HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

Standing Committee on Environment and Sustainable Development

ENVI • NUMBER 021 • 2nd SESSION • 41st PARLIAMENT

EVIDENCE

Tuesday, April 8, 2014

Chair

Mr. Harold Albrecht

Standing Committee on Environment and Sustainable Development

Tuesday, April 8, 2014

● (1530)

[*English*]

The Chair (Mr. Harold Albrecht (Kitchener—Conestoga, CPC)): Welcome, committee members.

I'd like to call to order meeting 21 of the Standing Committee on Environment and Sustainable Development.

We have three witnesses today: Mr. Chris McLaughlin, executive director, Bay Area Restoration Council; Ms. Nancy Goucher, program manager, Environmental Defence Canada; and Conrad deBarros, project manager, Toronto and Region Conservation Authority.

We have an hour-and-a-half meeting today as far as the open session is concerned. We have bells slated for 5:15. We were hoping to reserve 20 minutes for in camera, but we're going to cut that back to 15 and try to conclude our witnesses and questions by 5 o'clock.

We'll begin with Mr. Chris McLaughlin for a ten-minute opening statement from the Bay Area Restoration Council.

Mr. McLaughlin, welcome.

Mr. Chris McLaughlin (Executive Director, Bay Area Restoration Council): Thank you, Mr. Chairman, ladies and gentlemen of the committee. On behalf of the board, the staff, and the volunteers of the Bay Area Restoration Council, commonly called BARC, I'd like to thank you for this opportunity to address this important issue.

I'm going to speak for less than 10 minutes and focus on part (c) of this committee's motion regarding best practices to facilitate further local environmental remediation efforts across the Great Lakes.

First I'll speak specifically about Hamilton Harbour and the remedial action plan, or RAP, there. I know you have had a number of people speak to that already in previous meetings. I'll just give a brief overview, a little bit about what BARC does, and the conditions there. I'll also make some remarks about the Great Lakes AOC program in general.

In both cases, my remarks have relevance to the federal role in local remediation efforts. My particular interest is in characteristics of stakeholder engagement processes that lead to success or failure.

BARC represents the public interest in the restoration of Hamilton Harbour and its watershed. BARC evolved from the very first citizens group to be established in 1971 in Hamilton's north end neighbourhood, literally at Gil Simmons' kitchen table, which overlooked the harbour. They were the first group of people to say that this was enough.

During the development of the Hamilton Harbour RAP in the 1980s, that initial citizens group turned into the public advisory committee, which was formally established as a non-profit charitable organization in 1991 once the RAP was under way. We have remained so in continuous operation since 1991.

BARC is a member of the official governmental-led implementation team of agencies responsible for actions that implement the remedial action plan in Hamilton, and interestingly enough also responsible for actions or activities to evaluate progress of that remedial action plan. We do so through a broad stakeholder process of gathering information and forming consensus decisions to chart that progress.

BARC encourages community activity and action by offering school programs, volunteer programs and events, community workshops, evaluative reporting on current issues, and opportunities for digital engagement and promotion. I will return to that last point in just a second.

BARC recently relaunched a new website at hamiltonharbour.ca, a project we call the digital community forum, because most of the content will be created by the community. The project aims to do more than simply provide information. We will give voice to those who want to contribute their ideas, who want to share their experiences, and who want to lead by example. The project is just beginning, but it has already attracted significant support from the Ontario government and from other institutions who recognize this as an opportunity to initiate more meaningful engagement with the community, community groups, and individuals with knowledge and initiative to undertake the kinds of changes in the community at the individual level and at the institutional and commercial levels that will be required to make the further advances in the RAP that will be necessary to meet delisting targets in the end.

With support from the federal government, BARC is also creating randlereef.ca. Randle Reef, as you probably know, is the worst remaining coal tar deposit in the country. This website celebrates this most successful milestone in the harbour's fledgling renaissance—that is, the environmental containment facility to contain and gather up all of the toxic material, including PAHs and other toxins in the sediment at Randle Reef and elsewhere in the harbour.

Third, BARC's most recent report card on the Hamilton Harbour RAP was produced in 2012 using a consensus process, as I mentioned, involving a broad stakeholder group from across the watershed. Overall, progress has been significant, but so too are the remaining challenges.

Arguably, we have passed the halfway point to delisting Hamilton Harbour AOC, which involves a record of many small victories. Although several major projects to improve waste water treatment and remediate toxic sediment are under way, the future of the RAP is somewhat uncertain. The biggest question asks whether in the end the environment will respond to the many projects currently imagined to one day improve water quality and other environmental conditions in the Hamilton Harbour watershed.

● (1535)

The only grade to go down in our most recent report card involved a lack of progress on controlling erosion and implementing better, more sustainable, stormwater management.

Erosion produces sediment that clogs stormwater management facilities, ruins aquatic habitats, and carries phosphorus off the landscape into receiving waters. This is an urban problem. This is a rural problem. It involves construction sites as well as farms, and it involves thousands of individual yards and driveways. This is not the low-hanging fruit.

Sediment and phosphorous must be reduced before our water quality goals can be reached. Our efforts to date have made a difference, a significant difference, but it hasn't been enough yet. This represents what policy studies call an "implementation deficit": the difference between the goals that we set and the results that we achieve.

The federal role can influence implementation deficits in some positive ways. Reducing external constraints on implementers, providing adequate time and resources to problem-solving, improving the coordination and collaboration of shared local experiences—all of these are roles that can be played by the federal government and influence by reducing implementation deficits in processes like remedial action plans.

Recent research into the ongoing history of the Great Lakes RAP program has provided some insights into characteristics of RAPs. The research involved the anonymous feedback of many dozens of stakeholders with direct experience in developing and implementing remedial action plans across the Great Lakes. People from Canada, from the United States, from first nations to federal employees—all of these people across this spectrum were involved.

The research collected and aggregated the following things, in three stages. It collected direct knowledge of the strengths and limitations of RAPs. Through the researchers, this led to further knowledge of what worked and what did not work in the RAP program. That in turn facilitated the emergence of actionable policy options to improve RAP processes; I should say, really, to improve environmental problem-solving, collaborative local decision-making, and action-taking processes, but the RAPs were my point of study.

Participants from across Canada and the United States, from first nations to federal employees and everyone in between involved in developing remedial action plans, ranked those options for their desirability, their feasibility, and their likelihood to succeed. I'll give you a sample of some of those actionable policy options that I think are most applicable to the federal role.

One would be to ensure government coordination involves senior personnel trained and experienced in the mediation of group processes and able to navigate political arenas.

Two, ensure continuity of government coordination, meaning that coordination roles do not go unfilled for long periods of time, and that those roles are assigned adequate and dedicated time.

Third, create stakeholder agreements and implementation work plans with assigned responsibilities, timetables, deliverables, and explicit criteria for engaging new stakeholders and new ideas.

Four, directly link science and monitoring to policy needs regarding the restoration of beneficial uses.

Five, provide an overarching strategic RAP development and implementation framework that enables local flexibility.

Importantly, the results establish that not only the structure of problem solving, but also the characteristics of problem solving, were equally significant to RAP outcomes. This has significant implications for the federal role in fixing the nearshore right across the Great Lakes.

● (1540)

Most impactfully, the federal role should be defined at least in part by principles such as authority can be shared without being relinquished, so collaboration needs your support. We can choose our actions but not their consequences, so flexibility needs your support. Desired outcomes benefit from incentives and champions, so locals need your support. Senior government cannot command and control problems with those involved at the local level and expect positive outcomes, but an impactful federal role can provide or ensure capacity, adaptability, and moral authority in local problem-solving processes involving diverse stakeholders.

This is the path to meaningful and successful problem-solving.

Thank you, Mr. Chairman.

