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Chair

Mr. Harold Albrecht

Standing Committee on Environment and Sustainable Development

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● (1530)

[*English*]

The Chair (Mr. Harold Albrecht (Kitchener—Conestoga, CPC)): I'd like to call our meeting to order, please.

Welcome to the 14th meeting of the Standing Committee on Environment and Sustainable Development. We have with us today witnesses from the City of Hamilton, Mr. Chris Murray, city manager; Mr. John Hall, coordinator of the Hamilton harbour remedial action plan; from the City of Toronto, Michael D'Andrea, executive director, engineering and construction services; and from Great Lakes and St. Lawrence Cities Initiative, Mr. David Ullrich, executive director.

We're going to proceed in the order I've just indicated. The City of Hamilton will have a 10-minute opening statement, the City of Toronto, and then Great Lakes and St. Lawrence.

From the City of Hamilton, Mr. Murray, are you leading off?

Mr. Chris Murray (City Manager, City of Hamilton): I am. Thank you very much.

As you say, my name is Chris Murray and I'm the city manager of the City of Hamilton. I'm an urban planner by training and an environmental planner by profession.

As you well know, Hamilton harbour has been an area of concern for the city of Hamilton for quite some time. In fact, research on Hamilton harbour dates back to the 1960s where the upper levels of government as well as institutions were focused on the challenges that we are facing.

The harbour itself is about 2,100 hectares in size. It's surrounded by two major steel mills as well as a number of other industries in the area and there are three waste water plants that empty into the harbour.

In 1974 under the International Joint Commission work it was deemed to be a problem area. Further to that, in 1987 under the Great Lakes Water Quality Agreement it was deemed to be an area of concern. “It was deemed to be a pollution hot spot”. It was at that time that the Hamilton harbour RAP was officially created and an entity was formed to start to work with the community on making improvements in that area. At the time, Hamilton harbour, when compared to the other 16 hot spots that were identified in Canada, was deemed to be the most polluted.

What we have right now are three waste water facilities that empty about half of their flow into the harbour. The other half comes from the watershed.

If you look back over the years, there has been significant investment made into abatement measures in the Hamilton harbour area. You go back, from about 1990 to 2010 a total of about $1.2 billion has been invested in remediation measures. About 80% of that money has come from the local industry and community, 20% has come from the provincial and federal governments. It has really been in the last few years where the remaining $800 million is being spent on major upgrades, the tertiary treatment to our waste water facilities, that you see a sharing of the responsibility among the federal, provincial, and local governments. Of that $800 million being spent right now, about $460,000 is being spent on two waste water treatment facilities. Work on the one in Halton is going to be finished in 2015 and the work on our own Hamilton plant will be finished in 2019.

We are also engaged in a P3 with the federal government regarding our biosolids and we're looking for ways in which we can treat and dispose of that material in a more effective manner.

A considerable amount of work has been going on. We see ourselves in a position that by about 2020 we should begin the delisting process—be able to actually remove ourselves as to one of the areas of concern within the Great Lakes. This, of course, does not happen without the support of the federal government and the provincial government, certainly over the 30 years that we've been investing time and energy into this area, and so for that we certainly thank the federal government for its effort.

Maybe the most important part is, if we look at how we have been able to over the last 30 years achieve the progress we have, what are the best practices, what have we learned from this whole process? First and foremost, don't pollute your environment is probably a good start.

Aside from that, what we have benefited from.... Those who know Hamilton know that this very small area of land has had such a tremendous impact on people's perceptions of Hamilton. The fact is that, as polluted as it was, it is now being cleaned up, so that it not only generates a wonderful environment and an environmental legacy for us, but I would say it is certainly helping to change the tides of Hamilton in terms of attracting businesses and other investments in that community. Our image is shaped by this small piece of land, but the fact is, Hamilton is 50% agricultural. It's also one of the communities in Canada that boasts the most waterfalls.

This has had a tremendous impact on us, but so has the government's involvement and the scientific community. We enjoy having the Canadian Centre for Inland Waters on our shore. It has been those scientists who have really over the last several decades, the federal government scientists....

● (1535)

In fact, your own environment ministry has been key to our success in shaping not only the actions that have been taken but the monitoring that has gone on. I would say to you that without the Canada Centre for Inland Waters, I really seriously doubt we would be as far along as we are to being able to delist ourselves from that contamination stigma.

With that and the Hamilton harbour remedial action plan, which was formally launched in 1987....

John, sitting with me today, is an environmental planner as well. He has been leading that charge for the last decade or so, and is obviously quite knowledgeable.

But I will say to you that it's been that engagement of our community, of our scientists, and of all levels of government that over the last two decades has sustained the effort and that arguably has been the reason why we have been successful at getting about $2 billion worth of investment in this part of Hamilton.

The Hamilton harbour RAP is made up of essentially two groups, the Bay Area Restoration Council, which is a public body, and the bay area implementation team, which is really a group of scientists and government workers who are really the counterbalance to BARC. Those two groups have been key to our being able to not only focus on the problems and come up with solutions but also monitor to make sure that progress is being made and to keep government interested in the topic.

With that, the focus right now is on the two major water and waste water plants. We're going to spend about $160 million on those two plants. The focus from there, though, going forward, will now shift from, not the point sources of contaminants but really into the watershed. That is an area, obviously, that I have a lot of concern about in terms of the urbanization of that watershed. With all the storms we have been experiencing in Hamilton and all the flooding, I can tell you that our local council is very much interested in trying to address some of the stormwater issues we experience. We have an opportunity to deal with the phosphorus and sedimentation that's contributing to the problems we see in the harbour. Looking forward, that is our next area of conquest, I think, to try to address those issues as well.

At the end of the day, I know that this is a committee focused on water quality, but I can say that not just from an ecological standpoint is it important; from Hamilton's own image, and its changing image, I can tell you that it's equally important as an economic driver for us. It's part of the reason why our economy is I think becoming as diverse as it is.

Those are my comments.

● (1540)

The Chair: Thank you very much, Mr. Murray. Thank you for staying well within your 10 minutes.

We'll move now to Michael D'Andrea from the City of Toronto.

Mr. Michael D'Andrea (Executive Director, Engineering and Construction Services, City of Toronto): Thank you, Mr. Chair and members of the committee. I want to thank you for inviting me and for the opportunity to testify on the water quality of the Great Lakes.

I am, as noted, the executive director of engineering and construction services for the City of Toronto, responsible for engineering design and construction for all of the water, waste water, stormwater, and transportation infrastructure in the City of Toronto. This is as a result of a recent promotion last year. Previous to that I was the director of water infrastructure management for the city and so have overarching responsibility for infrastructure planning, dealing with all the water, waste water, and stormwater infrastructure in the City of Toronto.

I've led a number of environmental stewardship initiatives, including on climate change adaptation and a strategy to help reduce the risk and impact of flooding from extreme events and the development of the City of Toronto's innovative wet weather flow master plan, which I'll get into in some detail. The plan itself was aimed at addressing such water quality impacts as storm sewer and combined sewer overflow discharges, ultimately to improve water quality within the city's six watersheds and along the 43-kilometre waterfront, which includes 11 waterfront beaches. The ultimate objective of the plan, while aimed at improving water quality, was really directed at delisting Toronto as an area of concern in the Great Lakes basin.

As an aside, I am a professional engineer, having spent most of my professional career dealing with matters and projects on the Great Lakes.

I'd like to provide now a bit of background concerning the context for the city of Toronto and its dubious distinction as one of the AOCs in the Great Lakes basin. That started back in 1987 with identification by the International Joint Commission. To give a few facts about Toronto, it has a population of 2.7 million. The area of the city is 640 square kilometres. The principal land use is residential, about 45%. One thing we take for granted is that about 23% of our land area is open space and natural.

About 30% of the land area, which is really in the older area of the city, is serviced by combined sewers. That's a single pipe that carries both raw sewage and stormwater runoff when it rains. Inherent in the way these systems were configured back in the late 1800s and up to about 1950 is that during heavy rains there's a spillage of combined sewer overflow, as we call it. It's a mixture of raw sewage and stormwater runoff. We have about 80 outfalls across the city, 34 of which discharge to Lake Ontario.

The rest of the city is serviced by separated storm and sanitary sewers. When it rains, the stormwater runoff is discharged through 2,600 storm sewer outfalls, 70 of which are located along our waterfront. The remainder basically dot the ravine systems. We have six watersheds across the city. We have about 10,000 kilometres of sewer pipes, some of which date back to the mid- to late-1800s, so we have a significant infrastructure backlog, both in terms of sewers and water mains as well as our treatment facilities.

One of the things we often forget about is our green infrastructure. We have about 370 kilometres of water courses. These are open channels, if you will, but they are part of our ravine system and part of our natural heritage.

I should highlight at this point that because combined sewer overflows contain raw sewage, much of the attention was directed historically across Ontario to dealing with the discharge of combined sewer overflows, particularly where the discharge impacted a beach area.

Fast forward a bit into the mid-1980s. The U.S. EPA as well as the Ontario Ministry of the Environment undertook a number of studies to look at the characterization of wet weather flows, in which they were looking at the makeup of storm sewers and combined sewer overflows. Curiously enough, coming out of the very fulsome and detailed technical assessments, what they found was that the water quality— the chemical constituents—in stormwater was very similar to that for combined sewer overflows for many contaminants.

The data are very variable, so that statistically speaking, when you compare the concentration in storm sewers with that of combined sewer overflows, they are statistically speaking similar, save for a few parameters such as bacteria and some of the nutrients, which for combined sewer overflows are higher, notably because of raw sewage. But for most water quality parameters they are similar.

