

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
PRESQUE ISLE BACTERIA PROJECT**

The following table contains water-quality data from two sites at Presque Isle Beach 2 in Erie, Pennsylvania sampled as part of a water-quality monitoring and modeling study to forecast fecal-indicator bacteria in recreational waters. The project is a cooperative study conducted by the U.S. Geological Survey in cooperation with the Erie County Health Department. The results were based on 33 water samples collected from Lake Erie at each of two recreational sites (referred to as east and west) at Presque Isle Beach 2. Samples were analyzed for *Escherichia coli* bacteria. The objective is to develop a surrogate for the rapid assessment of the recreational water-quality of Presque Isle Beach 2 using factors such as wave height, number of birds on the beach, lake-current direction, rainfall, turbidity, and wind direction. For additional information, contact Tammy Zimmerman at the U.S. Geological Survey, 215 Limekiln Road, New Cumberland, PA 17070: 717-730-6974 (email: tmzimmer@usgs.gov).

REMARKS--Explanation of column headings--**FNMU**: formazin nephelometric units; **mg/L**: milligrams per liter; **µS/cm**: microsiemens per centimeter at 25 degrees Celsius; **deg C**: degrees Celsius; **col/100 mL**: colonies per 100 milliliters.

420752080084601 -- 28b Presque Isle Beach 2 West

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Turb- idity, IR LED light, mult. detect, FNMU (63684)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf µS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	<i>E coli</i> , modif. water, col/ 100 mL (90902)
JUN 2004									
27...	0840	84218	84218	65	9.9	8.0	303	19.7	60
28...	0840	84218	84218	16	7.8	8.0	299	19.9	23
29...	0830	84218	84218	56	9.4	7.9	306	18.3	37
JUL									
04...	0910	84218	84218	2.4	8.1	7.9	290	20.4	3k
05...	1040	84218	84218	160	8.6	8.1	245	21.9	73
06...	1100	84218	84218	13	9.2	8.4	291	23.1	<1
11...	0850	84218	84218	5.5	8.1	8.0	288	22.0	<1
12...	0850	84218	84218	6.2	7.6	7.9	289	21.8	9k
13...	0940	84218	84218	6.6	8.5	8.0	307	22.7	9k
18...	0900	84218	84218	8.2	7.2	7.9	288	21.7	10k
19...	0950	84218	84218	16	7.8	8.0	288	21.9	18k
20...	1110	84218	84218	34	7.5	8.0	296	23.2	73
25...	0840	84218	84218	7.1	8.5	8.2	291	22.0	18k
26...	0830	84218	84218	7.8	8.1	8.2	290	21.9	10k
27...	1140	84218	84218	5.8	8.0	8.1	289	22.0	480
AUG									
01...	0840	84218	84218	11	7.5	7.8	282	22.7	210
02...	0730	84218	84218	5.7	7.9	8.1	287	22.6	36
03...	1040	84218	84218	4.9	8.5	8.1	287	23.6	18k
08...	0850	84218	84218	21	8.5	8.1	292	21.1	82
09...	0710	84218	84218	7.1	8.1	8.1	293	21.2	<1
10...	1350	84218	84218	41	8.5	8.1	289	22.9	140
15...	0900	84218	84218	6.5	8.8	8.0	288	20.8	<1
16...	0900	84218	84218	3.4	8.8	8.2	286	21.0	<1
17...	1040	84218	84218	1.9	8.9	8.3	283	22.7	--
22...	0910	84218	84218	5.0	8.7	8.1	287	19.5	<1
23...	0830	84218	84218	26	8.8	8.1	290	20.3	36
24...	0940	84218	84218	7.4	8.6	8.1	290	21.9	10k
29...	0840	84218	84218	--	--	--	--	--	10k
30...	0850	84218	84218	13	8.4	8.0	287	22.0	82
SEP									
05...	0830	84218	84218	4.5	8.1	8.2	282	22.0	10k
06...	0750	84218	84218	4.6	7.9	8.1	285	21.4	<1
07...	1040	84218	84218	11	8.0	8.1	286	21.9	82

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
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420755080084501 -- 29b Presque Isle Beach 2 East

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Turb- idity, IR LED light, mult. detect, FNMU (63684)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf µS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	E coli, modif. m-TEC, water, col/ 100 mL (90902)
JUN 2004									
27...	0850	84218	84218	64	8.7	8.0	303	19.7	43
28...	0850	84218	84218	27	9.2	8.0	301	19.7	34
29...	0820	84218	84218	150	8.9	8.0	302	18.7	46
JUL									
04...	0920	84218	84218	7.8	7.9	8.0	291	20.4	3k
05...	1030	84218	84218	140	8.4	8.1	291	21.9	160
06...	1110	84218	84218	11	7.9	8.0	291	22.4	<1
11...	0900	84218	84218	5.6	7.7	8.0	288	22.1	<1
12...	0900	84218	84218	8.7	7.7	7.9	289	21.7	18k
13...	0930	84218	84218	15	7.9	8.0	288	22.8	18k
18...	0910	84218	84218	12	7.0	7.9	289	21.8	<1
19...	1000	84218	84218	14	7.9	8.0	288	21.9	10k
20...	1120	84218	84218	53	8.0	8.1	293	22.9	45
25...	0850	84218	84218	7.9	8.4	8.3	291	22.3	10k
26...	0840	84218	84218	5.5	7.7	8.1	290	22.0	290
27...	1130	84218	84218	7.1	8.1	8.1	289	22.0	330
AUG									
01...	0850	84218	84218	18	7.9	7.9	285	22.6	290
02...	0740	84218	84218	5.2	8.0	8.0	288	22.4	36
03...	1050	84218	84218	6.6	7.9	8.2	287	23.8	<1
08...	0900	84218	84218	21	8.7	8.1	291	21.2	36
09...	0720	84218	84218	8.0	8.2	8.1	293	21.5	10k
10...	1340	84218	84218	28	8.7	8.1	289	22.9	45
15...	0910	84218	84218	4.2	8.7	8.1	287	21.0	9k
16...	0910	84218	84218	3.9	8.3	8.1	286	21.2	<1
17...	1050	84218	84218	2.6	8.7	8.2	284	22.6	--
22...	0900	84218	84218	8.8	8.7	8.1	287	19.7	<1
23...	0840	84218	84218	17	8.9	8.1	289	20.4	36
24...	0930	84218	84218	6.9	8.3	8.0	291	21.8	<1
29...	0850	84218	84218	--	--	--	--	--	27
30...	0900	84218	84218	14	8.6	8.0	287	21.9	370
SEP									
05...	0840	84218	84218	3.6	7.8	8.2	282	22.1	<1
06...	0740	84218	84218	4.8	8.2	8.1	284	21.4	<1
07...	1050	84218	84218	11	8.1	8.1	286	22.0	91