

Carolinian Canada



Proceedings of
Buffers Best Evidence Conference
held at King's College, London, Ontario
May 3, 2000

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London Endowment for Heritage Fund



Preface

Thanks are due to Don Gordon for initiating this important conference and for his encouragement and guidance throughout this project. Our speakers and workshop leaders deserve much thanks for their substantial contribution of their professional expertise and experience to provide the grist for the mill of discussions. The workshop recorders extended this to all by providing a useful synopsis at the Plenary.

On the technical side, I extend thanks and appreciation to Tom Jory and his staff at King's who provided tape recordings of sufficient quality for transcription and to Mike Sukava for the dubbing. A very special acknowledgement is owing to Kellie Ross for her transcription of the tape recordings. Transcription of voices speaking at some distance from the microphone muffled by the sounds of others in the room is a challenge that deserves recognition.

On the matter of transcription, these Proceedings of the Best Evidence represent our best effort at capturing what was said. If the intent of your statement is incorrectly given here, please accept my personal apology.

Due to both technical and scheduling difficulties the publication missed the target by 3 months. My sincere apologies to those who could have benefitted from this sooner. I hope, however, that you will be able to use this book as a reference and source for good ideas to assist you and your municipality firstly, in framing a policy for buffers that serve the ecological needs of the natural heritage system based on the best evidence; and, secondly, as a source creative and effective ways to implement that policy.

I hope that we will be able to stay connected and to share with each other the best achievable policy that can be obtained in each municipality. One method that may be useful is the Federation of Ontario Naturalist discussion forum at www.fon.org/zzzzzzz.

- Bill DeYoung

Buffers “Best Evidence” Conference
the prevailing opinion on buffers for natural areas

3 May 2000
King’s College, London, Ontario

Agenda

<u>Time</u>	<u>Title</u>	<u>Speaker</u>
9:15 to 10:00	East Foyer Registration and Displays	
10:00 to 10:15	Welcome: Bill De Young, Event Chair The Big Picture:	Don Gordon, Carolinian Canada
10:15 to 11:00	Round Robin Reports What’s happening in Carolinian Canada	
11:00 to 11:15	<i>Refreshment Break</i>	
11:15 to 12:15	Ecological Needs, Provincial Minimum Standards, and Planning Realities	Panel Discussion: Jane Bowles Jack Imhof Gary Epp
12:15 to 1:15	Fresh Air Enjoy a splendid view of the Thames River <i>Dining Room Luncheon</i>	
1:15 to 2:00	Riparian: <i>Lessons Learned</i> Woodlands: <i>Take it to the limit</i> Implementation: <i>Drawing the Line</i>	Angus Norman Jane Bowles Bonnie Bergsma
2:00 to 2:45	Riparian: <i>Context and Approaches to Planning for Buffer Areas</i> Woodlands: <i>Protecting the back forty</i> Implementation: <i>Criteria for Effectiveness</i>	Barb Rosser Muriel Andreae Linda Harvey
2:45 to 3:00	<i>Refreshment Break</i>	
3:00 to 3:45	Riparian: <i>What Rural Landowners Telling Us</i> Woodlands: <i>The Ring Around the ESA and Other Suburban Myths</i> Implementation: <i>Community Assertiveness</i>	Tracey Ryan Michelle Kanter Hal Schraeder
3:45 to 4:45	Toward An Ideal Municipal Planning Guideline for Buffers Plenary	

Introduction

Purpose of the Conference

The purpose of many conferences is to bring together a group of people who typically belong to the same professional organization. This conference distinguishes itself by deliberately bringing together numerous communities of individuals. The invitation list was targetted to municipal planners, conservation authority staff, environmental consultants, planning consultants, naturalist organizations, students and volunteer members of municipal advisory committees. The attendance at the conference reflected this broad spectrum of individuals. What they have in common is a desire to find a workable solution to the question of the need for, the characteristics of, and the implementation of buffers.

The advertised purpose was to discuss the need for buffers and how to implement municipal guidelines for protected natural areas. We said that we would listen to the best evidence about why management of protected natural areas is essential to maintaining the features and functions of different habitats; to identify where buffers are required; to identify the necessary characteristics of buffers; to discuss how to manage buffer zones; to discuss buffer guidelines for municipal planning; and, to move toward a minimum performance standard for buffers in Carolinian Canada.

Progress was made on all aspects. The definition of a buffer was not declared before the conference and throughout the day several variations on the theme were proffered. The need for a common understanding and agreement on a working definition for buffers and setbacks was called for by many. A few examples are found within the text from the speakers and in the supplemental material toward the back of this book. As well, agreement on process for determining where and what kind of a buffer may be required was spoken of by many. Within this planning process must come agreement on the approach to the environment. Does protection precede development or is the natural heritage system the residue of the landscape which is not developed? Should the focus be on drawing lines around a key feature or do we know enough to provide protection and maintenance of the functions of the natural heritage system by establishing buffers?

The many unanswered questions from the conference include definitions, process, approach to what to protect (a whole unit or the core), ownership and management, and effective implementation of buffers for the benefit of the natural heritage system. Local solutions based on site-specific needs modelled on minimum standards for assessment, evaluation, interpretation and application seems to me to be the outcome of the day.

- Bill DeYoung

Welcome

Bill De Young Event Chair

Good morning. Thank you for coming to the Carolinian Canada Buffers Best Evidence Conference.

Does anyone know what a buffer is? Well, I hope we'll have a clear definition by the end of the day. First, I'd like to say, on behalf of King's College, welcome to King's College. They are one of our sponsors, and Gerald Killan is the Principal and he asked me to express his happiness and delight that you are able to use King's College facilities for this conference. Gerald Killan is very active in environmental issues, including being on the Ontario Parks Commission and the Thames River Heritage River Designation project.

I'll be the Event Chair. My name is Bill De Young, I am a member of EEPAC, The Environmental and Ecological Planning Advisory Committee for the City of London. If there are any questions or issues throughout the day, just try to track me down and I will try to help out. Importantly, I would ask the workshop leader to meet with me, in this corner here, at 11:00 when we have our break, and we will do some last minute preparation for workshops in the afternoon.

At this time, I would like to introduce to you Don Gordon with Carolinian Canada, who has some remarks.

The Big Picture

Don Gordon, Carolinian Canada

Thanks Bill. They won't be long. That's one of the best things about being in the driver's chair for something like this. You don't actually have to speak for any length of time, you can let other people do the work. I am very glad to see you all here. It has been a stressful day for our conference organizer. We exceeded our expectations for the numbers, so I hope you will bear with us in some of the shuffling back and forth we need to do. This is a nice comfortable room and I'm sure we're going to have a great success.

I think most of you probably are familiar with the name Carolinian Canada, though you might not be quite clear on what it is. Carolinian Canada is a coalition of non-government organizations, government agencies, and individuals who all share a common commitment to stem the loss and promote a significant increase in the size and quality of natural areas within this eco-region.

Today we've been able to accomplish this conference only with the support of some very generous sponsors who have made it possible for us. Bill has already mentioned King's College who have provided the facilities, but I would also like to thank the Urban League of London, Earth Tech Canada, the City of London, the Middlesex Stewardship Committee, the Federation of Ontario Naturalists and the McIlwraith Field Naturalists. In part, their contributions have made it possible for a number of students to attend, as well as community representatives from community volunteer organizations through a bursary program. There are number of students scattered around among us today, and I think more will be joining us as the day goes through. I would encourage them all to participate fully and ask questions. We have got some of the most knowledgeable people you'll find here today with us, and, for the rest of you, if you find yourself sitting at lunch with a student, please make him feel welcome because promoting student opportunity is a very important part of what Carolinian Canada does.

our sponsors

I'd like to talk for a moment about why we are interested in this topic. Carolinian Canada, as you know, for a number of years focused on a series of Carolinian Canada sites. These were key unprotected sites, but this island of green approach has failed to work in addressing the degradation of our natural heritage system. We have found, that as conservation science has advanced, natural values can only be protected within a network of core areas and connecting links, with each piece functioning as part of a big picture. Carolinian Canada has recently undertaken a mapping and analysis to project a vision of what a healthy and sustainable natural network could look like. There is a display across the road that will give you a taste of this, and in the coming months we'll have more and more educational materials surrounding this vision of a "Big Picture".

*the Big Picture:
a vision of what a healthy
and sustainable natural
network could look like*

*we have threatened the
air and water quality;
and, in turn, human
health*

The “Big Picture” is not something that is going to be accomplished overnight, but will be a multi-generational project to bring our natural heritage system back up to a sustainable level in this part of the world. So, why is it important to restore the natural systems in Carolinian Canada? In the first place, the losses to our natural heritage are severe and there can be no question that we have taken our system down further than it can manage. We have now got to the point where we have threatened the air and water quality; and, in turn, human health and all of this is going to have a very negative impact upon the economy of our region in short order.

*environment and the
economy*

The environment and the economy are on the same side of the balance sheet, and those who speak of balancing the environment against the economy and vice versa have got it all wrong—what they really mean is that they want to sacrifice the future for short term financial gain today. I think we have got to break this notion that they are competing interests; rather, if we are going to have a vibrant economy and a vibrant life for our children, we have to find a way to move both of these agendas forward together. Canadians pride themselves on their natural environment. We have poll after poll tell us how Canadians take a great sense of their identity from the wildness and the strength of Canada, the land of lakes and rivers. Well, the sad truth is that Carolinian Canada, this eco-region, is the most degraded and abused landscape in the entire Great Lakes basin. There is nothing to be proud of in that, I think, so there is a challenge to us to address the situation.

role of government

It has been our observation that local planning authorities are the key strategic players in conserving and enhancing our natural features in this region, and, for this reason, we are increasingly developing programs that we hope will be of some use to planning authorities, municipal governments, conservation authorities and the development community that works with them, so that we get better planning. At a government level, right from the highest level, we haven’t had enough resources put into the planning process to provide clear direction and standards. The provincial government, not individuals within it, but the government as a whole, has kind of dropped the ball here and has left it to competing interests to duke it out at the Ontario Municipal Board. The result of this is that municipal taxpayers and the proponents of development are all paying a heavy price, and the piecemeal results that are achieved are neither efficient nor effective.

*piecemeal results that are
achieved are neither
efficient nor effective*

Our hope today is that, with an exchange of experience and knowledge, we are going to be able to help you to achieve, better, quicker, and less expensive planning decisions. I expect we are going to hear a variety of opinions today, and while we may try and forge some common interest, I’m sure there is a diversity of opinion on the topic and, hopefully, we have assembled a good panel of facilitators today to tease out these different ideas. I’d like to remind you, again, that this is a participatory conference and we hope that you will share experiences from your own jurisdiction, war stories good and bad.

Perhaps, before I finish, while I've still got my soapbox here, I'd like to challenge a few of the myths that I believe are hampering efforts at good planning. The first of these myths is that we can continue to grow without limits. We have already surpassed the carrying capacity of the region by removing too much natural cover; and, if we are going to achieve a healthy environment and a vibrant economy, we are going to have to leave behind the status quo and look for new ways to have smart growth. The second myth would be that private property rights are absolute and unlimited. Sad to say, but one's right of property extends only so far as it does not diminish the rights of neighbours and the community. Property is not inherited from our forebears; it is held in trust for our children. A property owner's right of enjoyment is constrained by their duty of stewardship. The third myth is that land use planning is expropriation without compensation. This is nonsense. Governments not only have a right, but they have a duty to impose land use conditions for public benefit. Speculators do not share their profits with society and society has no responsibility for their losses.

three myths:

growth without limits

private property rights

*expropriation without
compensation*

I guess I'm wearing my heart on my sleeve here, and we'll hear a variety of opinions. Certainly, I expect to hear opinions that run contrary to what I have said, but I hope that you are all going to take something from this day that's going to help you fit your pieces into the big picture, and that together we can adopt a strategy that leads to smart growth in this part of the world, not simply open for business at all costs.

Thank you very much, and I hope you enjoy the day.

**Round
Robin
Reports**

In this session we would like you to introduce yourself and tell us where you come from and how buffers are part of the work that you do. You can use your own style but the following questions may guide you.

Your name _____

Name of Municipality/Township or organization: _____

Has your Municipality completed sub-watershed studies? Yes No

If no, will these begin in the next year?

Does the Official Plan have environmental protection policies to establish a natural heritage system? Yes No Don't know

Does the Municipality Official Plan have a Buffer Policy? Yes No Don't know

Are there buffer policy implementation guidelines? Yes No Don't know

Are there buffer management guidelines? Yes No Don't know

A question that I hope to have answered today is _____

In the past year we

In the coming year we hope to

Thank you very much for laying out the challenge of the day, and I think you clearly laid out what the issues are for us today, so thank you for that. To echo what Don has said, I hope that it's a day of dialogue and discerning the best path that we can all follow together. In order to get a sense of who is here in the room with us and where you are from, and what your expectations are of the day, we've allowed time for a round robin session. This just means stand up at your place if you have a loud enough voice, or if you don't, I encourage you to come and use the microphone, and tell us a little bit about where you're from, the name of the municipality or organization you represent, and tell us why buffers are important to you. What are the issues that you've experienced in the last little while? What do you hope to achieve in the next little while? For instance, does your municipality have a sub-watershed study yet? And if not, when is it scheduled to be completed? If you've got a sub-watershed study completed, are the recommendations being implemented? If they are not being implemented, what's needed to make it happen?

Those are the kinds of issues that I have suggested for standing up and speaking. The floor is open for the first brave soul to take it away.

My name is Trish Mass and I am an aquatic biologist at the Grand River Conservation Authority. I am just going to read off my sheet here. Some of our municipalities have begun some sub-watershed studies, others are in the process of just starting them. We do have official plans that establish natural heritage systems in them. We have a municipal official planner who has established policies along with our municipalities. Other municipalities don't even have official plans, but we are starting that this year. Buffer policy implementation, guidelines, yes. Buffer management guidelines, yes as outlined in official plan documents. The question that I have is - What is the best way to implement buffers in established areas, by that I mean municipal parks? In the past year we have managed, in our group, to establish varying buffers in parks, agricultural areas and industrial properties. In the coming year, we hope to publicize them, monitor their effectiveness, evaluate their value to the public and evaluate any of the challenges ahead.

*What is the best way to
implement buffers in
established areas*

My name's Sandra Malcic, I'm from the Toronto and Region Conservation Authority. We work with a number of municipal partners over a broad jurisdiction. We completed the watershed study in conjunction with the Ministry of Natural Resources and other small municipal partners. We vote for our municipal partners to have official plans and environmental protection policies to protect the natural heritage system in them. A lot of our municipal partners have buffer policies, implementation guidelines, and the guidelines are somewhat less formal. The question that I hope to have answered today is some direction on the tools and assignments required to protect more than the existing conditions, which includes not

*tools and assignments
required to protect more
than the existing
conditions*

Disclaimer:

This transcription is our best effort from the tape recordings.

If the intent of your statement is incorrectly given here, please accept our apologies.

to protect the broader regional picture, including some of those things that I mentioned corridors and linkages for things that are not on the landscape today including buffers

only buffers, but connections, corridors and linkages for things that are not on the landscape today. In the past year, the Toronto Region Conservation Authority has, for several years been a part of natural heritage strategy. That strategy includes recognition of the existing conditions as well as devising a strategy to protect the broader regional picture, including some of those things that I mentioned corridors and linkages for things that are not on the landscape today including buffers, configuration, shape, size, et cetera and natural features, and in the upcoming year we hope to develop policies at the Conservation Authority around that natural heritage system to be used for municipal planning as a process and hope to work with our municipalities to help them adopt it through their plans and other mechanisms that the municipality has.

bridging the gap between policies and implementation

My name is Domenic Lunardo of the City of Vaughn and am partnered with the Toronto Conservation Authority. We do have environmental policies in our official plans, but I think that what we are struggling to bridging the gap between policies and implementation. How big the buffer should be? Do we actually need a buffer? I think someone mentioned about compensation for buffers. We are fortunate to have an acquisition policy within our OP to acquire new lands in public ownership; not all woodlots but a percentage of them. So what I'm hoping to get out of today's session is how we bridge the gap in policy which everyone seems to buy into - these good policies, including the development community, but I think we fail within the serious limitations.

we concentrate too much on drawing a line around a feature without thinking about how the attributes and functions actually work outside of the key feature

My name's Brian Henshaw. I'm a consultant working in mostly Durham region. The thing I would like to get out of this workshop is an understanding of what a buffer is. Somebody mentioned it before, but I am really interested in stimulating debate about the critical function zone that supports natural features that you are interested in and the area of land, for whatever it might be, that should go outside of that critical function zone. I think we concentrate too much on drawing a line around a feature without thinking about how the attributes and functions actually work outside of the key feature, and that's really the language that we need. I think we all need to speak the same language, so that maybe critical function zone, adjacent lands area, and barriers are all part of a booklet. I think when somebody says buffer that everyone thinks of a different thing. That is the first hurdle that we need to get past in my opinion.

My name is Jim Robb, our organization is Friends of the Rouge Watershed and we work for the watershed in the eastern GTA Markam, Stouffville, Richmond Hill. In terms of sub-watershed studies, the _____ offers some protection to _____ parks and the area north of the Steeles region is undergoing the final stages of the Rouge Park management plan. But there is kind of disconnect there between the Conservation Authority which looks at the watershed issues and Rouge Park plan which is looking at a green space issue and I don't think we've got the sub-watershed studies in place yet to extend. We do have some overall studies which _____

better sub-watershed studies. The official plans do have environmental protection policies, but I agree there is a great disconnect between the policies and implementation.

Markham has less than 5% forest cover and is probably similar to some parts of southwestern Ontario. The York region official plan which covers that area has a 25% forest cover objective and yet it has been going backwards ever since it has been passed. There is no implementation strategy to set milestones for acquisition and funding to actually reach those objectives, as I see it. In terms of buffer management guidelines, the GRCA has a standard 10 metre setback, we find that woefully inadequate. In terms of the pressures that developing areas have: trails, _____ external forces of development, so I would like to see more evidence that could be brought to bear. Good scientific evidence to influence public policy to expand the buffers so we actually can contain these areas to protect them from over-use to external forces.

a standard 10 metre setback, we find that woefully inadequate

In the past year, our organization has worked with a lot of partners throughout the watershed, to plant and maintain over 20,000 new trees and shrubs. We have employed several young university graduates and co-op students and volunteers from schools and community groups and we have restored the vegetation along approximately 3 kilometres of the Rouge and have restored about 15 hectares of habitat. The restoration combined shrubs, wild flowers and trees, so there is some progress that's positive in the Rouge Watershed but development is so fast the areas are shrinking as the pressures increase.

My name is John Nemeth, I am the manager of Environmental Services for the Town of Richmond Hill. I think what I want to get out of your conference today is an understanding of why almost our planning is being done at the Ontario Municipal Board. Almost every square inch of the municipality has got an application on it that is at a potential point now of actually severing the corridors from all the Oak Ridges Moraine. I'd like today to come to some sort of an understanding or get some sort of a glimmer of hope of how we could get the land development industry and the Ontario Municipal Board and the municipalities all on the same line as to what a buffer is, its importance, and its ecological function.

understanding of why almost our planning is being done at the Ontario Municipal Board

I'm Caroline Barker from the Town of Ajax. The Town has just completed an integrated ecological review of identifiable natural features. We also just adopted our new official plan which has afforded a level of protection to all features identified in the ecological review. We have identified a two-tiered system of protection whereby we protect our features through environmental protection and adjacent to that, there are required buffers also designated for environmental protection. Also, we have our environmental resources which we use to connect to our environmental protection resources whereby we are requiring detailed environmental impact studies to establish the buffers required. In the absence of an environmental im-

a two-tiered system of protection whereby we protect our features through environmental protection and adjacent to that, there are required buffers also designated for environmental protection

pact study we have established minimum buffers. Lastly, we are requiring environmental reviews prior to development that is adjacent to or within an identified environmental features. So, today I would like work on implementation portion of buffers and I hope to gain an understanding of the ecological importance of buffers and how they are affected by human activities.

*how to influence
landowners to establish
riparian buffers*

I'm Bridget Roach, I am a grad student from the University of Western Ontario. My master's thesis is on evaluating the floodplain policy of the City of London. I am glad to be here with people who are actually involved in the industry and implementing the guidelines or policies for buffers. In particular, I am interested in the size of the buffers and whether buffer policies are adhered to for a particular development.

