As a groundwater professional you may need to inform a customer of the potential for per- and polyfluoroalkyl substances (PFAS) contamination in their well water and subsequent actions to mitigate exposure. This is a highly sensitive topic due to the widespread and persistent nature of these substances, and their links to human health impacts.

PFAS are a large class of synthetic chemicals manufactured since the 1940s. Because they are water-repellent and stain- and heat-resistant, PFAS have been used in a wide variety of industrial and commercial products. Their occurrence in the environment is commonly associated with manufacturing facilities, fire-training sites, wastewater treatment plants, and landfills. Many PFAS compounds dissolve easily in water, don’t break down in the environment, and can travel miles to wells, wetlands, and streams. There is evidence that exposure to some PFAS can be harmful to human health.

**Communication Challenges**

Below are some talking points that may be of assistance:

**“What will PFAS do to my health and my pet or livestock’s health?”** We have much to learn about adverse health impacts of PFAS. It is best to refer people to information from the Agency for Toxic Substances and Disease Registry (ATSDR), and from state and local health agencies.

**“Are treatment methods available for private water systems?”** Many in-home filter systems can remove PFAS from well water. However, filter performance varies depending on the specific characteristics of the PFAS compound. Filter performance may also be affected by background water chemistry, PFAS concentrations, or other factors. Installation should be done by a licensed professional. (See NGWA’s companion Fact Sheet “PFAS and Private Well Owners: What You Need to Know”).

**“What levels of PFAS are of health concern?”** The U.S. Environmental Protection Agency (EPA) has set a lifetime health advisory of 70 parts per trillion for the combination of two compounds, PFOA and PFOS. Many states have established their own advisory (and in some cases, regulatory) levels for these and other PFAS that may be more or less stringent. As a contractor, you will need to be aware of these levels in your state. The Interstate Technology and Regulatory Council (ITRC) has updated tables with the state regulatory and guidance levels (See “PFAS Water and Soil Values Table” at https://pfas-1.itrcweb.org/fact-sheets).

**“Why do the PFAS compounds targeted for analysis change over time?”** The PFAS family includes thousands of compounds. Commercial labs can test for approximately two to three dozen, and about a dozen of those have been identified as a health concern. The ability of
commercial laboratories to test new PFAS compounds continues to increase and the body of knowledge around the health impacts of individual PFAS compounds continues to evolve. Additionally, guidance or regulatory levels and recommendations for testing vary by state and continue to develop.

“Why is this an emotional issue?” As a contractor, be aware this discussion can be emotionally charged as it affects a customer’s drinking water and their health. Stay up to date on local regulations, stakeholder concerns, and treatment options. Work with your state association and use them as a resource if necessary.

Preparing and Delivering Your Messages

Public outreach resources, including fact sheets and other guidance, have been prepared by federal and state agencies, as well as by organizations such as the NGWA and ITRC, to support community engagement and risk communication of PFAS. Review public outreach materials provided by local authorities and identify the applicable regulatory standards before speaking with customers. Educating yourself on the current state of the science and regulations will help you understand the risk posed by PFAS in your customers’ well water, as well as help provide accurate information. Always be consistent in representing yourself as an expert in your respective field but refer to other experts and materials for questions outside your professional scope (e.g., health impacts).

When interacting with customers, it is essential to build trust and credibility by using the following best practices:

- Listen to a customer’s concerns and show empathy, putting yourself in their shoes
- Pay attention and explain processes
- Be aware of the community’s values and perceptions
- Identify and acknowledge sensitive populations, such as children and elderly
- Know the most trusted sources of unbiased information, such as regulatory and health agencies
- Use consistent messaging aligned with local, state, and federal regulations and advisories
- Acknowledge what you know and don’t know
- Only make promises you can keep
- Follow up promptly with accurate, science-based information
- Use local partners for support

Be able to provide information on the following resources to your customers:

- Consultants, laboratories, and testing
- Who to turn to (state and local) if PFAS are detected
- Information on current treatment technologies

If a customer chooses a treatment option, make sure they know periodic maintenance is necessary and that their well and filter system should be serviced properly. Be proactive!

Additional Risk Communication and Outreach Resources

Association of State and Territorial Health Officials (ASTHO) and the Environmental Council of the States (ECOS). PFAS Risk Communications Hub.  
www.eristates.org/projects/pfas-risk-communications-hub

Interstate Technology and Regulatory Council (ITRC). Risk Communication Toolkit.  
https://rct-1.itrcweb.org

National Ground Water Association. Groundwater and PFAS.  
www.ngwa.org/what-is-groundwater/groundwater-issues/Groundwater-and-PFAS

NGWA has an online PFAS resource center on its website. Among the contents are an FAQ, items for homeowners, and a comprehensive eight-part reference document titled Groundwater and PFAS: State of Knowledge and Practice. The piece contains information on human impacts, risk communication, remediation, and treatment of PFAS, among other topics. For more information, please visit www.ngwa.org/what-is-groundwater/groundwater-issues/Groundwater-and-PFAS.