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Dear Mr. Dunlop:

**Re: EBR Registry Number: 012-0291
Ontario's Provincial Fish Strategy: Fish for the Future**

Ontario Rivers Alliance (ORA) is a Not-for-Profit grassroots organization acting as a voice for the French River Delta Association, CPAWS-Ottawa Valley, Kiishik Community Association, Food & Water First, Whitewater Ontario, Vermilion River Stewardship, Friends of Grassy River, Mississippi Riverwatchers, French River Stewardship, as well as many other stewardships, associations, and private and First Nations citizens who have come together to protect, conserve and restore healthy river ecosystems all across Ontario.

ORA would like to thank the Ontario Ministry of Natural Resources (MNR) for the invitation to participate in the Provincial Fish Strategy Workshop, and the opportunity to provide input and feedback on the draft Ontario's Provincial Fish Strategy: Fish for the Future (Strategy). This workshop was an opportunity to participate with several other organizations in a forum environment to discuss our ideas, challenges and perspectives on key areas of the Strategy. ORA also commend the MNR for extending a 120 day comment period to allow for meaningful input from the public and stakeholder organizations. These important outreach tools instill confidence in the process, and demonstrate a genuine desire to reflect stakeholder interests in key decision making and policy objectives.

In general, ORA is very supportive of this draft Strategy. The focus of collaboration, accountability and transparency with all levels of government, First Nations, provincial partner agencies and stakeholders as a central theme within this Strategy is refreshing and vital. It is apparent that those responsible for crafting this document are doing everything within their power to act in the best interests of Ontario fisheries and the public; however, there are some areas where improvements are needed. Consequently, ORA is very pleased to provide our comments.



1. MNR Sectors Working Together

ORA's most fundamental recommendation is for all MNR sectors to work collaboratively to ensure MNR's Statement of Environmental Values (SEVs) are met through this Strategy. The MNR's SEV promises "*a healthy environment that is naturally diverse and supports a high quality of life for the people of Ontario through sustainable development. The Ministry's mission is to manage Ontario's natural resources in an ecologically sustainable way to ensure that they are available for the enjoyment and use of future generations. The Ministry is committed to the conservation of biodiversity and the use of natural resources in a sustainable manner.*"

In addition, the SEV states that the "*MNR will adopt an ecosystem approach*". An ecosystem approach can only be effective if this holistic approach is also incorporated into the inner workings of MNR itself. The success of this Strategy rests on the ability of the Fisheries sector to communicate with and influence the Renewable Energy sector. This Strategy cannot be successful if programs hive off key issues from other programs or agencies without acting to ensure these issues are handled responsibly and effectively.

MNR must ensure that appropriate information such as fisheries management objectives at the appropriate scale and detail are developed, passed on, and incorporated into the renewable energy programs. A siloed and insular approach to renewable energy programs has brought an imbalance to decision making that cannot continue if the intent is to ensure our fisheries are available for the enjoyment and use of future generations.

The fundamental values of ecosystem sustainability should be a key driver in all policies and strategies related to our fisheries, and guidance should include clear management objectives and policies related to the perpetuation of fish and wildlife – including fish passage.

MNR has a clear mandate for management of fisheries; however, currently the Renewable Energy sector and Great Lakes Policy sector are pulling in the very opposite direction.

A key issue in point were the recent proposed series of Technical Bulletins for Waterpower that, in ORA's opinion, reflected an abdication of the MNR's responsibilities under the Lakes and Rivers Improvement Act (LRIA), which provides for:

- (a) *the management, protection, preservation and use of the waters of the lakes and rivers of Ontario and the land under them;*
- (b) *the protection and equitable exercise of public rights in or over the waters of the lakes and rivers of Ontario;*
- (c) *the protection of the interests of riparian owners;*
- (d) *the management, perpetuation and use of the fish, wildlife and other natural resources dependent on the lakes and rivers;*
- (e) *the protection of the natural amenities of the lakes and rivers and their shores and banks; and*
- (f) *the protection of persons and of property by ensuring that dams are suitably located, constructed, operated and maintained and are of an appropriate nature with regard to the purposes of clauses (a) to (e). 1998, c.18, Sched.I, s.23.*



The Act also empowers the Minister of Natural Resources to make additional regulations concerning the use of lakes and rivers for in-water developments. Many of the provisions above were either seriously undermined or ignored in the proposed technical bulletins.

It is particularly concerning that the MNR considers all responsibility for fish habitat and fish passage as out of scope, and is divesting its interests by way of the bulletins, with no clear MNR role mentioned, to the Department of Oceans and Fisheries (DFO). This is at a time when the federal government announced the signing of a memorandum of understanding between the DFO and the National Energy Board (NEB) to relinquish much of its oversight of fish habitat along pipeline corridors. This news was quietly released just before Christmas, and only highlights the need for the Ontario government to look after its own interests and not rely on federal protection for any of our crown resources.

