groundwater and nearby residential wells. Along with providing cleaner water supplies, the Navy has put in efforts to remove contaminated soil and waste from disposal sites, trenches, and pits. Erosion controls have also been put in place using vegetated soil covers to monitor stream sediment. To monitor the clean-up process, the Navy conducts five-year reviews of their efforts to protect human health and the environment. The Navy is working with the EPA and the Pennsylvania Department of Environmental Protection. In Horsham, treatments have included adding sodium bicarbonate to groundwater to raise the pH. Lactate is also added as the substrate to provide feed for bugs. Horsham has also established a bioremediation pilot study. The Pennsylvania Department of Health is piloting a program to examine resident exposure to PFAS in impacted areas of Bucks and Montgomery counties by utilizing blood testing, which is funded through a grant from the National Association of State and Territorial Health Officials. This study will lead to a larger national study and provide feedback for a toolkit created by the Center for Disease Control and Prevention (CDC) and ATSDR. For more information go to:

<https://cumulis.epa.gov/supercpad/cursites/csinfo.cfm?id=0302466>



<https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0303820>

Michigan-The State of Michigan was one of the first states to implement maximum limits on PFAS in drinking water. Michigan also created the first multi-agency action team in the United States called the Michigan PFAS Action Response Team (MPART). Agencies representing health and environment work alongside branches of government to locate sources and locations of PFAS contamination, install protective actions towards safe drinking water and establish effective risk communication with the public. MPART is also comprised of different committees, such as the Scientific Advisory Committee and the Local Public Health Advisory Committee. Consumption guidelines have been placed on certain fish species from specific areas with PFAS contamination and deer are also being tested for PFAS levels. The Michigan Department of Environmental Quality (MDEQ) conducts experiments in drinking water, groundwater, lakes and streams, soils, sediments, wastewater and PFAS foams while also publishing specific PFAS sampling guidance to prevent cross contamination. The State of Michigan also has recommended residents to use in-home water filtration systems to lower levels of PFAS. Michigan's Industrial Pretreatment Program furthers state efforts to maintain PFAS levels by requiring industrial dischargers to utilize treatment techniques and management practices to lower or remove completely harmful pollutant discharge to sanitary sewers. For more information on the State of Michigan efforts go to: <https://www.michigan.gov/pfasresponse>

North Carolina-After the GenX leak in Cape Fear River, the North Carolina Department of Environmental Quality (DEQ) and Health and Human Services (DHHS) collaborated to investigate contamination and public health issues. The DEQ has been collecting water samples along the river. As the Chemours facility was found to be discharging GenX, the facility was instructed by the state to provide bottled water for the households with contaminated wells. For more information on the Cape Fear GenX issue go to: https://files.nc.gov/ncdeq/GenX/SAB/FAQ_updated_021518.pdf
For more information on the State of North Carolina measures go to: <https://deq.nc.gov/>

Florida-The State of Florida initiated PFAS investigations after a Facebook group brought attention to a possible cancer cluster in Brevard County. Water has been tested in monitoring wells of the City of Cocoa Beach, City of Satellite Beach, and schools in Brevard County. Surgeon General and Secretary, Celeste Phillip, MD, MPH has released a guidance sheet answering priority and frequently asked questions residents had towards PFAS. The guidance gave insight on not only what PFAS was and where it was found, but also information on biomonitoring and the types of water being tested. The Florida Department of Health is also compiling data from current and former community members who have concerns that their cancers are related to residing near the Patrick Air Force Base.

<http://brevard.floridahealth.gov/programs-and-services/documents/faq-water-pfas.pdf>

<https://www.militarytimes.com/news/your-military/2018/06/14/florida-health-agency-collecting-data-on-patrick-air-force-base-cancers/>



Minnesota-The Minnesota Department of Health (MDH) collaborated with the state public health laboratory to study the chemicals in the contaminate water supply after detecting PFAS contamination in 2002 coming from industrial facilities and waste sites. Upon conducting further investigations, PFAS was also detected in private wells, which led to the issuing of drinking water advisories and negotiating with impacted community public water suppliers to implement controls that would lower PFAS concentrations in residents' drinking water. As Minnesota is one of the first states to address the PFAS issue, the state is familiar with biomonitoring investigations. Along with biomonitoring, the state has taken legislative measures to implement groundwater guidance values for PFOA, PFOS, PFBS, and PFBA. The MDH also has conveyed effective risk communication practices by keeping the language at an eight-grade level to ensure that people of all educational backgrounds would be able to comprehend the information presented. This information was released to the press and public.

<http://www.astho.org/Environmental-Health/Water-Safety/Risk-Communication-of-Waterborne-Contaminants/Communicating-the-Risks-of-PFAS-Minnesota-Department-of-Health/>

Summary and Conclusion

The general issue of emerging unregulated contaminants and the specific issue of per and polyfluoroalkyl substances (PFAS) are challenging the systems and regulations designed to ensure that citizens have access to clean and safe water. Communities need EPA to provide leadership in coordinating federal and state expertise to develop guidance for local governments and utility system operators. These issues are urgent and important to local governments. Working in partnership with the LGAC, local governments, utility system operators, tribal governments, states and health experts, the EPA can and should provide the leadership necessary for a coordinated and comprehensive approach to protect the safety and well-being of our citizens.

Acknowledgements

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