

ST. CLAIR REGION CONSERVATION AUTHORITY

Clean Up Rural Beaches (CURB) Implementation Program

Year 1 Annual Report

April 1, 1992 - March 31, 1993



Prepared by:
Cathy Quinlan, M.A.

Prepared for:
Ontario Ministry of the Environment



TABLE OF CONTENTS

	Page
TABLE OF CONTENTS	i
BACKGROUND	1
SCRCA INVOLVEMENT IN YEAR 1	1
CURB Watersheds	2
PROGRAM PROMOTION	4
Public Inquiries	4
APPLICATIONS	4
WATER SAMPLING	7

LIST OF TABLES

1.	St. Clair Region Conservation Authority CURB Watersheds	2
2.	Applications, approvals, cancellations, etc.	5
3.	Approved CURB Projects for 1992/93	6

LIST OF FIGURES

1.	Location of CURB watersheds within the SCRCA	3
2.	Coldstream Beach and Sydenham River, 1992 F. coliform levels	8
3.	Warwick Beach and Bear Creek, 1992 F. coliform levels	8
4.	Highland Glen Beach and Highland Creek, 1993 F. coliform levels	9
5.	Bright's Grove Beach and Perch Creek, 1992 F. coliform levels	9
6.	Hickory Creek and Aberarder Creek, 1992 F. coliform levels	10
7.	Patterson Creek and Pulse Creek, 1992 F. coliform levels	10

LIST OF APPENDICES

A(i)	SCRCA Steering Committee Members	12
(ii)	Terms of Reference, Steering Committee	13
B(i)	Flyer, Septic Grant	16
(ii)	Flyer, CURB Grant	18

ANNUAL REPORT

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. It will 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 public 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 identifies the relative impact of pollution sources in the watershed and the amount of money and clean-up needed to restore swimming water quality at the beach.

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. A local Steering Committee is set up to oversee the program 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 (MOE)
- 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 INVOLVEMENT IN YEAR 1

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 to begin the Implementation Program. The SCRCA was allocated \$100,000 in grant money to offer landowners in this first year. An additional \$50,000 was allocated for use on Demonstration Projects which is to be spent by the end of Year 2. to break a tie.

In addition, a farmer was present as a technical assistant to the program, but did not have a vote. The names of the members are included in Appendix A. The Terms of Reference for the Committee is also included in Appendix A.

CURB Watersheds:

As mentioned above, four watersheds were the focus of the CURB Implementation Program in the SCRCA in Year 1. The creeks and the downstream beaches they impact are listed in Table 1 and their locations are illustrated in Figure 1. Additional information on the size of the watersheds, the number of livestock farms and homes within each is also listed in Table 1.

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

Creek	Beach	Watershed Area km ²	# Livestock Farms	# Homes
Bear Creek	Warwick Conservation Area Reservoir	77	52	183
Perch Creek	Bright's Grove Public Beach (Lake Huron)	69	49	231
Upper East Sydenham River	Coldstream Conservation Area Reservoir	59	60	160
Highland Creek	Highland Glen Conservation Area Beach (Lake Huron)	47	33	167
	TOTAL	252	194	741

