

**Minutes of CRASC Technical Committee Meeting
February 2, 2000
Conte Anadromous Fish Research Center
Turners Falls, Massachusetts**

Agenda Items

1. Call to Order and Approval of Minutes from the Meeting on October 28, 1999

Chair Jay McMenemy, Technical Committee Chair, called the meeting to order at 10:10 a.m.

The Chair gratefully acknowledged contributions made by Joe McKeon who has stepped down as the USFWS representative to the Technical Committee. The Technical Committee welcomed Mr. John Warner, Joe's replacement.

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

2. Fish Health Policy & Massachusetts Importations

Mr. Caleb Slater initiated a lengthy discussion on fish health management protocols.

The Genetics Subcommittee recommended the use of wild parr to augment sea-run milt when the sex ratio of returning adult salmon at the Richard Cronin National Salmon Station was found to be skewed toward females. Consideration was given to the fact that the wild parr had undergone some natural selection and the progeny of these crosses were to become domestic broodstock. The bottom line is that wild parr are needed to manage the genetics of Connecticut River salmon.

The Subcommittee recommendation was first implemented two years ago when wild parr were collected by the VTFW from the Rock River in Vermont. Some wild fish health survey work had been completed in this river prior to parr collection. It is thought that the parr pose less of a fish health risk than the returning sea-run adults. The collected parr were transported to the Richard Cronin NSS, spawned and monitored for fish health after death. The fish are held in fairly strict isolation. All of the spawned males used in the egg bank were lethally sampled for fish health. No diseases were detected.

Last year, Mr. Ken Simmons, MAFW, objected to this collection protocol and required fish health work prior to parr collection and importation. The timing of the MAFW request for fish health work precluded collection in Vermont as it was too close to spawning. Consequently, wild parr were collected in MA, sampled concurrently and monitored after death. No diseases were detected.

The parr collection protocol is associated with a number of concerns: There is no way to eliminate risk in a fish restoration program. The protocol is somewhat inconsistent with NEASC Guidelines. There is a risk of importing diseased fish. There is a risk of exporting diseased eggs. There is a question as to whether disease classifications of participating hatcheries should be adjusted during the interim between receipt of eggs and receipt of fish health certification. There is a problem collecting enough wild parr from MA as opposed to a single location in VT. There is an increased risk from collecting parr in multiple watersheds. VTFW has volunteered to collect the parr for fish health samples and spawning. Testing for BKD does not require detection using ELISA though ELISA is more sensitive. The Richard Cronin NSS is not designed as an isolation facility (when the USFWS took the RCNSS over from the state, the salmon either tested negative for fish pathogens or carried pathogens that already existed in the environment). Kelt males are not reliable sources of milt (Mr. Ben Letcher and Mr. Mickey Novak are investigating the potential for a diet supplement that may make kelts more reliable).

The VTFW agreed to collect at least 20 salmon (but may also sample other salmonids as part of the wild fish health survey) from the Rock River for fish health samples at least a month in advance of the need for wild parr for spawning (or early August). The Lamar Fish Health Unit agreed to process the samples. Fish health assessment will be based on existing agreed upon protocols (not ELISA). When the samples test negative, MAFW will issue the importation to the Richard Cronin NSS. Then wild parr can be collected for use at the Richard Cronin NSS.

The MAFW indicated there was no problem with trapping sea-run Atlantic salmon in any of the basin states and transporting them to the Richard Cronin NSS but MAFW would like to be informed of any occasions when this does occur.

3. Shad Studies Subcommittee Update

Mr. Ken Sprankle reported the 1999 shad run to the river was 475,000 shad, down from 642,000 shad last year. The run projection had been much higher (two million shad). The ocean, commercial and recreational take are low. The 1999 year class is strong but, with large numbers of striped bass in the mainstem, may not be associated with correspondingly high adult returns in 2003-2004.

Studies last year showed that 40% of the shad passing Holyoke make it to the Cabot Station. A bottleneck in the Cabot fishway will be addressed through an experimental retrofit of the lower ladder this spring. This effort is a cooperative effort between the NUSCO and the CAFRC.. The Subcommittee is taking steps to evaluate the shad restoration goal of 1.5-2 million fish. Limited

staff precludes the type of evaluation necessary and the Subcommittee proposes and requests that CRASC consider funding a research fellow to analyze existing data.

