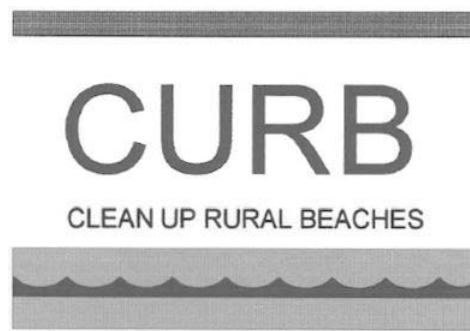


St. Clair Region Conservation Authority
Clean Up Rural Beaches (CURB)
Implementation Program
Year 2
Annual Report

April 1, 1993 to March 31, 1994



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Prepared for:

Ontario Ministry of the Environment and Energy



Background

The Clean Up Rural Beaches (CURB) Implementation Program is a \$57 million financial assistance program initiated by the Ontario Ministry of the Environment (MOE) in 1991. The program is proposed to operate for 10 years, closing in the year 2001. The goal of the program is to improve the water quality at rural beaches by providing landowners in designated CURB watersheds with grant money to repair problems on the farm and homestead which have been contributing bacteria to surface waters.

Designated CURB watersheds are those watersheds in the province which have been identified as having an impact on a downstream beach. Under the Provincial Rural Beaches Program, Conservation Authorities were funded to study these watersheds and produce a CURB Plan. The CURB Plan is a report which identified the relative impact of pollution sources in the watershed and the amount of money and clean-up needed to restore acceptable water quality at the beaches.

Participating Conservation Authorities administer the CURB Implementation Program at the local level for a 5-year period. A fixed amount of grant money is allocated to each Authority annually for water quality improvement projects. A local Steering Committee is set up to oversee the program, approve/deny projects and ensure the money is spent in a cost-effective manner. Each local committee is made up of five voting members and includes representatives from:

- Ministry of the Environment and Energy (MOEE)
- Ontario Ministry of Agriculture and Food (OMAF)
- Ontario Soil and Crop Improvement Association (OSCIA)
- Ministry of Health or Health Unit
- Conservation Authority (acts as Chair)

SCRCA - History in Program

The St. Clair Region Conservation Authority (SCRCA) completed CURB Plans on four watersheds within its jurisdiction in 1992. In the spring of 1992, the SCRCA received approval and funding from the Ministry of the Environment and Energy (MOEE) to begin the Implementation Program. The SCRCA was allocated \$100,000 in project grant money plus \$50,000 in demonstration funds to offer landowners in this first year. A local technical steering committee was set up to review the applications and the Terms of Reference were formulated.

Fourteen projects were approved in 1992/93 with a total allocation of \$75,000 plus \$16,000 in demonstration funds. However, only five projects were actually completed with a total of \$33,487.18 paid to landowners. Many landowners decided to postpone or cancel the work for various reasons including weather and financial situations. Although the number of projects was less than hoped, the Authority was pleased with the overall interest in the program in this first year.

SCRCA - Year 2

The SCRCA was allocated \$90,000 in grant plus \$50,000 in demonstration funds to offer landowners in this second year of the program. In addition, the Ministry approved an expanded area to cover all of the watersheds which drain into lake Huron. These additional watersheds are listed in Table 1 and Figure 1 illustrates their location.

Flyers were sent general delivery to most of the eligible areas in the spring. Due to the relatively small and irregular size of the watersheds, this was felt to be more cost-effective than newspaper advertising or local workshops/open houses. There was a good response from this. Many called immediately after receiving them while others held on to them until the late summer and called then. The flyers probably arrived at a busy time for most farmers and in the future they will be sent earlier in the season.

Twenty-two projects were approved totalling \$117,000. The Implementation Committee was permitted to allocate beyond the budget of \$90,000 since it was expected that not all landowners would actually complete their projects. This was, in fact, what happened. In total, 13 projects were completed and \$55,866.38 in grant was paid out to 10 landowners. Three landowners did two or combination projects. Two were carry-overs (re-applications) from the Year 1. Table 2 summarizes the numbers and types of projects completed in years 1 and 2 and the amount of grant issued. Table 3 contains a more detailed list of each project for 1993/94.

The majority of the landowners did not complete the work until the fall, as was expected. A few delayed construction too close to the start of winter and will re-apply in 1994 for funding. Phone calls were made to the approved landowners around August/September to inquire about the status of their projects. This seemed to rekindle interest in their projects as many had left them hanging. It may be worthwhile to phone approved landowners in early August so that more projects can be completed on schedule.

Table 1: St. Clair Region Conservation Authority CURB Watersheds.

