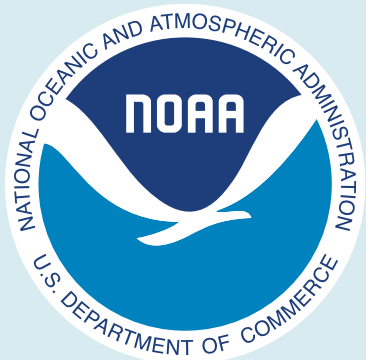


# UD CITIZEN MONITORING PROGRAM



UNIVERSITY OF DELAWARE  
EARTH, OCEAN &  
ENVIRONMENT



## Water Quality Monitoring for Total Enterococcus

Testing Site: Freshwater and Saltwater | Period of Time: April – September 2024

Fecal bacteria that live in the guts of warm-blooded animals are very diverse and numerous. Most are beneficial or harmless to the host, but some fecal bacteria can be pathogenic and cause gastroenteritis that results in diarrhea. To assess the fecal contamination of water, generally harmless fecal indicator bacteria are measured. Among the major groups of fecal bacteria, Total Enterococcus (TE) is considered to be the best, easily-measured indicator of the risk of acquiring gastroenteritis through inadvertent ingestion of water during recreational contact (US EPA).

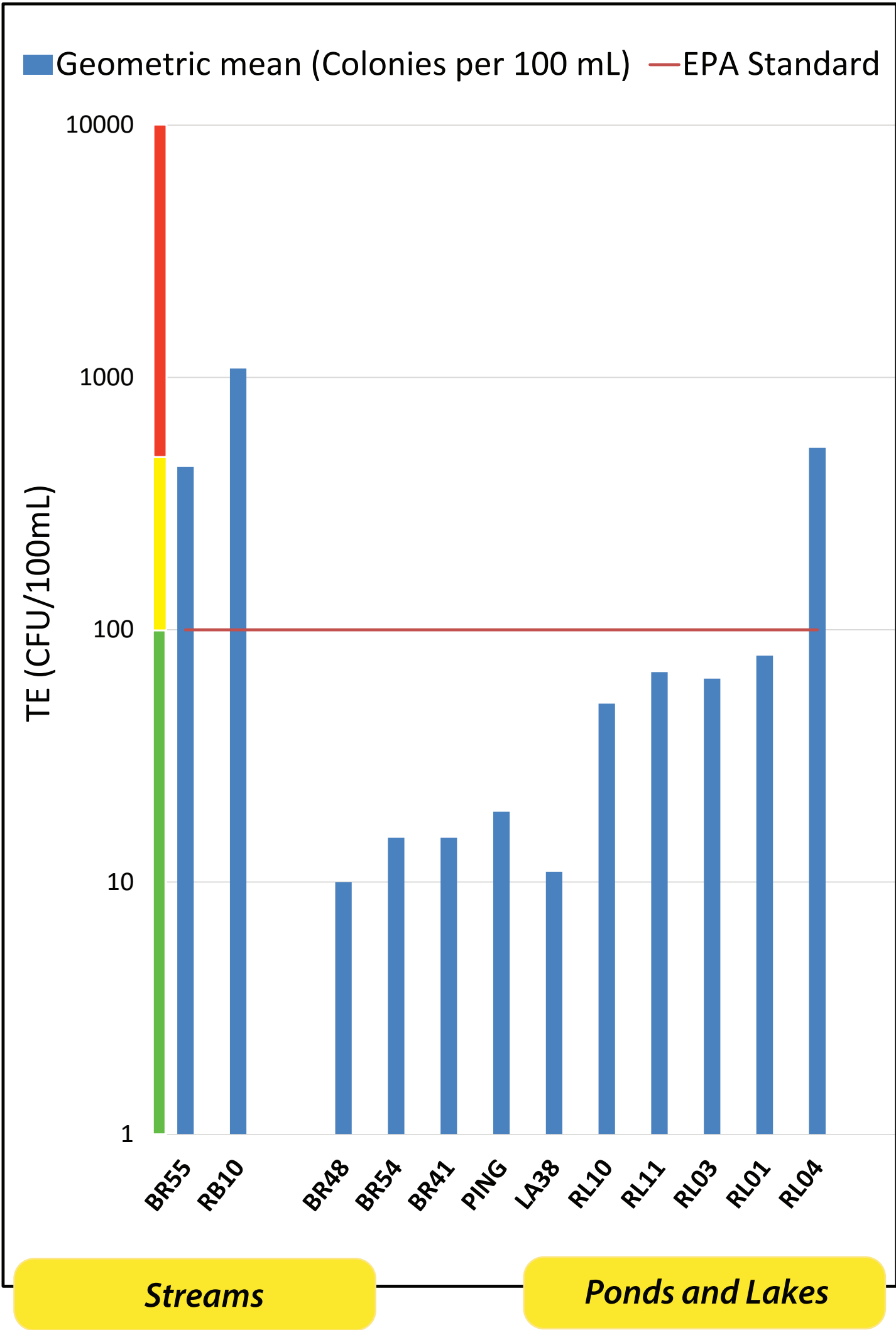
### EPA's Indicator for Safe Swimming and Kayaking

