

RIPARIAN ZONE WORKSHOP III

**BUFFER BLITZ – advancing an
“on-the-ground” program for Ontario**



**Proceedings
June 20, 2001 Workshop
Cambridge, Ontario**

Produced by:

RIPARIAN MANAGEMENT WORKING COMMITTEE

Acknowledgements

Once again, I wish to thank the members of the Riparian Zone Working Group for their professionalism, enthusiasm and commitment to the concept of riparian management. They planned an ambitious one-day session, and in large part due to their planning efforts, I believe we met our goals. The groups represented in the committee include:

Riparian Zone Working Committee

Government of Canada: Agriculture and Agri-Food Canada –
Agricultural Adaptation Council
Environment Canada – Canadian Wildlife Service
Fisheries and Oceans – Fish Habitat Protection Branch

Government of Ontario: Ministry of Agriculture, Food and Rural Affairs
Ministry of Environment – Watershed Standards Branch
Ministry of Natural Resources – Fish and Wildlife Branch
South Central Science Section

Non-Governmental: Ducks Unlimited
Grand River Conservation Authority
Ontario Cattlemen’s Association
Ontario Soil and Crop Improvement Association
University of Guelph, School of Rural Planning and Development
Wellington County Stewardship Council

The financial assistance from the workshop’s sponsors made this session possible in the first place. On behalf of the Riparian Zone Working Group, I wish to acknowledge:

Sponsors

Agriculture and Agri-Food Canada –
Agricultural Adaptation Council
Environment Canada – Canadian Wildlife Service
Ducks Unlimited Canada
Fisheries and Oceans Canada
Grand River Conservation Authority
Ontario Ministry of Agriculture, Food and Rural Affairs –
Resources Management
Ontario Ministry of Environment – Standards Development Branch
Ontario Ministry of Natural Resources – Water Resources Branch

We owe a special mention to the Grand River Conservation Authority for hosting the session, and being so helpful with the logistics.

The speakers, whose presentations this report attempts to summarize, must be acknowledged for their terrific efforts. This report also attempts to capture participants’ ideas and opinions, of which there were many, as it should be. Together, we made big strides toward a credible, community-based, riparian program for Ontario.

Jack Imhof
Workshop Chairperson
Ministry of Natural Resources
November 2001

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Introduction

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Now more than ever, the public and especially farmers and other rural landowners are interested in protecting the environmental quality of rural Ontario. Vegetative riparian buffers have a key role to play. Located along rivers, streams, lakes and wetlands, buffers help capture, block and mitigate many of the potential risks from normal farm practices on agricultural land. They also provide wildlife habitat and enhance the aquatic habitat they border.

Jurisdictions across North America are moving toward better and more intensive buffer management. Anticipation of a homegrown buffer incentive program is high among Ontario's farmers. The Riparian Working Group felt that rural landowners – as represented by their agricultural organizations and environmental interest groups – should review successful community-based programs from across the continent, the goal being to develop a buffer program they can promote and support.

Last June, over 100 people representing 30 groups gathered in Cambridge to do just what the session's title suggested: "blitz" on buffers, and particularly how to develop an effective province-wide buffer program.

As the third in a series organized by the Riparian Working Group, the workshop built on the strengths of its two predecessors. These have been well-attended by a broad range of stakeholders, whose enthusiasm and contributions to meaningful and productive sessions have been outstanding.

Workshop 1: Riparian Zone Management – State of the Science / State of the Practice October 1998

Participants at Workshop 1 reviewed the state of riparian research and concluded that while some important studies have been done, these have been isolated. Future work would warrant a strong interdisciplinary and comprehensive approach. Researchers and resource managers needed to develop a shared agenda.

Attendees also looked at the state of riparian areas and tried to gauge interest among landowners in establishing, enhancing and managing buffers. As with riparian science, fostering a cooperative and inclusive perspective by all parties – farmers and rural non-farmers, municipalities and others – was endorsed. A gap in extension materials such as factsheets was identified. The two-day workshop

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concluded with strong interest in followup sessions that would look more closely at the challenges of and strategies for implementing a buffer program, emphasizing the importance of working with landowners and promoting stewardship.

Workshop 2: Using Buffers to Protect Ontario Waterways May 2000

At Workshop 2, participants considered issues and options for the development and implementation of a riparian buffer program. They learned that the current status of riparian activity and promotion in Ontario is small-scale with little or no cohesion among efforts. To increase buffer presence, attendees preferred an incentive-based program to legislation. The program could be organized by watershed, taking advantage of existing watershed planning initiatives. This would support a flexible, location-specific approach. It was felt the task of buffer management should fall to landowners, with support from groups and agencies. Above all it should be a partnership, with each sector playing a role.

Several impediments to program implementation were identified and discussed. These were: political will (urban vs. rural); governance; technical knowledge; incentives; landowner perceptions; and funding and management.

Evaluation of Buffer Projects Along Watercourses on Southern Ontario Farms Prepared by Nancy Tilt, for Ontario Soil and Crop Improvement Association

Between 1991 and 1993, over 8000 acres of fragile agricultural land were retired from annual production through Agriculture and Agri-Food Canada's permanent cover programs. Over 1900 Ontario farmers participated in the programs through either the bid component (which offered up to \$10,000 in incentive), or the demonstration project component (which offered up to \$20,000 in incentive). Under these programs, cropped or pastured lands immediately adjacent to watercourses and wetlands were prime sites for fragile land retirement. Participating landowners were required to sign an agreement with the federal government to maintain the integrity of the project for up to 15 years.

In 1999, Ontario Soil and Crop Improvement Association partnered with the Grand River Conservation Authority to conduct an evaluation of 40 selected buffer strip projects (i.e. 20 selected demonstration sites, and 20 randomly selected bid projects). There were two objectives: 1. Garner landowner opinions from a farm manager's standpoint; and 2. Gauge ecological development and performance of the projects through a first-level site assessment. Funds were provided through the Ontario Ministry of the Environment and the Riparian Working Group. The interviews and field evaluations were conducted during fall of 1999, and are summarized in Part One of the Final Report available from

INTRODUCTION

OSCIA. The complete files, including field notes, cross-section sketches, and photo library, will be retained and managed by OSCIA. Part Two of the report contains observations and opinions by OSCIA and GRCA that reflect combined experiences in buffer-related programs of the past. Also included is a specific list of program features that deserve thorough discussion for future buffer program design and delivery.

What Do We Need in a Program?

As we moved closer toward our goal of formulating a buffer program for Ontario, we noted the need for:

- guiding principles and objectives
- a clear framework, including:
 - ❑ specific objectives / targets
 - ❑ best available information
 - ❑ determination of lead agency / organization
 - ❑ accountable delivery mechanism
 - ❑ funding and incentives
 - ❑ demonstration sites
 - ❑ various features, specifically: community-driven, well marketed, with effective auditing and monitoring.

INTRODUCTION

Workshop 3: Buffer Blitz Rolling out a Program for Ontario

Based on the consensus from the foregoing workshops, we set the following framework for this one-day focus session.

Objectives

- short-term— to develop the structure and consensus for an “on-the-ground” buffer program for Ontario
- long-term — to develop a collaborative framework for an Ontario-based Riparian Buffer Program with key stakeholders.

Product

- a draft framework for the creation of a province-wide buffer program for Ontario, developed by key stakeholders and organizations

Agenda

To bring a program proposal into sharp focus, we invited speakers from Alberta and PEI to describe the initiatives underway in their provinces. We then presented participants with a draft program for their detailed consideration. Questionnaires were completed and, based on the results, discussions ensued.

MORNING

- Welcome and Introduction to the Day and Agenda
- Overview and Work done to date – Jack Imhof, MNR; Mike McMorris, OCA
- Cows and Fish: A community-based approach to Buffers – Lorne Fitch, Alberta
- Buffer Strip Program in PEI: A Farmer’s Perspective – Tyler Wright, PEIS CIA
- RWQP: A Model Working in Ontario – Tracey Ryan, GRCA
- A Framework for Discussion - Andy Graham, OSCIA

AFTERNOON

- Questionnaires
- Facilitated Discussion: Developing Program Components – Steve Sauders, Kayak
- Where from Here – John FitzGibbon, U of G

A Template for Conservation in Agricultural Alberta: The Cows and Fish Process

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Cows and Fish is about building a cumulative body of knowledge that we all should know, including how riparian systems function and link us, how watersheds work, the vital signs of landscape health, the essentials of how people need to work together, how solutions need to benefit us all, and the kinds of information that will enable us to restore and maintain natural systems and build ecologically resilient communities and economies.

Definition of riparian areas

- these are transition zones between aquatic ecosystems and the adjacent upland terrestrial ecosystems
- they are a landscape type strongly influenced by water, small in aerial extent, and ecologically diverse

Benefits

- healthy riparian areas support unique plant communities that establish watershed function, provide diverse habitats for fish and wildlife, and a highly productive forage supply

Status in the United States

- livestock grazing has been focus of intense debate for nearly 30 years
- debate has led to remedial programs among federal and state agencies, including fencing to exclude cattle
- riparian grazing issue is characterized by entrenched conflict among interest groups, and legislated solutions

Alberta, 1970s–1980s

- historically the focus was on fish and restoring trout habitat damaged by unmanaged livestock
- in the absence of riparian research, initial efforts focused on exclusion fencing, which rehabilitated some areas quickly but was not a viable province-wide solution
- fencing-related problems included: high cost, high maintenance, loss of livestock water, loss of forage, perception that riparian and cattle are incompatible
- most importantly, fencing as a single solution is not management by landscape, and ignores the adjoining riparian zone and adjacent uplands

Cows and Fish Program

- recognizing that fencing could only be one of a range of solutions to riparian management, six groups and agencies established this program in 1992

SUMMARIES OF PRESENTATIONS

- the partnership included Fisheries and Oceans, Alberta Cattle Commission, Trout Unlimited Canada, Canadian Cattlemen's Association, (then) Alberta Environmental Protection, and Alberta Agricultural – described as “a synergy of experience, perspective, background and resources that broadened the approach to riparian issues”
- rather than a top-down approach that intended recipients might distrust, the Cow and Fish program engages them with an extension effort
 - ❑ local or community teams, composed of technical, producer and other local interests engage with each other
 - ❑ teams deliver ecological awareness and exposure to a range of alternative management practices
 - ❑ awareness leads to ecological “literacy” – an ability to see and respond to choice in land management decisions

Toolkit

- Cow and Fish program assists in assembly of technical advice and management tools
 - ❑ demonstration sites – leads to community acceptance and trust
 - ❑ riparian health assessment – used as a communication device to allow people to “see” their riparian area and its ecological functions in a new way

Stewardship opportunity – from conflict to cooperation

- stewardship opportunity is created through a 4-stage process
 1. begins with ecological awareness
 2. then teams and partnerships are developed – a network to solve issues and problems in a multidisciplinary fashion
 3. technical advice and tools for management changes are collected, sometimes taken from progressive landowners and adapted; also involves development of measuring sticks to assess riparian health
 4. transfer of responsibility for action to the community that's in the best position to make changes and benefit from them
 5. process must be community-based, locally driven and largely voluntary – empowering

Buffer Strip Program in PEI: A Farmer's Perspective

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To date, all things considered, farmers are not finding the implementation of buffer zones in the Environmental Protection Act difficult. Many were already leaving the required buffer distance or more. It is also easier to leave a buffer width if you know everyone is playing by the same rules... The consultation process has been able to create a law that was more palatable than originally proposed.

PEI buffer regulations

- 1997 Round Table report recommended mandatory riparian zones and exclusion of livestock – impetus came from fish kills and shellfish die-offs due to pesticides
- initial proposal regarding mandatory riparian zones came as a surprise to the agricultural community; followup consultations led to a more palatable version
- PEI's legislation applies to crop production, intensive livestock operations, forestry operations, and land development
- crop production regulations address minimum buffer widths, headlands, and conservation zones
- livestock regulations address new and existing intensive livestock operations
- effective October 2003, all livestock must be fenced from watercourses – enforced federally through Federal Fisheries Act

Education program

- to familiarize producers with changes to the Environmental Protection Act, several provincial ministries devised an education program, including print materials, field days, in-field training sessions and farm calls
- some confusion regarding buffer requirements remains

Compliance

- enforcement is the responsibility of PEI Dept. of Fisheries, Aquaculture and Environment
- to date, warnings have been issued but no fines
- cash crop producers have some difficulty with buffer measurement, slopes, law familiarization by farmers and farm help, planning, weather, loss of productive land
- in 2000, 66% of livestock were fenced from watercourses

Agriculture and Environmental Resource Conservation Program

- in third year of \$3 million program to aid farmers with compliance

SUMMARIES OF PRESENTATIONS

- eligible activities include riparian planting, livestock fencing and watering, winter cover cropping, straw/hay mulching, soil conservation structures, strip cropping, pesticide, fuel and manure storages, dead stock composting, and milkhouse washwater disposal
- funding for most of these activities is provided at 66% of eligible costs, with maximum assistance of \$30,000 annually
- no funding for retiring land for riparian purposes
- EFP is key component for eligibility

Legislation versus incentives

- PEI took legislative route due to urgency regarding fish kills from pesticides/soil erosion – required immediate implementation of changes to reduce runoff
- most farmers are in compliance with 10-metre buffer and 50-metre conservation zone
- incentives work, and most farmers will make at least some changes over time

Rural Water Quality Program: Lessons Learned

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Thus far, the RWQP has yielded important lessons in program delivery. These include but are not limited to: the necessity of strong political will and program champion(s), the importance of including all stakeholders in a cooperative framework from the outset, the value of prior participation in the Environmental Farm Plan program, local flexibility in implementation, incentives that are flexible and that recognize that lands to be retired have value. Finally, adoption of most best management practices regarding land use require long-term planning: five years is not enough.