I want to dwell on the bacteria piece for just a second. The Ontario provincial water quality objective for bathing beaches is 100 counts of E. coli per 100 millilitres. The concentration in combined sewer overflows is typically about a million counts, and in stormwater, it's typically on the order of a few hundred thousand counts. So in both cases, you're three to four orders of magnitude higher than where you need to be to protect those beach areas for swimming. The bottom line is that if we're going to get serious about water pollution in the Great Lakes basin, and certainly in the near-shore, we have to deal with stormwater runoff as well, in addition to combined sewer overflows.

● (1545)

In 1987 the International Joint Commission or IJC identified Toronto as an area of concern, largely dealing with the impacts of the impaired beneficial uses associated specifically with the discharges of combined sewer overflows and storm sewers. These discharges not only impaired water quality but aquatic biota and fisheries, sediment quality, and benthic invertebrates. They contributed to fish consumption advisories, loss of fish habitat, and nutrient enrichment, which also contributed to nuisance algal growth.

I noted earlier that most of the action had focused on projects specific to sewer discharges in a localized area. In 1998 the City of Toronto amalgamated six local municipalities with one regional government. That basically provided the necessary framework to deal with stormwater in an integrated way and led to the development of the city's wet weather flow master plan. The plan was innovative on a number of fronts. One is that it was a watershed-based plan extending across all six watersheds. I need to highlight that all of the watersheds except one extend well beyond the city limits, but the city undertook this on a watershed basis, in the way that you need to do to deal with stormwater across all six watersheds.

It also used a hierarchical approach to looking at stormwater, meaning that we looked at a number of options, beginning at the source. Where rain falls onto an individual lot or property, what are the kinds of things we could do to reduce stormwater runoff or improve water quality? One of the basic things is the disconnection of roof downspouts from our sewer system.

Then we looked at the conveyance system within the municipal road allowance. What could we do there to do much the same thing? Options that we considered looked, for example, at introducing leaky pipes instead of the conventional plastic or concrete pipes for stormwater runoff, to basically let the stormwater infiltrate into the ground in order to try to re-establish some of the natural hydrologic cycle.

Then ultimately, for what you couldn't achieve at source or within the conveyance system, you have “end of pipe”. We looked across the entire city at open space opportunities where we might be able to construct a stormwater pond or wetland. As well, we looked in the downtown core, where we are space-constrained—there is no open space available—and had to bite the bullet and look at underground storage systems, such as underground tanks or storage tunnels.

The development of the plan relied on computer simulation modelling, so we were looking at “what if” scenarios and at what the expected improvements would be in water quality within our watersheds. We had a whole lake model, which looked at the impacts of the watersheds and the sewers so far as the waterfront area of the city was concerned, as a way of helping us to direct the final outcome of the planning and assess the pros and cons of the various options. One of the factors was cost, obviously, and the timeframe for implementation. The plan was undertaken in accordance with the Province of Ontario's Environmental Assessment Act, with fulsome public consultation, including consultation with such stakeholders as the approving agencies, through the entire process.

Here are some of the salient outcomes of the plan.

Mandatory downspout disconnection was one. The city took the bull by the horns and mandated the disconnection of all residential roof areas from the city system in a phased approach, so that by the year 2016 some 350,000 properties will have their downspouts disconnected.

About 20% of the city is serviced by roadside ditches.There is a requirement to maintain the existing roadside ditch system, because we recognize the hydrologic as well as the water quality function of the system.

Then in the longer term we identified areas in the city in which there would be an opportunity to install these leaky pipe systems as the city renews its aging infrastructure. Then ultimately, at the end of the system we identified across the city opportunities for about 170 green facilities or stormwater ponds or wetland areas.

Unfortunately, where we were space-constrained we had to bite the bullet and go underground, with underground storage systems, tanks, and tunnels, and so we identified 16 combined sewer overflow facilities and 27 stormwater facilities underground.

While we have already constructed a number of these facilities, arguably the most significant project that we have under way is what we call the Don River and central waterfront project. From our standpoint, the implementation of that project will, we hope, ultimately lead to the delisting of Toronto as an area of concern.

The project deals with most of the remaining combined sewer overflows in the city—about 50 of them in total—and involves the construction of an interconnected deep tunnel system 23 kilometres long, located largely along the lower Don River and right across our central waterfront area.There are 15 underground storage shafts, each approximately 30 metres in diameter and about 50 metres deep that, in conjunction with the deep tunnels, will store about 570,000 cubic metres of wet weather flow.

An innovative high-rate treatment facility based on the technology we've been testing with our colleagues at Environment Canada over the last decade would be constructed abutting our Ashbridges Bay sewage treatment plant.

● (1550)

The flows from this integrated storage system would be treated through this high-rate treatment facility, ultraviolet disinfection, and discharged to Lake Ontario.

We've undertaken computer simulation modelling based on all of the work that we've done. We feel we can achieve water quality improvements to the inner harbour, which was really where the designation of the AOC for Toronto all began. Most of the inner harbour would meet international blue flag criteria for swimming beaches if the City of Toronto opted for the creation of swimming areas in the inner harbour.

The Chair: We're just a little over time. Can you wrap it up quickly?

Mr. Michael D'Andrea: Yes, I'm done.

The total cost of the project is $1.5 billion, and 25 years to construct. The funding, thus far, over that timeframe would be based on revenues generated within the City of Toronto through the sale of water.

The good news is that we're about to launch the project. We have a report going to our committee next week for the contract award for professional engineering services to begin the design of the first phase, which is the 11 kilometres of the tunnel.

Mr. Chair, if I could beg your indulgence for just one minute, I need to recognize the fact that I know there was an interest in talking about climate change adaptation strategies in the City of Toronto to deal with urban flooding as well as the work we've done for source water protection in the near-shore area of Lake Ontario. Time does not permit, but I include a few references to presentations I've made recently. They get into a lot more detail in that regard.

I apologize for that.

The Chair: Thank you, Mr. D'Andrea.

I just want to draw to the committee's attention the fact that this PowerPoint was prepared by Mr. D'Andrea for today's presentation. Unfortunately, our rules do not allow it to be distributed because they're not in French and English.

I would urge members as they leave to pick one of these up. I found it extremely helpful as you were going through your presentation. At the very least, I think it is incumbent upon members to avail themselves of this really good information.

Could we have unanimous consent to distribute these now for this particular meeting?

Some hon. members: No.

The Chair: Just so you know, committee members, they are available for you.

Ms. Mylène Freeman (Argenteuil—Papineau—Mirabel, NDP): Are we going to be getting them translated?

The Chair: Translation is a huge....

Can they be translated, Mr. D'Andrea?

Mr. Michael D'Andrea: Mr. Chair, what you will see in the presentation is it's very visual, a lot of photos and graphs, and there is a limited amount of text. It could be translated. We could take a stab at it and get it over to you.

As I said, it is not very text-heavy. It's more visual. I was wanting to introduce it in terms of impact.

The Chair: It's extremely helpful. I'll just leave it at that for now. We will see whether we can get these translated at a relatively low cost and rapid pace.

We'll move now to Mr. David Ullrich, Great Lakes and St. Lawrence Cities Initiative.

Mr. David Ullrich (Executive Director, Great Lakes and St. Lawrence Cities Initiative): Thank you very much, Mr. Chairman, and members of the committee. I greatly appreciate this opportunity to speak with you today.

I am the executive director of the Great Lakes and St. Lawrence Cities Initiative, which is a coalition of 112 U.S. and Canadian cities, representing about 17 million people across the basin. The focus of our work is on the protection, restoration, and long-term sustainability of the world's premier freshwater resource.

We are particularly fortunate in Canada and the United States to have a long tradition of working together, embodied originally in the Boundary Waters Treaty of 1909, which more specifically was translated into the Great Lakes Water Quality Agreement, originally in 1972.

Because of the international nature of this resource, it is absolutely essential that we work together in harmony between the U.S. and Canada, and our organization is fully committed to that principle.

Under the water quality agreement, as has been referenced by the earlier speakers, there were areas of concern designated by both countries. Originally there was a total of 42—one was added to make 43 later—with 12 in Canada, and we share 5 jointly. It was the consensus then that these were the locations that were the most contaminated, and as their name suggests, the primary areas of concern. A tremendous amount of attention, time, and energy is put on them.

Canada is to be commended because three of yours have been completely cleaned up and delisted, and one is what's called “an area of recovery”. We haven't done quite so well on the U.S. side. In terms of the remaining ones, the two cities represented here have the distinction of probably having the biggest challenges: Toronto and region, and Hamilton harbour. Again, a lot of the experience in the past and the plans for the future, I think, are very impressive and cause for optimism.

The ones that we need to be working on together between the U.S. and Canada are the Detroit River, the St. Clair River, and the Saint Mary's River. If you look at these beneficial use impairments, those are the ones that have the most impairment and will require a great deal of cooperation and collaboration to accomplish the ultimate delisting. Thunder Bay and the Bay of Quinte are two other locations where there is particular concern.

The strategies and practices that have been developed under these areas of concern, and the remedial action plans, have advanced significantly over the past 25 years.

First of all, with regard to management of contaminated sediments —and as you've heard, there's a big issue with Hamilton harbour— that were basically caused by industrial and municipal discharges over the years, there are three basic strategies. First is completely taking them out, removing the contaminated sediments and disposing of them off site. Second is collecting them but disposing of them in a secure location on site, or, third, capping them in place where there's lower contamination. That has really advanced significantly, and particularly the means of hydraulically dredging the material. It's basically like a big vacuum cleaner, and rather than digging in with a shovel and spreading it all over, they suck it out. It causes very little broader contamination.

These types of developments have occurred over the years, and I think both Hamilton harbour and Toronto will benefit from them.