Standards are expressed as TE bacteria colonies/100 mL sample



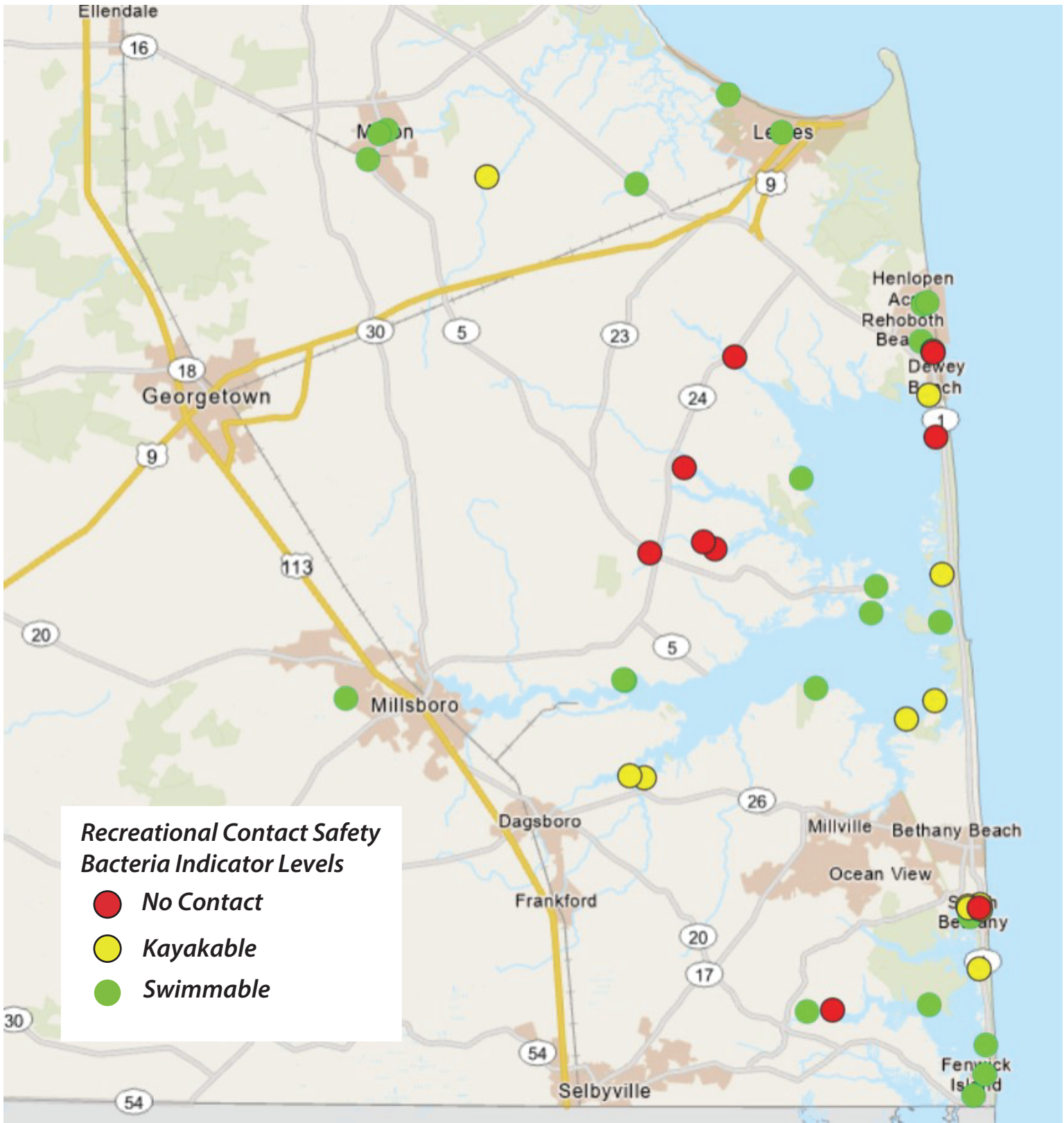
WATER TYPE	SWIMMING GEOMETRIC MEAN	KAYAKING GEOMETRIC MEAN
Fresh	100	500
Salt	35	175

Freshwater sites tested for Total Enterococcus (TE). Red line indicates EPA standard.



Delaware ocean beaches are considered among the "cleanest" in the nation, but the state posts a permanent advisory for the Inland Bays waters.

(2011–14 NRDC reports)



### Bacteria water tests have inherent environmental limitations:

1. Bacteria levels are variable in space and time
2. Rain events can deliver pulses to water bodies.
3. Bacteria reside in sediments and can be resuspended by wind and waves.

Saltwater sites tested for Total Enterococcus (TE). Red line indicates EPA standard.

