

ONTARIO FEDERATION OF ANGLERS & HUNTERS



Ontario Conservation Centre

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June 1, 2018

Mr. Eric Corneau
Industrial Sectors, Chemicals and Waste Directorate
Environment and Climate Change Canada
Government of Canada

Email: ec.produits-products.ec@canada.ca

Dear Mr. Corneau:

Subject: Moving Towards Using Lead-free Fishing Tackle/Moving Towards Using More Lead-free Ammunition

The Ontario Federation of Anglers and Hunters (OFAH) is Ontario's largest non-profit, conservation-based organization representing 100,000 members, subscribers and supporters, and 740 member clubs. We have reviewed the following reports produced by ToxEcology Environmental Consulting Ltd. ("the consultant") for Environment and Climate Change Canada (ECCC): 1) *Study to gather information on uses of lead ammunition and their non-lead alternatives in non-military activities in Canada (2018)*; and 2) *Study to gather use pattern information on lead sinkers and jigs and their non-lead alternatives in Canada (2018)*. We have serious concerns about the material presented in these reports and offer the following comments for consideration.

We are concerned with ECCC's ambiguous language in these proposals. ECCC requested feedback to help inform the development of an approach for "*encouraging the use*" of lead-free ammunition and tackle in Canada. However, ECCC states that their consultation is an invitation to be part of a conversation in "*moving towards*" lead-free ammunition and tackle. In our opinion, these are two very different discussions and would likely garner different responses. Additionally, the consultant's report focuses on "*sinkers and jigs*," whereas, ECCC's public-facing website broadly uses the more ambiguous term "*tackle*," which includes much more than sinkers and jigs. Moving towards lead-free tackle has greater implications than moving towards lead-free sinkers and jigs. Our submission will identify some major issues with the idea of "*moving towards*" lead-free ammunition and tackle, as well as offer approaches that should be taken if ECCC wishes to encourage and facilitate the voluntary use of lead-free alternatives.

The OFAH acknowledges that significant scientific research has been conducted on this issue since it was last raised by ECCC in 2005. But any legislation, regulations, or policy based on the two reports published by the consultant will be adamantly opposed due to the glaring problems, which are explained in more detail below. The reports lack critical information that was requested in the original tender notices that would have provided valuable insight into this discussion, and instead rely on unsupported opinions and assumptions.

The dismissal of hunter and angler opinion in these reports is the greatest barrier to the development of a program to encourage the use of lead-free ammunition and tackle. It is disingenuous that ECCC is asking for hunter, shooter, and angler input while presenting reports which repeatedly state that these groups will deny the science regarding lead toxicity and will refuse to cooperate. Making assumptions and predetermining how the recreational hunting, shooting, and angling communities will react significantly limits discussion and signifies that neither the federal government nor the consultant is interested in having constructive discourse on this topic. The reports also fail to recognize the validity of the views of these communities. Stakeholders are repeatedly referred to as "lobby groups" and not recognized as parties representing individuals with valid opinions.

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Furthermore, the language used when discussing hunters, shooters, and anglers in the reports is chosen to purposefully present them in a negative way. The report acknowledges that most of the information regarding the environmental and human health concerns related to lead are contained in the scientific literature, and freely concedes that this format is not conducive to public engagement (page 123 of the ammunition report). Despite this, the report criticizes hunters, shooters, and anglers for not being aware of these issues. In an extreme example, quotes collected by the consultant through the Hunter Survey and the Angler Survey regarding a perceived lack of evidence on these issues are only presented after the reports present scientific information to the reader. This purposeful and misleading delivery of hunters' and anglers' opinions serves to reinforce the messaging that the groups are anti-science when in reality the material is not readily available to the average person. It is a targeted attack on the intelligence of hunters, shooters, and anglers.

