

Grey Bruce Health Unit

Beach Management Report 2009



Executive Summary

The Grey Bruce Health Unit conducts a beach management program under the authority of the Health Protection and Promotion Act. In 2009 the guiding principles of this program were the Ontario Public Health Standards (2008) and the Beach Management Protocol (2008).

The program was delivered by Safe Water Manager Lou D'Alessandro, Public Health Inspectors Jos Moerman, Shannon McNabb, Angela Newman, Robert Reid, Jennifer Stevenson, Jennifer Van Dyk and Miranda Young, and Program Coordination Assistant Maggie Englehardt. In past years the program was conducted by a beach management student, but in 2009 it was included in the regular duties of the Public Health Inspectors.

A total of fourteen (14) beaches were monitored in 2009. There were 4 Blue Flag beaches (Little River Park, Northwinds, Sauble Beach, Station Park), and 5 regular program beaches (Bayshore Beach, Durham Middle Dam, Lion's Head, Old Woman River, Presqu'île Point). Flesherton Pond was monitored under contract with the Municipality of Grey Highlands. Berford Lake, Bluewater Park, Oliphant- Lonely Island, and Red Bay were monitored under contract with the Town of South Bruce Peninsula.

The program began on May 29, 2009 with risk assessments conducted at all beaches. Regular weekly sampling was carried out from the first week of June until the first week of September. The bathing season was characterized by wet, cold weather through June and most of July. Two beaches were closed due to adverse E. coli results in two consecutive sets of samples: Oliphant- Lonely Island (July 30 to September 4) and Bluewater Park (August 27). Adverse sample results at a few other beaches returned to safe levels upon resampling.

There were no adverse results at the Blue Flag beaches and all results were posted on the Blue Flag website (www.blueflag.ca). Contracting municipalities were sent monthly updates and beach closures were made available on the Grey Bruce Health Unit's website (www.publichealthgreybruce.on.ca). As well, press releases were issued and the Inspectors helpline was informed when beaches were closed.

Fewer beaches were monitored in 2009 as a result of a review of historical and epidemiological data. In 2010 the efficacy of the beach management program will be evaluated prior to the bathing season.

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1.0 Introduction

The Ontario Public Health Standards (OPHS) are published by the Minister of Health and Long-Term Care under the authority of the Health Protection and Promotion Act (HPPA)¹ to specify the mandatory health programs and services provided by boards of health. Protocols are program and topic specific documents which provide direction on how boards of health must operationalize specific requirement(s) identified within the OPHS.

The Beach Management Protocol (2008) identifies the minimum expectations for public health beach management programs. The purpose of this protocol is to assist in the prevention and reduction of water-borne illness and injury related to recreational water use at public beaches, and to assist boards of health in the delivery of local, comprehensive public beach management programs (Beach Management Protocol (2008)).

The Beach Management Program consists of surveillance and inspection including pre-season assessment and routine sampling; management and response including responding to complaints and adverse events as well as communication with the public and stakeholders; reporting data to the Ministry of Health and Long-Term Care.

The Beach Management Protocol defines a public beach as “A beach area owned and/or operated by a municipality which the general public has direct access to; allows supervised aquatics programs or is staffed by lifeguards; and meets the requirements of the sampling protocol for sampling sites (Beach Management Protocol (2008)). The Medical Officer of Health may add beaches to the program, in excess of minimum requirements, in order to provide a comprehensive appraisal of recreational water quality and to address local needs.

The 2009 Beach Management Program in the Grey Bruce Health Unit consisted of 14 beaches. There were 4 Blue Flag beaches: Station Park (Kincardine), Sauble Beach (Town of South Bruce Peninsula), and Little River Park and Northwinds (Town of the Blue Mountains). Presqu'île (Georgian Bluffs), Bayshore Beach (Owen Sound), Durham Middle Dam (West Grey), and Lion's Head and Old Woman River (North Bruce Peninsula) were included in the program. As well, the Grey Bruce Health Unit contracted with the Municipality of Grey Highlands to monitor Flesherton Pond and with the Town of South Bruce Peninsula to monitor the beaches at Bluewater Park, Berford Lake, Red Bay and Oliphant-Lonely Island.

A pre-season risk assessment was conducted at each beach. Sampling and routine surveillance was conducted, when practical, weekly at regular times on the same day

over the course of the bathing season when bacterial levels were expected to be highest according to the guidelines of the Beach Management Protocol (2008). When bacterial levels exceeded a geometric mean of 100 E. coli/100 ml of water inspectors were instructed to resample immediately. Two consecutive samples exceeding this standard would result in the beach being closed, signage erected, notification of the municipality and issuance of a press release.

Wet, cold weather at the beginning of the bathing season delayed some of the risk assessments and sampling. With the water temperature in the 8 to 10 °C range there was little bathing but considerable runoff until near the end of June. Other factors which seem to affect water quality include large numbers of waterfowl, wind direction and wave action. As well, in some cases, beach maintenance and ponding of stagnant water on the sand were mentioned as issues of concern.

A review of historical and epidemiological data indicated a relatively low risk of unsafe water quality at the beaches in Grey Bruce. Thus fewer beaches have been monitored this year. The results of this year's beach management program will be evaluated to determine the optimum level of monitoring to assure the public's safe enjoyment of our beaches.

2.0 ESCHERICHIA COLI (E.coli)

To ensure the water at a public bathing beach is safe for swimming and recreational use, Public Health collects samples from public bathing beaches to test for the presence of E.coli. Regardless of clarity, all recreational water is considered non-potable and should be tested for high concentrations of bacteria. To be considered safe for use by the Beach Management Protocol, laboratory analysis must show the number of E. coli per 100ml to be less than 100. A geometric mean that is calculated to be over 100 E.coli per 100ml requires public posting as unsafe for bathing.

To identify recent contamination of water, an indicator organism, in this case E.coli, is used.

Indicator organisms are characterized by:

- Being present only when pollution is present
- Growing easily and quickly
- Being easily detectable
- Occurring in greater number than associated pathogens
- Surviving longer than associated pathogens
- Not replicating outside their host

E.coli is a coliform that is present in the feces of all warm blooded animals, including humans, but is not naturally occurring in water. E.coli present in water indicates potential fecal contamination that could possibly contain infectious agents.

Though not all strains of E. coli are infectious to humans, those who have compromised immune systems, the elderly, as well as young children are especially at risk for developing severe symptoms when infected. These groups, as well as anyone who becomes infected may experience bloody diarrhea, ear, nose and throat infections, as well as gastrointestinal illnesses.

Some factors that may contribute to higher E.coli levels are noted in a pre-season survey done by Public Health. Presence of storm drains, large bather loads, and warm blooded animals, as well as environmental factors, such as air temperature, water temperature, recent rainfall, wave size and wind direction can all influence the bacterial levels of the surrounding water.

The public can help to lower the E.coli levels by avoiding the use of animal waste fertilizers near the water and by keeping septic systems in good repair. As well, animals should be deterred from being present on beaches and in water, such as geese and dogs. This can be done by ensuring all scrap food is removed from the area and by not deliberately feeding these animals. If pets are present, owners should be diligent with disposing of any excrement properly.



3.0 FIELD SAMPLING TECHNIQUES

The Grey Bruce Health Unit followed the guidelines established in the Beach Management Protocol (1998) to ensure validity and consistency of samples collected. All beaches were sampled weekly with a minimum of 5 samples; Sauble Beach was sampled at 15 sites according to the following criteria:

<u>Length of Beach</u>	<u>Number of Sampling Sites</u>
1000 metres or less	5 sites
1 kilometre or more	1 site per 200 metres

Equipment required for sampling:

- Telescopic pole
- Thermometer
- Ice packs
- Cooler
- Sterile bottles
- Field data sheets

To comply with the Beach Management Protocol, at least 5 samples must be taken at fixed locations from a depth of 1 -1.5 meters. These samples must then be stored in a cooler at a temperature of under 10°C, preferably at 4°C. These samples are then sent to the London Public Health Lab within 24 hours of collection. .