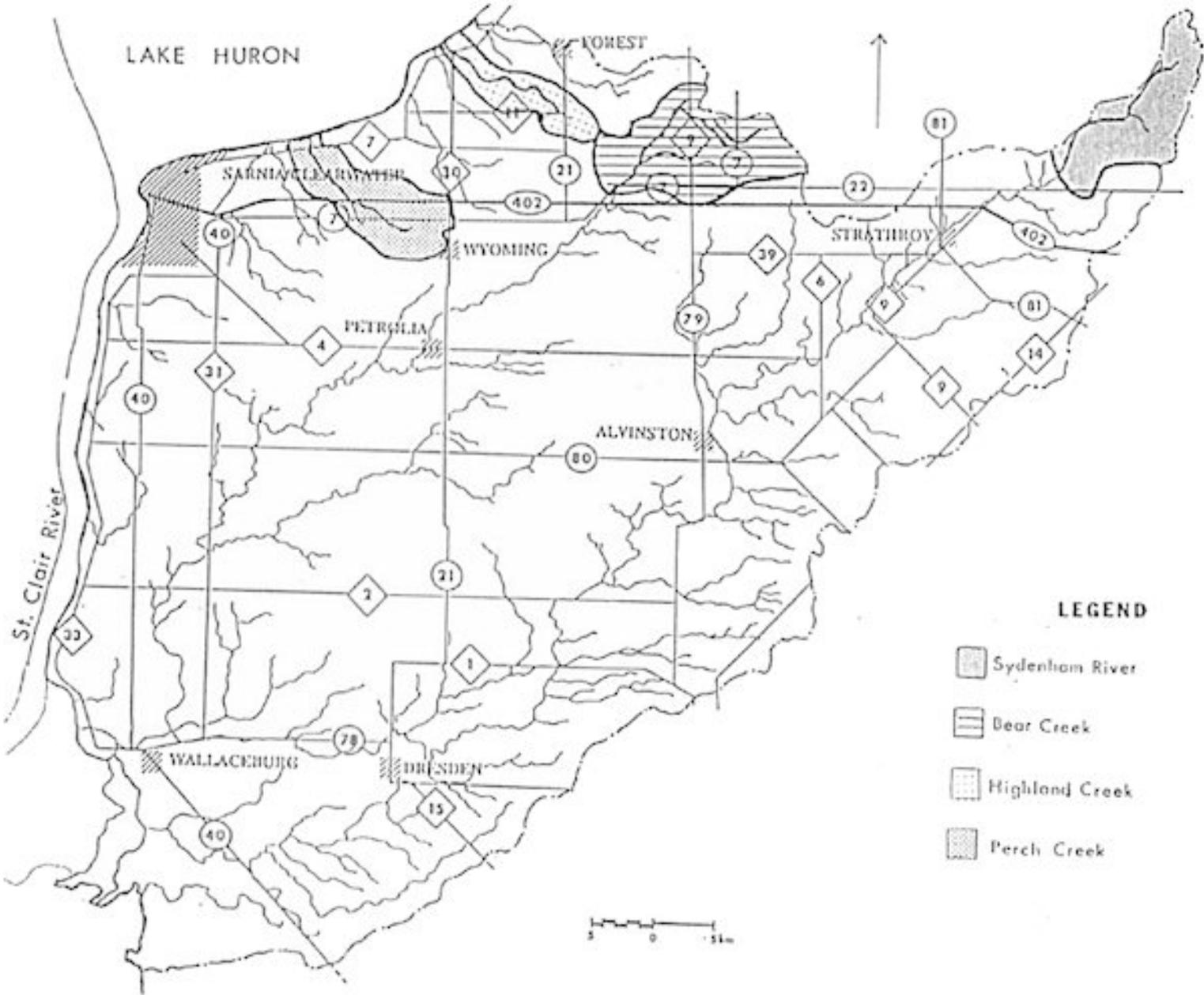


Figure 1: Location of the CURB Watersheds within the SCRCRA.

PROGRAM PROMOTION

Because approval did not come until the spring of 1992, there was some delay in getting the word out to the community. The quickest approach was thought to be a flyer sent to individual homes. Two flyers were produced to advertise the program. One flyer was aimed at the non-farming or cash crop farmer and described only the septic system grant. It also provided additional information on the importance of a well maintained system. The second flyer was aimed at the livestock producers and described each of the categories for which a grant was available. These flyers are included in the Appendix B.

Summer students dropped off these flyers to each residence in the four watersheds in May and June of 1992. This appeared to be quite successful in raising interest within the CURB watersheds and will likely be repeated each year. The Flyers were also posted at Township offices.

A presentation on the CURB Implementation Program was also made at the SCRCA Annual Bus Tour in June which stopped at one of the CURB Beaches. Many members and guests are farmers from the area or have direct contact with the local residents.

At the provincial level, a television advertisement was produced and aired on local TV stations in the London-Sarnia area in the summer of 1992. There was some response from this, but mostly from landowners outside of the CURB watersheds. The MOE also purchased advertising space on the side of a truck. The truck drove about in the Lambton County area with a 3x5 foot sign of the CURB logo and the address of the SCRCA. Non of the applicants indicated they had seen the truck, although several had seen the TV Ad. or the promotion from the neighbouring Authorities.

Public Inquiries:

There were over 60 inquiries about the grant, however, over 40 were from landowners outside of the CURB watersheds. The program restrictions and goals were explained and most people were understanding.

APPLICATIONS

Table 2 is a chronicle of the application and approval process which occurred in this first year of the program. While there was great interest at the outset, the weather or other factors seemed to hinder project completions.

Table 2. Applications, approvals, denials, and cancellations.

