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Standing Committee on Fisheries and Oceans
Sixth Floor, 131 Queen Street
House of Commons, Ottawa ON
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Re: *Fisheries Act* Review – "Serious Harm to Fish" and Associated Provisions

I am pleased to submit this brief for the purposes of the Committee's review of the "Fisheries Protection Provisions" of the *Fisheries Act* R.S.C. 1985 c. F-14. Presently, I am an assistant professor at the University of Calgary Faculty of Law, researching and writing in the areas of environmental and natural resources law and policy. Prior to joining the University in 2013, I spent almost six years as counsel with the federal Department of Justice, practicing law in the legal services unit at Fisheries and Oceans Canada. During this period, I also spent some time on secondment to the Legislative and Regulatory Affairs Division at Environment Canada. I have a B. Sc. (Biology) and an LL.B., both from the University of Saskatchewan, and an LL.M. (specialization in environmental law) from the University of California at Berkeley. My research have been published in various journals, including the *Dalhousie Law Journal*, *Queen's Law Journal*, the *Osgoode Hall Law Journal* and the *Canadian Bar Review*, as well as both of Canada's environmental law journals, the *Journal of Environmental Law and Practice* and McGill's *Journal of Sustainable Development Law and Policy*.[1]

My brief is largely based on my own recent research[2] and is organized as follows:

Based on my research, it is clear that the 2012 changes have undermined the protection of fish habitat in Canada. It is also clear, however, that the previous habitat regime was badly inadequate well before those changes came into force. Consequently, my recommendations go beyond reverting to the previous regime and include re-orienting the Act into an effective – but also efficient – information-gathering tool for managing impacts to fish habitat.

I. Background: Section 35 before and after Bills C-38 and C-45

As the Committee no doubt knows, section 35 of the *Act* used to prohibit any work or undertaking that resulted in the "harmful alteration or disruption, or the destruction" (commonly referred to as "HADD") of fish habitat. It was amended in 2012 to prohibit works, undertakings, *and activities* that result in "serious harm to fish that are part of a commercial, recreational or

[1] My full faculty profile is available here: http://law.ucalgary.ca/law_unitis/profiles/martin-olszynski
[2] Martin Olszynski, "From 'Badly Wrong' to Worse: An Empirical Analysis of Canada's New Approach to Fish Habitat Protection Laws" (2015) 28 J. Env. L. & Prac. 1, available online: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2652539

Aboriginal fishery," serious harm being defined as "the death of fish or any permanent alteration to, or destruction of, fish habitat" ("DPAD"). Commercial, recreational, and Aboriginal fisheries are also defined, and a new section 6 has been added to guide the Minister's decision-making with respect to all of the Fisheries Protection provisions.

Section 35 has always been more of a regulatory regime than a prohibition. Impacts to fish habitat prohibited by subsection 35(1) could – and still can – be authorized by the Minister or by regulations pursuant to subsection 35(2). Prior to Bills C-38/45, this regulatory regime generally worked as follows. DFO would receive inquiries or authorization requests from proponents (referred to as "referrals"), which it would then review to determine if a HADD was likely to occur. For what it deemed "low risk" projects (further discussed below), it would provide advice to proponents on how to reduce the likelihood of a HADD occurring with a view towards avoiding the need for an authorization. Such advice could be found in a letter specific to the proponent (referred to as a "Letter of Advice") or in an "Operational Statement" (essentially a generic Letter of Advice available on DFO's various regional websites for certain, usually routine, kinds of projects). In the case of the latter, DFO simply requested that proponents voluntarily notify DFO of their project. If avoidance of a HADD was not possible, an authorization was required, which until 2012 also triggered the need for an environmental assessment pursuant to the previous *Canadian Environmental Assessment Act* S.C. 1992 C-22.

Bill C-38 received royal assent in June 2012 but the changes to the *Fisheries Act* were not brought into force until November 25, 2013. Around that time, changes were also made to the manner in which DFO conducts its business. Operational Statements have been replaced with a "self-review" feature on DFO's primary fisheries protection website.[3] Here, project proponents are provided information and advice about the kinds of waters and works that DFO has determined do not require an authorization, with the important difference that there is no longer any way for proponents to notify DFO of their projects. DFO has also had its budget reduced by $80 million in 2012 and another $100 million in 2015.[4] The Minister of Fisheries and Oceans also released the *Fisheries Protection Policy Statement* (October 2013), which set out her interpretation of the new "fisheries protection" regime and which replaced the Policy for the Management of Fish Habitat that had been in place since 1986. The stated goal of the 1986 policy was to ensure "No Net Loss" (NNL) of the productive capacity of fish habitats. DFO had a hard time achieving this objective, largely due to inadequate monitoring and enforcement.[5]