It is even more concerning that this deferral was carried out despite the Fish Habitat Referral Protocol for Ontario which was approved by government and identifies and enables roles for MNR in the matters of fish habitat and fish passage. It wasn't surprising at the Fishery Workshop to hear this same approach repeated. How can MNR be responsible for fisheries and biodiversity but at the same time make no provision for fish habitat. This makes no sense.

It is ORA's view that this government must continue to play a strong role in ensuring effective mitigation of the impacts of all development, but especially waterpower, to meet their strategic directions for sustainable development; and certainly that will be what Ontario taxpayers expect.

It is vital that we have Ministry and inter-governmental cooperation, in a holistic and collaborative way, to ensure there are no gaps in fulfilling all responsibilities and commitments mandated under legislation, and MNR's SEV.

Recommendations:

- a. All MNR sectors work together effectively to ensure the goals and objectives of fisheries management are achieved and its responsibilities and commitments under its SEV are met.
- b. MNR must retain responsibility in the critical areas of fish habitat and fish passage.

2. Key Trends and Emerging Issues – Drivers/Threats/Pressures

The Green Energy Act, and the push for increasing numbers of waterpower projects is one of the most pressing threats to Ontario fisheries, but was not included in Section 4, Table 1.

The impacts of waterpower are well documented, and have largely been responsible for the decline, and in some cases, extirpation of several aquatic species. There is only one very brief reference to waterpower under Objective 1.2 in connection to the protection of aquatic ecosystem structure and function, including habitat. There should be strict fisheries policy centered on waterpower; however, the lack of any meaningful recognition or mention of its role in the decline of the health and sustainability of our fisheries is a major flaw in the Strategy. The success or failure of this Strategy rests on identifying all significant threats and drivers.



In the workshop MNR staff made mention several times of "balancing the effects of development" and yet the Strategy didn't even list development as a major driver affecting Ontario's fisheries, or their supporting ecosystems. What about mining and wastewater effluent, stormwater, agriculture, and their contribution to pollution?

A risk-based landscape approach can only be effective if all drivers and risks are identified and adequately mitigated. Monitoring, compliance and enforcement are also key to a risk-based approach; however, MNR's recent streamlining and downsizing places doubt around whether MNR has the capacity or will to properly manage a risk-based landscape approach.

Recommendations:

- a. Development must be listed as a "Type of Driver" in Table 1.
- b. Clearly identify waterpower as a risk under Development, and have clear goals that include the implementation of fish passage, healthy environmental flows, fish friendly turbines, and dam decommissioning provisions to be secured up front for the removal of waterpower facilities that are no longer environmentally, socially or economically viable and sustainable.

3. Management Approaches

The Principles and Management Approaches as set out in the Strategy are fine; however, a landscape-scale approach to fisheries resource management must also be balanced with local challenges, issues and needs – it must not just be one or the other.

Risk-based Approach

All risks must be clearly identified. Hydroelectric, aquaculture, and any other development that impacts on fisheries are risks not identified in this Strategy – when they clearly must be.

A risk-based approach to fisheries management can only work if decisions take into account the cumulative effects of all past, present and future developments within the watershed, are science-based, and tempered with the precautionary principle. If an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is *not* harmful must fall on those taking an action.

Those areas that have historic or on-going challenges, or those fisheries with higher risk, or that have significant social, economic or ecological importance, should require more intensive management focused on individual water bodies or watersheds. It is preferable and more cost effective to protect what we already have rather than allow development to move forward and, after the damage is done, try to restore or rehabilitate fisheries resources.

Adaptive Management Approach

Learning through doing can work; however, the risk of serious error and damage could be very high with this approach if it is not tempered with environmentally sound science-based decision making, and the precautionary principle. It is also vital that stakeholder advisory councils and committees representing the general public and key environmental stakeholders and First Nation communities provide advice and direction.



Adaptive Management must also have a strong monitoring, oversight and compliance strategy in place to ensure serious decline or damage does not occur.

Recommendations:

- a. This Strategy must openly address, in its objectives and tactics, the ongoing and significant cumulative effects of hydroelectric on fish communities and fisheries, and their supporting ecosystems, including fish habitat.
- b. Management decisions use a holistic approach that considers cumulative effects, is grounded in science, and tempered with the precautionary principle.
- c. Strong monitoring, oversight and compliance strategies are in place to ensure decline or damage to fisheries does not occur.
- d. Threats and risks to fisheries must include waterpower, aquaculture, and all other developments that impact negatively on fisheries.