Watercourse	Beaches Impacted	Watershed Area (km²)
Upper East Sydenham	Coldstream Conservation Area	59
Bear Creek	Warwick Conservation Area	81
Lake Huron Tributaries (North to South):		
Hickory Creek	Hilsboro Beach	64
Two small tributaries	Fisher, Invercairn and Hillcrest Height Beaches	6
Highland Creek	Highland Glen Conservation Area and Gallimere Beach	38
Aberarder Creek	Highland Glen Conservation Area	49
Blue Point tributaries	Blue Point and Blue Point Bay Beaches	9
Patterson Creek	C.J. McEwen Conservation Area, Baldwin, Point View and Bonnie Doon Subdivision Beaches	59
Small tributaries	California Avenue Beaches	3
Errol Creek	Errol Beach	19
Perch Creek	Bright's Grove Public Beach, Huron Heights, Eton Court and Murphy Subdivision Beaches	68
Pulse Creek	West of Bright's Grove Public Beaches and Sarnia Beaches	145
TOTAL		600

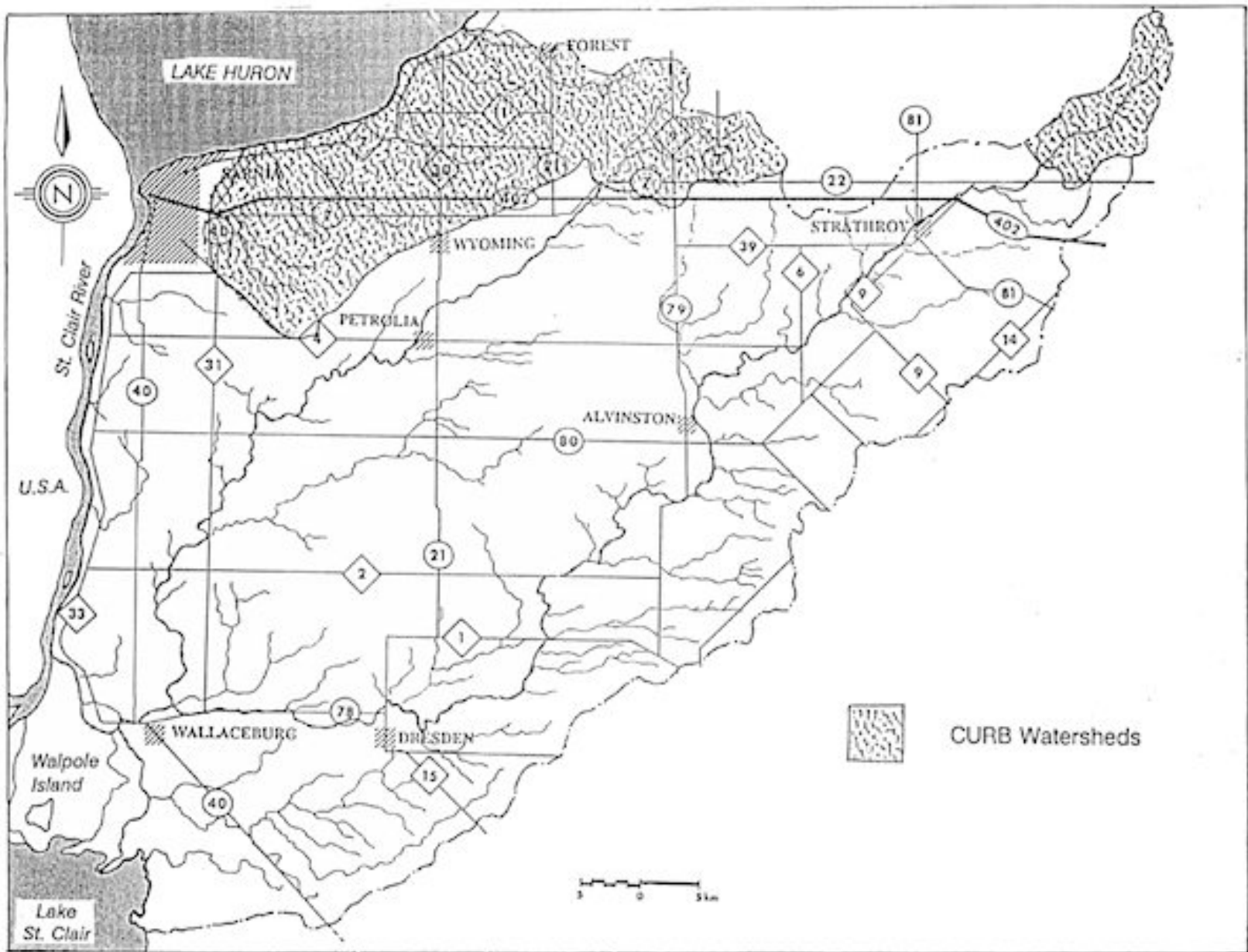


Figure 1: Location of the CURB Watersheds within the SCRCA.

Table 2. Summary of CURB Projects completed in Years 1 and 2.

Project	1992		1993	
	No.	Grant Paid	No.	Grant Paid
Septic System	1	\$823.03	4	\$ 14,1 15.82
Manure Storage	3	\$ 26,000.00	4	\$ 23,883.67
Cattle Access	1	\$6,664.15	4	\$ 16,397.38
Milkhouse	0		1	\$1,469.51
TOTAL	5	\$ 33,487.18	13	\$ 55,866.38

All completed projects (except septic systems) were given the new CURB sign to post on their properties. It is felt that this will further the promotion of the program. Since the signs were not available in 1992/93, it is unclear the effect this has. Several landowners indicated that they had discussed their projects with neighbours and this will also spread the word.