II. Research into the Implementation of the Habitat/Fisheries Protection Provisions

To gain some insight into how DFO is actually implementing the new fisheries protection regime, I analyzed over 150 subsection 35(2) authorizations issued by DFO's two largest regions (the Pacific and Central/Arctic Regions) over a six month period (May 1 – October 1) for the years 2012, 2013, and 2014 (2014 being the first year under the new regime). In order to help frame the analysis and provide additional baseline information, I also analyzed data from twelve annual reports to Parliament by DFO (2001/02 – 2013/14). These reports are statutorily required by section 42.1 of the *Fisheries Act* and must include information on "the administration and enforcement of the provisions of the Act relating to fisheries [previously habitat] protection".

[3] See http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html

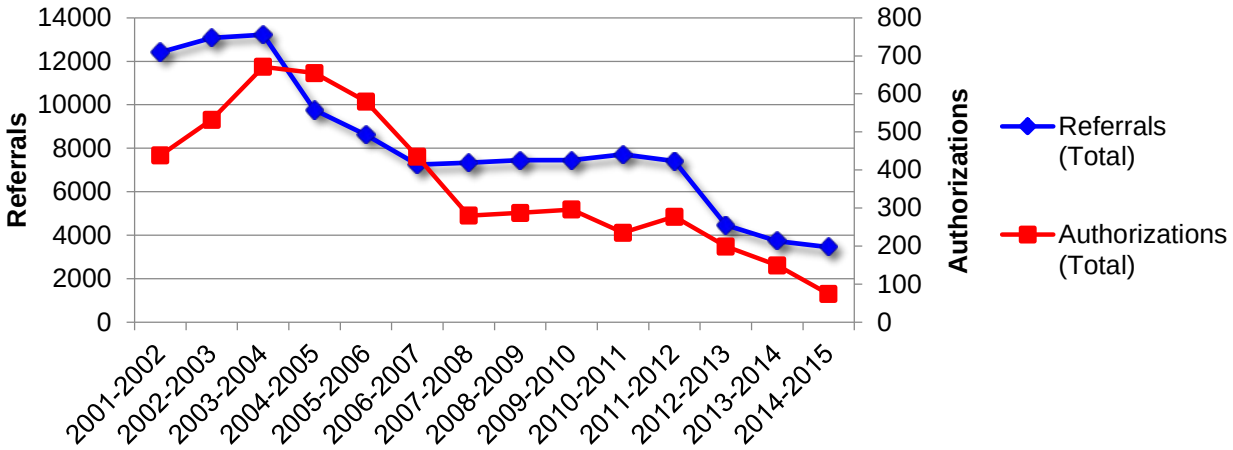
[4] See <http://www.cbc.ca/news/canada/new-brunswick/conservative-mps-argue-dfo-cuts-won-t-hurt-research-1.1162831> and <http://www.vancouversun.com/news/Federal+budget+cuts+million+from+fisheries+oceans+over+three+years/8133846/story.html>

[5] See http://www.oag-bvg.gc.ca/internet/English/parl_cesd_200905_01_e_32511.html#hd5h

Where indicated, the figures below have been updated to include data from DFO's 2014/15 Report.

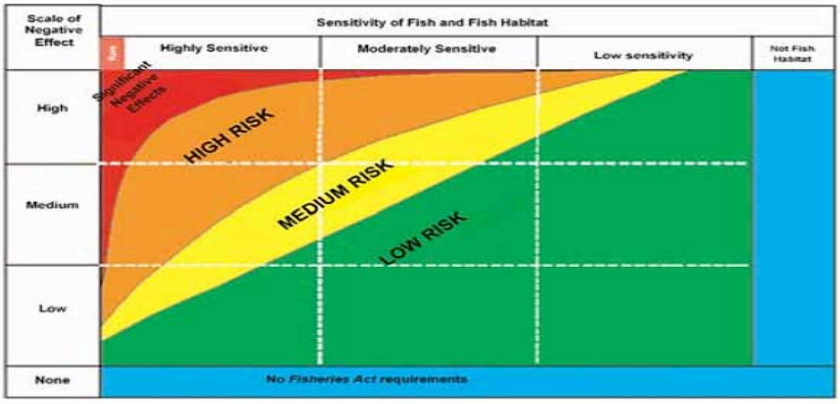
Figure 1 (updated) demonstrates that the total number of authorizations issued by DFO nationally (right axis) has declined from a high point of almost 700 in the 2003/04 fiscal year to roughly 75 for 2014/15. The most dramatic drops occurred between 2006 – 2008 and then again in 2012 – 2015. Similarly, the number of referrals that DFO reviewed (left axis) has also declined. The most dramatic decline in referrals occurred between 2004 and 2006. The slight lag in the drop in the number of authorizations issued around that time makes sense when one considers that referrals would take on average two years to process.[6] That is not the case, however, with respect to the declines in *both* authorizations and referrals *immediately* following the passage of Bill C-38 in 2012, bearing in mind that the changes *were brought into force in November 25, 2013*. These declines are consistent with a 2014 Vancouver Sun story wherein the chair of the Fraser Valley Watersheds Coalition suggested that "people got the memo that now is the time, no one is watching, the rules are vague, your chances of being prosecuted are virtually none."[7]