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

We'll move now to Nancy Goucher of Environmental Defence Canada for a ten-minute statement.

Welcome.

Ms. Nancy Goucher (Program Manager, Environmental Defence Canada): Thank you.

Good afternoon and thank you, Mr. Chairman, for giving me the opportunity to be here this afternoon.

I'm honoured to be here today. From what I've seen from the transcripts, I am hopeful that the recommendations from your report will be positive. I'm encouraged by the calibre of your questions and the witnesses who have been before you, so congratulations.

As was mentioned, I'm Nancy Goucher and I'm the water program manager with Environmental Defence.

We're an environmental organization that inspires change to promote a greener lifestyle. One of our primary goals is to safeguard the Great Lakes. We're known for our ability to communicate and connect with the public on issues that they really care about.

The first thing that's important for you to understand is how much Canadians care about the Great Lakes. A 2007 McAllister poll found that almost three-quarters of Ontarians and Quebecers are very concerned about the pollution in their lakes and rivers. The same number describe the Great Lakes as vital to our survival. Ninety-four percent believe that environmental quality will affect the health of their children and their grandchildren. People care about the Great Lakes and they are concerned about its health. That's why its so important for you to take real action to protect the Great Lakes.

You've asked three questions as part of your study. My comments are focused on the third one: how to further remediate Great Lakes water quality. I've organized this into three categories. The first is improving control of invasive species, the second is committing federally to being a full partner in Great Lakes water quality management, and the third is just a couple of relatively easy and immediate tasks that you should accomplish.

First, invasive species such as zebra mussels and sea lamprey have had a devastating impact on the Great Lakes to date, but none may compare with what could happen should Asian carp get into the Great Lakes. Asian carp are like super-fish: they can eat mass quantities of food—up to 20% of their body weight in a day—they're incredibly athletic and can jump up to over a metre out of the water, and they're adaptable and can survive conditions that other fish can't. We call them zombie fish because they can live out of the water for up to 48 hours. What this means is that they can out-compete other native fish and devastate commercial and recreational fisheries. They can alter ecosystems and deter people from using waters for recreational purposes because the jumping fish can really hurt people and damage equipment. Just look up the YouTube videos.

Right now the Army Corps of Engineers is trying to figure out a way to keep Asian carp out of the Great Lakes. Environmental Defence is working with our U.S. counterparts to make sure that the solution they choose gets the job done once and for all, which we believe requires building barriers between the Great Lakes and Mississippi basins to permanently close off interaction between the watersheds. Depending on the option they choose, the cost is either $5 billion or $18.4 billion and expected to take up 25 years to complete.

I'm hopeful that we can win this fight against Asian carp. We're being proactive right now, and I commend the provincial and federal governments for taking action. As an example, there's apparently a new Asian carp research lab opening at the Canada Centre for Inland Waters any day now.

I do have two recommendations for further action. The first is that we need an evisceration regulation for Asian carp under the Fisheries Act so that any Asian carp being imported into Canada can be confirmed dead before they cross the border. Second, Canada needs to encourage the U.S. to build a permanent barrier between the Great Lakes and Mississippi. This could mean that we are asked to contribute financially. I'll caution that funding for Asian carp prevention is important, and this requires additional funding above and beyond the resources that are needed to address other Great Lakes issues.

Moving on to my second point, water management is under the purview of all levels of government, and in a way is the responsibility of every property owner and every water user. That's what makes this such a complicated resource to protect. I'd like to see the federal government recognize its role as a key partner in protecting Canada's water, including the Great Lakes.

Recent decisions made by the federal government can be interpreted as a move away from this partnership. An example is the drastic staff cuts at Environment Canada and DFO. Former Environment Canada employee Jim Bruce, who also presented to this committee, noted that in 1978 there were 168 scientists and technicians in Environment Canada and DFO specifically committed to working on Great Lakes pollution. Current comparable data is not easily accessible, but based on recent operational budget cuts, it's likely that we have a fraction of that capacity today.

● (1545)

What we know is that by 2016 Environment Canada will have half the budget it had in 2007. Our concern is that this will have a direct impact on the health and safety of Canadians. We've learned these lessons before. In the five years leading up to the Walkerton tragedy, in which seven people died and 4,800 people became ill, the Ontario Ministry of the Environment cut its budget by 68%.

Canada also has the responsibility to be a good partner to the U.S. in Great Lakes management. Through the Great Lakes restoration initiative, the U.S. has invested $1.68 billion since 2010. This does not include money for water and waste water systems or what municipalities and their partners have contributed. Comparable Canadian figures are once again not available, but according to federal budget documents, the Great Lakes action plan has received just $13 million since 2010. Even considering the per capita difference, we are investing a fraction of what they are investing in the U.S.

Scientists tell us that three out of four of Ontario's Great Lakes are in a state of decline. Things are getting worse, with increasing frequency and intensity of storm events, increase in nutrient loading, and the threat of new invasive species. This is not the time to be cutting back on science and monitoring. The Green Budget Coalition recommends that we increase funding for Great Lakes management to $115 million per year.

As well, given the lack of clarity in how much federal capacity is available to protect Great Lakes water quality, I suggest that annual reports be produced on staff capacity and operational budgets related to the Great Lakes. Reports should describe action taken on priority issues and what will be done in future to address emerging concerns.

Finally, there are a couple of immediate actions that can be taken.

First, we need to sign the Canada-Ontario agreement, known as COA. The previous COA expired in June 2012. Getting a revised COA in place is critical to demonstrating a commitment to meeting our obligations under the Great Lakes Water Quality Agreement protocol of 2012. We are currently waiting for a sign-off from the eight federal ministries that are involved. Anything you can do to speed that along would be appreciated.

Second is support and respect for the International Joint Commission. The International Joint Commission is a world-renowned institution that has been instrumental in preventing and resolving water disputes between Canada and the U.S. Part of its success can be credited to its ability to make science-based decisions and remain relatively politically neutral. That needs to continue.

We should start by ensuring that the three seats we have on the commission are always filled. Last year one of Canada's seats went vacant for over a year, and another for a few months. As of January, we have another vacancy, which is unfilled right now. We need a full contingent of commissioners who are intelligent and able to interpret science to make reasonable decisions on complicated cross-border water issues. Without strong commissioners it's hard to know whether we're adequately protecting Canadian interests, especially given our relatively small size compared with the U.S.

To close, we know that Canadians care about the Great Lakes and want to see their political leaders taking action to address current and emerging threats. We ask you to work together to protect the lakes from invasive species, invest more in scientific capacity, sign COA, and appoint a qualified commissioner to the IJC.

Thank you.

● (1550)

The Chair: Thank you, Ms. Goucher.

I don't know whether all of the committee members have your speaking notes. I have them and was following along. I want to confirm your numbers on page 2 at the top, in your first paragraph. You said at the end of that sentence “$5 billion” to $18 billion, but your notes say “$15 billion”.

Ms. Nancy Goucher: Thank you for catching that. Yes, the cost to the army corps was $15 billion to $18 billion.

The Chair: I just wanted to clarify that for the record.

Ms. Nancy Goucher: Thank you very much.

The Chair: We'll move now to Mr. Conrad deBarros, project manager at the Toronto and Region Conservation Authority.

Welcome, Mr. deBarros. You can take up to ten minutes, please.

Mr. Conrad deBarros (Project Manager, Toronto and Region Remedial Action Plan, Watershed Management, Toronto and Region Conservation Authority): Thank you.

Good afternoon, everyone. As mentioned, my name is Conrad deBarros. I work with the Toronto and Region Conservation Authority as a project manager, coordinating the Toronto and region area of concern remedial action plan.

I appreciate the opportunity to attend this hearing and provide my perspective on efforts to protect and improve water quality and ecosystem health within the Great Lakes basin.