Overall, the Authority is pleased with the program and the positive feedback it has received from Board Members and the public. Since over twice as many projects were completed in 1993/94 as in 1992/93 we feel the program is growing in profile and will grow in years 3, 4 and 5.

Water Quality Monitoring

Water samples were taken at the mouths of the major creeks and beaches within the CURB area on alternate weeks from June 7 to September 13, 1993. This amounted to eight samples at most sites. The samples were analyzed by the MOEE laboratory in London. The parameters tested for included:

E. coli

F. streptococci

P. aeruginosa

Suspended Solids

Ammonia

TKN

Nitrate + Nitrite

Total + Soluble Phosphorus

pH

Conductivity

Chlorine

The beaches sampling normally carried out by the Middlesex and Lambton Health Units was conducted by Authority staff instead. In thanks for this work, staff were allowed to take a few more samples of CURB beaches normally not sampled by the Health Unit. Sampling was carried out on the weeks in between the MOEE sampling run. However, their laboratory facilities were only set up for fecal coliform analysis. The MOEE and Health Unit data cannot be compared completely as a result. However, *E. coli* are a major component of the fecal coliform group and their concentrations are often similar.

Bar graphs illustrating the fecal coliform and *E. coli* levels at five of the beaches is given in Figures 2a to 6a. Line graphs comparing the *E. coli* levels at these beaches and the nearby creeks is given in figures 2b to 6b. Figure 7 compares the *E. coli* levels at four creeks which discharge into Lake Huron. Their trends are similar.

The water quality at the beaches varied with some showing good quality with only occasional high bacteria levels and other beaches were above the swimming guideline of 100 fc/100 ml for often. The creeks, of course, contained higher levels of bacteria than the beaches and in most cases were an order of magnitude higher.

Table 3. Detailed List of 1993/94 CURB Applicants and Projects.

	NAME	LOCATION	PROJECT	CODE	GRANT (\$)
1	Hogervorst	L16 C1 SER Warwick	Septic	03-003	\$ 2,000.00
2	Medland	L20 C8 Lobo	Septic	03-013	\$ 1,773.64
3	Medland	120 C8 Lobo	Fencing	02-003	\$ 2,052.05
4	deWeerd	L7 C2 NER Warwick	Milkhouse	03-016	\$ 1,469.51
5	deWeerd	L7 C2 NER Warwick	Storage	03-015	\$ 5,521.29
6	Roder	L29 C2 NER Warwick	Fencing	02-005	\$ 1,917.75
7	Kerrigan	L19 C13 Plympton	Fencing	02-004	\$10,000.00
8	Garnham	L28 C12 Plympton	Septic	03-020	\$ 1,750.00
9	Cates	L22 C13 Plympton	Storage	03-025	\$12,000.00
10	Veeke	L30 C4 NER Warwick	Storage	03-026	\$ 5,821.76
11	Webb	L8 C9 Lobo	Septic DEMO	03-004	\$ 8,592.18
12	Vokes	L1 C14 Enniskillen	Fencing	02-006	\$ 3,061.60*
13	Vokes	L1 C14 Enniskillen	Storage	03-???	\$540.62*

* Estimates only: final processing not complete.

Table 4. Approved applicants who did not complete their projects in 1993/94.

	NAME	LOT + CONC, TWP	PROJECT	CODE	GRANT REQ'D	RE-APPLY?
1	Drapeau	L1 C8 Sarnia	Septic	03-007	\$ 2000	NO
2	Perkins	L20 C13 Plympton	Storage	----	\$ 6000	NO
3	Bos	L30 C7 Plympton	MHW + storage	02-004 03-017	\$ 6000	YES
4	Carruthers	L29 C9 London	Septic	03-021	\$ 2000	YES
5	Wright	L20 C9 Plympton	Storage	03-022	\$ 6000	YES
6	Korvenmaker	L23 C6 Plympton	Storage	03-019	\$ 9000	YES
7	Anderegg	L25 C11 London	Septic	---	\$ 2000	YES
8	Gysbers	L29 C11 London	Septic	03-009	\$ 2000	?
9	Dickenson	L9 C3 Sarnia	MHW + storage	----	\$10000	YES
10	Guymer	L2 C5 Plympton	Septic	03-014	\$ 2000	YES
11	Kingdon	L10 C7 NER Warwick	MHW + storage	03-024 03-023	\$ 7000	YES

