Impacts of Anthropogenic EDCs and the Role of Reuse and Conservation on the Quality of the Potomac River

The Potomac River serves as the primary drinking water source for more than 4 million people in the Washington Metropolitan Area (WMA) of Maryland, Washington DC and Virginia, and approximately 20% of the total streamflow to the ecologically sensitive Chesapeake Bay. Nutrients and endocrine disrupting compound (EDC) discharge into the watershed have been identified as potential issues which could negatively impact the health of the Potomac River watershed and the Bay. This research project aims to elucidate the impact of best management practices on ecological and human health, using the Potomac Watershed as a test-bed for innovative approaches. By combining a suite of state-of-the-art techniques to actively identify contaminant hot spots (EDCs, pesticides, and nutrients), assess the impact of those hot spots on human and ecological health endpoints, and quantify the impact of reuse and management solutions on these endpoints, this project aims to ultimately inform tools for decision makers to assign a priority order to managing contaminant sources and implementing water reuse and management practices on the basis of where funds and other resources can be best used, are most needed, and are most likely to achieve success.

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Biography: Dr. Rosenfeldt is Hazen and Sawyer’s Director of Drinking Water Process Technology, and a senior member of the Firm’s drinking water process and applied research groups. His work has focused on drinking water and reuse technology, evaluating, implementing, and optimizing conventional and advanced treatment processes for a variety of water quality concerns, including emerging contaminants such as EDCs, PPCPs, taste and odor and algal toxins, groundwater pollutants, as well as conventional and emerging DBPs. Dr. Rosenfeldt has designed and performed numerous bench, pilot, and full scale studies for evaluating the implementation of traditional and cutting edge technologies in drinking water and reuse applications, and is an internationally recognized expert in ozone, advanced oxidation, and biofiltration technologies.