14	landowners visited + completed application forms
16	separate projects presented to local steering committee 1 denied by local steering committee 1 denied by MOE Toronto
14	approved projects: approx. \$74,500 in grant + \$16,000 in Demo Grant committed 2 Demonstration Projects (both septic) 3 Fencing Projects 4 Septic Projects 4 Manure Storage or Runoff Pits 1 Milkhouse Project
2	cancelled or retired
7	postponed to 1993/94 (including both Demonstrations)
5	projects completed (\$33,487.18 submitted)

Table 3. APPROVED CURB PROJECTS FOR 1992/1993

No.	Name	Code 23-0015-	Watershed	Project	Grant	Status
<u>PROJECTS COMPLETED IN 1993/92</u>						
1	Bryson, C.	02-002	Bear	fencing	6664.15	complete
2	Vanderwolf, C.	03-005	Syden	septic	823.03	complete
3	Dortman, F.	03-008	Bear	storage	2000.00	complete
4	Gysbers, B.	03-010	Syden	storage	12000.00	complete
5	Soetemans, A.	03-011	High	storage	12000.00	complete
				TOTAL	33,487.18	
<u>DEMONSTRATION FUNDS</u>						
1	Webb, G.	03-004	Syden	septic	8000.00	1993/94
2	Geerts, J.	03-006	Bear	septic	8000.00	pondering
<u>POSTPONEMENTS TO 1993/94</u>						
1	Medland, D.	02-003	Syden	fence	6000.00	1993/94
2	Hogervorst, T.	03-003	Bear	septic	2000.00	1993/94
3	Perkins, J.	incomp	High	r.o. pit	4000.00	undecided
4	Gysbers, B.	03-009	Syden	septic	2000.00	1993/94
5	Drapeau, D	03-007	Perch	septic	2000.00	1993/94
<u>CANCELLATIONS AND DENIALS</u>						
1	Ross, D.	02-001	Bear	fencing	6000.00	retired
2	Bloomfield, B.	n/a	Syden	pit	12000.00	SCRCA denial
3	Bloomfield, B.	03-001	Syden	MHW	5000.00	cancelled
4	Wassink	n/a	High	r.o. pit	6000.00	MOE denial

Bear = Bear Creek

Syden = Upper East Sydenham

Perch = Perch Creek

High = Highland Creek

WATER SAMPLING

The mouth of each creek and beach area were sampled weekly throughout the late spring and summer of 1992. Summer students hired under the EYC Program carried out these sampling duties. In addition, they collected water samples from the mouths of four neighbouring creeks which empty into Lake Huron but are not under the CURB Program. These include the Hickory, Aberarder, Patterson and Pulse Creeks.

The results of the sample analysis are illustrated in graph form in Figures 2 through 7. All of the graphs bear a striking similarity to each other. Fecal coliform levels remained acceptable for swimming for the most part at all four beaches until July when levels shot up dramatically. There was some recovery in early August but levels rose again in late August and September. All levels dropped significantly in October. The bacteria levels in the creeks paralleled these trends quite closely, although they tended to contain fecal coliform levels 2-4 times higher than at the beaches.

The July and September peaks corresponded with wet weather and high flows. However, early August was not unusually wet. This information provides valuable baseline data for Year 1 with which to compare the subsequent four years of the CURB Implementation program.

SUMMARY

In summary, 1992/93 was a productive year, viewed positively by the Authority and the public. The commencement of the program, the establishment of the Steering Committee, advertisement of the program, liaison with landowners, site visits, paperwork, committee decisions, and project evaluations all bound together to create a very positive learning experience for both staff and public.

Poor weather and other factors resulted in a lot of project postponements. It is hoped that subsequent years will see more projects completed as word spread and the weather cooperates (hopefully). The announcement in February 1993 of the provincial financial commitment to communal sewage treatment in many Lambton and Middlesex areas was an added bonus to this program. Several CURB watershed areas should benefit.