Shad allocations have been made for 2000:

Agency	Number	In Basin Transfer
CTDEP	1,000	50%
MAMF	150	0%
NHFG	1,850	50%
MEDMR	1,000 instream for egg take	0%
MEDMR	1,000 mitigation to Vernon	100%
Total	5,000	

Cooperators agreed to assist MAFW with reading shad scales this year. However, a long-term solution is still needed to address the three year scale backlog and future seasons. The USFWS proposed to take this responsibility provided additional funds are allocated to the station to increase staff. The Technical Committee agreed to ask CRASC to write letters of support to Congressionals for additional funding at the Sunderland OFA. Other potential long-term solutions may include the MA Cooperative Fish and Wildlife Research Unit or the UMass/NOAA CMER Program.

The blueback herring run, 2,699 herring at Holyoke, was the lowest ever documented. The juvenile index is also quite low in 1999 which may indicate that the population has fallen below critical mass to sustain itself. The cause for the decline is unknown. Staff and resource limitations preclude adequate investigations by the cooperating agencies.

4. Smolt Advisory Committee Update

Mr. Gephard reported that there will be about 50,000 smolts available from the Pittsford NFH for distribution the first week of April. Half of the total will be transported by CTDEP to the Farmington River. About 2,000 smolts will be placed in the imprint pond at the Rainbow Fishway. These fish will be monitored for physiology, and fish health. Two lots of 100 smolts from the imprint pond will be Floy tagged and released upstream for a small recapture study at the Rainbow bypass. The remainder of the fish will be released in Dunnings Pond on the Farmington River in Farmington, CT. These fish will also be monitored at the bypass.

The other 24,500 smolts will be transported by NHFG to the mainstem Connecticut River and released between the Holyoke and Turners Falls dams. The exact location will be determined by access considerations for the NHFG's shad truck. About 400 of these smolts will be PIT tagged and released at two locations further upstream to assist in the collection of additional physiological and

behavior data. Another 100 smolts will be outfitted with new tags developed by Mr. Ben Letcher. The salmon tags change frequency once the fish is ingested by a predator. The disease status of the smolts will be re-assessed in March. If there are any concerns, cooperators will be notified and the smolts will be released below Rainbow dam on the Farmington River and below the Holyoke dam on the mainstem Connecticut River.

This year's fry will receive an immersion vaccine against furunculosis. The raceways will be disinfected before the fish are moved outside. Additionally, the 1+parr on station will receive an injected vaccine for furunculosis and vibrio when they are marked in late fall.

5. Fish Culture Subcommittee Update

The fish culture subcommittee is scheduled to meet February 8, 2000. The agenda includes a post-spawning wrap-up, discussion about a meeting to include all New England salmon culturists, a follow-up on the egg incubation temperatures, an assessment of egg incubation capacity, and potential studies.

A total of 13.6 million eggs were taken this past season, 82% from domestic broodstock.

Last year's stocking total was 6.5 million salmon including 22,000 smolts.

6. Salmon Studies Update

Mr. Steve McCormick volunteered to provide copies of the results of smolt monitoring at the Pittsford NFH to the Technical Committee and Smolt Advisory Committee.

Ms. Janice Rowan reported that Mr. Michael Twohey, USFWS Marquette Biological Stations, met with staff from the CTDEP, USFWS, and NUSCO to discuss plans for a lamprey study in support of the Great Lakes Fishery Commission sea lamprey management program. The plan is to develop a population estimate, determine sex ratio, and investigate the logistics of trapping at Holyoke. Staffing and sampling logistics were identified as the primary issues. Mr. Bob Stira indicated that NUSCO could work out sampling logistics.

Mr. McMenemy reported that PGE Gen will repeat the adult radio tag study on the Deerfield River to determine if passage is required at the #2 dam. Eleven adult salmon were documented in the Deerfield in 1999 with eight fish reaching the #2 dam. Adults were also documented in the Saxtons, Cold, West, Williams, Ammonoosuc, Mill-Hatfield, and Sawmill Rivers.

Mr. Kevin Friedland, NOAA, has offered some depth-temperature recording tags for use in the program. The tags are about 1"X0.75" in size and last five years.

Mr. McMenemy also reported that preliminary index site data seems to show 0+ parr survival was down and fish size was smaller while 1+ survival was up with stable fish size. However, all of the data has not been included in this quick assessment.

7. Fish Passage Subcommittee Update

Mr. John Warner provided the following summary of hydro/passage issues:

Turners Falls The Fish Passage Workgroup met with NU to discuss the 1999 study results and plans for 2000 studies. Primary focus in 1999 was on improvements at the gatehouse fishway, and included a radiotelemetry study of shad tagged at Holyoke and released upstream.

