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Nowcasting recreational water quality

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INTRODUCTION

Considerable resources are expended each year to measure fecal indicator bacteria (FIB) and assess whether recreational beaches are free from fecal contamination. However, these monitoring programs are compromised because current methods of enumerating bacteria are too slow to provide full protection from exposure to waterborne pathogens. The current United States Environmental Protection Agency (US EPA) approved methods to evaluate recreational waters require an incubation period of 18–96 hours, while several studies have shown that temporal changes in indicator bacteria levels in beach water occur on much shorter time scales. Thus, contaminated beaches remain open during the laboratory incubation period and are often clean by the time warnings are posted.

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