Dan Schaefer of the Middlesex Stewardship Committee. I guess what I would like to get out of today's workshop is just some ideas of how to influence landowners to establish riparian buffers, maybe there is more than one way. In the last year, we have been working with landowners to try to develop a bit of a buffer program and we just recently received a bit of money from Eco-Action so we will be establishing some buffers in the County. We are also working with Upper Thames and the County of Middlesex and Nature Conservancy and Carolinian Canada to do a natural heritage study, in the County and we hope that will have a big effect towards buffers, also.

*I'm a Provincial Public
Servant and I've come to
help you*

I am Hal Schraeder. I'm from the Ministry of Natural Resources. I'm a Provincial Public Servant and I've come to help you. I'm struggling with the idea that maybe I'm becoming a widespread believer that buffers are kind of a panacea to what ails the progressive rehabilitation of our natural heritage system and I'm looking to have that discussed in the context of natural heritage system management. The Ministry of Natural Resources for the Province has published a natural heritage technical manual, and what we are trying to do is influence the municipalities to actually apply some of the work that is espoused in that manual, because we can't do things to people, as you well know.

*I am here to help Hal
help you*

My name is William Pol, I'm with the Ministry of Municipal Affairs and Housing. I am here to help Hal Schraeder help you. I just started with the Ministry about a month ago and I think, from a planning perspective for local municipalities, with the approvals of planning, moving from Toronto to the London Regional office, we may be able to help the local municipalities access information a bit quicker through us and Hal. Today I'd like to learn more about changing some of the community values with respect to buffers and natural heritage features so that the Province and the local municipalities don't have to use more institutional policies or zoning regulations to protect the features that, I think, the community really values.

My name is Andrew Beck, I from the Essex Conservation Authority. In the Essex region, we have put together a sub-watershed analysis, its our final diversity conservation strategy which we plan to be implementing in the coming year. It targets various areas of concern both private and public land where we can implement different techniques such as buffers. I think the question I would like to have answered today is more from an economic standpoint. I'm kind of interested in some tangible incentives that landowners can understand, that would offset or give them reason to put a buffer strip on their land. I think that is an important aspect in the Essex region. In the past we have worked with landowners as well as private sector businesses and municipalities to do a lot of buffer work and a lot of stream stabilization. In the coming year, we hope to implement this conservation strategy.

tangible incentives that landowners can understand, that would offset or give them reason to put a buffer strip on their land

My name is Brett Lusy, I am landscape architect for the Town of Oakville Parks and Recreation Department and I hope to answered today, or to identify a process to amend the current Planning Act to apply for a mechanism to secure significant woodlot or natural areas without penalizing the existing parkland dedication requirements. And also, I would ask our good friends from the Provincial Government to help us out in that we are facing tremendous pressures within our development areas even though we go through extensive sub-watershed studies and identify significant natural features and woodlots. The bottom line is money and reimbursement to the developers. We go through hoops on every plan to try and secure those areas. As someone else has already indicated, it's a matter of a gap between the policies, you know, those warm fuzzy feelings and those warm fuzzy statements and the actual reality. We have seen woodlots carved up in the Town of Oakville. We have made our best efforts to save as much as possible, and I think we have done a tremendous job; but, the problem is how do we execute those warm fuzzy feelings when we've had a lack of support throughout the senior levels of government to do that.

to secure significant woodlot or natural areas without penalizing the existing parkland dedication requirements

My name is Linda Harvey, I'm with EEPAC of London right now and had worked on environmental planning which was carried out in BC on Vancouver Island. We don't have an OMB. We have lawyers. And we have the province. In the planning business what we have to do is work around the planning issues for the communitiy. By negotiating and taking a different approach because it is cheaper and to get buy-in from others for environmental policies. We are coming at this from a different angle. What I'd like to get out of today a sense of what is happening in Ontario and see if I can take my experience from BC and learn from you guys, and actually put them to use here in London through EEPAC in terms of wetlands and buffers to protect them.

I'm Rob Milne and I am representing Watershed Report Card today and some Lake Simcoe Naturalists and a couple of NGOs. With the Watershed Report Card we have developed a series of manuals to help small community leaders to go out and assess the health of your watershed. We tried, in the assessment part, to take a functional approach and part of that deals with buffers and look at the movement between uplands and low land areas. With functional approach we were trying the look at the academic literature on that we see that there is a real problem when you try to put a distance on a buffer. We have the policy numbers, but we didn't want to go to policy. So I what I hope to get out of today is to see where the scientific literature is coming from or where we are getting that with these distances. It is really difficult. Every different species has a different buffer distance and different elements sometimes, so it is really complicated. The other thing is, with the Lake Simcoe Naturalists in the field, we are dealing with up in Georgina we are dealing with an area of green land designed that was great, but it is not officially accepted in the plan. So when you are trying to preserve corridors and buffers and that you are finding it very difficult when you are dealing with documents that you should do all this stuff, when it actually comes to planning it is usually ignored. Those are some of the things I'd like to address today.

*need for a better
understanding of what
buffers are really about,
and what we are trying to
achieve*

I am Dave Wake, I'm wearing two hats today. I do environmental planning for the Ministry of Transportation, I also do a lot of work for the Mcllwraith Field Naturalists here in London on natural areas issues. I think that no matter which way you are looking at it, as several other speakers have mentioned already, there is a need for a better understanding of what buffers are really about, and what we are trying to achieve, so that we can all have intelligent conversations around the table, and I think that from both sides we have some consistency in that understanding we stand a better chance of really achieving something. I think there are a lot of positive opportunities here for a good exchange of information from a range of experiences.

My name is Michelle Kanter and I am with the Nature Conservancy of Canada. I guess we approach buffers in two different ways. One is _____ We should think about buffers, but there are opportunities to get a core area to build a buffer around it to give the land a breather and perhaps using some of those tools .. to be a bit more creative about how we regulatory or policy [end of tape]

My name is Gregg Barrett and I am with the City of London. I guess a lot of things that I'd like to get out of this are mostly within the context of implementation. I want to echo, I think, a lot of things that have been said already, but try to come up with some understanding as to what are appropriate buffers. Some of you have already mentioned that you have different buffer standards for different species of plants or animals or whatever. We have to try to come up with some common understanding, I think, within the context of that we work in, too. Should we have different buffer stand-

ards, or maybe even different expectations within the urban setting, and should we be looking at something that may not be entirely scientifically pure, but would still help us meet the intent and deal with the fact that we are within an urban context, so that we are not dealing with a pure natural system? I guess, probably because it's the last one that it's going to be the biggest one, it's the one that I think we probably all grapple with the most. How do we move beyond the compensation issue? It's not just cash, it's not just that you have to pay for lost opportunity. I think we have to come to some understanding as to what the role and the function of these issues when we are talking about buffers and then try to integrate those with development plans and with development expectations so that we are not constantly sitting down and saying "Okay, we'll meet you part way, but how much are you going to pay us for it?" I don't think that that should even be on the table.

*we are within an urban
context*

*we are not dealing with a
pure natural system*

I'm Christine Patty and I am the Coordinator of the Friends of Second Marsh Stewardship program in Oshawa. We are a non-government organization and Departmental _____ with the City of Oshawa and multiple community groups and Rotary Clubs. We have a sort of different perspective than a lot of you here. Some of the things that we have done is have community groups adopt city parks to increase the buffers that are along the streams. A lot of things that we are going to be doing in the next little while is working with private landowners who actually own land along the streams. I guess that's why I'm here today, is to learn more about how I could work with landowners and how to really get them interested in establishing these buffers on their lands. A lot of them are aware that they are losing a lot of land each year to erosion and some of them are very interested, for that reason, but others are still a little bit suspicious of using land _____ for naturalization.

*how I could work with
landowners to get them
interested in establishing
these buffers on their
lands*

I'm Doris Campbell and I am a volunteer with the Dorchester Mill Pond Committee and development _____ is surrounded by just a very small band of Carolinian forest and that is surrounded by a very minor _____. A very complex filtering process and _____ private property. _____ long negotiation with Environment Canada funding for the project to coordinate this. In the process we have produced a lot of material for the homeowner and for the schools about restoration, buffers around the Mill Pond, resident training programme about garlic mustard removal. About 50% of the homeowners adjacent to the pond are supportive. Some are not at all _____. We are also concerned with other areas in the township such as the Dorchester Swamp which is an ANSI. A subdivision is being built very close to it. They didn't request input from those outside of the boundary for the application _____ but we have we have just established a committee.

I'm Deanna Peterson, and I'm another one of those students that you had mentioned. I'm doing my Master's at the U of T in area of Forestry and I am studying what edge characteristics make an urban _____ forest more susceptible to a major high dying rate of vegetation and these edge characteristics include _____. Stable buffers are what interest me and finding out if they increase the likelihood of invasion by exotic plants and also I would like to know what kind of buffers these Municipalities have for the different municipalities _____

Our environmental policies are probably 25 years out of date

farmers feel that other parts of society benefit from their work on their property

My name is Ken Forgeron, and I am a planner with the Region of Niagara and we have done very little watershed planning. Our environmental policies are probably 25 years out of date. We're begging, borrowing and stealing from the best examples of raw material such as Bonnie's group in London and Hamilton Wentworth and are trying to develop a sort of landscape approach to natural heritage and environmental management. We are expecting a big battle this coming year. We've had a bit of an experience, particularly from the farming community, which I am really interested in the answers to all of the questions that were posed today. They are all very relevant to our questions, particularly the agricultural community - who seem to give us the roughest time. All of our councillors in Niagara seem to receive same comments from farmers. Number one, they don't like to protect the natural areas. Number two, they don't want to provide buffers, and the compensation issue is certainly one we are going to have address whether we like it or not. Despite this _____ farmers really feel that other parts of society benefit from their work on their property, they lose some of their land and some economic opportunities. They feel that wildlife are only things that feed on their crops and they can't sit outside because of mosquitoes. All of these kinds of things-we think that farmers are people too, and don't get some of the benefits. But, anyway, we have to face those on a day-to-day basis and make informed decisions and we haven't even addressed the development industry within the urban setting. So we really need to sell this to the farming community first and I am looking for some ammunition to deal with the farmers and get good management policies in our regional plan, or it could be another 25 years before we have this opportunity again.

My name is Jason Budd, I work for Knutson Planning here in London and we represent developers and I think it comes down to being an issue of utility, where in a business there is basically generated fby demand that we generate as a populous that work and live in urban areas and grow naturally and as a result, someone has to build the houses. You can't get something for nothing. There is an intrinsic value to certain things, but the developers, the business man who is trying to make a living, and I just wanted to bring that point up. I think that's basically it. I hope I didn't put a thorn in anyone's side yet. I'm open for discussion on this when we go into it later on this afternoon, but I just thought I'd bring up the fact that there is a real money issue here, and there is also an issue of making a living, putting food on the table.

My name is Ron I'll be presenting for the Region of Halton and I will talk about inputting into their planning Department effectively putting measurable goals in their official plan _____ this year. Measurable environmental goals stuck in there so that there is something to grade things against. Also, we are going to hand over to the EAC committee effectively an auditor's function. It will be able to take the information from the region and environmental information and actually audit it against the measurable goals within the OP so that the region will actually know what we are gaining or losing at any time over the next five years. We are also going to be developing woodland policies. From what I understand about woodlands, they are effectively not on the landscape but we'll be identifying areas that don't have trees today but could be woodlands. We will be developing wildlife policies and natural heritage policies that goes far beyond anything we have ever done to the moment. We are going to actually try to be putting the values of the citizens of the region actually into this environmental plan. There is no good any longer to be identifying things on the landscape. What we want to do is understand from the public if they want clean air and what price they are going to have to pay for it. If they want clean water, what is the price they are going to have to pay for it, and so on and so forth.

We are effectively going to use woodland buffers as a way of actually making sure that our recharge areas are protected and the stream water quality will be maintained at its current level and that we are going to actually start to improve. We are going to bring in satellite industries as a basis doing a lot of this stuff and a monitoring program both for surface ground waters and woodland areas themselves.

The whole purpose of this is actually to help integrate the environmental information and bring it into the planning process. For too long we have spent a huge amount of money and resources and time, especially for watershed studies, and only a small little wee piece of it can actually get into the planning process. This is fairly destructive. The idea is to hack out all the rest of that stuff from the sub-watershed plans at the moment and get rid of it. The reason is this, if we don't start completing these studies, we can't input the plan and the planning decisions are made in the setting of while they're studies are still going on. We no longer can sustain that. So, as a result, we are going to streamline all the processes so that the information gets into the current planning system then try to change the planning system so that more information can get in. That is the management approach, that is the way we are going to look at this stuff, and there are going to be experiments which effectively report to people which things actually work and which things are failing so that nobody repeats the failures.

Canadian Wildlife service for the Federal Environment Canada. I work out of the Guelph office. I am a biologist. I work on wetlands, species at risk and sustainable agriculture. We are currently launching a program that some of you may be aware of. Species at risk or endangered species legislation has been tabled. We are developing a part of that overall program to recover species at risk. In Ontario and in Canada most of the species in need of recovery are in the Carolinian zone. We are developing a habitat enrichment program for increasing progressive recovery and prevention of species becoming further at risk. I am most interested today to learn the answers to the questions that we have just heard _____ threatening the environment the most need of an answer and I am intrigued, I guess, and interested to learn about the municipal perspective.

Bill: Thank you to all who participated and those who haven't yet had their chance to speak can speak during the workshops later this afternoon, or during the panel discussion which will follow the refreshment break.

issues list

*a community of
communities working to
balance the public good
and the private right*

When I listened to the different people speaking, I generated an issues list and there are some common things in there and I think that the agenda that is structured for today will address many of the questions that were raised today. One of the things I heard, that was very important, was that there is a community of communities present in this room, and that is very good. I am very happy to know that there is a mixture of people working at the grassroots community level, people working at the municipal planning level, and the environmental consultants who are out there helping us mediate the satisfaction of our needs. It's trying to balance the public good and the private right. It is a very difficult challenge and the workshops are structured in that way, that there are three themes. There is the scientific/technical advice and there are community values, and they have to be mediated through municipal policy. That is a tough job for all the planners who are here, and if there are any politicians, even tougher, I suppose.

*OMB making policy
decisions*

implementation

*regulatory or non-
regulatory solutions*

We heard that some of the planning decisions are made at the OMB and in Dorchester they are made by community action. There are different ways to make policy. The central issue that I heard was implementation. Some municipalities are very proud of the policy that they have and they go to the extent of calling them warm and fuzzy feelings and that's an accolade, but there has to be some implementation, and that will be one theme in one part of the workshops. The other issue was economic incentive, and, in contrast to that, it is the non-regulatory approach. And so, is it by regulation, is it strictly a matter of utility and dollars and cents and, as Greg said, 'it's either 5% or cash in lieu, or let's meet you halfway'. That's not good enough. The other thing I heard was the importance of language and that was the first question that I asked-does anybody have a simple definition of buffers? I don't think there is a clear simple one, but will take

notes during the day and will try to work towards a clear understanding of the common language. I heard the use of the phrase adjacent lands. I only heard it once, but in the Provincial policy statement, there is a separate clause dealing specifically with adjacent lands and that's where the notion of buffers comes into play.

*Provincial Policy
Statement & adjacent
lands*

The other thing I did not hear was the use of the word setback and that will be some part of the discussion for today. That gets down to the mechanics of how to implement the buffer. The other part was what is the function of a buffer and what are we trying to achieve by it, and that's part of the scientific evidence, and there will be workshops on the technical advice and trying to establish if we have got the right technical advice and if we know what it is that we are trying to protect and what the minimum widths are. If we only had minimum widths, do we get minimum habitat or do we get functional habitat?

buffer function

Another thing I heard was having a target set in the sub-watershed plan of 25% natural heritage system coverage and some municipalities have 30%. Carolinian Canada is recommending 30% natural cover in a planning area. That looks good on paper, and it even looks better on a map, but can we achieve it on the landscape? That will be something to be addressed today as well. I hope, John, that there is a glimmer at the end of the day.

targets

That concludes the Round Robin.

Disclaimer:

*This transcription is our best effort from the tape recordings.
If the intent of your statement is incorrectly given here, please accept our apologies.*

Panel Discussion: Ecological Needs, Minimum Standards, and Planning Realities

It's exciting to hear the enthusiasm amongst all of you. You are obvious making connections, either old friends, or making new ones and that's good to hear. At this time, I would like to introduce the panel to you to help us set the tone and style for the balance of the day. We already established that, I think, quite well during the Round Robin session, but I'd like to reinforce that that today we have a community of communities represented.

Introductions:

Gary Epp

On our panel this morning, I'm very pleased to introduce, on my far right, Gary Epp. Gary Epp is a PhD Ecologist and he works with Earth Tech. He is a senior Ecologist with Earth Tech and he has been in the consulting business for the last 11 years. His clients include: developers, the London Development Institute, the Urban Development Institute, numerous conservation authorities, and, recently, the City of London. So, he fulfills his role as an ecologist working on both sides of the fence, as it were.

Jane Bowles

Next to Gary, in the middle of the panel, is Jane Bowles. Jane is a PhD Ecologist. She has been a free-lance ecologist for the last 18 years and, in addition, teaches part-time in the Departments of Plant Sciences and Geography at the University of Western Ontario. As well, she has served on EPAC for the City of London for about 7 years and was active throughout the sub-watershed study process that was there and she hasn't quite suffered burnout, because she is with us today.

Jack Imhof

Next to Jane, on my right is Jack Imhof. Jack is an ecologist and his specialty is aquatic and watershed planning and he has been with the Ministry of Natural Resources for the past 21 years. One of his areas of interest is ecological restoration in riparian habitats.

What I'd like them to talk about is their point of view on what a buffer is, what are the needs or function for having a buffer, what is the Provincial policy statement or Provincial policy generally and Planning Act say about how can we protect buffers, do we have the right to protect buffers; and also to talk about what are the planning realities, what's happening on the ground and what's happening at City Planning and at the Board hearings about how lines are drawn on maps. To start it off, I'd like to ask Gary Epp to do that.

Each panelist has five to seven minutes to make their presentation. Then each panelist may take two minutes to respond and again at the conclusion of all three. In about half an hour, the floor will be open and you may direct questions to the panelists.

Ecological Needs, Provincial Minimum Standards, and Planning Realities

Gary Epp: I'm glad that Bill clarified the fact that I'm not solely a developer's consultant, but I might be here to provide, what some may consider, a dissenting voice. I'm here to say, in my opinion, a standardization of buffers is the wrong approach to looking at preventing impacts on natural systems.

By way of a brief definition, in my mind, buffers are areas of land within which management practices are conducted to prevent impacts on natural regions. Basically, they are geared towards the features and functions and be relative to those natural impacts of adjacent land use. Why should buffers not be standardized? I think that there are a couple reasons. One being that ecological systems are very complex and diverse and I don't think we'll have too much argument on that and therefore, in any given situation, we have to look at the complexity of the particular ecological system that we are dealing with. Secondly, land use impacts are highly variable. Imagine the difference between a park adjacent to a natural feature might be very different from, say, an ore smelting plant. And, lastly, the knowledge base for buffers and how we determine buffers-at least to come up with any standards-is very limited. There are certain areas where there is a lot more information than others. Riparian buffer information is a lot greater than information for forests or for any other types of other uses.

I don't think that we've got the knowledge base upon which we can develop standards and I think that what we need to do is look at the ecological buffers on a site-specific basis. I have a point to put on the developer's consultant path and not only from that perspective, I think from both sides of the equation, preservationists and developers, the principal buffer solutions are the way to go. We really need to have some rationale for why a buffer gets developed and what it's aimed to do. So, buffers should provide a specific function and that should be based on ecological requirements of the features and functions that you are dealing with, and also, the potential impact. So, if you are looking at that ore smelting plant, what are the potential impacts of that plant, and how do we prevent those impacts from occurring on a natural feature, and what is it about that natural feature that we want to protect-is it a rare species, is it an uncommon forest community, is it a riparian zone? Standards provide distances and that's about it. Beyond that, there is not much you can do. I know that in the planning realm there is real need to provide some sort of conclusive answers and numbers. One number is good, but, in my opinion, there is no magic pill that provides us with the answer for even groups of types of ecological systems by applying buffers.