Year 2000 studies will focus on the Cabot ladder and try to explore problems in the ladder in more detail as well as attempt to modify sections of the ladder to see if passage can be improved. Mr. Stira acknowledged the cooperative effort in this work between NU and the Conte lab.

Deerfield - Deerfield River - MA The radio-telemetry study of adult salmon released from Holyoke to determine the numbers of adults returning to the Deerfield was repeated in 1999. Substantial improvements in tagging and handling procedures were employed in 1999. Nine salmon were recorded at the Deerfield No. 2 Dam, of the 20 salmon tagged. Even if adjusted for the high release percentage of Holyoke returners, this number exceeds the 4 fish count needed as part of the trigger for fish trap construction at No. 2 Dam (4 or more are needed 2 years in a row to trigger fish trap construction). PGE Generating will be repeating the study in 2000. We have provided them comments on the 2000 studies.

PGE Gen again provided a receiver to the cooperators to allow for monitoring of adult salmon movements outside the Deerfield. Again, we learned more about the fate and behavior of salmon released upstream from Holyoke.

CT River Downstream Passage Activities

Northfield Mountain The Fish Passage workgroup met with NU to review the results of the 1998 radio-telemetry study on smolt behavior and passage success with the partial guidance net in place. The results were generally positive as over 93% of radio-tagged salmon smolts passed the project safely. The tests were run with only 2 or 3 pumps operating, so 4-pump operation was not tested. NU stated, however, that they expected at least one unit will be down for service throughout the spring migration period for the foreseeable future. If 4 unit operation is to occur, this will need to be assessed.

Holyoke Construction of the downstream passage "flyover" which would convey downstream migrants to the tailrace while shedding the majority of the flow passed over the bascule gate for use as bypass reach flow or fish lift attraction was delayed due to the project relicensing. Now, following license issuance, NU is looking at alternatives to the "flyover" due to other modifications of the project that are needed to comply with the license and Fishway Prescriptions of FWS and NMFS.

Tributary Passage Activities

Black River - VT

Cavendish Project An assessment of a revised smolt bypass system was undertaken in 1999. The 1998 moderately poor passage results (57% bypassed) in 1998 using a standard bypass with 20 cfs flow led to evaluation of a modified system that uses a Flow Inducer system to guide fish and a smaller bypass flow. The lower bypass flow was needed to address bypass survival and an endangered plan issue. The Flow Inducer coupled with only a 7 cfs bypass flow resulted in substantial improvements in efficiency. We are likely to recommend repeating testing on the best configuration.

Fellows and Lovejoy projects Westinghouse, owner of these sites completed installation of downstream bypass facilities at both sites in Fall 1998. Passage is finally in place 5 years after FWS-NEFO initially raised the passage issue with the FERC.

Gilman The owner of the Gilman project has agreed to construct a downstream fish bypass facility at the project. Designed have been reviewed and accepted.

Sugar River - NH

Lower Village/Lafayette Street Project The smolt mark-and-recapture study was conducted in 1999, using marked White River smolts and using video monitoring and recaptures. Although bypass success was good, due to low river flows and low power generation during the tests FWS has recommended a repeat of the study. To date, the licensee has not responded to our request.

Deerfield River - MA

Deerfield River Project PGE Gen tested the downstream passage facilities at its No. 2, No. 3 and No. 4 stations. Efficiency was, as anticipated, best at No. 3 and worst at No. 2. We have recommended modified facilities at No. 4 Station and PGE Gen is proposing evaluation of a Flow Inducer at No. 2. We also have concerns about survival of smolts that do use the No. 2 bypass, and have asked that changes be made. Survival of smolts using the bypasses at the other stations was good.

Gardners Falls Project Consolidated Edison, new owner of the Gardners Falls Project tested the installed louver/bypass system. Passage efficiency was generally good although we have concerns about survival of smolts using the bypass. Changes in the plunge pool and spill gate have been discussed. Plans for 2000 have not yet been confirmed.

Millers River - MA

FWS-NEFO initiated consultation to have downstream passage measures implemented at the Cresticon and New Home projects on the Millers River. Interim facilities were operated at Cresticon in 1999. We are awaiting designs of permanent facilities from both project owners. However, due to poor survival of stocked fry, we will wait until better stocking sites are identified or improved survival is identified before we force the construction of permanent facilities.

Passumpsic River - VT

CVPS was notified by the FWS of concerns about smolt passage efficiency at their East Barnet Project that had been identified through studies done by Conte Lab. CV has indicated interest in discussing our concerns through they were clearly surprised by our letter.

