Connecticut River Atlantic Salmon Commission
Turners Falls, Massachusetts
Meeting Minutes
November 20, 2007

Agenda Items:

1. Determination of Quorum, Approval of Today's Agenda & Minutes of the July 11, 2007 Meeting

Chair Ed Parker requested that Mr. Eric Palmer act as CRASC Chair for the meeting in his absence. Start of the meeting was delayed by snow. Mr. Palmer called the meeting to order at 10:42 a.m. and adjourned at 1:50 p.m.

A number of Alternate Commissioners attended including: Mr. Steve Gephard (CT), Mr. Scott Decker (NH), Mr. Palmer (VT), Mr. Mark Tisa (MA), and Mr. Jaime Geiger (USFWS). Both the Vermont Public Sector Commissioner and the National Marine Fisheries Commissioner were absent. Mr. Palmer determined that a quorum was present and that there were no changes to the agenda.

Mr. Geiger made a motion to approve the Minutes from the previous meeting. Mr. Decker seconded the motion and the Minutes were approved.

Mr. Geiger requested that the Coordinator include the Fisheries Obituary for Charlie Thoits in the Minutes of this meeting.

2. Report of the Executive Assistant

Ms. Janice Rowan provided the following report:

The Connecticut River Atlantic Salmon Restoration Program is facing two new and significant challenges since the last meeting. These include detection of IPN virus in sea-run Atlantic salmon maintained at the Richard Cronin National Salmon Station and the infestation of the diatom, *Didymosphenia geminata*, in the upper watershed. Both items have been added to today's meeting agenda for further discussion.

Commission and Technical Committee membership has changed for New Hampshire. There is a new acting Director for New Hampshire Fish and Game, Mr. Donald S. Clark. He has authorized Mr. Scott R. Decker as his alternate to the Commission. Additionally, Mr. Mathew Carpenter will represent New Hampshire Fish and Game on the Technical Committee here as well as in the Merrimack program.

The Salmon-in-the-Schools Program is continuing throughout the basin. New Hampshire and Vermont teachers were trained at the White River NFH on November 7 by the New Hampshire Fish and Game and the U.S. Forest Service in cooperation with the U.S. Fish and Wildlife Service and other partners. The Connecticut River Salmon Association also trained new teachers on November 8. And, the Trout Unlimited Atlantic Salmon Egg Rearing Program Orientation is scheduled for January 10, 2008 at the Greenfield Community College.

Ms. Rowan also provided an administrative report noting that the Commission has $1,572.15 in the bank.

3. Report of the Technical Committee Chair

Mr. Slater provided the following report:

1. Committee Membership

Mr. Slater welcomed Mr. Matt Carpenter who is now the New Hampshire representative on the Technical Committee. He thanked Mr. Gabe Gries on behalf of the rest of the Technical Committee for his services

on the Committee in the past.

2. Status of the Run & Stocking

Returns
Migratory fish counts have not changed much since the last meeting (July) with the exception of salmon and sturgeon numbers. There were six late returning Atlantic salmon: 1 at Leesville, 1 at Rainbow, and 4 at Holyoke, and there were two shortnose sturgeon caught at Holyoke.
Current Counts:

Atlantic salmon – 140 (11 released) vs. 214 last year
American shad – 163, 466 vs. 156,352 last year
Blueback herring – 74 vs. 21 last year
Sea lamprey – 42,434 vs. 19,117 last year
Striped bass – 241 vs. 144 last year
American eel – 286 vs. 2,228 last year (not counting eels at Holyoke)
Gizzard shad – 67 vs. 134 last year
Shortnose sturgeon – 3 vs. 2 last year

One hundred seven Atlantic salmon were captured at the Holyoke fishlift, seven salmon were captured at the Rainbow fishway on the Farmington River, four salmon were captured at the Leesville fishway on the Salmon River plus one more was seined from the river, and twenty one salmon were captured at the West Springfield Project on the Westfield River.