Rural Water Quality Program

- source water protection program funded by municipalities to cost-share selected agricultural best management practices to improve and protect ground and surface water quality

Water quality concerns

- microorganisms
- phosphorus
- nitrogen
- sediment

Why source water protection?

- ensure a secure, safe water supply for all users
- improve wastewater treatment efficiency
- improve river-based recreation and tourism opportunities
- protect and improve aquatic habitat
- sustain agriculture as a land use

Why is this program unique?

- first time an Ontario municipality has directly funded a non-point source pollution control program from user rate budgets
- locally developed with the agricultural community and other stakeholders

Programs

- 1998 – Region of Waterloo \$1.5 million
- 1999 – County of Wellington and City of Guelph \$1.35 million over 5 years
- 2001 – Ontario Healthy Futures Program \$740,000 to Healthy Waters Project in Wellington County and \$350,000 to Waterloo
- Oxford, Perth, Middlesex Clean Water Project – \$2.3 million
- County of Brant and City of Brantford – \$100,000
- AESI – \$209,900 for other areas of the watershed

SUMMARIES OF PRESENTATIONS

Steering committee tasks

- creation of a list of best management practices
- cost-share ratios
- eligibility guidelines
- marketing and promotion
- monitoring

Lessons in program development

- all potential stakeholders must be invited to participate
- the steering committee must be a working committee that is empowered to develop the program
- steering committee must develop a terms of reference and a set of operating principles

Operating principles

- provide financial incentives to farmers for contributing to cleaner water
- build on the spirit and philosophy of the Environmental Farm Plan
- provide an incentive structure to ensure the effectiveness and longevity of best management practices
- develop a positive attitude in the community that fosters the adoption of best management practices

Program basics

- voluntary
- educational
- financial incentives (50%–100%) to cost-share best management practices

What do we deliver?

- manure storage
- fencing of watercourses
- variety of other eligible best management practices (e.g. milkhouse waste management; alternative cattle watering; no tillage practices, etc.)

Program progress

- over 370 projects completed
- \$1.4 million grant
- over \$3 million invested in water quality projects
- over \$300,00 of in-kind labour provided by landowners

What are the results to date?

- in contact with over 500 farmers
- facilitated planting of over 60,000 trees and the retirement of over 150 acres
- fenced over 32 km of watercourses

SUMMARIES OF PRESENTATIONS

What we have learned:

program development

- strong political will is required
- think above or beyond the end of pipe
- need a program champion

Involve! Involve! Involve!

- importance of partners, cooperation and a process that includes rather than excludes
- get everyone together at the beginning and go through the process together
- each area is unique and will have different priorities and funding ratios

What we have learned:

implementation

- the Environmental Farm Plan is a prerequisite for applying to the RWQP – critical step that ensures that landowners are aware of the issues and have assessed the environmental opportunities on their farms

Local innovations

- allowing in-kind labour as the landowner's contribution for fencing increases the number of projects completed.
- compensating landowners for land retirement acknowledges the fact that their land is of value

What we have learned: delivery

- 5 years is still too short – landowners have long planning horizons, (sometimes you have to wait for the farm to change hands)
- technical people in the field – improves project performance, increases participation and improves image

How do we continue our success?

Program champions!!

Ontario Buffer Strip Program: A Proposal

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Program development

- proposal was assembled by the Riparian Working Group and presented in June 2001
- its design reflects the stated needs of the farm community, and addresses the desired environmental needs of many federal and provincial departments, and wildlife conservation and water quality organizations

Program components

- proposed Ontario Buffer Strip program is a five-year, \$15 million initiative that will establish 10,000 acres of buffer strips on fragile agricultural land across the province – the acreage figure equates to approximately 4000 miles (6400 km.) of grass and tree buffer strips
- farm landowners will be encouraged to assemble competitive bids for limited incentive dollars – procedure is based on an evolved version of the very successful permanent cover programs funded by Agriculture and Agri-Food Canada 1991-93
- program anticipates about 3,333 successful bids (averaging 3 acres each)
- partnerships are proposed that will see delivery, administration and extension duties shared appropriately by a number of participating farm organizations, agencies and wildlife groups

Linked initiatives

- proposal is presented as the first in a series of linked buffer program initiatives aimed at the farm, non-farm and urban sectors
- 10,000-acre goal is a first step towards a sustainable approach to encouraging the widespread adoption of buffer strips as a best management practice
- program would capitalize on the success and interest created by current environmental education programs, and offer participants meaningful and practical compensation for environmental services
- program's successful integration of many environmental issues (e.g. water, soil, air and wildlife) offers others in society, guaranteed, measurable success

Input from Participants: Questionnaire and Discussion

Having heard about buffer programs here and elsewhere, we devoted the late morning and afternoon to a brainstorming, consensus-building session on ideas for program development. The process involved a questionnaire and later facilitated discussions that took its cue from questionnaire results.

First, participants were presented with three case studies – two from outside Ontario, and one from within the province. They also received a “straw man” proposal for an “on-the-ground” program within the context of the larger program presented earlier by Andy Graham.

The questionnaire was designed to stimulate thinking about what an “on-the-ground” program should look like, its scope, delivery and components. Results were used as talking points and to capture quantitative and qualitative information from all participants, whether they stayed for the afternoon or not. This information was also used later to compare and contrast information, opinions and ideas generated by the facilitated group discussions.

The full questionnaire appears on the next three pages, followed by a summary of results. To see the raw data, including comments, please go to the Appendices.

The afternoon session was a group-facilitated process that addressed the following questions:

- buffer program vision – goals, what does the program look like, where do you want to be when, what are the objectives?
- components – framework, i.e., what’s in it?
- buy-in from attendees – is there support?
- next steps?

Criteria presented for decision-making were:

- environmental impact
- interest from organizations
- practicality of implementation.

QUESTIONNAIRE

1. Scope of the program

The program should be comprehensive with the following components: education, financial assistance, R&D and regulatory controls.

Strongly Agree SA Agree A Undecided U Disagree D Strongly Disagree SD

Comments:

2. Where should the program be delivered ?

The “on-the-ground” buffer program should be targeted to agricultural southern Ontario only.

SA A U D SD

Comments:

3. Who is eligible ?

Only registered, commercial farmers should be eligible for financial assistance from this buffer strip program.

SA A U D SD

Comments:

4. What “on-the-ground” components should be eligible ?

Circle the features that should be part of an “on-the-ground” buffer program.

Grassed buffer strips enhanced buffer strips (planted trees/shrubs)

forage buffer strips field soil erosion control structures

streambank erosion control structures fencing fencing alternatives

alternate watering devices shade structures in-water buffering structures

watercourse crossings wetland buffers pond buffers field borders

field windbreaks vegetative wind strips vegetated treatment strips

Comments:

INPUT FROM PARTICIPANTS: QUESTIONNAIRE AND DISCUSSION

5. Funding level

Please rank your preference for each of the following types of financial assistance for “on-the-ground” buffer strip/riparian practices to eligible landowners.

	Least Preferred.....			Most Preferred
	1	2	3	4	5
Bid	1	2	3	4	5
Grants	1	2	3	4	5
Fixed-rate/cost-share loans	1	2	3	4	5
Tax incentives	1	2	3	4	5
Land easements	1	2	3	4	5

Comments

6. Funding source

Circle your preferred source(s) of funding.

Federal Government	provincial government	federal + provincial
Local government	provincial + local	all government levels
NGO + government	Other _____	Other _____

Comments:

7. Who should deliver the program?

Circle your preferred delivery agent or partnership.

Funding government agency	Funding government agency partners	
NGO + government	farm organization	Conservation authority
Other _____		

8. Targets

We should aim for XX kilometres of buffers strips as a key performance measure for evaluation.

SA	A	U	D	SD
Comments:				
<hr/>				
<hr/>				
<hr/>				

9. Education

Place a checkmark beside your preferred education methods for an “on-the-ground” buffer program from the following list:

- | | |
|--|-----------------------|
| Educational media (print, multi-media) | Demonstrations |
| Buffer Strip plan workbook | Tours |
| Buffer Strip Workshops | Community projects |
| Environmental Farm Plan | Landowner conferences |

10. Communications

At least 10% of the budget of this program should be invested in marketing, promotion and awareness of the local and societal benefits of this program.

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
SA	A	U	D	SD
Comments:				
<hr/>				
<hr/>				
<hr/>				

Thank-you for completing this assessment form. It will help shape an “on-the-ground” buffer program for Ontario.

Please leave the completed form with the session coordinators following the wrap-up.

Name & Affiliation (optional)

Additional comments:

Questionnaire Results

1. Scope of the program

The program should be comprehensive with the following components: education, financial assistance, R&D and regulatory controls.

- | | |
|--|----------|
| <input type="checkbox"/> strongly agreed | 20 votes |
| <input type="checkbox"/> agreed | 23 |
| <input type="checkbox"/> undecided | 4 |
| <input type="checkbox"/> disagree | – |
| <input type="checkbox"/> strongly disagree | – |

The issue of a regulatory versus cooperative or voluntary approach was a major concern. Farm organizations thought the focus should be on financial assistance and education, not regulation. Other comments stressed the need for a balanced, careful approach to any form of regulatory management.

2. Where should the program be delivered ?

The “on-the-ground” buffer program should be targeted to agricultural southern Ontario only.

- | | |
|---|---------|
| <input type="checkbox"/> strongly agreed | 6 votes |
| <input type="checkbox"/> agreed | 11 |
| <input type="checkbox"/> disagreed | 13 |
| <input type="checkbox"/> strongly disagreed | 9 |
| <input type="checkbox"/> undecided | 7 |

Many felt it's a not just a farm problem. Some felt a southern Ontario agricultural focus was fine as a start, but additional areas should be staged as the program progressed, e.g., southern Ontario agricultural to rural Ontario; near North to North. Some felt this type of initiative should be for all rural lands and expanded to urban areas as well.

3. Who is eligible ?

Only registered, commercial farmers should be eligible for financial assistance from this Buffer Strip Program.

- | | |
|---|---------|
| <input type="checkbox"/> strongly agreed | 6 votes |
| <input type="checkbox"/> agreed | 9 |
| <input type="checkbox"/> disagreed | 16 |
| <input type="checkbox"/> strongly disagreed | 6 |

The majority did not agree that it should be only eligible to farmers. They felt it should be available to all rural landowners, perhaps with some criteria for specific eligibility.

4. What “on-the-ground” components should be eligible?

- | | |
|---|----------|
| <u>Top 5</u> | |
| <input type="checkbox"/> fencing | 40 votes |
| <input type="checkbox"/> enhanced buffers | 37 |
| <input type="checkbox"/> alternative watering devices | 25 |
| <input type="checkbox"/> fencing alternatives | 24 |
| <input type="checkbox"/> grassed buffer strips | 23 |

INPUT FROM PARTICIPANTS: QUESTIONNAIRE AND DISCUSSION

<u>Other</u>	
<input type="checkbox"/> watercourse crossings	22 votes
<input type="checkbox"/> wetland buffers	20
<input type="checkbox"/> streambank erosion control structures	14
<input type="checkbox"/> field soil erosion control structures	10
<input type="checkbox"/> forage buffer strips	4
<input type="checkbox"/> shade structures	3
<input type="checkbox"/> vegetated treatment strips	3
<input type="checkbox"/> pond buffers	3
<input type="checkbox"/> field windbreaks	2
<input type="checkbox"/> vegetative wind strips	2

Most felt most or all of these best management practices should be included.

5. Preferred funding sources

<input type="checkbox"/> all government levels	29 votes
<input type="checkbox"/> combination of NGO and government	29
<input type="checkbox"/> federal + provincial	15
<input type="checkbox"/> local government, provincial + local	5
<input type="checkbox"/> provincial government	3
<input type="checkbox"/> federal government	1

The NGO refers to funding from corporations, as linking industries' sustainable management to agricultural landscapes was seen as a good idea.

6. Funding level

Rank your preference for each type of financial assistance for "on-the-ground" buffer strip/riparian practices to eligible landowners.

<input type="checkbox"/> grants	169 points
<input type="checkbox"/> bid	138
<input type="checkbox"/> tax incentive	136
<input type="checkbox"/> land easements	125
<input type="checkbox"/> loans	85

The grant process was most preferable, and bid, tax incentive and land easements were closely weighted.

