STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
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To: The Honorable Governor John C. Carney, Jr., Governor
Members of the Delaware General Assembly

From: Department of Natural Resources and Environmental Control

RE: **PFAS in Delaware Drinking Water**

Pursuant to H.B. 8, signed into law on October 20, 2021, the Delaware Department of Natural Resources and Environmental Control (DNREC) in coordination with its partners in the Delaware Department of Health and Social Services' Division of Public Health (DPH) has conducted sampling of more than 140 public water systems statewide to survey Per and Polyfluoroalkyl Substances (PFAS) in drinking water. This primary survey was designed to detect and mitigate the potential for consumption of PFAS. DNREC used standard laboratory methods for PFAS developed by the United States Environmental Protection Agency (EPA) and supplemental methods that DNREC and DPH determine meet project specific data quality objectives.

Prior Activity

In 2016, DNREC's Remediation Section in the Division of Waste and Hazardous Substances (DWHS) listed PFAS as Perfluorooctanoic acid (PFOA) and Perfluorooctanoic Sulfonate (PFOS) as "Hazardous Substances" through the Hazardous Substance Cleanup Act (http://delcode.delaware.gov/title7/c091/index.html). The screening values were set to the United States Environmental Protection Agency Health Advisory Limit (HAL) of 70 parts per trillion (ppt) for PFOA and PFOS. A multi-agency workgroup was formed in 2018, consisting of DNREC, DPH, the Delaware Department of Transportation (DelDOT) and the Delaware Department of Agriculture (DDA). DNREC and DPH began sampling water systems statewide using existing funding sources. Systems with PFAS greater than 70 ppt are provided technical and logistical support for alternate water sources and permanent solutions, including point-of-service carbon treatment for homes with private domestic wells. A mobile carbon treatment system to immediately address detections above appropriate criteria from DPH and DNREC is anticipated to be operational in 2022.

In prior years, carbon filtration systems were installed in the Town of Blades and the City of New Caste water systems due to PFAS findings. For private wells near Dover Air Force Base where PFAS has been found, the response is being managed by the Federal government. A resin treatment system was installed by the owner at the Tidewater Bayside water system based on finding there.

Results of the Statewide Survey (To Date)

DNREC's current sampling of drinking water sources, which includes Community Water systems (municipalities, mobile home parks, subdivisions), Non-Transient/Non-Community systems (schools, factories, office buildings and hospitals) and Transient Non-Community systems (gas stations, campgrounds) is well underway. Data evaluation has been occurring during the course of collection to appropriately address any concentrations over the HAL. Once compiled, the sampling results will be shared with DPH to be incorporated in the data needed to set a Maximum Contaminant Level (MCL) as dictated in HB 8.

Of the 140 systems sampled to date, only two systems found in the current sampling effort detected PFAS at or above the HAL of 70 ppt. The Bethany Crest system in Sussex County had detections at the HAL in the source water. However, an ion exchange treatment that had already been in place for nitrates was found to be successful in removing PFAS from the community's drinking water to significantly below the HAL. Testing of nearby potable wells did not find PFAS approaching HALs. Sampling at Byler's Store in West Dover detected PFAS above the HAL, but a follow-up investigation showed that while classified as a public water system, the water is not used for consumption at the store. An investigation to determine the source of the PFAS is ongoing at both locations by the DNREC Remediation Section. This investigation includes private domestic wells and DNREC has a stock of in-home carbon water treatment available if needed by water users.

Plan for Addressing Any PFAS Contamination Identified

When HAL is exceeded, DNREC and DPH respond to determine short-term and permanent alternate water sources. DNREC leads on investigations to determine potential sources, and these efforts include additional sampling, GIS mapping, well construction, geologic and hydrologic information. DPH leads on health assistance, including risk assessment, health recommendations, treatment and information. Following EPA's Strategic, DNREC and DPH seek to research, restrict, and remediate PFAS in Delaware's drinking water. DNREC and DPH consider the lifecycle of PFAS, get ahead of the problem, hold polluters accountable, ensure science-based decisions are made, and prioritize protection of disadvantaged communities.

Specific actions in regard to Bethany Crest and Byler's Store detections are described above.

Development of Maximum Contaminant Level (MCL)

DPH has authority through the Safe Drinking Water Act to create MCLs for emerging contaminants. DPH will shortly announce the start of the process to develop the MCL as described in House Bill 8. This process will include a public component to gather information

and insight. The public water system sampling data will be used to assist the determinations of the MCL. The process that is being used for data collection and analysis has allowed DNREC to pro-actively review and assess any detections of PFAS in anticipation of an MCL that may not be the same as the current default HAL. With the pending announcement, DNREC and DPH will proactively reach out to systems where PFAS has been detected to offer technical assistance prior to the setting of the MCL.

Future Sampling In Other Media

Beyond the MCL development process, DNREC will continue monitoring of the systems beyond the initial survey and create a plan for sampling other media beyond drinking water as the state continues to seek PFAS contamination and sources. This effort will include surface water sampling, human-made media such as leachate, wastewater spray irrigation and bio-solids to note a few.

DNREC and DPH will work with other Delaware entities to form a collaborative group across multiple regulatory protection and resource programs, track back studies through program authorities, identify and mitigate at points of opportunity, holistically collect and analyze multi-media data and then take action based upon proven science. DNREC and DPH will provide knowledge from the PFAS effort to state entities working to identify, provide proof via collected data and then develop regulation and policy to benefit environmental justice communities.

Already underway is sampling of human-made media such as landfill leachate, biosolids, and wastewater treatment plant spray irrigation, along with sampling groundwater and surface water throughout the state. DNREC and DPH will identify and remediate PFAS sources, provide an Emergency Mobile Treatment System for Community systems, and for impacted private residential wells provide information on their situation and a point-of-use filter if necessary. Planned sampling efforts for PFAS include fish and mollusk tissue sampling, developing and implementing a standardized method to assess the nature and extent of bio-solids and wastewater, and regional and state programs will sample landfill leachate for PFAS.