Another major source of contamination has been municipal waste water and stormwater. I might say that Mr. D'Andrea is recognized for his excellence in this work, and I think Toronto has set an excellent example for across the basin.

Infrastructure improvements and advancements in treatment technology and management practices, like these tunnels and reservoirs, are really the ways we can deal with this problem more effectively in the future.

Stormwater, as has been mentioned, can be contaminated both from surface runoff and when combined with other sewers to cause pollution and the like.

● (1555)

Again, progress is being made on both of these fronts.

The added factor now is this green infrastructure approach. There is a lot of optimism about that for the future. There is not as much certainty about what kind of results you can get from it, but lot of good work has been done in that area.

Directly related to this stormwater runoff problem is climate change. I can tell you, from our members, and across the basin on the Canadian side, Thunder Bay, Wawa, Goderich, Mississauga, Hamilton, and Toronto have been hit by incredibly intense precipitation events. The damage to the infrastructure, in addition to the difficulty in managing the water itself, is a huge challenge for everyone across the basin. Some places don't have enough water, we've got too much all at one time. Figuring out how to deal with that is a real challenge.

Our organization, with some assistance and funding from the Province of Ontario, has launched what we call a municipal adaptation and resilience service, where we are trying to take best practices and best technology and best information from across the basin and provide it to our 112 cities so that they can essentially leapfrog technology and move ahead.

Another problem, an area of concern, and you may have heard about it today, relating to Lake Erie are the nutrients, specifically phosphorus, and the resulting algal blooms and the hypoxia, which is essentially a dead zone in the lake. I know on the Canadian side there is an important commercial fishery on the north side, and on the Ohio side there is a recreational fishery.

Just today, the International Joint Commission has come out with some very significant recommendations about the reductions that need to be achieved. It's not going to be easy. It will be controversial, but the technology is there. What's most important is the will of the people and the will of the governments to forge ahead with that.

I feel obligated to talk just briefly about a problem that isn't normally thought of as a water quality problem, but in fact is, indirectly, and sometimes directly, and that is invasive species. I think you may know that Asian carp are knocking on the door of the Great Lakes in my hometown of Chicago. I've spent a good part of the last three years trying to figure out how we can get a consensus around how to keep them out. We're making some good progress on that but it's critically important. This is causing tremendous damage to the Great Lakes. Our two governments together spend $20 million to $30 million a year just dealing with sea lampreys. It's a huge problem and we need to deal more effectively with it.

One of the mechanisms that helps us work more effectively on the Canadian side is the Canada-Ontario agreement. Now that we have a water quality agreement it's very important that agreement be finalized between the province and the federal government. Then we work with Ontario and we have a memorandum of understanding so that we can integrate local government work with provincial and federal government work.

Gentlemen and ladies, thank you again very much for the invitation and the opportunity to speak. I will be happy to answer any questions that you might have.

● (1600)

The Chair: Thank you very much, Mr. Ullrich.

We're going to move now to our opening rounds of seven-minute questions.

I want to remind committee members that we have agreed to reserve about five minutes at the end of our committee for committee business, which will be in camera.

We're going to move now to the first question.

Mr. Woodworth, seven minutes.

Mr. Stephen Woodworth (Kitchener Centre, CPC): Thank you very much, Mr. Chair.

Great thanks to all of the witnesses; your information was fast and furious and I know I'm going to have to read the transcript at the end of the day, but I found it refreshing and upbeat and very positive. In particular I was quite interested to hear the anticipated beginning of delisting in 2020 from Mr. Murray.

I have a lot of questions for everybody but maybe I'll just start with Mr. D'Andrea.

I don't want to put you on the spot if this isn't possible, but do you have any expectation or prognosis about the delisting of Toronto and when that might begin?

Mr. Michael D'Andrea: My short answer is no, I do not. I think, as I said, for Toronto, our signature project is the one that I mentioned, the Don and central waterfront project. As it stands right now, we have forecast a 25-year implementation period if the project were solely funded through Toronto revenues.

I need to highlight one important point and it's not unique to Toronto, it's how most municipalities in Ontario fund their water and waste water infrastructure. It is really through the sale of water. When you have a limited funding envelope the core business for us is the provision of safe and reliable water and waste water services. Because we have an aging infrastructure, that is the first priority. You tack on environmental objectives as being sort of the next pillar, and then you tack on to that, as David mentioned, our climate change adaptation, which is presenting significant financial pressures on the limited funding that we do have available.

Mr. Stephen Woodworth: In this regard I'd like to ask you about an item that came to my attention and you tell me where it fits in, if you know about it. I'm told the federal government has provided $300,000 of funding toward what is described to me as the Don and waterfront trunk sewers and combined sewer overflow control strategy class EA project. Does that mouthful mean something that you can interpret for me?

Mr. Michael D'Andrea: It was the precursor to the project I just mentioned. We have to complete an Ontario environmental assessment process, and that contribution, which we welcomed with open arms, assisted us in getting that project through that front end, the planning.

We're now in the process of actually undertaking the design. So it's quite exciting for those of us who have been in the industry to now see the light at the proverbial end of the tunnel with this next contract award.

Mr. Stephen Woodworth: During my years on this committee I have heard often about the green infrastructure funding programs that the federal government has engaged in and a whole raft of other infrastructure funding. Have you made application, or do you expect some success in relation to this 25-year project in accessing some of the federal government's green infrastructure or other infrastructure funding?

● (1605)

Mr. Michael D'Andrea: The funding applications are certainly made by the city, as you can appreciate, with the needs of the city being multi-faceted. It really is, in many cases, a political decision in terms of which funding source they approach. I know that transit has been priority one for the last number of years. My hope is that as we complete the detailed engineering design, where we now have a bona fide implementation plan, we will make a concerted effort to seek funding.

I should also acknowledge that the federal government through the infrastructure stimulus funding did provide—the number escapes me right now—in the order of $2 million to construct the largest stormwater management pond in the province of Ontario. It's quite a striking facility nestled right in the middle of the city. So for that we are grateful.

Mr. Stephen Woodworth: In fact, I was going to ask you about that. You did mention 170 storm ponds and wetlands across the city. So we know at least there has been that amount of federal money going into those projects. Is there anything else along that line that you can tell us?

Mr. Michael D'Andrea: Just to qualify, on this one pond that I did make reference to, we were fortunate to have funding. The other 170 some-odd projects are in various stages of planning, design, and construction. Admittedly, we will be making funding applications if these projects conform to the criteria, but we haven't yet.

Mr. Stephen Woodworth: Maybe I could ask you to talk a little bit, Mr. D'Andrea, about what the impact of improved water quality is on the Toronto waterfront community. Starting with the population, what population is affected by this? What is the impact of these improvements on them?

Mr. Michael D'Andrea: As I said—one of the cornerstones in terms of David's point—the impaired beneficial use that most affected Toronto was our waterfront beaches. We pride ourselves as being the largest city in the country and having 11 beaches across our waterfront. Arguably, the wet weather flows, and the multitudes of them—the combined sewer overflows and the storm sewer discharges, the riverine discharges along our waterfront—have been most problematic in terms of impairing water quality. We have made significant strides forward in improving water quality at those beaches but much work remains, particularly at those beaches that are located at the mouths of river systems.

In addition to that, for those of you who do know Toronto, our inner harbour, which is really where the designation of this area of concern originated, is without question probably the most challenged body of water within the city. It is the area that is receiving most of the combined sewer overflow discharges. From my standpoint, I will refer to it as the high-rent district. This is where the high-priced condominiums are, and you can only imagine if looking out your window during one of these heavy rains, you see floatable material that is a result of the discharge across that waterfront area as well as the lower Don River, which has been the poster child for being one of the most heavily polluted rivers in the country.

Mr. Stephen Woodworth: Has your city received assistance, as we heard Hamilton has, from Environment Canada's Centre for Inland Waters? Did those scientists get involved in your efforts too?

Mr. Michael D'Andrea: Absolutely. As I noted, we are quite excited about this high-rate treatment facility that we would like to construct as soon as the first leg of our tunnel system is constructed. We have been working with our colleagues, scientists, and engineers at Environment Canada for over a decade, looking at different technologies and how you would squeeze efficiencies out of that technology. Working with them, we retrofitted a stormwater tank at one of our sewage treatment plants based on computer modelling and physical models that were undertaken at the inland waters centre.

The Chair: Thank you, Mr. Woodworth. You're time is up.

We'll move now to Mr. Choquette.

[*Translation*]

Mr. François Choquette (Drummond, NDP): Thank you, Mr. Chair.

I would also like to thank all of our witnesses for joining us today.

As I was saying earlier when the mics were off, I am really glad that you are here and that we're doing this study on the Great Lakes. I think it's critical. The Great Lakes are a vitally important source of drinking water for your cities. In fact, Canada should have a national water strategy, but unfortunately, that has yet to happen.

My first question is for the three of you, but perhaps a little more so for Mr. Ulrich given that he talked about this.

The Canada-Ontario Great Lakes water quality agreement expired in 2012. The government promised that the agreement would be renewed quickly. Unfortunately, we still have no agreement.

Were your cities consulted on their needs as part of the agreement? Does Ontario consult with you so you can make recommendations to the federal government?

● (1610)

[*English*]

The Chair: Mr. Ullrich.

Mr. David Ullrich: What we do is interact primarily with the province on this. The federal government is very aware of our interest in this. But obviously in respect of the way business is done in Canada, we basically have waited until the federal government and the provincial government sort out the essential elements of the Canada-Ontario agreement. The reason it has been held up is that the water quality agreement from which the Canada-Ontario agreement flows wasn't final until just a little over a year ago, February 2013.