I think what's needed are guidelines, preferable process for determining buffers. So, some sort of credible process by which we determine what

*ecological systems are
very complex and diverse*

*land use impacts are
highly variable*

*the knowledge base for
buffers is very limited*

*need to look at the
ecological buffers on a
site-specific basis*

first identify the features and functions of that ecological system you want to protect, develop some management objectives based on those requirements and then determine what the management implementation requirements might be for buffers

identify the proposed land use is that you are buffering the system from, to determine what potential development impacts might be and come up with some sort of mitigation measures

is the most appropriate buffer is for a particular scenario. One of the ways that we, in our work, go about establishing buffers, and I'll try not to spend too much time on this, is that there are two areas after we have defined what exactly the ecological features are that we want to protect. As much as we don't like to claim that ecological systems have defined boundaries, when we come to dealing with ecological systems, from a planning context, we do have to provide some kind of definition of the area. So that is the first step in determining some sort of buffer. But the two main areas, in my opinion, are the ecological requirement and the proposed land use requirement. So, what really needs to be done is to first identify the features and functions of that ecological system you want to protect, develop some management objectives based on those requirements and then determine what the management implementation requirements might be for buffers, and this applies also to the main focus of the management plan for that feature itself. Also, you need to identify the proposed land use is that you are buffering the system from, to determine what potential development impacts might be and come up with some sort of mitigation measures that you can combine with those requirements to come up with a suitable buffer for that particular scenario. The way we do this is in discrete management units, because for any large development scenario, you may have a mix of proposed land uses adjacent to a mix of ecological features, and the juxtaposition of those two different bodies is what you have to look at for determining a buffer. And, then that buffer comes into the larger environmental management plan for a particular area.

So, this is the type of thing that I think we should be working towards, as opposed to providing standards that really can't be applied to every scenario. I think it is the sensibility of that process that provides us with the opportunity to avoid unnecessary OMB hearings. It also provides credibility at the Board to provide you with some sort of guideline for justifying your buffers, but I think in terms of avoiding that unnecessary step, this type of a credible process of municipal level or provincial level will provide us with ways of avoiding disputes and negotiating some sort of acceptable buffers that both parties, municipalities, preservation groups and developers can live with. Thank you.

Jane Bowles: I agree very much with what Gary said at the beginning, that it is problem of complex issues in setting standard boundaries at a set distance. There are definite problems with that. It should be a case to case consideration for each circumstance, but, the problem at the end, was a nice flow chart and a nice model that says that yes, this is the management unit. That's usually where the disagreement starts, and that still ends up being the municipality's ecologists against the developer's ecologists, and who is right and where the boundary should be drawn, and who writes the impact statement, and whether all the impacts are really considered, because these problems are not simple problems. There is still a big gap in the implementation of how this is done. There are a lot of mistakes being made, and, as somebody said earlier, this makes of what's been done up to date a howling failure.

Jack Imhof: I have to admit that I have a tendency, like Jane, to agree quite a bit with what Gary said at the beginning. You'll probably hear me voicing a lot of his similar comments in the next few minutes. Again, the biggest problem with all these things, and I do not have solutions either yet, is the actual implementation on the ground of all these wonderful ideas that we are all discussing here. But I will make a slight disagreement with Jane that I don't mind making horrible mistakes as long as I learn from them and adjust myself and try to do something better the next time. I think that's been the challenge of all municipalities, and this is why it's really wonderful to see everybody here. Let's learn from each other's mistakes. I think we learn a lot faster than with a few occasional success stories. So let's learn from our mistakes and see that we don't repeat them in every municipality each year over the next five or six years. I think that mistakes are okay, and my wish is that we should be documenting better how we are approaching this, and how we are trying to implement it, and we should be sharing that information. As an example, for storm water management, the best management practice is there is an organization called SWAMP (Storm Water Assessment Management Program) which is more or less funded partly by government and partly by NGO's and the industry which basically monitors new ideas on storm water management and reports back to everybody every couple of years and provides documentation of what they have learned from these sort of things. Maybe for buffers, we should develop that process as well.

we should be documenting better how we are approaching this, and how we are trying to implement it, and we should be sharing that information

I suppose I have to have a definition of buffer. First of all, I'll tell you where I'm coming from right away, most of the focus of my career has been looking very generally at forms and functions of watersheds, especially to the lakes and rivers extending to the land adjacent to them sometimes called riparian systems. One of the things I'll be talking about will apply more so to a very broad topic that is within the valley itself and the river. I'll leave the constructs for an upland habitat and the environment to people like Jane, and Angus Norman and others who spend much more of their time solving those difficult questions.

When I think of buffers, first of all, one has to realize that buffers are a human instrument. It is not an ecological feature; it is a human instrument by which we separate a certain human use from some recognized or identified natural feature that we wish to protect. In fact, that's how we usually apply buffers. These things can be placed in a way that they provide some form of function to protect those special natural features and also the ultimate objective is that they will ensure these features persist in time. The difficulty with all of this is trying to understand the pathways by which degradative processes occur and how they affect critical natural features and then ensuring that you have designed your buffer to capture those pathways and modify processes.

buffers are a human instrument. It is not an ecological feature

I guess my one statement over Provincial standards is going to come right now, and it has been voiced by others already. My approach to the

if we rely on minimum standards, we will be left with a minimum environment

program, what I call contextual planning, contextual from the standpoint of truly understanding how these systems function. Some feel that you can make understandable decisions based upon the potential effect the change in use on that landscape. So, my comment is that if we rely on minimum standards, we will be left with a minimum environment. We have to go beyond the concept of standard. That's there to provide a certain minimum requirement, but that may not be what society wants. If you, as a community, want something much more, then you are going to have to move well beyond that, which means very difficult and complex political process, which everyone is quite well aware of.

Just because you've got the features delineated doesn't mean you understand how they function and what is driving and maintaining that system

So, again, planning from a standpoint of the environment has to be contextual. We have to understand the system we are trying to maintain. Just getting back to the old thing that ecologists talk about-composition, structure, and function. Just because you've got the features delineated doesn't mean you understand how they function and what is driving and maintaining that system. If you don't understand what is driving and maintaining that system how can you look after it. So, at some point, you have to understand some level of the biophysical interactions, chemical interactions which provide, at some level, the understanding of fundamental cause and effect relationships. Now this gets back to the old idea of fundamental ecological theory that everything is connected to everything else, which everybody thinks, "Oh my God, that means that we will be in planning and studying forever", but one comment that should be made is that not everything is incredibly important.

usually only half a dozen drivers that are really effect or maintain that system at some state

There are a lot of drivers; maybe a few drivers in the aid of environmental systems and everything else are secondary loops. They are still important and modify the system, but is usually only half a dozen drivers that are really effect or maintain that system at some state, so we need to sort that out as well. The reason we need to sort out the contextual information is that this is the type of information that we need to plug into our traditional process. It doesn't usurp our traditional process on a political boundary level, but provides context. If you are in a municipality that derives water supply, for example from a recharge area outside of its political boundaries then we cannot manage our water supply if we only worked within the political boundaries. We have to understand where it comes from so that we can work with the municipality in the up slope to ensure the preservation of our resource. This would be the same for wetland feature or whatever else you have. You have to know where the water is coming from that sustains that system and the nutrients and energy.

The other comment that people said, well what's that persistent view that land classification what have you, it all depends on the type of question you are asking and the type of environment that you are into so that you're into management of a large ungulates on a landscape, big things like moose,

then you probably will be looking at managing the forest on a very broad landscape. Using the Ecological Land Classification System. If you are worried about fish and rivers, then you use watershed as your analytical tool, because watershed better defines where the critical environment for that animal, which is water, comes from. So using water as an example, we look at higher planning on a very coarse or a very fine scale. Watershed analysis would feed into, say, a regional plan. The watershed regional plan would feed into the official planning process, the valley segment or channel of the riparian zone would lead into a secondary plan and with site analysis would then feed into your plan of subdivision. Each one gives you more and more detailed information as a guide and they often complement one another. That is just an example within the catchment. Again, this information is necessary and goes back to what Gary was saying: this provides you with the understanding of how my activities are going to affect the features of the society and local areas that society decides are important. In that situation, then, we create buffers on certain landscapes to ensure that the pathways that have a negative effect on the system are modified or captured and that the process we want to protect, ensure the protection of the given function. Thank you.

Each one gives you more and more detailed information as a guide and they often complement one another.

JaneBowles: I agree with what Jack said, it's a complicated process and there are things to be considered, that can be considered, that are important and other things have to fall into that, kind of less important, but you have to take less notice of them category, because otherwise it gets too complicated and you just have to throw up your hands and walk away, which we can't afford to do.

it gets too complicated and you just have to throw up your hands and walk away, which we can't afford to do.

Gary: I hate to keep on this track of agreeing on points. I'll try and find something. But I think some of what Jack has said supports the notion of determining buffers on a site-specific basis and that is the part of the argument-we have to understand the systems that we are buffering in order to provide an appropriate buffer in any particular scenario. Now, I think, certainly, when we're dealing with the different contexts of planning from sub-watershed right down to draft plans, there should be a refinement as Jack says, but I think some of that needs some sort of a process that we can all live with. I think there needs to be a buy-in on a process. I agree with Jane to a certain extent-that pretty flow charts don't do it. What we need is a buy-in to that process to determine how buffers get dealt with on a site-specific basis. I think one of the points that I'd like to make in terms of some of the student input here is that one of the things that is really lacking, in my opinion, is a solid research base to provide us with scientific knowledge for coming up with appropriate buffers. We've done a great deal of literature search on buffers, and there seems to be a lot in Jack's field, but not as much in other fields, and there is a real need for basic research on development-related impacts and different requirements for buffers, for species and for eco systems, different communities, buffer needs at different levels. No matter how credible the process is, we need sufficient scientific knowledge on which to base decisions within that process.

there is a real need for basic research on development-related impacts and different requirements for buffers, for species and for eco systems, different communities, buffer needs at different levels

*a buffer is an interspace
between two adjacent
land use regions*

Jane: Gary has more or less summed up what I was going to say. I'll start off, again, by defining what a buffer is. It's really an interspace between two adjacent land use regions. It may be wide or narrow depending on the circumstances, and we know quite a lot. We need information about what function the buffer has. We know quite a lot about what edge effects are and this is just some of the edge effect that you get on a natural area. Some things that you have to consider, and all of the impacts and many others, have various distances over which they operate and, as Gary said, there is quite a lot of literature about this, but the literature doesn't always conform to itself and it depends on what you are studying. A lot of the studies aren't particularly well done. So we have a range of edge effects which could be interpreted as how wide a buffer should be. It varies between 600 metres and about 5 or 10 or 15. So this is a problem. We have some information, but we don't have sufficient information.

*specific habitat that you
are trying to protect, what
the adjacent land uses
are, and also what the
existing edge or existing
buffer is like*

There are also other things to consider, and that is things like the aspect and the exposure, so these are site-specific. The specific habitat that you are trying to protect, what the adjacent land uses are, and also what the existing edge or existing buffer is like. If you look at this type you know the type of buffer is very important, as well as how long it's been established, the age of it, how well developed it is, whether it's in an expanding state or static state, whether it has a hard or a soft edge, whether it is a wide edge or a narrow one. All these things have to be considered.

*Habitats get fragmented
so entirely new edges get
created with entirely new
impacts*

Now the important thing, and I think it is sort of on the minds of all the people here, it's not what the established buffer is, because we have a number of remnant woodlots in Ontario that have been established for several to many decades and these have edges developed on them and they have, to a certain extent, a buffer. What the problem is, is the land use change that occurs with urban development buffers because you get the buffers being shaved off. You get boundaries drawn around where habitat ends and that's very much the case of how the ecologist would see the habitat. Bits of woodlot remain in upland, talking about terrestrial buffers not just riparian buffers. Habitats get fragmented so entirely new edges get created with entirely new impacts.

*backyards come to the
edges of the woodlot then
people expropriate a few
more metres, several to
many, for compost heaps
and wood piles, lawns and
that kind of thing*

The other difference, that is completely unstudied, is what the changes in the adjacent land use is from, say, an agricultural to an urban development. There is limited literature so far in looking at these impacts of urban development land use next to natural areas, and what literature there is suggests these impacts are nearly always detrimental. So what we have here is a change in the impact and humans in their activities, and the things that accompany humans-and I'm talking about pets and things-tend to be very aggressive in their impact on the edge. So, these impacts tend to be much more extensive than the impacts in agricultural areas. I'm talking about things like recreation, people getting in and cutting down trees for firewood. Encroachment, which Doris talks about, around the Mill Pond in Dorchester where the backyards come to the edges of the woodlot then people expropriate a few more metres, several to many, for compost heaps and wood piles, lawns and that kind of thing. Pets, garbage, pets get in and add to the degradation problem. So, it seems to me that where we should

be having bigger and better and more rigorous buffers for around woodlots or natural areas in urban settings, we are actually doing away with them and giving in to the minimum. I have never yet in my wildest hopes or dreams seen anything where the Provincial Policy Statements of 50 metres for a woodlot or 120 metres for a wetland which, as a possible zone of interest, has never been achieved or established or set. This hasn't happened. Usually, you are lucky if you get a fence outside the edges of the woodlot . That, to me, is problem. We need bigger buffers and we're creating smaller ones.

*We need bigger buffers
and we're creating
smaller ones.*

Gary: I am going to disagree with a little bit of that and not simply for argument's sake. I think, certainly, some of the fundamental stuff that Jane talked about, I agree with, but some of the issues related to adjacent land uses and impacts resulting from some of the, I guess, residential types of land uses that Jane talked about cannot always be dealt with within a buffer, and I think that although this is a discussion on buffers, I think we have to look at buffers within the context of an overall environmental management plan, some of which involves public education, and some of which involves buffers, some of which involves management of the ecological feature and function that we are trying to protect. Certainly, providing some outrageous distance would prevent land owners from walking that distance and depositing compost in a natural area, but I think an effective education program and public participation program, woodlot stewardship programs can do a lot more to that end than providing some distance within the buffer that may or may not work. So, in that sense, I don't think buffers provide all the solutions to some of the impacts coming from particular land use.

*an effective education
program and public
participation program,
woodlot stewardship
programs can do a lot
more to that end than
providing some distance
within the buffer that may
or may not work*

Jack: I hate to agree with Gary, because he's a consultant he told me. But I will agree with Jane that I have seen where we've placed buffers and then people have more or less trashed them. There is no doubt that that can occur, but I will agree with Gary that it is an educational system, and people have to realize those buffers are there for their benefit, not just for the environment it's trying to protect. I can think of Idlewood subdivision up in Chickapee in Kitchener that John Plank designed quite a few years ago, in which he spent probably more time working with the people who bought the houses in the subdivision to explain to them why it was important than the actual time being spent in designing the system, which works very, very well. But he felt, and I agree, that people have to take ownership of their local environment and given the fact that there are many fewer of us left in Provincial government and Conservation Authorities, and so on, people that live adjacent to these features have to take ownership. If they don't too bad. If they lose the environment, it's too bad. So, our role as provincial agencies these days is to facilitate, to help provide the community with the information and tools, but ultimately they have to take ownership. This gets back to the educational aspect.

*people have to take
ownership of their local
environment*

Bill: I'd like to open the floor to questions from the audience, and, because it's a large room, it may be necessary to go to the microphone, but at least project your voice as best you can, and you may direct it to the entire panel, or to a specific person.

Question from floor I guess for the sake of discussion purposes, I want to take a little bit of issue with the three notable members. I think part of the problem we're finding with planning is that planning is based on standards, setbacks—side yard setbacks, front yard setbacks, road quarter widths, and I think the whole planning process understands those and while I agree with you it's not the be all and end all, I think we need to have bigger minimum standards, and then from there work on more of these issues of the sub-watershed plans and the different things, because, if we don't what we seem to be getting into is more and more money for consultants and for lawyers who argue it out, and it's the best consultant or lawyer at the Ontario Municipal Board or the person with the most influence and contacts with the Municipal Council and the most money to spend on the issue who ends up winning. So, I guess I'd like you to address that, but the planning system really works on a lot of things like standard setbacks and I think we need to develop, perhaps on a watershed or sub-watershed basis, but some minimum standards and then from there go to the ecological criteria and the feature and function issues. I hope you can comment on that. One other thing that really bothers me is that we're working from a very fragmented and damaged landscape and I think ecological potential is something that gets totally lost. Areas where we have good fertile soils with a good moisture content which are often near wetlands or near existing forests or existing valleys are areas that have the best potential to be restored to protect feature and function, and I think we are totally losing that. So, to all the panel, if you could reply to those two things-how the planning system works on standards and what we're doing in terms of potential.

Areas where we have good fertile soils with a good moisture content which are often near wetlands or near existing forests or existing valleys are areas that have the best potential to be restored to protect feature and function, and I think we are totally losing that

Gary: I don't see anything wrong with additional money for consultants. Certainly I can understand your position, particularly when it comes to having some standards that can be applied. The danger I see in having standards set out that can be applied by just about anyone in any particular scenario is that the appropriate work to determine appropriate buffers for a particular scenario doesn't get done. And when financial constraints exist for municipalities, and this is something I've taken issue with on the Natural Heritage Reference Manual, is what happens when budgets get cut—this is nothing against planners or municipal planning bodies—is that that manual and the numbers that are in the manual get applied to plans without appropriate thought being given, and without the expertise being applied to those different scenarios. I think that minimum standards or setbacks work for things such as building setbacks for geotechnical purposes, but because of the complexity of ecological systems, I think you do have to

danger in minimum standards is that the appropriate work to determine appropriate buffers for a particular scenario doesn't get done

look at it on a site-specific basis and I think a credible process is the way to go. There are too many different combinations and permutations of adjacent land uses and ecological systems to come up with a set standard, even a minimum standard. I think the danger that exists with minimum standards is that that is what gets applied.

Jane: I'm almost agreeing with Gary again, a bit. If there is going to be more money around, I'd like some more to be for the municipalities for reviewing the plans that consultants come up with because that's one of the big problems, is that plans, environmental impact statements and so on get made by a consultant and, unless the municipality has expertise to see the flaws in such a plan, if any, then they tend to get rubber stamped, and that's dangerous. With minimum standards, again, they can be a weapon because people tend to go for the minimum standard and say, "well you know the minimum standard is x meters - we'll go for that", again, as Gary said, without any thought about what's really needed, and sometimes the minimum may not be needed and sometimes a lot more than the minimum may be needed. So that's another problem. One of the concepts of buffers in core areas in protecting natural areas is a sort of idea developed by Norton as much as anybody. You have a core area and then around it you establish a zone of protection to protect that minimum core. The problem is, that just simply doesn't work in a landscape that is as fragmented as many of those we have in Ontario. We don't have any core interior forest. We're protecting little remnants--the minimum--and it's important to maintain those and give those as much protection as we can, and that may include extending the boundaries of them and connecting them up and linking them to adjacent areas, and so on, which brings the whole buffer issue back into a sort of natural heritage system issue rather than just protecting the core.

more money for the municipalities for reviewing the plans that consultants come up with

extending the boundaries of them and connecting them up and linking them to adjacent areas, and so on, which brings the whole buffer issue back into a sort of natural heritage system issue rather than just protecting the core

Jack: Not that I want to see more money to consultants, I will say that I agree with Jane and Gary that, well first of all, one thing, I guess, we have to live with are minimum standards that are in our various policy documents and they are being used. I would much prefer, as you say, to have them used as a start of the process rather than the endpoint, but as both Gary and Jane have mentioned, we see that the fairly wealthy municipalities can afford to try to do much better. The rural and poorer municipalities, especially with the downloading of responsibilities, but again, with very little money to increase their staff to contend with that download of responsibility, they basically just pull out the book and say "what's the minimum", and they apply it. To a large degree, a minimum standards concept was founded in engineering which ensured that certain standards were met for certain types of physical interactions or principles. The difficulty is, when you're dealing with environmental systems where there are physical, chemical and biological interactions occurring, those standards are a shot in the dark, and that's where I think I'd rather have a credible process. Again, it doesn't have to be onerous and extremely extensive, but

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If we can classify those, what type of functions do they have, then that shortens the planning process by understanding that certain classes of systems will operate in certain ways. That could maybe help us to get beyond the minimum standards and to more of the functional end.

it has to be fairly specific, and one of the other things we've been trying to sort out is whether or not could we classify landscapes. We have done ELC. Can we classify it on a biophysical basis within watersheds. As well, there are certain segments of channel form and structure that persist because of certain aspects of slope and geology. If we can classify those, what type of functions do they have, then that shortens the planning process by understanding that certain classes of systems will operate in certain ways. That could maybe help us to get beyond the minimum standards and to more of the functional end. Yes, we have to live with the fact that we do have standards and we are applying them the best way possible. Our planning process is probably a lot better than one anywhere else despite what people think. It is probably one of the best ones that I have seen in North America. But we do have to go much beyond that. I remember talking to one of my colleagues in Guelph, John Fitzgibbon, about watershed plans and my angst about whether or not Guelph was going to accept the Hanlon watershed study. His comment was, who cares. He said, "It's a public document it's the best thing going. It's the best information that we possibly have on how the system functions. It's in the public domain."

