

NB Recreational Salmon Fishery Management Transformation Project:  
Scenario Option Arising from the 2017/11/24 First Partner Engagement Meeting  
Proposed by the New Brunswick Salmon Council. Date January 8, 2018

Title:

Proposed Tagging System for the Miramichi River Atlantic Salmon Sport Fishery to Encourage Harvest of Healthiest Stocks

Values: (points gathered from user input and covered by this management scenario)

- ) Adheres to harvest-by-abundance and river-specific management principles that are accepted by the NBSC.
- ) Ends draconian, unpopular and unnecessary prohibition on grilse retention.
- ) Promotes resource stewardship among the public.
- ) Conservation management through a river classification system compatible with the Precautionary Approach (PA).
- ) Proposed system considers river size, relative stock strength, concurrent fisheries (i.e. Food, Social Ceremonial <FSC>) and seasonal timing.
- ) Size limits (grilse only), yearly catch limits, and additional charges for tag acquisition over standard Catch and Release (C&R) licensing fees.
- ) Generation of additional direct licensing revenue potentially to fund enforcement as well as additional spin-off economic and social benefits while having little, or perhaps positive effect on egg deposition.
- ) Preserves current system with respect to Crown Reserves, leases, closed sanctuary waters and barrier pools.

Scenario Description: (details the different elements and the mechanics and scope of each)

River Classification and Tagging (Please refer to our questionnaire response for more detail and logic with respect to our proposed system.):

A grilse harvest in NB would have very little effect on egg deposition. Using DFO data and reasonable assumptions (see full questionnaire submission), we have calculated that, for each percentage point increase in the grilse harvest on the greater Miramichi, there is only a 0.12 percentage point decrease in egg deposition. Conversely, for each percentage point increase in the multi-sea-winter (MSW) harvest, there is a 0.88 percentage point decrease in egg deposition. The PA's Limit Reference Point calculation for the Southwest (SW) Miramichi assumes that 89% (75% on the Northwest (NW) / Little Southwest (LSW) composite) of the egg deposition is from MSWs. The sensitivity difference between the harvest of grilse versus MSWs (as confirmed in DFO's Canadian Science Advisory Secretariat Science Response 2010/005) speaks volumes about the relative insignificance of grilse to achieving egg deposition targets, as well as the vital importance of protecting MSWs in achieving these goals. It also emphasizes that absolute fidelity to the principles of the PA is very important in the case of the harvesting of MSW salmon, but not as critical when a proposed grilse harvest is being considered. Therefore, our proposed system involves a recreational fishery with a limited harvest of grilse.

The Proposed System: This proposed scenario option has been approved by the NBSC Board of Directors. Under the system, zero to a maximum of four tags would be potentially issued per licence. The tags could be applied to harvested grilse when the projected stock strength on an individual river is above the PA's "Critical" Zone. Tags would be provided at additional cost to the basic licence fee. The purchase of a tag or tags would be optional. Without tags, the licence would authorize C&R angling. As explained by presenters during the November consultation meeting in Metepenagiag, recreational fisheries management is for the most part people management. To encourage dispersed effort, and therefore harvest on rivers that are best able to biologically and sociologically support such effort, attachment of one to four tags per harvested grilse would be required.

On the SW Miramichi, a harvested grilse would require that only one tag be applied. Relative to other rivers in the Greater Miramichi drainage, the runs are strong on the SW, and there is a relatively large area of water to be fished. Potentially (but not necessarily) aided by more liberal public access to the salmon resource (see Standardized Signs proposal in our "Five Questions" submission), effort would be enticed to this river.

On the Renous (including the Dungarvon) and Cains, two tags would be applied per grilse. Although these stocks are relatively strong in comparison with those of closed rivers or of the NW / LSW Miramichi composite, there is an abundance of public access on the Cains, Dungarvon and Renous rivers to a small fishable area (compared with the SW). The requirement for attaching two tags per grilse harvested would encourage effort to move to the SW.

Grilse harvested from the NW and LSW would require all four tags be applied. The drainages are small; the river has a higher percentage of female grilse than on the SW and its tributaries, and there is an existing FSC fishery on the NW / LSW that impacts egg deposition. As a further measure, the NW/LSW could be a zero retention (C&R) river until August 1, with harvest allowed only downstream of the leases and/or Crown Reserves. This protects the early-run component that has a very high percentage of female grilse, and spawns in the high-elevation headwaters. The scheduling and additional tag requirements for the harvest of NW / LSW grilse would encourage effort to move to the other greater Miramichi River tributaries where harvest restrictions are less stringent.