Overall, the tone of these reports does not suggest an attempt to convince hunters, shooters, and anglers to use lead-free ammunition and tackle. Instead it reads as an attempt to convince non-hunters, non-shooters, and non-anglers to push for a ban on lead. A clear example of this is ECCC's public-facing website and the blatant focus on "the great Canadian Loon." This appears to be a calculated approach to generate an emotional reaction from the public and gain support from people unaffected by national initiatives towards lead-free fishing tackle. From our experience, basing decisions on emotional rhetoric leads to uninformed decisions and poor management. The potential challenges with respect to lead include more than a single species; rather, the broader discussion should integrate fish, wildlife, the environment, and people, as well as improved research and science. If the Government of Canada wishes to move towards lead-free alternatives, the communication strategy must be authentic. The reports over-simplify or ignore key socio-economic impacts that must be considered when asking the hunting, shooting, and angling communities to switch to lead-free alternatives. The reports severely over-estimate the availability of lead-free options and fail to show any meaningful consultation with hunters, shooters, and anglers. It also ignores any potential recruitment and retention losses of hunters, anglers, and non-resident resource users as a result of restrictions on lead. We will discuss in detail the concerns we have with these oversights and provide strategies on how to address them.

In order to better understand the positions held by OFAH members on the subject of lead-free ammunition and tackle, we distributed an online survey (the OFAH Lead Survey). This survey was active between May 2 and May 9, 2018 in which time we received 3,251 responses. Of these respondents, 82 percent were OFAH members. We acknowledge our survey is not a true random sample and may not be generalized to accurately represent the broader hunting, shooting, and angling communities throughout Canada; however, we feel it is necessary to present our survey responses in this letter in order to counter some of the inappropriate narrative about hunters, shooters, and anglers put forth by the consultant, insofar as they apply to Ontario. A full link to the OFAH Lead Survey report will be available at: www.ofah.org/issues/lead.

Accessibility

The single most important and overarching factor that will determine the success of any efforts to encourage the use of lead-free ammunition and tackle is the accessibility of those products. A product that is difficult to locate or expensive will not be widely adopted. For our purposes, the term "accessibility" refers to the retail availability and the cost of a product. This report incorrectly portrays lead-free ammunition as being highly accessible in terms of both availability and cost.

Availability of Ammunition

The ammunition report criticizes hunters and shooters for not embracing lead-free ammunition, but the reality is that it is difficult to locate. Availability is a two-part issue consisting of: 1) Does a lead-free alternative exist? 2) Can hunters and shooters get it?

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In the report, lead-free ammunition is considered “available” because it is manufactured by the companies that supply the Canadian market. This could be interpreted as market availability in that the product exists and could potentially be made available to the Canadian market, and the report states that lead-free ammunition is available in Canada under this context. However, this is a very general statement and ignores individual calibres. For many popular calibres, few or no lead-free options exist. A popular calibre for deer and moose hunting in Canada is .303 British due to the availability and low cost of surplus Lee Enfield rifles. There currently exists no commercially available lead-free options in this calibre. According to Table 1 in Thomas (2013) there are only two lead-free *bullets* (i.e. not loaded ammunition) currently manufactured in this calibre. When manufacturers do produce lead-free ammunition, they do so in the most common calibres, resulting in limited selection. Fifty-one percent of 2,320 respondents to the OFAH Lead Survey rated the selection of lead-free ammunition as “Poor” or “Very Poor.” Market availability is the “Does it exist?” question and for many popular calibres the answer is “no.”

The local availability of lead-free alternatives for ammunition is not addressed in this report. Many Canadians live and/or hunt in northern and rural areas away from large retailers. Out of 2,635 OFAH survey respondents, 17 percent indicated they only purchase their ammunition from small independent retailers. To encourage the use of lead-free ammunition it must be available where Canadians shop and not be limited to large retailers or online vendors. If lead-free ammunition is not made universally available, hunters living in remote areas (including Indigenous communities) will be severely limited. Currently, lead-free ammunition for all hunting purposes and calibres is not widely available, even at major retailers in large population centres with 52 percent of 2,273 OFAH survey respondents rating the in-store availability of lead-free ammunition as “Poor” or “Very Poor.”