Sample Collection:

- The sterile bottle is inserted into the cup on the pole and the cap is removed
- The bottle is plunged upside down, into the water to a depth between 15 and 30cm
- The bottle is then tilted upwards, against the current, until the bottle is filled to the fill line, then it is pulled out of the water and the cap is immediately replaced
- The surface temperature of the water is taken and field data sheets are completed after sampling



4.0 Blue Flag Beaches:


4.1 Little River Park

Grey Bruce Public Health Unit

PUBLIC BATHING BEACH RISK ASSESSMENT

BEACH NAME: Little River Park	DATE: May 29, 2009
CONDUCTED BY: Shannon McNabb	COUNTY/MUNICIPALITY: Grey/Thornbury
WASHROOM FACILITIES: SEPTIC <input checked="" type="checkbox"/> PORTABLE <input type="checkbox"/> PERMANENT NON/SEPTIC <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	
FOOD PREMISE: FIXED <input type="checkbox"/> TEMPORARY <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
POTENTIAL SOURCES OF CONTAMINATION	
STREAMS <input type="checkbox"/> NUMBER OF RUNOFFS _____	SOIL EROSION <input type="checkbox"/>
COMBINED/ STORM SEWER OUTLETS <input type="checkbox"/> NUMBER OF OUTLETS <u>1</u> NUMBER OF RUNOFFS _____	ANIMAL POPULATION <input type="checkbox"/> SIZE OF POPULATION _____ EST DISTANCE FROM BEACH _____
SANITARY LANDFILLS <input type="checkbox"/> EST. DISTANCE FROM BEACH _____	MARINAS <input type="checkbox"/> BOAT RAMPS: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> DOCKING FACILITIES: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> MARINE TRAFFIC: HEAVY <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
BIRD POPULATIONS <input checked="" type="checkbox"/> SIZE OF FLOCK <u>SM</u> SPECIES <u>SEAGULL</u>	
SAFETY HAZARDS (i.e. PLAYGROUND EQUIPMENT, STAIRS...): <ul style="list-style-type: none">• Playground• Rocky shore• Picnic tables• Bike rack	
BEACH AESTHETICS (i.e. DEAD FISH, ALGAE, OILY SCUM AND DEBRIS):	
OTHER INFLUENCES: <ul style="list-style-type: none">• Large Marina beside beach• Power Outlets• Faucet	

4.7 Little River Park (Cont'd)

GPS		
GPS (FRONT ENTRANCE): LAT: 4437.5334 N LON: 08052.6621 W		
GPS (INDIVIDUAL SAMPLING POINTS)		
1. LAT: 4437.5682 N LON: 08052.6976 W	6.	11.
2. LAT: 4437.5636 N LON: 08052.6930 W	7.	12.
3. LAT: 4437.5660 N LON: 08052.6905 W	8.	13.
4. LAT: 4437.5675 N LON: 08052.6978 W	9.	14.
5. LAT: 4437.5689 N LON: 08052.6849 W	10.	15.
SIGNS		
LOCATION OF SIGNS:		
<ul style="list-style-type: none"> • BEACH SIDE OF PARKING LOT NEAR ENTRANCE 		
WARNING <input checked="" type="checkbox"/> POSTED [] NO SIGN []		
		

Little River Park Field Data Summary

Date 2009	June 3, 2009	June 10,2009	June 16, 2009
Air Temperature (°C)	17C	19C	19C
Water Temperature (°C)	11C	9C	14C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	Light	Heavy	N/A
Wind Direction	Toward shore	Toward shore	Toward Shore
Sunlight	Bright	Intermediate	Intermediate
Bather Density	N/A	N/A	Light
Water Fowl	8 Seagulls, stayed 7mins	15 Seagulls, stayed entire time (30 mins)	N/A
Wave Action	Medium	Small	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences	N/A	N/A	N/A
Geometric Mean		14	10
Posting	N/A		

Date 2009	June 23, 2009	July2, 2009	July 8, 2009
Air Temperature (°C)	27C	19C	19C
Water Temperature (°C)	19C	17C	17C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	N/A	Light	Light
Wind Direction	Parallel to shore	No wind	Toward shore
Sunlight	Bright	Overcast	Bright
Bather Density	Light	Light	Light
Water Fowl	Seagulls (2) for duration of sampling (30mins)	Canadian geese (20), seagulls (10), entire duration of sampling (30 mins)	Seagulls (10), duration of sampling (30 mins)
Wave Action	Small	Still water	Large
Water Clarity	>100cm	>100cm	100cm
Other Influences	Pollen in water		
Geometric Mean	30	10	17
Posting			

Little River Park

Date 2009	July 15, 2009	July 22, 2009	July 29, 2009
Air Temperature (°C)	28C	25C	22C
Water Temperature (°C)	19C	20C	18C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	N/A	Light	Light
Wind Direction	Parallel to shore	Toward shore	Away from shore
Sunlight	Bright	Overcast	Overcast
Bather Density	Light	Light	Light
Water Fowl	Seagulls (10) for duration of sampling (30 mins)	N/A	N/A
Wave Action	Small	Small	Small
Water Clarity	> 100cm	>100cm	>100cm
Other Influences			
Geometric Mean	12	11	15
Posting			

Date 2009	August 5, 2009	August 12, 2009	August 19, 2009
Air Temperature (°C)	23C	25C	24C
Water Temperature (°C)	19C	23C	19C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	N/A	Light	Med.
Wind Direction	Toward Shore	Toward Shore	Toward Shore
Sunlight	Bright	Bright	Intermediate
Bather Density	Light	Medium	Medium
Water Fowl	N/A	N/A	N/A
Wave Action	White Caps	Medium	Medium
Water Clarity	<100cm	>100cm	>100cm
Other Influences			
Geometric Mean	77	22	83
Posting			

Little River Park

Date 2009	August 26, 2009	August 29, 2009	date
Air Temperature (°C)			
Water Temperature (°C)			
Rainfall During Sampling			
Rainfall Within 48 Hours			
Wind Direction			
Sunlight			
Bather Density			
Water Fowl			
Wave Action			
Water Clarity			
Other Influences			
Geometric Mean	188	14	
Posting			

4.2 Northwinds Beach

Grey Bruce Public Health Unit

PUBLIC BATHING BEACH RISK ASSESSMENT

BEACH NAME: Northwinds		DATE: May 29, 2009	
CONDUCTED BY: Shannon McNabb		COUNTY/MUNICIPALITY: Grey/ Town of Blue Mountains	
WASHROOM FACILITIES: SEPTIC [] PORTABLE [] PERMANENT NON/SEPTIC [X] N/A []			
FOOD PREMISE: FIXED [] TEMPORARY [] N/A [X]			
POTENTIAL SOURCES OF CONTAMINATION			
STREAMS [] NUMBER OF RUNOFFS _____ COMBINED/ STORM SEWER OUTLETS [] NUMBER OF OUTLETS <u>2</u> NUMBER OF RUNOFFS <u>1</u> SANITARY LANDFILLS [] EST. DISTANCE FROM BEACH _____ BIRD POPULATIONS [X] SIZE OF FLOCK <u>SM</u> SPECIES <u>SEAGULL</u> <u>and Mallards</u>		SOIL EROSION [X] ANIMAL POPULATION [] SIZE OF POPULATION _____ EST DISTANCE FROM BEACH _____ MARINAS [] BOAT RAMPS: YES [X] NO [] DOCKING FACILITIES: YES [] NO [X] MARINE TRAFFIC: HEAVY [] MEDIUM [] LIGHT [X] N/A []	
SAFETY HAZARDS (i.e. PLAYGROUND EQUIPMENT, STAIRS....): <ul style="list-style-type: none"> • Rocks/Breakwall • Playground • Picnic Tables • High Voltage Transformer • Bike rack • Charcoal Grills 			
BEACH AESTHETICS (i.e. DEAD FISH, ALGAE, OILY SCUM AND DEBRIS): <ul style="list-style-type: none"> • Wood debris 			
OTHER INFLUENCES: <ul style="list-style-type: none"> • Ponding water at west end • Dogs allowed 			

Northwinds Beach Field Data Summary

Date 2009	June 3, 2009	June 10, 2009	June 16, 2009
Air Temperature (°C)	16C	20C	21C
Water Temperature (°C)	12C	15C	17.5C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	Light	Heavy	N/A
Wind Direction	Toward Shore	Toward Shore	Toward Shore
Sunlight	Bright	Bright	Bright
Bather Density	N/A	Light	Light
Water Fowl	N/A	N/A	Seagulls, 5, stayed 30mins
Wave Action	Large	Small	Small
Water Clarity	< 100cm	< 100cm	>100cm
Other Influences	N/A	N/A	N/A
Geometric Mean	10	22	10
Posting			

Date 2009	June 23, 2009	July 2, 2009	July 8, 2009
Air Temperature (°C)	28C	19C	21C
Water Temperature (°C)	20C	19C	19C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	N/A	Light	Light
Wind Direction	No wind	No wind	Toward shore
Sunlight	Bright	Overcast	Bright
Bather Density	Light	Light	Medium
Water Fowl	N/A	Seagulls (10) @ 30mins	N/A
Wave Action	Still water	Still water	Large
Water Clarity	>100cm	<100cm	<100cm
Other Influences	Dead seagull on shore, appeared to have washed up on shore. Also thin layer of pollen over entire beach.		
Geometric Mean	10	18	14
Posting			

Northwinds Beach

Date 2009	July 15, 2009	July 22, 2009	July 29, 2009
Air Temperature (°C)	26C	30C	22C
Water Temperature (°C)	18C	21C	19C
Rainfall During Sampling	N/A	N/A	Light
Rainfall Within 48 Hours	N/A	Light	Light
Wind Direction	Parallel to shore	Toward shore	Away from shore
Sunlight	Intermediate	Bright	overcast
Bather Density	Light	Heavy	N/A
Water Fowl	Seagulls (3) for entire duration of sampling (30 mins)	Seagulls (3) for entire duration of sampling	Seagulls (3) entire duration of sampling
Wave Action	Small	Small	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	10	13	25
Posting			

