

**CRASC Technical Committee Meeting Minutes
Turners Falls, Massachusetts
October 9, 2001**

1. Call to Order and Approval of Minutes from the Meeting on June 21, 2001.

Mr. Jay McMenemy, Technical Committee Chair, called the meeting to order at 10:15 a.m.

Mr. John Warner motioned to approve the Minutes from the June 21, 2001 meeting. Mr. Steve Gephard seconded the motion. All approved and the Minutes were accepted as final.

A quorum was present for the meeting although there was no representation from the National Marine Fisheries Service nor the Massachusetts Division of Marine Fisheries.

The agenda was changed, delaying the timing of the Fish Culture Subcommittee Update, to accommodate the CTDEP.

2. Fish Passage Subcommittee Update

Mr. John Warner provided the following summary:

HYDRO LICENSING

Holyoke Project

- The City of Holyoke Gas and Electric Department purchase of the project from Holyoke Water Power is not yet final, but should be finalized soon. The license transfer has been approved by FERC.
- The rubber dam/inflatable flashboard system is being installed. Should be complete by early November. Flows to the bypass reach have had to be reduced during construction to assure that the work got done this fall.
- Tailrace excavation for the west-side entrance is being done now.
- Downstream passage modeling studies done at Alden labs demonstrated that no simple guidance screen would work. Agency and USGS-Conte AFRC staff have met to discuss shortnose sturgeon and are developing a list of possible other approaches to be evaluated by Alden.

Fifteen Mile Falls Project - Connecticut River - NH/VT

- The FERC is expected to issue a license in October or November. Following license issuance, the Settlement Agreement for the project requires PG&E National Energy Group to implement fish passage when they are “notified that a stocking program for Atlantic salmon is implemented upstream from the project.”

FISH PASSAGE ACTIVITIES

Upstream Passage

Turners Falls

- Evaluations of shad passage were undertaken by Northeast Generation Services (NU) and USGS-Conte AFRC (Mr. Alex Haro) again this year.
- Passage efficiency at gatehouse was very low again this year and PIT tag studies did not identify solutions for the problem. Agencies have requested that NU experiment with periodic reduced generation/canal flows as a means of improving gatehouse passage.
- Cabot ladder evaluations indicated that aligning the overflow weirs rather than zig-zagging them did not improve passage. Additional evaluations of the Cabot ladder are planned for 2002.

West Springfield Eelway

The eelway at DSI-West Springfield was completed and has effectively captured upstream migrating eels. Additional similar installations are targeted for the first dams on the Chicopee and Millers rivers. Three eelpass projects were recommended for flex funding at the CTR/LIS Ecosystem Team meeting - two on the Chicopee River and one on the Millers River - along with a riparian habitat restoration (fencing) project in NH and a dam removal/fishway on Yokum Brook in MA. Final funding decisions will be made by the USFWS Regional Office, potentially in November.

Ashuelot River

The owners of the Fiske Mill Project (1st dam), Ashuelot paper project (3rd Dam) and Lower Robertson Project (4th Dam) were notified that with the removal of McGoldrick dam and shad and herring transfers, that upstream passage facilities will be needed at their projects. The USFWS and NHFG have asked for the owners to submit design drawings of proposed facilities.

Downstream Passage

Cavendish - Black River - VT

The bypass with a flow inducer was re-evaluated again this spring. Formal results have still not been received.

Newbury Project - Wells River - VT

The project owner should be installing the bypass structure this fall

New Home and Cresticon projects - Millers River - MA

Downstream passage facilities for salmon smolts should be under construction at these projects this summer/fall.

Dam Removals

Ashuelot River

McGoldrick Dam in Hinsdale (2nd dam on the river) was removed this summer. Winchester Dam (5th dam) is scheduled to come out this winter or next summer. West Swanzey dam (6th dam) still being investigated.