One salmon eluded capture and escaped the Holyoke fishlift while ten more salmon were radiotagged and released from the Holyoke fishlift - part of a TransCanada Northeast Hydro Region fish passage study on the Deerfield River.

The Connecticut River sea-run Atlantic salmon returns were comprised of: 19 fish of smolt origin (aged 2:2) (14%); 86% fry origin, including 1 multi-sea winter fish (aged 2:3); (0.7%); and, 1 grilse (aged 1:1) (0.7%).

One hundred twenty-nine sea run Atlantic salmon were retained at the Richard Cronin NSS for spawning, including 100 females and 29 males. Five unvaccinated fish were kept isolated as controls (four have died (1 positive for furunculous) and 1 grilse remains alive). Two vaccinated fish have died (1 in summer and 1 late return).

Since our Technical Committee meeting on 13 November the disease Infectious Pancreatic Necrosis (IPN) has been isolated from ovarian fluid samples of 2 sea run salmon from Cronin. This raises many serious issues and will be discussed under a separate agenda item.

The Merrimack River Program has collected 75 salmon as of this date, including a number of fall returns.

Maine: Penobscot River count was 916 sea-run Atlantic salmon as of 11/6/2007; Kennebec-6; Dennys-3; Androscoggin-21; Narraguagus-10; and, Saco-24.

Stocking
Nearly 6.5 million Atlantic salmon were stocked in 2007 (compared to 5.9M in 2006). The total includes 5.5 million unfed fry, 855,000 fed fry, and a total of 97,959 two-year smolts (53,454 to the Farmington River and 44,505 to the mainstem Connecticut River above the Holyoke Dam). As usual, hundreds of volunteers donated many hours of their time to stock fry throughout the basin.

Mr. Slater noted that IPN had been detected in sea-run Atlantic salmon at the Richard Cronin National Salmon Station since the Technical Committee meeting, a subject to be addressed later in the agenda.

3. Genetics Subcommittee Update

Discussion on this update was delayed until a later agenda item.

4. Fish Culture Subcommittee Update

Egg Projection
Egg production is projected at 11.8 million eggs this year (well below incubation capacity) and includes a projection of 740,000 sea-run eggs, 960,000 kelt eggs, and 10.1 million domestic eggs. Spawning is complete at the Kensington SSH, the Roger Reed SFH, and at the Richard Cronin NSS, spawning continues at the North Attleboro NFH, and the White River NFH.

Sea Run Spawning Summary
The MDFW collected 239 mature parr of sea run origin from Sawmill River for spawning with sea runs. Survivors were stocked back into the river in November.

The RCNSS was holding 57 male and 20 female 2005 and 2006 kelts in Pool 1. On October 5, 2007, staff injected hormones in 10-2005 or 2006 year-class male kelts. Spawning took place on October 10 and October 15. On October 10, 14 male kelts provided milt, including five ripe kelts (without hormone implants) and nine kelts with hormone implants. Eventually, a total of 20 kelts gave milt and 8-10 female kelts (out of 20 in captivity) are expected to produce eggs.

The NANFH injected hormones in 10 male kelts on October 10, including 5 kelts from the 2004 year class and 5 kelts from the 2005 year class. Seven kelts gave milt on October 15. The milt was used to fertilize sea-run eggs at RCNSS on that date. Spawning is ongoing at the hatchery.

5. Smolt Advisory Subcommittee Update

Calcein Marking Study
100,000 smolts are in production for release this spring including 10,000 smolts at the Berkshire NFH and 90,000 at the Pittsford NFH. They will be released in the Farmington River above and below the Rainbow dam, in the mainstem Connecticut River above the Holyoke dam, and in the Westfield River. All of the smolts have received two calcein marks (with a third mark scheduled this winter) in a study conducted by the Northeast Fishery Center. The object is to test longevity of the mark and homing fidelity (despite dams) among released smolts when they return as adults in or around the year 2010.

Mortality following administration of the first mark at the Pittsford NFH initially caused some concern but was later attributed to an outbreak of coldwater disease. The disease has left the fish fins in poor condition.