Date 2009	August 5, 2009	August 12, 2009	August 19, 2009	
Air Temperature (°C)	27C	27C	25C	
Water Temperature (°C)	20C	24C	20C	
Rainfall During Sampling	N/A	N/A	n/a	
Rainfall Within 48 Hours	N/A	Light	Medium	
Wind Direction	Toward Shore	Toward Shore	Toward shore	
Sunlight	Bright	Bright	Intermediate	
Bather Density	Light	Heavy	Med	
Water Fowl	Seagulls (5) for entire duration (30 mins)	Seagulls	Seagulls	
Wave Action	White caps	Medium	Medium	
Water Clarity	<100cm	>100cm	>100cm	
Other Influences				
Geometric Mean	116	14	65	
Posting				

Northwinds Beach

Date 2009	August 26, 2009	August 31, 2009	
Air Temperature (°C)	20C	20C	
Water Temperature (°C)	19C	19C	
Rainfall During Sampling	N/A	N/A	
Rainfall Within 48 Hours	Light	Medium	
Wind Direction	Toward shore	Toward shore	
Sunlight	Bright	Intermediate	
Bather Density	Light	Light	
Water Fowl	Seagulls	Seagulls (6-10)	
Wave Action	Large	Small/Medium	
Water Clarity	<100cm	>100cm	
Other Influences			
Geometric Mean	21	10	
Posting			


4.3 Sauble Beach

GREY BRUCE PUBLIC HEALTH UNIT

PUBLIC BATHING BEACH RISK ASSESSMENT

BEACH NAME: Sauble Beach	DATE: June 8, 2009
CONDUCTED BY: Jennifer Stevenson	COUNTY/MUNICIPALITY: Bruce/ South Bruce Peninsula
WASHROOM FACILITIES: SEPTIC <input checked="" type="checkbox"/> PORTABLE <input type="checkbox"/> PERMANENT NON/SEPTIC <input type="checkbox"/> N/A <input type="checkbox"/>	
FOOD PREMISE: FIXED <input checked="" type="checkbox"/> TEMPORARY <input type="checkbox"/> N/A <input type="checkbox"/>	
POTENTIAL SOURCES OF CONTAMINATION	
<p>STREAMS <input type="checkbox"/> NUMBER OF RUNOFFS _____</p> <p>COMBINED/ STORM SEWER OUTLETS <input type="checkbox"/> NUMBER OF OUTLETS <u>16</u> NUMBER OF RUNOFFS <u>16</u></p> <p>SANITARY LANDFILLS <input type="checkbox"/> EST. DISTANCE FROM BEACH _____</p> <p>BIRD POPULATIONS <input checked="" type="checkbox"/> SIZE OF FLOCK SPECIES</p>	<p>SOIL EROSION <input type="checkbox"/></p> <p>ANIMAL POPULATION <input type="checkbox"/> SIZE OF POPULATION _____ EST DISTANCE FROM BEACH _____</p> <p>MARINAS <input type="checkbox"/> BOAT RAMPS: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> DOCKING FACILITIES: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> MARINE TRAFFIC: HEAVY <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> N/A <input checked="" type="checkbox"/></p>
<p>SAFETY HAZARDS (i.e. PLAYGROUND EQUIPMENT, STAIRS....):</p> <ul style="list-style-type: none"> • Swing sets • Benches • Boardwalks/ bridges 	
<p>BEACH AESTHETICS (i.e. DEAD FISH, ALGAE, OILY SCUM AND DEBRIS):</p> <ul style="list-style-type: none"> • Iron deposits • Debris • Algae 	
<p>OTHER INFLUENCES:</p> <ul style="list-style-type: none"> • 	

Sauble Beach

GPS		
GPS (FRONT ENTRANCE):		
GPS (INDIVIDUAL SAMPLING POINTS)		
1. LAT: 4437.8231 N LON: 08116.3267 W	6. LAT: 4438.5725 N LON: 08116.3660 W	11. LAT: 4439.0690 N LON: 08116.4278 W
2. LAT: 4437.8914 N LON: 08116.3379 W	7. LAT: 4438.6518 N LON: 08116.3591 W	12. LAT: 4439.1433 N LON: 08116.4592 W
3. LAT: 4438.0454 N LON: 08116.3339 W	8. LAT: 4438.7988 N LON: 08116.3660 W	13. LAT: 4439.3596 N LON: 08116.5760 W
4. LAT: 4438.2581 N LON: 08116.3468 W	9. LAT: 4438.8619 N LON: 08116.3814 W	14. LAT: 4439.4281 N LON: 08116.6593 W
5. LAT: 4438.4617 N LON: 08116.3598 W	10. LAT: 4438.9205 N LON: 08116.3884 W	15. LAT: 4439.5259 N LON: 08116.7371 W
SIGNS		
LOCATION OF SIGNS:		
<ul style="list-style-type: none"> • MAIN PARKING LOT ENTERANCE, 3rd, 5th, 6th, 11th St., LAKESIDE VILLAGE 		
WARNING <input checked="" type="checkbox"/> POSTED <input type="checkbox"/> NO SIGN <input type="checkbox"/>		
		

Sauble Beach

Date 2009	June 11	June 18	June 24
Air Temperature (°C)	12C	15C	28C
Water Temperature (°C)	10C	14C	20C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	Medium	Medium	NA
Wind Direction	Toward shore	Parallel to shore	No wind
Sunlight	Overcast	Overcast	Bright
Bather Density	NA	NA	Medium
Water Fowl	NA	NA	NA
Wave Action	Small	Small	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences			Pollen buildup on shore
Geometric Mean	10	10	22
Posting	Warning	Warning	Warning

Date 2009	July 2	July 9	July 16
Air Temperature (°C)	16C	23C	17C
Water Temperature (°C)	18C	19C	18C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	Medium	Light	NA
Wind Direction	Parallel to shore	No wind	Toward shore
Sunlight	Intermediate	Intermediate	Intermediate
Bather Density	NA	NA	NA
Water Fowl	NA	NA	NA
Wave Action	Small	Still water	Medium
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	12	13	26
Posting	Warning	Warning	Warning

Sauble Beach


Date 2009	July 22	July 30	August 6
Air Temperature (°C)	25C	16C	16C
Water Temperature (°C)	20C	20C	18C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	Light	NA
Wind Direction	Parallel to shore	Toward shore	Toward shore
Sunlight	Bright	Bright	Intermediate
Bather Density	Medium	NA	NA
Water Fowl	NA	NA	NA
Wave Action	Small	Small	Medium
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	26	15	19
Posting	Warning	Warning	Warning

Date 2009	August 13	August 20	August 25
Air Temperature (°C)	19C	21C	21C
Water Temperature (°C)	20C	20C	21C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	Light	NA
Wind Direction	Toward shore	Toward shore	Toward shore
Sunlight	Bright	Intermediate	Bright
Bather Density	NA	NA	Light
Water Fowl	NA	NA	NA
Wave Action	Small	Medium	White caps
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	20	74	68
Posting	Warning	Warning	Warning

Sauble Beach

Date 2009	September 2	date	date
Air Temperature (°C)	19C		
Water Temperature (°C)	18C		
Rainfall During Sampling	NA		
Rainfall Within 48 Hours	NA		
Wind Direction	Toward shore		
Sunlight	Bright		
Bather Density	NA		
Water Fowl	NA		
Wave Action	Small		
Water Clarity	>100cm		
Other Influences			
Geometric Mean	15		
Posting	Warning		

Station Park Beach

GPS		
GPS (FRONT ENTRANCE): LAT: 4410.5501 N LON: 08138.3481 W		
GPS (INDIVIDUAL SAMPLING POINTS)		
1. LAT: 4410.4586 N LON: 08138.5336 W	6.	11.
2. LAT: 4410.4829 N LON: 08138.5199 W	7.	12.
3. LAT: 4410.5179 N LON: 08138.5041 W	8.	13.
4. LAT: 4410.5435 N LON: 08138.4882 W	9.	14.
5. LAT: 4410.5734 N LON: 08138.4737 W	10.	15.
SIGNS		
LOCATION OF SIGNS: <ul style="list-style-type: none">• NO SIGNS		
WARNING [] POSTED [] NO SIGN [X]		
		

Station Park Beach

Date 2009	June 11	June 18	June 25
Air Temperature (°C)	10C	11C	17C
Water Temperature (°C)	8C	8C	15C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	Medium	Medium	NA
Wind Direction	Toward shore	Toward shore	Toward shore
Sunlight	Overcast	Overcast	Overcast
Bather Density	NA	NA	NA
Water Fowl	NA	NA	NA
Wave Action	Small	Small	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	10	32	41
Posting	No	No	No

Date 2009	July 2	July 9	July 16
Air Temperature (°C)	12C	18C	16C
Water Temperature (°C)	14C	16C	17C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	Medium	Light	NA
Wind Direction	No wind	No wind	Toward shore
Sunlight	Overcast	Intermediate	Intermediate
Bather Density	NA	NA	NA
Water Fowl	NA	NA	NA
Wave Action	Still water	Still water	Medium
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	18	11	47
Posting	No	No	No

Station Park Beach

Date 2009	July 24	July 30	August 6
Air Temperature (°C)	16C	18C	17C
Water Temperature (°C)	18C	19C	19C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	NA	NA
Wind Direction	Toward shore	Toward shore	Toward shore
Sunlight	Intermediate	Intermediate	Intermediate, Overcast
Bather Density	NA	NA	NA
Water Fowl	NA	NA	NA
Wave Action	Medium	Small	Small
Water Clarity	<100cm	<100cm	<100cm
Other Influences			
Geometric Mean	16	20	22
Posting	No	No	No

