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By Electronic Mail

Dr. Devdutta Sangavi, Secretary
North Carolina Department of Health and Human Services
2001 Mail Service Center
Raleigh, NC 27699-2001

Re: Request for Development of a Preliminary Health Goal for 1,4-Dioxane

Dear Secretary Sangavi:

On behalf of the Cape Fear Public Utility Authority (CFPUA), I respectfully and urgently request that the North Carolina Department of Health and Human Services (NC-DHHS) develop a **state-specific Preliminary Health Goal (PHG)** for **1,4-dioxane in drinking water**. This specific health goal is critically important to provide essential guidance to the Environmental Management Commission (EMC) as it considers draft 1,4 dioxane rulemaking, and would offer the public a clear, science-based understanding of safe long-term exposure levels to this emerging contaminant.

In 2017, NC-DHHS played a pivotal role in addressing public concern and scientific uncertainty surrounding GenX by issuing a **Preliminary Health Goal of 140 ppt** based on a rigorous assessment of toxicological risk and exposure assumptions. This action provided critical clarity to CFPUA and other affected communities and decision-makers and laid the groundwork for broader regulatory responses. Similar action is needed today with 1,4-dioxane.

The U.S. Environmental Protection Agency (EPA) considers 1,4-dioxane to be a likely human carcinogen. In a November 2017 Technical Fact Sheet, the EPA made its carcinogen determination of 1,4-dioxane, with additional concerns regarding long-term exposure symptoms of potential kidney and liver damage. According to the EPA, drinking water concentrations of 35 parts per billion (ppb) constitutes a cancer risk of 1 in 10,000 while a concentration of 0.35 ppb represents a more-protective 1-in-1 million cancer risk. The Cape Fear River was found to have one of the highest levels of 1,4-dioxane in the United States, demonstrated by the sampling performed during the 2013 Unregulated Contaminant Monitoring Rule 3 (UCMR 3) and subsequent monitoring by the North Carolina Department of Environmental Quality (NCDEQ).

Despite the risk 1,4-dioxane poses to human health and its prevalence in the Cape Fear River, no safe maximum exposure limit has been established by North Carolina health agencies, and no limits on concentrations for surface drinking water sources have been set by NCDEQ or the EMC.

For CFPUA and our customers, more than 200,000 residents in Wilmington and New Hanover County, this presents a very real and ongoing concern. The Cape Fear River is our primary raw water source, and it receives upstream discharges of 1,4-dioxane that have resulted in measurable concentrations at our intake point in Bladen County nearly every year since monitoring began, with a 5-year average of 1.21 ppb and levels exceeding 0.80 ppb in 2024. An authoritative determination about whether this exposure is a public health risk to our customers is long overdue.

In many ways, the occurrence of 1,4-dioxane in the Cape Fear River mirrors the discovery of GenX contamination. Like GenX, 1,4-dioxane entered the watershed largely undetected for years, accumulating in downstream drinking water supplies without regulatory oversight or public awareness. Routine testing conducted by CFPUA and its partners has since confirmed that 1,4-dioxane is present in the Cape Fear River at levels exceeding federal health advisory benchmarks, with limited options for removal through conventional treatment. Like GenX, this contaminant disproportionately affects downstream communities that must bear the burden of exposure and cost of treatment. As with the state's response to GenX, the emergence of 1,4-dioxane underscores the need for NC-DHHS to lead with timely, science-based public health guidance to inform state policy and community action.

While CFPUA has invested in advanced treatment that can remove approximately 50% of incoming 1,4-dioxane, many upstream public water systems lack this capability. Without clear state-level health guidance, utilities and regulators alike lack the foundation needed to make consistent decisions about permitting, monitoring, and treatment investment.

We urge NC-DHHS to provide the same public health leadership it demonstrated in the Preliminary Health Goal for GenX by initiating the process of developing a state PHG for 1,4-dioxane. Establishing such a goal, based on available toxicological data and best practices for lifetime exposure modeling, would provide a much-needed benchmark for protecting public health and managing the risks of this contaminant in drinking water.

Thank you for your continued commitment to the health of North Carolinians. CFPUA stands ready to support your efforts and looks forward to working in partnership to address this urgent need.

Sincerely,

Kenneth R. Waldroup

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Executive Director, CFPUA

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