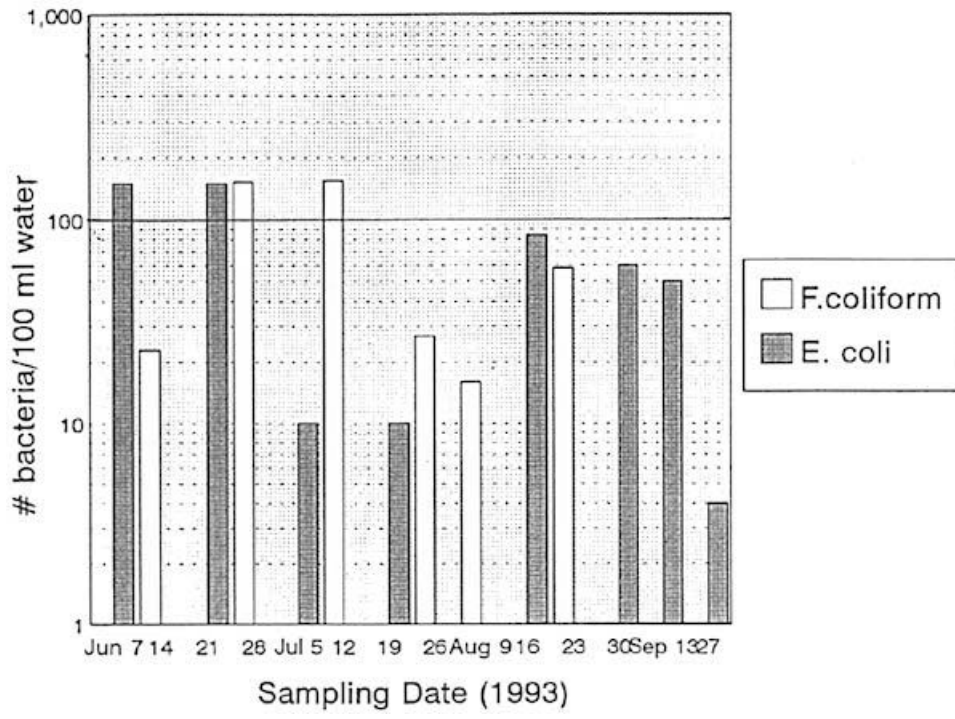


Figure 2a: *E.coli* and *f. coliform* levels at Coldstream Beach

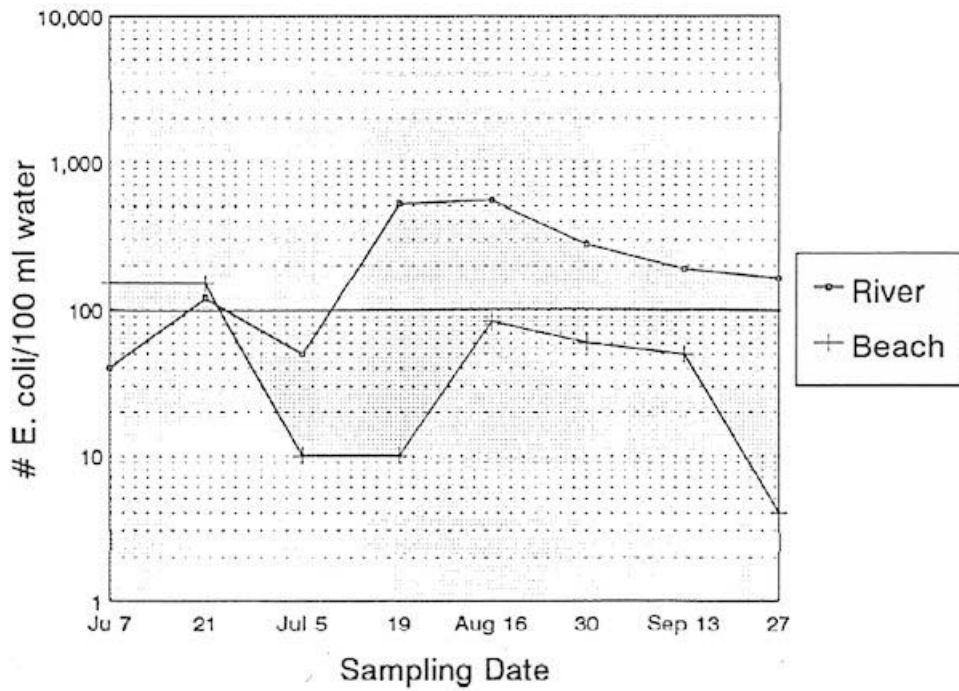


Figure 2b: *E. coli* levels at Coldstream Reservoir vs. Sydenham River, 1993