Figure 1: Section 35 Referrals and Authorizations (2001-2015)



The decline in referrals between 2004/06 coincided with the launching of DFO's "Environmental Process Modernization Program" (EPMP), the goal of which was to "contribute to more efficient and effective delivery of its regulatory responsibilities and to support the federal smart regulation agenda." The most tangible result of this program was DFO's "risk management matrix" (below), which classified risks to fish habitat as high, medium, and low, with high-risk projects receiving site-specific review/authorization, medium risk projects being subject to streamlined authorizations, and low risk projects being subject to Letters of Advice/Operational Statements.

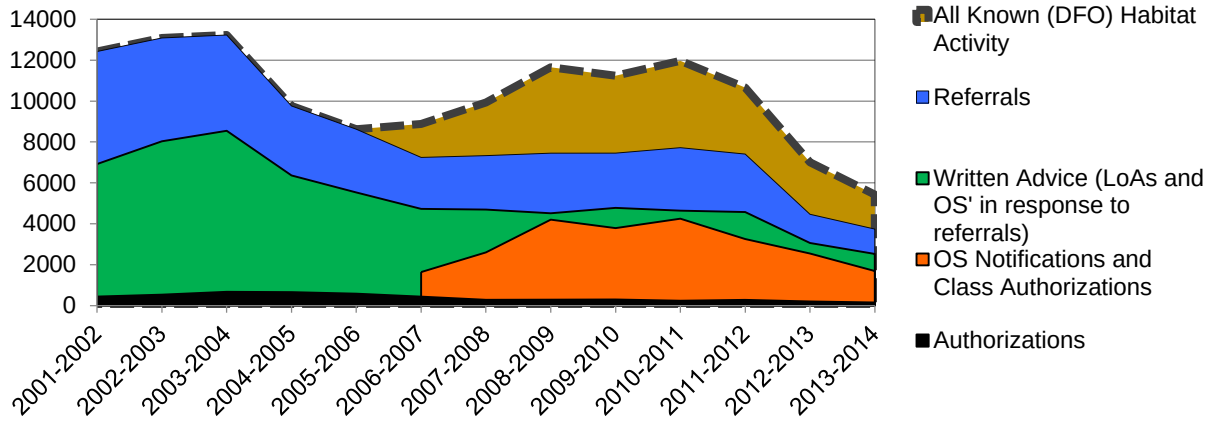
[6] See http://www.nrcresearchpress.com/doi/pdf/10.1139/cjfas-2012-0411
[7] See http://www.vancouversun.com/technology/Minding+Farm+Agriculture+practices+clash+with+protection+streams+fish+habitat/9916232/story.html



Risk-based regulation has both strengths and weaknesses. The Hampton Report (United Kingdom, 2005) suggested that "[p]roper analysis of risk directs regulators' efforts at areas where it is most needed, and should enable them to reduce the administrative burden of regulation, while maintaining…regulatory outcomes." However, risk-based approaches have a tendency to "neglect lower levels of risk, which, if numerous and broadly spread, may involve considerable cumulative dangers."[8] As further discussed below, DFO was fairly successful at reducing administrative burden but did so at the expense of not managing cumulative effects.

