

**FINAL INTERIM REPORT**

on

**THE LAKE GEORGE COLIFORM MONITORING PROGRAM**

&

**BATHING BEACH ASSESSMENT PROGRAM**

by

Darrin Fresh Water Institute  
Bolton Landing, NY

**Supported By The Fund for Lake George**

September 11, 1997

## Suggestions for Interpretation of Coliform Data

The Lake George Coliform Monitoring Program collects water samples from suspected contamination sources throughout the Lake George basin. Three primary measurements are then made for each sample: Total Coliform (TC), Fecal Coliform (FC) and Fecal Streptococcus (FS) bacteria. These bacteria serve as indicators of the presence of animal or human waste. The presence of elevated levels of these bacteria indicate that potentially disease-causing protozoa, bacteria and other microorganisms may be present in the water. Animal wastes also contain plant nutrients and contaminants which are deleterious to the quality of Lake George water.

New York State Department of Health has determined maximum allowable bacterial levels for contact recreation (swimming, wading, etc.). A table of these bacterial concentrations is included. When these maximum bacterial levels are exceeded, the New York State Department of Health is empowered to close the location to bathing until the problem or problems are corrected. These levels are used by the Darrin Fresh Water Institute to determine appropriate responses to various bacterial concentrations found during sampling. A table of these responses is included.

Interpretation of data to determine and locate sources of contamination (human or other warm-blooded animal) requires more than current bacterial levels. Knowledge of past history of the site, weather, geology of the area, drainage patterns, and some information on human activities in the area are also necessary. To differentiate between human waste and that produced by other warm-blooded animals, it is sometimes helpful to refer to the ratio of fecal coliform to fecal streptococcus bacteria (FC/FS). An FC/FS ratio of 4 or greater is generally considered indicative of contamination of human origin. A ratio less than 1 suggests waterfowl and ratios between these two values can indicate multiple sources. Ratios should not be used if fecal streptococcus numbers fall below 100.

With the focus of suspected bacterial contamination, results from this program should not be interpreted as indicative of the general water quality of Lake George.

Maximum Allowable Levels of Coliform Bacteria in Waters Used for Contact Recreation (NYS Department of Health)		
Bacterial Test	Maximum 5 Sample Mean	Maximum Single Result
Total Coliform	2400 per 100 ml	5000 per 100 ml
Fecal Coliform	200 per 100 ml	1000 per 100 ml

### *Action Levels of the Fund for Lake George Coliform Monitoring Program*

In order to respond effectively to contamination problems detected during the Fund for Lake George Coliform Monitoring Program, the following actions will occur:

1. If 200 or more fecal coliform bacteria per 100 milliliters are reported, the site will be resampled during the next sampling cycle.
2. If 400 or more fecal coliform bacteria per 100 milliliters are reported, the site will be resampled within 24 to 48 hours. The data for both samples will be reported to the LGPC and the appropriate regulatory agency immediately if the second sample remains above the action levels. If the second sample result is below action levels, an appropriate response will be determined at the next meeting of the Lake George Water Quality Advisory Group.

Follow-up samples to locate specific shoreline problems are not within the guidelines of this program and will be the responsibility of the appropriate regulatory agencies. The Darrin Fresh Water Institute will provide technical assistance upon request, however the cost of additional sampling and analysis must be covered by the local, county or state agency responsible for water quality complaints.