There were a lot of things that needed to be done in terms of getting the new water quality agreement up and running, and my sense is that there was just so much going on at once, it was difficult to focus on the Canada-Ontario agreement very specifically. We think it's very important that it go forward.

We have had preliminary discussions with the provincial government about the types of things that we think would be helpful in that agreement and once we have a memorandum of understanding, really kind of setting priorities within the agreement so we can have an understanding and agreement on what's most important to move ahead with first. But we think it's absolutely essential that it happens sooner rather than later.

[*Translation*]

Mr. François Choquette: Thank you.

Mr. Ulrich, you talked in general terms about climate change and its impact. The flooding in Thunder Bay, among other things, was mentioned. I am convinced that climate change is putting pressure on Hamilton and Toronto to adapt their infrastructure as well.

You talked about runoff, flooding and places that don't have enough water. And given the presence of ports, you probably have to monitor water levels there too.

I assume all of those things are included in your list of requests for the Canada-Ontario agreement on Great Lakes water quality. In other words, financial consideration needs to be given to climate change and investments need to be made in green infrastructure in order to adapt and to even out the situation as far as flooding and drought in other areas go.

Is that part of what you are asking for? The question is for all three of you.

[*English*]

The Chair: Mr. D'Andrea.

Mr. Michael D'Andrea: Perhaps to provide a bit of context, it's not unique to Toronto. We've experienced a number of extreme weather events over the last number of years. In Toronto, the history goes back to about the mid-1980s. In August of 2005, we had the biggest storm since our regional storm, Hurricane Hazel, in 1954. We had over 4,500 instances of basement flooding. It forced us through our council to take a very critical and hard-nosed look at our infrastructure because the initial feeling was that it was old infrastructure, and that basically it was just not able to deal with this. It was dilapidated infrastructure.

As we did our detailed reviews, there was nothing wrong with the infrastructure. The infrastructure in the areas that were most impacted was built in the 1950s and 1960s. In Toronto, that's some of the newest infrastructure that we have. It simply wasn't designed for these extreme storms.

I'll throw some numbers out, and I apologize. We designed our storm drainage systems back in the fifties and sixties for a one-in-two-year to a one-in-five-year return storm, a storm that you would expect to see every five years, for example. That storm, August 2005, was in excess of a one-in-100-year storm. One of the things that we found was that during that period, and this is not unique to Toronto, we developed just as quickly as we could get approvals and we could get the servicing in place, so in the Toronto context we have what I'd call a series of soup bowls, and we have houses in those soup bowls. If you're at the bottom of the soup bowl, then once that sewer system is overloaded, it's going to begin to flood, and as a result of that flood, water ends up in our sanitary sewer system, and then it basically backs up into people's basements.

Council directed us to provide a much higher level of service, to a one-in-100-year storm. It's the level of service that we provide for new development in the province of Ontario. You can imagine what it would take in terms of infrastructure to intercept that storm volume that otherwise would have just ponded in the middle of that urban centre. It's unbelievable. It's massive. We have very little room to put stormwater ponds because there isn't much green space in these areas. You're looking at twinning-pipes underground storage systems.

To be very brief, we're wholly supportive of green infrastructure, but when you look at green infrastructure, you can probably intercept maybe 5 mm to 10 mm of rainfall. The storm that we were dealing with was 150 mm, so you need much more than green. Green helps, but it doesn't get to the root cause of one of these major storms.

The fact is we're seeing these storms more frequently than we have before. It's incumbent upon us to do something about it, but it requires an infusion of funding for that.

● (1615)

The Chair: Thank you very much. Your time is up.

We'll move now to Mr. Sopuck for seven minutes.

Mr. Robert Sopuck (Dauphin—Swan River—Marquette, CPC): Thank you very much. I found all the presentations extremely interesting.

I'd like to ask Mr. Murray a question about the Randle Reef project. I understand that our government is partnering with you on remediating that particular site. Could you describe that project for us?

Mr. Chris Murray: You're absolutely right, the funding of that $140-million project is split between the federal and provincial governments and the community equally. Basically, what we have is a coal tar deposit that is equivalent to what we believe is in Sydney, Nova Scotia, and it is a containment strategy that we are all sharing in the funding of. Work will be under way starting next year and it will extend over about a 10-year period. Effectively, what we intend on doing is containing and capping it, and overtopping of that we will create a hard asphalt membrane, which will be utilized by the port authority.

It is a project that's been long on the books. It is a significant contribution to cleaning up the harbour as this deposit has been there for several decades. The technology being used, I think, was described earlier. It's exactly the same. It's one of these things that the community was quite happy to finally come to a conclusion with. As I said before, the federal government I think did a great job of helping to lead us to this conclusion.

Mr. Robert Sopuck: Our bias, of course, is for spending taxpayers' money on projects that actually generate real environmental results, so this is one that our government is particularly proud of.

I was fascinated, Mr. Murray, when you said that about half of Hamilton and the area is agricultural. Did I hear that right?

Mr. Chris Murray: Yes. I think the image of most people...and I'm originally from New Brunswick, so my stereotypical understanding of Hamilton before I moved there was that of the industry and the harbour and the pollution. The truth is that we are more than 50% rural, agricultural. Our urbanized area is growing, but by and large our economy is much more diverse than it's been in the last several decades. We're no longer just a steel town. We are probably one of the more diverse economies in the country. We're more of a knowledge economy than we are really manufacturing.

Mr. Robert Sopuck: In terms of runoff, sometimes the intensification of agriculture can increase runoff and create issues with phosphorus. Do you see that in your area? And if so, how would you deal with that, or any non-point source pollution issue, for that matter?

Mr. Chris Murray: I'll start and I know John is going to want to talk about this as well.

We have over the last several decades been focused on the contributions to the harbour from our water/waste water treatment facilities and as well dealing with problems such as the coal tar situation that Randle covers. Our shift now is more to what happens at the headwaters of these stream systems. Watershed planning is obviously key to our future, and the rural area, obviously, does contribute to some of the problems that we experience downstream. We are meeting with John and the conservation authority from Hamilton, as we speak, to start to forge more of a strategy for dealing with that runoff.

John, maybe you could contribute.

● (1620)

Mr. John Hall (Coordinator, Hamilton Harbour Remedial Action Plan, City of Hamilton): One of the things that we did over the last few years was studies with monitoring instream during storm events to see how much phosphorus and sediment were coming through the system. This was done in conjunction with both Environment Canada and the Province of Ontario. It's no surprise but as you get through a storm system, you find that at the peak flow times, there are extremely high levels of phosphorus and sediment. The take-home message is if you see dirty water flowing through the stream, it's not just sediment-laden, it will likely be heavily laden with phosphorus.

To give you a feel for things, our watershed contributes about half the flow into Hamilton harbour. The other half, as it was previously mentioned, comes from the waste water treatment plants.

In the past, the heavy burden of phosphorus that was contributed by the waste water treatment plants overwhelmed the watershed. Now, with upgrades that are going to be taking place to these waste water treatment plants with tertiary treatment, it's our watersheds that we have to focus on. And we literally have to cut in half the amount of phosphorus coming into the watershed.

The simplest analogy is that right now we have an amount of phosphorus every day going into Hamilton Harbour that is about four times the equivalent of my body mass—every day. Four guys like me, made up of phosphorus, jump into the harbour. We will cut it down to one person jumping in, made out of phosphorus, from our waste water treatment plants, and we need to do the same in our watersheds.

Mr. Robert Sopuck: Obviously, that will require an interaction with the agricultural community. I'd be interested in hearing about how you're coordinating this with the agricultural community. Second, I don't know if you've heard about the New York City watershed project. You have heard about that? New York City sent funds upstream and paid producers to change their farming practices, which resulted in very significant improvements in water quality for New York. Would you be willing to entertain that kind of program, assuming there was help from other levels of government? And I'll make the point that out of the Growing Forward program under our agriculture policy framework, those kinds of projects can actually be funded.

I was wondering if you would be interested in looking at those kinds of policies.

Mr. John Hall: We have two task teams that we've put together for watershed. One is the rural watershed; the other is the urban. And it's exactly programs like that, that the rural watershed people would be looking at.

I want to make it clear, though, that if you look at the amount of phosphorus and sediment that's contributed in most watersheds, and certainly in the Hamilton area, per hectare area, your urban area will generate much more phosphorus and sediment per hectare than your rural area will, under normal conditions.

The Chair: Thank you very much.

Thank you, Mr. Sopuck.

We'll move now to Mr. McKay for seven minutes.

Hon. John McKay (Scarborough—Guildwood, Lib.): Thank you, Chair.

And thank you, each of you, for your excellent presentations.

I'll start with Mr. Ullrich. This is something that was not in your presentation, but I've been thinking about it. We've had a brutal winter right across the watershed, if you will. I'm given to understand that Lake Superior has almost frozen over. It's the first time in maybe a generation that it's actually happened. So it's reasonable to anticipate that there's a lot of stored ice and snow that's going to be coming into the watershed in a potentially very short period of time. In your capacity, or in other joint areas of responsibility, what's been the thinking?

Mr. David Ullrich: You are absolutely right. Actually, as I flew over Lake Michigan today I didn't see any open water there either. The latest figure I saw, about a week ago, was 88% coverage across the Great Lakes. It went down a little bit, but with days like today the coverage is becoming greater, as well. It has been very cold and very snowy.

Just before our meeting, I was on the phone with Mayor Keith Hobbs of Thunder Bay. First of all, he said it was minus 40 there. This is going to be a very serious issue. We've had six feet of snow in Chicago this year, and most of it has stayed.

What is going to be critical is what happens in the springtime if we get a really strong warming trend right away. The real killer—and Mr. D'Andrea probably knows this better than I do—is when there's still snow on the ground and the ground is frozen, and you get a rainfall. The volumes of water that have to be dealt with are just phenomenal.