This is a one-time study. No additional work will be conducted until returns occur. If the marking persists, and the mark is considered valuable, then future consideration will be given to administration of the mark via feeding rather than immersions.

In the mean time, smolts at the Pittsford NFH have been vaccinated and clipped (week of October 16). Adipose clipping and fin evaluation will be schedule at the Berkshire hatchery. Fin evaluations will be scheduled at the Pittsford NFH in February 2008. A final calcein mark will be applied and the smolts will be stocked in late March 2008. Additionally physiological sampling by Mr. Steve McCormick will be scheduled prior to release.

6. Salmon Studies Update

Deerfield River Passage Study Results

Ten sea-run Atlantic salmon were captured at the Holyoke fishlift, radiotagged, and released above Holyoke by Normandeau Associates as part of the TransCanada Northeast Hydro Region fish passage study on the Deerfield River. One salmon made it to Turners Falls then turned around and went back downstream, final whereabouts unknown. Four salmon were counted in the Deerfield River. Five salmon passed the Vernon dam. Two salmon were trapped at Townshend and trucked upstream in the West River. Three salmon passed Bellows Falls with one documented in the White River and two in the Williams River. Mr. McMenemy noted that he would be checking for redds in the West and Williams Rivers.

Smolt Emigration
The smolt mark and recapture emigration estimate for 2007 is 58,209 +/- 30,869 smolts. The large error is caused by the low number of recaptures at Holyoke- mainly due to high water during the study period.

U.S. Atlantic Salmon Assessment Committee
Mr. Slater thanked Mr. McMenemy for offering to write the basin narrative and make the program presentation again this year at the U.S. Atlantic Salmon Assessment Committee meeting.

Index Site Assessments
In general, conditions were hot and flows were low this summer. Results from index site assessments tended to be highly variable. In Vermont, the young-of-year (YOY) salmon were smaller than usual and survival was poor for parr in the Williams River (usual source of mature sea-run origin parr). Wild trout were very abundant in VT waters this year. Variable results were also reported in NH though good growth and survival was observed in the Minnewawa where survival last year had been poor. Variable results were reported in CT with large variation among mainstem Farmington River pre-smolts. Results from MA streams were also highly variable.

PIT Tag Dataloggers
Mr. Haro reported that the PIT dataloggers at Holyoke (fishwindow and bypass pipe), Turners Falls (Gatehouse window and Cabot bypass) and Vernon (fishway window and bypass) were aging and in need of replacement. They are used to capture upstream movement of PIT tagged adults. The USGS would help retrofit the equipment if funding is found elsewhere and if someone can take the lead on monitoring at Holyoke, Vernon and Bellows Falls. The Tech Committee noted that it would be nice to have such dataloggers elsewhere on the tributaries as they are a good tool.

7. Fish Passage Subcommittee Update

Holyoke – Connecticut River
- Fish Passage Season ran well
- Eel passage was run - over 4,000 at South Hadley side eelway – but only 200 at Spillway lift and 77 at Tailrace lift eelways
- Downstream passage investigations ongoing – shortnose sturgeon tagging/lab testing

Turners Falls – Connecticut River
- New Gatehouse entrance installed and ready to go for 2008
- Testing of flows/flow fields - Fall 2007
- Cabot Station fish - Initial designs being prepared – Installation targeted for 2009

Fifteen Mile Falls – Connecticut River
- Moore bypass sampler was monitored and acoustic tagging was employed to look at smolt movement/behavior at the dam/fish bypass entrance
- Preliminary results : 1,029 smolts were captured – lower than 2005 (1,404) and 2006 (2,274) Awaiting results report on acoustic tagging
- Further consultation with TransCanada needed on next steps

Fiske Mill - Ashuelot River

- Fish Lift under construction. Changed plans from a Denil to a lift -- To date, pilings and in-water section of the fishway are almost done
- Target for completion – Spring 2008
- Eelway completed – ready for 2008