4. Goals, Objectives and Tactics

In general, ORA support all the goals, objectives and tactics; however, there must also be a component under "Objectives" that makes a strong statement of ensuring environmentally and socially sustainable development. This should be the foundation and primary tactic for achieving healthy ecosystems and abundant fisheries.

Goal 1 – Healthy Ecosystems

A primary consideration for healthy and sustainable fisheries is to protect connectivity of freshwater ecosystems as well as fish habitat. This is especially important given the number of proposed hydroelectric developments currently going through the approvals process throughout the Province. To date, none of these proposals include provisions for fish passage, or for dam decommissioning.

ORA is pleased to see that cumulative effects are considered in this Strategy.

The collateral environmental damage caused by dams and hydroelectric facilities has been well known for decades,¹ including loss or serious decline in migratory fish species (hydroelectric facilities are key factors in the listing of some iconic fish species as species at risk in Ontario and elsewhere); declining biodiversity^{2, 3, 4, 5, 6}; impaired water quality (including increasing mercury concentrations in fish tissue); and are key threats to imperilled aquatic species.⁷ In the past, little attempt has been made to mitigate these effects in Ontario,

¹ Baxter, R. M., 1977, Environmental Effects of Dams and Impoundments: Annual Review of Ecology and Systematics, v. 8, p. 255-283

² Ricciardi A, Rasmussen JB. 1999. Extinction rates of North American freshwater fauna. *Conserv. Biol.* 13:1220–22

³ Vaughn, C and C. Taylor. 1999. Impoundments and the Decline of Freshwater Mussels: a Case Study of an Extinction Gradient. *Conservation Biology* 13(4): 912-920

⁴ Bunn, S. and A. Arthington. 2002. Basic Principles and Ecological Consequences of Altered Flow Regimes for Aquatic Biodiversity. *Environmental Management* Vol. 30, No. 4, pp. 492–507

⁵ Carew-Reid, Jeremy, Josh Kempinski and Alison Clausen. 2010. Biodiversity and Development of the Hydropower Sector: Lessons from the Vietnamese Experience – Volume I: Review of the Effects of Hydropower Development on Biodiversity in Vietnam. ICEM – International Centre for Environmental Management, Prepared for the Critical Ecosystem Partnership Fund, Hanoi, Viet Nam.

⁶ Jelks, H. J., S. J. Walsh, N. M. Burkhead, S. Contreras-Balderas, E. Díaz-Pardo, D. A. Hendrickson, J. Lyons, N. E. Mandrak, F. McCormick, J. S. Nelson, S. P. Platania, B. A. Porter, C. B. Renaud, J. J. Schmitter-Soto, E. B. Taylor, and M. L. Warren, Jr. 2008. Conservation status of imperiled North American freshwater and diadromous fishes. *Fisheries* 33(8): 372–407

⁷ Wilcove DS, Rothstein D, Dubow J, Phillips A, Losos E. 1998. Quantifying threats to imperiled species in the United States *BioScience* 48: 607–615



despite the fact that hydroelectric facilities have been inducing ongoing harm for more than a century.

The environmental and ecological costs associated with waterpower are well known throughout the world. Perhaps the most famous case involves the devastating cumulative impacts of hydropower on Pacific Salmon stocks in the Columbia and Snake Rivers⁸. Similar examples occur here in Ontario where dams are considered to be a major factor in the extirpation of Ontario's Atlantic Salmon stock⁹, one of the important causes of significant anthropogenic mortalities and decline of Ontario's American Eel¹⁰, and a key threat to Ontario's declining Lake Sturgeon populations.^{11, 12}

If the MNR is serious about its core mandate to conserve biodiversity and manage natural resources in a sustainable manner; and with the organizational goals articulated in *Our Sustainable Future's Strategic Directions for MNR*, then a meaningful consideration of waterpower impacts is essential to protect fisheries and the ecosystems on which fish communities depend.

A holistic approach must be undertaken – one that centers on connectivity, and includes fish habitat, fish passage, fish friendly turbines, and sustainable and responsible development. Healthy fisheries depend on healthy habitat. MNR must not rely on DFO for decisions on fish habitat protection, as they have primarily backed away from their responsibility. MNR must protect the interests of Ontario by exercising its authority and responsibility to protect fisheries and fish habitat to the fullest.

Recommendations:

Objectives and tactics must include:

- a. **Goal 1.1** - Diversity and connectivity have already been severely compromised in Ontario, so this objective should read, "Protect, maintain and restore aquatic ecosystem diversity and connectivity".
- b. **Objective 1.2 – Tactics:**
 - i. Bullet two should read "Contribute to Leads in the development of legislation and policies that protect fish and fish habit".
 - ii. Bullet three, the words "~~where mandated~~" should be removed. It is our understanding that MNR is mandated to comment on all development projects that pose risk to fish communities, habitat and ecosystems, even on Federal waterways.
- c. **Objective 1.6 – Tactics:**
 - i. Climate change is certainly a driver to large-scale environmental change; however, Objective 1.6 and its tactics fall short of naming one of the most significant drivers over the past 100 years, and that is hydroelectric. This section should also provide tactics to deal with hydro's long-standing and

⁸ Blumm, M; E.J. Thorson and J.D. Smith. 2006. Practiced at the Art of Deception: The Failure of Columbia Basin Salmon Recovery Under the Endangered Species Act., Environmental Law: 36: 709

⁹ OMNR 2013. Restoration of Atlantic Salmon to Lake Ontario: past, present and future.