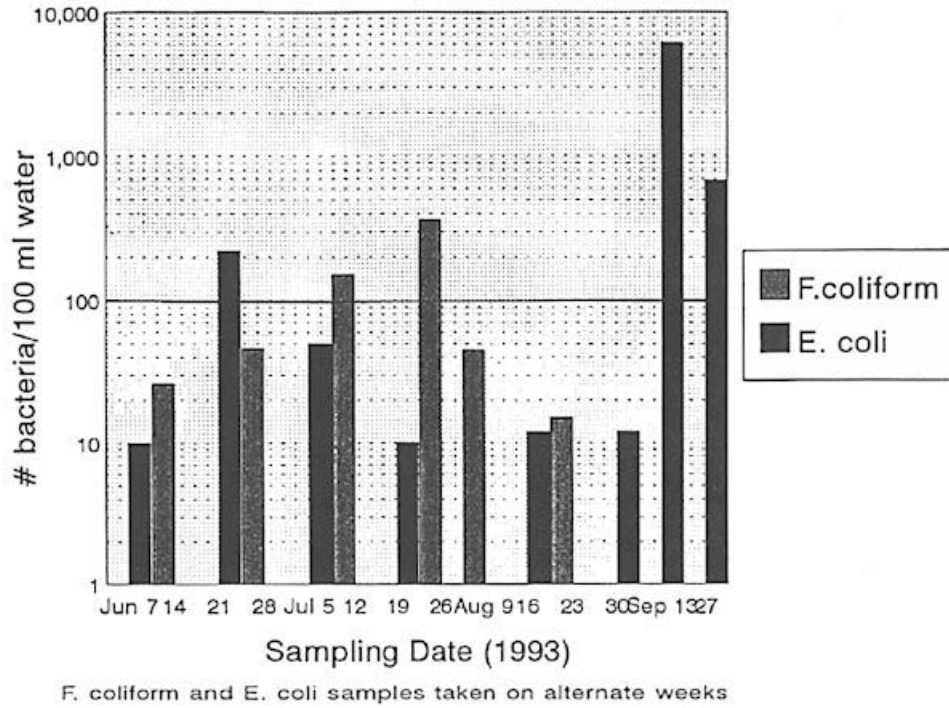


Figure 3a: *E. coli* and f. coliform levels at Warwick Beach

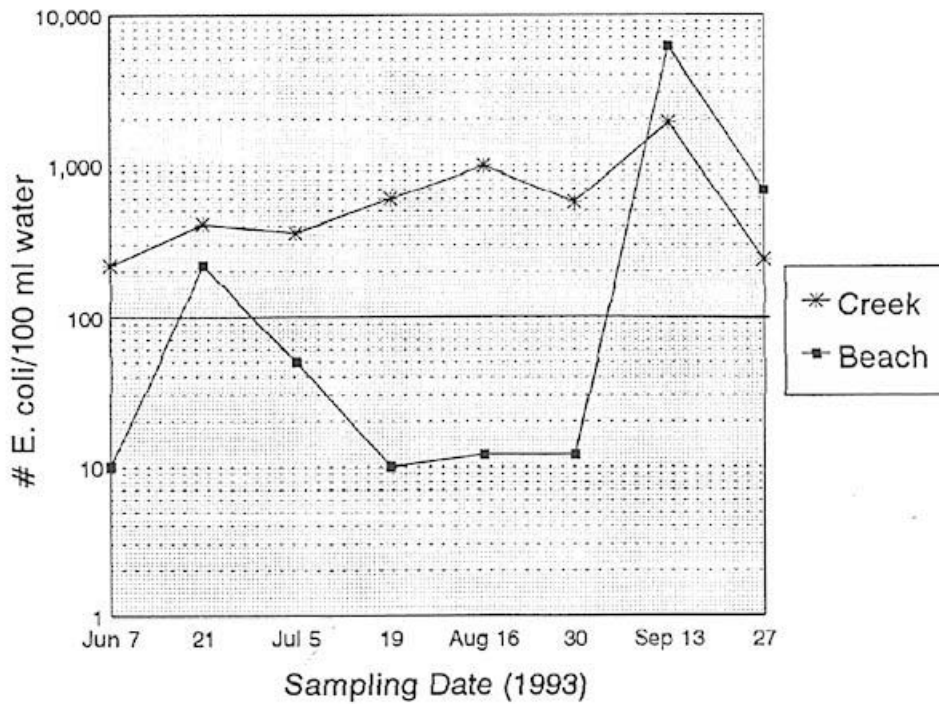


Figure 3b: *E. coli* levels at Warwick Beach vs. Bear Creek

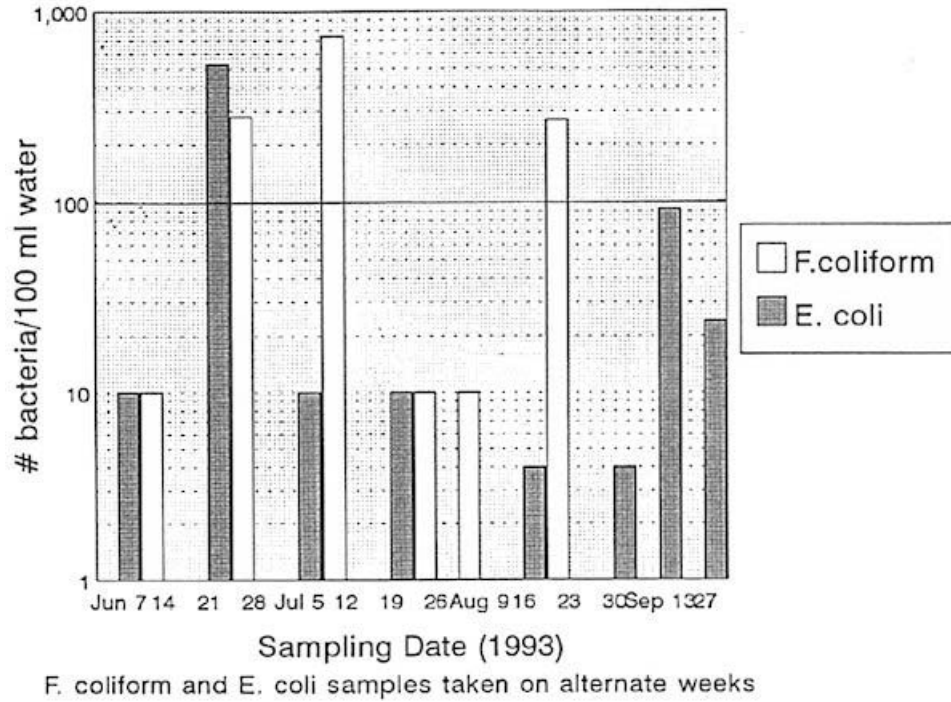


