

**Title: Something's In the Water: The Health Implications of Aging Wastewater Infrastructures in Environmental Justice Communities**

**Abstract:**

Disadvantaged and Environmental Justice (EJ) communities face a higher prevalence of environmental-related health implications due to several factors, including historical environmental racism, redlining, a lack of funding, and aging (failing) infrastructures. Particularly, wastewater infrastructures are important because they protect public and environmental health by ensuring that harmful substances such as pathogens, organic matter, metals, and chemicals are removed. Some treatment plants can remove more pollutants than others due to them being newer and the amount of funding that goes into them. Typically, wastewater treatment plants were designed to operate for forty to fifty years, but a significant percentage of these plants in the United States have reached or exceeded this threshold. Unjustly, those in EJ communities may have an elevated prevalence of illnesses and diseases associated with increased levels of toxins in their water due to aging wastewater infrastructures. I will utilize EJ screening tools in concert with state and municipal-level geospatial data, AI, and water sampling data to determine the link between EJ communities, aging wastewater infrastructures, and the health implications of these aging infrastructures.