Since you've heard from a great number of witnesses already who have identified the efforts and needs for areas within the Great Lakes, such as Lake Erie, the Thames River, the Grand River, the southeast shore of Lake Huron, southern Georgian Bay, and so on, I'm going to focus my presentation on Lake Ontario, and more specifically on the western basin or western end of Lake Ontario. Why Lake Ontario? The Lake Ontario basin is home to 56% of Ontarians. Urbanization is causing stress and loss of natural cover and habitat, which affects the hydraulic cycle and water quality. The Don River, which enters into Toronto's inner harbour, has been identified as among the most polluted rivers in Canada. Lake Ontario is also a downstream recipient of pollution from the other Great Lakes and the Niagara River.

I'm going to address the three areas of focus of your study. I will start with identifying locations within the Great Lakes basin that are of environmental concern and prioritization of the areas to be addressed.

I'd like to give you a quick overview of the Toronto and region area of concern. The first slide provides an outline of this area of concern and gives you some statistics on its makeup. For example, it contains six different watersheds and 45 kilometres of Lake Ontario shoreline. It's a highly urbanized area of concern and it is still urbanizing.

For the past 27 years the Toronto and Region Conservation Authority has been a very active partner with Environment Canada, the Ontario Ministry of the Environment, the Ontario Ministry of Natural Resources, and the City of Toronto in the coordination and implementation of a remedial action plan.

Over those 27 years, great progress has been made to address some of the past environmental conditions that led to the identification of Toronto and the region as an area of concern. About 35 hectares of wetland and fish habitat along the waterfront have been restored; however, this is an ongoing process, and there is still more to be done. Water quality along the waterfront has been improved, but there are still issues with urban non-point pollution from untreated stormwater and combined sewers overflowing into the Don River and Toronto's inner harbour during wet-weather-flow conditions.

Implementation of the Don River and central waterfront component of the City of Toronto's wet-weather-flow master plan is critical to protecting and improving water quality and is the major initiative required for delisting this area of concern.

One of the challenges the Toronto and region area of concern and also Hamilton Harbour area of concern have is the challenge of urban growth and development.

The slide on display tries to indicate that we are really struggling to hold the line on maintaining water quality in the tributaries. Water quality is poor, and we're holding the line on that. The graph on the slide indicates the trends. It is a slide showing chloride levels in the streams within the Toronto and region area of concern from 1965 to 2004. Chloride is an excellent tracer of urban growth. The more roads you have, the more the salt that is getting into the streams through winter salting, with resulting higher levels of chloride.

Non-point, especially urban non-point, sources of pollution are extremely difficult to manage, as mentioned before by Chris. That is one of the biggest challenges we have with the development of the urban centre in Toronto.

Beyond Hamilton Harbour and Toronto and region areas of concern, population growth is a threat to water quality in the western end of Lake Ontario. That is an area from the Niagara River to the city of Oshawa. This area is known as the Golden Horseshoe.

● (1555)

I'll move on to your second area of concern, which is reviewing the efforts that are planned and/or currently under way to remediate identifiable areas of environmental concern.

The greater Golden Horseshoe area is one of the fastest-growing regions in North America. By 2031 the population in this area is expected to increase by almost 4 million people above the 2001 census to 11.5 million people, accounting for over 80% of Ontario's growth.

This slide that I've put up actually relates back to Toronto, but it gives you an idea of the struggle we have and the rate of increase in the population. That relates to urban development. It is extremely hard to protect the natural cover when urban development is coming in and stripping that away.

The magnitude of this predicted growth in western Lake Ontario will severely stress the natural land cover as the landscape is paved over and hardened to accommodate the increase in population. Stream and river hydrology as well as water quality and ecosystem health both in the tributaries and Lake Ontario will suffer if this growth is left unchecked.

The Chair: Mr. deBarros, perhaps I could just interrupt for a second.

I don't know if the rest of your presentation will go at the same speed, but if so, you will be at about 15 minutes. If there is something specifically that we need to see here that isn't in your printed notes, I would urge you to make that available to us.

Mr. Conrad deBarros: This was just put up to really stress the fact that we are experiencing growth.

The Chair: I'm just giving you a heads-up that we have four minutes.

Mr. Conrad deBarros: It's just growing very quickly, and it's hard to stay ahead of rapid population growth.

The Chair: No, I think that point is well taken, and it's in your printed notes. I just wanted to let you know where we are.

Thank you.

Mr. Conrad deBarros: I will jump ahead then.

The Chair: I don't want you to skip things that aren't here. But if they are here, it's more important that we—

Mr. Conrad deBarros: This slide is trying to show you again population growth. If you look at the graph on the left, it shows the growth in Ontario. This shows population growth from 1950 to 2000 around the Great Lakes, with the Great Lakes states, and you can see Ontario identified by the purple line and the rate of growth there.

What I really wanted to stress, though, is the density of population. The blue dots represent the Canadian side of the Great Lakes. If you look down here you can see where the growth is occurring, the red and orange areas, in the western end of Lake Ontario. In order to mitigate the impact of rapid growth on the ecosystem health of the western end of Lake Ontario, we need to look beyond the two areas of concern. Areas of concern were never developed to address broad-scale population growth. We need to take a more regional perspective.

Efforts to plan and implement a strategy to address population growth in this area need to be started sooner rather than later. Lake Ontario is already showing signs of stress. Cladophora, which is a long filamentous green algae that looks like long green hair growing on hardened surfaces on the bottom, has proliferated as a result of the invasion of zebra and quagga mussels.

These invasive species of mussels have also altered the cycling of nutrients in the lake. They concentrate nutrients in the lake-bed and the nearshore, resulting in increased productivity and excessive cladophora growth. The excessive cladophora growth threatens water quality, clogs water intakes at power plants, potentially resulting in unscheduled shutdowns, and when this algae breaks off from the bottom, it washes up onto shore and forms unsightly and very foul-smelling piles. We have too many mussels in Lake Ontario, too much algae in the nearshore, too little fish food, and too few fish in the offshore.

Some interesting findings from 2008 intensive binational monitoring of Lake Ontario show that we have an estimated 9.7 trillion dreissenid mussels in the nearshore area of Lake Ontario. They have the ability to filter the volume of the nearshore water in roughly one to seven days. However, the phosphorus generated by these mussels was not sufficient to sustain the populations of cladophora. Tributary phosphorus load to the lake was 234% higher than that of waste water treatment plants, and the tributary phosphorus is the driver of nearshore conditions and localized patterns of cladophora abundance, that along with the zebra mussels.

Land use patterns influence nearshore water quality, with urbanized areas having the greatest impact. Again, we need to look at urban growth and start addressing it in a more sustainable matter.

Finally, to address the last area of focus of your study in terms of recommending best management practices that will facilitate further remediation of areas of environmental concern within the Great Lakes, I have a few points.

My first point is that we need to focus on maintaining the partnerships and completing the efforts within areas of concern. We can see the horizon for many of these areas of concern to get the job done and to delist them. We are now at that point, but we also need to stay alert and aware of new threats.

One of the best management practices that has come out of the 43-plus years of Great Lakes protection and restoration is partnership. No one government, no one agency, no single group has the capacity and all the know-how to take on the task of keeping “our Lakes Great”. That's stealing a quote from someone Chris and I both know.

There are many willing and able partners to assist with this. We need to engage them, and we need to engage them in a strategic manner.

We know that an ounce of prevention is worth a pound of cure. Let's get smarter and address predictable threats, such as population growth in the southern Great Lakes, or the expansion of the resource extraction industry that is currently occurring in Lake Superior, and develop preventative measures before the stresses to the Great Lakes manifest. On some fronts, we need to be proactive rather than reactive regarding Great Lakes protection and restoration. It makes sense; it's less expensive.

