

Box 8455, R.R.#1
Peterborough, ON
K9J 6X2

December 10, 2010

Ms. Amanda Warren, Program and Policy Assistant
Ministry of Natural Resources
Policy Division
Biodiversity Branch, Great Lakes & Water Policy Section
300 Water Street, Floor 5,
Robinson Place South Tower
Peterborough Ontario K9J 8M5

Subject: EBR posting #11306

Dear Amanda:

I am writing to comment on EBR posting # 011-1306, Technical Guidelines and Requirements for Approval under the Lakes and Rivers Improvement Act (LRIA). The Ministry of Natural Resources can rightfully be proud of its strategic directions, including the ministry's mission of ecological sustainability, its commitment to biodiversity and the ministry's new legislation directing the ministry to protect and promote recovery of species at risk. I have been enjoying retirement for almost a year now and it took a very important and significant issue to get my attention, and for me to register concerns. The technical guidelines contain a proposal that would, in my view, amount to a substantial deviation from these directions. I am not yet comfortable with the EBR process, but since your branch did not respond to my original inquiry, this appears to be the only avenue at my disposal to caution the ministry that they may be making a serious mistake.

I became aware of this posting a few weeks ago by a friend who seems to be on top of EBR postings. When he asked me and a few other colleagues what we thought of the guidelines, several of us decided to read them carefully. Despite the clear indication that these guidelines were about dam safety and operations within the posting, further burrowing across several links to find the guidelines revealed that major changes were being proposed to MNRs responsibilities and accountabilities with respect to the management and perpetuation of fish under the LRIA. These changes involve a key purpose and important section of the act; sections that do not involve dam safety or operation.

Buried deep within the technical guidelines, in several volumes of material, is section 14.5.2 (Lifecycle of Dams – Fish Passage). This section essentially attempts to establish a process enabling MNR to avoid its responsibility under the LRIA for fish passage by referring this matter to DFO. This paragraph alone is a very disturbing policy proposal that requires much discussion. Accordingly, I feel that this policy proposal was significant enough that it should have been posted clearly. It is my view that the public having interests in protecting and rebuilding Ontario's biodiversity and fisheries should have been given a much clearer indication that OMNR, and that the Ontario government is proposing to essentially abandon some of its responsibilities under the Lakes and Rivers Improvement Act. Further, Ontario's would want to know that MNR is proposing to ignore its own declared roles in protecting and restoring Ontario's biodiversity and

species at risk, at least when it comes to fish passage. I believe some people may want to be given a clear opportunity to comment on this without having to ferret this out.

In case you have not been properly briefed on this issue, Ontario formerly housed numerous iconic highly migratory fish species including the Atlantic Salmon, Lake Sturgeon, American Eel and American Shad. Not only were these species very important for thousands of years to the very survival of Aboriginal peoples in Ontario, they were very important to the well being of early European settlers; these species formed a very unique and special part of Ontario's natural and cultural heritage. The Atlantic Salmon is formally considered extirpated from Ontario and American Shad has virtually disappeared. The American Eel is now designated an endangered species provincially and Lake Sturgeon is threatened. The effects of dams and/or hydroelectric facilities have been linked to the declines or demise of all of these species in Ontario by obstruction of free passage to key habitats, and significant turbine mortalities. The importance to aquatic biodiversity and native fish species of ensuring dams and hydro-electric facilities are managed and operated in an ecologically sustainable manner, and the strong linkage to provision of adequate, safe passage, has been known for decades. It is clearly why the Ontario government ensured that the following sections were contained within the LRIA in the first place:

- A key purpose of the Act is found in Section 2d) the management, perpetuation and use of the fish, wildlife and other natural resources dependent on the lakes and rivers”;
- Under Section 17(4) of the Act: The Minister may order the owner of a dam that has been constructed without a fishway to provide one, within the time specified in the order, that permits free and unobstructed passage of fish up and down stream at any season of the year. 1998, c. 18, Sched. I, s. 32