7. Who should deliver the program?

<input type="checkbox"/> farm organizations	30 votes
<input type="checkbox"/> conservation authorities	26
<input type="checkbox"/> NGO + government	13
<input type="checkbox"/> government, agency partners	3

The first two groups scored much higher than NGOs or government. One reason is that farm organizations and conservation authorities are trusted by rural landowners. There were several comments about farm organizations and CAs forming partnerships.

8. Targets

We should aim for XX kilometres of buffers strips as a key performance measure for evaluation.

- | | |
|--|----------|
| <input type="checkbox"/> strongly agree | 10 votes |
| <input type="checkbox"/> agree | 19 |
| <input type="checkbox"/> undecided | 6 |
| <input type="checkbox"/> disagree | 5 |
| <input type="checkbox"/> strongly disagree | 1 |

There were specific criteria for target development. These include: length, width (area) and specific functions.

9. Education

Place a checkmark beside your preferred education methods for an “on-the-ground” buffer program from the following list :

- | | |
|---|----------|
| <input type="checkbox"/> demonstrations | 28 votes |
| <input type="checkbox"/> community projects | 24 |
| <input type="checkbox"/> environmental farm plan | 24 |
| <input type="checkbox"/> buffer strip workshops | 16 |
| <input type="checkbox"/> educational media (print etc.) | 15 |
| <input type="checkbox"/> tours | 7 |
| <input type="checkbox"/> landowner conferences | 6 |

There was moderate support for workshops, workbooks and educational media such as print. There were also suggestions that EFP was not enough, and additional support materials and training would be needed.

10. Communications

At least 10% of the budget of this program should be invested in marketing, promotion and awareness of the local and societal benefits of this program.

- | | |
|--|----------|
| <input type="checkbox"/> strongly agree | 24 votes |
| <input type="checkbox"/> agree | 18 |
| <input type="checkbox"/> undecided | – |
| <input type="checkbox"/> disagree | 4 |
| <input type="checkbox"/> strongly disagree | – |

There was caution about setting a specific limit. It would be important to demonstrate the program’s usefulness and communicate this message to the general public.

Summary of the Day's "Top Ideas"

Ontario Riparian Program Direction

Education	9 votes
▪ strategic approach targeted to politicians, managers, landowners, and public	
Separate government funding	8
▪ <u>directly</u> funded program	
Community-driven and supported with strong feedback, followup, monitoring and reporting to public	8
Riparian report card for province	8
▪ important step in process to identify need for community action	
Measurable results	8
▪ reportable numbers pooled, e.g., by an Internet-based program	
▪ part of monitoring program to test implementation measures, i.e., test water chemistry parameters and aquatic life or habitat assessment	
▪ water quality toolkit for kids, landowners and farmers	
Funding delivered to foster collaboration	7
▪ existing delivery mechanisms to be used	
▪ who does what to be determined	
Buffers that are truly functional, not just data	7
▪ permanent, not allowed to revert to previous condition	
▪ sensitivity of streams, cold water vs. warm water, to be considered	
Importance of technical assistance	7
Personal touch — delivered by people, not paper	7
Program prerequisites for project or bid \$ = EFP + Buffer Strip Project Plan = ?	7
▪ essential that program prerequisite is integrated with other stewardship programs	

Ontario Riparian Program Components

Ontario Farm Environmental Coalition to champion	14 votes
▪ agency should not be the champion	
Long-term adequate funding	8
▪ contract with consumer's percentage of water bill	
Grassroots, community-based organizations, Ontario Soil and Crop Improvement Association as deliverers	7
Funding delivered to foster collaboration	7
▪ existing delivery mechanisms to be used	
▪ who does what to be determined	
Definitions of buffers	6
▪ for farmers, government and public	
of goals	
▪ functional economic, social and economic goals	
Clarification of administration and delivery	6

Recommendations: Getting Something “On the Ground”

A comprehensive provincial strategy with a strong “on-the-ground” program as its core

- some of these “on-the-ground” programs do exist, as do some aspects of R&D, but none is linked to an overall vision and comprehensive strategy
- a provincial strategy should be sequenced
 - southern Ontario agriculture first, and then expand to all rural lands
 - a separate but similar process for urban lands

Farm organization and Conservation Authority in partnership to share program delivery

- a partnership between farm organizations and specific CAs may work well because CAs have the technical capability from a planning and design perspective, whereas farm organizations have strength from an educational, capacity-building and adjudication perspective
- there is room for a cooperative approach and shared responsibilities among these types of organizations
 - areas of sharing could be planning workshops for riparian areas and both groups could share administrative roles (where there are sensitivities related to cost-recovery issues for overhead and administration)

Monitoring should be done by agencies – perhaps collaboratively between provincial agencies (e.g. MOE/MNR) and CAs

Agricultural agencies/farm organizations coordinate development of best management practices, etc.

Eligibility requirements should include Environmental Farm Plan and a riparian buffer project plan (needs development).

R&D should fit into an overall program, as well as monitoring, BMP design work, and hypothesis testing

- should be delivered through a variety of sources (agencies, universities)
- should show what works well and how it works

Major components of an agricultural landscape management process include the following:

- the upland BMP processes, nutrient management BMP processes, riparian BMP processes and in-channel BMP biophysical processes (e.g., agricultural “natural drain design”)

Workshop Summary

John FitzGibbon, University of Guelph

Dr. FitzGibbon noted the timeliness of the buffer initiative with the newly released Nutrient Management Act. He then recapped the day's session by grouping features of program development, components and delivery that were covered.

Awareness – Capacity building

As a first step in the development of any “on-the-ground” program, there is a need to build awareness of the problems and issues in order to engage the local community. Awareness has many elements. All these elements provide tools that build a community's capacity to deal with the issues and to implement a program that is both meaningful to them and solves the problem. The awareness elements are:

- support
- education – individual, community, politically
- experience
- organization
- financial
- technical
- peer.

Principles

The participants in the workshop identified principles that are essential in the development of a buffer program for Ontario:

- economically viable
- ecologically functioning – human and natural
- socially acceptable.

Landscape-based

Participants suggested that any riparian buffer program in Ontario must be clearly tied to the landscape using farm-oriented and environmentally oriented planning tools. Therefore there must be strong and clear linkages to:

- linked to and based on EFP
- linked to watersheds
- linked to communities.

Delivery

Programs need very clear delivery mechanisms, structures and processes in order to be successful. Participants identified what they considered to be key delivery elements below:

- clearly defined delivery organization and process
- multiple partners in funding and implementation
- delivery = program definition, project evaluation and accountability and evolution.

Legislation and regulations

Most participants urged the development of voluntary, incentive-based programs. Unfortunately, regulations and legislation may be necessary. However, any legislation or regulations should follow these guidelines:

- legislation in support of stewardship – not a replacement for it
- provision for minimum requirements
- provision of support and opportunities for enhancement.

Objectives

The key objectives identified by the participants fall into three inter-related categories, all of which are important to a healthy community and healthy environment:

- adequate clean water
- fish and wildlife ecologically appropriate
- environmental amenity.

Need to be realistic

We cannot turn back the clock and return to “pristine”, original environments in Ontario. People need food and our rural lands and their agro-ecosystems are essential elements of a productive and healthy society. Therefore we need to be realistic in our expectations of a riparian buffer program. For example:

- impacts will never be non-existent – we should have reasonable expectation of impacts from reasonable use
- agricultural activity is part of our normal expectations both in performance and support
- there is a need for measurable, observed, accountable results.

Challenges

Challenges always exist and the development of a riparian program will have to solve the following challenges:

- program funding – contract with consumers – who gets what out of this
- role of government, role of organizations
- coordination
- getting action.

Appendices

A Template for Conservation in Agricultural Alberta: The Cows and Fish Process

Buffer Blitz – June 20, 2001

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Riparian areas are the transition zones between aquatic ecosystems and the adjacent upland terrestrial ecosystems. This is a landscape type strongly influenced by water, small in aerial extent and ecologically diverse. “Healthy” riparian areas support unique plant communities that establish watershed function, provide diverse habitats for fish and wildlife, and a highly productive forage supply for livestock. Despite their small size, riparian areas are the most valuable, productive and vulnerable areas for the agriculture sector.

In the United States the use and abuse of riparian landscapes by livestock grazing has been a focal point of nearly three decades of debate. This debate has resulted in remedial programs among federal and state agencies, which include fencing to exclude cattle from riparian areas and extend to removal of livestock altogether from public range lands. Initiatives to reduce or remove livestock often relate to overuse and degradation of riparian areas. The situation in the United States provides an example of a riparian grazing issue characterized by deeply entrenched conflict among interest groups and legislated solutions.

Issues about riparian use began in Alberta with a focus on fish. In the 1970's the impact of decades of unmanaged livestock use on several high profile trout streams in west-central Alberta became apparent through biological surveys. Those baseline surveys provided the catalyst to galvanize restoration actions designed to improve habitat conditions for trout. Without knowledge and tools to manage grazing of riparian systems, initial efforts for recovery involved fencing programs to permanently exclude livestock from variable portions of riparian areas. Exclusion fencing can provide rapid recovery and help to demonstrate a site's biological potential, often quickly; this was the case for the initial riparian management program in west-central Alberta. However, as the program to use exclusion fencing as the riparian management tool expanded some issues related to the narrow focus became apparent. Initial fencing costs are high and the associated maintenance of fences in close proximity to an area prone to flood damage often exceeds the original cost. Stream-bank fencing was also seen to be a loss of abundant forage and a perception that this limited the opportunity for livestock water. Acceptance of fencing as a solution and adoption by landowners became problematic in other areas of the province. In concert with this grew the awareness that exclusion fencing conveys the notion that riparian areas and cattle are incompatible, contrary to disturbance process theory in ecosystem dynamics. As well, streams, the adjoining riparian zone and watersheds function as units and are inseparable; exclusion fencing doesn't allow the

opportunity to find the solution to a riparian grazing problem in the adjacent uplands and to manage on a landscape basis.

The Alberta Cows and Fish initiative began as a recognition that resolution of the impasse over riparian areas and their management would be accomplished with a range of solutions, including but not exclusively, stream-bank fencing. In 1992 six groups and agencies sat around a rancher's kitchen table and established what would become the Cows and Fish program. This partnership between the Alberta Cattle Commission, Trout Unlimited Canada, the Canadian Cattlemen's Association, (then) Alberta Environmental Protection, Alberta Agriculture, Food and Rural Development, and Fisheries and Oceans Canada (and later PFRA) created a synergy of experience, perspective, background and resources that broadened the approach to riparian issues.

In the evolution of the Cows and Fish initiative it was not intended that it would develop as a program that superseded or replaced land/ resource management activities undertaken by agencies or groups. Staff, resources and mandates will always remain the purview of government agencies, either at national, provincial or municipal levels. However, it can be argued that the effectiveness of agencies involved in management, conservation or stewardship activities could be increased substantially. The inability to be more effective can be related to a number of factors including resources, priority, interest and motivation. All are intertwined but the factor that may be the driver of all is approach. As a general rule the approach of agencies (and agency staff) to resource management issues is regulatory or prescriptive or incentive based. Phrased differently, "this is what you must do", or "this is best and you should do it this way", or "here is some money, please cooperate". These delivery mechanisms tend to be centralist or top-down in nature; a consequence of this approach is products from it tend to be viewed with suspicion and distrust by those who are the intended recipients of the advice, direction and resources.

The Cows and Fish program began (and continues) as a different way to engage with people, especially livestock producers, to move beyond suspicion, denial and conflict to trust, acceptance and co-operation. Engagement begins with ecological awareness, a non-threatening, non-confrontational extension effort to help people understand some of the ecological processes that shape the landscape they live on and make a living from. Part of that critical, initial message is that there are choices and alternatives to current management practices. As the antithesis of the centralist or top-down approach, Cows and Fish encourages the formation of local or community teams, composed of technical, producer and other local interests, to engage with each other to "drive" the process.

A working arrangement of local individuals and technical staff begin to deliver ecological awareness on a broader basis in the community or watershed area. Acceptance is enhanced because people perceive the initiative is internal as opposed to being externally driven and motivated. Message deliverers go where the community invites them and as an invitee are given more prominence. This working relationship helps assemble diverse experience, talents, perspectives and resources in a multi-disciplinary fashion.

Ecological awareness, a place to begin sensitizing individuals at a community level to recognize elements of their environment, must lead to ecological literacy. Literacy is the ability to see and respond to choice, opportunity or option in land management decision. Changes to land management are driven by informed decisions that are, in part, based

on a greater appreciation of ecological function and process. Individuals, in making ecologically appropriate land management decisions, can minimize risk, avoid liability and maintain future options. The Cows and Fish program assists in the assemblage of technical advice and tools for management changes to provide options and alternatives to current practices. Information sources include those innovative, progressive or practical solutions already being used by a limited and select group of landowners.

Key tools, part of “literacy”, include demonstration sites and riparian health assessment. It is difficult to sell concepts or ideas without tangible products or examples. Demonstration sites are products, examples of changes in grazing management that people can see, review and reflect on whether these management changes make sense for their own operations. Sites selected for demonstration purposes also represent research opportunities, to test and measure riparian response to a particular grazing management option. Since many livestock producers are reluctant to experiment, at their own expense and risk, the development of demonstration sites using capital from elsewhere provides some of the first steps in a community to acceptance of other management ideas.