Date 2009	August 14	August 20	August 25
Air Temperature (°C)	16C	22C	25C
Water Temperature (°C)	18C	22C	22C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	Light	NA
Wind Direction	Toward shore	Toward shore	Toward shore
Sunlight	Intermediate	Intermediate	Bright
Bather Density	NA	NA	Light
Water Fowl	NA	NA	NA
Wave Action	Still water	Medium	Medium
Water Clarity	<100cm	<100cm	>100cm
Other Influences			
Geometric Mean	19	175	78
Posting	No	No	No

Station Park Beach

Date 2009	September 3	date	date
Air Temperature (°C)	19C		
Water Temperature (°C)	21C		
Rainfall During Sampling	NA		
Rainfall Within 48 Hours	NA		
Wind Direction	Toward shore		
Sunlight	Intermediate		
Bather Density	Light		
Water Fowl	NA		
Wave Action	Still water		
Water Clarity	<100cm		
Other Influences			
Geometric Mean	18		
Posting	No		

Bayshore Beach

GPS		
GPS (FRONT ENTRANCE): LAT: LON:		
GPS (INDIVIDUAL SAMPLING POINTS)		
1.	6.	11.
2.	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.
SIGNS		
LOCATION OF SIGNS: •		
WARNING <input checked="" type="checkbox"/> POSTED <input type="checkbox"/> NO SIGN <input type="checkbox"/>		

Bayshore Beach

Date 2009	June 3, 2009	June 10,2009	June 16, 2009
Air Temperature (°C)	21C	17C	19C
Water Temperature (°C)	14C	13C	16C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	Light	Heavy	N/A
Wind Direction	Toward shore	Away from shore	Toward Shore
Sunlight	Bright	Intermediate	Intermediate
Bather Density	Light (1person)	N/A	N/A
Water Fowl	5 Seagulls, stayed 5mins	N/A	3 Seagulls, stayed 5mins
Wave Action	Small	Small	Medium
Water Clarity	>100cm	>100cm	>100cm
Other Influences	N/A	N/A	N/A
Geometric Mean		20	10
Posting	N/A	N/A	

Date 2009	June 23, 2009	July 2, 2009	July 6, 2009
Air Temperature (°C)	24C	18C	17C
Water Temperature (°C)	19C	15C	16C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	N/A	Light	N/A
Wind Direction	No wind	No wind	Toward Shore
Sunlight	Bright	Overcast	Overcast
Bather Density	N/A	N/A	N/A
Water Fowl	N/A	Seagulls	30 Canadian geese, stayed entire duration of sampling (30 mins).
Wave Action	Still water	Still water	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Pollen on water, garbage on water, under water and organic debris on shore	Debris on beach, organic matter, expired fireworks, garbage. Garbage in water and on water, feathers floating on water.	Debris on beach, including organic matter, garbage and excrement of Canadian geese (also in water). Many different animal tracks on the beach, dogs, birds, cats.
Geometric Mean	71	175	22
Posting			

Bayshore Beach

Date 2009	July 15, 2009	July 23, 2009	July 29, 2009
Air Temperature (°C)	20C	18C	26C
Water Temperature (°C)	17C	17C	17C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	N/A	N/A	light
Wind Direction	Parallel to shore	Toward shore	Toward shore
Sunlight	Intermediate	Overcast	Bright
Bather Density	N/A	N/A	Light
Water Fowl	N/A	Canadian Geese	N/A
Wave Action	Still water	Small	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Organic debris on beach, bird tracks and raccoon tracks and bird excrement on beach	Excrement from Canadian Geese on beach	Excrement from Canadian Geese on beach
Geometric Mean	30		62
Posting			

Date 2009	August 6, 2009	August 12, 2009	August 19, 2009
Air Temperature (°C)	18C	27C	23C
Water Temperature (°C)	16C	24C	17C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	Light	Light	Light
Wind Direction	Toward Shore	Toward Shore	Toward shore
Sunlight	Bright	Bright	Intermediate
Bather Density	N/A	Medium	Medium
Water Fowl	Canadian Geese (8), Seagull (1), Mallard (1)	N/A	Seagulls
Wave Action	Small	Medium	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	41	26	21
Posting			

Bayshore Beach

Date 2009	August 26, 2009	August31, 2009	date
Air Temperature (°C)	22C	18C	
Water Temperature (°C)	19C	17C	
Rainfall During Sampling	NA	NA	
Rainfall Within 48 Hours	Light	Light	
Wind Direction	Toward shore	Toward shore	
Sunlight	Bright	Bright	
Bather Density	NA	NA	
Water Fowl	NA	NA	
Wave Action	Medium	Small	
Water Clarity	<100cm	>100cm	
Other Influences			
Geometric Mean	136	10	
Posting			

5.2 Durham Middle Dam Beach

Grey Bruce Public Health Unit

PUBLIC BATHING BEACH RISK ASSESSMENT

BEACH NAME: Middle Dam		DATE: May 25, 2009	
CONDUCTED BY: Jenn Van Dyk		COUNTY/MUNICIPALITY: Grey/West Grey	
WASHROOM FACILITIES: SEPTIC <input checked="" type="checkbox"/> PORTABLE <input type="checkbox"/> PERMANENT NON/SEPTIC <input type="checkbox"/> N/A <input type="checkbox"/>			
FOOD PREMISE: FIXED <input type="checkbox"/> TEMPORARY <input type="checkbox"/> N/A <input checked="" type="checkbox"/>			
POTENTIAL SOURCES OF CONTAMINATION			
STREAMS <input type="checkbox"/> NUMBER OF RUNOFFS _____ COMBINED/ STORM SEWER OUTLETS <input type="checkbox"/> NUMBER OF OUTLETS _____ NUMBER OF RUNOFFS _____ SANITARY LANDFILLS <input type="checkbox"/> EST. DISTANCE FROM BEACH _____ BIRD POPULATIONS <input type="checkbox"/> SIZE OF FLOCK SPECIES		SOIL EROSION <input type="checkbox"/> ANIMAL POPULATION <input type="checkbox"/> SIZE OF POPULATION _____ EST DISTANCE FROM BEACH _____ MARINAS <input type="checkbox"/> BOAT RAMPS: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> (across waterway) DOCKING FACILITIES: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> MARINE TRAFFIC: HEAVY <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	
SAFETY HAZARDS (i.e. PLAYGROUND EQUIPMENT, STAIRS...): <ul style="list-style-type: none"> • Playground at top of swimming area (higher elevation) • Wooden stairs from parking lot & playground to beach area (sunken into ground, middle of steps slightly dips into hill) 			
BEACH AESTHETICS (i.e. DEAD FISH, ALGAE, OILY SCUM AND DEBRIS): <ul style="list-style-type: none"> • Some dead wood in waterway (not in swimming area) • Clean beach front 			
OTHER INFLUENCES: <ul style="list-style-type: none"> • 			

Durham Middle Dam Beach

GPS		
GPS (FRONT ENTRANCE): LAT: LON:		
GPS (INDIVIDUAL SAMPLING POINTS)		
1.	6.	11.
2.	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.
SIGNS		
LOCATION OF SIGNS: <ul style="list-style-type: none"> • Middle of beach from • On wooden post approx. 10-12' high 		
WARNING <input checked="" type="checkbox"/> POSTED <input type="checkbox"/> NO SIGN <input type="checkbox"/>		



Durham Middle Dam Field Data Summary

Date 2009	June 9	June 15	June 23
Air Temperature (°C)	15C	22C	22C
Water Temperature (°C)	13C	15C	20C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	17.9mm	1mm	0.7mm
Wind Direction	parallel to shore	parallel to shore	parallel to shore
Sunlight	overcast	bright	intermediate
Bather Density	NA	NA	6
Water Fowl	4 (seagulls)		NA
Wave Action	small	small	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences	moderate amount of bird droppings		light bird feces along shoreline
Geometric Mean	112	15	43
Posting	Warning	Warning	Warning

Date 2009	June 29	July 7	July 14
Air Temperature (°C)	21C	14C	20C
Water Temperature (°C)	19C	16C	19C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	6mm	1.2mm	NA
Wind Direction	parallel to shore	parallel to shore	parallel to shore
Sunlight	Intermediate	Intermediate	Intermediate
Bather Density	4	NA	25
Water Fowl	NA	NA	NA
Wave Action	Small	Small	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences		large amount of bird feces at site 1	
Geometric Mean	96	47	18
Posting	Warning	Warning	Warning

Durham Middle Dam

Date 2009	July 21	July 28	August 4
Air Temperature (°C)	19C	22C	25C
Water Temperature (°C)	17C	20C	22C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	NA	NA
Wind Direction	no wind	parallel to shore	no wind
Sunlight	Overcast	Intermediate	Bright
Bather Density	1	6	9
Water Fowl	NA	NA	NA
Wave Action	Still	Small, still	Still
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	18	93	46
Posting	Warning	Warning	Warning