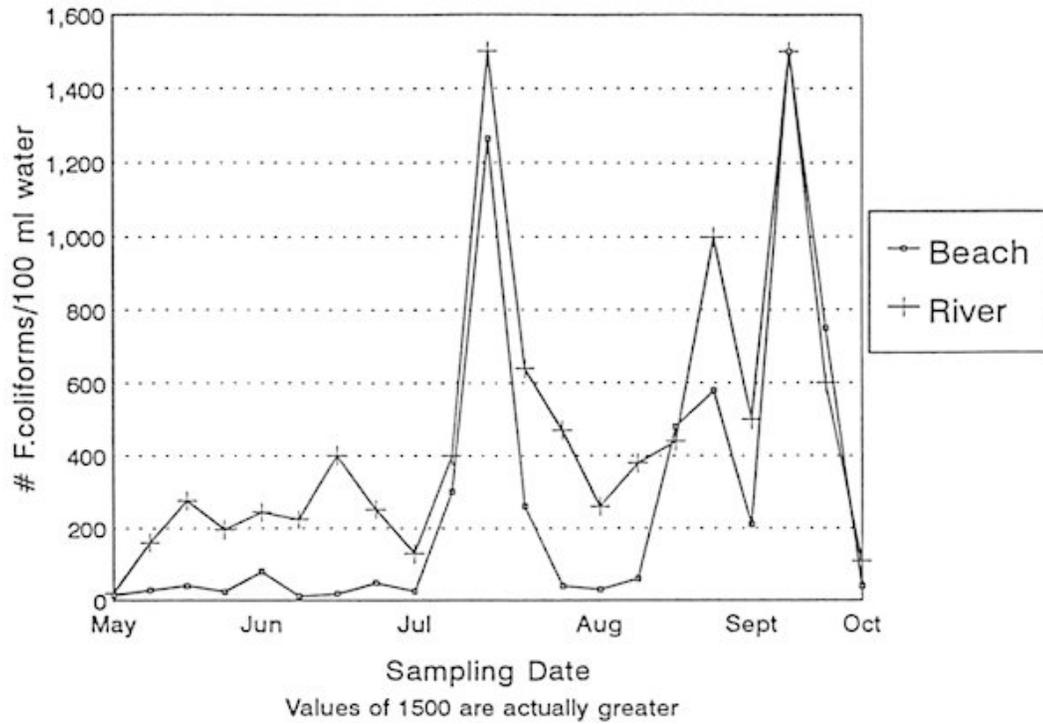


Fig. 2: Coldstream Beach and Sydenham River - 1992 Fecal Coliform Levels

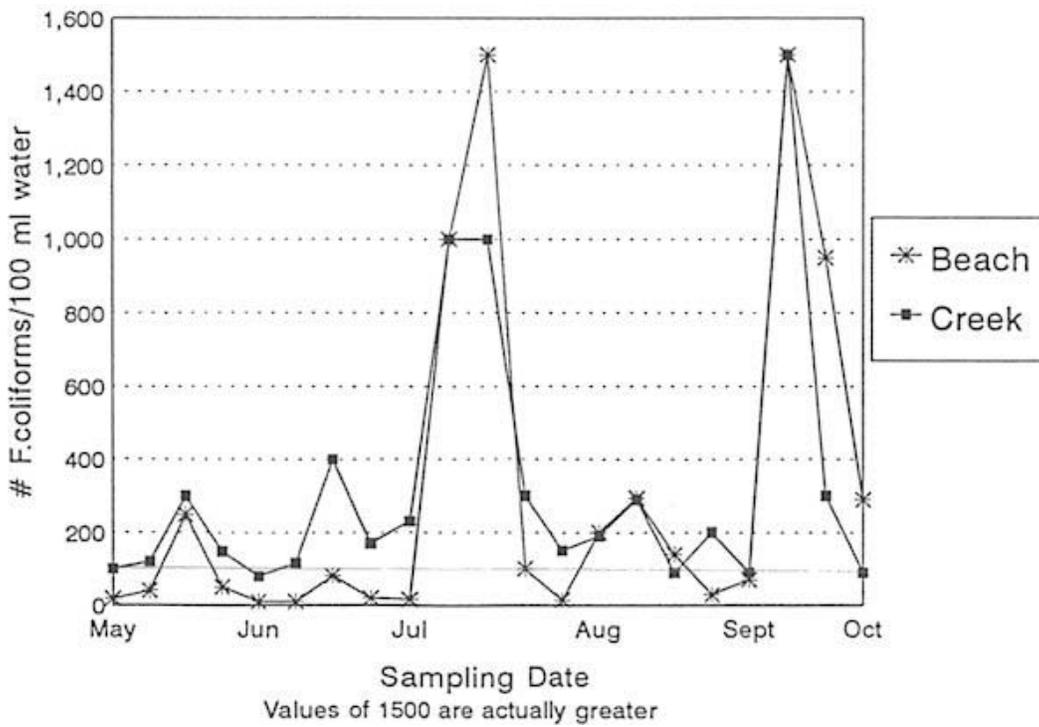


Fig. 3: Warwick Beach and Bear Creek - 1992 Fecal Coliform Levels