Riparian health assessment is a useful tool to allow people to critically observe, measure and assess the status of ecological function on their own property or within their communities. The term “riparian health “ is used to mean the ability of a riparian area to perform certain key ecological functions. These functions include sediment trapping, bank building, water storage, aquifer recharge, water filtration, flow energy dissipation, maintenance of biodiversity and primary production. If these functions are impaired so too will be the ability to sustain agricultural operations. Health assessment is not just an ecological “measuring stick”, it becomes a communication device to allow people with differing backgrounds and experience to “see” a riparian area and its status through the same set of eyes. Arguments about riparian condition are minimized and a much more productive discussion about how to restore damaged areas can begin. The current status of watersheds within a community can become a catalyst for action based on health assessments and forms a benchmark useful to chart progress, both on individual properties and within watersheds.

The Alberta Cows and Fish program assists in community-based conservation through a process of engagement that creates opportunity to move from conflict to cooperation. Stewardship opportunity is created through a four stage “process” or “pathway”. It begins with ecological awareness; a fundamental building block often skipped in other initiatives. The second step is assisting in the development of teams and partnerships. A network of resource professionals, landowners and others who value riparian landscapes needs to form to solve issues and problems in a multidisciplinary fashion. Step three is the assemblage of technical advice and tools for management changes to provide options and alternatives to current practices. Much of the information is gathered from the solutions already being used by some progressive landowners. The task is one of locating those individuals, understanding the management action taken and translating that action into an alternative for others to assess for possible application to their operation. Part of this step includes the development and use of ecological measuring sticks to assess riparian function or “health”. Those measuring sticks allow an objective review of watershed condition, link ecological status to management, help galvanize community action and provide a monitoring framework for landowners and others. Other tools help communities link biodiversity, economics and water quality to management actions and alternatives.

The last step (although the process steps are often constantly repeated) is critical: it is the transfer of responsibility for action to the community that is in the best position to make the changes and benefit from them. Riparian (and by association, watershed) actions need to be community based, locally driven and largely voluntary. To help a community to arrive at this point requires knowledge building, motivation, acknowledgement of problems and empowerment. The reasons for positive action may result from enhanced awareness, motivated self-interest, concern about legislation, marketing opportunity or altruism. The net effect will be a return to a landscape that maintains critical ecological function and provides a greater measure of support for agricultural operations. Cows and Fish is about building a cumulative body of knowledge that we all should know including how riparian systems function and link us, how watersheds work, the vital signs of landscape health, the essentials of how people need to work together, how solutions need to benefit us all and the kinds of information that will enable us to restore or maintain natural systems and build ecologically resilient communities and economies.

Concerns about riparian areas in Alberta began over fisheries issues. The more the microscope focussed on this seemingly insignificant landscape the greater our understanding has become about the disproportionate importance of riparian areas. Issues of biodiversity, economics and water quality now crowd the media; all relate to landscape use, especially that use of riparian areas. Long-lasting solutions will have to engender thoughtful application of initiatives that are accepted and effective at a community level. Inevitably this is where we will succeed or fail, based on approach.

***BUFFER STRIP PROGRAM IN PEI
A FARMERS PERSPECTIVE***

Buffer Blitz – June 20, 2001

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INTRODUCTION

In May of 2000, Mr. Clair Murphy, Director of Water Resources with the Province of PEI introduced many of you to amendments of the Environmental Protection Act and the special problems our province is encountering. Today I will cover some of the same topics as Clair, but I will try to give it a farmer perspective. As well I will bring you up-to-date on new amendments to the Environmental Protection Act just passed during the last sitting of the House.

Prince Edward Island farmers, foresters, and land developers are the first in Canada legislated to maintain riparian areas in their daily activities. Buffer zones on Prince Edward Island has been discussed since the '80's, but not until the ***Round Table on Resource Land Use & Stewardship*** report was released in 1997, did the discussion on buffer zones become more focused.

The ***Round Table on Resource Land Use & Stewardship*** report focus was soil and water quality, pesticide use, and forest resources. The 16 members appointed by government heard presentations from about 70 individuals and organizations, and over a two year period to develop this 160 page report.

In regards to buffers, the report recommended the Environmental Protection Act be amended to establish mandatory riparian zones adjacent to watercourses having minimum widths of 10 metres on all intermittent streams and springs, and 20 or 30 metres on all other watercourses. In addition they recommended to make it illegal for all forms of livestock to have access to watercourses and to travel within designated riparian zones.

The ***Round Table Report***, I think, was an awakening to the farm community that environmental issues will be on the agenda for government and the general public for many years to come. Many may not have seen what was coming and may have been shocked when they saw the recommendations in the ***Report***. As a result many farmers, especially livestock producers, began expressing their concerns in what was proposed. At the same time in November of 1997, the Standing Committee on Agriculture, Forestry, and Environment issued a ***Discussion Paper on Watercourse Buffer Zones*** to explain proposed amendments to the act. This paper also served to focus the debate on the ***Round Table Report***, which may have been lacking previously. With such an

overwhelming response, the Standing Committee held public meetings and received presentations from more than 70 groups and individuals, resulting in over 900 pages of transcripts and submissions. In the end they presented a report to the Legislative Assembly of PEI in April of 1998 with their recommendations.

Prince Edward Island's Environmental Protection Act was amended in June of 1999, incorporating a "watered down" or more palatable version of the previously proposed buffer zone law. The new law came into effect April 1 of 2000. The Environmental Protection Act was again amended in May of 2001. Therefore we do not have a lot of experience regarding the legislation.

PEI BUFFER REGULATIONS

The following is a review and an update from Mr. Clair Murphy's presentation of last year. PEI's legislation applies to crop production, intensive livestock operations, forestry operations, and land development. Here is the law as it affects agriculture directly.

1. Crop production and minimum buffer widths:
 - Not permitted to plant an agricultural crop within 10 metres
 - Forage crops can be grown and harvested in the 10 metres
 - Forage crops can be renewed 1 in 5 years using spring tillage & under seeded cereal
 - Renewal of the forage cannot be done in a year that the up slope field is in row crops
2. Crop production and headlands:
 - All headlands within 200 metres adjacent to a watercourse for fields planted up-and-down slope cannot be planted to a row crop - grass headlands required
 - If the 10 metre buffer is grass, it can be used as a headland
 - If the 10 metre buffer is trees, a grass headland must be left
3. Crop production and conservation zones:
 - If the land within 50 metres of the up slope boundary of the 10 metre buffer zone has greater than 5% slope, farmers can either:
 - Increase the buffer zone width to 20 metres, or;
 - Establish a conservation zone within this 50 metres with:
 - No fall tillage and
 - A winter cover be established during the row crop years
4. New intensive livestock facilities (including buildings, manure storage, exercise yards, and concentrated feeding areas)
 - These facilities cannot be constructed within 90 metres of a watercourse or designated wetland
5. Existing intensive livestock operations
 - where the slope of the land between the intensive operation and a watercourse or wetland is nine percent or less, a 20 metre buffer zone shall be required
 - where the slope of the land between the intensive operation and a watercourse or wetland is nine percent or more, a 30 metre buffer zone shall be required

NOTE: An intensive operation is defined as:

- animals are kept or housed in a confined area, with or without access to an outside lot or yard,
- the animal density, based on total living area, is greater than seven animal units per acre; and
- feed and water are delivered to the animals.

FEDERAL FISHERIES ACT

Currently there are no specified buffer width for pastured cattle in non-intensive situations. However the livestock industry has developed a **Code of Practice for the Watering of Cattle While on Pasture** recommending cattle to be fenced from watercourses in most situations. Department of Fisheries and Oceans and Environment Canada have begun to actively enforce the Federal Fisheries Act on Prince Edward Island and they consider livestock access to watercourses in violation of this act. The livestock industry is cooperating with the federal and provincial governments to have all livestock fenced from watercourses by October 1, 2003. Livestock producers will reach yearly milestones during this transitional phase. A buffer width has not been designated.

EDUCATION PROGRAM

With changes to the Environmental Protection Act, an education program was needed to assist producers in becoming familiar with the new legislation. The Departments of Agriculture and Forestry, and Fisheries Aquaculture and Environment sponsored/participated in the following activities:

- buffer zone brochure with the regulations in a friendly format
- major advertisements (½ page in size) in the local papers
- presentation at the annual PEI Soil and Crop Conference in 2000
- focus on Resources Cable TV show
- Cavendish Farms Field Day for employees
- Province of PEI home page
- Extension services and farm calls by the Department of Agriculture and Forestry
- Numerous in-field training sessions or field days.

I have spoken with a number of farmers recently and some still are not sure what they require for a buffer. In addition no one is up-to-date on the recent amendments. It will certainly take a few years before these regulations are familiar. Therefore in the mean time the province must continue to rigorously pursue an education program.

COMPLIANCE TO DATE, ENFORCEMENT AND FINES

Enforcement of the Environmental Protection Act is the responsibility of the PEI Department of Fisheries Aquaculture and Environment and their enforcement officers. These officers flew over a number of watersheds last year and did a number of follow up ground checks. Their conclusion was compliance with the 10 metre crop buffer zone was excellent but compliance of the conservation zone was poor due to poor fall weather conditions. There were 8 to 10 infractions of planted headlands the previous spring.

To date no fines have been laid. For a person fined under the EPA, fines can range between \$200 and \$10,000, and for a corporation fines can range between \$1,000 and \$50,000. Officers can spot ticket anyone based on the minimum fine. In the early stages of this process, leniency will be used. Only warning have been issued so far. Some farmers had to remove planted headlands in those sensitive areas. Without a doubt the general public will become involved in policing these laws.

DIFFICULTIES EXPERIENCED BY CASH CROP PRODUCERS

For the most part producers are having no difficulties in implementing the buffer law - compliance has been acceptable. Here are some points of difficulty however:

- Where to measure from? For streams, rivers, springs, brooks, ponds, etc. the measurement of the buffer starts at the outside edge of the flow defining banks. For designated wetlands, the measurement begins on the border between vegetation that is water tolerant and vegetation that is not water tolerant. These designated wetlands include open water, shallow marsh, deep marsh, and salt marsh. These are stored on a wetland inventory. For tidal watercourses, it is the mean high water mark. The EPA does not apply to land locked ponds or coastal areas. Understanding these requirements has certainly caused some confusion.
- Obtaining an accurate slope. Certain sections of the EPA is based upon slope. Measuring an accurate average slope is difficult and requires the proper equipment. Slight variations can make significant differences. With the new amendments farmers can opt for the 20 metre buffer option, and not worry about slope measurements at all.
 - Becoming familiar with the law. As a new law with many complicating factors, it will take a while before producers are totally familiar with the regulations and what is expected of them.
 - Teaching the help. Once the farm managers are comfortable with the law, they will need to educate their farm help when they are working in the field.
 - Planning and thinking ahead to protect grass headlands where necessary, and prepare for the conservation zone.
 - Weather hampering the establishment of the conservation zone. As we seen last fall producers had a difficult time in establishing winter cover with hay mulch due to the wet weather conditions. Some farmers may not have to equipment, or may not care for such an activity, therefore the new amendments will give those producers the option to establish a 20 metre buffer instead.
 - Less field efficiency or more land not in production as a result of not planting headlands. Turning field equipment, such as sprayers, requires some space to increase efficiency. Planting headlands is a practice to maximize the space for turning equipment, but minimizing the land not used to produce a crop. In other words keep the driveway as narrow as possible.

HOW ARE LIVESTOCK PRODUCERS RESPONDING?

For existing intensive livestock operations, such as feedlots, producers realize they are having a very significant impact on the environment when there is no buffer distance - some cattle receive their water from the watercourse. Luckily this is not a common situation on PEI and the ones that are in this situation realize they must make some changes. I would suggest less than 2% of the beef producers would be in this situation. Many are building covered feedlots for their cattle with the help of the AERC program.

As I discussed earlier, livestock on pasture has not been included in the laws for buffer zones.

Through the Industry/Government Working Group, a letter has been sent last winter to all dairy and beef producers on PEI (about 1,000 producers). The letter introduced the 3-year phase in-period to have all cattle fenced totally from watercourses. They were also encouraged to apply to the AERC program. The response has been very positive so far, with only minor concerns or complaints. If the AERC program did not exist as it does currently, producers would not be able to undertake this activity and the response to the letter last winter would be much different.

A survey of cattle producers in 2000 indicated that over 66 % of our cattle are fenced from watercourses, but 50 % of our 1,000 producers have cattle with access. This year we have received 120 applications thus far.

AGRICULTURE AND ENVIRONMENTAL RESOURCE CONSERVATION PROGRAM

The *Agriculture and Environmental Resource Conservation Program* is a 3-year, \$3 million program, currently in it's third year. The funding partners for this provincial program includes the PEI Departments of Agriculture and Forestry, and Fisheries Aquaculture and Environment, Eastern Habitat Joint Venture, Ducks Unlimited Canada, and the Wildlife Conservation Fund.