1997 LAKE GEORGE COLIFORM MONITORING PROGRAM						
SITE	DATE	TC/100mls	FC/100mls	FS/100mls	FC/FS	NOTES
<b>TOWN OF BOLTON</b>						
Basin Bay Brook -North	28-Jul-97	7100	3925	945	4.2	cold, clear, low flow
Basin Bay Brook -North	29-Jul-97	750	430	170	2.5	clear, low flow
Basin Bay Brook -North	11-Aug-97	900	7500	560	13.4	moderate flow
Basin Bay Brook -North	12-Aug-97	770	210	660	0.3	
Basin Bay Brook -North	25-Aug-97	440	10	140	0.1	kids, flow
Basin Bay Brook -South	25-Aug-97	540	10	60	0.2	froth, bubbles
Bay S of Braley Point	4-Aug-97	60	lt 10	lt 10		clear
Bixby Beach	28-Jul-97	270	65			cloudy, no flow @ culvert
Bixby Beach Culvert	21-Jul-97	610	740	34100	0.0	
Braley Pt. Culvert	25-Aug-97	220	10	lt 10	0.0	no flow
Edmunds Brook	28-Jul-97	520	30	340	0.1	moderate flow, clear, cold
Finkle Brook	30-Jun-97	880	680	115	5.9	cold, flow
Finkle Brook	1-Jul-97	30	lt 10	30		low flow
Finkle Brook	14-Jul-97	195	30	100	0.3	clear
Glen Island	7-Jul-97	lt 10	5	lt 10		clear
Huddle Bay Brook	30-Jun-97	500	135	290	0.5	3 ducks, low flow
Huddle Bay Brook	11-Aug-97	100	95	170	0.6	heavy flow, waterfowl
Huddle Beach Brook	30-Jun-97	4700	150	750	0.2	cold, low flow
Huddle Beach Brook	11-Aug-97	50	70	580	0.1	warm, lots of algae
Middleworth Bay Brook - South	25-Aug-97	270	8	300	0.0	low flow, clear, cold
Middleworth Bay-S	11-Aug-97	1080	1120	180	6.2	many ducks
Middleworth Bay-S	12-Aug-97	640	90	600	0.2	low flow
Pioneer Pt. Culvert	7-Jul-97	170	20	110	0.2	low flow
Pole Hill Pond Rd.	7-Jul-97	130	30	40	0.8	no flow
S. Sawmill - Headwater	2-Jul-97	350	115			low flow, orange floc
S. Sawmill @ 9N	2-Jul-97	3700	185			low flow, musty
S. Sawmill Bay Brook	30-Jun-97	4900	420	2250	0.2	no flow, frogs
S. Sawmill Bay Brook	2-Jul-97	98000	7100			turbid, oily
S. Sawmill Bay Brook	14-Jul-97	10700	3000	600	5.0	low flow, cloudy
S. Sawmill Bay Brook	15-Jul-97	57000	5100	10000		low flow, cloudy
S. Sawmill Bay Brook	28-Jul-97	7300	1700	1150	1.5	green, cloudy, low visibility
S. Sawmill Bay Brook	30-Jul-97	12000	600	400	1.5	stagnant
S. Sawmill Bay Brook	2-Sep-97	790	210	420	0.5	moderate flow, clear, no odor
Stewart Brook	11-Aug-97	300	110	1470	0.1	low flow
Veterans Beach Culvert	28-Jul-97	4210	780	625	1.2	mucky bottom
Veterans Beach Culvert	30-Jul-97	110	125	530	0.2	low flow
Veterans Beach Culvert	11-Aug-97	250	70	110	0.6	dry