There isn't a whole lot that can be done right now other than knowing that it's going to happen. Just as an example of the way we try to operate, after Thunder Bay was hit so hard and their waste water treatment plant got knocked out completely, the mayor of Grand Rapids was in touch with the mayor of Thunder Bay. They had bad floods in Grand Rapids, Michigan, last spring. It wasn't a very high-tech approach, but basically people from all over the city came together and sandbagged around the waste water treatment plant. We can't do that long term.

● (1625)

Hon. John McKay: We can't sandbag the entire Great Lakes water system.

Mr. David Ullrich: No.

Hon. John McKay: No, I agree with that.

Mr. David Ullrich: So—

Hon. John McKay: I'm sorry, but I have to keep on moving here because of the shortness of time.

Your answer is not comforting, may I say.

Mr. David Ullrich: Sorry, truthful though.

Hon. John McKay: Yes, it's truthful but not comforting.

Second, with your invasive species issue, I agree with you on the Asian carp. That's a pretty serious issue, and it is a bit disconcerting.

In terms of ballast water in ships on the Great Lakes, the EPA has put in a regulatory framework. It was imposed last month. I'm given to understand that there's very little likelihood that many ships can actually comply with that regulatory environment, and that, only coincidentally, any ship built prior to 2009 is exempt from that regulatory requirement, which only seems to be coincidental that it is in the entire U.S. fleet but it would apply much less so to the Canadian fleet.

Is my factual rendition of that issue correct, and if so, where are we going to go from here? It seems to be a use of a regulatory environment to be unfairly discriminatory against one side of the fleet as opposed to the other side of the fleet.

Mr. David Ullrich: As with most things on the Great Lakes, it's not really simple and straightforward.

First of all, we have to make a distinction between the salties and the lakers. Through the political process, on the U.S. side at least, the lakers are not subjected to the same requirements that the salties are. That is a cause for concern both in terms of equity and.... Although the lakers, which operate completely within the lakes, cannot bring new invasive species from outside, they can spread existing ones. So there is concern about that.

The hope is that both countries are still requiring ballast water exchange in the open waters for the salties. There has not been a new invasive species detected since 2006, which is cause for encouragement. I think much more needs to be done to totally harmonize and make sure these are strictly enforced.

We're at a period.... It's moving in the right direction, not at the same pace on both sides and applying to all ships, but we're at least moving in the right direction, and we have to continue to push.

Hon. John McKay: I think there may be a little bit of a war on the Great Lakes over this—

Mr. David Ullrich: I hope not.

Hon. John McKay: —that is not very helpful to anyone.

Moving to Mr. D'Andrea, we had a huge flood event in Toronto this year, down at the bottom of the Don Valley Parkway in particular. You described this $1.5-billion, 25-year project of tunnels and reservoirs. Would that event have been more containable with your project?

Mr. Michael D'Andrea: To some extent. I'll throw a few other numbers to you. That system that I described would capture most of the flow from our combined sewer system that we would expect in an average year and provide for a spillage of one to two overflows. It wouldn't capture all of the runoff that we would have in a summer season. When you have a storm that approaches something to the tune of a one-in-100-year storm there will be some storage provided, but you're going to need something far more significant.

● (1630)

Hon. John McKay: If you're having these very frequent one-in-100-year events, should we be describing them as one-in-a-decade events?

Mr. Michael D'Andrea: Certainly when you speak to our residents, particularly those who have had sewage in their basements repeatedly over the last decade or so, there is no such thing as a one-in-100-year event.

It's unprecedented the level of control that the approach that Toronto has taken. I have some images and I said to someone that these residential neighbourhoods literally look like downtown Beirut. They look like war zones. We're basically ripping up every single street and putting in place these underground storage systems. To deal with the problem as you described on a watershed basis, I think the best hope for that watershed is the work that's taking place with respect to the flood plain and the flood protection works at the lower end in conjunction with waterfront Toronto and the conservation authority.

The Chair: Thank you very much, Mr. McKay.

We're going to move on to Mr. Bevington. We're now starting our five-minute rounds.

Mr. Bevington, please.

Mr. Dennis Bevington (Western Arctic, NDP): Thanks Mr. Chair.

I want to thank the presenters. That was excellent information today.

With Hamilton harbour you indicate the cost of the Randle Reef is $140 million and this mostly has come as a result of industrial pollution, is that correct?

Mr. Chris Murray: That's right.

Mr. Dennis Bevington: Is there any question of trying to attach some of these dollars back to the companies that created the situation?

Mr. Chris Murray: In our case the community contribution is from Halton region, the city of Burlington, the city of Hamilton, as well as U.S. Steel. U.S. Steel is contributing some of the metalworks that are associated with this construction project as well as a small amount of cash. Our total contribution is in the order of $46 million; their contribution to this project is in the order of about $7 million or $8 million. They are, I think, from historic practices deemed to be the company that has contributed most to the problem. They are in fact part of the community's contribution.

The Chair: I just want to interrupt for two seconds and I won't take it off your time, but again, this is another example, the city of Hamilton also did a great job of their presentation, it's not in both languages but those figures are in this form if you care to pick one up at the end of the meeting.

Mr. Dennis Bevington: The figures are important but the liability, was there any sense of liability on the part of the companies for this entire amount? In the process you entered into did you assign responsibility to the various businesses?

Mr. Chris Murray: That was, as you can imagine, a very sensitive topic. There has been a number of different owners of that steel-producing plant so where we were able to make progress was agreeing that some contribution would have to be made. In terms of any ongoing liability for any contamination to the harbour, they're not willing to be participants if there is going to be some kind of legacy responsibility. At the end of the day, as the city representative, we were satisfied there was at least some contribution coming from them.

Mr. Dennis Bevington: Do you think there is something to learn through this process for the future? As you mentioned earlier, you said the best result was simply not to put the pollution in the water. When you're dealing with these situations where there is pollution entering into the system, is there some process that should be established to assign responsibility?

Mr. Chris Murray: I think in fairness to the steel producers in Hamilton harbour, I would say certainly since 1990 to 2010, a lot of that $1.2 billion that has been invested in Hamilton harbour has come from not just local government but the industries themselves and retrofitting their operations to address water quality issues. I do think there has been responsibility taken the last couple decades. But there seems to have been about a 40-year period, say during the beginning of the Second World War and extending forward, where there was a race to the bottom in terms of contamination. In that area, very little seems to have been done. It's going to take us about another 40 years before we're able to turn it around.

● (1635)

Mr. Dennis Bevington: What would you say the current status is of the Randle Reef situation, the sewer outflows, and the water treatment plant upgrades? Can you give a percentage completed?

Mr. Chris Murray: In terms of the objectives in the Hamilton harbour RAP, which of course John can speak to, I think we're about 50% towards where we want to be.

We know that the major investments that are going to be made, starting in 2015 and ending in 2019, at both the Hamilton and the Halton water/waste water facilities are going to make a large dent in the problem. That's why we're saying that in 2020 we believe we can start to look at decertification. I'd say we're well on our way. Much of it has to do with the approach that's been taken through the RAP with the parties that have been working together for a long time and are still quite passionate.

The political involvement has been wonderful. There are annual events involving all levels of government and political representation. They are very well aware of what's being achieved each and every year. That level of engagement, I would say, along with the scientific community's being right in our backyard, has led to this momentum, which just hasn't stopped.

The Chair: You have about 30 seconds.

Mr. Dennis Bevington: I have a question for all three of you.

Have these municipalities at all used the Federation of Canadian Municipalities' green fund for any of the work that has gone on here, for the assessment or the planning or any of it?

Mr. Chris Murray: None has, Mr. Chairman, that I am aware of.

Mr. Dennis Bevington: And from Toronto—?

The Chair: Thank you very much.

I'm sorry, do you want to respond to that, from Toronto?

Mr. Michael D'Andrea: Again, Chair, I am not aware of such a use either.

The Chair: We're going to move on to Mr. Toet now for five minutes.

Mr. Lawrence Toet (Elmwood—Transcona, CPC): Thank you, Mr. Chair.

Thank you to our witnesses. I'm very appreciative of your time.

I want to start, Mr. Ullrich, with a question for you. In your introductory remarks you talked about the water quality agreement and the International Joint Commission. You also talked about strategies and practices for cleaning up the areas of concern having advanced significantly over the past 25 years.

Would you say that there is actually a very strong strategy on the part of this International Joint Commission going forward; that there is a real plan and a strategy as we approach these areas of concern?

Mr. David Ullrich: There is a good strategy and practice. I don't think it is as strong as it needs to be. I need to clarify something. The International Joint Commission itself is not responsible for this. In the first instance, it's the Canadian government and the U.S. government. There were remedial action plans associated with these areas of concern. They got off to a very slow start. Part of the problem was that there wasn't any kind of implementation money and, as we've heard concerning Hamilton, some fairly significant investments were required.

I think there has been significant improvement. Hamilton harbour is really a good example now, I think, in which you get a three-party —federal, provincial, and local government....

As was raised by the previous gentleman, the whole issue of liability on the part of industry—and I don't want to venture into that too deeply, because it's very complicated and controversial—has been a key part in the cleanup on the U.S. side.

The other element of planning and strategy that has been revised in the new agreement is the lake-wide action and management plans. Those hold promise for significantly strengthening the strategies across each lake individually, such that the work on the individual areas of concern can be integrated with the broader work across the lake so that there can be a more effective strategy lake-wide and binationally.

So my short answer is that it's not strong enough yet, but I think the groundwork is there to be much better in the future.