Tags per grilse on the three classes of rivers could be modified after in-season reviews, but generally, the insensitivity of egg deposition to a grilse harvest would allow such adaptive management to be postponed until after the angling season closes. That said, if stock strength on an individual river is anticipated to be in the PA's "Critical" Zone, C&R would apply on that river.

Revenue could be generated by applying a surcharge for each tag. At \$25 per tag, enhanced enforcement could be funded. Unused tags could be partially refunded (say for \$10) at the end of the season, or they could be used as entries for a prize draw to encourage C&R. User ideas for revenue generation and use from the tag system could be solicited.

**Communication/Engagement/Information: (the detail, form and frequency of exchange and flow)**

The angling summary, DFO and Dept. of Energy and Resource Development webpages, a special brochure, and media press releases would be used to describe the management changes and the use of tags on a river by river basis.

Documents drawn upon to support proposed river classification system: On the relative insensitivity of egg deposition to a grilse harvest: DFO. 2010. Assessment of Atlantic salmon in the Miramichi River (NB), 1998 to 2009. DFO Can. Sci. Advis. Sec. Sci. Resp. 2010/005.

On the biological characteristics of Miramichi River salmon: Chaput, G., Douglas, S.G., and Hayward, J. 2016. Biological Characteristics and Population Dynamics of Atlantic Salmon (*Salmo salar*) from the Miramichi River, New Brunswick, Canada. DFO Can. Sci. Advis. Sec. Res. Doc. 2016/029. v + 53 p.

**Change: (proposed for managing recreational salmon fishery)**

**Governance: (authorities/regulations/legislation; policies existing/new)**

**Analysis: (what are the Strength, Weaknesses, Opportunities, and Threats associated with this scenario)**

Strengths	<ol style="list-style-type: none"> <li>1. Simplicity. Complies with the existing tag numbers. No costly ponderous draw system for tags required.</li> <li>2. This simplicity offers opportunity for quick implementation and avoids another year of status-quo mandatory C&amp;R, which is unnecessary and viewed by the public as unacceptable.</li> <li>3. Addresses decline in participation in salmon sport fishing because of grilse harvest prohibition. Provides goodwill to angling community and potentially turns foes (poachers) into allies.</li> <li>4. Grilse harvest limits the rate of decline towards Limit Reference Point (LRP), while stewardship promotion may prevent MSW poaching, which rapidly moves stock strength downwards towards LRP.</li> <li>5. Revenue generation and economic benefits.</li> <li>6. System transferable to other rivers in the province.</li> </ol>
Weaknesses	<p>Would require non-residents to purchase a full-season or 7-day licence (as opposed to 3-day) to retain grilse from the smaller rivers. Maybe viewed as a strength from the revenue as well as from a conservation point-of-view.</p> <p>System does not manage according to DFO's preferred criterion that rivers flowing to tidal water be considered as the units for management. We don't see the harm in this. For example, the Cains would be managed separately in our proposal, and any system that is considered for transfer to drainages such as the Restigouche should allow separate management of large tributaries that do not flow to the tideway.</p>
Opportunities	Collaboration? First Nations. May provide revenue for their programs.
Threats	<p>Need First Nations' buy-in</p> <p>Need public buy-in for tag fees. Tag prices should be reasonable and revenue dedicated to fishery management.</p> <p>Potential for resumed grilse retention to continue the vilification of anglers as the reason for the salmon decline.</p>

Notes: (linkages to other scenarios, etc.)

See NBSC's answers to original five questions.

In summary, we propose a river-specific recreational salmon fishery management system that attempts to disperse effort and harvest spread to where fish numbers and fishable area will result in an enjoyable fishing experience. The results of the fishery would be monitored, and tagging requirements adjusted annually, or semi-annually (if necessary) – adaptive management. The system adheres to harvest-by-abundance since targeting only grilse virtually always allows for an acceptable level of harvest. Such a system would not discourage the rebuilding of stocks towards the PA's "Healthy" Zone.