Question from floor The broader functions that may be mentioned in an ecological assessment. Additionally, I think that independent municipalities and how much money they have to spend ___ without minimum standards to adhere to the minimum standards. In forcing them _____ I believe the rationale for nothing over and over again, so I don't know if I totally agree that by setting minimum standards you are getting _____. I agree that ecological assessments have to be undertaken to determine appropriate buffers, but I think there is real rationale for minimum standards in the technically broader regional functions, and you can also allow some municipalities to have that callback against the _____. So, to get back to the whole implementation aspect, and because minimum standards and broader policies are no longer warm and fuzzy, you actually have some rules you can fall back on when it comes to implementation.

site-specific guidelines or ranges for buffers within the watershed or sub-watershed

Gary: I'll say something quickly. I think that when you are talking about, and I do agree with you in part, and that is when you are looking at an area site-specifically, scale is a big issue and there is no reason why you can't to some extent come up with site-specific guidelines or ranges for buffers within the watershed or sub-watershed. So, I think that comes into play within the context of sub-watershed and watershed planning study, and that really should be geared towards that sub-watershed and the features and functions within that sub-watershed. What, I guess, I would object to is having a Provincial minimum standard applied to watersheds because I think your watershed is going to be very different than a watershed in North Bay, versus a watershed in the Niagara region, so I think to that degree there is no reason what you can't come up with some sort of ranges for protection and requirements of implementing buffers within dif-

ferent areas without providing one number that absolutely gets applied, so you can, quite simply, mandate an EIS to develop buffers and a process through which that gets determined, but also provide some sort of a management zone within which those EIS's have to be done and that's part of what comes through in the Provincial Policy Statement. The concept of an adjacent lands is the areas within which these types of studies have to determine various different environmental management requirements. So, in part, I agree with you, but I wouldn't want to put a hard and fast number on the entire watershed, but certainly a requirement for it. I wouldn't want that on a provincial level.

adjacent lands is the areas within which these types of studies have to determine various different environmental management requirements

Question from floor My name is Max Shop, I'm a consultant ecologist. I'd like to say I don't know if throwing more money at the ecologists is going to resolve the problem. Sorry about that Gary. I would agree with most of what the panel said, but I think that what didn't come up, perhaps, is the real gap between the process and the implementation, and I don't think you really addressed the implementation part of it. Jane, I think in one of your responses that you brought out a key thing. What you end up with when you go through that nice logical process is just the developers' ecologists arguing with the municipalities' ecologists and I think that's mostly a reflection of the fact that there are still a lot of unknowns in terms of how big buffers should be and what the real impacts are, and possibly some degree a reflection of who we work for. My partner actually said, to get an argument you just have to put two ecologists in the room, but maybe its just something inherent in our discipline. But, in any case, to get to the implementation level, it seems that the difference between the two points of view are going to get resolved either by planners working with developers and coming to some compromise and ecologists are often cut out of that decision making, or it goes to the OMB, in which case the decisions are often made by the people who least understand the technical issues. I think those two things are to be avoided. I guess my question to panel is, although a process such as the one Gary outlined is probably the best way to go academically, I think it really only works if we know a little bit more about the impacts we are dealing with. Do you think a set of minimum standards is an interim while we get our act together and try to figure out exactly how wide buffers should be and what impacts are, at which point maybe we can go to just using some kind of a process to establish these.

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Jack: I was just thinking that I remember when we were invited by Municipal Affairs and Housing to prepare the Provincial Policy Statement and our criteria to it, we said that we would like them to be based on good science and good information, and the answer back from them was "we've got six months, give us some standards". Our comment was "that's great can you help us with a little bit of cash flow in the longer term so that we can collect the data to refine those numbers", and the answer was, "what's

your problem”. So, ideally, and this gets back to it and you’re right, at some point you have to make some decisions to start at some process. I would much rather see minimum standards set through a watershed-sub-watershed process at least to get some data to better refine things rather than that the standard that is applied across the Province. I also agree with that you implementation is the key. The elegance is in the details, and I see most of our fundamental big issue planning decisions made at the OMB. You are right, by the people who have the least amount of knowledge and understanding of the situation. So, the challenge is how we can try to get the win-win. I cannot tell people what the answer is, all I can tell them is when it comes to how wide a buffer should be is what functions they are going to gain and lose as they reduce or expand that buffer, and it’s up to them to decide. It is up to me to provide that information to the OMB and then they can make that decision. That is the only process I can see. But, one thing that we have found is if you can get the developers and their consultants on board at the very beginning of the process of trying to sort this out, usually you end up with a better product because people can see the information together, there is nothing being hidden, and usually you can work together towards this. We saw this happen through our sub-watershed planning and further implementation with the City of Waterloo. They were asked to do an Elora Creek watershed study and there were still points of dissension here and there, but, in the main, most of the major things we wanted done with buffers were achieved, and that was in conjunction with the developers and their consultants.

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Question from floor I am the Chair of the City of Walsn EAC committee and I have a couple of questions. Do you believe that the best place to use the process that we are hearing today would be at the EIR stage and to make a request of the consultant and developer half way. Is there something besides the normal checklist for an EIR that we should be adding into the process to ensure buffer requirements are understood.

Jane: I think what Jack just said is really important, that it’s essential to have some ground rules set out whether there are minimum standards, which I don’t particularly agree with, or whether there are ranges of rules and sets of circumstances under which things should apply, because once things get to the stage of actually getting on the ground, and doing a survey, usually someone has a grand vision of a subdivision or something in their mind and is much harder to change that than to have them come in at the beginning and know which areas they can and cannot develop in. When this has been working for the wetland evaluation. Now everybody knows that they are not going to be able to develop in wetlands so they don’t even try any more and so it’s getting the whole mind set, the whole attitude of what needs to be taken care of at a much more fundamental stage than trying to fight all these battles, and go to the OMB and have all those decisions made there.

Question from floor This one is for Gary. I think that most people who have experience with buffers is analogous to a head gasket. They are very thin and they are subject to intense heat and they don't work most of the time. I think part of the solution, this is more of a comment again to Gary. This is short list: there are five types of infrastructure in communities - we're talking urban areas so there has got to be some contextual paradigm within urban areas for the most part. We have a recreational aesthetic infrastructure. Every community needs that. We have ecological infrastructure and natural heritage system, and its coming into its own. We have a utility infrastructure, poles, wires, water pipes, and sewer lines. We have living or sedentary infrastructures where we, our species lives. Then we have our entrepreneurial infrastructure, where we busy ourselves during the other part of the day when we're not at home. It strikes me that a lot of the guidelines still needs to be reserved to elevating ecological infrastructure to the same level as the rest, because if that happens, all these other infrastructures are well served by setbacks and buffers because people don't tolerate minimum separation distances that have people living on top of each other. Are we getting there, or are we going to continue to have natural heritage systems as the residue of our settlement history on the landscape?

five types of infrastructure

*recreational
ecological
utility
living
entrepreneurial*

*elevating ecological
infrastructure to the same
level as the rest*

Gary: Certainly I wouldn't be justified in saying we are there, but I would tend to agree with you that we have to elevate the importance of ecological systems and need to provide natural heritage networks that are somewhat approaching sustainability or that should be the goal. I think we're getting there; we're on the road to getting there. Don't ask me how far along that road we are, because I don't think that anyone can say, but I think we are on the way to getting there. I think things like the implementation of ESA criteria in official plans, the requirements for EIS's for various different development proposals are all mechanisms by which we get there. Now each of those have their implementation aches and pains, but really, in order to provide something that will maximize the natural heritage system, we have to go through that process, because to apply something that we know nothing about in terms of stopping something down, we can't justify, we don't know how it's going to work. It doesn't necessarily provide us with any additional protection, it may be underachieving what we want, so I think that we have to recognize the importance and deal with it accordingly, but deal with it through some sort of attempt to understand the system and how that system has impacts placed upon it.

*sustainable natural
heritage networks*

Jack: Just one quick point. I felt the earth shudder under my feet a few weeks ago when I got an e-mail with a paper that was presented at an engineering conference on water by a Municipal Engineer who was making an argument that rivers, streams and riparian zones flowing through an urban area should be managed as assets of the community, just as the infrastructure for pipes should be, and that it should be managed in a way that

*rivers, streams and
riparian zones flowing
through an urban area
should be managed as
assets of the community*

maintains environmental health, because it provides service to the community. I have the paper and I'll be happy to distribute it to anybody who wants it. It's by Kevin Cober and Mary Trudeau from Ottawa Carleton. I think that that is a refreshing thought to begin the concept of trying to figure out how that infrastructure should be better managed and viewed by the community.

*enforceable minimum
standards for the EIS
process*

Question from floor I am a consultant. I just want to say I really do think we do need minimum standards, but the minimum standards we need are those that apply to EIS's because, my experience is that not only are they all varying a lot, but also, the people who interpret them have huge degrees of experience and abilities to do that and that's where the minimum standards are required. I know we have the guidelines, but we need enforceable minimum standards for the EIS process, otherwise the whole thing won't work. Your flow chart won't work unless we all do the same level. Just one example of that is just defining what the natural area is. If you have a big wetland and adjacent upland old field, almost all consultants will draw a line around the wetland and then buffer it, whereas, they don't even know what the resources are, for instance, breeding water fowl that are in that adjacent upland field. Is that part of the feature, or is that part of the booklet? And that's where we need those solid guidelines and enforceable minimum standards. That was a question.

no standards for an EIS

Jane: Your voice is supposed to go up at the end. I really agree with that. I think a lot of the problem that we have with establishing where the boundaries are, and where the limits of development are, and where the buffers are, is because there are no standards for an EIS. Some of them are really bad that come out and some of them are really good. There are a lot of things in between. There are very few people in municipalities who are qualified to make that judgment. There are a lot of decisions being made based on a nice glossy report with colour maps and photos even if what's in it is complete garbage. I do agree with that.

*scoping meetings at the
beginning of an EIS
process are extremely
helpful*

Gary: I just wanted to say one thing. All our reports are good. I think, in terms of a credible process, certainly you need some standards for an EIS. The difficulty comes into play when you are dealing with different systems, different development scenarios, different conditions under which you are trying to establish minimum requirements even for an EIS. One of the things that I found very helpful, and maybe Bonnie at the City of London could hopefully support me on this, is that scoping meetings at the beginning of an EIS process are extremely helpful. What a scoping meeting does is it helps you to define requirements for an EIS, and it is focused towards the particular development scenario, if that's the case, or for the particular feature and draws out important issues that need to be

dealt with during the process of conducting an EIS. Then you get buy-in from both parties, the municipality and its EEPAC members as well as the developer and the developer's consultant. Then there is a clear understanding as to what needs to be done to determine appropriate management practices, protection measures, whatever. I think that's one of the steps in a process that is critical when you are conducting any sort of environmental impact study. Within that is the determination of buffers. I think that that's one way of developing, again, on a site-specific basis, some minimum requirements for how these studies get done. It eliminates the degree to which you have disagreement at the end. There is less disagreement on exactly what it was that was required of the study and more focused on the findings of the study.

*minimum requirements
for how these
studies get done*

Question from floor: Just a brief comment on the discussion of _____. I read a lot and I am focused on that about an hour ago when we talked about _____ shortcomings and a lot of time is spent on the front end of an area. I think there would be a lot of gain in findings communities and so on and so forth. I find that as a reviewer of municipalities, that I'm really disappointed in what comes out the _____. There's lots we can build upon, but we don't seem to get to the end of the process and that is partly the community's responsibility to make sure that the consultants come back with visual presentation of management practice and guidelines.

Bill: Thank you, I think that kind of discussion will take place in the workshops this afternoon on implementation. I'd like to thank those who participated in this panel discussion. I'd like to especially thank our three panelists who took the time to prepare for this session. They have very busy schedules, and if you need to take some time to relax, and I'd like to encourage them to take a walk in the woods. Take a walk in Carolinian Canada and to go out there and get to relax, and to do what Steven Covey says and "sharpen their saw". But I hope they don't bring their saw with them when they go.

Afternoon Workshops

Riparian

Angus Norman	<i>Lessons Learned</i>
Barb Rosser	<i>Context and Approaches to Planning for Buffer Areas</i>
Tracey Ryan	<i>What Rural Landowners Telling Us</i>

Wodlands

Jane Bowles	<i>Take it to the limit</i>
Muriel Andreae	<i>Protecting the back forty</i>
Michelle Kanter	<i>The Ring Around the ESA and Other Suburban Myths</i>

Implementation

Bonnie Bergsma	<i>Drawing the Line</i>
Linda Harvey	<i>Criteria for Effectiveness</i>
Hal Schraeder	<i>Community Assertiveness</i>

Plenary Session

Bill: The three workshops went on simultaneously. It was not possible for two-thirds of you to attend one of the workshops, so, in order to get as much benefit out of the day as possible, I arranged to have a recorder for each session to take notes. That person is going to come up next and make a little synopsis of what they heard. The other reason for doing this, is that everybody can get a full picture, or a sense of what has gone on today, and to come closer to the language that we need to identify what a buffer is, can we define a buffer, and characterize the functions that we're trying to protect? And also, what are some ideas that people have discussed throughout the day about how to implement an effective buffer policy?

The first ones that I'd like to hear from are the Riparian Workshops. The first one was Angus Norman, who spoke. He was followed by Barb Rosser and then by Tracey Ryan. So, in order, I'd like Steve to come forward and Mike Leonard, and Rebecca, and then one after the other do your sessions and that will hold the Riparian workshops together.

First, I'd like to defer any questions to Angus Norman, who is the person who did the presentation. My name is Steve Couture, I work with the City of London in the Planning Policy.

With regards to the "Riparian: Lessons Learned". One of the key messages, in fact, probably the key message is, we have a long way to go with regards to knowledge. Key take home points: Angus has done a literature review. He is publishing something by way of a professional publication that is a limited consolidation of the information, but slowly and surely we are developing the base of knowledge with regards to riparian and wetland habitats and buffer areas. We are definitely better off in some areas than others. We have a better idea of what we need to look for. We know that buffer distances are variable due to the large number and huge number of factors that have to be studied, and site specific analysis makes sense, but it is a very onerous and possibly expensive thing to do on a regular basis. So Dr. Epp, my apologies, but truthfully very expensive, very onerous to take on.

Suggestions for Actions: How do we go about creating buffers to protect water quality and water quantity? We do need more funding, either through government organizations, private development or municipal involvement to establish the scientific base on these ecological functions and their interactions.

With regards to the recommendations: To the plenary, integration of this knowledge is very important, which will provide us with a better understanding of the hydrological regime, a water budget that will not just focus on the site, but on the area involved. End of pipe solutions, with regards to a comment, a question, that came forward from one gentleman. The end of pipe solution has been, for many many years, the simplest, most cost effective solution. It is not necessarily the best one, as we are all finding out. The language that is used to communicate to the participants, the stakeholders and so forth, has to be simple language. For those who are technically oriented, experts and so forth, you have to be very simple in terms of the jargon that you use when you are communicating your ideas. It is extremely useful to demonstrate, with example sites, real examples of people who are involved in decision-making and, finally, they need to be proactive in identifying the natural heritage system. I think the primary example here is, you have to have your natural heritage polices in place, through your planning process. The Provincial Polices are there, the municipal polices, through your official plan can identify the natural heritage of a system. However, without that, you are really facing an uphill battle.

Riparian: Lessons Learned

- Angus Norman

*we have a long way to go
with regards to knowledge*

*see pages 62-69 for an
excerpt from Angus
Norman's "Vegetative
Buffer Strips and
Wetlands"*

*more funding, either
through government
organizations, private
development or municipal
involvement to establish
the scientific base on
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and their interactions*

*to be very simple in terms
of the jargon that you use
when you are
communicating your ideas*

**Riparian:
Context and
Approaches to
Planning for
Buffer Areas**

- Barbara Rosser

*other legislative
mechanisms*

*stewardship from the
development industry*

My name is Mike Leonard. Barb Rosser spoke to the group on that exciting piece of writing called Provincial Policy Statement 2.3. (Riparian: Context and Approaches to Planning for Buffer Areas.) I know I felt five years younger the moment I walked into her conversation because she was talking about the difference between have regard for as opposed as to be consistent with. This took me back to 1995. Once stepping back through the Planning Act framework for eventually establishing buffers, riparian and otherwise, in Ontario, Barb dealt with some of the other legislative mechanisms. I know that she touched lightly on the Conservation Authority's Act, and I am certain that that has no connection with the fact that she comes from Ailsa Craig, where, this summer they are recreating the historic event "Stock Car Racing on the Local Flood Plain". So, if there are any discrepancies there, you can actually speak to her.

I think one of the more interesting aspects that Barb got into was the fact that, in looking at preservation of urban woodlands, (this is where I got confused because I thought it was a buffers conference only, but anyway), she got into some of the precedents in various communities in Ontario, and especially an interesting one up in Vaughn where, depending on the perspective of people in the room, either there was a great voluntary sense of stewardship from the development industry, or somebody who, I think, was a bit more cynical, mentioned that perhaps it was a limited form of extortion under the provisions to the Development Charges Act. I should say at this point, I think the reason Vaughn probably is in the forefront is because, as a development services manager, they had the good foresight many years ago to hire a landscape architect from the University of Toronto.

I would close my presentation and comments on Barb's presentation in terms of saying that I think there were many more questions opened up. I think there were probably topics for three or four more days like this contained. And one of the more important ones, in closing, probably would be recounting Middlesex County's experience. I don't see Steve Evans here in the audience, so I'll be quite blunt and frank. But, what happens when at the front end of an upper tier official plan you devote a lot of resources to characterizing the natural environment, but what happens to Schedule A at the back end of an upper tier plan when you haven't had a chance to develop those strategies in context of the constituency's mindset.

My name is Rebecca Brewer, I'm a grade 11 student from Lucas Secondary School. Please forgive me if I've missed a few key points. I'll try my best. This was the discussion with Tracey Ryan entitled "Riparian: What Rural Landowners are Telling Us". Pretty much the purpose was to learn the needs and concerns of private landowners instead of focussing so much on the others. So, I found that the message was that we want to understand their side and facilitate them instead of them having to bend to our needs and wants. So, some really interesting points - the fact that landowners actually do undertake making buffers on their own. They don't always need someone to come up to them and say, we want you to try having a buffer here, or you have to do this. They actually do so on their own without somebody having to come up to them.

Also, for the watersheds, the minimum buffer is 8 feet. That's not a lot, but we found that you have to take that 8 feet because that 8 feet is better than nothing. Then you can work on that and build from that. At least you have that much. A really interesting thing was that farmers have made buffers mostly just to improve their stream bank stability to avoid erosion, to improve water quality, and improve fish and wildlife habitat and have better drain maintenance. It seems with our discussions before, that the main concern would be the wildlife coming and eating off their crops. This problem is actually a very minor one for the farm landowners. They found that 90% of the farmers had placed buffers for the satisfaction of being a good steward, not because they had to, because they were pressured into it, or for the money. They also found that most farmers involved with buffers were part time farmers, so they had other income and they had more time to try to maintain the buffers.

We found we need to educate landowners. We can't expect them to know everything. There need to be more innovative techniques of incentives for farmers-not necessarily money. Buffers other than natural ones- we can't just expect them to have a buffer that won't benefit them at all. We still need to give them some economic gain since they have lost that land to their crops and everything. So, maybe if it can still give them some economic gains like, maybe, having Christmas trees planted on there so that after the birds migrate they can cut them down and sell them for Christmas trees and then replant, or even just having grass and let it grow and then once the nesting is done you can cut it and feed it to the livestock. So, landowners have to be given options that they can adapt to their situation. You can't give them specifics, because then that is going to frustrate them even more. We need to provide them with examples of buffers so they can see that we are also doing it too-not just expecting them to do it and putting it all the responsibility on them. So, we need realistic expectations from them. We can't expect them to give us so much of their land because that's what most of them making their living off of, so we can't just say, give us all of this. We have to work with the landowners to determine acceptable buffer widths because it will be dependent on how much land they have.