Mr. Lawrence Toet: But essentially you have two national governments that are very involved, going forward on this, and that have actually come together to create this joint commission. The reason I asked the question is that my colleague across the way rather implied that there was no federal involvement in any of this strategy. We actually have the federal governments from both the United States and Canada involved in a strategy on the Great Lakes, so it's not as though this has been left to a willy-nilly process.

● (1640)

Mr. David Ullrich: That is a fair statement. It is not willy-nilly.

In my 40 years in this work, I have spent almost as much time with Canadians as with Americans. I was at the federal level for 30 years and worked very closely with Environment Canada. It's absolutely essential.

Mr. Lawrence Toet: Very good.

Mr. D'Andrea and Mr. Murray, you both touched in your presentations on the work you did with the federal government scientists. In fact, Mr. Murray, you said they were key to the work and the success you've had in the Hamilton area. You also touched, Mr. D'Andrea, on the establishment of the Canada Centre for Inland Waters there.

Can you tell the committee how important and how instrumental the work with the Environment Canada scientists has been in being able to accomplish what you have accomplished to this point, and to being able to start with the plan that you've come up with?

Mr. Chris Murray: If I can, I'm going to ask John, through the chair, to respond, because he has been most closely associated with them over the last several decades.

Mr. John Hall: It's been absolutely essential. We have technical teams that are made up of government scientists from the federal government and the provincial government and universities. We had those scientists work hand in hand, literally around a table like this, with the community stakeholders in order to come up with the remedial action plan. We couldn't have moved forward without that scientific expertise. We couldn't have even begun the task.

Hamilton is in a unique situation. Many of the other RAPs don't have a Canada Centre for Inland Waters literally on their shoreline. The one thing, when it comes to recommendations to this committee, that I can't stress enough is the importance of that scientific base, which needs to continue to be there. And it needs to be throughout the Great Lakes system, so that they're not just looking at the Hamilton harbours and the Torontos, but at the other, smaller AOCs.

The Chair: Thank you very much.

I'm sorry, Mr. Toet, but time flies when you're having fun.

We're going to move now to Madam Freeman for five minutes.

Ms. Mylène Freeman: Thank you, Chair.

My questions are mostly directed at Mr. Ullrich, but if our other witnesses want to jump in with anything to add, please feel free.

My first line of thought would be to wonder how you identify and share best practices throughout the different municipalities. How are best practices different for small municipalities from those for larger municipalities, such as our guests here today represent?

I represent the kind of riding that has 42 municipalities, all very small towns. Obviously, their realities are very different from those of a city. How do you identify, share, and differ in best practices?

Mr. David Ullrich: It's a lot more difficult than it should be. In theory you would think that all of the cities would say, we're doing these great things and we want everyone to know about them. Honestly, people in cities are, first of all, so busy dealing with the next crisis that even being able to sit down and write down the key elements of it so that we can put it up on our website.... That's essentially how we try to do it, so that people have access to the website. That's the number one way that we do it.

Second, believe it or not, as I explained before, Mayor Hobbs talks with Mayor Hartwell and says, this is how we did it. That's not a very efficient way of doing it, but in fact it does work. You can't get it out to enough people.

Third, such things as this municipal adaptation and resilient service are ways in which we're trying to more systematically go out to all of the communities asking how they are dealing with this, that, and the other thing and match up that information with technical expertise wherever we might be able to get some outside assistance, then compile it and deliver it through a series of webinars, which we are doing right now. It shouldn't be as hard as it is, but it is.

A lot of good ideas come out of our smaller communities, and they don't necessarily translate directly into a best practice.

Let me give just one brief example, on access to beaches for disabled people. Racine, Wisconsin put out a little wooden platform so that a man in a wheelchair could get out to the water and get into it. He was so thrilled; he had never been able to get into the water. The next week I saw one in Chicago down at the Ohio Street Beach. It was just like that; it wasn't an accident—it was right after the annual meeting.

So it's not as systematic as it should be, but those are the ways we try to get the best practices out.

● (1645)

Ms. Mylène Freeman: Yes, Mr. D'Andrea.

Mr. Michael D'Andrea: To perhaps build on David's point, we hosted through the Great Lakes and St. Lawrence Cities Initiative a couple of very focused workshops that I recall quite vividly to your point. One was dealing with combines or overflows and it was best practices of municipalities within the Great Lakes basin. We learned an awful lot from each other, failures as well as successes.

Another one was a beach symposium where we heard lessons learned from beach management both in terms of water quality as well as beach grooming, drawing on experiences from both sides of the border. To David's point, I think we need to do more of that as an industry and municipal staff. The opportunities are limited as David said because we are so focused day-to-day on the impending or the current crisis. But we need to have more opportunities to just take a step back and get more engaged.

Ms. Mylène Freeman: I'm interested in what would be the major topics that could be shared. You said beaches but obviously if you are talking about waste water management that's clearly going to be very different from small municipalities to large municipalities.

What other issues would be good? Earlier you were talking about dealing with flooding, etc. Maybe you could name off a few of those things that could be...?

The Chair: Mr. Ullrich.

Mr. David Ullrich: Mr. Chair, if I could give one example that is really going all across the Great Lakes, big, medium, and small cities, it is phragmites, these invasive plants that are coming in and turning our wetlands into monocultures where they don't function effectively as a habitat or from a water quality or a flood control standpoint. They are like our kidneys on the Great Lakes. They are incredibly important. I go places where there are miles and miles of phragmites. They are hitting cities of all sizes. That would just be one example of where best practices would be helpful.

The Chair: Thank you very much, Madam Freeman.

We now move to Mr. Shipley. Welcome, sir.

Hon. John McKay: On a point of order, could we get a definition of phragmites?

The Chair: I think there might have been one just prior to his statement.

Mr. David Ullrich: I knew I would have to come to my true confessions, I am an English major lawyer. A recovering lawyer, though....

They are a plant that is not native. I don't think it's native at all to the U.S. or Canada. It has been introduced. Maybe John can bail me out on this but it is a tall and unfortunately very beautiful plant that has these leafy ends. It is not like the purple loosestrife, which is pretty too, unfortunately. It is better if they are not pretty. The phragmites are very tall and they have thousands of seeds on them. The establish themselves and basically squeeze out all the other plants. I don't know technically if there's a biologist in the house who can bail me out.

John, are you familiar with this?

Mr. John Hall: The only suggestion I have is when you're driving down the 401 and you see the very tall plants that look like a marsh cattail but they are much taller and they have a feathery top. Those are phragmites.

Hon. John McKay: I thought they were good plants.

Mr. John Hall: No.

The Chair: I need to admit that was probably the most bizarre point of order I've ever had to deal with but it was very educational.

Thank you, Mr. McKay.

Mr. Shipley, I'm not going to take your time off Mr. McKay's we'll take it off his next time.

Mr. Bev Shipley (Lambton—Kent—Middlesex, CPC): That I understand. I want to thank you, Mr. Chair.

I'm just visiting so we have a farmer talking to a lawyer. I would like just to chat with you, Mr. Ullrich.

I'm glad that you brought up phragmites. My riding comes along Lake Huron and before it gets to the St. Clair River it goes into my colleague's riding. I pick up a little bit of the St. Clair River before it gets to Lake St. Clair. The phragmites, particularly in Lake Huron in one of my areas, are a huge concern. Roundup does get it but it's the process you've got to go through to get it. I was just going to ask you how you're working with municipalities and the provinces to be able to expedite some process, because it's doing just as you said, it is choking everything out. This stuff can grow 20 feet high. It is a very invasive species. I'll leave that right now, you can talk to that.

In terms of the International Joint Commission, there was a blue-ribbon commission. I was involved municipally for a number a years and so I understand Ms. Freeman's concerns. I come from a very small rural riding, large, small towns, and mostly agriculture. One of the things we found in dealing between Canada and the United States was that we have different rules. When we talk about quality, obviously along the beach area, which is very well established on Lake Huron—it's a beautiful resort area—we have high density. A number of those cottage residences are in municipalities that don't have full services in, so we have septic tanks that are in sand. It makes a great system of moving product towards the water.

Then, obviously, I'm in a large and very tense agriculture area. We work with those two in terms of best management in agriculture, in terms of cropping and obviously in terms of livestock. With that we found with nutrient management planning, for example, in discussion with the blue-ribbon, there was quite a disparity between the United States and Canada. I can only speak for Ontario, where there were significantly more safeguards in place, I would say, province-wide than there were statewide at that time. Maybe you can help me with that, in terms of where that is now.

The third part I guess would be, in terms of municipalities. I had the privilege of being a mayor of a municipality for likely longer than I should have. It was a great experience. You learn a lot, not only about the agriculture but about how we have to work, and do work, with federal, municipal, and provincial, and our partners within the commodity organizations, and livestock, and farming, and industry. How are you working with municipalities to help coordinate quality management for our Great Lakes, because all our streams around in my area end up going to a main river or to the Great Lakes?

I know that's three, Mr. Chair, but I'm done.

● (1650)

The Chair: Good thing. We've got a very short time for your answer, about a minute and a half.

Mr. David Ullrich: I'll do my best.

Even though I am a recovering lawyer I grew up in a county in Wisconsin that had more cows than people, and they were often in my backyard in the morning. And I worked on a farm at one point.

In terms of being able to expedite the process, dealing with phragmites or whatever, we have not, as an organization, directly engaged in that. We're very small. To service 112 communities across the way, if we can engage possibly, through the memorandum of understanding that we have and will redevelop with Ontario under the Canada-Ontario agreement, that would be a good thing to do. I will take that idea back and see if we can focus on that to see if there can be some expediting of processes. Having worked for the federal government for 30 years, I fully appreciate that.