● (1600)

The final best management practice is eternal vigilance. We need to keep it up. We need to keep the safeguards to ensure that we're not backsliding on the amount of investment we've made over the years. We need to be aware that the lakes are changing. The climate is changing. There are new threats. We need to deal with them and adapt.

The Chair: Thank you, Mr. deBarros. We're a minute and a half over. We're going to have to cut you off there and hopefully allow you to weave in some of the rest of your comments in the answers to the questions.

Thank you again for giving us a written submission. It's certainly helpful to all of us as committee members to be able to go back and review that when we're reviewing our testimony for the adoption of the final report.

We'll move now to a seven-minute opening round of questions, beginning with Mr. Carrie.

Mr. Colin Carrie (Oshawa, CPC): Thank you very much, Mr. Chair.

I want to take this opportunity to thank the witnesses for being here today and participating in this very important study. I found it such a learning experience for me. I'm right on that horseshoe in my community of Oshawa, so the things we're learning here are very applicable. Thank you very much for the information you're giving us.

Mr. McLaughlin, in your opinion how effective has the federal government been in helping to clean up Hamilton Harbour?

● (1605)

Mr. Chris McLaughlin: Recently it's been more effective than in the past. Most of the investment in the RAP has been local up until recently with tri-government investments in waste water treatment. There are three waste water treatment plants: Dundas; Woodward, which handles most of the city of Hamilton; and the Skyway, which handles most of the city of Burlington. Tertiary treatments are being installed currently at Skyway and Woodward, which is the majority of the waste water that's treated and flowing back into the harbour... and along with the province and the municipality, those are major investments.

The Randle Reef project to contain toxic sediment has also received a green light recently. That was one-third, one-third, one-third funding, which is about $40 million from the federal government. That's a really significant project to the RAP.

Probably the most significant thing over time and that I shouldn't overlook is the amount of scientific expertise that exists. It's not a coincidence that we've been able to make a lot of headway in Hamilton Harbour, despite it being such an intractable situation. It's a federal port. It has the Canada Centre for Inland Waters, the National Water Research Institute, McMaster University, and other scientific agencies.Some fantastic, dedicated federal employees have been devoted to Hamilton Harbour and its recovery over the length of the RAP, since the 1980s. They're still involved. They're still on BARC's board, for example. They're still giving to the process.

Mr. Colin Carrie: What do these improvements that we're seeing to Hamilton Harbour mean to your community?

Mr. Chris McLaughlin: It's probably going to be hard to define exactly what it's going to mean. It's going to mean a headline in *The Globe and Mail* one day when Hamilton Harbour's delisted as an area of concern. It's a national story.

Without a doubt, perception lags behind reality. Much of the community is disenfranchised from the waterfront. It's a spectacular community with the Dundas Valley, the escarpment, the waterfront. It has natural assets that communities across the country would kill for, and yet, over many decades, not only physically but through legal tools, it was illegal to touch Hamilton Harbour at one point. The majority of the shoreline was industrialized. It was cut off from the community. I literally see my job as reminding the city that it's a waterfront city again.

The impacts that those investments in those large projects have is very significant, because 50% of the water that goes back into Hamilton Harbour is through the waste water treatment plants. That means that 50% of the water doesn't go through technology. Technology is not going to save the day in this regard. Phosphorus and other sources of chemical and biological pollution will require the human touch along with technology, so law, policy, and behavioural changes will be required along with better stormwater infrastructure, for example. Today is a waste water sewage overflow day in Hamilton Harbour. We still see two billion litres of raw sewage going into the harbour every year. That's a frighteningly small fraction to what it used to be, thanks to these upgrades to waste water treatment, but there are still significant changes, both technological and non-technological, that need to be made, which are often more difficult to implement.

To answer your question, it will be a very significant development in the psyche of the community. I can tell you that there is so much enthusiasm for restoring this harbour. You can't go wrong getting behind these projects. You can't go wrong.

● (1610)

Mr. Colin Carrie: That's great.

In your speech you were talking about some of the things you would recommend. I think you didn't quite have enough time to go through them. I'm really interested in best practices and what you learned. Part of the study is to look at that.

Would you be able to provide for the committee or explain what you would consider lessons learned for the Hamilton Harbour and how you could help us in dealing with some of these other hotspots?

Mr. Chris McLaughlin: Sure.

In terms of the negative and the positive sides, certainly on the positive side there have been many individuals, and some are federal employees, who have been engaged in this process since the 1980s. They were in the room back in 1985 at CCIW, whose meetings I attend today, when they first started suggesting water quality targets. I'm sure everyone looked at them like they were out of their minds. Yet here we are today, and we've met some of those targets. We have cut in half the amount of phosphorus going into the harbour from 80 micrograms per litre to 40 micrograms per litre, but we need to cut that in half again. We don't have a lot of remaining technology with which to do that. That is going to be behavioural changes at the site level and so forth.

On the positive side, there has been federal support for my organization, the Bay Area Restoration Council, from the feds on down to other partners like McMaster University providing in-kind support to us since 1991. The important thing to remember is that in processes like this, the federal government has a tremendous role to play in providing those support systems to maintain continuity and maintain connectivity between groups and processes and decision-making and so forth. It's so difficult. Think of an MP and how difficult it is for them to make those connections into the community. It's very difficult.

The Chair: Thank you.

Your time is up, Mr. Carrie. Maybe we can come back to that at a future time.

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

[*Translation*]

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

I thank the witnesses for being here with us today. They have the honour, the privilege and the good fortune of being our last witnesses. Unfortunately, we will already have reached the end of this study after today's hearing.

Ms. Goucher, you said that the Canada-Ontario accord was very important. It was signed in 2007 and came to an end in 2012. It took a long time before it was signed. I don't think it was renewed. Recently, the Government of Ontario told us that everything was going well and that everything had been concluded, but there was no mention of a similar accord in the information bulletins.

Could the fact that that accord has not been signed have consequences on water quality? Could you give us a few pieces of information on that?

[*English*]

Ms. Nancy Goucher: I think there are a couple of things. One is perception. When we're trying to be a good partner to the U.S., and ACOA is part of the Great Lakes water quality protocol, if we're going to demonstrate that we're doing our part then we should have our agreements in place in order to demonstrate to the United States that we are good players.

I also think that having ACOA in place is important in terms of ensuring that groups on the ground that are getting funding and benefiting from this agreement are able to plan in the long term and are able to understand what the priorities are as set out in the agreement. It's very important to have this agreement in place. My understanding is that the agreement is close to being finished and we just have to do the final sign-off, but it hasn't been released yet. I know that because I'm looking for it.

[*Translation*]

Mr. François Choquette: That is very interesting. I hope it will be signed soon because we need it quickly.

In the same vein, you referred to the International Joint Commission. I believe I understood that there are some vacant seats on that commission. I am surprised and disappointed by that, given that Canada should, as you said, have a very strong presence at the International Joint Commission.

Could you explain to us the importance of the International Joint Commission and of the scientific data regarding the fight against climate change? I read that, among other things, the commission studies water levels and rate of flow, which are related to water quality in the Great Lakes.

● (1615)

[*English*]

Ms. Nancy Goucher: The IJC has a really critical role to play. You guys have heard from Gordon Walker, who is the acting co-chair. It was Joe Comuzzi who left that chair as of January, so we have a vacancy as of January.

The IJC has played an important role in water management since 1909, when the Boundary Waters Treaty was signed. It's been instrumental in getting the Great Lakes Water Quality Agreement set up in the first place. It has developed over the years to take a more watershed-based approach. Because the commissioners are looking at science and not just politics, Canada and the U.S. come together on these issues in a more equal way than in other issues.

So I think it's really important that we continue to support the IJC.