Eligible activities under AERC include hedgerow and riparian tree planting, livestock fencing and watering, residue management for potato production, winter cover cropping, straw/hay mulching, soil conservation structures, strip cropping, pesticide storage, fuel storage, manure storage, dead stock composting, and milkhouse wash water disposal.

Funding for most of these activities is provided at 66% of the eligible costs, with a maximum assistance of \$30,000 in each year. For example a producer has been able to install a manure storage in one year and in another year complete a fencing and watering project.

The Environmental Farm Plan is a key component to be eligible for funding through the AERC program. Producers are required to complete their EFP Action Plan to identify priority projects for funding. Issues such as manure storage, soil conservation, and fencing and watering must be addressed first through the AERC program before funding can be available for other activities.

The details of funding for the hedgerow and riparian tree planting program:

- 1-year old seedlings \$0.40 per tree
- 2-year old seedlings \$1.40 per tree

- Agroforestry crop also eligible for assistance for planting value added shrubs and trees in riparian areas taken out of production (i.e. red oak, birch, hazelnuts, witch hazel, gooseberries, fiddle heads, herbs, medicinals, etc.

In March of 1998 PEI Soil and Crop participated in a report that identified many different management options for watercourse buffers. I will make a copy available of this study here today.

Unfortunately there has been no agroforestry activity under AERC to date. We are not sure why there has not been any interest, but it may be the lack of someone really pushing and encouraging this type of venture. Maybe landowners do not realize that this program even exists. Without tangible markets, most will not be interested. Maybe if the program identified higher levels of assistance it might create more activity.

The program has had only 20 hedgerow and 2 riparian planting projects to date. Again the level of assistance may not be high enough to generate more interest.

For livestock fencing, watering and stream crossings, the AERC program assists producers at 66% of their labour, materials, and tractor time. Technical assistance is being provided through the PEI Soil and Crop Improvement Association. The livestock industry thought it be best if a farm organization delivered this part of the AERC program.

Spending under the AERC program to date has been brisk. 346 projects have been approved by the AERC program between April 1999 and May 2001, over-committing to \$3.93 million. Projects include 79 fencing and watering, 111 soil conservation, 110 manure storage, 23 hedgerow, and 23 others.

As you can see there is no funding available for taking land out of production for riparian purposes. Money availability is always an issue for governments of today. In 1997 and 1999 the PEI Federation of Agriculture and the PEI Potato Producers Association certainly supported financial help or tax breaks for establishing new buffers zones. Most people would agree I think that buffer zones are only one tool for environmental sustainability, but if the tools for the uplands are not implemented as well, the effectiveness of the buffer drops to almost nothing. In an ideal world governments would support both initiatives at a high rate of assistance.

I would estimate PEI could easily spend roughly 5 to 10 million dollars to secure a 10 metre buffer alone. In my opinion limited dollars are better invested in upland activities. It appears most producers had already left the 10 metres prior to the legislation and would feel it is their responsibility to be a good steward of the land to do this without compensation.

The Province of PEI is planning an AERC 2, but we do not know what assistance rates will be available. There is discussion of including nutrient management Planning.

LEGISLATION VS. INCENTIVE

On Prince Edward Island, soil erosion is certainly the largest environmental concern for agriculture. More so PEI has experienced about 10 fish kills since the mid 90's that was attributed to pesticide residue from the usage of an insecticide for the Colorado potato beetle. There were many uncontrollable factors working against these farmers (i.e. an

application of the insecticide being applied early in the season with minimal crop canopy and a short time before a sudden and unexpected torrential rain with 35 to 50 mm of precipitation in a 20 minute period - a 1 in 100 year storm). With the insecticide that missed the target and landed on the ground, the eroded soil carried the active ingredient to the watercourses.

PEI obviously went the route of legislation. Past experience on PEI has shown that incentives can work and a large percentage of the farmers will buy in over time to at least make some of the necessary changes on their farm. But time was not a factor most farmers would or could accept in dealing with the fish kill issue, and we needed everyone to implement these changes immediately. The **Report of Action Committee on Agricultural Runoff Control**, developed by farmers and government, recommended that all potato growers be encouraged to implement the 10 metre buffer zone law immediately, and that the conservation zone requirements be moved one year ahead of schedule for implementation.

Generally it is manageable. Farmers and farm groups support and understand the buffer zone concept.

In 1999 the PEI Potato Producers Association passed a resolution to implement a 10 metre buffer, and if buffer zones greater than 10 metres are imposed, then Department of Transportation must first prevent any siltation on their land, and all farmers should be reimbursed financially for the additional buffer beyond the 10 metres

The PEI Federation of Agriculture passed a resolution in 1997 and 2001 that supported a 10 metre buffer, and that farmers be compensated for land taken out of production.

With all things considered, the implementation of buffer zones in the Environmental Protection Act to date has not been that big of a deal for farmers. They are not finding it difficult. Many were already leaving the required buffer distance or more. It is also easier to leave a buffer width if you know everyone is playing by the same rules. There was certainly heated discussion early on after the release of the **Round Table Report**. However the consultation process had been able to create a law that was more palatable than originally proposed in the **Round Table**.

The 10 metre buffer and the 50 metre conservation zone appears to be palatable for farmers on PEI. If the law went with the 20 and 30 metre buffer as originally proposed, farmers would definitely require compensation for the land taken out of production, and this would perhaps reduce or even eliminate projects currently being done through AERC as source of funding is limited. We certainly might have had wider buffers, but the important upland work would not be done at the pace it is now - making any buffer width very ineffective.

PEI also was able to deal with the planted headland issue that had been contributing significantly to soil erosion rates on PEI.

Please note: As Tracey Ryan's original presentation was in PowerPoint, a text version appears in its entirety in the front section of this report. Please see pages 9 to 11.

ONTARIO BUFFER STRIP PROGRAM

PRESENTED TO PARTICIPANTS at
**BUFFER BLITZ – ADVANCING
A PROGRAM FOR ONTARIO**
June 20, 2001

Presented by: Andrew Graham,
Ontario Soil and Crop Improvement Association,
with contributions acknowledged from
members of the Riparian Working Group

PART I – The Ontario Buffer Strip Program

There is broad acceptance across many agricultural, environmental and wildlife conservation sectors that permanent grass and tree buffer strips along watercourses and around water bodies provide multiple benefits on and off-site (see Part III Section B). Many farm families have expressed, and demonstrated, a clear willingness to adopt buffer strips as a best management practice. The inclusion of buffer strips in land management planning is a clear expression of commitment to conservation. They provide an immediate signal to others that the landowner is doing something good for the environment.

This proposal deals specifically with an innovative program that will accelerate the adoption of buffer strips on Ontario farms. The design reflects the stated needs of the farm industry, and addresses the desired environmental needs of many federal and provincial departments, and wildlife conservation and water quality organizations.

There have been many buffer strip program opportunities presented to the rural community in the last decade. The results from some have been outstanding, while others have struggled, resulting in lack-luster enrollment. There are many challenges to overcome in the design and delivery of a truly effective buffer strip program:

1. Regardless of proven environmental benefit, buffer strips along streams and shorelines have generally not been a best management practice widely embraced by the farm community. The adoption of a conservation practice, for example no-till, involves introducing a strategy package aimed at controlling cropland erosion, with expected payoffs in sustained or improved net income over time (e.g. savings in fuel, equipment investment and time). In contrast, establishing buffer strips to stop sediment from washing into streams, means giving up pasture lands or revenues from crop production. Practices that promise some strong potential for short-term return on investment, are quicker to be adopted by farmers than those which do not. Buffers make environmental sense, but they have to be economically attractive too.
2. 'Transaction costs' (the time spent finding out about, and enrolling in various assistance programs) can be a deterrent to participation. Studies in Ontario, and elsewhere, have concluded that farmers who are acquainted with those administering the program, are more likely to participate, than those who are not familiar with the farm programs and the people who run them.

3. Lack of funding and long-term commitment. Even the best-designed programs will have very limited positive impact if there are insufficient funds and technical resources to accommodate large-scale participation by a critical mass of farms. Often, any attention and enthusiasm expressed by the farm community in response to program opportunities, is quickly lost due to under-funded and short-term initiatives.
4. Many past and existing buffer programs are fragmented and small-scale, often overlapping with other very similar initiatives. These situations lead to many potential participants quickly becoming frustrated and apathetic.

PROGRAM COMMITMENT

The proposed **Ontario Buffer Strip Program** is a five-year, \$15 million initiative that will establish 10,000 acres of buffer strips on fragile agricultural land across the province. The acreage figure equates to approximately 4,000 miles (6,400 km.) of buffer strips averaging a 21 foot width (6.4 metres). We anticipate the program will accommodate about 3,333 successful bids (averaging 3 acres each). Program design, marketing, administration and delivery have evolved from collective experience gained through environmental program development, delivery and evaluation over the past decade in Ontario.

PROGRAM DESIGN

The framework provided here is intended as an outline only. The recommended design was reached after careful review of numerous past and current buffer strip program initiatives, and following extensive discussion with landowners, farm organizations, extension personnel, and government officials. Refinements will be incorporated as discussions with partners continue and the program develops. The main aspects of the program include:

1. Eligible buffer strips are defined by the program as annual cropland or pasture acres that have been permanently retired to grass and tree cover, immediately adjacent to watercourses or water bodies. A minimum buffer strip width of 15 feet (4.5 metres) measured outwards from top of the stream bank will be required. The maximum buffer width to claim payments on varies from 50 to 100 feet (15-30 m) depending on the category. Lands that are currently not used for annual crop production or pasture are not eligible. Buffer strip categories will include:
 - i. **Grass Buffer:** 15 ft. minimum to 50 ft. maximum
 - ii. **Grass and Tree Buffer:** 15 ft. to 50 ft. with one or more rows of trees or shrubs
 - iii. **Enhanced Buffer:** 15 ft. to 100 ft. featuring grass with trees, or livestock fencing (or other barriers) to restrict watercourse access, alternate watering facilities, channel crossings, erosion control structures (diversions, etc.).
 - iv. **Wetland/Shoreline Buffer:** 15 ft. to 100 ft. with or without trees or shrubs.
2. Program funds will be targeted initially on a county/district/region basis across Ontario based on total row crop acres and pastured livestock numbers. Further local targeting may be encouraged to address identified needs in individual major watersheds or sub-watersheds.

3. Decision by landowners to participate in the **Ontario Buffer Strip Program** is voluntary. Lands entered into the program will remain in private ownership. Eligible participants must have prepared an Ontario Environmental Farm Plan (EFP) and had it deemed appropriate through local peer review. All successful participants must sign a 15-year agreement that clearly details contributions and responsibilities of both the landowner and the funding agent(s). Other eligibility criteria may apply at the discretion of the funding agent(s).
4. A 'competitive bid' procedure will be followed by landowners wishing to participate. Farmers will consider establishment and maintenance costs, project benefits, risk and transaction costs. Provision will also be made to claim a financial credit for lost production over the 15-year term of the agreement. The maximum financial contribution available per landowner is \$10,000. The bid procedure recognizes that every farm situation and buffer design is unique. Some of the targeted riparian lands may provide only marginal crop and pasture production due to low fertility, shallow soils, high water tables, etc. In other situations, riparian lands are extremely productive from a cropping standpoint, and permanent buffers will not be established by landowners without reasonable credit for the land retired. The confidential and competitive bid procedure, combined with the proposed targeting of county/district/region budgets, uniquely addresses these differences fairly.
5. The establishment costs detailed in a proposed project may include such items as: vegetation establishment, tree and shrub plantings, associated mulch and protection systems, fencing to restrict livestock access, alternate watering facilities, and erosion control structures (e.g. drop structures and diversions), depending on the category of buffer strip.
6. Extension personnel at participating conservation authorities, and wildlife and wetland conservation groups, will be relied upon to assist requesting landowners with technical advice and direction to complete their bid. It is anticipated that about 30% of participants would choose to take advantage of this delivery approach.
7. 'Bid Kits' containing all the relevant application forms, completion guidelines and technical materials that convey design and maintenance options, will be prepared and distributed at appropriate times to the farm community. Initial bid submission deadlines will be declared early in the program to guide communication, and build public interest.
8. A full communications strategy will be assembled and delivered by OSCIA to alert the Ontario farm community of the program opportunities, procedures, and provide updates on local participation and project ideas.
9. The Best Management Practices Buffer Strip book, now in development, will provide a collection of the best available science and advice to assist landowners in their buffer strip design and function.
10. Program administration will be carried out by OSCIA. An appropriate data collection, monitoring and reporting structure will be established and maintained by the OSCIA Provincial Office throughout the 5-year program in accordance with contractual commitments with the funding agent(s).
11. Local, existing OSCIA Peer Review Committees, comprised of individuals from the farm community, will evaluate all submitted bids received from within the relevant county/district/region, and award those offering the highest environmental value for the program dollars requested. Peer review of the submitted bids will be guided by a universal scoring procedure that will be developed for the program.