Riparian: What Rural Landowners are Telling Us

- Tracey Ryan

*to learn the needs and
concerns of private
landowner*

*90% of the farmers had
placed buffers for the
satisfaction of being a
good steward*

*more innovative
techniques of incentives
for farmers*

Woodlands: Take It To the Limit

- Jane Bowles

Bill: The next series of workshops were on the Woodlands and Upland corridors theme. Jane Bowles, Muriel Andreae and Michelle Kanter spoke. I'd like to ask Leslie Adams, Jack Lorimer and David Wake in turn to come forward and to give their report on what they heard in the workshops.

My name is Leslie Adams and I sat in on the title of the session was "Woodlands: Take It To the Limit". It was Jane Bowles who was our presenter. It is kind of hard to define what exactly we are trying to get at. We are a little bit all over the place, but the message that I would take away from this is that, in general, we are dealing with fragmented areas when we are talking about buffers and we are not really sure of what the questions are that we are trying to answer right now. Like, edge, buffer-what are we looking at right now?

*identify what values we
are attempting to protect*

Some of the key points, I would say, would be trying to identify what values we are attempting to protect. Also, it would be important to evaluate the difference between how land is currently being used, and, when you are going to have the change, what degree of changes. When the zoning is changed, how different are they pre- and post-land use change? Another thing that came out, that I felt was a key point was, we need to know what services are wanted and needed by the population, and we need to determine if those services are met in the community. One of the examples that we were talking about was partying in the ESAs. Obviously there is a need for that service in the community so it something that should be addressed.

*four uses or four needs
that buffers serve:*

- a filter for land use change
- a conduit for trails around an ESA
- connectivity between two patches of woodlot
- habitat for species diversity

We also looked at the fact that there really are four uses or four needs that buffers serve. The ones that we basically addressed were looking at it from a filter for land use change. That would be one of the services and functions that a buffer may serve. We also touched on its conduit function-where you're looking at it as a ring around an ESA where your trails are being put in or if you are looking at a connectivity between two patches of woodlot. Another area of function could be the habitat for species diversity.

We didn't get into any issues pertaining to that and is a sink or source for natural functions and resources. I guess the thing I would come away with-we really didn't get into any plenary recommendations or ways to move in the future, but some of the things we did get quite more in depth would be looking at the edge and the way the edge is established in relation to how it will be when the land use is changed. We also looked at, if the buffer has to be similar to the area it's protecting. Do you want it to be a continuous area and have buffers as a measure to mitigate land use change? We also talked a bit about thinking about cumulative impact, and we kind of came to an agreement that residential development takes away from the ecological integrity of the area we are looking at.

My name is Muriel Andreae. The session I was facilitating was on Municipal policy and I started by talking about an example from Caradoc Township, West of London, the site where this proposed subdivision, which will result in 16 acres out of a 66 acre woodland being developed. However the woodland was not recognized in the OP or the ZB of the municipality. There is no council or public support for the woodland preservation, so there was no municipal policy in that example. But that was the example that I put on the overhead with the air photos just to start a discussion of what sort of buffer should a significant woodland have.

One of the opinions was that it should be 120 metres. Start right there, 120 metres away from the edge of the trees. Nobody in the room had such a policy in place. Vaughn appeared to have the most detailed policy. Tableland woods are zoned. The zone line is at the point of the trees and one metre more. That becomes public land after negotiation with the developers and the CA's managing the woodlands under an agreement. A subdivision agreement requires a chain link fence on the private property which abuts that significant woodland. Tough negotiating; money is limiting. The best case is that someone had a seven and a half metre strip outside of the drip line. Seven and a half metres being half of the 15 metres that they went into the negotiating room with, basically. But, also interesting to me is that this strip outside of the drip line is to be naturalized, not used as a trail, which is something that we discussed in Strathroy, because the developer could then say, well that's part of our recreational, we should get credit for that as recreation if we put the trail outside of the woodland.

Oakville has criteria to identify the significant woodlands, zoning is to the drip line with an additional buffer on the northwest edge, i.e., the high wind direction, the cold wind direction edge in some cases. In that case, they put the fence on the public property and the public purse is maintaining the fence, because we've had discussions earlier in Jane's session particularly with residential and recreational encroachment into the woodland. Dollars are limiting; they have only been able to acquire about a third of the woodlands. In London, there are new criteria for identifying significant woodlands in lesser sites, shall I say, they are requiring protection of about one third of the canopy of the woodland. Other municipalities felt that survival of isolated trees on private lots was very unlikely. Individual trees don't equal a woodland.

Thinking back about it afterwards, I am getting quite discouraged about discussion of buffers and such a range in the room in terms of where people were on municipal policy for buffers. I felt we really need to get natural heritage areas into the policies. If more municipalities take part in a knowledgeable discussion of what the municipalities will do with their buffers.

Woodlands: Protecting the Back Forty

- Muriel Andreae

*tableland woods are
zoned at the point of the
trees and one metre more*

*7.5 m strip outside of the
drip line is to be
naturalized,
not used as a trail*

Woodlands: Suburban Myths

- Michelle Kanter

- * if it has a tree,
it's an ESA,*
- * if it doesn't have a tree,
it needs mowing,*
- * if I live near it,
it's important*

*there is a need for
municipalities to set a
good example*

My name is David Wake. I attended Michelle Kanter's discussion entitled "Woodlands: The Ring Around the ESA and Other Suburban Myths". Michelle provided a number of very interesting myths that we thought about.

If it has a tree, it's an ESA, if it doesn't have a tree, it needs mowing, or if I live near it it's important. Just to give a sense of the thought stimulating comments that were put forward. I think the kind of messages that we heard is that there is a very strong need to understand the purpose and function of buffers and we need both policy and education. You can't achieve good work on buffers without doing both.

Suggestions for action, for the need to involve the future residents, and maybe that can be done by doing surveys of those already living adjacent to natural areas. There is also a need, certainly from the point of view of municipalities, to set a good example in one area of how these things can work, and then, perhaps, we can achieve more in others.

In terms of recommendations, there is lots of science on ecological values of natural areas; but, we need to learn a lot more about the impacts of the adjacent land uses. We need to involve the communities. We need to consider recreational needs and desires of the people in those communities. If there are to be buffers, we need to encourage appropriate uses within them, and tools to get there would include monitoring and research, ongoing commitment, budget, and, always, stewardship of those in the adjacent properties.

The third series of workshops were on implementation of buffer guidelines. Bonnie Bergsma, Linda Harvey and Hal Schraeder made presentations, and to hear what they presented I would invite Caroline Hart, Maureen Jones and Tunde Otto to come forward to give their reports.

I'm Carolyn Hart, I attended Bonnie Bergsma's presentation on "Drawing the Line". The main message that we learned this afternoon was that ecosystems operate across the landscape and we can't attempt to confine them within lines that are drawn. We understood that we can, however, try to implement an approach whereby we would work towards attempting to find fixed-width, reasonable minimum buffers and determine site specific variable width buffer prescriptions, based on models. However, we agreed that these theoretical concepts are very difficult to argue at the OMB.

Two model approaches were discussed by Bonnie. She gave to us some examples in the City of London whereby the whole patch approach is used. That means, the area under question on the site is looked at as a whole where the different components of that natural area add value to the whole, such as diversity. A buffer is established to protect the whole unit rather than only the individual feature. She also discussed a second approach known as the core approach, whereby the core of the feature is identified for protection. Two buffer zones are established around these cores. Very minimum activity is permitted in the first zone while more activity may be permitted in the second zone. These two approaches are examples of ways buffers can be achieved for natural areas.

One of the other things that was discussed was the goal of buffers and what they are attempting to achieve. We agreed that they are necessary to minimize the impacts on the features and functions and to maximize long term viability of the feature. We also need to achieve a balance between the needs of people and the needs of wildlife through appropriate buffer design. Lastly, we need to acknowledge the natural limits on natural systems and their functions.

Implementation: Drawing the Line

- Bonnie Bergsma

*to find fixed-width,
reasonable, minimum
buffers and determine site
specific variable width
buffer prescriptions,
based on models*

*two models:
the whole patch approach
or
the core approach*

*the goals of buffers are
to minimize the impacts
on the features and
functions and
to maximize long term
viability of the feature*

Implementation: Criteria for Effectiveness

- Linda Harvey

*there is a need for bottom
up approaches rather
than regulation and the
imposition of standards*

*[see pages 53-61 for
Linda's 6 criteria for
effective implementation]*

*how do you measure the
effectiveness of
implementation*

*include costs of
management in
implementation plans*

Hi, I'm Maureen Jones with AquaforBeech. I was at Linda Harvey's session this afternoon and that was one of the implementation ones and we were talking about the criteria for effective implementation of environmental policy by local government. Linda gave a very good presentation with a handout that helped all of us, especially me for taking notes. Some of the key messages that came out of that was that policy implementation is different than effective implementation. So, you can have the policy, but that doesn't necessarily mean it's going to be effective. She indicated that local government arena provides unique challenges and opportunities for implementation and we also talked about how there is a need for bottom up approaches rather than regulation and the imposition of standards. Linda talked about six criteria for effective implementation and I will just run through those briefly.

The first one was that it produces tangible outcomes, both short term and long term, and she acknowledged or recognized the need that long term outcomes require change in behaviour and that you also need to provide the ways and means for implementation. The second criterion is that it needs to recognize goals and objectives. The third one is that it needs to include provisions for performance, measuring, monitoring, and reporting. The fourth criterion was that effective implementation should cultivate co-operation and commitment; and, that is with all of the various parties that are involved and affected. The fifth was that effective implementation must fit within the existing context—that being the physical, the community, organizational and regulatory context. The last criterion for effective implementation is that it engages government and stakeholders in a process of collaboration, conflict and feedback to learn and adapt over time. She felt that conflict was a very useful and informative part of the process because it allows people to identify other factors that need to be considered in implementation.

We didn't really have any specific recommendations, I don't think, that came out of the discussion, but some of the questions that came out of our discussion were, how do you measure the effectiveness of implementation? How do you rebuild or instill trust between various participants? There was some discussion about how trust tends to break down or has broken down between communities and developers and planning departments, and so on. Another question was, how do you deal with conflicting goals and objectives, and how do you involve the local community if one doesn't really exist yet. Somebody was talking about a rural situation where there really isn't a local community that comes out to meetings and so on, so how do you involve that and ensure that those needs or values are representative and you can't rely on special interest groups to necessarily represent them. Some of these suggestions for action, that Linda mentioned, and that came out of our discussion, key things were to use indicators to measure, monitor and report. She identified the need for face to face communication and the need to include costs of management in implementation plans.

Hello, my name is Tunde Otto and I will be speaking about Hal Schraeder's session. The goal was to talk about implementation and community assertiveness. Hal began by putting forward a concept of what might be important for assertiveness, to consider the triple E solution, as he called it. Effective, Efficient and Efficacious. Effective, we can all imagine what that is. Efficient, so does it perform well what you are implementing. Is it low maintenance or high maintenance, how efficient it is. Efficacious, which some of us do and don't know what it is. Efficacious is used in the medical field to determine whether a treatment is effective. It is giving you what you are looking for. We suggested that you could use this, as well, to assess whether what you have implemented is working. It was raised whether what is theory is what is being practiced. Hal suggested that you should consider that you are never making mistakes; but, instead you are gaining experience. So, things are worth trying. He also was questioning and throwing this out to the group, as to whether or not going to look at buffers, specifically, is a form of reductionism in the bigger picture of ecology and ecosystems.

Then there was talk about the official plan. Is it a contract, or a vision? There was talk about it being a vision, from the group, and then again there were some who thought it was a contract. The biggest question was, does the official plan show us where we want to be 20 years from now? Then we talked about the implementation of the official plan being the key to its effectiveness. There were comments and discussion and some things were about the fact that the environmental agenda is really a local matter. So it comes down more to the local official plan. Of course, the local official plan is governed or parented by the greater official plan of the province.

There was the comment of thinking globally, acting locally. There was discussion of educating the local community; isn't that always the bottom line we come up with. Talk about educating children. And finally, talk about how do we get discussions within the community, because everybody has their own interests. How do we get people to talk about their interests and work together, perhaps for a common goal or two or three common goals and how can everybody's views be incorporated? This is, of course, in respect to the environment. Just in summary then, there was the role for the community. We also talked about the role for politicians and meeting the community's needs, as we are taxpayers and we are paying the politicians who help meet our needs. Coming together to try to work together and communicate and find what makes people tick, as I mentioned. For example, if they have clean water it might be a good sign the environment is healthy, but help them realize that we have to steward or consider the environment in creating that effect, so that if we are active, proactive instead of retroactive, that might help sooner meet our needs.

Implementation: Community Assertiveness

- Hal Schraeder

the triple E solution:

Effective

Efficient

Efficacious

*official plan:
a contract, or a vision*

Bill: Thank you to all the people who have made the reporting presentations. What we heard from them is that they received a lot from the workshop presenters and I would like to ask each of the workshop presenters, to come forward and receive a token of acknowledgement of our appreciation for their efforts in preparing for today's workshops and presenting it. Angus, Barb, Tracey, Jane, Muriel, Michelle, Bonnie, Linda and Hal, please come forward.

I'd like to let you know that there is so much information that was presented this morning in the two sessions and then the note-taking and we have just heard back through this last 45 minutes. There is so much information that you couldn't all take it down and keep it all in your heads, so there will be proceedings report and I am making a commitment to having that ready by June 15, in the mail by June 15, so we'll see if I make my commitment. That's my target.

Ideas for future conferences from the floor included:

buffers, again

GIS

cumulative effects

enivoronmental impact studies and how to do them right

monitoring

Due to both technical and scheduling difficulties the publication missed the target by 3 months. My apologies to those who could have benefited from this sooner.

Supplemental Material
provided by Workshop Leaders

Speaking Notes
Criteria for Effective Implementation
of Environmental Policy
by Local Government

By
Linda Harvey

Local Government

Level of government closest to the people

- Directly accountable to citizens on a daily basis;
- Also accountable to Provincial and Federal government standards;
- Sometimes, local and provincial priorities/values diverge.

Limited resources

- Ability to generate revenue limited— property tax, user fees etc., and grants from senior government.
- Trend for senior government devolution of tasks requiring local governments to do more with less.
- Professional/technical capacity limited in some jurisdictions.

Limited statute authority

- In environmental regulation, local governments may have jurisdiction over some activities but not others within a landscape unit, watershed, or ecosystem. (e.g. land use and density, but not forestry, aggregate extraction, or agriculture).

Implementation of environmental policies at the local government level requires consideration of these factors in order to be effective. The following 6 criteria help delineate what makes implementation effective at the local level.

1. Effective implementation produces tangible outcomes.

SHORT TERM OUTCOMES

Prevent degradation of natural system by:
Regulating activity; Negotiating, cooperating.

LONG TERM OUTCOMES

Changing behaviour by:
Working cooperatively, increasing the conservation ethic in the community, developing commitment, Monitoring and learning over time;

- **Tangible outcomes:** The policy needs to actually ACCOMPLISH something. It's possible to do a lot and accomplish nothing (e.g. conservation covenants that are never enforced).
- Make sure that the implementation strategy provides **ways and means**.

WAYS

How we're going to go about it

- Regulation?
- Non-regulatory
 - cooperative approach/negotiation
 - self-regulating/community-driven

MEANS

What resources do we need to make it happen?

- If regulating, how will we administer, monitor and enforce? What actions, or penalties will produce the desired effect? Inspections? Mandated restoration? Mandated public education initiatives? Fines?
- If non-regulatory, how will be set up a workable approach, how will we ensure that we are achieving an adequate standard of protection? How do we ensure equity?
- Look at non-traditional resources:
 - community expertise and commitment
 - stakeholders with common interests
 - public/private partnerships
 - partnerships between levels of government

2. **Effective implementation recognizes goals and objectives**

- **What do we want to do and how will we know when we've done it?**

Ask this question often! Goals and objectives can provide a yardstick throughout the policy's formulation, implementation, and review, keeping programs on track, and revealing the need to adapt and revise either the original goal or the implementation plan to respond to new information.

- **Align the implementation strategy as close as possible to the goals and objectives.**

(e.g. are there political aspects in the implementation strategy that will confound the ability to meet science-based goals & objectives?)

- **Consensus on goals and objectives facilitates implementation.**

Where conflict prevents consensus, the conflict can result in learning about other factors that need to be addressed.

3. Effective implementation includes the provision for performance measurement, monitoring and reporting.

- **Ensure that policy outcomes are having a desired effect**

- To prevent degradation of natural systems due to ineffective policy;
- To maintain accountability to senior levels of government, and the community;
- To allow learning to occur.

- **Use indicators to measure, monitor and report on an ongoing basis**

- This provides an early warning system of negative impacts, so activities can be adapted;
- Information is available to meet senior government requirements for accountability;
- Learning and the concept of continual improvement are hallmarks of performance measuring, monitoring and reporting on progress. Traditional “evaluation” and “auditing” are more judgemental/negative. .

“In simplest terms, an individual’s or society’s capacity to improve their situation and contribute to the well-being of the enveloping ecosystem, depends on taking action that leads to some positive outcome. If the nature of the outcome is not being recognized and assessed against desired ends, little or no learning occurs. If there is no such feedback, any improvement is by chance if it occurs at all.”

Hodge, R.A., Hardi, P., and Bell, D. 1999. Seeing change Through the Lens of Sustainability. Background Paper Draft: 8 April 1999 for the workshop “Beyond Delusion: Science and Policy Dialogue on Designing Effective Indicators of Sustainable Development”, The International Institute For Sustainable Development, Costa Rica, 6-9 May, 1999. P. 1

4. Effective implementation cultivates co-operation and commitment.

- **In the short-term, regulation and the imposition of standards are effective in limiting human activity.**
 - There are limits to how far regulation can go in protecting natural areas, given what we know about local governments.
 - Enforcement is expensive and local governments are under pressure to provide more with less.
 - If the community perceives some interest to be a priority, it has the ability to zone and regulate land use to reflect these local values. These values may not prioritize protection of natural areas over other land uses, leading to passive and active resistance to policy.
- **To protect natural systems over the long-term, a change has to occur in the daily interaction between people and the land on which we live**
- **Increasing the normative commitment** of staff, politicians, and the community is essential in substantively integrating natural area protection into the variety of land uses identified by the community as having value.
- **Choosing policy implementation processes that are cooperative, interactive and empowering vs. bureaucratic can increase normative commitment.**
 - Learning occurs through the experience of protecting the natural environment.
 - Costs are shared as developers engage professionals vs. government providing all of the issue identification, prescription and advice.
 - Direct costs to government are reduced through more efficient utilization of resources available in the community (e.g. EEPAC).
- **Rationality affects commitment and compliance**
 - The policy should be rational and scientifically defensible in order to justify the restrictions that are being imposed on people's activity.

5. Effective implementation fits into an existing context.

- **Physical**

- Does the implementation plan take into account the physical characteristics of the landscape and the nature of the system being protected?

Are different standards required for different types of wetlands: fens, bogs...?

Is a setback distance or buffer on flat terrain adequate for rolling topography or steep slopes?

- **Community**

- What are the values and priorities established by the public in official community plans and zoning bylaws?
- Is there economic stress in the community that could undermine implementation of an environmental policy?
- Is there interest in taking on a stewardship role, or does the community rely on government to protect natural systems?

- **Organizational**

- What level of experience and expertise does the municipality have in implementing environmental policy?
- Will implementation of the policy be a significant divergence from past practice? Is there likely to be commitment to the policy, or resistance and apathy?
- How many departments will be affected and how can efforts be coordinated to gain efficiencies in the implementation process?
- Is a change management plan necessary to guide the transition period from past practice to the new way of providing service?

- **Regulatory**

- Does the implementation plan conflict or duplicate any existing Federal, Provincial or local government programs in place?

6. Effective implementation engages government and stakeholders in a process of collaboration, conflict and feedback to learn and adapt over time.

- **Conflicting values and competition for land use are a fact of life in local government.**
- **Include conflict management in implementation plans** as a way to provide feedback and learn.
- **Choose implementation tools that provide opportunities to involve people** in the process of protecting natural areas. This helps build normative commitment through participation and learning.
- **Engage stakeholders in developing indicators, measuring performance, monitoring, and reporting results.** This can be a shared learning experience that can also help build normative commitment.

