

Project overview

Some of the most extensive beach monitoring in the US is performed by the Chicago Park District at 23 designated bathing beaches along 26 miles of Lake Michigan shoreline. Despite intensive monitoring and sophisticated targeted analyses over the past decade, beach notifications (advisories and swim bans) due to elevated levels of fecal indicator bacteria (FIB) continue to occur. We propose a multi-tier project to investigate storm water as a source of pollution leading to beach notifications in Chicago. This will involve conducting sanitary surveys at beaches, as well as in the catchment areas of storm drains that discharge into Lake Michigan. The sampling will include testing storm water and beach water for fecal indicator bacteria, along with the use of source identification analyses. Results of this investigation will be utilized to identify remediation targets. This work will be performed by a collaboration that includes local government, local beach managers, a School of Public Health, the United States Geological Survey (USGS), and a community-based group that advocates for improving the Great Lakes. The project is part of a comprehensive beach initiative that also includes other efforts to reduce known sources of pollution such as gull waste, and a communication program to improve the public's understanding of beach water quality and factors that can impair it. We will communicate our findings to Great Lakes beach managers and researchers so that the results of this project can inform the implementation of storm water investigations at other Great Lakes beaches.