[*Translation*]

Mr. François Choquette: You are absolutely correct when you say that science is essential.

Fortunately, the Experimental Lakes Area was saved just in time. Unfortunately, the federal government is no longer funding those facilities. And yet, people worked very hard, among other things, on phosphorus pollution. I think that that contributed to the improvement in water quality in the Great Lakes. The position of the federal government is really disappointing in that regard.

You also talked about funding. Everyone always wants more money, that is normal, and there is never enough. The Government of Canada itself estimates that it would cost approximately $1.9 billion to restore the Canadian sectors that are problematic. I doubt that it has invested all of that money. Rather, in 2010 the sum in question was $16 million.

What can be suggested in the Great Lakes' Action Plan to improve the situation? Finding money is not always easy, but how can we increase the funding? Would long-term funding be more appropriate?

[*English*]

Ms. Nancy Goucher: Under the Canada Water Act there used to be a fund for water management in Canada, called the Canada water fund, I believe. It was an important amount of money that could be distributed for water management across the country. I don't think there is any more funding available through that fund. Restoring something like that would be the first step.

If you are looking for specific numbers, the Green Budget Coalition has been putting together some numbers and some recommendations in terms of where we should start. They are trying to be reasonable. We would ask for more, if the situation were ideal, but we are trying to be reasonable in terms of what we think is the minimum amount that should be invested in water.

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

We'll move now to Mr. Sopuck.

Mr. Robert Sopuck (Dauphin—Swan River—Marquette, CPC): Thank you.

Ms. Goucher, you talked about staff changes at Environment Canada and so on. People often use the word “cuts”, but again, all that's happened at Environment Canada, and indeed in DFO, is a reallocations of funds. For example, the Randle Reef project, which our government is funding to the tune of $46.3 million a year, is essentially a reallocation from within Environment Canada.

Don't you think spending hard-earned taxpayer dollars on direct environmental remediation that generates real environmental results is a better use of government resources? I'm not going to minimize the role of staff, but again, this spending is perhaps at the expense of process and those other things that in the short term, at least, do not contribute to environmental remediation.

● (1620)

Ms. Nancy Goucher: My response to this is that a research poll that was done by Environics found that two-thirds, or 69%, of Environment Canada's scientists believe it was doing a worse job at protecting the environment than five years ago.

So scientists within Environment Canada believe they're not able to be as effective, and I think that's an important thing to consider.

Mr. Robert Sopuck: Okay, I will take you up on that. Name me an environmental indicator that has declined on our watch as a government, and which environmental indicators did those scientists specifically point to as having gotten worse?

Ms. Nancy Goucher: The trick with environmental indicators is that sometimes they need to change to adapt to new circumstances. So our indicator for phosphorus on Lake Erie we may have met under the Great Lakes Water Quality Protocol, but what we're finding now is that we're still seeing algae blooms, and the reason is because the context is changing. We have warmer waters, we have different types of phosphorus.

So we do need to continuously adapt and look at those indicators and improve them with the understanding of new science that becomes available.

Mr. Robert Sopuck: Mr. McLaughlin, I was interested in your presentation. What, in your view, do we need to do to deal with non-point source pollution, specifically phosphorus? What would be your answer to non-point source pollution?

Mr. Chris McLaughlin: We need green infrastructure, in two words. We need behavioural change—two more words. We need to improve aging infrastructure. There's a host of issues around non-point source in how water is collected and transported across the landscape. Hard surfaces and other forms of development like parking lots and roofs and so forth don't allow stormwater to infiltrate into the ground. The water is conveyed very quickly, it picks up pollutants, and reaches receiving waters without treatment. We need to slow that water down, we need to hold it back and allow it to travel through the landscape more slowly and release or deposit some of those nutrients like phosphorus, for example, and E. coli and other materials before they reach receiving waters.

A large part of the changes that are going to need to be made are through the citizenry, through behavioural changes. I think that governments are in a good position to support people in communities to champion these efforts, because I think nothing sells them as well as peer-to-peer and neighbour-to-neighbour educational opportunities, and to incentivize people.

Mr. Robert Sopuck: Those are aspirational goals, which are fine, and I agree with that, but I want specific projects that you would like to see implemented on the ground that fulfill those goals.

I'll give you one that I am very partial to, and that is constructed wetlands. I think a network of constructed wetlands would be a good idea.

What other specific, on-the-ground actions need to be done to fulfill the goals that you have enunciated?

Mr. Chris McLaughlin: They're not so much aspirational as directly related to what you're talking about.

Mr. Robert Sopuck: Fair enough.

Mr. Chris McLaughlin: On constructed wetlands, I have no problem with constructed wetlands unless they're to make up for a real wetland that has been paved over. But commercial properties could be incentivized to create those types of natural, green infrastructure on their properties through policy mechanisms—monetary policy mechanisms, for example.

Mr. Robert Sopuck: Okay.

Mr. deBarros, I was interested in the statement you made earlier in your presentation about the 35 hectares of wetlands and fish habitat that have been remediated on the shores of Lake Ontario; I think that's what you said. How was that done?

● (1625)

Mr. Conrad deBarros: That was done through a multi-partnership group consisting of the Department of Fisheries and Oceans, Environment Canada, the Ontario Ministry of Natural Resources, the Toronto conservation authority, and Toronto Waterfront.

Mr. Robert Sopuck: Is that the Rattray Marsh? Is that what we're talking about?

Mr. Conrad deBarros: No, Rattray Marsh is not within the Toronto and region area of concern. It's outside.

Mr. Robert Sopuck: So in terms of the 35 hectares, what on-the-ground work was actually done?

Mr. Conrad deBarros: There's Tommy Thompson Park, which has three cells that were developed to handle dredge material from the harbour and from cleaning out Keating Channel. Cell one was filled; they capped it and created a wetland in there. There has been restorative work on other areas in Humber Bay and different areas along the waterfront to help bring back some of the lost wetlands that were originally there in Toronto before they filled them all in.

Mr. Robert Sopuck: What benefits from this 35 hectares are you seeing in terms of improved ecological function?

Mr. Conrad deBarros: There's an excellent research study that is currently going on and is providing excellent results through Carleton University, which is showing that fish are using the habitat for spawning, for rearing, so it's creating an excellent fish habitat. Other birds and things are also using the habitats as well.

Mr. Robert Sopuck: Excellent.

Thank you.

The Chair: Thank you, Mr. Sopuck.

Mr. McKay, you have seven minutes.

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

Thank you to each one of you.

I live quite close to Highland Creek, and I have quite a keen interest in the Rouge River—two of the more degraded watersheds that you're responsible for, Mr. deBarros.

I kind of lived the whole business of hardening and stripping, particularly in the Highland Creek, and the consequences of rather poor urban design. So I think your points are well taken.

Currently the federal government has an area of study in the Rouge River. The Rouge River, at its lower part at least, is probably the ideal river for wetlands and for filtering water and all of that sort of stuff, at least as ideal as you can make it in the urban circumstances in which it finds itself. What relationship is there between the Rouge Park and TRCA in terms of not only the management of the park and the quality of the water, but also the expansion of the authorities into the northern reaches of the Rouge watershed, with particular reference to the airport lands and the anticipation that the airport will just do exactly what you're most concerned about, which is the hardening of the surface and ruining the downstream watershed?

Mr. Conrad deBarros: Geez, that's a—

Hon. John McKay: It's only a minor question.

Mr. Conrad deBarros: Yes, it's a minor question.

Hon. John McKay: Focus on the relationship.

Mr. Conrad deBarros: First of all, in terms of the relationship between the TRCA and Parks Canada, they've worked very closely together in trying to establish the federal urban park in Rouge River. There is a watershed plan for the Rouge River that....

