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ECOS

Risk Communication of Per- and Polyfluoroalkyl Substances

New Hampshire Department of Environmental Services

Background and Environmental Agency Program/Capacity

The New Hampshire Department of Environmental Services (NHDES) is a state agency tasked with protection of the environment and public health. NHDES has worked with other northeast states for several years to address challenges of per- and polyfluoroalkyl substances (PFAS) contamination in drinking water. In May 2016, U.S. EPA issued drinking water lifetime health advisories for two PFAS [perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS)]. NHDES reviewed this information and subsequently filed an emergency rule to establish Ambient Groundwater Quality Standards. New Hampshire ultimately set three groundwater standards: 70 parts per trillion (ppt) for PFOA, 70 ppt for PFOS, and 70 ppt for PFOA and PFOS combined. New Hampshire is one of the few states with a legally enforceable standard for PFAS in ambient groundwater. The standard is enforceable for the purposes of site remediation requirements and provision of alternate drinking water, and for public water systems. NHDES has since worked to determine the extent of contamination across the state and to provide communities with clean drinking water.

Rollout and Dissemination of Advisory and Relevant Resources

For communities with drinking water measuring above PFAS standards, NHDES:

- Sends NHDES staff to homes to sample for PFAS.
- Contacts homeowners, and then briefs the local town officials, state Senator, and Executive Council members so they are prepared to answer questions.
- Holds town meetings in cooperation with the New Hampshire Department of Health and Human Services (DHHS).
- Supplies bottled water through a standing state contract.
- Issues press releases and/or blog updates at each step of the process.
- Advertises through TV, radio, and print media interviews with maps and graphics tailored to the affected groups.
- Distributes information through weekly email updates about the contamination for up to a year following the first notification of the incident, followed by monthly updates.
- Maintains a public hotline with DHHS that is manned five days a week for a year.
- Communicates with different groups that have legal responsibility to communicate risk to interested property purchasers such as local governments, local water utilities, U.S. Air Force bases, state bar associations, and realtors' associations.

NHDES currently maintains a website with updated information on the contamination.

Key Messages for the Public

NHDES emphasized the challenge of communicating risk-based standards to worried communities. The agency also noted that it is important to discuss why the state is using EPA's Health Advisory values versus higher and lower values proposed by other states. For interested citizens, NHDES presents information on how they can avoid products with PFAS and work to limit exposure.

Gaps and Challenges

Gaps in information and challenges communicating with the public include the following:

- Many citizens and other states want to know why New Hampshire uses EPA's standard of 70 ppt, which differs from some other states' standards. NHDES responds that they decided on that number after examining peer-reviewed science and studying the chemicals. The agency uses EPA's standard because it believes it to be the best allowable contamination benchmarker for long-term reference.
- There is confusion among states over the term "exceedance;" NHDES thinks this means that communities should not drink the water. Other states provide public notification but not "do not drink" warnings. NHDES is unsure if or how citizens differentiate between public notifications and "do not drink" warnings.
- Because the health risks from PFAS are not immediate or even strongly correlated to drinking water at 70 ppt, some citizens think that PFAS health risks do not exist and that NHDES is unnecessarily scaring people.
- Exposure to PFAS from non-industrial products is difficult to communicate as they are in household products that citizens choose to use. Given the widespread use of PFAS, there is no way to avoid all exposure.

Advice for Other State Environmental Agencies

NHDES recommends understanding the standards other states are using and being able to explain why your state is not using those standards. When deciding on a standard, research fully and decide whether it applies only to drinking water or if it applies elsewhere. One potential issue of applying a PFAS standard widely is that some levels could end up defining the liquid in some septic systems as hazardous waste.

NHDES also advises that states should not lose sight of other drinking water pollutants. In one New Hampshire community, arsenic was detected above the drinking water standard, but residents were more concerned about PFAS. New Hampshire officials met with a knowledgeable activist to learn more about arsenic, which carries a far greater risk than PFAS. The public was less worried about the risks of arsenic because it is naturally occurring, whereas PFAS are artificial compounds.

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