State recommends water systems be tested for "forever chemicals"

Water system testing

By Kate Cough ELLSWORTH — A state task force is recommending that all public water system managers be required to test for per- and poly-fluoroalkyl substances, collectively known as PFAS and nicknamed "forever chemicals" for their persistence in the environment and human bodies.

In a draft report released before Thanksgiving, the group outlined seven recommendations for dealing with the chemicals, which officials at the Centers for Disease Control and Prevention (CDC) warn can increase the risk of certain cancers, lower a woman's chances of getting pregnant and cause developmental defects in children.

The chemicals have been found across the state in more than 244 locations, including at low levels in drinking water at Trenton Elementary School and in higher concentrations in soil on Pleasant Street in Blue Hill and in sewage sludge around the state.

The Maine PFAS task force's recommendations
Continued on Page 11

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Continued from Page 1

include regular testing of residuals (such as biosolids) before they're commercially distributed or spread on agricultural land, doing away with requirements for firefighting foams to contain PFAS and requiring manufacturers to reduce or eliminate PFAS chemistry in nonessential applications.

The chemicals have been used for decades in just about every imaginable application, from waterproofing clothing, waxing skis and pizza boxes to making non-stick frying pans and in foam for fighting fires.

They're particularly useful not only because they reduce the surface tension of water, but also because they are stable and degrade slowly. While that's good to make pans nonstick and carpets stain-proof, it's not good for humans and the environment, since PFAS can stay around for years, leach into groundwater and cause a wide variety of health problems.

Concerns over PFAS began emerging in the 1980s, when workers at a DuPont factory in West Virginia that manufactured Teflon products began having children with birth defects and being diagnosed with higher than average rates of leukemia and kidney cancer. But the company kept quiet about PFAS' toxicity, even in the face of mounting evidence, until it was sued in 1998 by a neighboring farmer whose cows were dying of mysterious ailments.

The farmer won that lawsuit, opening the door for dozens of others, including a class action case that targeted the company for contaminating local drinking water.

Although most Americans likely have at least one PFAS chemical in their blood, levels of two types of the chemicals measured in participants in the CDC survey have decreased by around 80 percent since 1999, a decline that coincides with the decrease in the use of the chemicals in the United States.

In Maine, PFAS were first discovered in groundwater at former military installations where foam containing the chemicals was used in firefighting, but they were later found in at least two municipal water supply systems (one in the Kennebunk area and one in Houlton) and in high levels in the hay, soil, water and milk from cows on a dairy farm in Arundel that used biosolids and paper mill residuals as fertilizer.

Those discoveries raised the question of whether residents might be exposed to PFAS via other pathways, such as farms and industrial sites leaching the chemicals into groundwater.

In March, Governor Janet Mills formed a task force with stakeholders ranging from the pulp and paper industry to the Maine Department of Environmental Protection (DEP) to look into the issue and develop recommendations for dealing with the chemicals. It released preliminary recommendations earlier in the fall and its draft report last week.

According to the draft report, residents are most likely to be exposed to PFAS via diet, which is why many of the recommendations deal with protecting the state's food and drinking water supplies. As of this month, the DEP has more than 30,000 records for PFAS at 244 locations around the state.

The report does contain some good news: after testing 53 public water systems serving more than 65 percent of the state's population, members of the task force determined Maine "does not have widespread PFAS contamination of public drinking water."

As of October, only one public water supply, a system serving 140 people at a mobile home park in Houlton, was found to have chemical levels above the EPA's controversial health advisory limit of 70 parts per trillion. (Residents are receiving bottled water while the issue is dealt with.) The combined level of two of the chemicals, PFOA and PFOS, in the water at Trenton Elementary School were found to be 23.95 parts per trillion.

But the report notes that the testing could be more widespread, and that a "thorough assessment of potential risk" would need to include sampling of all 378 community water systems.

The sampling also does not account for the 51 percent of Mainers who get their water from private wells, which are not subject to federal or state regulation or testing requirements.

Another way residents may be exposed to PFAS is via foam used to fight fires. There are two main types of firefighting foam, Class A and B. Class A is generally used to fight wood, paper and brush fires, while Class B, which often contains PFAS, is used to fight gasoline, oil and jet fuel fires (which is why it is more frequently found on military bases).

The state task force has attempted to create an inventory of which of the state's 305 fire departments use Class B firefighting foam but received only 60 responses to its survey, a result members called "disappointing." (Ellsworth Fire Department Chief Richard Tupper has previously said that the department uses Class A foam.) The task force listed seven recommendations in its report, including:

• Requiring manufacturers to report the intentional use of all PFAS in manufacturing processes and in

consumer products and use safer alternatives when available.

• Public education about the chemicals.

• Action at the federal level to eliminate requirements for PFAS in firefighting foam, develop exposure limit levels for firefighters and others exposed to the chemicals and establish a maximum contaminant level for PFAS in drinking and bottled water.

• Pursuing possible legal action against companies that "knowingly supplied products that are harmful to human health and the environment."

More information on the report, including meeting minutes and materials, can be found online at https://www. maine.gov/pfastaskforce/.

12/12/2019 Page .A001