Availability of Sinkers and Jigs

The Canadian angler is primarily interested in three aspects when considering sinkers and jigs: availability, cost, and performance. Currently, jig markets are not conducive to widespread availability of lead-free alternatives, whereas the angling industry does provide a fairly diverse range of lead-free options for sinkers at major retailers. Despite this, more than half (54 percent) of 2,311 OFAH survey respondents described the availability of lead-free sinkers and jigs as “there are options but they are limited.” As mentioned in Section 3.2 (Profile of Alternatives versus Lead) of the sinkers and jigs report, lead is dense, malleable, it does not damage line, and can be easily molded into a variety of shapes and sizes. While alternatives may provide improvements to one or two of these qualities, they do not offer all of the benefits of lead. This is evidenced by the fact that 32 percent and 37 percent of 2,311 OFAH survey respondents felt that lead-free sinkers and jigs are less effective than lead or that they were unsure of their effectiveness, respectively. Adding to this issue is that people are reluctant to change, especially when considering the long-standing convention of using lead products.

Strategies to Address Availability

The ammunition and tackle industries are developing lead-free alternatives for the performance benefits they offer in specific situations. For example, copper monolithic bullets offer high bullet weight retention and deep penetration, and tungsten drop shot weights are far better than lead in noise making/fish attracting characteristics when striking hard bottoms. However as explained above, a major issue with availability is that in Canada there is limited supply and demand for lead-free alternatives. To address this, the Government of Canada should engage with manufacturers to identify barriers to delivering lead-free options and encourage market penetration in Canada. This could be done with current manufacturers to supply Canadian distributors or by providing business grants and tax incentives to encourage domestic manufacture. The ammunition report highlights the lack of domestic manufacturers. This could represent an opportunity to encourage innovation in Canada. As an example, for products that do not currently exist in lead-free forms (e.g. lead-free .303 British ammunition), business grants could be awarded for domestic manufactures to fill that Canadian-specific niche.

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To ensure the success of the sale of lead-free options that are new to the market, improvements could be made to the marketing and labelling of lead-free alternatives and, where applicable, increased advertising of the associated benefits. To encourage customers to purchase lead-free alternatives, retailers could establish designated lead-free sections and displays. One of the most effective ways to get people to change behaviours is to give them an easier alternative; if you want consumers to switch away from lead, provide clear and easy to find alternatives. To complement this, retail staff could be trained on how to answer questions regarding lead-free products. Additionally, a growing proportion of hunters, shooters, and anglers are new Canadians, therefore, the implementation of strategies must consider potential language barriers in order for initiatives to be successful. Hunters, shooters, and anglers wishing to purchase lead-free options should not have to expend significant effort searching for them.

Costs of Ammunition

Can hunters and shooters afford to make the switch to lead-free ammunition or will it create an economic barrier to participation? The cost of all components of hunting (licences, equipment, gas, lodging, etc.) are all increasing, making hunting on the whole more expensive. Many hunters budget closely to be able to participate, and increased costs can reduce hunter recruitment and retention. Our survey responses support this concern with 38 percent of 2,448 respondents indicating that they would hunt fewer species and/or hunt less often if a partial or complete ban on lead ammunition came into effect. The report dismisses this as a possibility but that conclusion is based on errors when calculating ammunition costs and a failure to consider the cost to hunters and shooters required to purchase new firearms or modify existing firearms in order to use lead-free ammunition.

When calculating the cost to hunters of switching from lead to lead-free options, the report uses calculations of ammunition use based on reported wildlife harvest records from earlier in the report. The harvest records obtained by the consultant do not represent all wildlife harvest in Canada due to differences in reporting requirements between provinces and territories and mostly consist of waterfowl (which requires the use of lead-free ammunition) and big game animals (i.e. deer, bear, moose, and elk). When using these estimates to calculate the amount of lead deposited in the environment through hunting, the report very clearly states that these are underestimates of the amount of ammunition used. However, when calculating the cost to hunters of switching to lead-free ammunition, the consultant does not mention this and the method of calculating cost is only given in a footnote. This is an inappropriate omission because the harvest records largely exclude small game and upland birds, which have the highest harvest limits and, therefore, greatest ammunition expenditure of game species with the possible exception of waterfowl.