Second, in terms of federal, provincial, and municipal collaboration, I spend a lot of my life doing that. Just as an example, next week I will be out in Washington. We have Great Lakes Week every year, and by the way we are bringing a group of probably 15 mayors to Ottawa April 2 and 3 to engage more with members of Parliament and we look forward to that. I will be meeting specifically with Department of Agriculture people. As was alluded to before, this issue of how much reduction you get from a municipality versus how much from the agricultural areas, this is a potential huge battle brewing. I'm going to try to see if I can cut that one off at the pass and see whether or not we can start talking before we start fighting on this. There are some good projects under way, the Fox River in Wisconsin—

The Chair: Thank you, Mr. Ullrich. Hopefully we will come back to that, but we have to honour our time commitments.

I have to move now to Mr. Choquette.

● (1655)

[*Translation*]

Mr. François Choquette: Thank you, Mr. Chair.

First off, as I mentioned earlier, I want to reiterate how important the Great Lakes are for all Canadians. They supply nearly 35 million people with drinking water and account for some $4.4 billion economically speaking. That's huge.

We have received two letters on the issue. The first is from Fe de Leon, of the Canadian Environmental Law Association. In the letter, she indicates that she has spent more than 40 years working on issues related to the protection of the Great Lakes ecosystem and that she wishes to appear before the committee. We, the NDP, consider her to be a key witness who the committee should give priority to.

Nancy Goucher, a water program manager, is another person who would like to speak to the committee. She is going to send the committee a letter, and we think her request should be given priority.

We feel the committee should make hearing from both of those organizations a top priority. And we also want to point out how important it is that the committee hear from all stakeholders, municipalities as well as environmental groups. These groups have spent years examining these issues and are backed by very important scientists.

[*English*]

Mr. Lawrence Toet: I have a point of order. We have witnesses who are here to share their expertise, and I would request that the member ask questions that pertain to their expertise, and not go on about something that has nothing to do with their expertise.

The Chair: Mr. Choquette.

[*Translation*]

Mr. François Choquette: I didn't think that was a real point of order. No matter, I finished what I had to say on the subject, Mr. Chair. Thank you for giving me back the floor.

Coming back to you, gentlemen, I want to thank you once again for joining us today.

I want to discuss a topic we touched on, the wetlands situation. How are wetlands faring in your cities? I know the situation is serious in Quebec. Every year, we lose some. Wetlands filter water that ends up in the Great Lakes. In your regions, what shape are wetlands in? Are they in decline? Are they stable? Are you taking measures to address the situation? I'll turn things over to all of you.

[*English*]

Mr. David Ullrich: I would be happy to start, Mr. Chair. Your question is very timely, and your observation is very accurate.

Wetlands are a tremendously underappreciated part of the ecosystem. It's really where the water and the land interact the most. In terms of habitat for fish, birds, other wildlife, water cleansing, and helping to deal with the flooding problems, it's critically important. Obviously, the development pressures, particularly in urban areas, have resulted in the loss of a lot of wetlands over the years.

A report was released on the U.S. side in November, and I think it covered the Canadian side as well, but I am not certain. It stated that the Great Lakes region was the only area where there had been an increase in wetlands over the previous five years. The Gulf coast and the Atlantic and the Pacific coasts had all continued to lose wetlands. Within the Great Lakes and St. Lawrence community, there is a much greater appreciation for this, and this is recognized in a variety of programs. There's a really conscious effort not only to prevent the destruction of additional wetlands, but to restore ones that had been harmed.

[*Translation*]

Mr. François Choquette: I'd like to quickly throw it back to you.

You were very clear, and I am glad to hear that wetlands are doing well or, at least, that the situation around the Great Lakes is improving.

Should the federal government have a hand in restoring or protecting wetlands? Is the federal regulatory framework helping you? Could it help you?

[*English*]

Mr. David Ullrich: I am not familiar enough with the federal and provincial regulatory system on the Canadian side to speak to it. The federal government does have a role on the U.S. side, although it's a very controversial point. It's a long-debated legal question as to what constitutes a water of the United States and adjacent wetlands. One way or another, they need to be protected.

● (1700)

The Chair: Thank you very much.

Thank you, Mr. Choquette.

We'll move now to Mr. Sopuck for five minutes.

Mr. Robert Sopuck: I have a report here from Environment Canada that's just a little thing off their website. It's entitled *How Are the Great Lakes Doing?*. Under the section that says, "Can we eat the fish?", the first sentence says "Contaminant levels in Great Lakes fish have declined significantly from their historic peaks."

If the contaminant levels in fish are a proxy for contaminants in the ecosystem itself, it appears to me in terms of contaminants we're actually not doing a bad job in toxics and so on, and we're continuing that work with the Randle Reef.

I heard phosphorus mentioned a lot. We seem to have a toxics management plan in place. It will play out its course. So, Mr. Ullrich, are we now, from this point on, looking at the long term primarily as an issue of phosphorus in the Great Lakes and remediating that?

Mr. David Ullrich: I believe phosphorus is probably the most significant and dominant concern right now.

You are correct. We have made very good progress on toxics, and a lot of that had to do with the banning of PCBs and DDTs so we stopped the flow into the system. With projects like Hamilton harbour, where the legacy pollutants that are there already are taken away and secured, that is a further improvement.

We still have to be concerned about air deposition of toxics, believe it or not. That's the largest source now through air deposition —mercury.

Mr. Robert Sopuck: Mercury, then? Is it mercury?

Mr. David Ullrich: Yes, mercury from coal-fired power plants. But then there are emerging chemicals of concern, and Canada and the U.S. are working very closely on that to try to make sure we don't recreate the problem we had.

That is an area where we have made good progress. Really, phosphorus is not a toxin. It's a nutrient, but of the day it is the primary concern.

Mr. Robert Sopuck: I asked the question last time of witnesses, and I'll ask you again, Mr. Ullrich, or any one of you who has knowledge about this.

Anecdotal evidence suggests even though the zebra mussels are a negative for the Great Lakes and an invasive species, they have had some impact on water quality.

Can one of you talk to that issue?

Mr. David Ullrich: Again I am not an expert in this area, but this is what I hear experts say about it. The answer is no. Although water clarity has improved because of the zebra mussels, you need to understand the quagga mussels are quickly "out-muscling", if you will, the zebra mussels. I'm sorry, that wasn't intended.

They are processing many nutrients through their systems, and in some instances they are actually magnifying the effects of the nutrients once they process themselves through the system.

The other thing is they are having a negative effect on some of the other critical biota, in particular, diaporia. Especially in Lake Michigan and I believe Lake Huron, those levels have gone down dramatically. It's felt that is the responsibility of the zebra and quagga mussels. That's the base of the food chain for the sport and commercial fishery.

So I don't think anyone thinks they've had a positive effect on water quality, although some people say, "Oh, I can see deeper. It must be better." Not so.

Mr. Robert Sopuck: I appreciate that.

Mr. D'Andrea, I was interested when you talked about the issue of fish habitat. Just to let you know, in my remaining time, our government in the latest budget approved $50 million for something called the recreational fisheries conservation partnership program.

Of special relevance to you, there was a project in a marsh in the Mississauga area called Rattray Marsh—actually, I think right in town. The rehabilitation of that marsh was partially funded by the recreational fisheries conservation partnership program. I would recommend you have your staff have a look at that program because it's a partnership program, and it will fund up to $100,000 in terms of actual on-the-ground habitat improvement work. I certainly would be happy to discuss that with you offline at some point.

Thank you, Mr. Chair.

● (1705)

The Chair: Thank you, Mr. Sopuck.

We move now to Mr. Toet for five minutes.

Mr. Lawrence Toet: Thank you, Mr. Chair.

I had a question for Mr. D'Andrea. That's essentially regarding your 70 stormwater holding ponds and wetlands you spoke about as part of your plan. These wetlands, I'm taking it, are going to be in some of your new urban development areas.

We had heard in a previous study, when we had done quite a bit of work on urban habitat.... Some of our witnesses were telling us that actually there's a real interest in those areas for both a developer and for those who are looking to move into those areas. There's actually a real attraction, and people are willing to pay even an additional price to have this wetland habitat in close proximity to their homes.

Is this something you're seeing as being taken up by developers in your area?

Mr. Michael D'Andrea: Maybe just as a point of reference, I need to acknowledge the work that we do with the conservation authority to get back to the wetland area, and I apologize for that. But also critically important to your question and the fact that when we're looking to develop greenfield, I'll say, Toronto has very little greenfield left. It's pretty much all urbanized. But to your point, in terms of meeting stormwater quality management requirements, inherently if it's a large enough subdivision, as part of the stormwater management plan the developer through their engineering firm will propose a stormwater pond/wetland. So it's inherent within the makeup of that subdivision to manage stormwater runoff twofold. One is to control flow to minimize erosion in the stream to which it discharges; and second is the water quality component, which is critically important.

In Toronto's context, we have developed wet weather flow management guidelines. What we're seeing an awful lot of is redevelopment, and so we've imposed stringent criteria to developers who are developing in the city to actually provide on-site stormwater controls, and we prescribe a level of flow as well as water quality control.

Mr. Lawrence Toet: Is there really good pickup, though? Like you say, it's a criteria, but is there pickup from the developers that you're not having resistance but they're actually very willing and happy to do?

Mr. Michael D'Andrea: Again, so far as the greenfield development outside of the city of Toronto, it's pretty much standard practice in terms of meeting these very stringent requirements. For flow control, for erosion control, as well as water quality, you have to provide a stormwater pond within a large subdivision. To your point, generally speaking, I understand that the lots dotting the perimeter of these facilities are of higher value than the lots in the interior of the subdivision.

Mr. Lawrence Toet: Mr. Murray, could you also speak to that?