As a matter of fact, one of the responsibilities or one of the roles that the TRCA provides is for all of those watersheds that I identified within the area of concern; and realize that the Toronto and region conservation's jurisdiction is much broader than that. For all of the watersheds, they have watershed plans that are in place looking to mitigate the types of impacts that would result from the development of lands in those watersheds, and to be able to try to accommodate the development as it proceeds.

It's a really tough thing, though, because what you're really looking at is that in those areas that are already built up, you don't have the flexibility to take some proactive—

Hon. John McKay: But this particular area that I'm thinking of, to the north of the 407, for instance, is not built up; you do have an opportunity.

● (1630)

Mr. Conrad deBarros: That's right.

Hon. John McKay: Are you putting down markers so that you can actually preserve the quality of the water?

Mr. Conrad deBarros: That would be worked on with the TRCA and...with the airport lands ready to be built out. It's been done in Duffins Creek and it will be done in the Rouge River as well.

Hon. John McKay: Are you part of the study?

Mr. Conrad deBarros: I am not involved in it directly. I deal with—

Hon. John McKay: Is the TRCA?

Mr. Conrad deBarros: The TRCA would be involved, yes. Their other staff would be the ones involved in that.

Hon. John McKay: I take your point on urban growth, except I don't know what you're saying about what we can do about it.

Mr. Conrad deBarros: The question was asked about what measures should be taken. Chris mentioned green infrastructure; you can call it low-impact development or whatever. That's what you would apply to those new, urbanizing areas where you have the ability to implement that. One of the problems we have with implementing low-impact development right now in Canada is that a lot of the measures are very well known and used in Europe and in the U.S.A., but we don't have the experience and the information on how these measures perform in Canada under the climatic conditions we have.

So if you're a developer looking to develop, you're going to use the old method because your engineer's going to know exactly how to engineer that, how to size it, and put it in. TRCA, with the help of the Credit Valley Conservation Authority and the Lake Simcoe Region Conservation Authority, established the sustainable technology evaluation program, which is generating the types of engineering and design data, performance data, that's required to develop that kind of thing. But we need to do it on a broader scale.

Hon. John McKay: I understand that for new developments such as those on the Lake Simcoe watershed, where you're putting in a few wetlands and—

Mr. Conrad deBarros: Well, it's more than wetlands. It's actually changing the whole urban landscape. It's how you actually have your residential and commercial lots.

Hon. John McKay: Okay. It's how you organize those.

Mr. Conrad deBarros: How you organize, how it's built....

Hon. John McKay: What would you do with a place like Scarborough, though, which was—

Mr. Conrad deBarros: That's the other side, or the other shoe that needs to come down: how do we deal with these built-up areas? There are some examples being applied right now within the jurisdiction of the Toronto and region conservation area. One of them is the sustainable neighbourhood retrofit program, which is called SNAP for short. They're looking at getting into neighbourhoods.

As Chris talked about, changing behaviour is really working at the residential level to change people's attitudes towards their property, to change it around from straight mowed lawns and to try to change it up, so that we can now have.... The way you treat stormwater is that you treat it at the source to try to reduce the impact, you treat it as it's being conveyed to the tributaries, and you deal with it at end of pipe.

Hon. John McKay: But the problem is that 10% of the people will buy your argument—i.e., downspouts and all that sort of stuff—but 90% won't pay any attention to you. So is there a mandating way that you have to do this?

Mr. Conrad deBarros: Well, that is why we need to sit down and start working. Whose role is that? Whose jurisdictional area is that? Is that a bylaw?

Hon. John McKay: Well, the problem is that everybody is going this way....

Mr. Conrad deBarros: That's my point exactly. Where I was trying to get to is that we need to start dealing with it, and dealing with it sooner rather than later.

Hon. John McKay: In the few seconds I have left, I'll go to Ms. Goucher.

There's a big argument in the legal community about water as a right versus water as a commodity. It seems to me to be a very difficult argument, because the price of potable water costs money, and it costs all of us a serious amount of money. Yet water as a right seems to me to assume that water is a free good.

What does your organization feel about that?

The Chair: Because that's such a complex question, we'll let all of the panellists have a little bit of time to think about that until the following question.

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

Hon. John McKay: It's so terrible....

Voices: Oh, oh!

The Chair: I'm an equal opportunity employer.

Madam Freeman.

Ms. Mylène Freeman (Argenteuil—Papineau—Mirabel, NDP): I heard “Madam Freedom”, so that's wonderful.

Voices: Oh, oh!

Ms. Mylène Freeman: Thank you, Chair. I feel like it's not that much of a stretch from “Freeman”.

The Chair: That's 30 seconds of your time.

Ms. Mylène Freeman: Yes, I know. That's fine.

Hon. John McKay: Feel free to use your time.

Ms. Mylène Freeman: My question is for Ms. Goucher.

Based on your expertise, could you talk about whether you see climate change as something that the government should be addressing as an issue of concern for the Great Lakes region?

● (1635)

Ms. Nancy Goucher: Absolutely. You've heard from a number of different witnesses who've talked about climate change and the impacts it will have on the Great Lakes.

There are some really basic things. You're going to have warmer waters and more intense rainfall events, and both are going to lead to an increase in algae growth, especially in Lake Erie. Also, with warmer waters and warmer winters, you're going to have less ice cover, which leads to more evaporation, which in turn leads to lower lake levels. It's more complicated than that, but that's one of the important factors.

In terms of solutions, I would say that we really need to be looking at both mitigation and adaptation. In terms of adaptation, conservation authorities and other partners on the ground have been doing a great job in working toward ways to build more resilient cities and resilient communities.

In terms of a federal role, I think there's a direct federal role for the federal government: to support communities in helping them deal with flooding and droughts, in funding infrastructure upgrades and emergency planning, and in renewing the flood damage reduction program so that we're not building in flood plains.

Also, I think we need to be looking at mainstreaming our water policies with climate change. Every decision we make in terms of water will need to consider what will be happening in terms of climate change.

On top of this, we need to be looking at mitigation. At a provincial and even a municipal level, I think we have a lot of communities working on reducing greenhouse gas emissions. We need a stronger federal commitment in that capacity as well.

Ms. Mylène Freeman: Thank you.

I have a question for Mr. McLaughlin as well.

You mentioned that there's an implementation deficit, right? This might go a little bit into what Ms. Goucher was just saying. You mentioned that we need more resources and more collaboration and that the federal government needs to take on a role and work with partners.

You also mentioned reducing “external constraints”. What did you mean by that?

Mr. Chris McLaughlin: Well, you could think of it as clearing a path. External constraints can mean the things that are beyond our control, but in some cases it can mean, in the federal case, granting and reporting that is onerous on organizations. It could mean making adaptations to a funding program to meet local needs rather than forcing a lot of small organizations through the same funnel with the same criteria and being more open-ended that way.

Does that make sense?

Ms. Mylène Freeman: Sure.

I'll bounce back to Ms. Goucher here.

You mentioned empowering collaboration among community groups that are working on the ground as well. How do you see that working with the federal government? What can the federal government do, in your view, to make sure communities are sharing best practices and really working towards the same goal at the same time?

Ms. Nancy Goucher: It's a big question. At least one part of the answer is that I would like to see a national water strategy that coordinates some of the work that's happening at the local level and directing it in the same direction through some common goals that are established thorough a national water strategy.

Ms. Mylène Freeman: And what would you see as the priorities in this water strategy?

Ms. Nancy Goucher: I might refer you to a great document called “Changing the Flow”, written by a group called the Forum for Leadership on Water in 2007. It outlines specifically seven priority areas and a number of recommendations for where the federal government might want to start thinking about it in terms of developing a water strategy.

Ms. Mylène Freeman: Thank you.

The Chair: Thank you, Madam Freeman.