The LRIA is an especially important tool in the tool box to ensure MNR and the province achieves its mission of ecological sustainability, its commitment to biodiversity and protection/recovery of species at risk – this is obvious. Clearly, the LRIA is a very important and effective instrument in ensuring that MNR strategic directions identified in policy and other legislation are adhered to in the construction and operation of hydro-electric facilities and other dams. However, instead of embracing this tool and using it to meet its own strategic directions, and assist in the implementation of its own policies, the ministry seems to be making an attempt to distance itself from its own mandates. Mandates the Ontario government explicitly gave MNR through the LRIA and other legislation and policies. The whole issue of fish passage, and other areas of the act that could be useful in ensuring ecological sustainability of hydro-electric facilities, appear to be referred to Fisheries and Oceans Canada (DFO), essentially dusting MNRs hands of this. In essence, it appears to me that the ministry is proposing to rely on the federal government to implement the very strategies, policies and directions that the Ontario government gave itself, at least when it comes to ensuring that dams and hydro-electric facilities in Ontario are ecologically sustainable.

Unclear Direction to Ministry Staff

The technical guidelines are silent on MNRs responsibilities for fish passage under the LRIA, giving staff no direction other than to indicate that MNRs concerns and objectives are to be referred to DFO. My first question is: in what format are these objectives to be transmitted; are they to be formally approved documents? The guidelines give no

indication. Many approved fisheries management objectives are rarely specific regarding fish passage requirements, and were written prior to promulgation of MNRs Biodiversity Strategy and Endangered Species Act. If passage requirements are mentioned in fisheries management objectives, they often only consider passage for salmon, trout and walleye. Rarely is fish passage considered for other species at risk in these documents. My next question is: what is the direction to MNR staff if DFO does not act? It is unlikely that MNR can abandon its responsibilities under the LRIA in the likely event of DFO inaction. MNR has a large number of highly capable and experienced staff across the landscape with intimate knowledge of the resource. If MNR has already done all the work to determine fish passage needs, it seems only logical that they would issue the permits with conditions for passage. Instead, a very cumbersome process is proposed involving two levels of government (potentially three if the CAs are involved), and all the associated internal approvals required within each government. Would it not be more efficient if MNR issued LRIA permits including requirements for fish passage on provincial waters while consulting with DFO on matters of design? I do not get it I guess. LRIA approvals are one of the first permits issued to proponents of new dams – an opportune time to let the proponents know of fish passage requirements, rather than expecting other legislation (e.g., ESA) to pick this up later in the approvals process, and surprise proponents well into the approval process. In any event, the whole matter requires more thought.

With new government priorities to increase capacity for renewable energy (a laudable initiative if done well and thoughtfully), a major expansion in Ontario's hydro-electric generation is foreseen. This means more new facilities and significant expansions of existing ones. I can only imagine how conflicted staff feel with this new government initiative (Green Energy Act) on the one hand, and Ontario's mission of ecological sustainability, new Biodiversity Strategy and Endangered Species on the other. The technical guidelines were an opportunity to embed the ministry's strategic directions and policies into the guidelines, giving staff clear direction and support to implement them during their reviews of proposals under the LRIA. Instead, the guidelines are not only largely silent on these directions (or at most timidly mention them), the guidelines overtly strip out all past directions relating to fish passage that were in the previous version of the guidelines posted on EBR in 2004. That act alone sends a message to staff. The guidelines are silent on how staff are to proceed under the LRIA for fish passage, other than to refer fish passage issues to DFO. How much internal consultation with staff was carried out? And again, what if DFO does not require fish passage if requested by MNR – how are staff to proceed under the LRIA with their mandate for fish passage? This needs to be clarified. The proposed process sounds like a clear recipe for inaction, both federally and provincially. If MNR does not have clear, approved fisheries management objectives for fish passage, then DFO may be unwilling to require passage, and if DFO does not act to require fish passage then will the Ministry consider it has no reason to require fish passage? The end result is that the protection and recovery of biodiversity and species at risk, and the ecological sustainability of hydro-electric facilities, will again fall between the cracks and again be compromised by ignoring the need for fish passage.