Date 2009	August 11	August 13	August 18
Air Temperature (°C)	21C	23C	18C
Water Temperature (°C)	18C	19C	15C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	72.7mm	NA	19.5mm
Wind Direction	no wind	no wind	parallel to shore
Sunlight	Bright	Bright	Intermediate
Bather Density	15	NA	4
Water Fowl	NA	NA	NA
Wave Action	Still	Still	Small
Water Clarity	<100cm	>100cm	>100cm
Other Influences	Water murky, brown; no clarity	Water a little murky; minimal clarity	
Geometric Mean	707	83	22
Posting	Warning	Warning	Warning

Lion's Head Beach

GPS		
GPS (FRONT ENTRANCE): LAT: LON:		
GPS (INDIVIDUAL SAMPLING POINTS)		
1.	6.	11.
2.	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.
SIGNS		
LOCATION OF SIGNS:		
WARNING <input checked="" type="checkbox"/> POSTED <input type="checkbox"/> NO SIGN <input type="checkbox"/>		



Lion's Head Beach Field Data Summary

Date 2009	June 16	June 23	July 7
Air Temperature (°C)	12C	26C	16C
Water Temperature (°C)		17C	18C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	NA	Light
Wind Direction	Toward shore	No wind	Away from shore
Sunlight	Bright	Bright	Overcast
Bather Density	NA	NA	NA
Water Fowl	Seagulls	NA	24 seagulls/geese
Wave Action	Small	Still water	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences	~ 20 ft. loaded with bird feces		Bird feces at site 5
Geometric Mean	80	45	53
Posting			

Date 2009	July 13	July 20	July 27
Air Temperature (°C)	24C	20C	21C
Water Temperature (°C)	14-15C	16C	16C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	Light	Light
Wind Direction	Away from shore	No wind	No wind
Sunlight	Bright	Intermediate	Overcast
Bather Density	Light	Light	Light
Water Fowl	24 seagulls	NA	12 seagulls
Wave Action	Still water	Still water	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Bird feces at site 5	Bird feces at site 5	
Geometric Mean	11	95	13
Posting			

Lion's Head Beach

Date 2009	August 5	August 12	August 17
Air Temperature (°C)	21C	20C	23C
Water Temperature (°C)	15C	20C	16C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	Light	Light	Light
Wind Direction	Away from shore	No wind	Away from shore
Sunlight	Bright	Bright	Bright
Bather Density	Light	Medium	Light
Water Fowl	Handful- Ducks	NA	Seagulls at site 5
Wave Action	Still water	Still water	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences	NBP Public Works raked the beach		
Geometric Mean	73	103	14
Posting			

Date 2009	September 3	date	date
Air Temperature (°C)	24C		
Water Temperature (°C)	18C		
Rainfall During Sampling	NA		
Rainfall Within 48 Hours	NA		
Wind Direction	No wind		
Sunlight	Bright		
Bather Density	Light		
Water Fowl	NA		
Wave Action	Still water		
Water Clarity	>100cm		
Other Influences	Seagull feces at site 5		
Geometric Mean	11		
Posting			

5.4 Old Woman River Beach

Grey Bruce Public Health Unit

PUBLIC BATHING BEACH RISK ASSESSMENT

BEACH NAME: Old Woman River	DATE: June 1, 2009
CONDUCTED BY: Jos Moerman	COUNTY/MUNICIPALITY: Bruce/ Northern Bruce Peninsula
WASHROOM FACILITIES: SEPTIC <input type="checkbox"/> PORTABLE <input type="checkbox"/> PERMANENT NON/SEPTIC <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	
FOOD PREMISE: FIXED <input type="checkbox"/> TEMPORARY <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
POTENTIAL SOURCES OF CONTAMINATION	
STREAMS <input type="checkbox"/> NUMBER OF RUNOFFS <u> 3 </u> COMBINED/ STORM SEWER OUTLETS <input type="checkbox"/> NUMBER OF OUTLETS <u> </u> NUMBER OF RUNOFFS <u> </u> SANITARY LANDFILLS <input type="checkbox"/> EST. DISTANCE FROM BEACH <u> </u> BIRD POPULATIONS <input checked="" type="checkbox"/> SIZE OF FLOCK 24 SPECIES Geese	SOIL EROSION <input type="checkbox"/> ANIMAL POPULATION <input type="checkbox"/> SIZE OF POPULATION <u> </u> EST DISTANCE FROM BEACH <u> </u> MARINAS <input type="checkbox"/> BOAT RAMPS: YES <input type="checkbox"/> NO <input type="checkbox"/> DOCKING FACILITIES: YES <input type="checkbox"/> NO <input type="checkbox"/> MARINE TRAFFIC: HEAVY <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> N/A <input type="checkbox"/>
SAFETY HAZARDS (i.e. PLAYGROUND EQUIPMENT, STAIRS...):	
BEACH AESTHETICS (i.e. DEAD FISH, ALGAE, OILY SCUM AND DEBRIS):	
OTHER INFLUENCES: <ul style="list-style-type: none"> • Gate at entrance • Washroom with holding tank 	

Old Woman River Beach

GPS		
GPS (FRONT ENTRANCE): LAT: LON:		
GPS (INDIVIDUAL SAMPLING POINTS)		
1.	6.	11.
2.	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.
SIGNS		
LOCATION OF SIGNS: at entrance gate		
WARNING <input checked="" type="checkbox"/> POSTED <input type="checkbox"/> NO SIGN <input type="checkbox"/>		



Old Woman River Beach Field Data Summary

Date 2009	June 17	June 23	June 29
Air Temperature (°C)	20C	20C	20C
Water Temperature (°C)	14C	19C	19C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	Light/Medium	Light/Medium
Wind Direction	No wind	Toward shore	Toward shore
Sunlight	Overcast	Intermediate	Intermediate
Bather Density	NA	NA	NA
Water Fowl	NA	NA	NA
Wave Action	Still water	Small	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	10	172	59
Posting			

Date 2009	July 8	July 13	July 22
Air Temperature (°C)	25C	24C	20C
Water Temperature (°C)	20C	18C	18-19C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	NA	Light
Wind Direction	Toward shore	Toward shore	Parallel to shore
Sunlight	Intermediate	Bright	Intermediate
Bather Density	Light	Light	NA
Water Fowl	NA	NA	NA
Wave Action	Small	Small	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	10	10	11
Posting			

Old Woman River Beach

Date 2009	July 29	August 5	August 12
Air Temperature (°C)	24C	21C	24C
Water Temperature (°C)	20C	19C	20C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	NA	Light
Wind Direction	Toward shore	Toward shore	No wind
Sunlight	Bright/Intermediate	Bright	Bright
Bather Density	NA	Light	Light
Water Fowl	NA	NA	NA
Wave Action	Small	Medium	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences			Water level up
Geometric Mean	20	10	10
Posting			

Date 2009	August 19	September 3	date
Air Temperature (°C)	26C	24C	
Water Temperature (°C)	24C	20C	
Rainfall During Sampling	NA	NA	
Rainfall Within 48 Hours	Light	NA	
Wind Direction	Toward shore	Toward shore	
Sunlight	Bright	Bright	
Bather Density	Medium	Light	
Water Fowl	NA	NA	
Wave Action	Small	Small	
Water Clarity	>100cm	>100cm	
Other Influences		3 boats close to shoreline	
Geometric Mean	10	10	
Posting			

Presqu'ile Point Beach

GPS		
GPS (FRONT ENTRANCE): LAT: LON:		
GPS (INDIVIDUAL SAMPLING POINTS)		
1.	6.	11.
2.	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.
SIGNS		
LOCATION OF SIGNS: •		
WARNING [] POSTED [] NO SIGN [X]		

Presqu'ile Point Beach Field Data Summary

Date 2009	June 3, 2009	June 10,2009	June 16, 2009
Air Temperature (°C)	21C	17C	19C
Water Temperature (°C)	14C	13C	16C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	Light	Heavy	N/A
Wind Direction	Toward shore	Away from shore	Toward Shore
Sunlight	Bright	Intermediate	Intermediate
Bather Density	Light (1person)	N/A	N/A
Water Fowl	5 Seagulls, stayed 5mins	N/A	3 Seagulls, stayed 5mins
Wave Action	Small	Small	Medium
Water Clarity	>100cm	>100cm	>100cm
Other Influences	N/A	N/A	N/A
Geometric Mean		20	10
Posting	N/A	N/A	

Date 2009	June 23, 2009	July 2, 2009	July 6, 2009
Air Temperature (°C)	24C	18C	17C
Water Temperature (°C)	19C	15C	16C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	N/A	Light	N/A
Wind Direction	No wind	No wind	Toward Shore
Sunlight	Bright	Overcast	Overcast
Bather Density	N/A	N/A	N/A
Water Fowl	N/A	Seagulls	30 Canadian geese, stayed entire duration of sampling (30 mins).
Wave Action	Still water	Still water	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Pollen on water, garbage on water, under water and organic debris on shore	Debris on beach, organic matter, expired fireworks, garbage. Garbage in water and on water, feathers floating on water.	Debris on beach, including organic matter, garbage and excrement of Canadian geese (also in water). Many different animal tracks on the beach, dogs, birds, cats.
Geometric Mean	71	175	22
Posting			