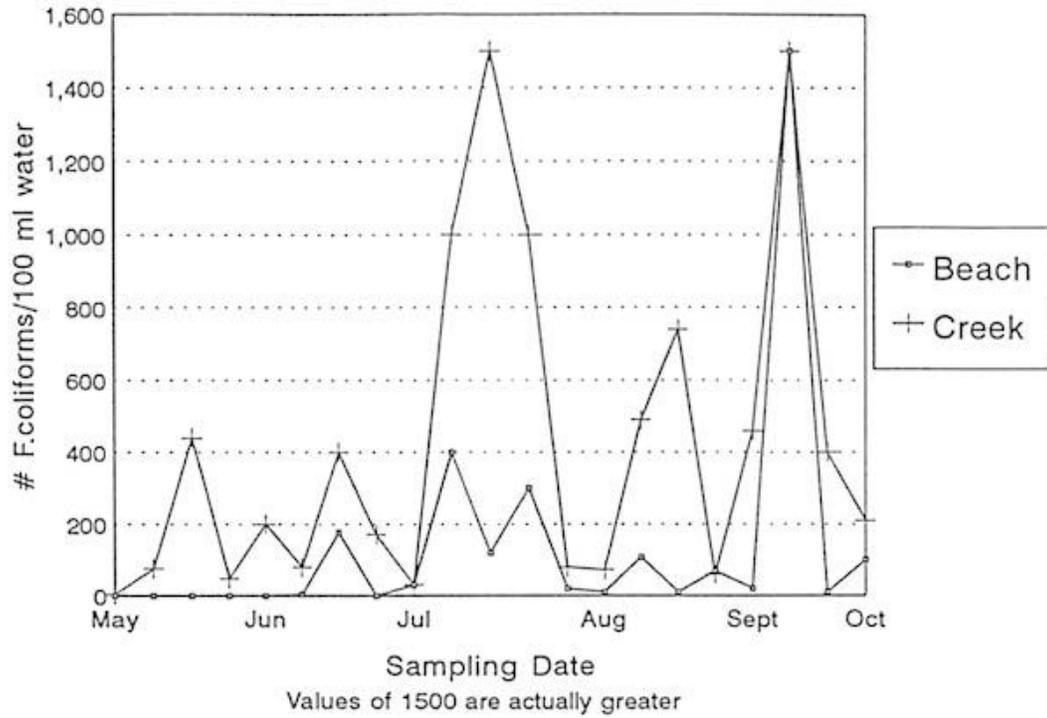


Fig. 4: Highland Glen Beach and Highland Creek - 1992 Fecal Coliform Levels

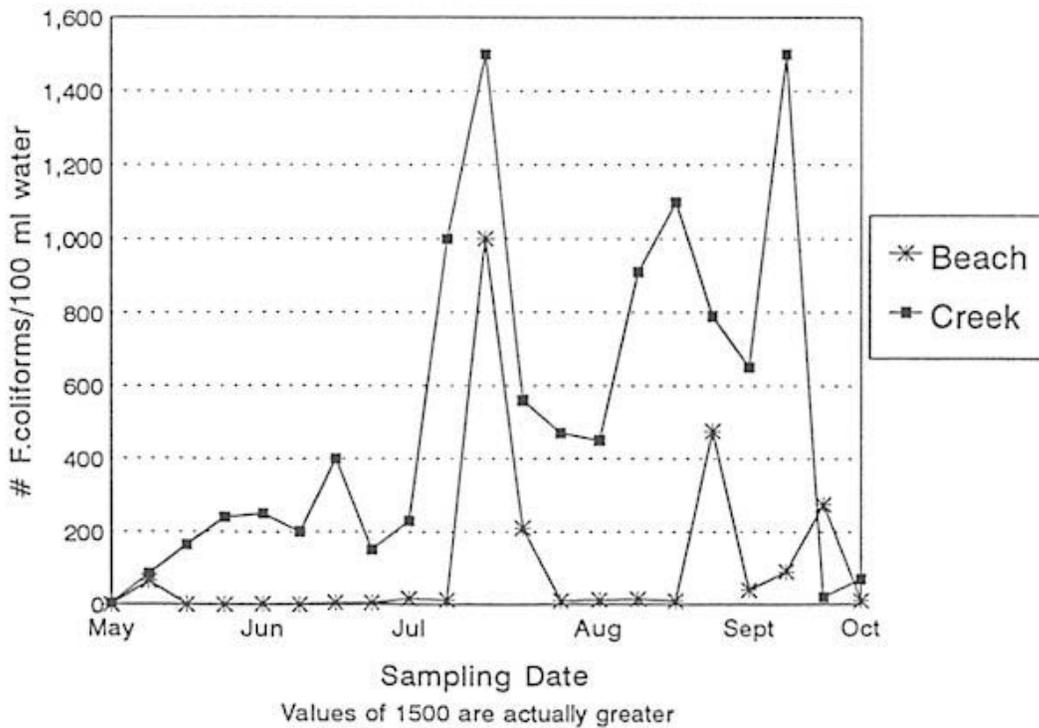


Fig. 5: Bright's Grove Beach and Perch Creek - 1992 Fecal Coliform Levels