Reliance on DFO

My analysis of this issue, particularly with reference to fish passage, suggests that this proposal is ill-conceived and is doomed to fail. By fail I mean if Biodiversity and Renewable Energy Branch and the Ministry is steadfast in its commitment to biodiversity, ecological sustainability and the protection/recovery of species at risk. I

know there are similar mandates federally, and strong provisions in the Fisheries Act for fish passage. But it is well known that DFO has a long and disappointing track record when it comes to insisting on the provision of fish passage in Ontario, especially at hydro-electric facilities. In Ontario, there are more than 200 hundred hydro-electric facilities, only one has fish passage (Saunders GS) on the St. Lawrence River, and that facility currently provides only for upstream passage of one species, the American Eel. This passage provision was not required by DFO – it was an agreement between Ontario Hydro and OMNR, using the LRIA as an instrument to operationalize it. Again, more than two hundred hydro-electric facilities exist in Ontario. None have been required by DFO to install fish ways to facilitate passage for any species, even when other federal permits (e.g., Navigable Waters Protection Act permits) have suggested passage should be provided. The end result is that many of our watersheds support numerous hydro-electric facilities with no requirements to mitigate their ongoing, highly cumulative, negative effects on fish and fish migration. Consequently, existing dams and hydro-electric facilities continue to induce serious cumulative impacts on several migratory fish species in Ontario. And many more facilities are coming. The cumulative, unmitigated effects of dams and hydro-electric facilities have been identified as key factors leading to the extirpation or near-extirpation of several fish species in the province. In addition, they have been identified as key threats in status reports leading to the listing several species as threatened or endangered species. Hydro-electric facilities, for instance, have been identified as the leading source of man-induced mortality of American Eel in the province, jeopardizing survival and recovery of American Eel in Ontario's watersheds.

A good example is the Ottawa River watershed which supports 50 hydro-electric facilities. Many of these facilities each produce 10s of millions of dollars of power annually, and many have been doing so for almost a century. Yet none have been required to provide safe, adequate passage. The result has been very significant and negative effects on Lake Sturgeon and its habitat, the extirpation or near extirpation of American Eel (a species that travels 6000 km to get to Ontario in the first place) and the province is now almost devoid of American Shad (once abundant in the Ottawa River). Many of these facilities are on the main stem of the Ottawa River and span the river into Quebec from Ontario. Because these facilities span two provinces, federal leadership clearly is required, and yet to this day there has been no mitigation of effects on fish passage despite almost a century impacts, including of ongoing mortalities. Similarly, the Trent River supports 14 hydro-electric facilities, but none provide safe, adequate fish passage, and the locks are clearly inadequate for some fish species. There is evidence of these facilities killing provincially listed species at risk as well. Yet this is a federal waterway where the federal government and DFO have very strong mandates for conservation and protection of biodiversity, species at risk and protection of fisheries within Ontario.

There are numerous other examples of federal inaction regarding fish passage, particularly at hydro-electric facilities in Ontario. It is no secret that literally tons of American Eel have been killed by hydro-electric facilities in Ontario; this species is now listed as endangered provincially. The most recent example is at Saunders GS where, since it's commissioning in 1958, it has again been no secret that the facility has been killing eels on an ongoing basis for decades, to the extent that when eels were more abundant, Ontario Hydro hired contractors to collect and dispose of truckloads of eel carcasses killed by the turbines. I thought section 32 of the federal Fisheries Act was supposed prevent killing fish by means other than fishing unless the facility authorized – was this facility ever formally authorized? I understand that (at the urging of the

province) there is now an agreement with the power company to begin looking at and implementing mitigation options, but was this facility ever authorized under the Fisheries Act for previous 40+ years of mortalities? If not, what actions were taken by DFO? Similarly, it is no secret that turbine mortalities of sturgeon and eel have been ongoing on the Ottawa River for a century, are these facilities formally authorized to do so under the federal Fisheries Act? If not what actions has DFO taken? It is public knowledge that these facilities are still killing species that are designated endangered and threatened provincially. With no effort required of the power companies by the federal government to even attempt mitigation of these mortalities (e.g., by changing operational procedures or by employing adaptive management procedures), there has been no incentive for Ontario waterpower producers to develop technologies and to implement known operational procedures that would help mitigate. Fish are still being killed in clear and graphic view; apparently this must be viewed as a manageable risk. This continues on many watersheds despite highly publicized concerns in the media, including the Toronto Star, Globe and Mail, Walrus Magazine and most recently National Geographic. I am mindful of the following quote from Dr. Peter Hodson, Queens University in the Walrus article “ Eels on Wheels” by David Lees:

“Peter Hodson was eleven years old the first time he saw an eel, on June 27, 1959. He also saw the Queen that day, a white speck in the distance, as she unveiled the International Friendship Monument, which stands at the precise point where the R. H. Saunders dam, operated by OPG (then Ontario Hydro), meets the New York Power Authority’s Robert Moses dam. The unveiling was in effect a delayed ribbon cutting for the joint hydroelectric complex, which had been in operation for a year. Virtually all the fresh water in the Great Lakes basin, barring leaks through a few ship canals, pours through its thirty-two turbines — nine million litres a second, generating 2,090 megawatts of power. More clearly than he remembers the Queen, Hodson recalls the eels, hundreds of them, their dead, broken bodies floating on the surface downstream.”