Mr. Chris Murray: Yes. The one thing that strikes me about this proliferation of stormwater ponds, whether they be for detention or for quality purposes, is not so much the building of them, it's the maintenance of them. I know the City of Hamilton has a number of C of As attached to much of the stormwater system that's been built in the last 5 to 10 years. We're a city that has a deficit of infrastructure spending in the order of about $200 million a year. We're just trying to catch up to our capital needs. Operating is a whole other problem. When I start thinking 10 years down the road and I'm thinking of health care costs and how much money is going to be spent in those sectors, where is the money going to be to maintain the system that we're building? It may work wonderfully now, but are we going to have the wherewithal to clean them out when they need to be in order to re-establish their quality benefits?

I don't have an answer for that. All I know is that we are building them and we are requiring the developers to include them, obviously.

I would never use the term “happy” with a developer. If they're happy, I've done something wrong.

Voices: Oh, oh!

Mr. Lawrence Toet: Very interesting, but I think it is important to note. That's why I keep on referring to it as a real wetland area that you're developing much more so than a retention pond. A retention pond has a lot of the issues and concerns that you are speaking about, as far as future maintenance of that, whereas a wetland area that is properly developed and built in the proper manner, the maintenance aspect of it actually goes way down. You'll see there's a natural maintenance of it, especially, as Mr. D'Andrea said, when you have flow levels that are controlled, etc. You can really have a continuous improvement in that wetland area without having to spend a lot of money on dredging or things like that. That goes back to the old way they used to do these retention ponds, but I think there's been a great uptake on that.

In fact, if you would need some information on that, I know Olds College, in Alberta, has been doing some great work on wetlands, and the building of those wetlands in these urban area and rural areas to make sure that we have that natural filter that we need.

● (1710)

The Chair: Thank you very much, Mr. Toet.

We're going to move now to Mr. McKay for the 30 seconds he has left from his previous five-minute round, when he asked about phragmites.

Hon. John McKay: Thank you.

The Chair: We'll give you five minutes.

Hon. John McKay: I think you phragmited my entire question here.

Voices: Oh, oh!

Hon. John McKay: For reasons best known to the government, they've decided to be pretty hard on the environment budget. You spoke very positively about the contribution of the Ministry of Environment to your projects, your harbour.

Have you seen the impact of these cutbacks?

Mr. Chris Murray: We haven't, just to be blunt. I think we've enjoyed commitments by both the federal and provincial governments in the last 5 to 10 years that we really have little to complain about.

Hon. John McKay: Okay.

You talked about a P3 on biosolids. It's hard for me to imagine what's in it for a private partner on a biosolids project.

Mr. Chris Murray: We're looking at a couple of different technologies so we're not curtailing the market here. There are two technology streams, one of which is to turn the material into pellets to effectively create fertilizers. There is a revenue stream that does come from that. I mean, the land application has been our issue. We're running out of time and space and, quite honestly, I think society's moving on that it's not going to tolerate much more in the land application, notwithstanding the water quality problems that it does generate as well. We're in the early days here. The RFP has not gone out yet but I think there was somewhere in the order of about $30 million of funding that's going to come from the federal government in support of this.

Hon. John McKay: Is this at a stage of research or is this—

Mr. Chris Murray: No, no.

Hon. John McKay: —a stage of applied research? Or is this at the stage of commercialization?

Mr. Chris Murray: Commercialization.... This is an RFP that's going to go out the door in the next, I think, four to five months from our shop. We've been working hand-in-hand with the federal government for over a year now. It's passed all the federal government requirements and we're basically ready to go to market.

Hon. John McKay: Thank you.

Mr. D'Andrea, the big issue with these extreme weather events, particularly the extreme precipitation events, is the rapidity with which the rain, or maybe sometimes the snow melts, will fill the system to overcapacity. Part of it is because of the way we built the cities. Or a good part of it is the way we built the cities. I have for years wondered why we parallel sidewalks in lightly travelled streets rather than simply having grass to curb or even replacing them with, if you will, passive ditches or whatever. Is there any conversation around, how should we say, taking out concrete, taking out pavement so that the rush of water is reduced?

Mr. Michael D'Andrea: To be honest with you, one of the biggest challenges that we have is the reverse. It's the interest of residents, particularly if they're in ditched roads and it doesn't happen everywhere, but in many cases they consider those drainage systems to be substandard, rural. In many cases in neighbourhoods they want sidewalks that do not exist currently because again they feel that they've been disadvantaged.

Hon. John McKay: I'm not following that. They want more sidewalks rather than fewer sidewalks.

Mr. Michael D'Andrea: They want more sidewalks and more curb and gutter, which is in the wrong direction.

The other thing that I need to highlight is that the area of stormwater management has continued to evolve over time. Currently in these new subdivisions, not only do you typically have a stormwater pond if the subdivision is of sufficient size, but we designed the sewer systems to the relative design as what we would have in place in Toronto now in the 1950s and 1960s. But what we do is we design the roads so that the road acts as an open channel. When the sewer system is overloaded, that extra stormwater runoff now flows along the road within the road allowance and then it typically outlets to a stormwater pond away from that residential area. So, we've come a long way.

The challenge for built-up areas like ourselves in Hamilton is what do you do in situation, to your point, where without question we're seeing these extreme storms more frequently? We have situations where people have had their basements flooded with sewage on a repetitive basis. What do we do? In Toronto we've taken this very aggressive approach but it is very costly.

● (1715)

The Chair: Okay, thank you, Mr. McKay.

We're going to move now to our last question, to Mr. Shipley—we'll give him a chance to finish up on his previous question—for five minutes, please.

Mr. Bev Shipley: Mr. Chair, I can't believe it. I'm just visiting so it's really great.

Mr. Ullrich, I've really appreciated your involvement. We had to leave a couple of things hanging in terms of that coordination. I'm glad that you've talked so much about phosphorus also because it does go back—and I didn't get a chance to talk about the coordination between state and our provinces, particularly around agriculture, because much of that phosphorus gets shifted to agriculture, whether it's all from agriculture or not. But we have our part to do—and I farm.

I'm wondering what sort of coordination can you help bring to state and provinces. I may be a few years out now so I may be out of touch a bit but, I can tell you at that time—in my municipality and in our counties and then to the province—we had much stricter land management practices. Is there a coordination of that between the provinces and the states in terms of the joint committee?

Mr. David Ullrich: Sir, your timing is perfect. There is no better opportunity to have that kind of cooperation than we have, really, as of today. The International Joint Commission essentially, through a very intensive study that has been essentially confirmed by other parallel, university studies, has quantified the kinds of reductions that we are going to have to get.

Starting with Lake Erie—and this can be the perfect example—the states of Michigan, Ohio, Pennsylvania, and New York and the Province of Ontario should, under the auspices of the water quality agreement, be sitting down as early as tomorrow. Unfortunately it won't be tomorrow. It takes a little while to get all the people together and say that we have to get such-and-such amount of reduction in the western basin, in the central basin, and in the eastern basin and ask how we can equitably divide those amounts.

You could set aside the specific laws or whatever, because you can get wrapped around the axle very quickly with something like that. How much reduction can you get? What is an equitable reduction from either side?

Then most importantly, a lot of this is going to boil down to best management practices.

Some of the suggestions are these. Don't apply any of the phosphorus—and you're a farmer, and you know better than I—in the fall. Second, don't apply it on frozen and snow-covered ground; it's much more a question of the proper application at a time when you can get the absorption. Obviously you can't control the rain, but you can control the timing and the weather conditions—whether it's frozen land, or in the fall.

I think there is this opportunity for the province and the four states to sit down and ask how they can come up with an equitable way and how they can share the best practices under the auspices of the International Joint Commission.

Mr. Bev Shipley: Just quickly concerning municipalities, one thing I have found is that in my area, it seems that they will come in and.... We talked about what I call swamp, but marsh and wetlands. They will come in and, it would seem, be able to make the crusher to the urban area, because there are defined perimeters for urban areas. Then there's development that has to happen within it, whereby a number of acres will all of a sudden.... There's a machine that comes in and strips all the trees, and then the next time you come back, there's bare land. Then they bring in about five feet of topsoil or dirt to bring it up.

If I want to square up a farm, I have to go through a process and agree—which I will do—to replant trees someplace else.

I'm wondering how we get some control, if that is the right word—and it may be too big a word. I'm concerned, because there seems to be a disparity of authority in terms of who can cover marshland or leave a little bit of it. The stewards of the land, the agriculture people, are much more conscious, it seems, that if we're going to take some out, we're going to replant trees and are going to make sure that we protect those areas.

How, as municipal administrators, are you dealing with this, when you have the high pressure of developers coming in?

● (1720)

The Chair: Can you give a quick answer? Thank you.

Mr. Chris Murray: Mr. Chair, in Hamilton, in light of our environmental legacy and our history, we have a very active environmental community. The days of our being able to, not remove wetlands, but encroach on wetlands are essentially over. Wetlands are almost non-negotiable now. We have provincial legislation that governs them and we certainly have our own policies within the City of Hamilton, in the urban area, that restrict anything you can do.

Again, even from the perspective of encroachment, extensive studies have to be done to determine that there will be no impact or, if there is an impact, how you mitigate it.

I don't think we even contemplate development that is going to have any kind of truly negative consequence on any of the wetlands in our urbanized area. That's for certain.

The Chair: Thank you, Mr. Murray.

Thank you, Mr. Shipley.

Our time is coming to a close. We need to leave about five minutes for some committee business, and that will leave us a couple of minutes for transition.

I want to thank our witnesses for being here. Thank you for your expert testimony. You have been very helpful, and I'm sure there will be a lot of people going back through not only the written submissions you've given, but the blues from today to recap.

Thank you very much.

We will suspend for just two minutes.

[*Proceedings continue in camera*]