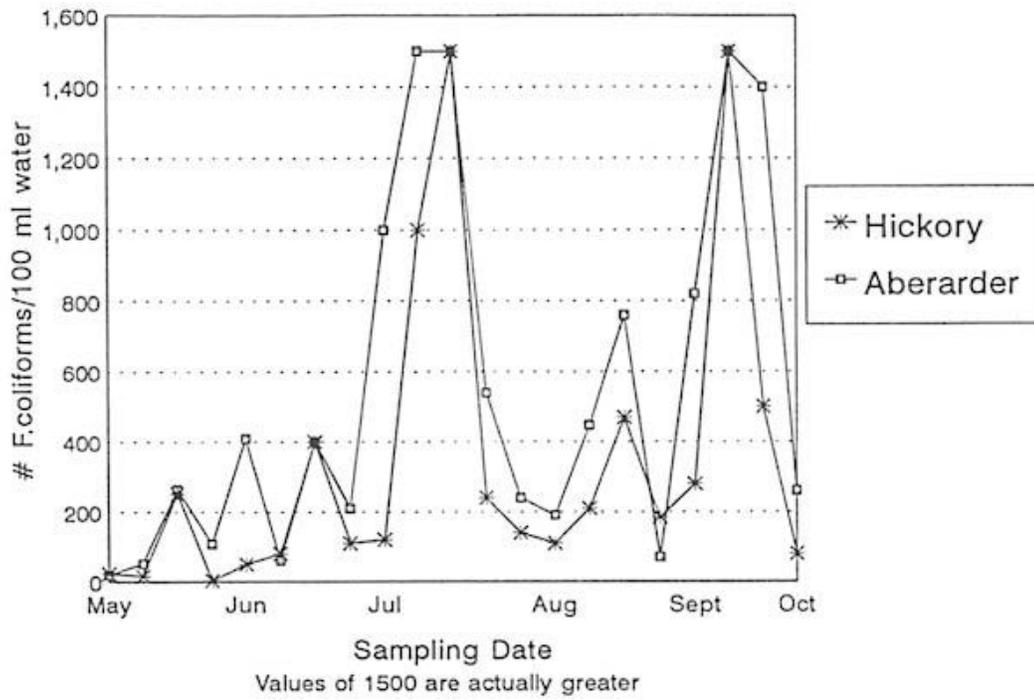


Fig. 6: Hickory Creek and Aberarder Creek - 1992 Fecal Coliform Levels

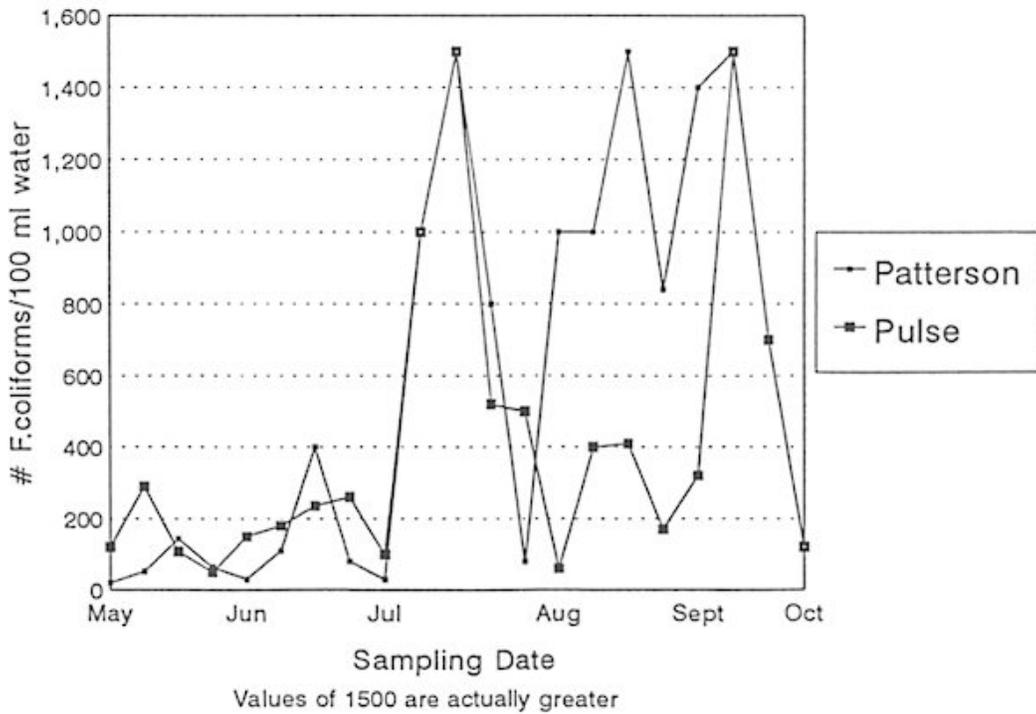


Fig. 7: Patterson Creek and Pulse Creek - 1992 Fecal Coliform Levels

APPENDICES

Appendix A (i)