The problem with this project is that it has delayed construction of permanent downstream passage at the Brockways Mills where temporary downstream passage is in place

Woronoco – Westfield River

- ***Smolt study in 2008 coincident with similar study at Westfield Paper Dam was planned but now that project delayed – Woronoco to proceed anyway in 2008
- 3 Eelways have been installed

*** This is an unquantified smolt need which may be met with the previously planned release of Berkshire smolts

Slack Dam – Black River

- Permanent downstream fishway finally installed – after years and various inadequate temporary facilities

West Swanzey/Homestead Woolen Mill Dam – Ashuelot River

- Still actively pursuing removal
- Final design details for removal with cross vane construction underway – a few other details relative to archeological study and bridge repair/dam removal project alignment in process
- Removal targeted for 2008

West Springfield Project – Westfield River

- One of the fish migration weirs will be repaired this fall- if the project is not already completed

Zemco Dam Removal – Eightmile River

- CTDEP, TNC, and American Rivers worked together to remove this dam upstream of two completed fishways

Raymond Brook Dam Removal – Salmon River tributary

- CTDEP, CRWC, and American Rivers worked together to remove this dam

USFWS Fishway Engineering Support

The USFWS Fisheries Program has taken in three regional fish passage engineers as a result of budget deficits within the Budget and Administration Division. The Fisheries Program is now examining what types of work can be supported given available funding levels and sources. Funding for FERC related projects is limited; however, funding is available to increase non-FERC related projects. Only one FTE of "FERC work" region-wide would be possible which compares to about two FTEs now. This is problematic since most FERC projects are also critical to ongoing fish restoration efforts.

8. Shad Studies Subcommittee Update

CT has completed assessment of the scales sampled from American shad at the Holyoke fishlift. That information will be forthcoming.

Mr. Gries noted that large numbers of juvenile shad were observed in the Vernon pool and at the base of the dam to a point ½ mile downstream. The VT Yankee Nuclear Power Plant also reported entraining juvenile shad this fall despite the low number of adults passing or trucked upstream.

9. Didymosphenia Geminata, "Didymo" or "Rock Snot"

Discussion on this update was delayed for a later agenda item.

10. Other Business

Salmon-in-the-School-programs are underway. New Hampshire and Vermont teacher training was provided at the White River NFH on November 7, 2007 by the NHFG and USFS in cooperation with other partners. The Connecticut River Salmon Association trained new teachers also on November 8, 2007. And, Trout Unlimited will conduct its annual Atlantic Salmon Egg Rearing Program Orientation on January 10, 2008 at Greenfield Community College.

4. IPN Detected at RCNSS

Mr. Geiger introduced Mr. John Coll, USFWS-Lamar Fish Health Unit, who provided a PowerPoint presentation on the IPN virus isolated from sea-run Atlantic salmon spawned at the Richard Cronin National Salmon Station.

Discussion
Mr. Geiger deferred the decision on managing the fish at the RCNSS and the eggs at White River NFH to the Commission. He asked that the decision be made as soon as possible because the White River hatchery is managing a lake trout program and a landlocked Atlantic salmon program in addition to the a salmon program for the Connecticut River. He noted that all of the production there is at risk until action is taken. He encouraged further testing prior to depopulation so that we can understand as much as possible about this virus isolation. And, he expressed concern that all necessary action be taken to ensure that the Cronin facility is ready for full operations next spring.

Mr. Coll said that he was 100% sure that IPN had been detected in the sea runs. The confirmation by the Seattle USGS lab is a necessary professional formality. Since this is the first isolation of IPN at the Cronin facility, he recommended that the Commission not take risks. This calls for elimination of all the Atlantic salmon broodstock: sea runs, kelts, and domestics, as well as any trout on station. He also recommended a conservative approach to the eggs shipped from the facility and now in incubation at the White River hatchery. This calls for elimination of all the eggs. This approach calls for the elimination of the year class but protects White River NFH and its several programs as well as the whole watershed to which IPN could be spread if suspect fry are positive. Other fish species in the Connecticut River basin are vulnerable and could be infected.