The foregoing clearly demonstrates that the concept of referring fish passage, and essentially the ecological sustainability to DFO, is fundamentally flawed. This will do little to change the status quo. Given the disappointing record relating to fish passage by DFO, and the fact that they again have experienced severe cuts in staff and budget, how can OMNR possibly think that its mandates under the LRIA and its strategic directions would be covered off by DFO – have DFO agreed to this? Surely MNR was aware of DFO capacity reductions via CONFAB deliberations? What miraculous changes have occurred within DFO that can assure the citizens of Ontario they can realistically expect any difference in DFO’s treatment fish passage? Can OMNR realistically expect that its own legal mandates, strategic directions and policies will be met by referring fish passage to DFO? Presumably, the Ontario legislature enabled all sections of the LRIA for good reason. If the Ministry wants to make such changes, I would think they should change the act itself; otherwise, the Ministry and Ontario government could be vulnerable to criticism when DFO does not act. I presume this proposal has been clearly vetted internally? I mean no disrespect to my former colleagues in DFO. They are as dedicated as Ministry staff, but they seem to have little direction on this serious issue and seem to be hand-cuffed by regional and national confusion. Moreover, DFO in Ontario appear to have capacity issues to carry out their existing responsibilities for fish habitat protection, much less attempting to handle a new wave of hydro-electric facilities on their own across the province. In the meantime, the watersheds and aquatic species of Ontario may again be at risk by repeating past mistakes. MNR has a strong

provincial tool called the LRIA that should be used to require fish passage and other mitigation at dams and waterpower facilities - otherwise biodiversity and potential risks to species are going fall through the cracks again. The guidelines are very unclear whether the LRIA will ever be used for this purpose, and they need to be.

Summary

There are known technologies and known operational procedures to mitigate many effects of dams and hydro-electric facilities on fish passage, and adaptive management techniques can be used to solve others. It takes effort, but after a century or more of no effort to mitigate at most facilities, strategically implemented effort should be required. The resources clearly are available within the waterpower industry to undertake strategic mitigation, especially after up to a century of none. Perfect solutions cannot be expected immediately in all instances, but strategic effort (sometimes through adaptive management approaches) should be required at new and existing facilities to assure Ontario residents that waterpower will become a source of green energy. Surely after 50 to 100 years of no effort, that is not unreasonable. The LRIA is an important tool to ensure this occurs.

When this EBR posting was first drawn to my attention by a member of the public, I, like many others I am sure, read it the in the same manner. At first blush the guidelines appeared to be dealing only with dam safety and operations. However, when I investigated further (and I really had to drill down hard and long), I found the section relating fish passage. I doubt many members of the public would take the time to review the guidelines, given the summary contents of the posting on the EBR. The Technical Guidelines indicate on each page that they were for discussion purposes only – I presume that OMNR did not want to discuss this with people interested in biodiversity and fisheries interests because this proposed major policy deviation was cleverly buried within a huge document with no such indication in the summary posting. Many people could be concerned over lack of fish passage at Ontario's existing hydro-electric facilities and their cumulative effects on fish and fisheries. I believe they may have similar concerns over the potential for many more facilities without mitigation. This proposal significantly increases the risk of that occurring. I presume some Ontario's would want to have an opportunity to comment on this proposed weakening of the LRIA, an act whose very purpose among others is the management, use and perpetuation of fish.

The LRIA is strong legislation that can be very useful in helping the Ministry in achieving its strategic directions. As I have shown, the proposed changes relating to fish passage have the potential to seriously weaken the LRIA and comprise the ministry's ability to achieve its mandates. Moreover, the proposed change could leave the ministry and government exposed to serious criticism. If the MNR does not wish to have nor implement these important tools to ensure dams and hydro-electric facilities are ecologically sustainable, then the ministry should attempt to change the act to be sure they are on safer ground. I think that would be a big mistake by the way.