Figure 4a: *E. coli* and f. coliform levels at Hillsboro Beach

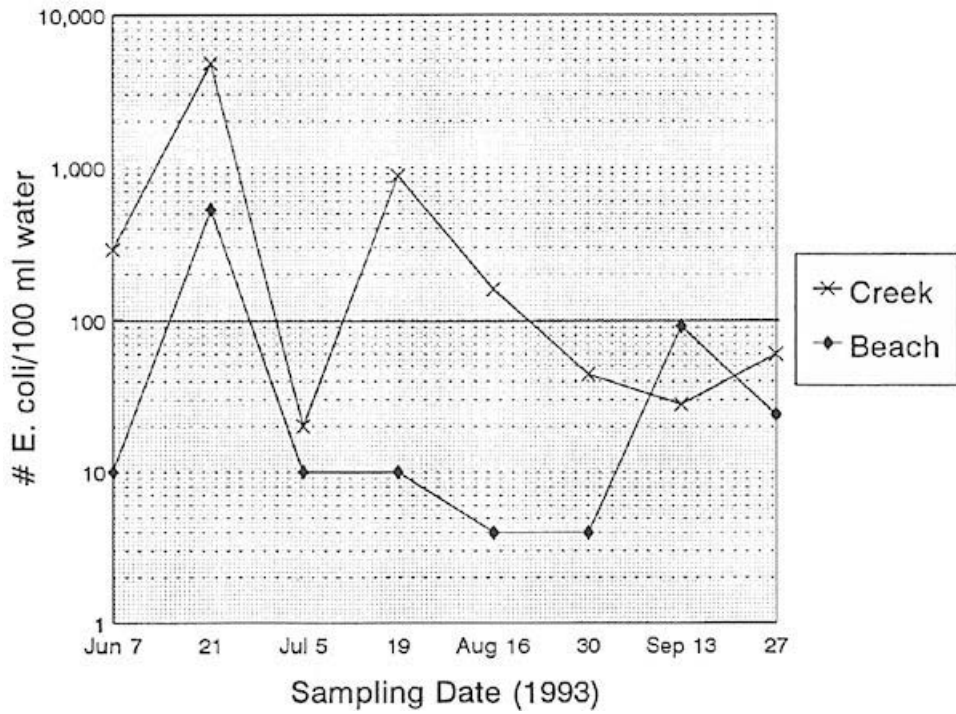


Figure 4b: *E. coli* levels at Hillsboro Beach vs. Hickory Creek

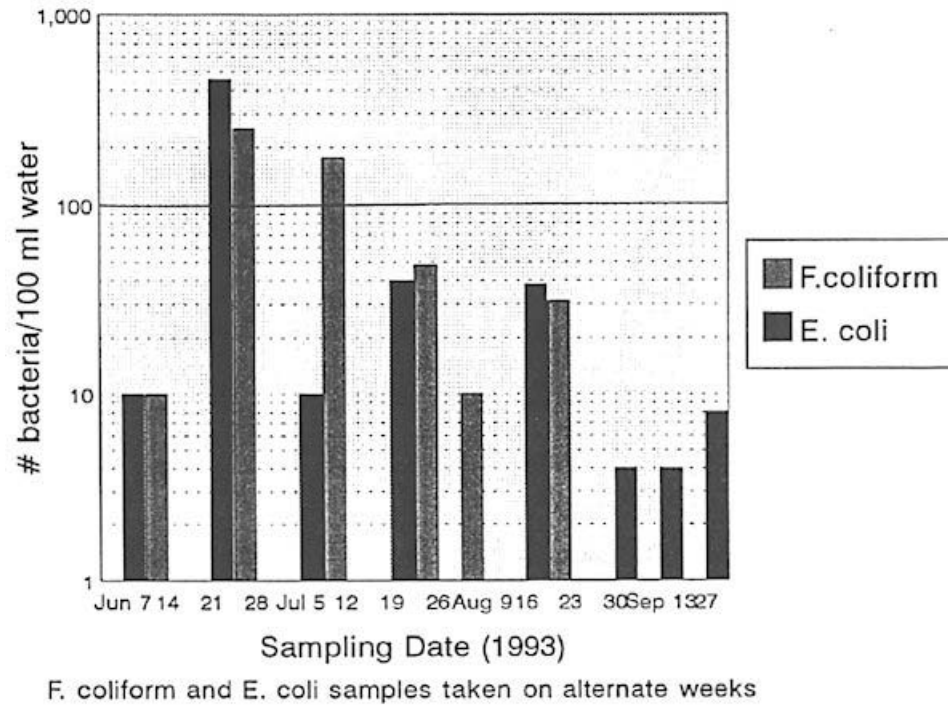