Mr. Coll explained that he would feel very confident about which sea runs were carriers if necropsy results reveal that one or two fish are positive for IPN and their PIT tags correspond with those from the pooled, positive ovarian fluids.

Additional testing does not increase the number of management options since positive results require IPN classification for the facility and restrictions on fish and egg transfers from the station. Negative results will not alter suspect status for the fish held at the Cronin facility, so, it will still be shown as an IPN station until three consecutive inspections are all negative. As a result, all the same restrictions will apply as if the fish test positive. The only way to achieve a clean station in time to receive wild returns next spring is to sacrifice and disinfect.

To manage the program with some risk, the ideal situation for suspect eggs is to incubate them in quarantine, then test fry/fingerlings for IPN before release. State and federal hatchery closures have precluded optimal egg incubation options and the consolidated system at the White River NFH is currently inadequate. The system should be designed so that if a virus is isolated, it is not necessary to eliminate the entire egg take. Egg incubation capacity at other facilities like the Cronin station should be increased to minimize future risk and the new system should be designed to accommodate individual pairings. It was agreed that structural changes like this are needed to address this issue. Mr. Geiger indicated that the USFWS is committed to making needed changes contingent upon review of the issue, system design, and funding needed to prevent long-term catastrophes. He noted that it is likely that such changes will have to be phased in over time as funding becomes available.

It was determined that the program could absorb the impact of depopulation without long-term negative impacts. It is a serious setback that can be overcome. The biggest impact is the loss of one year-class of genetic material. That is the annual foundation for domestic F1 broodstock production. The domestic production program can rely on members of the same generation among kelt broodstock as a fall back for the loss of this year-class of sea runs if kelt x kelt matings can be maximized before spawning is completed this season. The Genetics Subcommittee was asked to consider this further and recommend any changes that may minimize genetic losses.

Even using a cautious approach to controlling spread of the virus, it was recognized that the virus could appear again despite implementation of measures to control spread of the disease from the Cronin facility. So, protocols for screening the returning salmon will continue, changes to structure of facilities and operations will be made, and in the future changes to the fish health policies region-wide may be necessary.

Mr. Geiger reported that the USFWS had already notified partners throughout New England and the Great Lakes and basin Congressionals. He emphasized a need to heighten awareness among basin Congressionals about this situation in the off chance that they may be willing to help with some of the structural and operational changes that are required.

After some discussion about precisely which action would be most appropriate, the Commission reached consensus. Mr. Tisa made a motion that the Commission approves the USFWS plans to eliminate all fish on station at the Richard Cronin Salmon Station followed by station disinfection. Any products, now held at the White River NFH, that were derived from spawning at the station this season will also be eliminated. Mr. Decker seconded the motion and all approved.

It was agreed that the USFWS would revise a draft news release for the Commission to review with the intent of release this week or very early next week. In the mean time, the Commission decisions have been made and will be released pending final confirmation of the virus. The news release will explain the situation, the Commission decision, and the fact that losses are being minimized based on existing protocols and sound science. The primary audience of the news release is expected to be the public and anglers who need to realize that the salmon program did not create IPN, that IPN is endemic, and that our protocols worked – identifying the presence of the virus and dictating a prudent response that will not spread the disease.

Mr. Coll offered to share a list of frequently asked questions (FAQs) that the Lamar Fish Health Unit had written when IPN was detected at the Allegheny NFH. The cooperators can use these FAQs to address questions from reporters with some consistency. Mr. Parker will be the spokesman for the Commission on policy and Atlantic salmon issues. Mr. Coll will continue to be the technical spokesman.

It was noted that this loss would not impact the 8,100 students in basin-wide salmon-in-the-school programs.

Geneticists at the USGS-CARC will be requested to determine if any of the infected Cronin salmon were strays to the river.