Mr. Michael Parker, MAEOEA, announced that an open house is planned at the DSI fishway on October 20 from 10:00 a.m. - 2:00 p.m. This will mark the official grand opening of the eelpass on the Westfield River. The Westfield River Watershed Association, Massachusetts Executive Office of Environmental Affairs, Massachusetts Division of Fish and Wildlife, and the U.S. Fish and Wildlife Service are involved. The new eelpass was designed by Mr. Haro (USGS-Conte AFRC) and built by CCI out of Connecticut. It cost \$15,000. Volunteers from the Westfield River Watershed Association have been monitoring the trap, counting 700-1,000 eels since the end of August. Over 100 eels were observed yesterday. The eels seem to move on rainy, cloudy nights though current movement may be temperature oriented.

*The Technical Committee agreed that Mr. Warner should draft a letter, on behalf of the CRASC, to PG&E National Energy Group about CRASC plans to stock the upper Connecticut River basin with Atlantic salmon. Such stocking necessitates downstream fish passage at the Fifteen Mile Falls projects. Passage efficiency evaluations are expected to be inherent to this requirement. This notification letter will conform with the Fifteen Mile Falls Settlement Agreement conditions. The draft letter will be reviewed by the CRASC with final signature by the Commission Chair.

*The Technical Committee agreed that Mr. Steve Gephard would draft a Connecticut River Watershed American Eel Management Plan for the CRASC and Technical Committee to review and adopt, establishing the CRASC policy to restore eels to the river.

3. Shad Studies Subcommittee Update

Mr. Caleb Slater noted that the Subcommittee had met on August 14, 2001. Observed shad returns (270,000) in 2001 increased approximately 23% from the 2000 returns and included another record run (4,700) in the Westfield River.

In-basin transfer of shad above the Vernon dam was limited to the 71 shad moved by the CTDEP. Last minute changes in out-of-state transfer requests left the agencies hanging and resulted in inadequate transfers.

The Vernon transfers were implemented in response to the shad passage bottleneck at the Turners Falls dam. The USGS-Conte Anadromous Fish Research Center has been conducting research to improve passage at Cabot and Gatehouse. Results in 2001 were not encouraging. Additional attempts at passage improvements are planned for Turners Falls to boost shad passage.

The NHFG and MAFW worked with the USFWS-Sunderland Office of Fisheries Assistance to re-establish runs of herring in historic habitat. Blueback herring were collected and trucked from the Chicopee River to the Ashuelot and Westfield Rivers. A total of 1,307 herring were moved to the Ashuelot and 800 herring were moved to the Westfield River. Herring were most available in the river during very high flows. The NHFG and USFWS conducted limited evaluation without success on the Ashuelot River. The MAFW did not evaluate the Westfield transfer but plans to have a contractor conduct an evaluation next year through a MAEOEA grant.

* Mr Haro, USGS-Conte AFRC, agreed to provide a copy of his report (on the results of the shad passage work at Turners Falls) to the Coordinator for distribution among Technical Committee members.

*The Technical Committee agreed that the Shad Studies Subcommittee would meet this winter and develop a plan for managing American shad transfers to the upper basin. The Subcommittee should consider how many shad to transfer, where they should be released, when the transfers should be scheduled and the best way to accomplish these objectives. This plan should facilitate scheduling and ensure that adequate numbers of shad are transferred upstream annually.

*The Technical Committee agreed that Mr. Slater would draft a Connecticut River Watershed River Herring Management Plan for the CRASC and Technical Committee to review and adopt, establishing the CRASC policy to restore herring to the river.

4. Fish Culture Subcommittee & Pre-Spawning Meeting Update

Mr. Ken Gillette reported that the Subcommittee had met on July 11, August 31, and September 19, 2001. The Subcommittee developed the following responses to the charges of the Technical Committee:

- a) Feasibility of reconditioning male kelts - The kelt diet is being re-evaluated with changes to the formula expected based on preliminary analysis; Sea-run males will be sampled non-lethally for all fish health assays this year because numbers are so limited.
- b) Study plan for hormone use on sea-run salmon - A plan is in place for use of hormones in sea-run salmon and select kelts at the Whittemore Salmon Station (WSS) and North Attleboro National Fish Hatchery (NANFH)
- c) Assess egg size - Mr. Joe Ravita took a look at the data but could not establish any new trends in egg size.
- d) Evaluate need for changes to disinfection protocol - Existing protocols for water hardening and disinfection of transferred eggs should provide adequate protection against furunculosis.