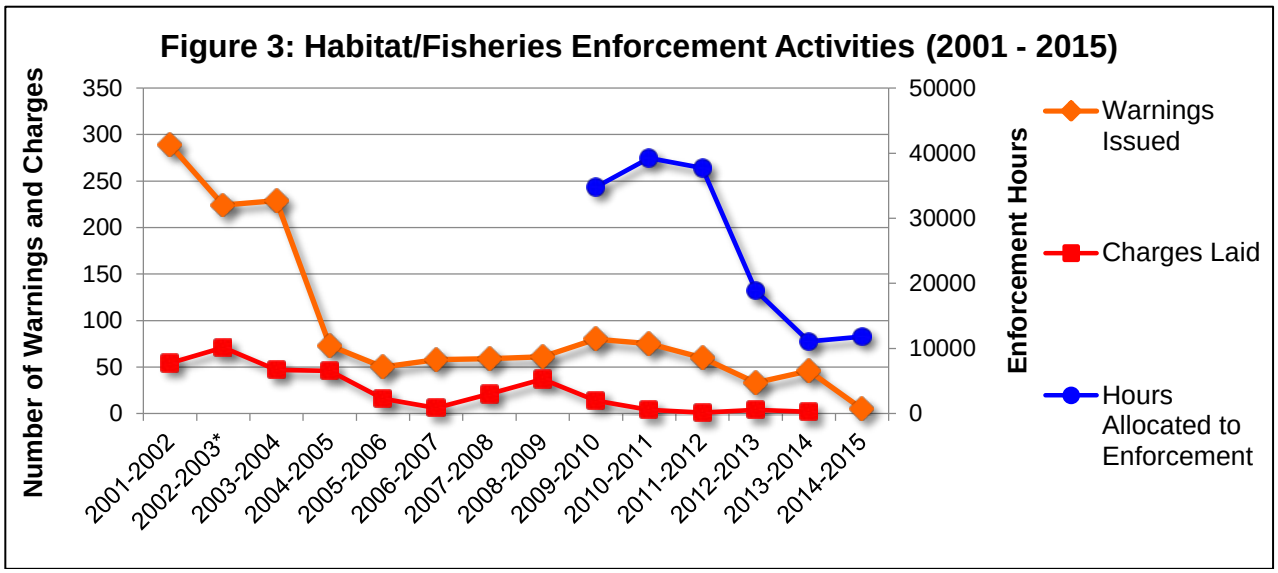
Returning to DFO's risk management matrix, the Committee may have noted the upward and seemingly arbitrary placement of the low-risk threshold, which results in this category taking up 60% of the matrix space. This is consistent with a 60% reduction in authorizations following the implementation of the EPMP starting around 2004/05. The reduction in referrals is also consistent with increased reliance on Operational Statements. Figure 2 (below) suggests that, after an initial decline, all known habitat activity (referrals, Operational Statement notifications and class authorizations combined) returned to near pre-EPMP referral levels after a few years. This suggests that the level of habitat-related activity in Canada remained relatively constant throughout the analyzed period but that an increasing portion of it was carried out without DFO's direct involvement or supervision. Figure 2 also reaffirms that site-specific authorizations have only ever played a very minor role in regulating the totality of impacts to fish habitat in Canada.

Figure 2: Habitat Activity (2001/02 - 2013/14)



[8] Robert Baldwin & Julia Black, "Really Responsive Regulation" (2008) 71:1 Mod L Rev 59.

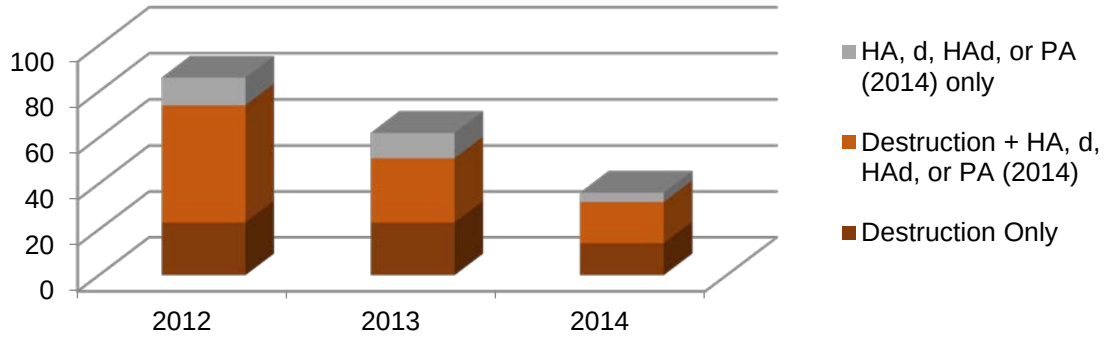
Part and parcel with the "smart" regulatory agenda is a de-emphasizing of traditional enforcement activity. Accordingly, in it's 2003/04 Report to Parliament, DFO indicated that near the end of that fiscal year "habitat compliance modernization" had been added to the EPMP, reflecting the program's "increased emphasis on monitoring and auditing of its regulatory decisions and resourcing the full continuum of compliance activities." Figure 3 (updated) confirms a dramatic decline in traditional enforcement activity following the introduction of the EPMP and further declines in the past five years (including only 5 warnings and 0 charges in 2014/15). Unfortunately, there was never any commensurate increase in monitoring and auditing. As noted by the CCESD in her 2009 Report to Parliament, DFO has not measured habitat loss or gain, "has limited information on the state of fish habitat across Canada" and has "little documentation to show that it monitored the actual habitat loss that occurred."