CURB Implementation Steering Committee Members List

Murray Blackie, Agriculture Specialist

Ministry of the Environment
985 Adelaide St. South
London, Ontario, N6E 1V3
Phone: 661-2200 or 661-1710 Fax: 661-1742

Peter Johnson, Soil and Crop Specialist

Ministry of Agriculture and Food
50 King Street
London, Ontario, N6A 2P2
Phone: 434-6811 Fax: 434-4627

Janice Clubb, Ontario Soil and Crop Improvement Assoc. Advisor

R.R. #1, Brigden, Ontario NON 1B0
Phone: 864-1977 Fax: 864-1236 (Insurance Office)

Mike Gariepy, Health Inspector

Sarnia-Lambton Health Unit
160 Exmouth Street
Point Edward, Ontario N7T 7Z6
Phone: 383-8331 Fax: 383-7092

Peter Van Engelen, Land Stewardship II, farmer (alternate for Janice)

88 MacDonald Street, Box 993
Forest, Ontario NON 1J0
Phone: 786-4184

Donald Craig, Manager of Conservation Services

St. Clair Region Conservation Authority
205 Mill Pond Crescent
Strathroy, Ontario N7G 3P9
Phone: 245-3710 Fax: 245-3348

Dave Hayman, Water Quality Program Coordinator (alternate for Murray)

Upper Thames River Conservation Authority
Box 6278, Station "D"
London, Ontario N5W 5S1
Phone: 451-2800

Cathy Quinlan, Water Quality Technician (Facilitator)

St. Clair Region Conservation Authority
205 Mill Pond Crescent
Strathroy, Ontario N7G 3P9

Appendix A (ii)

St. Clair Region Conservation Authority CURB Implementation Review Committee

TERMS OF REFERENCE

Purpose of the Committee

To review applications for financial assistance through the Clean Up Rural Beaches (CURB) Program for projects intended to eliminate contamination entering the following watercourses:

- Sydenham River upstream of Coldstream Conservation Area
- Bear Creek upstream of Warwick Conservation Area
- Highland Creek upstream of Highland Glen C.A.
- Perch Creek upstream of Bright's Grove Beach

Objectives

- 1) To ensure CURB funding is distributed in a responsible and efficient manner.
- 2) To ensure that the intent of the CURB Implementation Program is achieved.
- 3) To encourage CURB applicants to practice responsible and environmentally sensible domestic and animal waste management practices to achieve water quality improvement.

Committee Membership

Membership is to consist of representatives of the following organizations:

- St. Clair Region Conservation Authority - Chair
- Ministry of the Environment - London Regional Office
- Ministry of Agriculture and Food - Lambton or Middlesex
- Health Unit - Lambton or Middlesex
- Ontario Soil and Crop Improvement Association/LSII

Representatives from other interested organizations may be invited to sit on the committee to provide information and perspective but will not be voting members.

Committee Format

- 1) The CURB facilitator shall present the Water Quality Improvement Plan proposals to the committee for consideration. The facilitator shall be a member of the SCRCA staff.
- 2) The committee shall review the plans for funding.
- 3) The Committee will decide by majority vote the acceptance, non-acceptance or deferral of the proposal. At least three "yes" votes are necessary to approve an application.
- 4) Meetings to be set at the end of each meeting or the call of the chair.
- 5) The committee may interpret the existing guidelines or suggest innovations to improve or advance otherwise deficient or non-conforming applications.
- 6) Applicants, who's projects are not approved for funding by the Committee, may appeal the decision in person to the Committee. If the applicant is again refused approval, the applicant may then appeal to the Director of the Water Resources Branch of the MOE.
- 7) Invited, non-voting members who are not staff of a ministry or Authority will be paid per diem and mileage fees quarterly according to fees established by the Province upon receipt of appropriate forms.

Project Approval Criteria

- 1) Projects must be located in the CURB watersheds of the SCRCA.
- 2) There must be a demonstrable benefit to the receiving watercourse as a result of the proposed project.
- 3) Highest priority is to be given to those projects with the greatest beneficial impact on water quality. The Committee and/or Facilitator may assign priority to any of the proposed projects over the five year period of eligibility.
- 4) Project proposals shall meet the MOE Guidelines in order to be eligible for funding. Every effort should be made to ensure the criteria for a Certificate of Compliance are met.
- 5) Top-ups from the LSII grant ceiling will be considered.
- 6) All projects must be approved before construction begins. There will be no retroactive funding for projects already completed or started.

- 7) The Committee will only review projects to be completed in that fiscal year. If the application is received, it will be placed on file until that year arrives.