12. An evaluation and scoring system will be devised that assigns environmental scores to various project components, for each of the four buffer strip categories (i.e. Grass Buffer, Grass and Tree Buffer, Enhanced Buffer, and Wetland/Shoreline Buffer). The system will be used by Peer Review Committees to prioritize projects, and be used later to report measured environmental change. Points could be awarded for the planned inclusion of environmental elements (e.g. native species, buffer strip dimensions, planting of trees, etc.), and other relevant management decisions (e.g. harvesting vs. clipping vs. leaving alone, contiguous projects involving two or more landowners, multi-function designs, other conservation measures on-site, etc.). The highest score could be given to multi-purpose buffers with low-impact use. The most competitive bids will identify significant contributions made by the landowner that represent a portion of materials, establishment costs, maintenance, and loss of annual production. There will be some opportunity to apply local preferences and capture unique needs. Bids will be evaluated as submitted, and will not be altered by the Peer Review Committee.
13. The retired acres cannot be utilized in a fashion that will generate on-farm profits during the 15-year agreement. The program is not to interfere in any way with the growth of domestic and export markets for particular farm commodities. Harvesting hay for on-farm use will have to be discussed. The planting of ornamental shrubs, fruit trees, Christmas trees or nut trees that could yield a profit within the term of the agreement will not be allowed.
14. Payment on approved projects will be subject to a site inspection by OSCIA, review of paid invoices, and submission of signed agreements. Financial contributions from the program will recognize the 15-year term of the agreement, but will be paid in one lump sum upon successful project completion and inspection. Payments to landowners will be issued by OSCIA.
15. The projects will be policed by OSCIA and the partnering agencies for the duration of the formal agreements. Abuse of the contractual agreement will be reported to the funding agent(s).
16. For each successful bid that was compiled with direct assistance from a conservation authority or other resource group, a single, flat-rate, cash payment (e.g. \$200) will be offered by the program to the participating group to recognize technical contributions and planning assistance. This payment is exclusive of any service contracts for tree supply and planting that may be arranged between the landowner and the resource group, and reflected in the competitive bid.

ADDITIONAL CONSIDERATIONS FOR PROGRAM DESIGN

- **Funding ideas.** Federal and provincial ministries of agriculture, natural resources, and environment, are logical contributors to fund the proposed program entirely or in part. Wildlife and wetland conservation groups are considered key contributors as well, and would be encouraged to park funds in the budget. In return for dollars contributed to the provincial effort, the program would agree to promote the availability of the conservation group to assist landowners with their buffer design and other restoration works involving wetlands, woodlands and natural areas. This concept makes best use of the growing number of extension personnel available through these organizations, and welcomes them to be part of a major environmental program administered by a provincial farm organization.

It is conceivable that at the specific request of some contributor(s), funds could be earmarked for specific types of buffer strip projects that reflected unique design features (e.g. native grasses, special considerations for species at risk, etc.). In other cases, some contributions may come with stipulations that they be made available to farmers in specific geographic regions or watersheds. Such requests should be accommodated in program design, and provincial administration and delivery.

Agricultural supply and other corporations should also be approached to share the cost, and take an active role in program design and communication. All contributions, including those of the participating landowners, should be considered as investments in environmental vitality.

- **Availability of native seed and native and non-native tree stock.** A gradual introduction in some areas may be required in order to give the seed and tree seedling supply industries time to respond. There may be advantage in striking tree service contracts with planting agencies that commit to planting the site in future years when the desired species and quantities of stock is available.
- **Establishment of buffer strips along existing municipal drains.** OMAFRA drainage officials estimate there is approximately 20,000 miles (32,000 km.) of municipal drains in Ontario. These watercourses are currently being classified to determine fishery potential through a joint MNR/Conservation Authority initiative. Every drain would benefit from buffer strips, particularly those offering the highest potential for fish habitat. Many recent drainage engineering reports prepared include the provision of 2-3 metre buffer strips, however, the vast majority of older reports have no such inclusions. The proposed **Ontario Buffer Strip Program** is aimed at individual landowners; modifications (including more funding) could be introduced to accommodate municipal projects involving multiple landowners.
- **Crop damage prevention.** Any program aiming to restore or increase potential wildlife habitat on the farm landscape, may be escalating potential problems associated with nuisance wildlife. In general, the crop and livestock predation problems associated with deer, coyotes, bear, geese, and other types of wildlife are on the increase. There may be some opportunity through the bid procedure to account for such losses.
- **Selling the merits of the program to the non-farm sector.** An education and awareness initiative should be investigated and developed that bolsters support within the non-farm sector for the program. The general public and elected officials must be convinced of the merits of providing substantial cost-share to farm families for the establishment and maintenance of buffer strips.
- **Investigative Projects.** Additional budget and resource considerations should be given to the provision of scientific investigative projects that would further our collective understanding of the ecological, production, social and environmental benefits of buffer strips as a best management practice.

Expanded partnerships with the science and academic communities could be established and challenged to develop their own ideas and collaborative efforts through innovative partnerships. The goal would be to establish a few long-term, appropriately monitored, research and development sites. There are many established buffer strip demonstration sites that could be seriously considered for such investigations. The Investigative Projects are **not** included as a line item in the Budget Summary presented later.

PART II – Component of a Larger Umbrella Program

There is a realization that additional buffer strip initiatives are needed for the farm and rural non-farm sectors. As large and comprehensive as the proposed program is, funds are limited, and the design will not necessarily accommodate all needs and suit all situations (e.g. bid procedure may not be accepted in some communities). In addition, existing buffer program opportunities that are proving to be locally successful must be recognized, and given the opportunity to contribute synergy and benefit from logical integration with the larger proposed program.

A modest contribution to the smaller farm buffer programs, that recognizes annually completed projects, could be made by the **Ontario Buffer Strip Program** budget. This would accomplish three important objectives:

1. Provide the opportunity to account for **all** newly established buffers in the provincial tally,
2. Boost receptivity of the proposed program by groups currently delivering buffer programs, and
3. Benefit from wider program promotion.

The contribution, based on the length of newly established buffer strips meeting minimal width requirements (no maximum), might be a flat rate of \$0.15 per lineal foot (\$0.50 per lineal metre), to a maximum of 50 miles in total for each of five years. (Up to \$200,000 in total contributions to local projects.) The money handed over to the smaller buffer programs allows the administrators the opportunity to leverage dollars for local projects that contribute to the suite of buffer opportunities.

Beyond the 10,000 acre goal set by the proposed **Ontario Buffer Strip Program**, it is appropriate to collectively set a larger target that encompasses all buffer strip activity over the same five-year time period. As long as minimum standards are satisfied, the overall target should accommodate “on-the-ground” accomplishments for all buffer installations, whether they are farm, non-farm, or perhaps even urban. And they should account for buffers initiated through cost-share programs, and those installed by landowners without program financial assistance. Success could be measured by the number and types of projects, the total length of buffer strips installed, and by the diversity of participation. Agreement on the concept, and commitment to actually work collectively on goals of an umbrella program, would clearly demonstrate to taxpayers that a true integrated approach is being taken—one that benefits all of society.

PART III

A. BUDGET SUMMARY

The proposed five-year **Ontario Buffer Strip Program** carries a funding request of \$15 million total. Items included in the work plan are as follows:

Development costs (program devpt., resource materials, staff training, etc.)	\$ 100,000
Promotion and communication. Evaluation and reporting.	100,000
Financial incentives (supporting up to 3333 farm families devoting 10,000 acres to buffer strips)	13,000,000
Contributions to other buffer projects	200,000
Administration and delivery	1,600,000
	<hr/> <hr/>
Estimated Total	\$15 million

BENEFITS

The proposed program would integrate many environmental issues and provide guaranteed, measurable success. Through the permanent retirement of 10,000 acres of cropland and pasture along and around watercourses and water bodies converted to grass and tree buffer strips, many environmental opportunities exist. The overall condition of the riparian areas and their on-going conservation management will improve, and provide:

- Surface water quality for downstream users.
- Enhanced aquatic habitat.
- Provision of planned terrestrial habitat.
- Enhanced recreational opportunities and land use options.
- Accommodation of needs of wildlife species at risk.
- Increased native grass, forb and tree cover.
- Enhanced biodiversity on the agricultural landscape.
- Wind erosion control through strategic planting of tree windbreaks.
- Reduction of greenhouse gases through the sequestration of carbon dioxide (CO₂) in woody plant material.
- Filtering of surface water from agricultural land to remove potential sediment, nutrient, pesticide, pathogen and bacteria contamination.

APPENDICES – GRAHAM

- Assistance for landowners to comply with legal obligations to establish set-backs from water's edge where it may become law that pesticides or nutrients are not applied.
- Cleansing of shallow ground water systems to reduce possible nitrate concentrations.
- Stream bank erosion control.
- Protection of wetlands and environmentally sensitive areas and habitats.
- Conservation of existing water supplies both in terms of quality and quantity. This will become even more important with the anticipated effects of global climate change.
- Increased amount of contiguous land retired to buffer strips along a watercourse.
- Promotion of land management practices that provide multi-species benefits to wildlife, such as rotational grazing and delayed haying.
- The role of farmers as stewards of the land will be promoted, and the importance of supporting a sustainable agriculture sector will be better understood by the general public.

This design will encourage aggressive and voluntary stewardship action by individual landowners, that will foster soil, water, air and wildlife conservation. Rural communities and regional economies will benefit through immediate cash flows, and environmental work that contributes to a sustainable agriculture industry. The public at large will benefit through riparian lands being retired from agricultural production and converted to other uses through permanent vegetative cover.

The **Ontario Buffer Strip Program** will assist governments in achieving targets and satisfying commitments under the Canadian Biodiversity Strategy, Canada's Plan for Protecting Species at Risk, the Kyoto Protocol, North American Waterfowl Management Plan, water quality objectives, and other national and provincial agriculture and environmental goals.

REFERENCES

1. *Evaluation of Buffer Projects Along Watercourses on Ontario Farms*, Ontario Soil and Crop Improvement Association and Grand River Conservation Authority, February, 2000.
2. *Canadian Conservation Cover Program*, Land Use Committee of the Prairie Habitat Joint Venture, June, 1999.
3. National Soil Conservation Program – *Final Report*, Agriculture and Agri-Food Canada, March, 1994.
4. *Ecological Integrity of Agricultural Landscapes in Canada – A Proposal for Ecological Fiscal Reform*, Ducks Unlimited Canada, January, 2001.
5. "Farmers' Response to a Filter Strip Program: Results from a contingent valuation survey," A. Purvis, et al, *Journal of Soil and Water Conservation*, September–October, 1989.

Raw Results

QUESTION	CATEGORY	RESPONSE	COMMENTS
1. SCOPE OF THE PROGRAM The program should be comprehensive with the following components: education, financial assistance, research and development, and regulatory controls.	Strongly Agree	20 ✓	<input type="checkbox"/> Research should be part of a broader program- not specific to an on the ground program. – <i>MNR</i> <input type="checkbox"/> If regulations are used they should be separate from an incentive based program – <i>MNR</i> Should also include monitoring on landscape change, landowner attitude and action – also need feedback to program through adaptive management and promotion – to target community, govt. politicians and public <input type="checkbox"/> Carefully consider regulatory controls – <i>Conservation Authority</i> <input type="checkbox"/> Farm, non-farm and urban with the components customized or targeted – <i>Conservation Authority</i> <input type="checkbox"/> More regulatory controls in urban and non farm areas and less incentive for non farm – <i>Conservation Authority</i> <input type="checkbox"/> Does the research and development include the possibility of a monitoring program of water chemistry and aquatic life Be careful with regulatory controls – must be eased in with lots of public consultation and compromise and designed to look after stubborn or intentionally non compliant landowners but not penalize those that are doing their best with what they know AND must be consistent with rules applied to urban areas – <i>Conservation Authority</i> Allow the agricultural industry to have a large part in regulatory control development – a self regulated approach after proven success – <i>Stewardship Council</i> <input type="checkbox"/> Regulatory controls already in place – <i>Cattlemen's Association</i> Each is important – results should be scientifically monitored as this should be a long ongoing program – positive results should make the program grow and prosper – <i>Cattlemen's Association</i> Tread carefully with regulatory controls – not the approach of PEI where farmers didn't appear to be part of the early stages – <i>Conservation Authority</i> <input type="checkbox"/> Regulatory controls already exist – ENFORCEMENT IS ESSENTIAL – <i>Carolinian Canada</i> Not sure about regulatory controls unless they pertain in non agricultural practices and land uses too – <i>Carolinian Canada</i> <input type="checkbox"/> Downplay the regulatory <input type="checkbox"/> Add feedback from farmer or teaching through farmer experience – <i>OMAFRA</i> <input type="checkbox"/> All are important over the long term – <i>Department of Fisheries and Oceans</i> <input type="checkbox"/> Emphasis on financial assistance and education, less on R&D and hopefully least on regulatory controls – <i>Corn Producers</i> <input type="checkbox"/> Make sure evaluation assessment is built in – <i>Environment Canada</i>
	Agree	23 ✓	
	Undecided	4 ✓	
	Disagree	✓	
	Strongly Disagree		
2. WHERE SHOULD THE PROGRAM BE DELIVERED?	Strongly Agree	6 ✓	<input type="checkbox"/> S. Ontario and other parts of province where appropriate – CS Ontario should be a priority – <i>Dept of Fisheries and Oceans</i> <input type="checkbox"/> Limited funds should focus on south <input type="checkbox"/> There should be some part of this initiative targeted to areas such as Thunder Bay and Sue St Marie – <i>MNR</i> <input type="checkbox"/> URBAN – develop a municipal buffer program
	Agree	11 ✓	
	Undecided	7 ✓	
	Disagree	13 ✓	

