U.S. Atlantic Salmon Assessment Committee
BRIEF of Annual Report of Report No. 21 - 2008 Activities
Portland, Maine March 2 – March 5, 2009

1. Status of US Stocks 2009

    a. Returns to US = 2,614 adult salmon: ranked 14 of 42 year time series
        i. Marine Phase 1991 to present: returns averaged 1,878 (median = 1,721)
            1. 2008 returns ranked 4 of 18 year time series
        ii. Benchmark - Conservation Spawning Escapement = 29,199 spawners
            1. 2008 returns were 9% of CSE

    b. Contributions of each stock complex to US total - Fundy (<1%), Gulf of Maine (88%), Central New England (7%), Long Island Sound (5%).
        i. Penobscot River population accounted for 81% of total
        ii. US sea age composition. - 31% 1SW and 69% multi sea winter (MSW)
            1. MSW mostly 2SW – no 3SW fish and only 4 repeat spawners
        iii. Origin of returns - 84% hatchery smolt origin and 16% naturally-reared from fry or parr stocking and natural reproduction.

    c. Large River Returns –
        i. Connecticut R. -141
        ii. Merrimack R. - 118
        iii. Penobscot R. - 2,117

2. Hatchery Production 2008

    a. A total of 13.1 million juvenile salmon stocked in 15 river systems
        i. Total is typical of the decade
        ii. Fry stocking – 12.1 M in 15 systems
        iii. Parr stocking – 275K in 5 systems (Conn., Saco, Sheepscot Penobscot, Narraguagus)
        iv. Smolt stocking – 712K smolts in 5 systems (Connecticut, Pawcatuck, Merrimack, Penobscot, Narraguagus)
            1. 513K in the Penobscot River
        v. Adult stocking – 5,848 stocked mostly post-spawn (4,615)
            1. pre-spawn adults (1,233) - Merrimack, Sheepscot, East Machias, Machias, and Hobart Stream (produced redds)
            2. support sport fishery - Merrimack River

3. Fishery Reporting

    a. Recreational Fishery Penobscot River, Maine –
        i. Spring 2008 – 177 licenses catch and release only – 600 documented in river and 61 total caught (exceeded quota of 50)
        ii. Fall 2007 - 90 licenses sold, 31 documented in river – 3 caught and released

    b. Commercial Farm production – 9,014 mt (3 X 2007 amount -2,715 mt)
        i. Production in four the last seven years < 50% of highest 13,202 t produced in 2001

4. Emerging Issues

   a. Regional Assessment Products – expanded status summaries beyond adult to provide regional time series of large parr densities and smolt abundance for all 4 management areas

   b. Fish Health
      i. *Nucleospora salmonis* infestation in hatcheries that had shipped lake trout eggs in previous years to WRNFH – not a listed pathogen
      ii. Richard Cronin National Salmon Station (RCNSS) -$700K Biosecurity update in response to IPN (see 2008 USASAC Report)
         1. Spawning required a crew of about 25 staff supplied by Connecticut River Atlantic Salmon Commission cooperators to meet biosecurity
         2. Reminder - **USASAC statement about pre-planning for IPN**: *IPN may represent a critical threat to Atlantic salmon recovery. The introduction and discovery of IPN at any hatchery facility will result in loss of genetic diversity and the loss of one to three year classes. Current procedures for screening and isolating fish are inadequate to protect against an IPN outbreak. Options for IPN mitigation, prevention and screening need to be investigated immediately and this should be a fish health priority.*

   c. NASCO Rivers Database – user friendly improvements and US progress

   d. Marine Survival Acoustic Telemetry Studies in Penobscot Bay
      i. 156 smolts: naturally reared (n = 46), fall parr (n=31) and hatchery (n = 80)
      ii. 67 detected exiting Penobscot Bay (43% of total)
      iii. 23 detected at Halifax (15% of total; 34% of those exiting PN Bay
         1. median of 26.44 (±4.15) days later

   e. Parr Subsidy
      i. Smolts – hatchery product responsible for >70% of returns
      ii. byproduct production: Fall Parr – 29-42% of large juvenile stocked
      iii. All unmarked hatchery returns were credited to the unmarked smolt stocking this discounts the contribution of unmarked parr to adult returns and overestimates the smolt return rate

   f. Sample Design for GoM Juvenile Production
      i. benefits of random and fixed, non-random sites were discussed
      ii. Use spsurvey package for R, developed by the US EPA Environmental Monitoring and Assessment Program
      iii. new approach combines historical fixed and random sampling