

**Minutes of CRASC Technical Committee Meeting
March 25, 1998
Conte Anadromous Fish Research Center
Turners Falls, Massachusetts**

Agenda Items

1. Call to Order and Approval of Minutes from the Meeting on September 8, 1997

Ms. Janice Rowan, Technical Committee Secretary, called the meeting to order at 10:15 a.m. The meeting was adjourned at 12:55 p.m.

Mr. Steve Gephard motioned to approve the Minutes from the last meeting, Mr. Ken Sprankle seconded and the Minutes were approved.

2. Selection of Technical Committee Chair

Mr. John O'Leary, Technical Committee Chair, has taken a new job as the Massachusetts Connecticut River Watershed Team Leader. Consequently, the Technical Committee addressed the selection of a replacement. Technical Committee members from the MAFW, CTDEP, and NHFG previously held this position. Mr. Steve Gephard motioned to nominate Mr. Jay McMenemy, VTFW, and Mr. Ken Sprankle seconded the motion. All approved and Mr. McMenemy was unanimously selected to Chair the Technical Committee.

3. Update on Public Information Meetings and Comments on the Draft Revised Strategic Plan

Ms. Janice Rowan provided both a draft summary of the scope of comments received, and a table of comments keyed to sections in the draft Plan with recommended responses developed by the draft Strategic Plan Subcommittee for the Commissioners. Technical Committee members were asked to review the draft and suggest any additional changes as soon as possible so that the summary and responses can be finalized. It was agreed that the Coordinator will then forward this information to the Commissioners for review prior to the next CRASC meeting. If the Commissioners accept these recommendations, the recommended changes will be made to the Plan. The comment package will be added to the Plan as another Appendix. It will also be forwarded to all who commented on the Plan. The Commissioners can vote to accept the Plan at this point, potentially at the next CRASC meeting.

4. Genetics Workgroup Update

Mr. Steve Gephard provided an update on a recent (3/2/98) Workgroup meeting with Dr. Tim King, USGS/BRD-Leetown and Dr. Ben Letcher, USGS/BRD-Conte Lab. Information on the genetics of Connecticut River sea-run salmon was discussed. Dr. Letcher analyzed the results of mating protocols demonstrating that paired matings based on the DNA samples resulted in no loss of alleles. Randomly mating one male with one female without any information on relatedness results in a

significant loss of alleles, while randomly mating one female with four males results in a loss of fewer alleles than a 1:1 mating ratio. The latter result is confirmation that the past standard mating protocol was sound. Data also show more alleles in the population at the Richard Cronin NSS than at the Whittemore Salmon Station because there are fewer fish held at Whittemore. Heterozygosity was also improved with the DNA mating scheme. Heterozygosity was determined to be about 75% with a random mating scheme and about 79% with the DNA matings at Whittemore verses about 78% and about 83%, respectively, at Cronin. Dr. King made a couple of key recommendations for consideration. While the DNA study was initiated to address the need for a fry mark, the resulting information has proven useful in designing the broodstock management protocols.

Dr. King suggested that the uneven sex ratio of returning sea-run salmon be corrected by importing milt from Maine salmon, either Penobscot or wild river sea runs or, at a minimum, to refrain from re-using sea run males. The Workgroup decided that it is preferable, for the egg bank matings, to utilize domestics rather than repeat spawn males.

Additionally, Dr. King suggested importing specific genetic material, through green eggs from Maine salmon, either Penobscot or wild river sea runs, so as to increase the likelihood of adding missing genetic material, inherited through maternal mitochondrial DNA, and thus improving genetic variability in the Connecticut stock. A portion of a number of females' eggs could be imported with some increased likelihood of success if the fish are sampled and marked using the protocol that Dr. Ben Letcher and he have developed on the Connecticut. This recommendation is under consideration.