Effective Implementation and Sustainability

- **Effective policy implementation criteria contain some key themes from implementation theory and everyday experience.**
 - taking the long-view to learn and adapt over time
 - enhancing normative commitment
 - forming partnerships and using cooperative approaches
 - taking a holistic view of the context of ecosystems and human systems

These are also key concepts of sustainability.

- **By creating a truly effective environmental policy implementation strategy, local governments can move along a parallel path toward more sustainable communities.**

SUMMARY

Six Criteria For Effective Implementation

- 1 — Effective implementation produces tangible outcomes.**
- 2 — Effective implementation recognizes goals and objectives.**
- 3 — Effective implementation includes the provision for performance measurement, monitoring and reporting.**
- 4 — Effective Implementation cultivates co-operation and commitment.**
- 5 — Effective implementation fits into an existing context.**
- 6 — Effective Implementation engages government and stakeholders in a process of collaboration, conflict and feedback to learn and adapt over time.**

Vegetative Buffer Strips and Wetlands

Vegetative Buffer Strips and Wetlands

Angus Norman -STTU -MNR-London

2000 05 03

Buffers " Best Evidence " Conference
King's College, London, Ontario

The following pages are excerpted from the book “Vegetative Buffer Strips and Wetlands” which is an up-to-date literature review by Angus Norman of the Ministry of Natural Resources, Science and Technology Unit, London.

Vegetative Buffer Strips and Wetlands

Angus Norman –STTU –MNR-London

2000 03 20

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Vegetative Buffers for Wetland Protection and Provision of Habitat in Southern Ontario Definitions and Descriptions

There are many definitions in the literature characterizing vegetation retained, created or managed adjacent to lakes, rivers and wetlands for purposes of water quality protection and the provision and protection of habitat for a wide range of fish and wildlife species. Terms used include, riparian buffers, buffer strips, vegetated buffers, vegetated filter strips and filter strips.

The main features identified in this range of definitions and descriptions are:

- They occur on lands adjacent to lakes, rivers, streams and wetlands
- They are often in a riparian zone
- The area may be periodically flooded
- The surface may be rough and the vegetation heterogeneous (vegetative buffer)
- The surface is smooth and the vegetation homogenous (vegetative filter)
- The vegetation may occur naturally or be planted
- The vegetation may or may not be managed · The band of vegetation may vary in width
- They separate environmentally sensitive areas and development
- They lessen the impact of human disturbance
- They slow water runoff
- They reduce erosion
- They help stabilize banks
- They help protect water quality
- They provide some protection from non-point source pollution
- They trap sediment and other pollutants
- They provide habitat in the riparian zone
- They provide some habitat protection for the adjacent down-slope wetland/ water body
- They connect wetlands and other natural heritage features

Urban Considerations

In urban practice vegetative buffer strips are only one component in an integrated stormwater management system.

A series of BMP's should be utilized depending on the nature of the site, the nature of development and environmental protection goals and objectives

Before development land in a watershed is available and costs of establishing a buffer strip and other best management practices at that time are relatively low. Costs are comparatively low when an existing grass or meadow area is reserved at the site before development begins

Further savings can be realized if the filter strip is used as an-on-site erosion control practice during the construction phase of development. If a filter strip has been used as a sediment control measure during the construction phase, it is advisable to re-grade and re-seed the top edge of the strip.

A buffer strip to work effectively in an urban environment should:

1. have the top edge of the filter strip follow across the same elevational contour
2. be equipped with some sort of level spreading device (i.e. a device such as a shallow stone trench to convert concentrated flows into sheet flow)
3. be densely vegetated with a mix of erosion-resistant plant species that effectively bind the soil
4. be graded to a uniform, even, and relatively low slope
5. if necessary have berms placed at 50 to 100 foot (15 to 30 m) intervals perpendicular to the top edge of the strip to prevent runoff from bypassing the strip

Widths

- absolute minimum - 6 m (20 feet) -minimum - grade slope as close to zero as drainage permits
- better performance -15 to 23 m + 1m for each 1 % increase in slope
- widths of 31m to 92 m needed for adequate removal of smaller particles found in urban runoff
- If minimum width (6 m) is used slopes should be graded as close to zero as drainage permits. Narrow filter strips to be effective in improving water quality must be managed as a lawn or short grass meadow. These strips should be mowed 2 to 3 times a year to suppress weeds and interrupt natural succession; clippings should then be removed.
- Wooded filter strips are preferred to grassed strips. If an existing wooded belt cannot be preserved at the site, the grassed strip should be managed to gradually become wooded by intentional plantings. The maintenance required for a buffer strip depends on whether or not natural vegetative succession is allowed to proceed. Under most conditions, the gradual transformation from grass to meadow to second growth forest will enhance rather than detract from the performance of wider buffer strips. This process can be enhanced with intentional landscape plantings. Maintenance tasks and costs are both sharply reduced for these "natural" buffer strips.
- To prevent concentrated flows from forming, it is advisable to have each buffer strip serve a contributing area of five acres or less.
- All buffer strips should be inspected on an annual basis for damage. Extra strip maintenance must be devoted in the first few months and years to make sure the strip becomes adequately established including extra watering, fertilization and reseeding. Periodic spot repairs, watering and fertilization may be required to maintain a dense, vigorous growth of vegetation. Accumulated sediments deposited near the top of the strip will need to be manually removed over time to keep the original grade.

Recommendations

- Use good land use practices and best management practices to help protect both the wetland and the adjacent riparian zone.
- Use vegetated buffer strips to help protect the wetland.
- Use wide vegetated buffer strips wherever possible to help protect ecological functions of the riparian zone.
- Manage runoff so that flow is shallow and uniform i.e. sheet flow. Use best management practices to help accomplish this.
- Assess the factors contributing to erosion, sedimentation, contaminant and high nutrient runoff and utilize a series of best management practices that are most appropriate.
- In all operations, try to maintain good ground cover to help control erosion at the source.
- Avoid using minimum vegetative buffer widths wherever possible.
- Use wide buffer strips comprised of herbaceous vegetation, shrubs and trees wherever possible to help protect water quality and provide wildlife habitat.
- Use settling basins to trap sediments and contaminants from intensive uses such as feed lots or in some urban situations before runoff reaches the vegetative buffer strip.
- In winter, during snowmelt and periods of high rainfall, use other best management practices to help reduce erosion, sedimentation and runoff of high nutrient and contaminant levels.
- In intensive use situations such as certain farm or urban operations where space is limited, use herbaceous vegetation and mow it 2 or 3 times per year and remove the cuttings.
- Use on slopes less than 10% or preferably less than 5%
- In urban situations, plan for space and management of vegetated buffer strips before construction.
- Inspect the buffer strip a few times per year to ensure there is a dense vigorous growth of vegetation. Repair damage where needed as soon as possible.
- Riparian zones adjacent to wetlands are important for many species of wildlife that use wetlands. .

The following widths of vegetative buffer strip have been shown to help protect the ecological functions identified

Width of Vegetative Buffer Strip	Ecological Function Protected
3 - 5 m	Protection of bank erosion and sedimentation
15 m	Some protection from sedimentation and contaminants Some habitat for edge species
30 m	Better protection from sedimentation and contaminants Habitat for edge species
50 m	Good protection from sedimentation and contaminants Good habitat for edge species
100 m	Good water quality protection Supports some neo-tropical bird species
300 m	Good water quality protection Good habitat for neo-tropical bird species and ground nesting waterfowl

**IMPLEMENTATION OF BUFFERS
DRAWING THE LINE AND OTHER SITE-SCALE TOOLS
- Bonnie Bergsma**

BUFFER ZONES

From a planner perspective zoning by-laws are the most effective and versatile regulatory tools that are used to implement the policies of an Official Plan.

Zoning, as a management tool for habitat protection, is used to differentiate between areas of development and areas of no development, or open space. In the zoning of land, a buffer is a transition zone between two land uses that separates and protects one from the other. The width of the buffer zone must be large enough to sustain the two land uses on either side without conflict or impact.

From an ecologist perspective, drawing a hard line, or a zone boundary, on a map is contrary to the concept of ecosystem, because nature operates within fluxes and across gradients, not within lines (Riley & Mohr, 1994) and ecosystem boundaries are not fixed in time and space on the landscape.

In a fragmented landscape the boundaries of the remnant terrestrial patches are based only in part on ecological criteria, but are strongly influenced by ownership patterns and past land uses. Thus any boundary between natural vegetation and other land uses becomes our operational starting point. From there, defining an ecosystem boundary requires understanding of the constraints, both natural and anthropogenic or technological that the ecosystem is operating under. This is where buffers play an important role in the management of natural systems.

In order to define buffers, we must first define the goal.

GOALS OF BUFFERS

- To minimize ecological impacts to features and functions of sites, and maximize the long-term viability of natural systems and species (Riley & Mohr, 1994).
- To achieve a reasonable balance between the needs of people living in a community and the needs of wildlife - based on ecological principles and the best scientific information available (Duerksen et al 1997).
- to acknowledge the natural limits on system functions and not try to exceed them; and to acknowledge that anthropogenic constraints on system functions are potentially preventable, modifiable or removable (Merriam, 1994).

1. *BUFFER ZONES*
2. *GOALS OF BUFFERS*
3. *DRAWING THE LINE - CORE/BUFFER CONCEPT versus WHOLE PATCH CONCEPT*
4. *FIXED-WIDTH versus SITE SPECIFIC BUFFERS*
5. *REALITIES OF BUFFER MANAGEMENT AND OWNERSHIP*
6. *CASE EXAMPLES IN LONDON*

DRAWING THE LINES - CORE/BUFFER CONCEPT versus WHOLE PATCH CONCEPT

How we draw the line delineating the area to which buffers are applied is a critical first step. In the fragmented landscape, setting ecological boundaries of natural areas based on what is left over is what we have to work with. The determination of buffers is generally done after the ecological boundaries have been delineated. What do we include in ecological boundaries?

The Core/Buffer Concept is widely used in conservation planning approaches, particularly in wilderness or more forested settings. In this approach a process of identifying areas of relative degrees of sensitivity, significance and ecological features and functions is completed to the extent that the natural area is separated into parts which are then treated individually as having lesser or greater significance. A core area is identified for protection. Buffers are added, generally two zones.

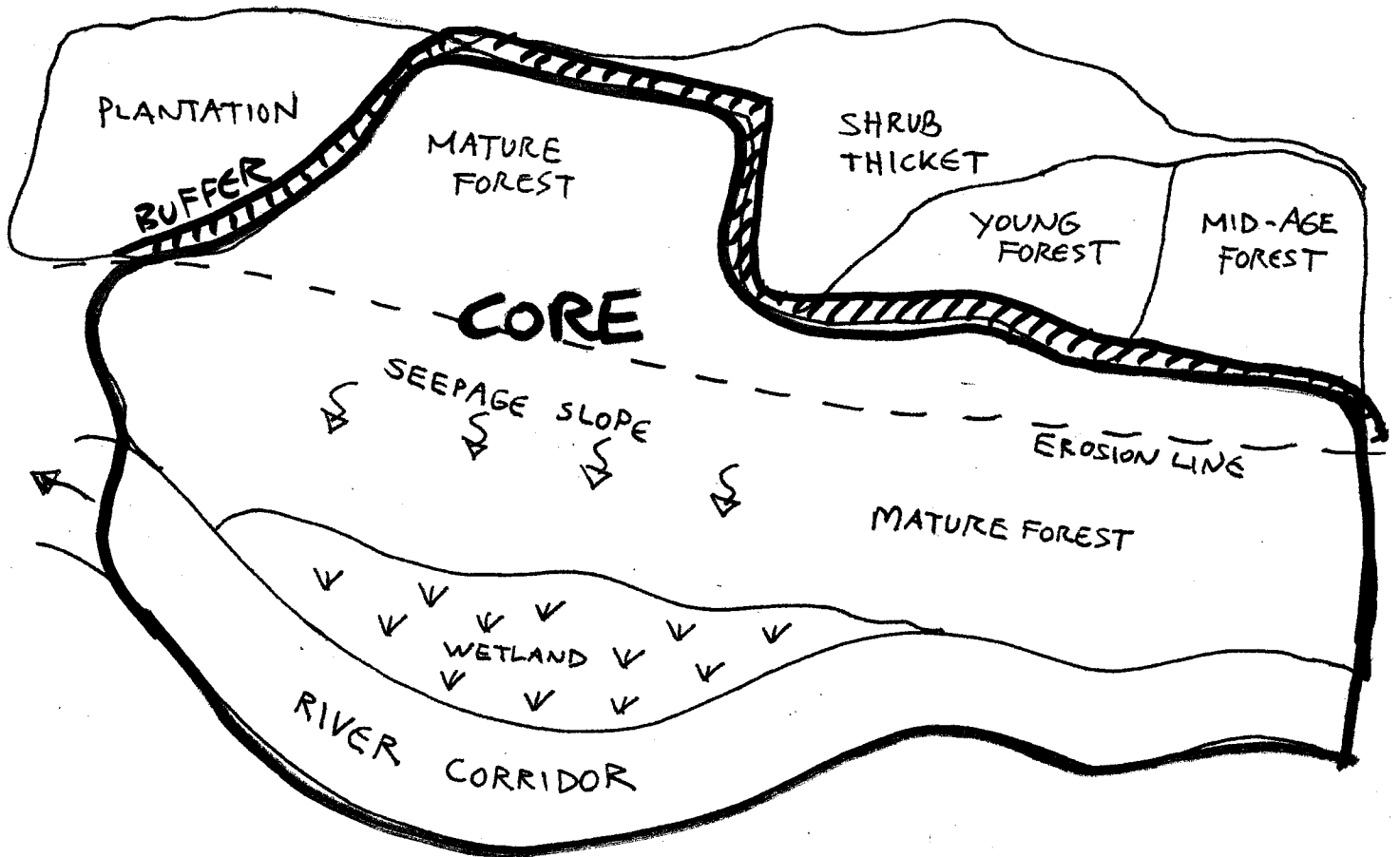
Where this type of functional approach has been used in fragmented landscapes, we do not end up with two buffer zones. As a rule, this core area is always smaller than the whole patch. The shrubby vegetation, or young previously grazed forests, or disturbed forests or regeneration often present on the edge of the existing natural area is defined as non-significant to the whole, cut out of the boundary and then a minimum width added back in under the heading of buffer. All it does is result in the protection of a smaller internal area and the creation of new internal edges.

The concept would be more acceptable if multiple buffer zones are created with inner zones consisting of existing vegetation important to the integrity of the area and sufficient to accommodate shifts in the ecosystem over time and an outer zone which may support compatible uses such as passive recreational trails, vegetation restoration, stormwater management facilities and other softer development forms.

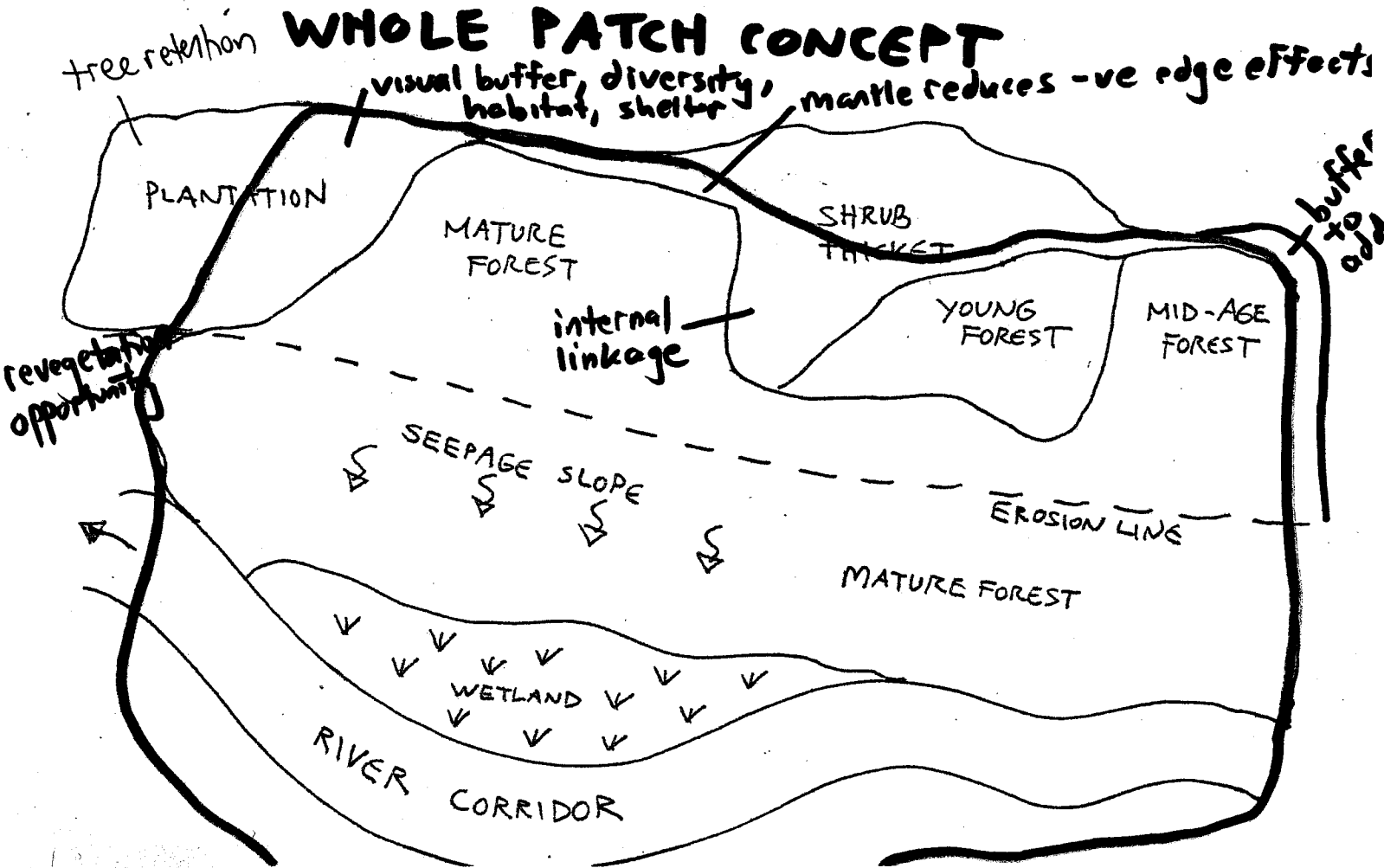
The Whole Patch Concept is one which is supported by the City of London for Environmentally Significant Areas. All naturalized vegetation within the patch is identified for inclusion in the boundaries including reasonable amounts of shrub thickets, younger woodlands and plantations that add supporting habitat, diversity, connectivity, internal linkages, visual and spatial buffers, restoration opportunities and contribute to the ecological integrity of the whole. The whole patch approach is an outward approach which looks at the fragment in relation to the role it plays or potentially could play, in the larger landscape in which it is situated.

The determination of buffers is done after the ecological boundaries have been delineated. All lands required for buffer are designated in the same open space zone as the patch. Other site management tools to reduce the size and intensity of the zone of disturbance to the natural area at the zone boundary are then included in the subdivision agreements or development agreements for site plans. These may include such things as: use restrictions, tree protection and retention plans, controls on fencing and access, development phasing, controls on construction activities, etc.