The Subcommittee developed a spawning plan/schedule to include the use of hormones this fall. Mr. Bill Fletcher, USFWS, and Mr. Steve McCormick, USGS, assisted in developing the planned use of hormones. [A 20 day time-release pellet will be implanted in the dorsal sinus

cavity of all sea runs and a portion of kelts to compress and synchronize the spawning schedule. About 90% of the injected fish are expected to spawn within 10 days of injection. The use of hormones reduces handling and related stress which translates into fish health benefits. A control trial is planned with the domestics at Richard Cronin National Salmon Station (RCNSS) to evaluate any impact of elevated hormones on the incidence of furunculosis. Additionally, sea-run males will not be killed this year. Instead alternative blood and milt sampling will be conducted. Wild parr will be lethally sampled.]

Mr. Mickey Novak reported that a hormone implant practice session was held at the RCNSS on 10/2/2001. The fish suffered no apparent ill effects from the placebo implants other than bruising at the site of inoculation. There are 12 male and 16 female sea runs at the RCNSS and 3 male and 4 female sea runs at the WSS.

Mr. Rocco Cipriano, USGS-Leetown, and the USFWS-NEFC are working together to conduct a controlled hormone use experiment on the outdoor domestics at the RCNSS. Placebo and active hormone implants will be assessed. Changes in immune response, milt production and milt motility will be evaluated in these fish only.

Sea Run Schedule The Richard Cronin NSS will implant sea runs with hormones on 10/10 with spawning on 10/15, 10/19, 10/24; WSS will implant sea runs on 10/12 with spawning on 10/17, 10/22 10/26.

Kelt Schedule Kelts will also receive hormone implants so that those not previously included in the egg bank can be used to augment the small return class this year. WSS will implant kelt on 10/26 and then spawn on 10/31, 11/5, 11/9; The NANFH will implant on 10/24 and spawn on 10/29, 11/2, 11/7. NANFH will ship green eggs to RCNSS.

The egg production projection for this fall is 12.4 million eggs. This is below incubation capacity of 14.1-14.9 million. The Warren SFH will not be used for incubation and there may be no imperative to use the Pittsford NFH given current water supply concerns.

Poor sea-run fry survival in the Farmington River was discussed. This level of survival has not been fully paralleled elsewhere. Reduced survival of 0+ fish has been observed in some Vermont streams followed by good survival of 1+ salmon. Research results have been equivocal. And, hatchery results have demonstrated good sea-run fry survival results.

The CTDEP proposed a sea-run fed-fry program for the WRNFH. Mr. Gillette estimated that this would cost an additional \$1,500 to heat water with nominal cost increases for feed and labor.

The Technical Committee agreed that there is benefit in retaining '98 brood fish at the WRNFH because they represent a larger return year class with greater likelihood of gene variability than a year class like this year or last year. The Committee approved retention of these fish at WRNFH, NANFH and potentially WSS. The price to retain them at WRNFH is reduced capacity to hold new domestic broodstock but this would be limited if NANFH and WSS maintain some of the broodstock. The cost to retain these fish at NANFH and WSS was not available.

*Mr. Lofton agreed to present the proposal to hold '98 domestics at the NANFH to the USFWS-Fisheries for approval.

*The Technical Committee agreed that Mr. Letcher would develop a study plan, including cost estimate and logistics, for consideration by the CRASC to compare the survival of fed verses unfed sea-run fry, possibly involving a calcein mark to distinguish the fish.