Wells River - VT

Wells River/Boltonville and Newbury Project - FWS the notified owners of need for passage in September. Site visit planned for early spring.

Williams River - VT

Brockaways Mill dam on the Williams River a long-defunct hydro project has been sold to new investors who intend to redevelop the site. Their plans are for operation beginning in summer 2000. Downstream passage facilities are needed and the owners have not contacted us. FERC has been contacted on this

Hydro Licensing

Holyoke - Connecticut River - MA Discussions with NU/HWP on fish passage are ongoing. NU has suggested various alternative configurations of passage facilities than what was prescribed. Discussions of alternative passage, however, are tied to project operation and bypass flow issues that are also subject to discussions in the context of the state 401 Water Quality Certificate.

15-Mile Falls - Connecticut River - VT/NH Relicensing at 15 Mile Falls is proceeding. The application and Applicant-prepared EA have been filed with FERC. Final Management Plans for fisheries, wildlife, and other resources are being discussed .

The salmon smolt migration study at the project that was undertaken in 1998 will be repeated in 2000. We are expecting a draft study plan soon to review. PGE Gen plans to expand the study to include evaluation of smoltification in study fish and additional study oversight. The draft plan will be distributed to others for review and I will prepare a response to PGE Gen.

Mr. Steve McCormick will monitor the smolts at the White River NFH to ensure that they are smolts.

Woronoco - Westfield River - MA The application for the Woronoco Project was filed and includes FWS and MAFW recommendations for minium bypass flows and fish passage. Following licensing, the interim fish bypass will be evaluated and an eel ladder will be installed.

Knightville - Westfield River - MA Mr. Slater reported that the U.S. Army Corps of Engineers had agreed to release the pool behind the Knightville dam by the first weekend in April beginning in 2001. The decision was based on the Corp's mandates for flood control (not recreation). The White Water Boaters have been notified. The Corps is also still looking at the feasibility of upstream passage at the site.

8. Genetics Subcommittee Update

Mr. Gephard reported that the Genetic Subcommittee will be meeting next week to discuss the domestic broodstock program at the White River NFH and Mr. Ben Letcher's proposal to study rapid evolution of Atlantic salmon smolts. (Some elements of this study have already been implemented including specific fecundity work where all eggs are weighed and enumerated for each spawned sea run.)

9. Other Business

Draft Work Plan - Mr. Slater provided the Technical Committee with a draft Work Plan last Friday. The Technical Committee agreed to follow this template in developing agency contributions. Additionally all items would be included in the CRASC Work Plan even if the items are not addressed. Technical Committee members agreed to get agency Work Plans to the Coordinator by (or before) March 20, 2000.

Fish Requests - The Committee approved two requests for fry: 2,000 egg bank fry from Kensington SSH will be transferred to the White River NFH for broodstock production and 2,000 egg bank fry from Kensington SSH will be provided to Mr. Letcher for research.

The Committee approved a request by Mr. McCormick for 800 of this year's fry as parr in October from the White River NFH assuming the hatchery has enough to spare.

Ms. Margaret Murphy, SUNY, requested 20,000 fry for research on fry dispersal in Lake Ontario. The request was temporarily tabled until Mr. Sprankle can confirm whether surplus fry are available from the Merrimack and/or until the fry allocation meeting.

The fry allocation meeting is scheduled for March 16, 2000 at 9:30 a.m. at the White River NFH.

10. Next Meeting Date

The next Technical Committee meeting is scheduled for June 14, 2000 at 10 a.m. at the Conte Lab.

The meeting was adjourned at 1:00 p.m.

Technical Committee Meeting Attendance

Janice Rowan	USFWS
Steve Gephard	CTDEP/Fisheries
Jay McMenemy	VTFW
Ken Sprankle	NHFG
Steve Roy	USFS
Steve McCormick	USGS/BRD
Adam Goncalves	USFWS
Steve Rideout	USGS/BRD
Caleb Slater	MAFW
Ben Letcher	USGS/BRD
Don Pugh	UMASS
Jon Truebe	Lakeside Engineering
Michelle Babione	USFWS
John Warner	USFWS
Alex Haro	USGS/BRD
Bob Stira	Northeast Utilities Service Company
Lynn DeWald	Normandeau Associates
Ron Huen	Normandeau Associates
Rick Van Nostrand	CTDEP
Ken Simmons	MAFW
Dan Flint	USFWS
Phil Herzig	USFWS
Trish Barbash	USFWS
Tom Jones	VTFW