CORE/BUFFER CONCEPT



WHOLE PATCH CONCEPT



FIXED-WIDTH versus SITE SPECIFIC BUFFERS

fixed width and site-specific variable width

Application

to protect specific functions

e.g. riparian 30 m to reflect site specific conditions

e.g. variable topography and soils

Advantages

- easy to administer
- does not require ecological expertise
- more flexible for varying site conditions and management practices
- tailor made
- may protect the environment more effectively without undue cost

Disadvantages

- results in arbitrary boundaries not reflective of site specific conditions
- requires expertise
- hard to connect the variable width boundaries in areas that grade together

Problems with both

- how to see the boundaries in the field
- how to monitor and enforce

Solution

- implement fixed width reasonable minimum buffers and determine site-specific variable width buffer prescriptions based on models

REASONABLE MINIMUM WIDTH BUFFERS FOR TYPICAL CONDITIONS

Wildlife habitat -	100 m
Woodlands -	50 m
Wetlands -	30 m
Riparian Corridors and Valleys -	30 m
Corridors -	100 m (urban) to 200 m (rural)

REALITIES OF BUFFER MANAGEMENT AND OWNERSHIP

- we tend only to get the minimum that is achievable based on environmental, social and economic interests, rather than what is ecologically most appropriate.
- regulatory buffers require monitoring and enforcement to ensure effectiveness.
- buffer boundaries must be clearly evident and easily identifiable to be enforced and monitored.
- as a rule, buffers are subject to reduction in size over time through encroachment
- On blocks of land subject to site plan, or in rural areas, it is possible to have a separate buffer zone identified and implemented and maintained over time.
- On individual lots on plans of subdivision, it is not feasible to have multiple zones and restrictions on lots for several reasons. First it is cumbersome to enforce and monitor a buffer that encompasses multiple landowners. Second, it relies upon education and stewardship initiatives which are voluntary and if not embraced by the owner, compromises the area which is to be protected.
- it is far easier and ecologically more viable to develop a management program for the buffer as part of the larger open space block and maintain it under one ownership, preferably public or other conservation body.
- Regulatory approaches need to be balanced with integrated approaches that include education and citizen involvement, cooperative management coupled with buffer demonstration areas, financial and other incentive tools for landowners to conserve buffers, acquisition programs, private-sector initiatives, development agreements.

CASE STUDY 1 - LONDON

Subdivision with single lots adjacent to an ESA

large active river and tributary
steep slopes with seepage areas
wildlife corridor
former apple orchard
rare species

Buffer Goals

1. Protect the Ecological Resource
 - protection of slopes for long term stability and encroachment
 - protection of watercourse
 - protection of a wildlife corridor
 - protection of existing natural vegetation
 - protection of seepage areas and ground water recharge/discharge = water balance
2. Provide opportunity for enhancement
 - compensation for loss of orchard habitat
 - location of storm water management pond in between the fill line and flood line
3. Provide social/recreational values
 - allowance for trail location behind lots

Parameters for buffers to extend to the rear lot line - all lines are mapped and the greater of the lines becomes the boundary of the buffer

- use of minimum fixed width and variable buffers.
- multiple zones within the buffer

1. Riparian buffer - minimum 30 m from the watercourse
2. Slope buffer - minimum 10 m from the long term stable angle
3. Vegetation buffer - to the edge of the existing naturalized vegetation (if trees measured at the outer drip line)
4. Naturalization and trail areas - between the rear lots and the existing vegetation

CASE STUDY 2 - LONDON

Subdivision with Blocks adjacent to a locally significant wetland

- riparian wetland
- unusual skunk cabbage dominant gently sloping wetland
- upland island
- seepage slopes linkage to forested open space areas
- water pipeline easement identified for recreational access
- high ground water table

OMB Hearing on issues related to wetland boundary and buffers

- approved 15 m riparian buffer
- approved 5 -15 m wetland buffers
- deferred areas on seepage slopes and linkage for further study
- additional setbacks for rear yard areas and areas where no basements could be built.
- designated buffers in a special open space zone, the area which could be used for density calculations

SELECTED REFERENCES

Duerksen, C.J., D. Elliot, N. Thompson Hobbs, E. Johnson, J. R. Miller 1997. Habitat Protection Planning: Where the Wild Things Are. American Planning Association.

Gray, Merriam 1994. Managing the Land: A medium-term strategy for integrating landscape ecology into environmental research and management. Forest Fragmentation and Biodiversity Project, Report No. 13. Ontario Forest Research Institute, Sault Ste. Marie.

Johnson, A.J. and D. Ryba 1992. A Literature Review of Recommended Buffer Widths to Maintain Various Functions of Stream Riparian Areas. Prepared for King County Surface Water Management Division

Mitchell, Frank 1996. Vegetated Buffers for Wetlands and Surface Waters: Guidance for New Hampshire Municipalities. Wetland Journal Vol 8 (4): 4-8. Environmental Concern Inc. Maryland.

Noss, Reed 1995. Maintaining Ecological Integrity in Representative Reserve Networks. A World Wildlife Fund Canada/World Wildlife Fund United States Discussion Paper.

Riley, John L. and Pat Mohr 1994. The Natural Heritage of Southern Ontario's Settled Landscapes. A review of conservation and restoration ecology for land-use and landscape planning. OMNR, Southern Region, Aurora.

Table 3.2 The Scale/Tool Matrix

		Landscape-scale Tools	Site-Scale Tools
Regulatory Tools	Zoning Texts and Maps	X	X
	Special Overlay Districts	X	X
	Agricultural and Open Space Zoning	X	
	Performance Zoning		X
	Phasing of Development		X
	Subdivision Review Standards	X	X
	Sanctuary Regulations	X	
	Urban Growth Boundaries	X	
	Targeted Growth Strategies	X	
Incentive Tools	Density Bonuses	X	X
	Clustering		X
	Transferrable Development Rights	X	
	Preferential Tax Treatment	X	
Acquisition Programs	Fee Simple Purchase	X	X
	Sellbacks and Leasebacks	X	X
	Options and Rights of First Refusal	X	X
	Easements and Purchases of Development Rights	X	X
	Land Dedications and Impact Fees	X	X
Development Agreements			X
Control of Public Investments	X		X
Taxing and Assessment Districts	X		X
Private-Sector Initiatives	Land Trusts		X
	Limited Conservation Development		X
	Industrial Restoration Showcase Projects		X
Intergovernmental Agreements	X		
Education, Citizen Involvement, and Technical Assistance	X		X

In Duerkson et al. 1997. Habitat protection planning: Where the wild things are. American Planning Association.

Ecological Buffers

An example of policy in Official Plan language is this one from the City of London Official Plan. This section along with the balance of other environmental policies in Chapter 15 were the subject of an Ontario Municipal Board hearing. The challenge by the London Development Institute was substantively rejected by the Board and some phrases were strengthened. The work that remains is to transfer this official plan language for policy guidance into effective day-to-day management procedures to ensure that the Natural Heritage System is ecologically viable.

i) Ecological buffers serve to protect the ecological function and integrity of the Natural Heritage System. Buffers may be required around, or adjacent to, the shorelines of lakes, rivers and streams and other components of the Natural Heritage System.

ii) The location, width, composition and use of ecological buffers necessary to protect natural heritage areas from impacts of development on adjacent lands will be specified through a community planning study and/or an environmental impact study.

iii) In addition to buffer lands, additional techniques may be required in minimizing the impact of development on the Natural Heritage System, including but not limited to:

a) The use of site planning to orient the development away from natural heritage areas;

b) The acceptance of lands immediately adjacent to natural heritage areas as part of the required parkland dedication for the proposed development;

c) The use of a setback from the boundary of natural heritage areas for reconstruction purposes;

d) Restriction of public access by providing a limited number of access points to natural heritage areas; and

e) Other measures, such as fencing.

**Official Plan
15.3.6
City of London**

The City shall prepare and adopt a Guideline Document setting out recommend criteria and parameters to facilitate the identification of Ecological Buffers.

**OMB Decision
No. 1048, June
3/99**

Provincial Policy Statement 2.3

2.3.1 *Natural heritage features and areas* will be protected from incompatible development.

a) *Development and site alteration* will not be permitted in:

- significant wetlands south and east of the Canadian Shield; and
- significant portions of the habitat of *endangered and threatened species*.

b) *Development and site alteration* may be permitted in:

- fish habitat;
- significant wetlands in the Canadian Shield;
- significant woodlands south and east of the Canadian Shield;
- significant valleylands south and east of the Canadian Shield;
- significant wildlife habitat; and
- significant areas of natural and scientific interest
if it has been demonstrated that there will be no *negative impacts* on the natural features or the *ecological functions* for which the area is identified.

2.3.2 Development and site alteration may be permitted on *adjacent lands* to a) and b) if it has been demonstrated that there will be no *negative impacts* on the natural features or on the *ecological functions* for which the area is identified.

2.3.3 The diversity of natural features in an area, and the natural connections between them should be maintained, and improved where possible.

2.3.4 Nothing in policy 2.3 is intended to limit the ability of *agricultural uses* to continue.

Natural Heritage

Best Policies

An example of Official Plan text pertaining to development setback and buffer.

This is taken from the section on “enhanced policies” in NATURAL HERITAGE PLANNING POLICY IN ONTARIO: A REVIEW OF COUNTY AND REGIONAL OFFICIAL PLANS carried out by The Best Policies Working Group of the Ontario Professional Planners Institute and published in August 1999.

Enhanced policies address the full range of natural heritage features as set forth in the Provincial Policy Statement and the natural connections between them. Effective controls on development and site alteration within natural heritage areas are in place.
p. 15-17

“All fish habitat is protected by federal legislation which is administered by the Ministry of Natural Resources in conjunction with the federal Department of Fisheries and Oceans.

...All fish habitat, including that used seasonally, shall be protected. The Ministry of Natural Resources, or its designate, may be consulted when development is proposed which may affect fish habitat in order to ascertain development alternatives that will achieve no net loss of productive capacity and seek a net gain of productive capacity whenever feasible. Development may be permitted if it does not harmfully alter, disrupt or destroy fish habitat. The relocation and redesign of development proposals is preferred over mitigation and compensation of fish habitat. A net gain can be achieved through the restoration of degraded habitat, the enhancement of existing habitat and/or creation of new habitat where possible.

Fish habitat protection may require a development setback and an appropriate vegetative buffer, the width of which will be determined in consultation with the Ministry of Natural Resources.

Area municipalities are required to consult with the Ministry of Natural Resources and the conservation authority to determine environmental protection methods which will minimize or prevent fish habitat degradation, ensure no net loss of fish or fish habitat and protect the values of Significant Biotic Areas when maintaining municipal drains or establishing new ones”(Region of Haldimand-Norfolk, 1997).¹

¹Official Plan for the Regional Municipality of Haldimand-Norfolk, p. 66-67

FISH HABITAT

development setback and an appropriate vegetative buffer

Definition & Purpose of Buffers and Setbacks

- C of London, EEPAC proposal 991115

Setback

- boundary between private and public
- measured from feature (ESA, naturalized vegetation) to rear lot line
- protect property from encroachment by public
- protect individuals from hazards

Buffers

soft zone to protect natural function or feature

Objectives

- control encroachment (rubbish, lawn extension, garden)
- limit access
- assert ownership
- privacy (visual screen)
- multiple-use objectives
- recreation
- public access and recreational utilization
- reduce edge effect
- wildlife/aquatic habitat maintenance/enhancement
- water quality/water quantity

Authority for

Section 15.6.12

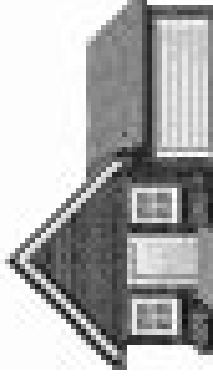
The Subwatershed Plans identify “antifragmentation” areas which, if naturalized, would have the greatest potential for enhancing the Natural Heritage System. Naturalizing these areas would restore some of the historic habitat diversity.

Comprehensive Set of Policy Statements (Bill 163)

Goal 1A ... the naturally vegetated or potentially revegetated areas that link or border natural areas and provide ecological functions such as habitat, passage, hydrological flow, connection or buffering from adjacent impacts. They can occur across or along uplands, lowlands or slopes. Ravine, valley, river and stream corridors are further defined as landform depressions, usually with water flowing through or standing in them for some period of the year. Ravine, and valley corridors may be defined locally by considerations such as their natural features and functions, minimum setbacks from crest of slope, top of ravine or valley bank or top of projected stable slope.



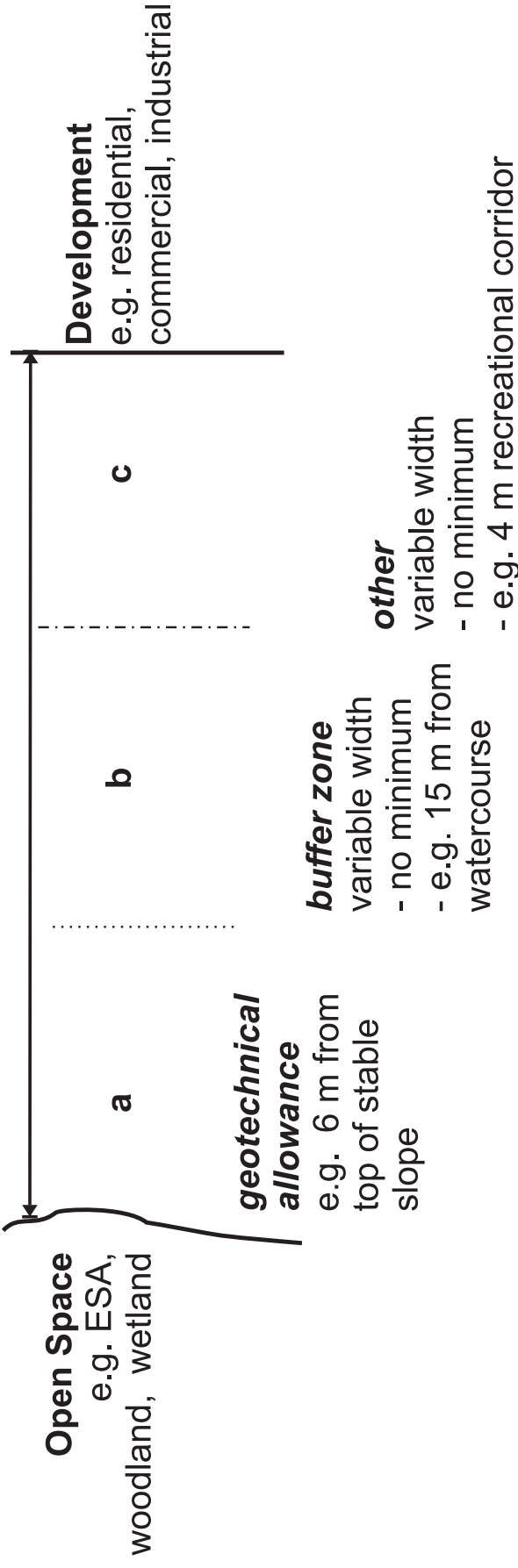
limit of NHS
e.g. naturalized vegetation



limit of development
e.g. rear lot line

SETBACK

a + b + c



Performance Management Zone (a.k.a. Buffers)

Performance Management Zone

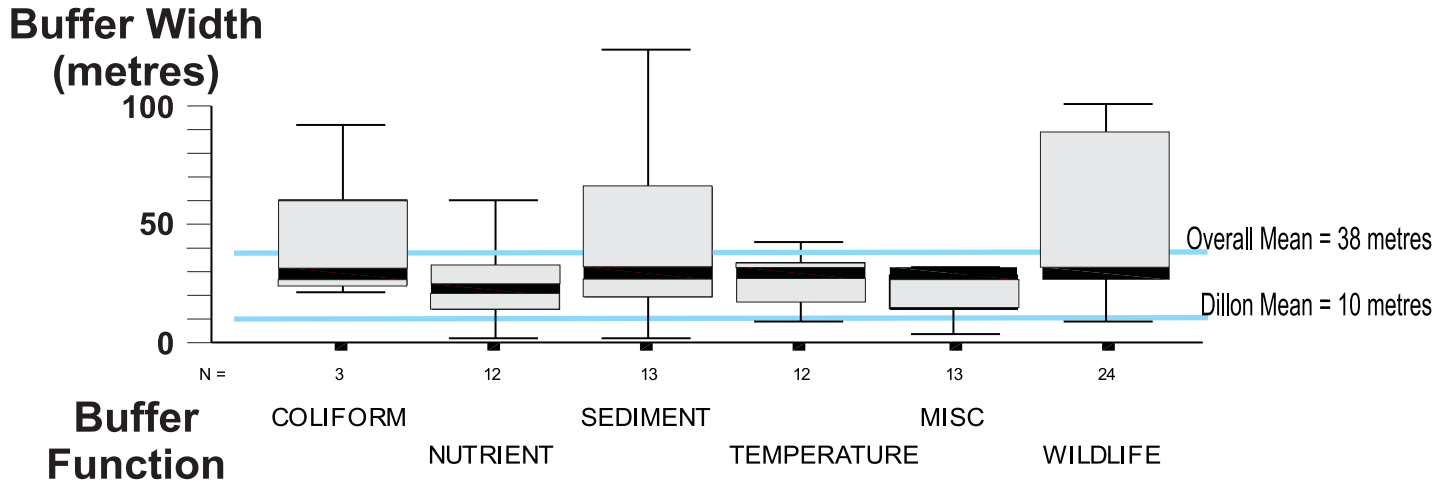
Classification of Open Space Zone and Permitted Uses

Division	Cemetery		Non-HazardLands		OS5.0 proposed		OS5.1 proposed		HazardLands	ManagementArea
	OS3 -> CEMproposed	OS2	OS1	OS1	OS4					
Components	cemeteries	Various		Sig Wetlands, significant portions of the habitat of endangered and threatened species	ESAs, Sig Woodlands, Sig WildlifeHabitat, ANSIs, Habitat of VTE species, Upland Corridors, Fish Habitat, River, Stream and Ravine Corridors, Naturalization Areas				flood plain, lands susceptible to erosion, steep slopes, contaminated sites, land fill,active and abandoned petroleum resources, gasoline fillingstations	variable width along perimeter of component of NHS
legislation	Cemeteries Act			PPS 2.3.1 a	PPS 2.3.1 b 2.3.3 Fisheries Act OWRA LRIA				Conservation Authorities Act, Petroleum Resources Act, Environmental Protection Act, Drainage Act	PPS 2.3.2
OPA88		8, 9, 15, 16		2.9.1, 2.9.3, 8.1, 15.1, 15.2, 15.3, 15.4					8.2, 15.6, 15.8, 15.9	15.3.6, 15.3.7, 15.5, 15.6, 15.7
Watershed Performance	> 10% Surface Impervious									
Restrictions	structures permitted	structures not permitted	structures not permitted	development or site alteration not permitted	development and site alteration ifdemonstrated no negative impact on features or functions				works necessary to manage the hazard	Site specific management objectives
Class	Cemetery	Recreational		Conservation Lands						Various
Permitted Uses	cemetery & mausoleum (crematoria, funeral homes, institutions)	active & passive recreation, horticulture golf courses structural recreational facilities (buildings, swimming pools, stables) commercial recreational establishments institutions	active & passive recreation, horticulture non-structural recreational facilities	passive recreation management for sustainable ecological function					passive recreation	determined by defined site-specific standards of care
Exceptions	none	legal non-conforming uses legal non-complying uses							essential public utilities and municipal services	h2 re NHS h4 re slopes h- re Petroleum

Recommended Buffer Widths

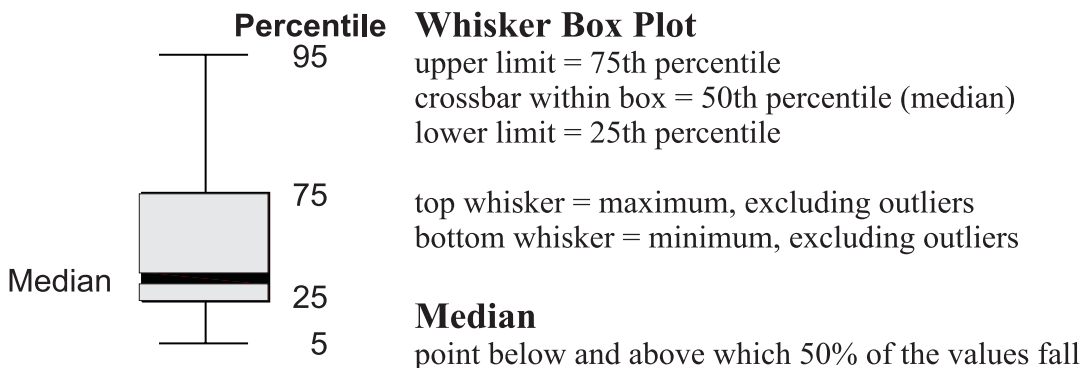
Recommended Buffer Widths for riparian and wetland habitats by function from 48 investigators

- after Johnson & Ryba, 1992



	Median		n	N	% > 30 m
	Mean	(50%)			
Coliform	48	30	2	3	67
Nutrient	26	24	6	12	50
Sediment	47	30	9	13	69
Temperature	29	30	7	12	58
Wildlife	55	31	18	24	75
Miscellaneous	25	30	7	13	54

n = number of investigators recommending 30 m or greater
N = number of investigators



Workshop Evaluation

Thank you for making the time to complete this workshop evaluation. Your input will contribute to effective conference planning. Please place your completed survey in the box after the last workshop.