A similar oversight/omission occurs when the consultant describes the cost to sport shooters. The report correctly acknowledges that sport shooters will be the most impacted from a cost perspective. This is supported by our survey results with 65 percent of 1,831 OFAH survey respondents who identified as recreational/sport shooters indicating that a partial or complete lead ban would reduce the amount of shooting they do. This impact would likely be even greater among shooters who cast their own lead bullets as a cost saving measure. However, the ammunition report then presents a "case study" to demonstrate the increased costs and estimates an increased cost of \$180-\$216 per year. The presentation of this "case study" is problematic for two reasons. First, like so many of the "estimates" used in the ammunition report, it is based on a non-random, geographically-biased online survey (the Hunter Survey), despite the consultant highlighting, somewhat ironically, the importance of a representative survey that includes an estimate of non-response bias (see page 58 of the ammunition report). Ninety-five percent of the 512 respondents were from British Columbia, yet the consultant generalizes the findings to all of Canada. Second, the "case study" is only based on shotgun sports (skeet, trap, and sporting clays) and does not include rifle and pistol ammunition, despite the consultant repeatedly stating that rifle and pistol ammunition makes up 70 percent of ammunition imports.

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Finally, the ammunition report does not consider the cost to hunters and sport shooters that need to replace or upgrade their firearms in order to use lead-free ammunition. The report states that lead-free alternatives are available for most purposes, however “available for hunting” is a very general statement. Without available lead-free .303 British ammunition, big game hunters would no longer be able to use Lee Enfield rifles and would need to spend hundreds of dollars to purchase a new rifle. For a hunter on a fixed or limited income, this is definitely a barrier to participation. Even in calibres where lead-free alternatives are available, they may require modification of the firearm due to the different density and ballistic characteristics of copper relative to lead. Thomas (2016) states that this is a simple matter of replacing the rifle barrel, but the ammunition report neglects to mention the cited cost of 650€ (~\$1,000 CAD) to have this work performed by a gunsmith. The omission of these types of details from the report highlights the consultant’s lack of knowledge related to firearms and concern regarding the impact on hunters and shooters.

Costs of Sinkers and Jigs

The report cites Scheuhammer et al. (2002) stating that a switch to lead-free sinkers would result in an average increase of \$2 per year for the Canadian angler. The OFAH believes these values are deliberately misleading and appear to neglect economic inflation, increased cost of raw materials, and consumer price indices. These calculations are apparently derived from an outdated document published over two decades ago (Scheuhammer and Norris, 1995) and, having solely focused on a very narrow selection of sinkers, the analysis fails to include the average annual increase in total expenditures on jigs or other tackle types. These reports made inferences and extrapolated data from a United States Environmental Protection Agency angler study published in 1994, which focused on a limited selection of lead-free sinker alternatives (i.e. tin and bismuth). In reference to sinker import data used by Scheuhammer and Norris (1995), and Scheuhammer et al. (2002), the OFAH echoes the statements of the Government of Canada in that the data is “unreferenced” and “inaccurate” (footnote in the sinkers and jigs report), leading us to conclude that these sources are unreliable. Despite having access to the same sources cited in the sinkers and jigs report, we have been unable to duplicate the estimated \$2 annual increase.

Simply put, neither the consultant nor the Government of Canada have provided an accurate estimate for the annual cost increase for switching from lead to lead-free sinkers and jigs, or tackle. Regardless of the estimate, an increase may be insignificant for some anglers but financially burdensome for others. Our survey responses support this with 29 percent of 2,309 OFAH survey respondents indicating they would fish for fewer species and/or fish less often if a partial or full lead sinker and jig ban was put in place. One-third of 2,312 OFAH survey respondents reported that approximately 75 percent or more of their tackle contains lead. Therefore, costs would be significantly higher under a “moving toward using lead-free fishing tackle” scenario.

The issue for many anglers is the cumulative costs associated with fishing. For example, expenses for some may include a licence, boat, outboard motor, fuel, rods, reels, tackle boxes, trailers, vehicles, nets, ice huts, and other gear. When broadly considering the associated costs for angling equipment, expenses related to tackle becomes magnified and potentially limiting for some. The consultant attempted to conduct a cost comparison for lead and several lead-free sinkers in Table 14 (Cost Comparison: Sinkers [prices from major retailers December 2016-January 2017]); however, we noticed the calculations for deriving the sinker price per gram are incorrect. Oversights such as these further undermine the confidence we have in the data presented in the report, and is also reflective of the consultant’s failure to adequately evaluate how ECCC’s proposals may impact anglers.