5. Didymo Impacts to WRNFH Operations

Didymo is a large freshwater diatom that thrives in cold, low nutrient waters with stable flows. It is being treated as an aquatic nuisance species though it is not known if this diatom is native to the basin. It is known that blooms of this diatom have not previously been documented (prior to spring 2007). It is currently found in the White River near Bethel, VT (upstream of the White River NFH); in the mainstem Connecticut River from Stratford north to Canaan and Clarksville, NH and in the Batten Kill. It is not known to exist in MA or CT yet so there is concern about movement of this species into uninfested waters including tributaries throughout the basin. One potential vector is fry stocking because eggs incubated at the White River NFH are exposed to surface water from the White River during portions of incubation. The USFWS held a series of meetings (October 31, November 5, and November 6-7, 2007) to assess

infrastructure risk and remediation at the White River hatchery, develop a plan of action, and initiate testing for control measures.

The hatchery has an existing sand filter that has the capacity to filter particles down to about 30 microns in size which will be useful if the diatoms are at a low density. Water will be exposed to UV disinfection which may kill the diatom. And, eggs will be treated with formalin which may kill the diatom. Each of these control points will require efficacy verification.

Testing for control measures required collection of Didymo samples from the wild. None could be found in the White River on November 6. Samples were collected on that date from the mainstem Connecticut River at the Stewartston/Pittsburg, NH town line off Route 3. Staff from the Northeast Fishery Center attempted to stain and kill the diatom with formalin. However, the sample was exhibiting signs of senescence precluding confidence that formalin is an effective control measure. By the same token, testing UV as a control measure is also precluded until a vigorous sample of the diatom can be obtained (likely not until next spring).

The Technical Committee is also exploring field disinfection protocols for equipment used during fry stocking and index site surveys.

A formal basin-wide risk assessment might prove helpful in identifying primary risks like angler transfers. An assessment of this kind might demonstrate that the hatchery vector is a much smaller concern.

Mr. Geiger presented a draft action plan that the USFWS had prepared to describe actions that the USFWS will take to control spread of Didymo within the watershed.

Initially, the USFWS had focused on mechanical filtration using a rotary drum filter with 10 micron sieve size. The problem with this solution is that installation could not be guaranteed until early to mid-spring. As a consequence, the only feasible alternative is to eliminate use of surface river water for egg incubation. Two drawbacks to this strategy include temperature and water quantity limitations. The USFWS is working to address the temperature limitations by planning installation of additional heat exchangers and water chillers. Mr. Geiger was hopeful that the water temperature and quantity limitation would be reduced since the White River hatchery will be incubating fewer early eggs. Mr. Ken Gillette is currently reviewing production requirements and will present his assessment of whether the hatchery can produce fry according to schedule or whether there will be some need to include production of feeding fry this spring. In the long term, water use at the hatchery needs to be assessed with potential for re-use, filtration and etc. explored. The objective of a more comprehensive water management plan at the facility is to have primary, secondary and tertiary back-ups available. This sort of redundancy will have to be phased in to the hatchery facility and operations.

In response to a question from Mr. Scott Decker, Mr. Ron Howey confirmed that the eggs currently under incubation had not been exposed to river water yet.

The Commission was satisfied with this approach as long as the Service remains committed to full production.

6. Broodstock Management & Genetic Monitoring

Mr. Gephard reported the following:

New Science
A paper from Science, entitled *Genetic Effects of Captive Breeding Cause a Rapid, Cumulative Fitness Decline in the Wild* by Hitoshi Araki, Becky Cooper, and Michael S. Blouin (Science 318, 100 (2007)) was briefly discussed by the Technical Committee. This research demonstrates almost 40%/generation decline in reproductive fitness between wild and hatchery-reared steelhead trout. This research was based on

stocked smolts and multiple generation captive broodstock rather than a fry-based program using sea runs, kelts and F1 domestics like we have in this program. The Genetics Subcommittee plans to review the paper and provide comments in the future.