1) Workshop Title: _____ Workshop Leader: _____

Please give us some feedback on this workshop. Mark your response by filling in the oval space.

Factors contributing to choosing to attend

	Extremely Unimportant	1	2	3	4	5	6	7	Extremely Important	Comments
Relevance of topic to my work		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		_____
The speaker		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		_____
The title		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		_____

On a scale of 1 to 5 for Very Poor to Very Good, please rate each of the following.

	Very Poor	Poor	Fair	Good	Very Good	Comments
The format of the workshop for this topic was	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
The style of group facilitation was	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
The presentation was	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____

Were your expected objectives for this session achieved? Yes No **Comments** _____

2) Workshop Title: _____ Workshop Leader: _____

Please give us some feedback on this workshop. Mark your response by filling in the oval space.

Factors contributing to choosing to attend

	Extremely Unimportant	1	2	3	4	5	6	7	Extremely Important	Comments
Relevance of topic to my work		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		_____
The speaker		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		_____
The title		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		_____

On a scale of 1 to 5 for Very Poor to Very Good, please rate each of the following.

	Very Poor	Poor	Fair	Good	Very Good	Comments
The format of the workshop for this topic was	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
The style of group facilitation was	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
The presentation was	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____

Were your expected objectives for this session achieved? Yes No **Comments** _____

3) Workshop Title: _____ Workshop Leader: _____

Please give us some feedback on this workshop. Mark your response by filling in the oval space.

Factors contributing to choosing to attend

	Extremely Unimportant	1	2	3	4	5	6	7	Extremely Important	Comments
Relevance of topic to my work		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		_____
The speaker		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		_____
The title		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		_____

On a scale of 1 to 5 for Very Poor to Very Good, please rate each of the following.

	Very Poor	Poor	Fair	Good	Very Good	Comments
The format of the workshop for this topic was	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
The style of group facilitation was	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
The presentation was	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____

Were your expected objectives for this session achieved? Yes No **Comments** _____

Workshop Evaluation Summary

	Angus Norman			Barb Rosser			Tracey Ryan		
	N	Mean	Median	N	Mean	Median	N	Mean	Median
Factors in choosing to attend [Scale 1 = Extremely Unimportant...7 = Extremely Important]									
Relevance to work	15	5.27	5.0	18.0	5.17	5	12	4.50	5
Speaker	14	4.14	4.0	18.0	4.00	4	12	4.50	4.5
Title	16	4.94	5.0	18.0	5.06	5	12	5.33	5.5
Rating of [Scale 1 = Very Poor ... 5 = Very Good]									
WorkshopFormat	15	3.40	3.0	18.0	3.72	4	11	4.27	4
FacilitationStyle	15	3.33	3.0	16.0	3.69	4	12	4.00	4
Presentation	15	3.20	3.0	18.0	3.94	4	12	4.33	4
Were your objectives achieved	11	0.45	0	16	0.88	1	10	1.00	1

	Jane Bowles			Muriel Andrae			Michelle Kanter		
	N	Mean	Median	N	Mean	Median	N	Mean	Median
Factors in choosing to attend [Scale 1 = Extremely Unimportant...7 = Extremely Important]									
Relevance to work	14	6.00	6	7	5.29	5	23	5.91	6
Speaker	13	4.46	4	7	4.14	4	22	3.68	3.5
Title	14	5.29	5	7	4.71	5	23	5.30	5
Rating of [Scale 1 = Very Poor ... 5 = Very Good]									
WorkshopFormat	14	3.43	4	7	3.57	3	24	3.75	4
FacilitationStyle	14	3.93	4	7	4.00	4	23	3.74	4
Presentation	14	3.36	3	7	3.86	4	24	3.79	4
Were your objectives achieved	11	0.36	0	4	0.25	0	18	0.67	1

	Bonnie Bergsma			Linda Harvey			Hal Schraeder		
	N	Mean	Median	N	Mean	Median	N	Mean	Median
Factors in choosing to attend [Scale 1 = Extremely Unimportant...7 = Extremely Important]									
Relevance to work	13	6.92	7	17	5.12	5	7	6.29	6
Speaker	12	3.58	3.5	16	3.56	3	7	5.00	6
Title	13	5.00	5	17	4.41	4	7	5.86	6
Rating of [Scale 1 = Very Poor ... 5 = Very Good]									
WorkshopFormat	13	3.54	4	16	3.50	4	7	4.43	5
FacilitationStyle	13	3.54	4	16	3.56	3.5	7	4.00	4
Presentation	13	3.62	4	16	3.94	4	7	4.43	4
Were your objectives achieved	12	0.58	1	14	0.50	0.5	7	0.86	1

	Overall		
	N	Mean	Median
Factors in choosing to attend [Scale 1 = Extremely Unimportant...7 = Extremely Important]			
Relevance to work	126	5.6	6
Speaker	121	4.0	4
Title	127	5.1	5
Rating of [Scale 1 = Very Poor ... 5 = Very Good]			
WorkshopFormat	125	3.7	4
FacilitationStyle	123	3.7	4
Presentation	126	3.8	4
Were your objectives achieved	103	0.6	1

Conference Evaluation

In your decision to choose to attend this conference pick a number from the scale below to show how important each of the following factors were in your decision. Mark your response by filling in the oval space.

Factors contributing to choosing to attend

	Extremely Unimportant						Extremely Important	Comments
Professional Development Day	(1)	(2)	(3)	(4)	(5)	(6)	(7)	_____
Availability of financial support	(1)	(2)	(3)	(4)	(5)	(6)	(7)	_____
The agenda	(1)	(2)	(3)	(4)	(5)	(6)	(7)	_____
To improve my knowledge	(1)	(2)	(3)	(4)	(5)	(6)	(7)	_____
The low cost	(1)	(2)	(3)	(4)	(5)	(6)	(7)	_____
To learn what others are doing	(1)	(2)	(3)	(4)	(5)	(6)	(7)	_____
Value of topic to my work	(1)	(2)	(3)	(4)	(5)	(6)	(7)	_____

On a scale of 1 to 5 for Very Poor to Very Good, please rate each of the following.

	Very Poor	Poor	Fair	Good	Very Good	Comments
King's College as conference site	(1)	(2)	(3)	(4)	(5)	_____
Morning Plenary Meeting Room	(1)	(2)	(3)	(4)	(5)	_____
Workshop rooms	(1)	(2)	(3)	(4)	(5)	_____
Dining facilities	(1)	(2)	(3)	(4)	(5)	_____
Afternoon Plenary Meeting Room	(1)	(2)	(3)	(4)	(5)	_____
Food preparation	(1)	(2)	(3)	(4)	(5)	_____
Menu plan: Morning refreshments	(1)	(2)	(3)	(4)	(5)	_____
Afternoon refreshments	(1)	(2)	(3)	(4)	(5)	_____
Luncheon	(1)	(2)	(3)	(4)	(5)	_____
Time management	(1)	(2)	(3)	(4)	(5)	_____

	Yes	No	Comments
Is a one day conference sufficient?	(Y)	(N)	_____
Overall, was this conference useful to you?	(Y)	(N)	_____
Was the panel discussion in the morning informative?	(Y)	(N)	_____
Did the afternoon plenary session clarify issues?	(Y)	(N)	_____
Were your expected objectives for this day achieved?	(Y)	(N)	_____

If you were the organizer for a conference on another environmental issue such as today's theme, what is one thing you would recommend to make it a success?

Thank you for making the time to complete this evaluation. Your input will contribute to effective conference planning.

Please place your completed survey in the box on your way out.

Conference Evaluation

The majority of conference participants attended the conference to learn from others because it had value for their work.

Reasons for attending this conference	Mean	Median	Mode	Percent ranking as 6 or 7
to improve knowledge	6.12	6	7	77
to learn form others	6.13	6	6	77
the value to my work	6	6	6	77
the agenda	5.4	5	5	42
PD Day	4.5	5	6	38
Cost	4.3	4	4	27
Financial Support	3	2	1	14

Generally, the facilities and food were rated as good. Two areas that should be improved are the size and quality of the workshop rooms and better time management.

One of the workshop rooms was inappropriate for the number of delegates. A sign-up list at time of registration to determine the number of participants per session would enable achieving a balance.

A request for more time or a longer conference were written by many. The structure of the workshops was also a common comment. It was suggested that the workshop leader deliver a focussed and short presentation and only after that to open the floor to discussion. The number of times that an individual may comment should be limited by setting out rules at the beginning and asking for agreement. Schedule five minute breaks between sessions.

Handouts and an early turn-around on the conference proceedings were requested.

	Facilities				Food			Time Management		
	KingsSite	am Room	WshopRooms	Dining	pm Room	Preparation	am break	pm break	Luncheon	
N	69	68	69	67	64	67	68	67	66	68
Mean	4.25	4.12	3.61	4.06	4.09	4.04	4.29	4.42	4.18	3.82
Median	4	4	4	4	4	4	4	4	4	4
Mode	4	4	4	4	4	4	4	5	4	4

C - Comments beside questions

R - Recommendation to make a successful conference

Conference Cost & Student/ngo support

C - thought cost was moderate, not low

C - great to hear that high school and university students were here

C - conf fee was not low

Facilities

Directions to site & rooms

C - confusing about where rooms were, where to go

C - better directions to the conference and within site to rooms

C - better directions to the conference were needed

C - Kings was easy to find; free parking is a plus

Food

C - fruit was great

C - lunch was a little short

C - afternoon refreshments outside was great; fresh fruit is always the key

C - fabulous fruit

C - lunch was disgusting

C - should be reusable or recyclable cups and plates

C - meat, fish, some protein needed for luncheon

Morning Room

C - morning room was hard to find

C - dining room should have microphone for announcements and speeches

C - more microphones throughout morning meeting room

C - sound poor in morning sessions

Workshop Rooms

C - workshop rooms were small

C - Room 176 was very warm and stuffy

C - Rm 176 was tight; not enough seats

C - Rm 176 was too small; lack of air

C - Room 178 was bad

C - Rm 176 too small; hot!

C - Room 176 was too small

C - room too small

C - Room 176 was not good; too small; very stuffy

C - workshops room were good except 174

C - workshop rooms were too small

C - hard seats in workshop rooms

C - student desks are hard for left-handers

Afternoon Room

C - lecture halls not very cheerful, no windows

Time

Not enough time

C - not enough time in afternoon plenary

C - not enough time in morning panel

C - not enough time

C - not enough time though, to get into the ""meat"" of the matter

C - too little time per sessions

C - need more details and more time in plenary

C - more time needed on this issue

C - It is always easy to go over time; good job at keeping sessions almost on time

C - morning panel was too short

C - morning panel was too brief

C - thanks for being on time

C - too many things to cover, not enough time

C - time mgt — too much to cover

C - more time would have been useful

C - too short a time to discuss in plenary session

C - no time to discuss conclusions

R - although the workshop sessions seem too short a whole hour might be tiring and 3 sets probably couldn't be held

R - need 5 min break between sessions

R - more time!

Conference length

C - one day is sufficient although probably benefit from second meeting at a later date; with range of interests participating—group not met before, should maybe have been 1.5 days

C - one day not enough; a day of solutions to follow would have been good

C - one day is sufficient; but need to focus more

C - one day sufficient for a brainstorm but not to get to a solution

C - overall I think this type of conference required more than one day to discuss the diverse topics that were presented.

C - one day is insufficient, topic too vast

C - one day is enough but I'd stay for more

C - too much info to be reviewed in one afternoon

R - either a 2 day conference or part of a series over a period of time

R - It was too much information and too many topics for a one day workshop

Suggestion

C - would suggest earlier start but build in time for displays; many not set up before 10 as planned

C - afternoon plenary was a good summary but hearing speaker's summaries is tiresome; could have been shorter

C - I found the presentations too long in the afternoon which didn't leave enough time for discussion

C - plenary session helped but it went too fast

C - much time spent discussing problems, but perhaps due to time constraints there was little in the way of useful conclusions at the end ie buffers "best evidence"

C - needed more time for discussion, expected more ""evidence"" to be presented

C - have a timer for all sessions

R - set aside as much time as possible for discussions. Try to encourage debates

Participation

C - Round Robin at the beginning was good to foster discussion throughout the day

C - it was a good discussion but I did not learn anything new or have enough info exchange with practitioners in other municipalities

C - very interesting issues; lots of viewpoints from different agencies, groups and government

C - most people seemed most focussed on how to get core areas meaningfully protected and weren't yet at the stage of dealing with buffers

C - I really enjoyed the contributions from different people in the 'audience' ie discussion format as opposed to lecture format

C - It was an excellent forum for determining what does exist in terms of buffer policy/knowledge and what need to be done to ensure or initiate sound environmental planning

R - do GTA, rural, small, intermediate town/city examples; look at differences, etc.

R - Utilize actual case studies — have sessions on various municipal case studies, planning process and impacts. Present points of view of developers, municipalities, local EAC

R - break into two groups — those with an in depth knowledge of issues; another for those who are trying to get a general understanding of the issues

R - more scientists that are studying buffers should have been asked to present their data, ie Masters or PHD students current

research in this area

R - focus on municipalities in general, not just London for the benefit of those who are not from the area

R - bit of overemphasis on London and City of London — suggest move next meeting to another Carolinian Canada Community

R - invite local decision makers — elected officials - for free

R - more variety in participants: industry, business should be more involved; more politicians also

R - lots of municipal representatives; need development industry input

R - still need to engage agriculture, aboriginals and developers — didn't hear from these groups or feel they were represented here.

Round Robin

R - drop the round robin; end earlier

C - morning intros good

R - Round Robin excellent way to introduce issues and start discussions between attendees; well "facilitated"

Panel

C - morning panel was intimidating

C - morning panel was a good way to flush out range of issues

C - panel somewhat informative

C - morning panel gave different points of view

C - panel was a good discussion

C - panel — not many questions

C - panel discussion was mildly informative

Workshop

R - smaller workshops if possible

R - smaller groups to allow more complete participation

R - could engage participants in smaller groups to work on examples

R - ask facilitators to get the group to begin with an agreement or acknowledgment that individuals can speak no more than twice in each meeting

R - Presenters should have presented info then allow questions

R - more interaction in smaller groups with more practical examples

R - more opportunity for info exchange and discussion with practitioners in other municipalities

R - provide more info on the workshops to help people determine which workshops to attend

R - need speakers to focus more on concrete examples demonstrating benefits and detriments emanating from the buffers that were implemented; otherwise the conference tends to hang too much on the general concepts

R - I would suggest that sessions remained more focussed on the issue at hand (sessions tended to stray away from buffers themselves).

R - one thing that I would recommend is to have a more in depth description of the workshops taking place

R - handouts prior to the start of each presentation like Linda Harvey

R - perhaps only 2 concurrent sessions, rather than 3 to ensure one is able to get adequate information, and not miss too many other discussions/sessions

Plenary

C - afternoon plenary session — people reported presentations; not sure about next step to clarify issues; thought afternoon session would be more facilitated workshop, but was presentations with questions and comments; I only attended implementation sessions; bit rushed, not sure achieved consensus

C - afternoon plenary clarified issues to a degree; time was a limit

C - plenary clarified, sort of

C - plenary clarified the need for more information

C - afternoon summary plenary session helped

C - plenary provided more questions than answers

C - plenary created more questions

C - plenary clarified some issues

C - plenary clarified somewhat

Overall

Favourable

C - overall the conference was very useful

C - I thought the day was very well organized. I heard a lot but I am still not ready to say I know how to implement a buffer plan. I hear that others are struggling, that the scientific info is lacking.

C - the day gave me things to think about but not answers

C - It illustrated a real need to show information, policies, etc. to protect vanishing ecosystems.

C - This conference illustrated the great diversity and levels of protection afforded natural open spaces (woodlots, etc.) with various communities.

C - overall, I learned the things that I needed to know

C - conf helped me to understand what's going on with natural area protection

C - provides useful benchmarks from other areas

C - I came away with a lot of new knowledge

Unfavourable

C - no new information or specific targets

C - conf provided little in the way of direction

C - disappointed in outcome; too much focus on problem rather than solutions.

C - overall, not useful; nothing new

C - not sure question of buffers was answered

R - covering a lot here; maybe more focus on one or two key issues

R - presentations were not really well organized; it seemed to be more of a discussion of what a person or municipality think that they have the best policies that work but not backed by research

R - define a small number of issues to address and focus discussion on those issues. Discussion at this conference was too dispersed to draw conclusions. It might have been better to focus on one or two particular scenarios e.g. a buffer in an upland situation where urban development is proposed.

R - need much more specific info; clearer more relevant examples not just general ideas and overviews; use of examples, samples of municipalities where various distances have been utilized

R - tell all speakers to avoid use of all acronyms

R - no recognition of political and financial realities and mechanisms to sell at these levels

Mixed

- C - There is so much more to cover; more questions asked than answered
- C - conference somewhat useful, overall
- C - many questions raised but not answered
- C - re objectives: satisfaction is proportional to the reciprocal of expectations
- C - objectives — not set buffers but I suppose shouldn't expect miracles
- C - some objectives were met
- C - Overall I was hoping to go away with a guideline to developing an achievable buffer policy
- C - objectives achieved partly; difficult subject
- C - objectives met half & half
- C - it should be if goals are focussed
- C - hoping for more examples plus research
- R - otherwise, very good structure

General

- C - so much focus on resident issues and not the forest issues
- C - It also illustrates the dire need to have mechanisms to acquire natural areas—buffer areas mean nothing if the resource is lost!
- C - what about planning guideline
- C - difficult to focus on buffers
- C - implementation mechanisms more critical to me
- C - need more agreement on basic buffer parameters, use same language
- C - more handouts please
- C - proceedings will help cover other workshops
- C - Tracey Ryan's talk was very good
- C - King's is a bad example for buffers
- C - need to decrease number of comments per person in workshops
- C - buffers = something to polish your car with
- C - no urban perspective
- C - seemed to be most focussed on pleasing people that live next to buffers vs the ecological backing for buffers
- C - The groups were rather large which probably limited the input from most of the groups; not really a criticism, it just reflects the success of response to the workshop
- C - not enough details

Other

- R - recycle tags
- R - more displays; resource materials; experts contact list
- R - a rainy day so that we would have felt better about being stuck inside; otherwise, well done!
- R - provide proceedings to take home with contact info to follow up with any of the speakers
- R - I would very much appreciate a list of participants including addresses.
- R - I am looking forward to receiving the information from the conference.
- R - beer
- R - be more practical about how things/policies are implemented

New Conference Themes

- R - Lobby to open the Planning Act to force addition 5% taken for natural areas separate from the 5% dedication for parkland!!!
- R - next conference re monitoring
- R - how to do an EIS
- R - how to evaluate cumulative effects
- R - monitoring
- R - monitoring
- R - how to evaluate performance of buffers
- R - profile successful buffer projects that have been implemented; provide tools and techniques
- R - monitoring guides and guidelines
- R - focus on an issue and seek solutions that can be applied; or better understanding to bring solutions in one's local area
- R - need more "how to's"
- R - next conference: cumulative effects, GIS, EIS guidelines, defining core for natural area
- R - more case studies with technical info
- R - identify research needs and ways to achieve them
- R - next time monitoring
- R - future studies — EIS guidelines
- R - next conference on EIS
- R - EIS standards relying on speakers with local knowledge and broad view of topics
- R - next conference re doing EIS's consistently
- R - Maybe have separate workshops for defining types of buffers, implementation of buffers, etc.
- R - perhaps working groups should be struck (ie technical group, policy group, implementation group, stewardship group) to provide more focus on issues
- R - needs a discussion paper ahead of time with alternatives presented for language and approaches, etc. to focus purpose of conference; could include a literature review, a few tables
- R - need a better balance between identifying issues and implementation mechanisms on this issue
- R - Focus on natural heritage system planning — this was lacking
- R - Focus on implementation and networking to make necessary systemic changes to improve buffers — this was lacking
- R - need to explore the role of the Province of Ontario and its failure legislatively to provide the tools for municipalities to work with
- R - relationship to the Planning process needs to be further explored
- R - I am involved in organizing the Riparian workshop. I commend you on broad participation and engagement of municipalities in today's workshop. I would recommend you do this again!

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