DNA marked fry will be released this spring in the Farmington River as part of a pilot marking study. A small number of additional fry will be released in Vermont in concert with the Dartmouth isotope marking study. Some 60 of the marked families are also feeding at the White River NFH, each family was spawned to maintain or improve the stock's genetic variability, and thus contribute to the genetic health of the station's broodstock. Portions of this production, at WRNFH and Kensington State Salmon Hatchery, will also be utilized to produce smolts at the Pittsford NFH.

5. Smolt Advisory Committee Update

Mr. Steve Gephard reported that the Committee met at the Pittsford NFH on December 17, 1997. The Committee agreed to focus on the quality not the quantity of smolts that could be produced at Pittsford. In other words, if the 100,000 smolt target is too high for the facility to adequately support, then the figure will be adjusted accordingly. Additionally, it was agreed that any research conducted should not interfere with production and should be practical in terms of a direct contribution to improving smolt quality. The plan is to provide a specific hatchery target for smolt quality in terms of size, condition, physiology, etc. The Committee will be looking to select a marking protocol and is considering CWTs though NMFS may not be able to assist as they have in the past. The need and type of covers for the raceways was discussed without conclusion. The need for assistance in stocking the two-year smolts in 2000 with some one year smolts possible in 1999 was also discussed without conclusion. Another meeting is planned for June or July.

6. Update on Fish Passage Issues

Mr. John Warner provided the following update:

The Annual Notification letter for fishway operations was mailed.

A letter was sent to NUSCO (Chevalier) requesting improvements in upstream passage at Turners Falls and suggesting coordination with the Shad Studies and Fish Passage Subcommittees. There has been no response. Previously this was discussed and Mr. Ben Rizzo had provided plans for improvement while NUSCO had countered with an alternative plan. These plans could be the starting point for discussion to see if there is an existing solution or to determine if additional studies are needed. It is beneficial to open these discussions now because Turners Falls will be sold this spring as part of the utility deregulation process and buyers should be on notice.

NUSCO has had difficulty replicating good downstream passage efficiency at Turners Falls. Past results indicate that lighting around the bypass impacts passage success. This year, NUSCO will monitor wild smolt passage through the bypass under a couple of different lighting conditions to see if the lighting can be fine tuned to achieve good passage efficiency.

The guidance net will be put in place at Northfield when the river level drops this spring. Assessment of bypass efficiency using this partial net will again be measured using radio-tagged smolts. If results are unsatisfactory, a new solution will have to be identified since full net deployment across the intake is not considered feasible.

Downstream passage facilities will be constructed at the Gardners Falls project on the Deerfield River this spring.

Downstream passage efficiency will be measured this summer through a mark and recapture project at the Lower Robertson Project on the Ashuelot River.

International Paper has agreed to a permanent bypass design for the Woronoco dam on the Westfield River. Interim downstream passage facilities are currently in place at that dam though there is concern that the discharge pipe is not properly positioned over the plunge pool and may require modification. Interim passage is important here because this is a major bottleneck to emigration on the Westfield where significant numbers of smolts have been observed pooled behind the dam.

A smolt migration study is planned for this spring on the Moore and Comerford Reservoirs as part of the Fifteen Mile Falls Agreement. NEPCO has contracted with Normandeau to radio-tag smolts and monitor their movement to see if the smolts migrate through the reservoirs to the dams. Once at the dams, observations will be made to see if the smolts continue to migrate, and pass through the turbines, and then whether they survive. Results of these general movement studies may require more detailed subsequent studies. Ultimately, the results will impact upper basin salmon management.

FERC held both a public and agency scoping meeting on the Holyoke dam relicensing process. The USFWS and NMFS provided comments and requested additional information. The USFWS and NHFG provided FERC with additional information. There is lot of political pressure on FERC to push the licensing through on this project which is impacting how the process is being handled.