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

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

My thanks to all of the witnesses. Regrettably, at five minutes we can barely scratch the surface, and I have a number of questions I'd like to ask. I'll try to keep my questions short and ask for short answers, if possible.

I'll begin with you, Mr. McLaughlin. I have a note here about a project—total cost $611,000, with Environment Canada contributing about 40% of that, $259,000, between 2010 and 2014.

Does that ring any bell with you, and can you put a name to that for me? I don't have any other details.

● (1640)

Mr. Chris McLaughlin: I'm not exactly sure, I'm afraid. Does it refer to waste water upgrades?

Mr. Stephen Woodworth: Unfortunately, I don't know. So if you don't know, I'll move on. Sorry about that.

Mr. Chris McLaughlin: I'm sorry, I'm not sure.

Mr. Stephen Woodworth: Mr. deBarros, I was very interested in your comments regarding the link between mussels and phosphorus, because I've heard this from scientists. As I understand it, mussels will take in the dissolved phosphorus and then excrete it and deposit it in the nearshore and cause weedy and skunky water. That's my understanding of it.

Is that more or less correct?

Mr. Conrad deBarros: Well, I'd make one slight change. They're filter feeders, so they're feeding on the particulate that's in the water, the algae, bits of sediment and that, which they take it in. When they excrete it, it becomes soluble.

Mr. Stephen Woodworth: Right.

Mr. Conrad deBarros: That's one of the issues that lead to the extensive algal growth that you see in the nearshore.

Mr. Stephen Woodworth: So I understand the role of those invasive mussels in fouling the nearshore. Do you have a suggestion about how to deal with it, apart from, of course, controlling the phosphorus input into the water?

Mr. Conrad deBarros: What I tried to point out was that the information that was obtained through the intensive monitoring research work in 2008 showed that tributaries contributed 234% more phosphorus load to the system than point sources.

The way the study was done, they looked at various different landscape types and the impacts on the nearshore. They showed that the mussels alone were helping to get the Cladophora growth going, but it was also those tributaries, especially from urbanized areas, affecting the greatest amount of algal growth.

Mr. Stephen Woodworth: I'm interested in knowing whether you have anything to suggest regarding the mussel problem.

Mr. Conrad deBarros: I think we're going to be stuck with them forever. That's going to be the tough part to deal with. Maybe we should be doing some research on something that's environmentally safe that can eradicate them. I don't know. The only levers we as humans have to twist or turn are the ones that we cause.

Mr. Stephen Woodworth: Ms. Goucher, I was interested in your comments regarding the Asian carp. I think I have a grasp of how the Asian carp will upset the ecosystem and possibly endanger native fish species, but since we're studying water quality, I'm trying to draw the link to water quality, and I wonder if you can help me understand. I can understand mussels and phosphorus. How do Asian carp influence or affect the water quality?

Ms. Nancy Goucher: Thank you. That's a good question.

One easy answer is that Asian carp produce a lot of waste. They're taking in 20% of their body weight in a day, in terms of food, and then they're excreting a lot that in an undigested form. What happens is that they make the water much more murky, and that also makes it harder for native fish to see in the water. Native fish need to be able to see to find their food. Where Asian carp have invaded rivers in the United States, they've had a direct impact on water quality in a negative way.

Mr. Stephen Woodworth: Thank you.

I was curious about your comment that the Environment Canada budget either is now or is shortly going to be one half of what it was in 2007. I wondered if you could give me the 2007 figure so that I could look into this.

Ms. Nancy Goucher: I don't have it on hand. One of the tricky parts of doing research for this is trying to get a nice, clear understanding of funding levels. That's why one of the recommendations I made was that it would be great to have annual reports that look at how much investment is being made in the Great Lakes.

The Chair: Okay, Mr. Woodworth, your time is up.

We'll move to Mr. Bevington. Thank you.

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

I apologize to the witnesses that I didn't get to hear their testimony, as I was engaged in another meeting and wasn't able to attend.

Mr. Woodworth has opened the door for me on this Asian carp thing, and I want to explore it because it came up today in terms of.... There was a meeting held in Chicago in February on Asian carp. Basically they're saying that the electronic barrier that has been put in place is not adequate, and that it's likely to be inefficient in protecting the Great Lakes from the Asian carp.

The City of Chicago had suggested that they completely block all passage between the Mississippi River and the Great Lakes in terms of commercial transport, but that's been rejected by the business community in the Chicago area.

They've identified the problem as being serious enough for the City of Chicago to suggest that. Is there any action on the part of the Canadian government to put pressure on the U.S. government to initiate actions that are going to be completely effective in stopping these Asian carp, which are an absolute disaster coming into the Great Lakes?

● (1645)

Ms. Nancy Goucher: Yes, you're absolutely correct. The Army Corps of Engineers is currently studying how to keep Asian carp out of the Great Lakes. They have identified seven options for doing so. There's a range that includes things like non-structural measures all the way up to complete separation between the Great Lakes. There are two ways of doing that. One, as I said, would cost $15.5 billion and the other would cost $18.4 billion and would take about 25 years to complete. Currently they're doing consultation and looking at which option is the best to move forward with.

So you're right, and it's my understanding as well, that the shipping industry is not happy with the option of complete barrier separation, but a lot of groups do believe that's the only thing that will work in order to permanently address this problem.

Mr. Dennis Bevington: What's the Canadian position?

Ms. Nancy Goucher: I'm not sure if the federal or Ontario governments have officially responded to the study, but I feel that they should definitely be involved and be submitting an official position, because we have a lot at stake as well in the Great Lakes.

Mr. Dennis Bevington: With this completely shutting down, is that a cost of $18 billion to shut down the waterway?

Ms. Nancy Goucher: It's a complicated process that involves a number of different steps, building reservoirs and building barriers. The other important thing to understand is that the reason these barriers exist is that there's a series of canals in the city of Chicago and the whole city sort of developed around these canals. In order to address the water movement between them, they have to adjust a lot of the flood damage and stormwater management in the city of Chicago. That's part of the reason why it's such an expensive solution.

Mr. Dennis Bevington: Does anybody else have any comments on this subject? Okay.

Do you have any idea of how that's going forward? Was there Canadian participation in these meetings?

Ms. Nancy Goucher: There was one. The army corps came to Toronto last week and had one study in the city of Toronto, which I attended. There were a number of different representatives, mostly from the provincial level of government. I believe the next step is for them to take this to the U.S. Congress to decide on what options to move forward with.

Mr. Dennis Bevington: So there weren't Canadian federal representatives there?

Ms. Nancy Goucher: I'd have to double-check.

Mr. Dennis Bevington: Could you get back to us with that information?

Ms. Nancy Goucher: Sure.

Mr. Dennis Bevington: Thanks.

I think my time is up.

The Chair: You have 15 seconds. You have lots of time.

Thanks, Mr. Bevington.

We'll move back to Mr. Woodworth, for five minutes.

Mr. Stephen Woodworth: Thank you very much.

My thanks to my colleague for letting me take his time.

I want to still pursue some of the numbers with you, Ms. Goucher.

You mentioned that your record shows that there has only been $13 million spent in the Great Lakes action plan since 2010, I think is what you said, but the Government of Canada thinks, as I know, that they're spending $8 million a year on that.

What was the source of your $13 million figure?

● (1650)

Ms. Nancy Goucher: I looked at the federal budget numbers for each of the federal budget reports for 2010 to 2013.

Mr. Stephen Woodworth: Okay.

Are you familiar with the areas of concern that were mapped out many years ago and that have been slowly being remediated?

You're nodding yes. You have to say yes for the record.

Ms. Nancy Goucher: Oh, sorry: yes.

Mr. Stephen Woodworth: So you're aware that there are at least 42 of them, I take it?

Maybe one of the others knows the exact number.