1997 LAKE GEORGE COLIFORM MONITORING PROGRAM						
SITE	DATE	TC/100mls	FC/100mls	FS/100mls	FC/FS	NOTES
<b>TOWN OF DRESDEN</b>						
Agnes Island Brook	4-Aug-97	750	17	140	0.1	no flow, very cold
Black Mt. Pt.	7-Jul-97	80	35	lt 10		2 swimmers, 3 boats
Bluff Head Creek	18-Aug-97	900	30	170	0.2	low flow, stagnant
Foster Brook	7-Jul-97	50	15	35	0.4	moderate flow
Foster Brook	18-Aug-97	800	75	203	0.4	low flow, very cold
Pickeral Bay Brook	4-Aug-97	5	lt 10	lt 10		dry
Sunset Bay Brook-E	7-Jul-97	295	120	85	1.4	no flow, mucky
Sunset Bay Brook-E	21-Jul-97	310	150	130	1.2	ducks
Sunset Bay Brook-E	18-Aug-97	490	90	500	0.2	no flow, 2 ducks
Sunset Bay Brook-E	2-Sep-97	190	190	40	4.8	many ducks
Sunset Bay Brook-W	7-Jul-97	185	85	30	2.8	2 ducks
Sunset Bay Brook-W	18-Aug-97	320	200	610	0.3	several ducks, algae, warm
Sunset Bay Brook-W	2-Sep-97	30	lt 10	lt 10		clear, calm
Wyatts Bay Culvert	7-Jul-97	40	35	20	1.8	no flow
Wyatts Bay Culvert	18-Aug-97	600	380	51	7.5	low flow, algae
Wyatts Bay Culvert	2-Sep-97	lt 10	lt 10	lt 10		low flow, algae blooms
<b>TOWN OF FORT ANN</b>						
Barber Bay Wetland Brook	25-Aug-97	100	10	40	0.3	wetland outflow
Butternut Brook	14-Jul-97	120	25	60	0.4	black tint
Butternut Brook	25-Aug-97	30	30	lt 10	0.0	clear
Log Bay	30-Jun-97	9	4	12	0.3	1boat
Log Bay	28-Jul-97	9	8	62	0.1	3-4 boats, 3 bathers
Pilot Knob Marina	25-Aug-97	10	lt 10	lt 10		little activity
<b>TOWN OF HAGUE</b>						
"B" Point	21-Jul-97	30	lt 10	10		low flow
Cape Cod Village Bk.	7-Jul-97	35	25	90	0.3	
Forest Bay Brook	21-Jul-97	4460	lt 10	60		rapid flow, cold
Forest Bay Brook	18-Aug-97	720	60	203	0.3	moderate flow, cold, clear
Forest Bay Brook	2-Sep-97	420	20	80	0.3	moderate flow, clear, cold
Hague Boat Launch Culvert	7-Jul-97	45	35	10	3.5	
Hague Boat Launch Culvert	18-Aug-97	230	20	20	1.0	low flow
Hague Brook	7-Jul-97	115	5	80	0.1	
Indian Kettles	21-Jul-97	40	lt 10	lt 10		taken off dock
Jabe Pond Brook	4-Aug-97	170	lt 10	150		low flow, very cold, algae
NW Island Harbor	21-Jul-97	670	220	680	0.3	ditch@Olivers
Rogers Rock Beach Brook-N	21-Jul-97	1460	320	490	0.7	slimy, low flow
Rogers Rock Beach Brook-N	23-Jul-97	1300	460	475	1.0	low flow
Rogers Rock Beach Brook-N	4-Aug-97	670	90	60	1.5	low flow, algae, cloudy
Rogers Rock Beach Brook-N	18-Aug-97	1570	540	790	0.7	low flow, lots of algae
Rogers Rock Beach Brook-N	2-Sep-97	2210	150	2410	0.1	low flow