Broodstock Management
The USGS Conte Lab has been genotyping sea-run Atlantic salmon since 1996. The lab has assisted CRASC member agencies in determining the effective population size and recommending parr numbers for inclusion in the spawning program. The information is entered into a database that identifies potential matings that minimize loss of genetic variability. This research has gradually evolved into a management tool as well as the foundation for the genetic marking program. The lab staff has supported the Richard Cronin NSS staff during spawning. Because funding has been limited at the lab, the USFWS Northeast Fishery Center has agreed to assume this task as an annual priority (assuming funding in FY08 does not preclude expansion of effort). The transition between agencies is likely to take a couple of years followed by a long-term relationship between the agencies since the monitoring research requires the broodstock screening data. This is an excellent example of interagency cooperation.

Genetic Marking
In 1997, the USGS-Conte Lab first used the information obtained from the genotyped sea runs to create "genetically marked" families of salmon. The fry, with known family genetic marks, are stocked into the watershed in known locations. Two years later, some of the emigrating smolts are captured at bypass facilities in Turners Falls and/or Holyoke. Fins are clipped to provide samples for genetic assessment. The assessment/monitoring have the potential to inform management choices and priorities with respect to nursery habitat and stocking regimes. And, it has the potential to point out other landscape limiting factors that may provide opportunities for hatchery and habitat management. The Conte Lab has been collecting samples and hopes to have results analyzed for the 2004 smolts by April 2008. Completion of monitoring, assessment and interpretation has been hampered by lack of dedicated funding. Total cost to complete the project with samples on hand is estimated at $147,000 and would likely require 1-2 years.
This project is a high priority and the Technical Committee would like the Commission member agencies to work with USGS to identify funds for completing this project. Cost estimates for the work are available.

Sea-Run Milt Cryopreservation
The Northeast Fishery Center and Cryogenetics, a Norwegian Company, which has large scale cryopreservation capability, conducted a demonstration project at the White River NFH from November 6-8, 2007. They froze milt from 16 males on November 6. The following day, they thawed the milt and fertilized salmon eggs using non-frozen milt as a control with the same females. Eye-up will be used as a measure of success. If this works and is desired, the CRASC member agencies will have to consider purchase of license, needed equipment, and technology transfer/training to establish a cryo program here since the company has proprietary rights over the technology. This capability could be used to address chronic shortage of male sea-run salmon.

Kelt Retention and Reconditioning
The Genetics Subcommittee was dealing with space limitations that required decisions about which kelts would be retained and where in 2007. Mr. Gephard noted that the elimination of the 2007 sea runs will take care of this issue for this year.

Broodstock Management Plan
Issues like sperm cryopreservation and kelt retention call for a plan to help guide broodstock management decisions. The Technical Committee has obtained a copy of the Maine plan and the National Science Foundation Review of the Maine hatchery program. The Maine broodstock management plan was used as a template to develop a rough outline with some completed details. The outline will be provided to the Genetics Subcommittee as a starting point for a CRASC document. The draft will then be provided to the Technical Committee for future development.

7. Other Business

The Commission agreed to attempt to schedule two upcoming meetings sometime during the weeks of January 12, 2008 and June 16, 2008 or June 23, 2008.

Attendance

Janice Rowan	USFWS
Eric Palmer	VTFW
Bill Archambault	USFWS
Richard Shelton	NH Public Sector
Scott Decker	NHFG
Tom Menard	MA Public Sector
Dave Perkins	USFWS
Caleb Slater	MDFW
Robert A. Jones	CT Public Sector
Jim Carroll	CRSA
Mark Tisa	MDFW
Jay McMenemy	VTFW
Jaime Geiger	USFWS
Steve Gephard	CTDEP
Gabe Gries	NHFG
Matt Carpenter	NHFG
Steve Garabedian	USGS
David Klinger	USFWS
Ken Simmons	MDFW
Jennifer Ayre	MDFW
Larry Lofton	USFWS
Mickey Novak	USFWS
Darren Desmarais	USFWS
John Coll	USFWS
Rick Van Nostrand	CTDEP
Tom Wiggins	VTFW
Ron Howey	USFWS
Ron Rothschadel	USFWS