Stormwater and untreated sewage are released into surface waters that are at the interface of the urban and natural environment. This talk will focus on the unique communities found in stormwater and sewage infrastructure conveyance systems, including the dominant organisms that are resident to these systems. Populations of Arcobacter, Acinetobacter, and Aeromonas are ubiquitous in sewer infrastructure and comprise almost 30% of the total community in these systems across 71 cities. Populations within each genus show low diversity, with pronounced temperature associated patterns of sequence types between cites. By following unique signature of human and sewer associated organisms, we can quantify the amount of sewage released from failing infrastructure from an urban area and trace the imprint of these organisms on nearshore freshwater communities.