The prospect for constructing fish passage at the Manhan dam on the Manhan River was considered at a meeting attended by the Mayor of Easthampton, the town councilman, Connecticut River Watershed Council, USFWS and MAFW. Easthampton received about \$250K to rehab the dam and is willing to discuss change orders that would accommodate construction of a fishway in the future. The construction estimate was \$400K for a denil fishway to pass salmon, shad and herring. The engineers planned to meet to see what was feasible and others are moving forward to secure funding.

FERC denied appeals for the Bookmill Dam Project on the Sawmill River.

The Holyoke intervention letter for CRASC is ready for mailing.

7. Update on Shad Studies Subcommittee Activities

Mr. Ken Sprankle provided a summary of Subcommittee activities (attached). The total river shad estimate was about 659,000 shad (not statistically different from last year's 667,000) and juvenile survival was very high. The projection for last year was 2 million fish. Mr. Tom Savoy theorized that the difference was due to striped bass predation. Both commercial and recreational shad exploitation are down, most anglers have shifted to stripers.

8. Update on Salmon Studies Workgroup

Chair Jay McMenemy reported that NEPCO through Normandeau Associates will be radio tracking all adult salmon released at Holyoke to assess need for upstream passage on the Deerfield River as part of the relicensing agreement. NEPCO will also provide the agencies with a receiver to monitor movement of adults that do not swim up the Deerfield.

NUSCO has proposed to conduct another smolt estimate study at Cabot and Holyoke in cooperation with the USFWS and GCC. The proposal was provided to the Technical Committee and was approved pending further review by the Chair. The final report of last year's results should be released soon. The Technical Committee discussed the need for continued oversight on this project.

Coded wire tags from the '93 and '94 smolt releases, designed to replicate early time of release and photo-period advance studies, resulted in low sample sizes that indicated no advantage or trend to these treatments.

Mr. Brian Kennedy at Dartmouth College requested 400 fry for a study to determine optimal growth rates under a variety of flow conditions at the White River NFH. Mr. Joe Mckeon motioned to approved the request, Mr. Steve Gephard seconded the motion, and all approved.

9. CRASC Meeting Agenda Items (4/28/98)

- Status of draft Strategic Plan and Public Comments, potential VOTE on Plan
- Coordinator Office expenditures and role
- Status of Tech Committee charge to develop a strategy to bring funds into program - where we are, what we are doing, what we need
- U.S. Atlantic Salmon Assessment Committee Report

10. Other Business

Fish Health:

Ms. Janice Rowan provided an update from Ms. Trish Barbash, Lamar Fish Health Unit, on fish health concerns in Canada pertaining to some new viruses. Infectious Salmon Anemia (ISA) is a horizontally transmitted virus, at least in saltwater. It is the cause of Hemorrhagic Kidney Syndrome (HKS). Where cases have been isolated in Canada, the government there plans to shut down infected net pen sites at the end of this month, managing the disease using the exact same technique that worked in Norway. This disease has only been seen in saltwater environments.

Togavirus appears to be more widespread. It is not associated with disease and does not appear to be transmitted vertically.

Concern is focused on the fact that New England salmon migrate past infected sites placing them at risk for exposure. In Norway, fish that pass within 5km of processing plants or ISA infected sites have contracted the virus. The Fish Health Unit will be monitoring morts for this virus.

Outreach:

The New England Science Center in Worcester, MA, has an Atlantic Salmon Hatchery Exhibit highlighting the Center's educational fry stocking program, aquarium display, and informational displays. MAFW, USFWS, and the CRASC through the Coordinator's Office, provided eggs, fish, support, and information. Mr. Steve Gephard indicated that he was scheduled to make a presentation on salmon restoration at the Center 3/26/98.

Volunteer:

Mr. Doug Brander, Southern Connecticut State University volunteered assistance with fry stocking and other salmon restoration work. His address was provided to Technical Committee members.