Figure 5a: *E. coli* and f. coliform levels at Highland Glen Beach

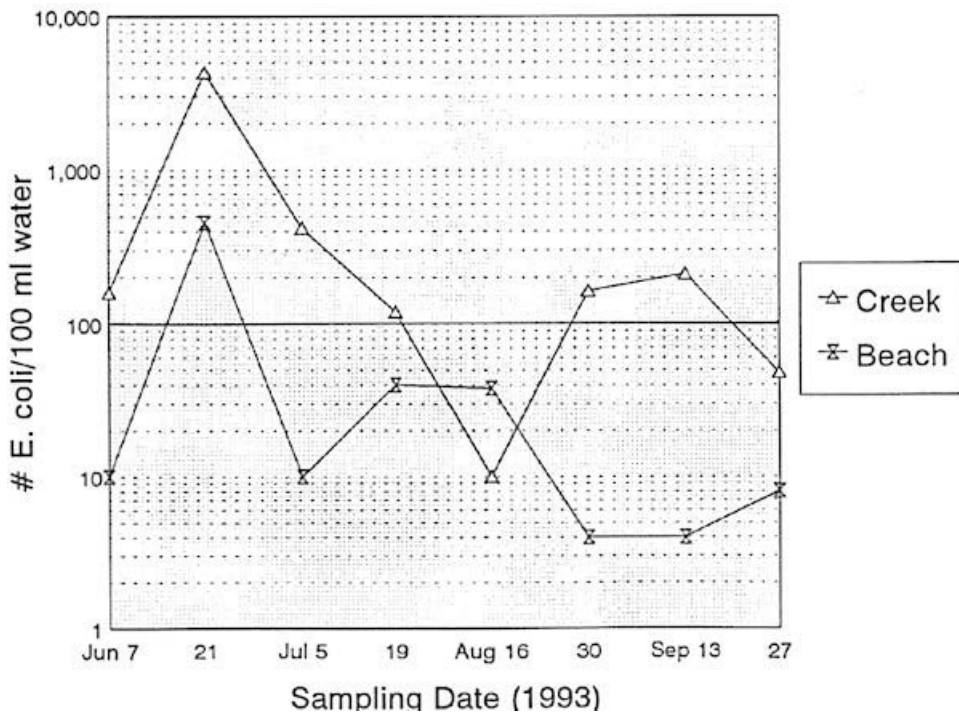


Figure 5b: *E. coli* levels at Highland Glen Beach vs. Highland Creek

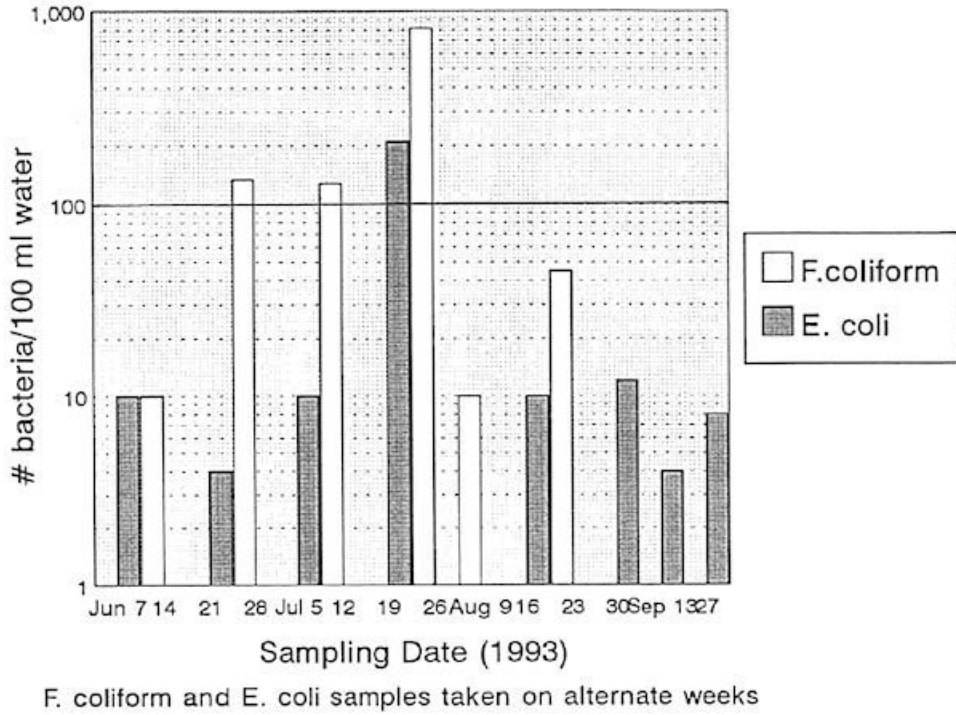


Figure 6a: E. coli and f. coliform levels at Brights Grove Beach