Turning to the difference between the previous "habitat protection" regime and the current "fisheries protection" regime, DFO's two largest regions went from issuing 86 authorizations in 2012 (over a six month period) to 36 in 2014 – a **58% reduction** (the 2014/15 numbers are even lower, suggesting a **66% reduction**). As will be seen, only a small percentage of this reduction (16%) appears attributable to the actual legislative changes to section 35.

Assuming perfect implementation of both regimes, one would expect there to be fewer authorizations in the 2014 vintage simply on the basis that temporary disruptions were no longer prohibited. This scenario is complicated, however, by the fact that DFO risk-managed low-risk projects away from the authorization stream. Consequently, I coded all of the authorizations on the basis of the type of impact that was being authorized. The results (Figure 4) suggest that harmful alterations (HA) and disruptions (d) constituted only a small portion of DFO's authorization activity under the previous HADD regime.

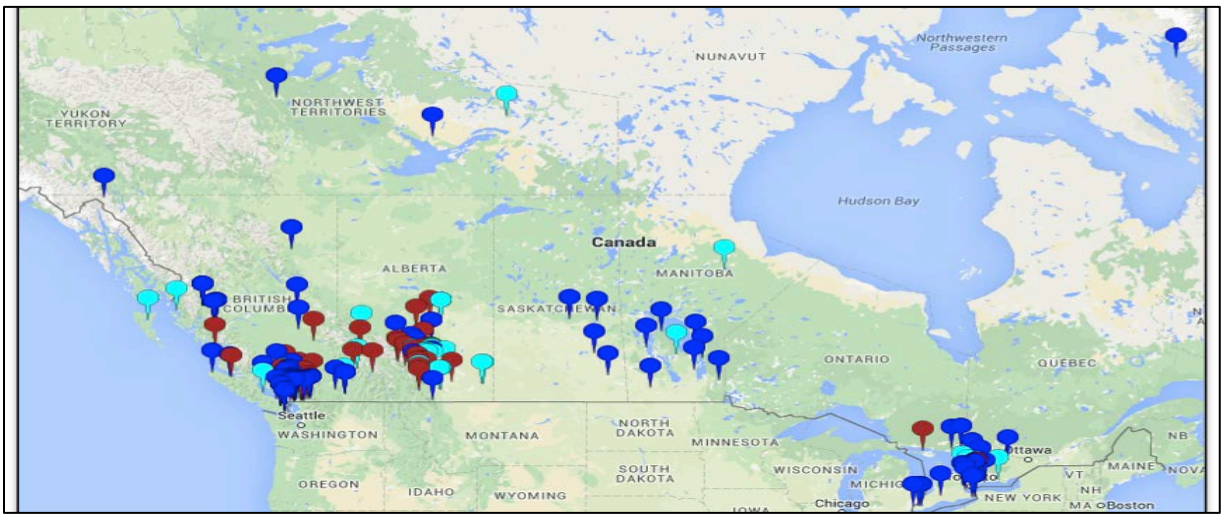
Figure 4: Authorizations by Type of Impact (HADD v. PAD)



Practically speaking, this means that few projects that did not involve at least some destruction of fish habitat were being caught by the regulatory process under the previous HADD regime. This is not to say that disruptions and other harmful alterations were not technically prohibited (they were) but proponents were actively dissuaded from seeking an authorization and more or less assured compliance if they followed (or tried to follow) the mitigation measures set out in a non-binding Letter of Advice or applicable Operational Statement. Most importantly, Figure 2 makes clear that the change from HADD to DPAD cannot account for the 58% reduction in authorization activity under the new regime. At most, this change could account for a 16% reduction.