QUESTION	CATEGORY	RESPONSE	COMMENTS
The "on-the-ground" buffer program should be targeted to agricultural southern Ontario only.	Strongly Disagree	9 ✓	<input type="checkbox"/> Needs to be a provincial initiative = equity <input type="checkbox"/> Develop a similar initiative for cottage country <input type="checkbox"/> Allow rural non farm to participate if do EFP Concept is valuable everywhere i.e. northern and eastern Ontario water is important for tourism – <i>Conservation Authority</i> <input type="checkbox"/> Any area where agriculture will have a negative impact should be included – <i>Six Nations</i> We can learn from research and application elsewhere – consider the bigger ecological picture and biodiversity targets/benefits – <i>Conservation Authority</i> <input type="checkbox"/> Agricultural areas throughout the province – <i>Stewardship Council</i> <input type="checkbox"/> Why only Southern Ontario - rural non farm as well <input type="checkbox"/> For now because it is high priority – <i>Stewardship Council</i> Should be provincial and open to all rural landowners. The realities may result in a focus on southern Ontario – <i>Cattlemen's Association</i> <input type="checkbox"/> As a start – <i>Environment Canada</i> <input type="checkbox"/> Need to focus on most problematic regions – <i>Corn Producers</i> <input type="checkbox"/> Some provision for on farm landowners should be considered - <i>Department of Fisheries and Oceans</i> <input type="checkbox"/> MNR is planning assistance for all rural landowners due to completion of recent provincial survey – they can address non farmers – <i>OMAFRA</i> <input type="checkbox"/> Use complementary programs for non farm and urban – <input type="checkbox"/> As a starting point although need to deal with non farm, northern Ontario and urban – <i>Conservation Ontario</i> Not limited – maybe phases of focus of activity over several years from South to North to East to West but should be seen to be comprehensive for all of Ontario – <i>Carolinian Canada</i> <input type="checkbox"/> Should be available to farmers in the North – <i>MNR</i> <input type="checkbox"/> Wherever density and intensity warrants – <i>OSCIA</i> <input type="checkbox"/> Cover all agricultural area of Ontario – <i>OMAFRA</i> <input type="checkbox"/> Same problems exist across Ontario – <i>MNR</i> Everyone should be able to do something with the buffer program not just the agricultural sector – <i>Conservation Authority</i> We are giving the wrong message to other agricultural area of Ontario by suggesting that they are not included – <i>Cattlemen's Association</i> <input type="checkbox"/> Must be open to all Ontario farm and non farm - <i>Farmer</i> Need to address all land users equally. Don't put geographic boundaries on eligibility – entire province should be eligible but funds distributed based on water quality impacts. – <i>GRCA</i>
3. WHO IS ELIGIBLE? Only registered, commercial farmers should be eligible for	Strongly Agree	6 ✓	<input type="checkbox"/> Non farming rural landowners that manicure and landscape riparian areas need help and guidance – <i>Conservation Authority</i> <input type="checkbox"/> Need to determine what implications could be in restricting program – <i>Dept of Fisheries and Oceans</i> <input type="checkbox"/> All farmers – part time too
	Agree	9 ✓	
	Undecided	8 ✓	
	Disagree	16 ✓	

QUESTION	CATEGORY	RESPONSE	COMMENTS
financial assistance from this Buffer Strip Program.	Strongly Disagree	8 ✓	<input type="checkbox"/> Include rural non farm who have taken EFP <input type="checkbox"/> Should target agriculture and non agriculture properties – <i>Six Nations</i> <input type="checkbox"/> 60 new golf courses have been established in the Grand River watershed since 1989 and we have to look for all opportunities to establish habitat and benefits to threatened wildlife while managing and buffering water resources – <i>Conservation Authority</i> <input type="checkbox"/> Generally they are the problem – non farm landowners generally not a problem - <i>Stewardship Council</i> <input type="checkbox"/> You would be missing out on a lot of potentially at risk water systems <input type="checkbox"/> Small unregistered operations should receive equal opportunity – <i>Stewardship Council</i> <input type="checkbox"/> Limited funds - keep agricultural <input type="checkbox"/> Farmers and non farm- will help improve profile of agriculture in public eye – <i>Environment Canada</i> <input type="checkbox"/> Don't forget about the hobby farmers – <i>Dept of Fisheries and Oceans</i> <input type="checkbox"/> Focus on agriculture in its entirety – <i>OMAFRA</i> <input type="checkbox"/> There is a need for other landowners but might be a different pot of money i.e. golf courses and rural non farm There are many commercial and industrial landowners with riparian holdings – may need different kinds of assistance as appropriate – <i>Carolinian Canada</i> <input type="checkbox"/> Should be a complementary program for non farm especially in terms of education - <i>MNR</i> <input type="checkbox"/> Agree yet a similar program for non farms should be implemented – <i>MNR</i> <input type="checkbox"/> If agricultural sponsored funds then farmers but non farm landowners can be advocated and participants through other funds – <i>OSCIA</i> <input type="checkbox"/> What about landowner who leases for production <input type="checkbox"/> All areas in rural agricultural Ontario should be eligible. – <i>OMAFRA</i> <input type="checkbox"/> If public money is involved – must be open to all – <i>Farmer</i>
4. CIRCLE THE TOP FIVE FEATURES THAT SHOULD BE AN ELIGIBLE PART OF AN “ON-THE-GROUND” BUFFER PROGRAM.	Grassed buffer strips	23 ✓	<input type="checkbox"/> Should include most of these features – <i>GRCA</i> <input type="checkbox"/> Hard choices – all have value and some may be more appropriate to remedy specific problems – <i>Bait Association</i> <input type="checkbox"/> Money could come from other sources to deal with physical elements i.e. Department of Fisheries and Oceans to deal with watercourse crossing/replacement, removal of barriers, small dam removal, erosion protection etc – <i>Conservation Authority</i> <input type="checkbox"/> Any and all measures that provide effective buffering as determined on a site by site basis – <i>Corn Producers</i> <input type="checkbox"/> Focus on water interaction – ponds can still affect ground water quality – <i>OMAFRA</i> <input type="checkbox"/> Need for all to be part of the program in the right location – <i>Conservation Ontario</i> <input type="checkbox"/> Forage buffers beyond a minimum buffer need to be included <input type="checkbox"/> Field borders are tied in with wildlife corridors – <i>Cattlemen's Association</i> <input type="checkbox"/> Streambank erosion – could be stream restoration not just standard rock placement - <i>Conservation Authority</i>
	Enhanced buffer strips (planted trees/shrubs)	37 ✓	
	Forage buffer strips	4 ✓	
	Field soil erosion control structures	10 ✓	
	Streambank erosion control structures	14 ✓	
	Fencing	40 ✓	
	Fencing alternatives	24 ✓	
	Alternate watering devices	25 ✓	
	Shade structures	3 ✓	
	In-water buffering structures		
	Watercourse crossings	22 ✓	
	Wetland buffers	20 ✓	

QUESTION	CATEGORY	RESPONSE	COMMENTS
	Pond buffers	3 ✓	
	Field borders	1 ✓	
	Field windbreaks	2 ✓	
	Vegetative wind strips	2 ✓	
	Vegetated treatment strips	3 ✓	
5. FUNDING SOURCE Circle your top two preferred source(s) of funding.	Federal Government	1 ✓	<input type="checkbox"/> Include landowners – <i>Ducks Unlimited</i> Financial assistance is excellent as an incentive and to get projects off ground however it should not be in perpetuity – at some point landowners must recognize that their project is also a demonstration of responsibility and treat is as a part of normal operations – <i>Conservation Authority</i> <input type="checkbox"/> All government and community partners <input type="checkbox"/> Incentives that have origins in new development i.e. conditional plan and permit approval <input type="checkbox"/> Focus should be on Federal and Provincial simply because chance of success is greatest BUT opportunity should be there for all levels of government and NGO's to contribute- <i>Bait Association</i> <input type="checkbox"/> Involves multi agency funding as it interfaces with the objectives and policies of most agencies <input type="checkbox"/> Industry support would be good – <i>Dept of Fisheries and Oceans</i> <input type="checkbox"/> Corporations and foundations <input type="checkbox"/> Corporate sources – <i>MNR</i>
	Provincial Government	3 ✓	
	Federal + Provincial	15 ✓	
	Local Government	5 ✓	
	Provincial + Local		
	All Government Levels	29 ✓	
NGO + Government	29 ✓		
6. FUNDING LEVEL Please rank your preference of financial assistance for buffer strip practices to eligible landowners. Where 1 = Least Preferred and 5 = Most Preferred	BID	1=2, 2=7, 3=9, 4=15, 5=7	<input type="checkbox"/> Need a range to suit non farm, farm and urban situations – land easements attached to approvals of land use change - <i>Conservation Authority</i> <input type="checkbox"/> I am not sure we should have to buy good water quality and sound land management with tax \$ - <i>Bait Association</i> <input type="checkbox"/> Tax incentive means we value it as a society, land easements means landowner wants it protected forever – maximum commitment – <i>Stewardship Council</i> <input type="checkbox"/> A local level involvement will be necessary for tax incentives. However these levels of government will have to be reimbursed by higher levels – <i>Cattlemen's Association</i> <input type="checkbox"/> Tax incentive is Not working for the Managed Forest Tax Incentive Program – <i>OMAFRA</i> <input type="checkbox"/> Would like more discussion of bids – <i>Environment Canada</i>
	GRANTS (Fixed-rate/cost-share)	1=1, 2=2, 3=13, 4=15, 5=13	
	LOANS	1=13, 2=10, 3=5, 4=8, 5=1	
	TAX INCENTIVES	1=2, 2=6, 3=14, 4=10, 5=8	
	LAND EASEMENTS	1=5, 2=6, 3=9, 4=9, 5=9	
7. WHO SHOULD DELIVER THE PROGRAM? Circle your preferred delivery agent(s) or partnership.	Funding Government Agency	-	<input type="checkbox"/> Should be delivered by or with farm organization and in the field organizations – <i>MNR</i> <input type="checkbox"/> CAs and farm organization most trusted – <i>OMAFRA</i> <input type="checkbox"/> Different people will accept different delivery agencies – rural non farm best delivered by CAs <input type="checkbox"/> CA has the advantage of working closely with all resource users – <i>Conservation Authority</i> <input type="checkbox"/> Must be simple, cost effective and accountable – <i>Bait Association</i> <input type="checkbox"/> Stewardship Councils <input type="checkbox"/> CAs are set up for these in most areas – some landowners in north would be left out – <i>Cattlemen's Association</i>
	Funding Government Agency Partners	3 ✓	
	NGO + Government	13 ✓	
	Farm Organization	30 ✓	