¹⁰ MacGregor, R., J. Casselman, L. Greig, W. A. Allen, L. McDermott, and T. Haxton. 2010. DRAFT Recovery Strategy for the American Eel (*Anguilla rostrata*) in Ontario.

Ontario Recovery Strategy Series. Prepared for Ontario Ministry of Natural Resources, Peterborough, Ontario. vii+ 78 pp.

¹¹ Golder Associates Ltd. 2011. Recovery Strategy for Lake Sturgeon (*Acipenser fulvescens*) – Northwestern Ontario, Great Lakes-Upper St. Lawrence River and Southern Hudson Bay-James Bay populations in Ontario. Ontario Recovery Strategy, Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. vii + 77 pp.

¹² COSEWIC 2006. COSEWIC assessment and update status report on the lake sturgeon *Acipenser fulvescens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 107 pp. (www.sararegistry.gc.ca/status/status_e.cfm).



- broad-scale effect on fish communities, fisheries, and their supporting ecosystems, including fish habitat.
- ii. Bullet two should read "~~Support~~ Develop integrated resource management plans".
 - iii. Bullet three should read, "~~Contribute to development of~~ Develop initiatives that advance science-based decision making tools for cumulative effects". It is important the MNR take a leadership role in developing fisheries management objectives with firm action, rather than "explore" or "contribute".
- d. A holistic approach with a focus on improving and restoring diversity and connectivity.
 - e. Provisions to address fish habitat, and ensure fish passage, fish friendly turbines, and sustainable and responsible development.
 - f. Dam removal for dams that are no longer serving any useful purpose.

Goal 2 – Sustainable Fisheries

As stated above, protecting connectivity and fish habitat is essential to healthy and sustainable fisheries, and must be clearly stated as an objective of Goal 2. The tactics under Sustainable Fisheries seems much more developed, detailed and clear than those in Goal 1.

Goal 3 – Effective and Efficient

Again, Ministry sectors and other government agencies must all work together and support each other's programs with their responsibilities and commitments guiding decision making. This must be added as an objective of Goal 3.

Goal 4 – Informed by Science

As recommended above, a science-based approach that takes into account cumulative effects and employs the precautionary principle must be a clear objective under this section.

Fisheries policy must be based on sound science - not political agendas.

Goal 5 – Participatory and Engaged

Engagement and participation through outreach to the public, stakeholders and First Nations is essential in all aspects of the Strategy. This would not only supplement MNR's capacity to carry out restoration and monitoring, but also builds public interest, awareness, and a sense of responsibility in the care of local water bodies and fisheries. A strong education component must be in place to inform local stewardship and lake organizations and encourage their involvement.

Recommendations:

- a. Providing funds to local stewardships and organizations to engage in fisheries related activities would bring a sense of responsibility and ownership to the health of the fisheries.
- b. Many local organizations and stewardships are collecting data on water quality, fisheries, etc., and MNR should provide best practice guidelines for the uniform collection of this data.



- c. There is a need for MNR to facilitate the sharing of this information/data/research amongst other organizations and stakeholders.
- d. Social media and software apps are a useful tool in promoting and engaging the public and stakeholders in data collection.
- e. Through sponsorships and/or partnerships, industries that benefit from Ontario's natural resources must also be required to support and/or participate in protecting and restoring Ontario fisheries.

ORA emphasises that it is vital that all risks and issues are identified so that clear goals, objectives and tactics can effectively prevent or mitigate their impacts. It is important that MNR develops clear fisheries management objectives at the appropriate scale (e.g. watershed scale) to clearly inform the permitting and approvals process.

ORA strongly support the development of a clear and strong cumulative effects project review process.

Throughout our submission, ORA has had a focus on waterpower development as it has been a primary cause for many of our water quality and fisheries challenges over the past century. The advent of the Green Energy Act and its inclusion of hydroelectric under its FIT Program has proven to be a major threat to Ontario fisheries and riverine ecosystems. Therefore, it is essential that this Strategy take a strong position, and make provisions for proper consideration and mitigation of the impacts of waterpower.

Thank you for this opportunity to comment. ORA look forward to any future opportunities for input into this very important Strategy.

Respectfully,

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