Turning next to the new "fisheries" requirement, I sought to determine whether this change could account for the balance of the reduction, bearing in mind the prediction made by Canadian fisheries biologists Jeffery Hutchings and John Post that Canada's sparsely inhabited northern lakes and rivers would receive no protection.[9] To answer these questions, the coordinates of all authorizations issued in 2012, 2013 and 2014 were plotted using Google Maps. Below is a screen shot of all years combined (blue = 2012, red = 2013, light blue = 2014):

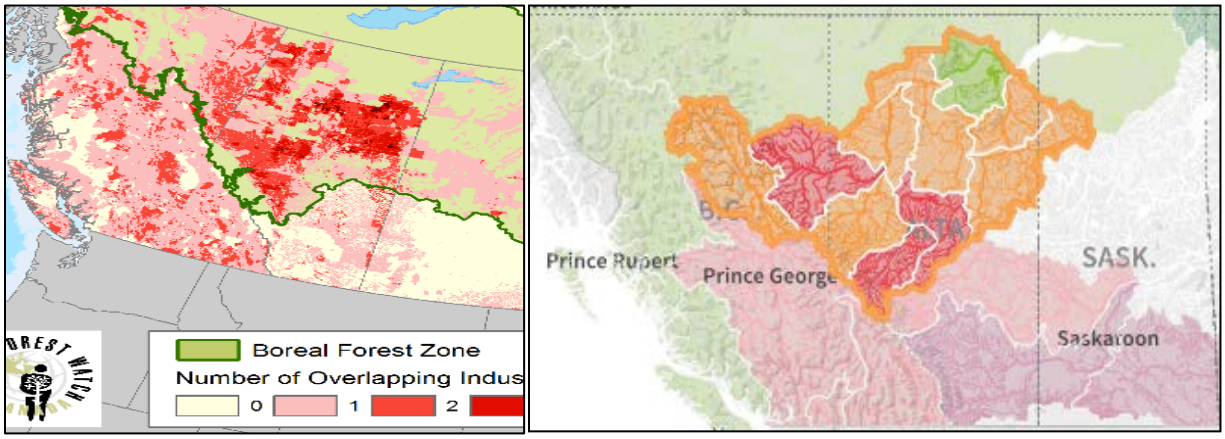
Figure 5: Authorizations by Location (2012 – 2014)



[9] See http://myweb.dal.ca/jhutch/publications_pdfs/2013_hut_post_fish.pdf

As can be seen, apart from the fact that there are fewer authorizations in 2014 their distribution more or less resembles the distribution from 2012 (2013 exhibits the strongest urban concentration). Although the data is obviously limited, the absence of any obvious change in pattern is consistent with the government's talking points and DFO's policy that the fisheries requirement did not represent a radical change to the scope of the regime. The more striking realization, however, is that the vast majority of Canada's freshwater lakes and rivers appear to not have had the benefit of habitat protection *before* the implementation of the new fisheries protection regime. It is simply untenable to suggest that there were only *a few instances* of habitat destruction (to say nothing of harmful alteration or disruption) that would have required authorization in all of northern British Columbia, Alberta, Saskatchewan, Manitoba and Ontario in 2012 and 2013. In addition to a long-established forestry industry, this area includes the Montney and Horn River shale gas plays of northeastern B.C. and northwestern Alberta, which have seen significant development in the past decade.[10] It also includes Alberta's Lower Athabasca Region, home to Alberta's oil sands. The left side of Figure 6 (below) shows the number of overlapping industrial concessions in that same region (Global Forest Watch, 2014), while the right shows WWF Canada's recent assessment of the health of the Peace-Athabasca watershed (for more on WWF's watershed reports, see my letter to the Committee dated 22 September 2016).

Figure 6: Industrial Concessions and the State of Watersheds in Western Canada

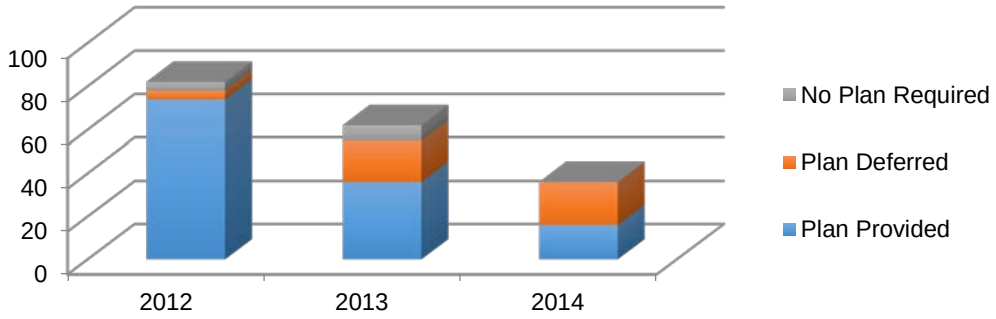


Like the change from HADD to DPAD, then, the addition of the fisheries requirement cannot account for the reduction in authorization activity. As I discuss in more detail in my paper, it appears that DFO adopted a new size threshold as a proxy for "serious harm to fish," which can account for 40% of the reduction.