QUESTION	CATEGORY	RESPONSE	COMMENTS
	Conservation Authority	25 ✓	<input type="checkbox"/> Should be a partnership between CA and farm org – <i>Conservation Authority</i> <input type="checkbox"/> Both farm org and CA have advantages – <i>OMAFRA</i> <input type="checkbox"/> Joint delivery between NGO, Government, farm org and CA NGO because close with community – gets beyond the psychological barrier of interfering govt. – <i>Carolinian Canada</i> <input type="checkbox"/> Farm org i.e., OSCIA could front the program with delivery by the CAs <input type="checkbox"/> Need to heed results of 2 recent landowner surveys – <i>Conservation Ontario</i> <input type="checkbox"/> Will depend on who is eligible – Andy Grahams proposal was interesting – <i>Environment Canada</i> <input type="checkbox"/> Group such as OSCIA in cooperation with CAs and also with support of provincial/ municipal agencies – <i>Corn Producers</i> <input type="checkbox"/> Don't create another wheel – work with existing programs to reduce administration overhead and technical advice. Watch out for duplication and double dipping into funding pots – <i>MNR</i>
8. TARGETS We should aim for XX km of buffer strips as a key performance measure for evaluation.	Strongly Agree	10 ✓	<input type="checkbox"/> Should aim for FUNCTIONAL buffers not just length – <i>Environment Canada</i> <input type="checkbox"/> Needs to be a stretch yet realistic – <i>Conservation Ontario</i> <input type="checkbox"/> Best measure is # of strips that begin to go in that don't get funding support – <i>Stewardship Council</i> Yes - include widths suitable for protecting and supporting different functions and providing ecological service – <i>MNR</i> <input type="checkbox"/> Measurable meaningful targets are essential – Need to ensure clarity – does length represent one side or 2 sides – <i>MNR</i> Look at % of sub-watershed completed if we are treating this as watershed/riparian restoration – <i>Conservation Authority</i> <input type="checkbox"/> Important to have target but need to know what is at risk - i.e. assessment prior to rolling out a program - <i>Farmer</i> <input type="checkbox"/> Results should be water quality based or the program is missing the point – <i>Cattlemen's Association</i> <input type="checkbox"/> Should look at acreage to account for narrow vs. wider – <i>Conservation Authority</i> <input type="checkbox"/> Use area as another component of measurement along with length – <i>MNR</i> <input type="checkbox"/> Hard to target a number of km without knowing how many km exist without buffers – <i>MNR</i> <input type="checkbox"/> Should be SMART (specific, measurable, achievable, rewardable and timely) <input type="checkbox"/> Will depend on level of funding <input type="checkbox"/> Width and composition is important - <i>Department of Fisheries and Oceans</i>
	Agree	19 ✓	
	Undecided	6 ✓	
	Disagree	5 ✓	
	Strongly Disagree	1 ✓	
9. EDUCATION Circle your top three preferred education method(s) for an "on-the-ground" buffer program.	Educational Media (Print, Multi-Media)	15 ✓	<input type="checkbox"/> All these are important and necessary for a successful program – <i>Conservation Authority</i> <input type="checkbox"/> Use any and all to increase awareness – <i>Corn Producers</i> <input type="checkbox"/> Use an Education strategy that uses a mix of all of these – where appropriate – most importantly delivered in collaboration with soil and crop reps, stewardship councils, CAs and other local organizations - <i>MNR</i> <input type="checkbox"/> Check out the landowner survey for their preferences – <i>Conservation Ontario</i> <input type="checkbox"/> More testimonials from successful project landowners – invite landowners to speak at these types of workshops and at EFP workshops – <i>Conservation Authority</i> <input type="checkbox"/> EFP needs to be more robust with respect to riparian buffers <input type="checkbox"/> Talked about in school curriculum – <i>Six Nations</i> <input type="checkbox"/> Need one on one technical assistance <input type="checkbox"/> Land Stewardship Demonstrations www.stewardship.com – <i>Stewardship Council</i> <input type="checkbox"/> Hands on is best but you have a large audience that must be reached – need balance – <i>Bait Association</i> <input type="checkbox"/> Use EFP as support BUT needs to be a specific effort on buffers – <i>Cattlemen's Association</i> <input type="checkbox"/> Web based interactive tools – <i>Farmer</i> <input type="checkbox"/> EFP has been done by many – and update would be necessary though – <i>Cattlemen's Association</i> <input type="checkbox"/> Landowner conferences would have to be at a regional scale – <i>Conservation Authority</i> <input type="checkbox"/> Direct personal communication is the most effective and is essential – <i>OMAFRA</i>
	Demonstrations	28 ✓	
	Buffer Strip Plan Workbook	19 ✓	
	Tours	7 ✓	
	Buffer Strip Workshops	16 ✓	
	Community Projects	24 ✓	
	Environmental Farm Plan	24 ✓	
	Landowner Conferences	6 ✓	
10. COMMUNICATIONS At least 10% of the budget of this program should be invested in marketing, promotion and awareness of	Strongly Agree	24 ✓	<input type="checkbox"/> Communication is vital! <input type="checkbox"/> A must if it is to gain/maintain momentum and be there in the long term – <i>Conservation Ontario</i> <input type="checkbox"/> Definitely a very significant component – <i>Conservation Authority</i> <input type="checkbox"/> Will promote funding agency and farmers – <i>OMAFRA</i> <input type="checkbox"/> Put the money on the ground and water and free word of mouth will be the communication tool – <i>Cattlemen's Association</i>
	Agree	18 ✓	
	Undecided	-	
	Disagree	4 ✓	

QUESTION	CATEGORY	RESPONSE	COMMENTS
the local and societal benefits of this program.	Strongly Disagree	-	<input type="checkbox"/> \$1.5 million seems more than adequate – effective communications need not be expensive – <i>Corn Producers</i> <input type="checkbox"/> Should be even higher – <i>Farmer</i> <input type="checkbox"/> And also include 'taking pulse' of program to enhance and improve <input type="checkbox"/> Need to be careful how you spend this type of money – it goes quickly and is wasted easily – <i>Bait Association</i> <input type="checkbox"/> Successful farmers will champion it – spend the money on the ground – <i>Stewardship Council</i> <input type="checkbox"/> We need to demonstrate usefulness and to communicate this message to the general public

Additional comments

- Recognize and celebrate farmers who participate – *Stewardship Council*
- Monitor water quality before and after and teach farmers monitoring techniques – there is no marketing tool as big as pride in a difference made – *Stewardship Council*
- Very timely and must get on with a more coordinated and integrated program that results in action – *Conservation Ontario*
- Who should lead the charge – OFEC
- Excellent workshop
- Great speakers in am
- I like the questionnaire to stimulate thinking and as a tool to collect data. An 8 _ x 11 sheet uses 30% fewer trees than legal

Flip Chart Notes

The following notes are what were recorded on the flip charts during the afternoon portion of the Riparian Workshop.

Targets / Directions

1. Where are we? Goal and Target
2. How can I get there?
3. Did we make it? (1 vote)
4. Tangible measurements (1 vote)
5. Are we in conflict with Environmental Farm Plan (EFP)?
6. What is the problem? Definitions: Politicians; bureaucrats; Scientific Community; Landowners; General Public (4 votes)
7. Avoid mixed messages with other environmental programs
8. Environmental friendly landscape management (more than just buffers) e.g. tile drains effect on stream (4 votes)
9. Include ideas for profitability
10. Separate government funding – directly funded (8 votes)
11. Flexible and site specific (4 votes)
12. Focused result in critical locations (4 votes)
13. Concerned about farmer by farmer bid process – should be on watershed basis or component (3 votes)
14. Funding not given for EFP – should we tie this program with EFP and not be in competition with EFP (3 votes)
15. Funding for local collaborative efforts – grassroots initiated (4 votes)
16. Consumer contract for funding e.g. water bills (5 votes)
17. Funding delivered to foster collaboration – use existing delivery mechanisms and sort out who does what (7 votes)
18. Expand water quality to include water quantity
19. Cover ongoing cost e.g. retirement of land, long term, substantial funding, commodity linkage to beneficiary (5 votes)
20. Ecological services understood by decision makers and general public (4 votes)
21. Focus on rural agriculture – but how to include rural – non-farm properties as part of same package (4 votes)
22. Zero impact is realistic (1 vote)
23. Look closely at recent landowner surveys Ministry of Natural Resources (MNR)
24. Important to communicate results of buffer program to non-farm public
25. Look at program as opposed to project
26. Identify crop consumption differences – before/after (1 vote)
27. Build around major principles such as agriculture sustainability (4 votes)
28. Education – strategic process targeted to politicians, managers, landowners, and public (9 votes)
29. Develop common language about what are buffer/riparian zones (2 votes)
30. Technical assistance is key (7 votes)
31. Needs personal touch delivered by people/not paper (7 votes)
32. Program needs focus/home (4 votes)
33. Need to look/study legislated approach – is this a way to get results? – if no funding is available should we look at legislation as another way to go? (4 votes)
34. Lineal measure compensation – functional measures rewards (1 vote)
35. Ensure that buffers are truly functional not just data (i.e. x amount etc.) Ensure that buffers established are permanent and not revert back to previous condition Consider sensitivity of streams i.e. cold water vs. warm water (7 votes)
36. Don't get so involved in the process that the "productivity" becomes secondary (3 votes)
37. Mechanism to link legislation to 'on the ground' Buffer Program – feedback loop gray areas increase understanding re: Fisheries Act, Nutrient Management Legislation (2 votes)
38. Agriculture must be recognized as vital part of Ontario rather than a problem to be dealt with (6 votes)
39. Social Marketing is important in changing attitudes/behaviours after you understand what/why/how they are – get on board the program now or legislation later (1 vote)
40. Program pre-requisites (for project or bid \$) = EFP + Buffer Strip Project Plan = ? "Program" pre-requisite – must be integrated with other stewardship programs (7 votes)
41. Incremental improvements are important – we need to do a better job of demonstrating benefits – ecological – socio-economic... and getting information out to decision-makers, general public, landowners – communicating effectively (5 votes)
42. Assessment/monitoring to show results and benefits of buffers i.e. water temperature, siltation, improved fish biomass or diversity of flora/fauna (6 votes)
43. Ensure it is a community driven and supported process – need strong feedback to follow up monitoring and reporting to public (8 votes)
44. Initial Buffer Program leads into long term on going program that evolves – include wetlands! (2 votes)
45. Strong commitment to funding through an Act (1 vote)

FLIP CHART NOTES

46. Maintenance? Beauty of Drainage Act = maintenance via superintendent = engineers report = bylaw = permanency (1 vote)
47. Whaddy do with those @*!! Cottagers
48. Market to trail clubs who pay for land access to cover costs
49. Functional for both crops and livestock - "Nuisance Wildlife"? Let's not forget who the nuisance is! Don't forget who is supplying your "food" (it sure isn't coyotes) (1 vote)
50. Pot of \$ accessible for drainage ditches
51. Program evaluation – needs to be undertaken – are we achieving our over goals / objective? And get the information back out – feedback – mid course corrections if/as required (1 vote)
52. Riparian Report Card for the Province - important step in process must identify need for community action (8 votes)
53. One component of well-managed landscape (buffers, riparian zones, wetlands, woodlands, farmland, urban areas, transportation etc.) (6 votes)
54. Provincial Based – with local delivery – through existing stewardship programs (that work well with landowners) – unnecessary layer of delivery (5 votes)
55. Measurable results – "reportable #'s" pooled e.g. via an internet based program – part of monitoring program to test implementation measures? i.e. test water chemistry parameters and aquatic life or habitat assessment – water quality toolkit for kids/landowners/farmers (8 votes)
56. Definition: buffer = effect Setback = distance from watercourse
57. Minimum standard buffers - guidelines - carbon sequestering tie in - make certain they are still functional - physical/chemical/biological (3 votes)
58. Identifying marketable products from buffers may reduce the need for future funding e.g. biomass will become a large market
– also access to fish and wildlife (charge for access; minimize "nuisance" wildlife)
– incorporating marketable products but not paying for them i.e. Christmas trees in a deciduous buffer (4 votes)
59. Initiative – Clean water so we need to be able to give scientific data to prove to all concerned that it is improving i.e. The original initiative they see aesthetic improvements (5 votes)
60. Land trusts for tax credits - beyond implementation (i.e. for maintenance)
Easements – range of options (e.g. On title; 5-10-15 years) (4 votes)
61. Conditional Approvals
62. Build on Common Concerns (2 votes)
63. Communications for the program need to address a potential 15 year span i.e. work to include in training/education i.e. college courses etc. (3 votes)
64. Buffer system for urban, farm and non farm areas - all encompassing system based upon what we know we need today (5 votes)
65. Fisheries Act: define due diligence (1 vote)
66. Buffer has a negative connotation - how about filter strips

Specific Components

- Who should champion this program? OFEC / Who should not – agency (14 votes)
1. Business component from deliverer and receiver – strategic and addressing local client issues (1 vote)
 2. Priority areas – focus resources
 3. Level of personal responsibility to keep water quality no worse than when it entered property. Broader Public need to be involved for further improvements (1 vote)
 4. Sort out who does what
 5. Need to define buffers and define goals: farmers, government, public – functional goals: environmental, social, economic (6 votes)
 6. Broad goal – Urban and Rural goals – specific interests (1 vote)
 7. Ensure buffer part of landscape approach
 8. Avoid blanket legislation (1 vote)
 9. Expand category to include erodible upland and entire floodplain and no less than 15 year agreement
 10. Interaction – education, marketing, government, public, landowners (2 votes)
 11. Who to fund – Provincial Government, non-government organizations (NGOs) (4 votes)
 12. Who to deliver – Grassroots, community-based organizations such as Ontario Soil and Crop Improvement Association (OSCIA) (7 votes)
 13. Riparian working group to set program objectives
 14. NGOs and CAs to deliver – more than one organization
 15. Who administers measurable, accountable – OSCIA, OFEC (Ontario Farm Environment Coalition)
 16. Need for technical assistance (1 vote)
 17. Long term adequate funding e.g. contract with consumers percentage of water bill (8 votes)
 18. Capital component – Salary component – need to drive collaboration – how do we add to what is currently happening (1 vote)
 19. We need strong presence from government
 20. Multi-stakeholder application review
 21. Take broader view of Champions to ensure success – diversify
 22. Educational component (1 vote)

FLIP CHART NOTES

23. What are the benefits for whom?
24. Do we have the right people involved to date? Who else? E.g. Rural municipalities,
Aboriginal communities (1 vote)
25. What are the next steps? (2 votes)
26. Very conservative group today – land use is more dynamic than reflected today – golf courses, gravel, industry.
We need buffering program with land use change (1 vote)
27. Do we know how large the problem is?
28. Administration and Delivery – clarification (6 votes)
29. Focus next steps for agricultural community (1 vote)
30. How does this on the ground program fit into larger framework? (2 votes)
- 31.

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BUFFER BLITZ 2001

**Advancing an “On-the-Ground” Program for Ontario
Jack Imhof, Chair, Riparian Working Group**

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- ❑ ONTARIO CATTLEMEN’S ASSOCIATION
- ❑ GRAND RIVER CONSERVATION AUTHORITY
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