Fry Allocation Meeting:

Chair Jay McMenemy reported that 9.1 million fry were produced this year. Stocking dates have been scheduled throughout the basin. Fry have also been supplied to Rhode Island for the Pawcatuck River program. Terry Bradley, URI, coordinated with RI to get 20,000 fry for research. The Warren State Fish Hatchery fry tested negative for virus.

New England Federal Partners:

The New England Federal Partners are working with the Connecticut River Joint Commissions to implement the Joint Commissions Management Plan. Five Workgroups have been formed to better define necessary actions and oversee implementation. Ms. Janice Rowan is the co-team leader for the Fisheries, Wildlife, and their Habitats Workgroup. Other members include Joint Commissions members and agency personnel including Duncan McInnes, Steve Roy, Larry Bandolin, and Jay McMenemy. Technical Committee members recommended a meeting date of June 29 with further details to be provided by the Team Leader.

New England Fishery Management Council - Essential Fish Habitat Initiative:

Mr. Steve Rideout, USFWS-RO, requested a meeting with the Technical Committee to explain the EFH and its implications to the Connecticut salmon restoration program. EFH amendments to the existing Fishery Management Plan are needed by early June so that the FMP can be updated by October. Information to describe the EFH is required. The Technical Committee members did not feel that they could commit the time requested for a meeting. Instead, they requested that Mr. Rideout briefly summarize what is happening and what is needed on email. Members can then individually provide information directly to Mr. Rideout. Ms. Rowan indicated that she would speak to Mr. Rideout and request this recommendation as an alternative to meeting as a group.

Connecticut River/Long Island Sound Ecosystem Team Workgroups:

The ecoteam met and formed two new Workgroups to address Fish Passage and Stream Restoration issues. The Workgroups were deemed necessary to identify projects, describe and assign budget estimates, and prioritize projects for funding initiatives that periodically arise throughout the year and for inclusion in base budget request packages. Fish Passage Workgroup members include Rowan, Bandolin, Bartlett (a.k.a. Warner), Halavik, Haro, Gephard, and the CT River Watershed Council. Stream Restoration Workgroup members include Rowan, Bandolin, Tilton, Roy, and Gillette. Technical Committee members declined to commit to a meeting date but requested that a funding proposal format be provided electronically so that projects can be developed and submitted to a clearinghouse (Rowan-CRC) for handling. Ms. Rowan requested that projects be submitted now (April 15 deadline) for USGS BINS Research and FY2000 USFWS budget packages.

Excess Fish Available @ White River NFH:

7,000 '98 year class DNA marked fry will be transferred to Pittsford NFH for the smolt production program

6,300 '97 year class parr (5") will be stocked by NHFG

1,100 '96 year class (10-12") are still available

Returns Summary:

The *Atlantic Salmon Returns Summary for the Connecticut River, 1997* report was submitted for Technical Committee review after incorporating revisions previously suggested by Chair McMenemy.

Watershed Report:

Ms. Rowan reported that a limited number of copies of *The Health of the Watershed: A Report of the Connecticut River Forum* were available upon request. It identifies the main water quality issues in the watershed and list recommendations for handling these concerns.

USGS/BRD Atlantic Salmon Team:

Dr. Steve McCormick reported that a team had been formed to coordinate research and improve communication of research needs and results. USGS/BRD members include Alex Haro, Rocco Cipriano, Steve McCormick, and Ben Letcher. USFWS has identified members and states and NGOs are also encouraged to participate and review team output.

11. Next Technical Committee Meeting Date

September 29, 1998

Technical Committee Meeting Attendance

Janice Rowan	USFWS
Richard Hartley	MAFW
Joe McKeon	USFWS
Steve Gephard	CTDEP/Fisheries
Jay McMenemy	VTFW
John Warner	USFWS
Cori Rose	NMFS
Ken Sprankle	NHFG
Duncan McInnes	NHFG
Ken Gillette	WRNFH
Phil Herzig	USFWS
Don Pugh	USGS/BRD
Steve McCormick	USGS/BRD
Alex Haro	USGS/BRD