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The Ontario angling community is composed of various subgroups that use lead to varying degrees. For example, 43 percent of 2,274 OFAH survey respondents who fish for Walleye indicated that they use sinkers and/or jigs “All of the time” compared to 14 percent of 2,227 respondents who fish for Northern Pike and Muskellunge. Subgroups may be formed according to preferences towards certain fish species, but geography may also shape the species of fish an angler is targeting and the angling method used. Anglers may be further categorized to include hard and open water, shore and boat, trolling versus casting, and many others. The diversity amongst Ontario anglers is apparent, and when assessing anglers on a national scale, the number of subgroups becomes even more multifaceted and complex. For these reasons, it is unscientific to amalgamate the community, make inferences, and relate data to a one-dimensional category (i.e. anglers). The consultant’s Angler Survey presented in the report validates the lack of consideration towards the diversity within the angling community. Of the 240 respondents, 228 were from British Columbia, while the remainder were from Nova Scotia. Aside from the noted “technical issues” within the survey, which limited respondents’ ability to answer questions, the survey is not reflective of Canadian anglers.

Strategies to Address Costs

If ECCC wishes to resolve issues related to the economic accessibility of lead-free ammunition and tackle, they should consider methods to remove or mitigate cost-related barriers. For example, a rebate program could be modeled on Ontario’s saveONenergy coupon program that offered instant savings on energy efficient items such as lightbulbs and weather-stripping. The government could provide a similar incentive for lead-free products to hunters, shooters, and anglers with the purchase of their licences. One key caveat is that the funding for such a program must not come from hunter or angler fees, as is the case with Nova Scotia’s Non-Lead Education and Exchange Program. Hunter and angler licence fees are already earmarked for ongoing resource management that is chronically underfunded.

Tourism Considerations

There are approximately 1,600 tourist outfitters in Ontario, the majority of which are located in the north (MNRF, 2015). The Government of Canada must take into consideration the social and economic implications of “moving towards” lead-free ammunition and tackle, and the potential impacts this could have on resource-based tourism. In the 2014/2015 fiscal year, non-resident revenue accounted for roughly 30 percent of all hunting and angling licence and permit revenue (MNRF, 2016). Non-residents may be discouraged by the lack of availability and increased cost of using lead-free alternatives. This inconvenience could be a determining factor when a non-resident chooses to plan a hunting or fishing trip to Canada or not.

Consultation and Engagement

These reports represent an abject failure to meet the requirements clearly stated in the original tenders. While the consultant is very experienced in environmental toxicology, they are clearly not knowledgeable regarding hunting, shooting, and angling, as reflected by the many false assumptions and incorrect statements about these activities. Rather than attempting to list these errors, we instead draw attention to a section in the original tender notices that state:

“All assumptions or extrapolations made by the Contractor must be supported by literature (e.g. scientific, academic, industry, or government reports). If no literary evidence is available, the Contractor must verify their assumptions or extrapolations with two (2) industry experts in the appropriate field and provide their contact information with transcripts of the correspondences. Also, the Contractor must explain how all the assumptions or extrapolations apply to the Canadian context.”

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When read with this requirement in mind, the shortcomings of these reports are evident. All estimates given in this report - be it for lead deposition in the environment, the behaviour of hunters, shooters, and anglers, or the costs of lead-free alternatives - are based at least in part on unsupported assumptions or extrapolations. Several others are supported only by single source personal communications, many of which are not attributed to a specific person. Explanations of the extrapolations in the Canadian context are entirely absent. In particular, the report repeatedly uses information on shooting participation in the United States to infer trends in Canada with absolutely no discussion of the significant differences in legislation and culture between the two countries.

Due to these concerns and others listed in this letter, the OFAH would like to see a transparent and authentic consultation process with hunters, shooters, and anglers as the current reports failed to do that. The reports did not successfully consult or engage with hunters, shooters, or anglers and the tone of the reports suggest an underlying negative perception of their opinions. It even suggests using Section 71 of the Canadian Environmental Protection Act to force the collection of information from industry. In our opinion this is a heavy-handed approach that will do nothing to draw stakeholders into a constructive discussion about lead and lead-free alternatives. Rather, we would suggest assembling a working group of all parties affected such as provincial and territorial governments, Indigenous communities, academics, biologists, tourism agencies, recreation groups (e.g. sport shooters), industry (ammunition, firearms, and angling representatives), and conservation NGOs such as the OFAH.