1997 LAKE GEORGE COLIFORM MONITORING PROGRAM						
SITE	DATE	TC/100mls	FC/100mls	FS/100mls	FC/FS	NOTES
<b>TOWN OF HAGUE (Cont'd)</b>						
Rogers Rock Beach Brook-S	21-Jul-97	2570	100	220	0.5	low flow, one duck
Rogers Rock Beach Brook-S	2-Sep-97	810	120	34	3.5	stagnant
Sabbath Day Point Brook	4-Aug-97	50	lt 10	lt 10		3 ducks, moderate flow
Silver Bay Brook	4-Aug-97	25	10	lt 10		low flow, clear
Temple Island Culvert	21-Jul-97	700	100	120	0.8	moderate flow
Temple Island Culvert	18-Aug-97	1020	30	250	0.1	moderate flow, fishy odor
Temple Island Culvert	2-Sep-97	580	40	250	0.2	rapid flow
<b>TOWN OF LAKE GEORGE</b>						
Antlers Brook	30-Jun-97	190	15	65	0.2	1 frog, low flow
East Brook	14-Jul-97	475	220	180	1.2	cloudy
East Brook	28-Jul-97	300	90	200	0.5	cold, cloudy, moderate flow
English Brook	30-Jun-97	100	50	60	0.8	moderate flow
Green Harbor	14-Jul-97	15	15	60	0.3	cloudy
King James Spring	14-Jul-97	1550	770	190	4.1	faint odor
King James Spring	16-Jul-97	1490	1150	250	4.6	2 ducks
King James Spring	28-Jul-97	1190	495	1340	0.4	strong flow, clear
King James Spring	30-Jul-97	570	110	5	22.0	heavy flow
King James Spring	11-Aug-97	2320	2830	570	5.0	rapid flow, several ducks
King James Spring	12-Aug-97	960	70	70	1.0	ducks, heavy flow
King James Spring	25-Aug-97	1110	430	lt 10	0.0	many ducks, good flow
King James Spring	2-Sep-97	850	70	110	0.6	clear, cold, good flow
Lake Avenue Culvert - N	11-Aug-97	570	640	280	2.3	no flow, debris
Lake Avenue Culvert - N	25-Aug-97	5500	4800	150	32	stagnant, warm, ducks
Lake Avenue Culvert - N	27-Aug-97	1800	500	200	2.5	stagnant, oil, floating debris
Lake Avenue Culvert - N	2-Sep-97	2500	400	240	1.7	low flow, floating debris
Lake Avenue Culvert-S	28-Jul-97	200	130	10	13.0	debris, clear
Lake Avenue Culvert-S	12-Aug-97	5300	1200	770	1.6	ducks, no flow
LG Water Treatment Culvert	28-Jul-97	40	5	70	0.1	no flow, dead fish
Marine Village Culvert	30-Jun-97	12200	470	3735	0.1	flow, 30 ducks being fed
Marine Village Culvert	2-Jul-97	2850	185			strong flow, clear
Marine Village Culvert	14-Jul-97	2450	100	490	0.2	heavy flow
Marine Village Culvert	25-Aug-97	280	160	10	16.0	waves, rapid flow
S. Tea Island Brook	30-Jun-97	440	140	220	0.6	many Ducks
Shepards Cove Culvert	28-Jul-97	lt 10	LA	lt 10		moderate flow, odor
Shepards Cove Culvert	11-Aug-97	100	lt 10	lt 10		moderate flow, very warm
Sheriffs Dock	30-Jun-97	160	50	10	5.0	no flow, ducks
Smith Brook	11-Aug-97	580	130	310	0.4	heavy flow, ducks
Stebbings Brook	30-Jun-97	610	110	230	0.5	low flow, debris
West Brook	28-Jul-97	230	25	140	0.2	cold, cloudy, moderate flow