Presqu'ile Point Beach

Date 2009	July 15, 2009	July 23, 2009	July 29, 2009
Air Temperature (°C)	20C	18C	26C
Water Temperature (°C)	17C	17C	17C
Rainfall During Sampling	N/A	N/A	N/A
Rainfall Within 48 Hours	N/A	N/A	light
Wind Direction	Parallel to shore	Toward shore	Toward shore
Sunlight	Intermediate	Overcast	Bright
Bather Density	N/A	N/A	Light
Water Fowl	N/A	Canadian Geese	N/A
Wave Action	Still water	Small	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Organic debris on beach, bird tracks and raccoon tracks and bird excrement on beach	Excrement from Canadian Geese on beach	Excrement from Canadian Geese on beach
Geometric Mean	30		62
Posting			

Date 2009	August 6, 2009	August 12, 2009	August 19, 2009	
Air Temperature (°C)	18C	27C	23C	
Water Temperature (°C)	16C	24C	17C	
Rainfall During Sampling	N/A	N/A	N/A	
Rainfall Within 48 Hours	Light	Light	Light	
Wind Direction	Toward Shore	Toward Shore	Toward shore	
Sunlight	Bright	Bright	Intermediate	
Bather Density	N/A	Medium	Medium	
Water Fowl	Canadian Geese (8), Seagull (1), Mallard (1)	N/A	Seagulls	
Wave Action	Small	Medium	Small	
Water Clarity	>100cm	>100cm	>100cm	
Other Influences				
Geometric Mean	41	26	21	
Posting				

6.0 GREY HIGHLANDS BEACH MONITORING:

6.1 Flesherton Pond Beach

Grey Bruce Health Unit

PUBLIC BATHING BEACH RISK ASSESSMENT

BEACH NAME: Flesherton Pond		DATE: May 25, 2009	
CONDUCTED BY: Jenn Van Dyk		COUNTY/MUNICIPALITY: Grey/Grey Highlands	
WASHROOM FACILITIES: SEPTIC <input type="checkbox"/> PORTABLE <input type="checkbox"/> PERMANENT NON/SEPTIC <input checked="" type="checkbox"/> N/A <input type="checkbox"/>			
FOOD PREMISE: FIXED <input type="checkbox"/> TEMPORARY <input type="checkbox"/> N/A <input checked="" type="checkbox"/>			
POTENTIAL SOURCES OF CONTAMINATION			
STREAMS <input type="checkbox"/> NUMBER OF RUNOFFS _____ COMBINED/ STORM SEWER OUTLETS <input type="checkbox"/> NUMBER OF OUTLETS _____ NUMBER OF RUNOFFS _____ SANITARY LANDFILLS <input type="checkbox"/> EST. DISTANCE FROM BEACH _____ BIRD POPULATIONS <input type="checkbox"/> SIZE OF FLOCK SPECIES		SOIL EROSION <input type="checkbox"/> ANIMAL POPULATION <input type="checkbox"/> SIZE OF POPULATION _____ EST DISTANCE FROM BEACH _____ MARINAS <input type="checkbox"/> BOAT RAMPS: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> (private, to the W. of swim area) DOCKING FACILITIES: YES <input type="checkbox"/> NO <input type="checkbox"/> MARINE TRAFFIC: HEAVY <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	
SAFETY HAZARDS (i.e. PLAYGROUND EQUIPMENT, STAIRS....): <ul style="list-style-type: none"> • Pavillion @ beach front (2 picnic tables, 1 garbage can, under a roof) • 			
BEACH AESTHETICS (i.e. DEAD FISH, ALGAE, OILY SCUM AND DEBRIS): <ul style="list-style-type: none"> • some (very little) dead algae & leaves along West portion of swimming shoreline 			
OTHER INFLUENCES: <ul style="list-style-type: none"> • Parking lot approx. 20' from shoreline • Firehall across from parking lot (North side) • Vehicle repair shop across road (East side) • Approx. 3 homes on pond front (NW side) 			

Flesherton Pond Beach

GPS

GPS (FRONT ENTRANCE): LAT:
LON:

GPS (INDIVIDUAL SAMPLING POINTS)

1.	6.	11.
2.	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.

SIGNS

LOCATION OF SIGNS:

- Galvanized post at edge of parking lot & sand area
- No sign present

WARNING POSTED NO SIGN



Flesherton Pond Field Data Summary

Date 2009	June 2	June 9	June 16
Air Temperature (°C)	10C	10C	28C
Water Temperature (°C)	8C	12C	20C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	light	17.9mm	1mm
Wind Direction	parallel to shore	parallel to shore	no wind
Sunlight	overcast	overcast	bright
Bather Density	NA	NA	4
Water Fowl	NA	NA	NA
Wave Action	small	small	still
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	10	31	11
Posting	No	No	No

Date 2009	June 23	June 29	July 7
Air Temperature (°C)	22C	21C	16C
Water Temperature (°C)	20C	19C	15C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	0.7mm	6mm	1.2mm
Wind Direction	parallel to shore	parallel to shore	parallel to shore
Sunlight	intermediate	intermediate	intermediate
Bather Density	3	NA	NA
Water Fowl	NA	NA	NA
Wave Action	small	small	small
Water Clarity	>100cm	>100cm	>100cm
Other Influences	bird feces moderate	bird feces moderate to heavy	bird feces along shoreline
Geometric Mean	20	18	13
Posting	No	No	No

Flesherton Pond

Date 2009	July 14	July 21	July 28
Air Temperature (°C)	20C	20C	22C
Water Temperature (°C)	18C	18C	20C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	NA	20.2mm
Wind Direction	parallel to shore	no wind	parallel to shore
Sunlight	intermediate	overcast	intermediate
Bather Density	1	NA	
Water Fowl	NA	NA	NA
Wave Action	small	still	still
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	13	17	90
Posting	No	No	No

Date 2009	August 4	August 11	August 13	August 18
Air Temperature (°C)	25C			18C
Water Temperature (°C)	22C			15C
Rainfall During Sampling	NA	NA	NA	NA
Rainfall Within 48 Hours	NA	72.7mm	NA	19.5mm
Wind Direction	no wind	no wind	no wind	parallel to shore
Sunlight	bright	bright	bright	overcast
Bather Density	5	2	3	NA
Water Fowl	NA	NA	NA	NA
Wave Action	still	still	still	small
Water Clarity	>100cm	>100cm	>100cm	>100cm
Other Influences				
Geometric Mean	43	287	55	117
Posting	No	No	No	No

Flesherton Pond

Date 2009	August 20	August 25	September 1	
Air Temperature (°C)	Resample-	17C	20C	
Water Temperature (°C)	Data not recorded	15C	18C	
Rainfall During Sampling		NA	NA	
Rainfall Within 48 Hours		0.9mm	NA	
Wind Direction		no wind	no wind	
Sunlight		intermediate	bright	
Bather Density		NA		
Water Fowl		NA	NA	
Wave Action		still	still	
Water Clarity		>100cm	>100cm	
Other Influences				
Geometric Mean	31	25	30	
Posting	No	No	No	

7.0 SOUTH BRUCE PENINSULA BEACH MONITORING:

7.1 Berford Lake Beach

Grey Bruce Public Health Unit

PUBLIC BATHING BEACH RISK ASSESSMENT

BEACH NAME: Berford Lake	DATE: May 29, 2009
CONDUCTED BY: Jos Moerman	COUNTY/MUNICIPALITY: Bruce/ South Bruce Peninsula
WASHROOM FACILITIES: SEPTIC <input type="checkbox"/> PORTABLE <input type="checkbox"/> PERMANENT NON/SEPTIC <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	
FOOD PREMISE: FIXED <input type="checkbox"/> TEMPORARY <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
POTENTIAL SOURCES OF CONTAMINATION	
STREAMS <input checked="" type="checkbox"/> NUMBER OF RUNOFFS <u> 3 </u> COMBINED/ STORM SEWER OUTLETS <input type="checkbox"/> NUMBER OF OUTLETS <u> </u> NUMBER OF RUNOFFS <u> </u> SANITARY LANDFILLS <input type="checkbox"/> EST. DISTANCE FROM BEACH <u> </u> BIRD POPULATIONS <input checked="" type="checkbox"/> SIZE OF FLOCK SPECIES	SOIL EROSION <input type="checkbox"/> ANIMAL POPULATION <input type="checkbox"/> SIZE OF POPULATION <u> </u> EST DISTANCE FROM BEACH <u> </u> MARINAS <input type="checkbox"/> BOAT RAMPS: YES <input type="checkbox"/> NO <input type="checkbox"/> DOCKING FACILITIES: YES <input type="checkbox"/> NO <input type="checkbox"/> MARINE TRAFFIC: HEAVY <input type="checkbox"/> MEDIUM <input type="checkbox"/> LIGHT <input type="checkbox"/> N/A <input type="checkbox"/>
SAFETY HAZARDS (i.e. PLAYGROUND EQUIPMENT, STAIRS...): <ul style="list-style-type: none"> • Merry Go Round • Spiral slide • 2 two bay swings 	
BEACH AESTHETICS (i.e. DEAD FISH, ALGAE, OILY SCUM AND DEBRIS): <ul style="list-style-type: none"> • Wood debris along shoreline 	
OTHER INFLUENCES: <ul style="list-style-type: none"> • High iron leakage from soil at 2 streams/runoffs • Artesian well 	