The role of this working group would be to guide public engagement on encouraging lead-free alternatives. As an immediate starting point, a subsection of this working group (comprised of ECCC, academia, industry, and recreation stakeholders) would be responsible for a critical review of the two reports based on the original tender notices, to evaluate knowledge gaps and what information presented is either incorrect or misleading. These reports were clearly not subjected to even the most cursory review by ECCC prior to posting on the public-facing webpages. This is evidenced by tables with missing information (e.g. Table 16 on page 28 of the ammunition report) and basic mathematical mistakes (e.g. Table 14 on page 41 of the sinkers and jigs report). The reviewers would be expected to bring concerns to the entire working group if they could not address them with their own expert opinions (such as individual provincial or territorial considerations). If necessary, the working group will then recommission the reports to address the knowledge gaps and develop an unbiased report that provides the insight originally asked for by the tender notices. Based on the new information the working group could then collaborate to form strategies to encourage lead-free alternatives that address the socio-economic concerns highlighted by this submission.

The working group will also be responsible for guiding the government's production of outreach material and programs. Partnering with organizations such as the OFAH could allow for direct delivery of information to hunters and anglers through programs such as our TackleShare program (which has been responsible for distributing and encouraging the use of lead-free tackle), through fishing derbies and trade shows, and even in membership kits.

Conclusion

Hunters and anglers are conservationists. Our licence fees in Ontario support regulation, science, enforcement, conservation, and education (MNRF, 2018). Many anglers and hunters volunteer their services for restoration and rehabilitation projects, stewardship initiatives, and other environmental programs. When properly engaged and given the necessary information, resources and tools, hunters and anglers are at the forefront of conservation issues. The results of our Lead Survey indicate that OFAH members are aware of the potential issues related to lead ammunition and tackle with approximately two-thirds of respondents indicating that they were "Somewhat Concerned" or "Very Concerned" about these issues.

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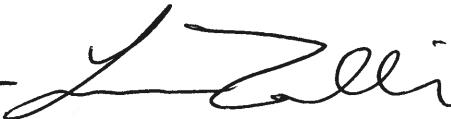
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The Government of Canada's attempted engagement process on the issue of lead-free ammunition and tackle is severely hampered by the biased tone and low quality of the reports produced by the consultant. The reports presuppose and diminish the opinions of hunters, shooters and anglers on this issue and through this fail to properly engage with these communities, especially in terms of the potential socio-economic impacts. If nothing else, the level of participation in the OFAH survey clearly shows that hunters, shooters, and anglers are interested in the conversation and should not be dismissed. The users of lead ammunition and tackle must be engaged in an open and meaningful way if the federal government hopes to constructively move this conversation forward.

Due to unsupported assumptions and errors in calculations, the reports overestimate the accessibility of lead-free alternatives to Canadians both in terms of retail availability and cost. We present cases where both these factors can create barriers to hunters, shooters, and anglers adopting lead-free alternatives. We also provide concrete strategies to address issues of availability and cost that can be implemented both at the government and retail levels. The reports fail to meet key requirements outlined in the tender notices, omissions that were then compounded by an obvious lack of critical review on the part of ECCE. Due to this, we will adamantly oppose any legislation, regulations, or policy that use these reports as a foundation. Instead, we recommend a transparent and authentic engagement process, the centrepiece of which is our proposed working group. We feel that this is the best path towards encouraging the use of lead-free alternatives to ammunition and tackle.

Innovative strategies can incrementally change resource-user behaviour. Rather than focusing on negative aspects, the Government of Canada has the opportunity to promote and encourage lead-free alternatives for ammunition and tackle. There is room for change, if it is conducted with authenticity, integrity, and transparency. Hunters, shooters and anglers must be at the forefront of any decisions, initiatives and strategies for real change to occur.

Yours in Conservation,



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