1997 LAKE GEORGE COLIFORM MONITORING PROGRAM						
SITE	DATE	TC/100mls	FC/100mls	FS/100mls	FC/FS	NOTES
<b>TOWN OF PUTNAM</b>						
Clark Hollow Bay Brook	18-Aug-97	lt 10	lt 10			dry
Dark Bay Brook	21-Jul-97	60	lt 10	lt 10		dry
Glenburnie Pumphouse Stream	21-Jul-97	930	140	620	0.2	low flow
Glenburnie Pumphouse Stream	18-Aug-97	20	lt 10			no flow
Glenburnie Pumphouse Stream	2-Sep-97	80	lt 10	30		moderate flow, algae
Gull Bay Brook	7-Jul-97	210	30	75	0.4	ducks
Gull Bay Brook	18-Aug-97	6700	385	378	1.0	low flow, algae, warm
Gull Bay Brook	2-Sep-97	7400	150	520	0.3	
Lamb Shanty Bay Brook	4-Aug-97	5	lt 10	lt 10		no flow
Smith Bay Brook	4-Aug-97	90	15	20	0.8	low flow
Sucker Brook	21-Jul-97	70	lt 10	20		moderate flow
<b>TOWN OF QUEENSBURY</b>						
Assembly Pt. Brook	14-Jul-97	70	lt 10	1055		no flow
Assembly Pt. Brook	25-Aug-97	180	10	183	0.1	dry
Assembly Pt. Wetland	14-Jul-97	175	10	10	1.0	mucky
Dunhams Bay Brook	28-Jul-97	131	46	20	2.3	water brown, plant debris
Harris Bay Culvert	14-Jul-97	875	20	70	0.3	little flow
Harris Bay Culvert	25-Aug-97	180	60	lt 10	0.0	oil, algae, low flow
Joshua Rock Brook	14-Jul-97	800	lt 1	20		suspended sediment
NE Warner Bay Culvert	14-Jul-97	55	15	20	0.8	ducks
Plum Pt.-Tumblebrook	28-Jul-97	6	1	1	1.0	low flow
Sandy Bay	11-Aug-97	200	lt 10	67		3 boats, ducks, a few bathers
Speaker Heck Island	30-Jun-97	250	20	62	0.3	debris
Warner Bay Culvert	11-Aug-97	20	20	50	0.4	no flow, floating debris
<b>TOWN OF TICONDEROGA</b>						
Howes Landing Culvert	21-Jul-97	60	lt 10	lt 10		dry
Mossy Point Boat Launch	4-Aug-97	20	lt 10	lt 10		1 boat
Spencer Point Culvert	4-Aug-97	5	lt 10	lt 10		no flow
Tiroga Point Channel	4-Aug-97	35	lt 10	lt 10		cloudy

*Action Levels of the Fund for Lake George Beach Testing Program*

In order to respond effectively to contamination problems detected during the Fund for Lake George Coliform Monitoring Program, the following actions will occur:

1. If 100 or more fecal coliform bacteria per 100 milliliters are reported, the site will be resampled during the next sampling cycle.
2. If 200 or more fecal coliform bacteria per 100 milliliters are reported, the site will be resampled within 24 to 48 hours. The data for both samples will be reported to the LGPC and the appropriate regulatory agency immediately if the second sample remains above the action levels. If the second sample result is below action levels, an appropriate response will be determined at the next meeting of the Lake George Water Quality Advisory Group.

Follow-up samples to locate specific shoreline problems are not within the guidelines of this program and will be the responsibility of the appropriate regulatory agencies. The Darrin Fresh Water Institute will provide technical assistance upon request, however the cost of additional sampling and analysis must be covered by the local, county or state agency responsible for water quality complaints.

Maximum Allowable Levels of Coliform Bacteria in Waters Used for Contact Recreation (NYS Dept. of Health)		
Bacterial Test	Max. 5 Sample Mean	Max. Single Result
Total Coliform	2400 per 100 mls	5000 per 100 mls
Fecal Coliform	200 per 100 mls	1000 per 100 mls