Mr. Chris McLaughlin: There were 42 originally. A 43rd was added in 1991. If memory serves, four have been delisted and one—is it one?—is officially listed as an area of recovery.

Mr. Stephen Woodworth: Let me just tell you what I've been told. The reason I'm speaking about this, Ms. Goucher, is because of your comment that the Great Lakes action plan spending is only a fraction of what the U.S.A. is spending.

The information we've received is that there were 12 Canadian areas of concern, of which three have already been delisted and two are recovery, whereas there were 26 U.S. areas of concern, of which only two have been delisted. If one were to look at the relative percentage of hotspots there, it would be safe to say that only a fraction of them are in Canada.

Does it surprise you at all that the U.S., with ten times the population, is going to be spending quite a bit more than Canada?

Ms. Nancy Goucher: I'd say that the U.S. should be spending more than Canada, given population numbers. But when I'm talking about investment, I'm not talking about just what needs to be invested to clean up the areas of concern. I think at this point we need to be looking at the threats to the Great Lakes water quality today, as well as addressing legacy threats.

For instance, a lot of the funding through the Great Lakes restoration initiative on the U.S. side is going towards addressing nutrient management issues that we've discussed, and I feel that's where Canada is lacking in terms of investment.

Mr. Stephen Woodworth: Are you familiar with the Great Lakes nutrient initiative operated by Environment Canada?

Ms. Nancy Goucher: I have heard a little bit about it, but I don't have details on it.

Mr. Stephen Woodworth: There are about 39 different research projects designed to track the flow of non-point specific phosphorus into Lake Erie and ultimately, by I think 2015 or 2016, to come up with targets for loading.

In fact, that was something else I wanted to ask you. You picked on the Great Lakes action plan and compared that alone to U.S. spending, but you've heard that there have been millions of dollars spent on Randle Reef and of course many others, Bay of Quinte and other locations around the Great Lakes, by the Government of Canada, by Environment Canada.

Have you ever actually tried to sit down and calculate the total amount of money that is spent by the Government of Canada on the Great Lakes?

Ms. Nancy Goucher: I have tried to look at some of those numbers before. That's why one of my recommendations was that there needs to be more clarity on what spending is happening and what programs are taking place so that the public can understand—

Mr. Stephen Woodworth: So you'd agree with me that it's a little unfair, maybe, just to pick on the one Great Lakes action plan and compare that to all the spending that the U.S. is doing.

Ms. Nancy Goucher: I definitely said that it's difficult to find comparable numbers, but I would say that the Great Lakes restoration initiative, $1.68 billion since 2010, was on top of what the United States has been spending on areas of concern.

Mr. Stephen Woodworth: Going back to the question of the 2007 figure versus the current figure.... Actually, I wasn't sure which current year you were talking about when you said it's down to half of 2007.

Can you clarify that for me? Is it the recent budget that you're speaking about?

Ms. Nancy Goucher: I researched that in a report, so I could find you some of the original numbers and follow up.

Mr. Stephen Woodworth: I would appreciate it.

I also wanted to know if it included the areas of Environment Canada responsibility, including Parks Canada and the Environmental Assessment Agency.

● (1655)

The Chair: Thank you, Mr. Woodworth.

Mr. Choquette.

[*Translation*]

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

Once again, I thank the witnesses for their presence and their excellent work. Their statements were very interesting and instructive. Once again we have learned a lot and we are very happy to have heard them before the committee.

I would like to talk about what Mr. Bevington raised earlier, that is to say, the Asian carp and the problem of invasive species in general, which we have to look at.

Mr. McLaughlin, if memory serves, you referred to invasive species. You said that the problem was also attributable to human activity, which has increased the quantity of nitrogen and phosphorus. You also mentioned that human activity may have changed water levels, which could also have had an adverse effect on water quality in the Great Lakes and contributed to the proliferation of invasive species.

How do you explain the proliferation of invasive species in the Great Lakes?

Mr. Chris McLaughlin: I am sorry, but I speak very little French.

Mr. François Choquette: There is no problem. You may speak English.

[*English*]

Mr. Chris McLaughlin: I don't think that was me; I didn't mention lake levels, although lake levels are certainly an issue in Hamilton Harbour and Cootes Paradise.

[*Translation*]

Mr. François Choquette: So, what about the invasive species?

[*English*]

Mr. Conrad deBarros: I didn't mention them.

Mr. François Choquette: You didn't speak about the invasive species?

Mr. Chris McLaughlin: No, I'm sorry. I don't think so.

[*Translation*]

Mr. François Choquette: Ms. Goucher, I will let you discuss the issue of invasive species.

[*English*]

Ms. Nancy Goucher: What I would say is that I think it's important to look at not just Asian carp and what their potential impact could be on the Great Lakes but also at the impact of all the invasive species on the Great Lakes.

Another figure I'll throw out there is that the Green Budget Coalition had recommended spending $25 million per year for five years to look into some of the impacts and better understand what we can do to address things like zebra mussels.

[*Translation*]

Mr. François Choquette: Thank you kindly.

Mr. deBarros, in July 2013, a rain storm caused the City of Toronto's sewers to overflow. It's a common problem. The same thing happened to us, in Drummondville. We had torrential rain, which we very seldom see, and it caused some serious problems. In situations like that, city sewers are no longer efficient and often the water is directly sent into the rivers or the Great Lakes.

Can you talk to us about the importance of investing in green infrastructure? What is your city doing about that?

[*English*]

Mr. Conrad deBarros: I can't put a number on what the green infrastructure costs would be, but I know that with the storms we're having now, we're seeing more severe and more frequent severe storms occurring. We believe it's because of the changing climate as well. What used to be one-in-100-year storms are now being talked about by many people as being one-in-10-year storms: it's that kind of rate.

One of the things for the Toronto and region area of concern is the City of Toronto's wet-weather-flow master plan, which is a huge plan at $1.5 billion. There is a component of it that deals with the Don River combined sewer overflows and the central waterfront collection system to collect combined sewer overflow to help prevent some of that mixture of stormwater and sewage from going directly into the lake, being held back to be treated. It will need support by all levels of government, and it is the most important step to the delisting of the area of concern.

● (1700)

The Chair: Thank you very much.

Mr. Conrad deBarros: I have just one other small point. That wet-weather-flow master plan does consider the sizing required to handle some of the new flows they expect to have due to climate change.

The Chair: There's time for one question from Mr. Toet, then we're going to cut it off.

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

There is one thing that has been actually a very common theme not just amongst the panel we have here today, but throughout our study, and maybe we could get just a very quick comment on it.

Mr. McLaughlin, you talked about no command and control from the federal government.

Mr. deBarros, you talked about how no government or entity has the ability or capacity to deal with this completely by themselves.

Maybe you could make just one quick comment on the need for complete community collaboration throughout the system in order to deal with these issues going forward.

Mr. Conrad deBarros: Just as a little background, I worked for 33 years with the Ontario environment ministry. I worked very closely with the federal government and a lot of other partners on Great Lakes protection through my career.

One thing that became clear to me is that we look at the Great Lakes as a community, that no one group is a leader. That's the way we try to work at the staff level, at the community level. We work and collaborate as best we can and come up with the plans. This is realizing that there will be constraints, but if we can work together and develop a strategic plan, we can adjust the plan based on resources available.

We know that all governments have to balance budgets, have to deal with health care and other things, but we need to work together in a very collaborative way. Sometimes politics get in the way of that.

The Chair: With that comment, we will conclude the open part of our meeting.

Thank you to our witnesses. As was pointed out earlier, this is the last of the witnesses dealing with the study on Great Lakes water quality. We're hoping to draft a report over the next number of weeks. At that point, hopefully we'll move ahead with the bigger project.

Thank you again.

[*Proceedings continue in camera*]