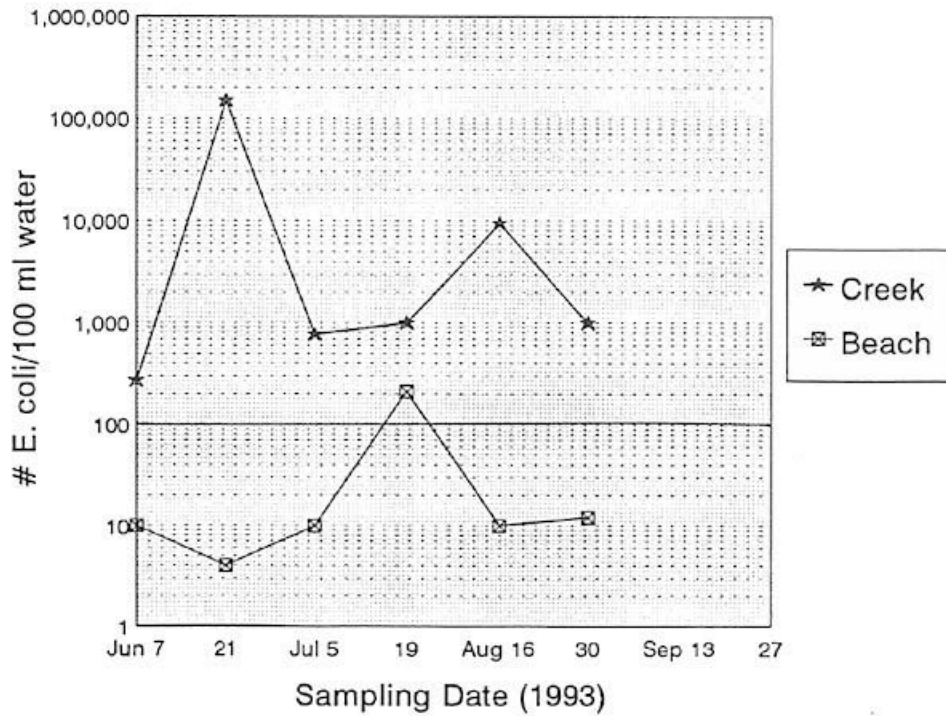


Figure 6b: E. coli levels at Brights Grove Beach vs. Perch Creek

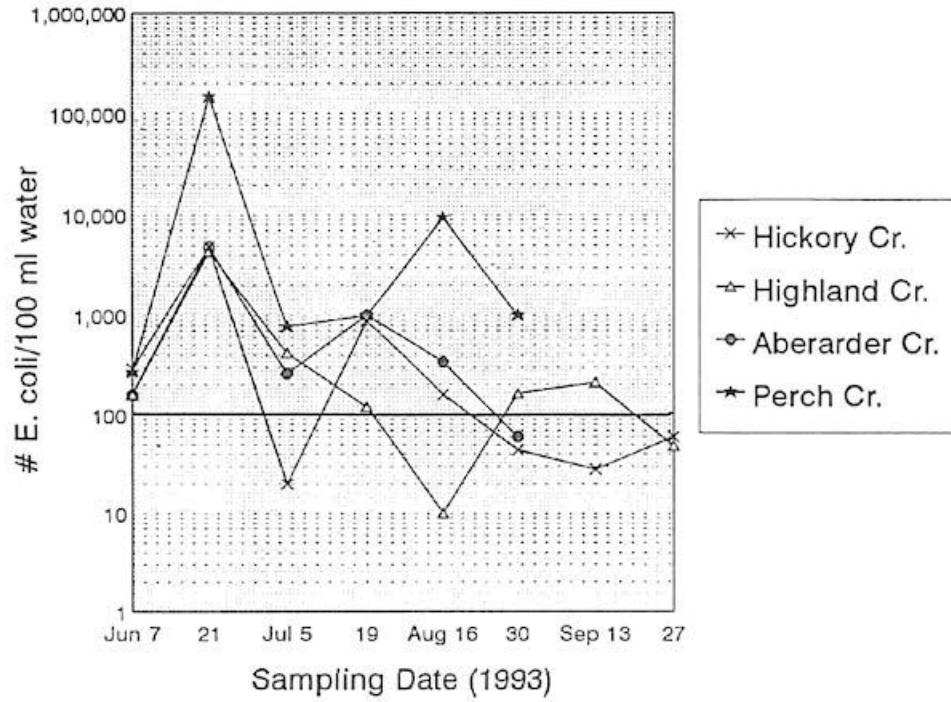


Figure 7: *E. coli* levels at Hickory, Highland, Aberarder and Perch Creeks