## beaches

1997 LAKE GEORGE BEACH SAMPLING PROGRAM				
SITE	DATE	TC/100mls	FC/100mls	NOTES
Rogers Memorial Beach	30-Jun-97	265	25	debris/bathers
Rogers Memorial Beach	14-Jul-97	195	195	several swimmers
Rogers Memorial Beach	16-Jul-97	280	170	swimmers
Rogers Memorial Beach	28-Jul-97	550	300	no bathers
Rogers Memorial Beach	29-Jul-97	30	10	many bathers
Rogers Memorial Beach	11-Aug-97	30	lt 10	no bathers
Rogers Memorial Beach	25-Aug-97	lt 10	lt 10	clear
Veterans Park Beach	30-Jun-97	25	30	few bathers
Veterans Park Beach	14-Jul-97	85	35	several swimmers
Veterans Park Beach	28-Jul-97	40	20	a few swimmers
Veterans Park Beach	11-Aug-97	80	lt 10	no bathers/sea gulls
Veterans Park Beach	25-Aug-97	lt 10	lt 10	gulls, clear
Fort Ann Town Beach	30-Jun-97	45	50	4 bathers
Fort Ann Town Beach	14-Jul-97	2090	145	no bathers
Fort Ann Town Beach	28-Jul-97	2	1	no bathers/clear
Fort Ann Town Beach	11-Aug-97	20	lt 10	no bathers/smell of dead fish
Fort Ann Town Beach	25-Aug-97	10	lt 10	debris, garbage
Shepards Park Beach	30-Jun-97	28	15	3 bathers/5ducks
Shepards Park Beach	14-Jul-97	TNTC	7020	no bathers
Shepards Park Beach	16-Jul-97	865	425	no bathers
Shepards Park Beach	17-Jul-97	145	140	3 bathers
Shepards Park Beach	18-Jul-97	590	400	turbid, many bathers
Shepards Park Beach	22-Jul-97	735	610	3 ducks, 4 seagulls
Shepards Park Beach	28-Jul-97	120	60	several swimmers/2-3 ducks
Shepards Park Beach	11-Aug-97	50	lt 10	no bathers
Shepards Park Beach	25-Aug-97	30	30	ducks, no bathers
Diamond Point Beach	30-Jun-97	48	3	turbid
Diamond Point Beach	14-Jul-97	5090	415	1 bather
Diamond Point Beach	16-Jul-97	25	lt 10	no bathers
Diamond Point Beach	28-Jul-97	50	1	rain/no bathers
Diamond Point Beach	11-Aug-97	50	lt 10	no bathers
Diamond Point Beach	25-Aug-97	60	20	bathers, turbid
Ticonderoga Beach	7-Jul-97	75	35	report of swimmers itch
Ticonderoga Beach	21-Jul-97	10	10	calm, clear
Ticonderoga Beach	4-Aug-97	lt 10	lt 10	no bathers
Ticonderoga Beach	18-Aug-97	20	lt 10	no bathers, warm
Ticonderoga Beach	2-Sep-97	lt 10	lt 10	no bathers
Hague Beach	7-Jul-97	10	30	no bathers
Hague Beach	21-Jul-97	200	20	calm, clear
Hague Beach	4-Aug-97	45	lt 10	no bathers
Hague Beach	18-Aug-97	lt 10	30	cloudy, no bathers
Hague Beach	2-Sep-97	20	lt 10	choppy, one duck

## beaches

1997 LAKE GEORGE BEACH SAMPLING PROGRAM				
SITE	DATE	TC/100mls	FC/100mls	NOTES
Washington Co. Beach	7-Jul-97	15	10	no bathers
Washington Co. Beach	21-Jul-97	190	30	several ducks
Washington Co. Beach	4-Aug-97	30	2	no bathers
Washington Co. Beach	18-Aug-97	20	40	no bathers
Washington Co. Beach	2-Sep-97	30	10	calm
Gull Bay Beach	7-Jul-97	145	125	5 ducks
Gull Bay Beach	21-Jul-97	380	60	no bathers
Gull Bay Beach	4-Aug-97	30	15	1 bather/3 ducks
Gull Bay Beach	18-Aug-97	40	50	2 bathers
Gull Bay Beach	2-Sep-97	10	lt 10	clear, calm
Sabbath Day Point Beach	7-Jul-97	65	5	duck feathers
Sabbath Day Point Beach	21-Jul-97	20	10	no bathers
Sabbath Day Point Beach	4-Aug-97	2	lt 1	1 bather
Sabbath Day Point Beach	18-Aug-97	40	lt 10	no bathers
Sabbath Day Pt. Beach	2-Sep-97	lt 10	lt 10	rough, 1 1/2 ft waves

*COLIFORM BACTERIA  
SAMPLES EXCEEDING  
200 FECAL COLIFORM  
PER 100 MILLILITERS  
OF SAMPLE*