With respect to the section 6 factors, I wanted to see whether these had any appreciable effect on the content of authorizations. Generally, I observed that authorizations from 2014 were shorter and less detailed than in 2012 or 2013. With respect to offsetting plans in particular, I was surprised to find that these were increasingly (and probably unlawfully) being deferred to a later time (Figure 7). This is likely a reflection of the 3-month time limit in the new section 35 regulations, coupled with resource constraints following the reductions to DFO's budgets.

[10] See http://www.theglobeandmail.com/news/british-columbia/sweeping-aboriginal-lawsuit-threatens-to-strangle-resource-development-in-northeastern-bc/article23282084/

Figure 7: Status of Compensation/Offsetting Plans (2012/14)



This outcome is made possible because sections 6 and 6.1 are half-measures only; in addition to listing a series of mandatory factors, establishing a clear structure for the regulatory review process also requires transparency. Notwithstanding the fact that the Supreme Court of Canada has long held that Canada's fisheries are a "public resource" (see *e.g. Interprovincial Co-Operatives Limited et al. v. The Queen* [1976] 1 SCR 477 at 495), DFO has never maintained a public registry of section 35 authorizations. Under the previous *CEAA* this reality was offset by the fact that the need for a section 35 authorization triggered a federal environmental assessment, information about which would be posted on the Canadian Environmental Assessment Registry (CEA Registry). Presently, however, the only way for Canadians to become aware of an authorization is through an access to information request.

III. Recommendations for Reform

A. Principles Informing Reform

In developing my recommendations, I was guided by the results of my research but also the following principles and ideas, which I elaborate below:

1) Some degree of **risk-based management** is inevitable, but poor regime design is not;
2) Mechanisms are required for managing **cumulative impacts** to fish and fish habitat;
3) **Public participation and transparency** are hallmarks of regulatory excellence;
4) DFO must embrace **learning for continuous improvement**;

1) Risk-based management: My research demonstrates that Operational Statements were effective in reducing the administrative burden on both DFO and proponents (*i.e.* proponents did make use of this mechanism). According to London School of Economics Professor Julia Black, however, "if such systems are not supplemented by other programs, such as those of random inspection…they can under-deter the lower level risk creators… The overall effect of regulation is then not to reduce risk, but to substitute widely spread risks for lower numbers of larger risks.[11] As my research shows, enforcement activity was virtually non-existent following the implementation of the Operational Statements regime, while what limited information exists (*e.g.* WWF Canada's Watershed Reports, above) does indeed suggest that the effect has been to under-deter low-risk level creators.

[11] See Robert Baldwin & Julia Black, "Really Responsive Regulation" (2008) 71:1 Mod L Rev 59.

2) Cumulative effects: There is a broad recognition in environmental law and policy circles that most environmental problems are not the result of only a handful of major industrial projects but also of the cumulative effect of thousands of individual and seemingly innocuous impacts. According to American scholars JB Ruhl and Eric Biber, rather than exempting such harms (as DFO does now with the self-assessment tool on its website), meeting this challenge requires a regulatory approach that captures small harms but imposes a minimal administrative burden on proponents:

> General permits [*e.g.* class authorizations or "minor work" regulations] are likely also superior to…specific permits [*i.e.* individual s. 35 authorizations] and exemptions…in managing the environmental harms from the accumulation of thousands or millions of individual activities. Currently, many of these activities are exempt from government regulation. But…general permits – even if they impose minimal substantive and procedural burdens – can have significant advantages over an exemption. First, the general permit can allow the collection of information that can be used to design a more effective and politically sustainable regulatory program in the future… General permits also might make it more feasible for a regulatory agency to respond to emerging harms – for instance, an activity that previously was harmless because it was limited might become more widespread and begin causing significant damage… Finally, general permits might allow more public participation and accountability than a legislative exemption, given that there is at least a rulemaking process for the public to participate in and for courts to review.[12]

3) Public Participation and Transparency: As recently observed by a team of international experts gathered to give advice to the Alberta Energy Regulator, "effective public engagement and transparency are hallmarks of regulatory excellence."[13] Presently, except where a section 35 authorization is required for a project undergoing federal environmental assessment, there is no transparency and no formal role for public participation in the section 35 authorization regime.

4) Learning: The same experts referred to above also observed that "an excellent regulator pursues continuous improvement." There is no shortage of reports, whether by the CESD, DFO employees or Justice Bruce Cohen, that confirm that DFO is not measuring its progress in terms of managing fish habitat in Canada, making learning and improvement all but impossible.