Berford Lake Beach

GPS		
GPS (FRONT ENTRANCE): LAT: LON:		
GPS (INDIVIDUAL SAMPLING POINTS)		
1.	6.	11.
2.	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.
SIGNS		
LOCATION OF SIGNS:		
WARNING <input type="checkbox"/> POSTED <input type="checkbox"/> NO SIGN <input type="checkbox"/>		



Berford Lake Field Data Summary

Date 2009	June 16	June 23	July 6
Air Temperature (°C)	18C	26C	24C
Water Temperature (°C)		18C	21C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	NA	NA
Wind Direction	No wind	No wind	Toward shore
Sunlight	Bright	Bright	Bright
Bather Density	NA	NA	NA
Water Fowl	50-75 Canada Geese	NA	NA
Wave Action	Still water	Still water	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences		Huge turtle in water	
Geometric Mean	11	10	10
Posting			

Date 2009	July 13	July 20	July 27
Air Temperature (°C)	21C	24C	21C
Water Temperature (°C)	20C	21C	16C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	Light	Medium
Wind Direction	Toward shore	No wind	Toward shore
Sunlight	Intermediate	Bright	Overcast
Bather Density	NA	Light	NA
Water Fowl	NA	NA	NA
Wave Action	Small	Still water	Medium
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	11	10	38
Posting			

Berford Lake

Date 2009	August 5	August 12	August 19
Air Temperature (°C)	21C	26C	26C
Water Temperature (°C)	20C	24C	26C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	Light	NA
Wind Direction	Toward shore	No wind	No wind
Sunlight	Bright	Bright	Bright
Bather Density	NA	Light	Light
Water Fowl	NA	NA	NA
Wave Action	Small	Still water	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Water level up		
Geometric Mean	33	61	15
Posting			

Date 2009	August 25	September 2	date
Air Temperature (°C)		22C	
Water Temperature (°C)	22C	22C	
Rainfall During Sampling		NA	
Rainfall Within 48 Hours		NA	
Wind Direction	Very windy	Toward shore	
Sunlight		Bright	
Bather Density		Light	
Water Fowl		NA	
Wave Action	Large	Small	
Water Clarity	>100cm	>100cm	
Other Influences			
Geometric Mean	22	24	
Posting			

Bluewater Park Beach

GPS		
GPS (FRONT ENTRANCE): LAT: LON:		
GPS (INDIVIDUAL SAMPLING POINTS)		
1.	6.	11.
2.	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.
SIGNS		
LOCATION OF SIGNS:		
WARNING <input type="checkbox"/> POSTED <input type="checkbox"/> NO SIGN <input type="checkbox"/>		

Bluewater Park Field Data Summary

Date 2009	June 16	June 23	July 6
Air Temperature (°C)	8C	26C	24C
Water Temperature (°C)		16C	16-18C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	NA	NA
Wind Direction	No wind	No wind	No wind
Sunlight	Bright	Bright	Bright
Bather Density	NA	NA	NA
Water Fowl	20 seagulls	12 seagulls	NA
Wave Action	Still water	Still water	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences	New boardwalk; beach is raked	3 pools of runoff water ponding	
Geometric Mean	10	59	10
Posting	No		

Date 2009	July 13	July 16	July 20
Air Temperature (°C)	17C	22-24C	23C
Water Temperature (°C)	14C	16C	15C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	NA	Light
Wind Direction	Away from shore	Away from shore	No wind
Sunlight	Intermediate	Bright	Bright
Bather Density	NA	NA	NA
Water Fowl	Handful of seagulls	4-5 seagulls	NA
Wave Action	Still water	Still water	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Water very cold	Bird feces at sites 1&2	
Geometric Mean	532	13	20
Posting			

Bluewater Park

Date 2009	July 27	August 5	August 12
Air Temperature (°C)	22C	20C	24C
Water Temperature (°C)	18C	12C	18C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	Medium	Light	Light
Wind Direction	Away from shore	No wind	No wind
Sunlight	Intermediate	Bright	Bright
Bather Density	NA	NA	NA
Water Fowl	24 seagulls	Handful of seagulls	Many seagulls
Wave Action	Still water	Still water	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Bird feces along shoreline	Water level up; Porta-potties filthy	No toilet paper in portable toilets
Geometric Mean	92	27	129
Posting			

Date 2009	August 19	August 25	September 2
Air Temperature (°C)	21C		20C
Water Temperature (°C)	16C	21.4C	20C
Rainfall During Sampling	NA		NA
Rainfall Within 48 Hours	Light		NA
Wind Direction	No wind	Little wind	No wind
Sunlight	Bright	Bright	Bright
Bather Density	NA		NA
Water Fowl	30 seagulls/50 geese		Seagulls nearby
Wave Action	Still water	Still water	Still water
Water Clarity	>100cm		>100cm
Other Influences	A lot of bird feces along shoreline; portable toilets filthy		
Geometric Mean	206	102	39
Posting			Warning/Unsafe

Bluewater Park

Date	September 9	date	date
Air Temperature (°C)	24C		
Water Temperature (°C)			
Rainfall During Sampling	NA		
Rainfall Within 48 Hours	NA		
Wind Direction	Toward shore		
Sunlight	Bright		
Bather Density	NA		
Water Fowl	Seagulls		
Wave Action	White caps		
Water Clarity	<100cm		
Other Influences	Strong winds; sampling postponed		
Geometric Mean			
Posting	Closed- 3 signs		

The beach was closed on August 27, 2009 due to two consecutive sets of samples which exceeded the provincial standard of a geographic mean of 100 E. coli per 100 ml of water. It remained closed at the end of the bathing season as adverse weather prevented the collection of a second set of samples on September 9, 2009. The inspector expressed concerns about stagnant water ponding on the beach, a large number of waterfowl nearby and the cleanliness of the portable washrooms. Placement of more sand on the beach to alleviate ponding is being considered.

Oliphant- Lonely Island Field Data Summary

Date 2009	July 8	July 14	July 24
Air Temperature (°C)		18C	18C
Water Temperature (°C)		16C	17C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	Light	NA	Medium
Wind Direction	Toward shore	Toward shore	Toward shore
Sunlight	Bright	Bright	Overcast
Bather Density	NA	NA	NA
Water Fowl	NA	NA	NA
Wave Action	Still water	Still water	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Shallow Water	Shallow Water	Shallow Water
Geometric Mean	10	43	128
Posting	No	No	No

Date 2009	July 28	August 4	August 14
Air Temperature (°C)	19C	21C	22C
Water Temperature (°C)	19C	19C	20C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	Light	Light
Wind Direction	Toward shore	Toward shore	Toward shore
Sunlight	Intermediate	Intermediate	Bright
Bather Density	NA	NA	NA
Water Fowl	NA	NA	NA
Wave Action	Still water	Small	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Shallow Water	Shallow Water	Shallow Water
Geometric Mean	179	941	32
Posting	No	Warning, Unsafe	Warning, Unsafe

Oliphant- Lonely Island

Date 2009	August 19	August 25	September 2
Air Temperature (°C)	19C	21C	14C
Water Temperature (°C)	18C	21C	12
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	Medium	NA	NA
Wind Direction	Toward shore	Toward shore	Toward shore
Sunlight	Bright	Bright	Bright
Bather Density	NA	NA	NA
Water Fowl	NA	NA	NA
Wave Action	Still water	Still water	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Shallow Water	Shallow Water	Shallow Water
Geometric Mean	193	19	10
Posting	Warning, Unsafe	Warning, Unsafe	Warning, Unsafe

Lonely Island Beach was posted as unsafe on July 30, 2009 due to two consecutive sets of samples which exceeded acceptable bacterial levels. The beach was deemed safe for bathing on September 4, 2009 when two consecutive sets of samples indicated that bacterial levels were within Ministry of Health and Long-Term Care standards. It was noted that the water level in the bathing area was less than 1 metre in depth; in order to accurately determine water quality and the geometric mean of the bathing area there must be 1 metre of water at the sampling sites.