Thankfully, the guidelines at least indicate that LRIA permits will not be issued if the proposal threatens species at risk. Nevertheless, due to known and frustrating complications with the ESA, there is no assurance that MNR can rely on the ESA alone to implement fish passage, particularly upstream passage – even though the hydro-electric facilities and other dams may be jeopardizing recovery of species by obstructing passage. Moreover, there is an equally important role for the LRIA in helping to keep non-listed species off the ESA list of species at risk to begin with; this role is clearly

outlined in the purposes of the act (specifically Section 2d). This is particularly important given the proposed new wave of hydro-electric facilities coming to Ontario. This time Ontario has to get it right. Ontario can ill-afford further serious (and for the most part unnecessary) environmental trade-offs for power generation; trade-offs that will potentially exacerbate the significant ongoing effects on species and biodiversity arising from existing facilities (which still need to be addressed). I trust the government has been thoroughly briefed?

The LRIA will be a very effective tool in preventing further losses to aquatic biodiversity due to dams and turbines by enabling MNR to require mitigation (e.g. fish passage) – even if the mitigation is experimental and through adaptive management to begin with. It is almost 2011 (not 1930), Ontario can do much better this time, particularly if staff are enabled and supported to use all the tools in the drawer effectively (both federal and provincial). It will be a sad statement if the province's only actions to protect and restore biodiversity are to keep native species from entering Ontario watercourses to begin with. This would be contrary to Ontario's mandate to protect and recover species. Further losses of species and biodiversity will be inconsistent with the recent COP-10 deliberations and agreement struck in Japan, not to mention Ontario's own strategic directions.

Achieving balance between the effects of hydro-electric facilities with ecological sustainability, protection and recovery of biodiversity and the protection and recovery of species at risk involves taking a long-term perspective. It absolutely cannot mean using today's status as the baseline. It means thinking through the cumulative loss over the past century, and the cumulative billions of dollars made over the same time frame. It involves thinking through the benefits and losses to Ontario's, and the further benefits had mitigation been required. It also involves careful thinking about future effects of new hydro-electric facilities when added to the effects of existing ones. It involves stepping back from the day to day frenzy and taking a good hard look at this from the landscape perspective, beginning with the site release process and effects on the few pristine areas left in Ontario. Finally, it involves understanding that even with careful mitigation something will always be lost or forever changed; therefore, Ontario residents need to be given many opportunities to clearly understand and make meaningful comments on the choices. It is essential that the LRIA is used wisely in this context to at least minimize the effects. It is important ensure that serious known collateral environmental damage is not perpetuated as we dash off to attend to climate change. Nowhere is it suggested that global warming be addressed at all costs.

I am disappointed that Biodiversity and Renewable Energy Branch and the ministry would not think to clearly invite comments from those interested in protecting Ontario's biodiversity and fisheries, particularly when such an overt act to strip out all previous wording relating to fish passage was undertaken. Having said that, I can well appreciate how busy and pressured staff in MNR are these days, and that this was hopefully a simple oversight. With any luck, this situation will be rectified sometime soon.

I understand that letters such as mine take considerable time to respond to; consequently, I am not asking that the ministry and DFO spend time developing one. I would rather staff from the two agencies spend the time consulting with each other, including thorough consultations with the field staff who are expected to implement the guidelines. It is my hope that the technical guidelines will be revised to clearly embed and conform to the aforementioned strategic directions, policies and legislation. The

LRIA has an important role in ensuring that hydro-electric facilities are developed and operated in an ecologically sustainable basis. This is critical because the environmental impacts can be serious and ongoing; accumulating across a century or more if the effects are left un-mitigated.

I look forward to the next iteration of these important guidelines. Hopefully you find these comments helpful. They are intended to be. I wish my OMNR colleagues all the best. They are doing important work; hopefully they find their compass and can stay true to their strategic directions through all the turmoil. I have the same wishes for staff from Fisheries and Oceans Canada.

Sincerely,

Rob MacGregor

c.c. Honourable Linda Jeffrey, Minister of Natural Resources
Virginia West, Deputy Minister of Natural Resources
Gord Miller, Environmental Commissioner of Ontario
Bob Lambe, Fisheries and Oceans Canada