Project Guidelines

Funding is targeted at cleaning up existing water quality problems and not for new or future works/expansions.

- 1) Cattle Access:
 - The project must completely restrict the livestock from the watercourse.
 - Maximum dollar value for fence material will correspond to the local price for installed page wire fence.
 - Staff will follow the guidelines in the LSII manual to maintain program consistency.

- 2) Septic Systems:
 - New homes or additions are not eligible.
 - Plumbing expenses to hook up grey water to the septic system are eligible. All necessary permits must be obtained before final payment is given.

- 3) Milkhouse washwater treatment:
 - Funding is eligible for the additional sizing of manure storages to hold the milkhouse washwater.
 - An item used to divert first rinse (pre-rinse) from entering the system will be fundable.
 - All treatment trench system must receive a Certificate of Approval and User permit to be eligible for the grant.

- 4) Manure storages and runoff containment:
 - Storages for new barns or for future expansion will not be eligible. Funding for manure storages will be pro-rated at a 300 day sizing maximum to avoid funding future expansions.
 - A manure management program plan form must also be completed and submitted with an application for a manure storage grant (see attached).

General

- A site visit will be required as a follow-up to each application received.
- A site visit will be required to inspect the completed projects prior to final payment.
- Anyone approved for a project under LSII will not be allowed to drop from that program to come onto the CURB Program unless they are on the waiting list or there is an extreme circumstance.
- The local CURB committee has the right to direct the completion of a project it feels more serious over another.



Appendix B (i)

St. Clair Region Conservation Authority

Fact Sheet

205 Mill Pond Crescent, Strathroy, Ontario

N7G 3P9

245-3710

GRANTS FOR UPGRADING SEPTIC SYSTEMS

The Clean Up Rural Beaches (CURB) Program is providing financial assistance to landowners to repair or rebuild faulty septic systems that are presently impacting water quality.

If you are aware of problems with your system and would like to make improvements, you may be eligible for funding. Under the CURB Program 50% of these cost up to \$2000 are available.

Contact the

St. Clair Region Conservation Authority

for further information

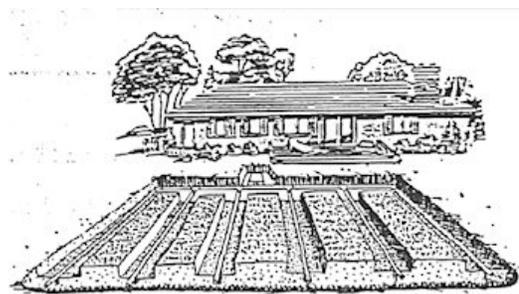


FAULTY SEPTIC SYSTEMS HAVE DIRECT IMPACT ON WATER QUALITY AT LOCAL BEACHES

Septic systems have a great potential for contaminating our local beaches. Systems that are not functioning properly, or not treating all of the waste water, are polluting the creeks and downstream beaches.

The result of these pollutants entering our creeks and beaches is poor water quality, and may pose a health risk to swimmers. High bacteria levels cause skin, eye, ears, nose, and throat infections and may lead to stomach disorders. Excessive phosphorus levels enhance algae growth which will deplete oxygen supplies and release toxins as it decomposes, resulting in an unhealthy habitat for aquatic life. Nitrates in the water represent the threat of "blue baby" syndrome in infants, and increases the risk of scours in livestock operations. Human body wastes may contain parasitic worms, eggs and larvae, as well as microbial pathogens and parasites. Improper disposal of these wastes pose a serious health threat as numerous diseases and viruses may be spread if household wastes are not properly treated.

Not enough people realize the damage that can occur when septic systems are not properly constructed or maintained. As long as the toilets flush, the sinks don't back up, and the laundry water runs away, most of us are content to remain oblivious as to where our wastes ends up. Studies conducted by the St. Clair Region Conservation Authority indicate that failed septic systems are the leading source of bacterial pollution in many watersheds.



Typical Layout of Septic Tank Tile Bed System

Many septic systems may only be handling sewage wastes, while "grey water" (wash water from laundry and dishwashing facilities) is being disposed of through farm drainage tiles, storm sewers, or by being tiled directly into a watercourse. For many years grey water was not considered to be a pollutant. Research, however, has indicated that grey water contains excessive levels of phosphorus, bacteria, and dissolved solids. Therefore, all grey water must be handled in a septic system.

The purpose of the septic tank is to treat and store the solid part of the waste and disperse the liquid portion into a weeping bed. When septic systems are poorly installed or maintained, the waste will contaminate local water sources with bacteria and excessive nutrients.

Properly constructing and maintaining your system will protect your investment and the quality of water in our creeks and lakes.