7.4 Red Bay Beach

Grey Bruce Public Health Unit

PUBLIC BATHING BEACH RISK ASSESSMENT

BEACH NAME: Red Bay		DATE: June 1, 2009	
CONDUCTED BY: Jos Moerman		COUNTY/MUNICIPALITY: Bruce/ South Bruce Peninsula	
WASHROOM FACILITIES: SEPTIC [] PORTABLE [] PERMANENT NON/SEPTIC [X] N/A []			
FOOD PREMISE: FIXED [] TEMPORARY [] N/A [X]			
POTENTIAL SOURCES OF CONTAMINATION			
STREAMS [X] NUMBER OF RUNOFFS <u> 1 </u>		SOIL EROSION []	
COMBINED/STORM SEWER OUTLETS[X] NUMBER OF OUTLETS <u> 1 </u> NUMBER OF RUNOFFS _____		ANIMAL POPULATION [] SIZE OF POPULATION _____ EST DISTANCE FROM BEACH _____	
SANITARY LANDFILLS [] EST. DISTANCE FROM BEACH _____		MARINAS [] BOAT RAMPS: YES [X] NO [] DOCKING FACILITIES: YES [X] NO [] MARINE TRAFFIC: HEAVY [] MEDIUM [] LIGHT [] N/A [X]	
BIRD POPULATIONS [X] SIZE OF FLOCK SPECIES			
SAFETY HAZARDS (i.e. PLAYGROUND EQUIPMENT, STAIRS....): <ul style="list-style-type: none"> • Playground, Merry Go Round, slide, swings • Picnic tables, garbage receptacles 			
BEACH AESTHETICS (i.e. DEAD FISH, ALGAE, OILY SCUM AND DEBRIS): <ul style="list-style-type: none"> • Vegetation in water 			
OTHER INFLUENCES: <ul style="list-style-type: none"> • Iron leakage at stream 			

Red Bay Beach

GPS		
GPS (FRONT ENTRANCE): LAT: LON:		
GPS (INDIVIDUAL SAMPLING POINTS)		
1.	6.	11.
2.	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.
SIGNS		
LOCATION OF SIGNS:		
WARNING <input checked="" type="checkbox"/> POSTED <input type="checkbox"/> NO SIGN <input type="checkbox"/>		



Red Bay Beach Field Data Summary

Date 2009	June 17	June 23	July 8
Air Temperature (°C)	24C	26C	24C
Water Temperature (°C)	18C	22C	20C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	NA	NA
Wind Direction	No wind	No wind	Toward shore
Sunlight	Overcast	Bright	Intermediate
Bather Density	NA	NA	Light
Water Fowl	NA	NA	NA
Wave Action	Still water	Still water	Medium
Water Clarity	>100cm	>100cm	>100cm
Other Influences		Pollen on water	
Geometric Mean	10	10	11
Posting			

Date 2009	July 14	July 20	July 27
Air Temperature (°C)	16C	No Data	24C
Water Temperature (°C)	20C		20C
Rainfall During Sampling	NA		NA
Rainfall Within 48 Hours	NA		Medium
Wind Direction	Toward shore		Toward shore
Sunlight	Bright		Intermediate
Bather Density	Light		Light
Water Fowl	NA		NA
Wave Action	Medium		Medium
Water Clarity	>100cm		>100cm
Other Influences	Windy, incoming waves		Black soil particles floating in water
Geometric Mean	10	10	201
Posting			

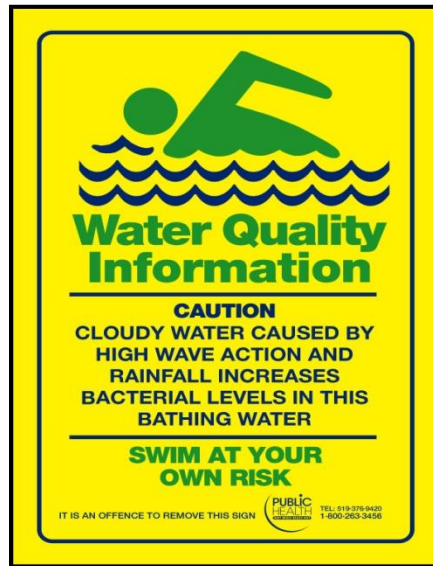
Red Bay Beach

Date 2009	July 30	August 5	August 12
Air Temperature (°C)	20C	20C	24C
Water Temperature (°C)	20C	19C	22C
Rainfall During Sampling	NA	NA	NA
Rainfall Within 48 Hours	NA	NA	Light
Wind Direction	Toward shore	Toward shore	Toward shore
Sunlight	Intermediate	Bright	Bright
Bather Density	NA	Light	Light
Water Fowl	NA	NA	NA
Wave Action	Small	Large	Still water
Water Clarity	>100cm	>100cm	>100cm
Other Influences	Resample	Water level up	Water levels up
Geometric Mean	25	16	39
Posting			

Date 2009	August 19	August 25	September 2
Air Temperature (°C)	24C		22C
Water Temperature (°C)	21C	22C	22C
Rainfall During Sampling	NA		NA
Rainfall Within 48 Hours	NA		NA
Wind Direction	Toward shore	Moderate	Toward shore
Sunlight	Bright		Bright
Bather Density	Light		Light
Water Fowl	NA		NA
Wave Action	Small	Medium	Small
Water Clarity	>100cm	>100cm	>100cm
Other Influences			
Geometric Mean	69	10	10
Posting			

8.0 Beach Postings

Most public beaches sampled by Public Health have a yellow warning sign. These signs inform bathers that murky water, which is usually associated with high wave action or heavy rainfall, may mean high levels of bacteria are present in the water at that time.



When the E. coli levels at a beach exceed a geometric mean of 100 per 100ml of water the Beach Management Protocol requires the beach to be marked unsafe for bathing. Two consecutive sets of samples must be taken to confirm the results before action is taken as environmental factors, such as adverse weather, may cause results to vary. If the water quality is confirmed to be unsafe, a white sign is posted at the bathing area. The sign is removed after two consecutive sets of samples indicate that the water quality does not exceed the provincial standard.



9.0 Blue Flag Program

The Blue Flag program is administered by an independent, non-profit organization known as the Foundation for Environmental Education. This international program awards an eco-label to beaches which meet the strict criteria set out by Blue Flag. This criteria includes water quality, cleanliness, environmental education, safety, and environmental management.

In Canada the Blue Flag program is administered by a national, charitable organization known as Environmental Defense. Public Health is responsible for conducting a pre-season risk assessment, routine weekly water quality monitoring and uploading the results to the Blue Flag website.

In Grey Bruce there are 4 Blue Flag beaches: Sauble Beach in the Municipality of South Bruce Peninsula, Station Park Beach in the Municipality of Kincardine, and Little River Park and Northwinds Beach in the Town of the Blue Mountains.

The Blue Flag website is available at www.blueflag.org . The Environmental Defense website is available at www.environmentaldefense.ca .

Blue Flag logo



10.0 Recommendations

The following recommendations are based on observations and experiences reported during the execution of the beach management program:

- Develop an electronic database for recording risk assessments, field data and field data summaries.
- Incorporate this database as a Healthspace program.
- Continue to offer a beach management program on contract with municipalities.
- Re-evaluate the efficacy of sampling beaches which do not meet the guidelines of the Beach Management Protocol ...i.e. Oliphant- Lonely Island (the bathing area is only about 1 foot in depth)
- Convene an organizational meeting with the staff who are conducting the program to ensure that there is consistency in delivering the program and to address any questions or concerns.

11.0 Conclusions:

This was the first year that the Beach Management program was conducted under the guidelines of the new Ontario Public Health Standards (2008) and the Beach Management Protocol (2008).

The 2009 Beach Management program was delivered by Public Health Inspectors as part of their regular duties this year. Beaches were monitored as regularly as possible despite a very cold, wet start to the bathing season and time constraints. The inspectors were very diligent in the delivery of the program and responding to enquiries from the public. Thanks, in particular, to Inspector Stevenson for demonstrating sampling techniques to students at Sauble Beach.

Oliphant- Lonely Island and Bluewater Park were the only beaches to be closed due to adverse sampling results from two consecutive sets of samples. The bathing area at Lonely Island beach is too shallow to attain an accurate geometric mean. Bluewater Park is visited by a large number of waterfowl and may require more sand and attention to maintenance.

12.0 References:

Ontario Public Health Standards: Safe Water (2008). Ontario Ministry of Health and Long-Term Care. Queens Printer for Ontario

Beach Management Protocol (2008). Ontario Ministry of Health and Long-Term Care. Queens Printer for Ontario

Beach Report 2008, Grey Bruce Health Unit. www.publichealthgreybruce.on.ca . Accessed May 15, 2009

RISK ASSESSMENT (cont'd)

GPS		
GPS (FRONT ENTRANCE):		
GPS (INDIVIDUAL SAMPLING POINTS)		
1.	6.	11.
2.	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.
SIGNS		
LOCATION OF SIGNS: •		
WARNING [] POSTED [] NO SIGN []		

14.0 Appendix B

PUBLIC BATHING BEACH FIELD DATA REPORT

SAMPLER'S NAME:		DATE:		TIME:	
BEACH NAME:			LOCATION:		
BACTERIOLOGICAL COUNTS:					
NUMBER	E-COLI	OTHER (SPECIFY)	TEMPERATURE (*CELCIUS) [] WATER TEMPERATURE []		
			RAINFALL DURING SAMPLING: LIGHT [] MEDIUM [] HEAVY [] N/A []		
			RAINFALL WITHIN 48 HOURS: LIGHT [] MEDIUM [] HEAVY [] N/A []		
			WIND DIRECTION: TOWARD SHORE [] AWAY FROM SHORE [] PARALLEL TO SHORE [] NO WIND []		
			SUNLIGHT: BRIGHT [] INTERMEDIATE [] OVERCAST []		
			BATHER DENSITY: LIGHT [] MEDIUM [] HEAVY [] N/A []		
			WATER FOWL: - (SPECIFY) SIZE OF FLOCK [] DURATION OF STAY [] N/A []		
			WAVE ACTION: SMALL [] MEDIUM [] LARGE [] WHITE CAPS [] STILL WATER []		
			WATER CLARITY: < 100cm [] > 100 cm []		
			OTHER INFLUENCES:		
GEOMETRIC MEAN:					
POSTED: WARNING [] UNSAFE [] NOT POSTED []					