B. Specific Recommendations

With the above principles in mind, I propose a scheme that would impose a minimal burden on proponents of minor works, undertakings, and activities, while at the same time providing DFO the information it requires to effectively and transparently manage threats to fish and fish habitat in Canada. This regime would include the following elements:

1) A return to the previous **HADD provision** (although keeping the addition of "activities");
    a. This would also require ancillary changes to sections 20 (flow), 37 and 38.

[12] Eric Biber & JB Ruhl, "The Permit Power Revisited: The Theory and Practice of Regulatory Permits in the Administrative State" (2014) 64:2 Duke LJ 133 available on SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2397425

[13] Cary Coglianese, Listening, Learning, Leading: A Framework for Regulatory Excellence [2015].

2) Prompt development of additional **class authorizations** or "minor works" and/or "minor waters" regulation(s) that would automatically authorize projects listed therein:

a. These class authorizations/regulations would be relatively easy to develop, as they would be based on DFO's previous "Operational Statements";
b. The only regulatory burden on proponents would be to notify DFO that the work or activity is being carried out, including when and where. This could be done online through DFO's website much like the current self-assessment tool;
c. Contravention of these class authorizations/minor works regulations would generally be subject to an administrative monetary penalty (AMP) regime *in lieu* of regulatory prosecution (except in egregious circumstances);
d. Should DFO continue to apply a risk-based approach, closer coordination with compliance personnel is essential, as is a random inspection program;

3) Continued **individual assessment of medium to large projects**;

a. To the extent that DFO will continue to allow proponents to rely on "adaptive management"[14] (also referred to as "learning while doing") for dealing with uncertainties in the context of mitigation or offsetting, legislative provisions are required to set out what adaptive management actually is, its requisite steps, and a requirement for the development of adaptive management plans (as further discussed below);

4) **Re-write the section 6 factors** to include mandatory consideration of:

a. The state of the watershed or sub-watershed in which the work/undertaking/activity is being carried out, bearing in mind that the state of fish habitat has always been, and continues to be, the best proxy for fisheries productivity;[15]
b. Where they exist, watershed or regional plans established by the provinces and how the impacts to fish habitat fit within those plans (recognizing the importance of provincial jurisdiction and the goal of integrated resource management);
c. The potential impacts on Indigenous and/or treaty rights; and
d. The principles of precaution and sustainable development;

5) A requirement for DFO to **provide written reasons** explaining how it considered these factors in reaching its decision to authorize (or not) a given work, undertaking or activity;

6) An **online public registry similar to the CEA Registry** which would contain:

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[14] This recommendation is based on another recent empirical paper of mine with respect to the implementation of adaptive management in Alberta's energy resources sector. Briefly, adaptive management is supposed to be a planned and systematic process whereby management actions (*e.g.* habitat offsetting) are designed as experiments and monitored with a view towards learning. Unfortunately, my research confirms that, as practiced in Canada, adaptive management is rarely planned or systematic, with no real potential for learning. Legislative provisions are therefore necessary to ensure that adaptive management can deliver on its promise of improved decision-making.

[15] "The sustainability and ongoing productivity of fish populations depends on the amount and quality of the habitats…required for each life stage, interactions with other species, and the appropriate management of fisheries and anthropogenic threats": Randall, R.G., Bradford, M.J., Clarke, K.D., and Rice, J.C. 2013. A science-based interpretation of ongoing productivity of commercial, recreational or Aboriginal fisheries. DFO Can. Sci. Advis. Sec. Res. Doc. 2012/112 iv + 26 p at 5: See also Nicolas W.R. Lapointe, Steven J. Cooke, Jack G. Imhof et al., "Principles for ensuring healthy and productive freshwater ecosystems that support sustainable fisheries" (2014) 22 Environmental Reviews 110 at 112 ("Habitat degradation and loss is the major threat to the survival of freshwater fish populations").

a. All notifications obtained pursuant to the minor works/minor waters regulations;
b. All section 35 applications, their eventual authorizations, reasons, adaptive management plans, and any monitoring data subsequently provided per the terms of those authorizations;
c. An online map that plots the location of all of these projects and that provides information on the state of the watershed (fish habitat) in which they are found;

Much more could and should be done to bring the *Fisheries Act* into the 21st century. In light of the condensed nature of this reform exercise, however, I have limited my recommendations to something that builds off existing institutions and practices and is achievable in the short term. In the long term, the information gathered through the reforms proposed here should be analyzed and used to draft the next generation of habitat protection laws.

Thank you for the opportunity to submit this brief. I would be pleased to present the results of my research and recommendations for reform to the Committee should you deem this useful.

Best regards,

Martin Z. Olszynski