BACKGROUND: History of DFO ASNM/Aroostook Commitments

prepared by Trevor Goff – August 2017

- DFO, the State of Maine DMR (formerly Maine Atlantic Salmon Commission) and ASNM have in their files the original correspondence where DFO (John Ritter on behalf of the RDG Neil Bellefontaine) committed to supply eyed eggs to ASNM if they constructed an incubation facility dedicated to salmon restoration in the Aroostook.
- At the time, it was considered preferable by all participants that Saint John River (SJR) stock be used rather than Penobscot River stock for the Aroostook restoration, a previously active possibility in Maine for the Aroostook restoration.
- The ASNM constructed the $1 million+ Dug Brook hatchery on the Aroostook with private funds, in addition to funding the $0.5 million cost of Fishway construction at Tinker Dam in Canada.
- DFO's Engineers recommended the DFO designed incubators that ASNM installed in the Dug Brook hatchery facility.
- ASNM also funded the adult release site upstream of Tinker Dam, but still located on the Canadian side of the border.
- The original plan to supply eggs to the new Dug Brook hatchery was to transfer SJR Serpentine stock smolts from Mactaquac to marine net pens at DFO's Lime Kiln Bay Aquaculture Research facility where they would be reared for broodstock.
- DFO committed to fully fund the Mactaquac smolt production and sea-cage operation needed to produce the broodstock and eggs.
- This was initially successful with eggs from sea-cages being produced for ASNM, but subsequently, ISA disease at the Lime Kiln Bay DFO facility necessitated the destruction of multiple year classes of broodstock being reared to produce eggs for the Aroostook.
- As a result of the sudden downturn in marine survival and the accompanying collapse of Atlantic salmon stocks, providing eggs from SJR sea-run returns was not an option for the Aroostook, and not even for DFO's Mactaquac supplementation program for the SJR.
- This necessitated the development of the broodstock captive-rearing program at Mactaquac for freshwater juvenile stabilization of the Tobique River population, and subsequently the development of a similar project to continue the commitment to supply eggs for the new Aroostook hatchery.
- This time, due to budget constraints at DFO ASNM was required to fund the cost of the broodstock production via a Joint Project Agreement (JPA).
- Previously the entire cost of producing broodstock at DFO's Bay of Fundy Aquaculture Research facility had been borne by DFO as was committed in return for ASNM's $1.5 million expenditures to build both the Tinker Fishway and the Dug Brook facility.
- Including the annual hatchery operating costs since construction, and the JPA costs for broodstock captive rearing at Mactaquac ASNM has committed well over $2 million to the Aroostook restoration effort....a grassroots funding effort unmatched by any public conservation group in Atlantic Canada.
- In the early years, the F1 smolt offspring of sea-run Serpentine adults were captive-reared to produce F2 eggs for the Aroostook, and in the latter years of the program, the smolt F1 PROGENY of captive-reared Tobique Adults were in turn captive reared to produce F2 eggs for the Aroostook.
- The concept was to divert and captive-rear a few hundred hatchery smolts from the 10's of thousands of smolts being released from Mactaquac annually to produce eggs for the Aroostook with no impact on the Tobique program....ie valuable wild Tobique smolts used (essentially) for Tobique captive broodstock rearing only.
- The production of eggs at Mactaquac for the Aroostook was stopped by DFO in 2015 due to staff and budget considerations and the concern (by some) that F2 stocking was not ideal.
- While F1's are a better choice from a genetics perspective, the F2 program that required unfed fry to adapt and survive in the Aroostook for 2-3 years was a design that should achieve restoration if smolt marine survival returns to somewhat normal values.
- To our knowledge, there is no publication that demonstrates that this strategy will not work if marine survival again approaches normalcy.