*The Technical Committee agreed that Mr. McMenemy and Mr. Gephard would meet at the WRNFH in November and assign family groups to tributaries to enable hatchery personnel to set up an appropriate incubation regime for the marked sea-run and domestic families at the WRNFH.

5. Genetics Subcommittee Update

Mr. Gephard gave a summary of Genetics Subcommittee objectives for this season. The goal is to have a minimum of 50 spawning pairs of salmon. Since we are well below this figure with 40 sea-run returns, the number of available females will be augmented with kelts from WSS and NANFH, and the number of males will be augmented with mature parr. Each female will be crossed with five males to increase the number of phenotypic combinations. The CTDEP has collected 130 parr from Pine Brook and the VTFW has collected 104 parr from the Rock River, to date, for spawning with sea runs. Additionally, use of hormone implants in the sea runs and a portion of kelts is designed to compress and synchronize the spawning schedule, ensuring that all potential crosses of sea runs will be made.

Mr. Letcher plans to continue his studies on West Brook, Farmington and Williams Rivers. Approximately 168,000 sea-run fry are available; 16,000 fry will be retained for broodstock, 138,000 fry will be stocked in the Farmington and Williams Rivers, and 14,000 fry will be stocked in West Brook and three other streams.

*The Technical Committee agreed that the Genetics Subcommittee would develop a plan of action for implementing genetics technology developed by researchers as a management tool, including a graduated time line and proposed budget for anticipated costs in the next several years. The cost of PIT tags in 2002 has already been estimated at about \$10,000.

6. Salmon Studies Update - *McMenemy*

Mr. McMenemy provided an update on various salmon studies:

The PG&E National Energy Group fish passage study results include only four radio-tagged fish in 2001. One of the adults was caught and subsequently released in the White River. Another adult was observed near the #2 dam in the Deerfield River. A third adult spent time in the Green River and is now in the Deerfield River. A fourth adult is presumed dead in the Mill River-Hatfield.

Mr. Bob Stira, Northeast Generation Services, reported that the smolt estimate for the Connecticut River basin above Holyoke is 37,000 smolts, based on the NU/GCC/USFWS mark-recapture study in 2001. He noted that low water between high early and late season flows seems to have increased smolt transit time between the Turners Falls and Holyoke dams. There was no estimate made in 2000 because of high flows. The 1999 estimate is about 64,000 smolts (report to be available in December). Funding to continue the study in 2002 is not firm though Northfield and Turners Falls have interest. It is unknown whether the USFWS and the HG&E will be able to provide funds.

The Holyoke smolt estimate has tracked reasonably with the index site assessment data for the basin and the Farmington River. The data seems to indicate a general decline in smolt return rate since the mid-90s which may point to problems in the lower river or ocean.

7. CRASC Initiative Update

Ms. Janice Rowan provided the following update:

The Senate Judiciary Committee passed the bill (S703) without change. It can now go to the floor of the Senate for a vote.

The House Resources Committee passed the bill by unanimous consent (HR2062) but amended it to decrease appropriation authorization from \$9M to \$5M.

The House Judiciary Committee has referred the bill to the Subcommittee on Commercial and Administrative Law. Since the Resource Committee acted first, the Judiciary Committee had only 30 days from September 12 to act on the bill. Lacking any action, the bill will be passed automatically and become eligible for a vote on the full floor.

The House and Senate will have to conference over the language in the two bills which will likely result in a compromise over the amount of funding authorized.

This action is separate from any funding action or appropriation which remains possible during the DOI budget conference [scheduled for 10/11/01] since Leahy and Gregg are both on the Conference Committee.

8. Other Business - Rowan

Fish and Egg Requests:

Surplus Broodstock Requests

Agency	Number Requested	Number Approved	
		WRNFH '97s	WRNFH '98s
CTDEP	800		800
MAFW	200+	958	
VTFW	200	200	
NANFH	600*		600*
WRNFH	700		700
Request Total	2,500+	1,158	2,100

*Pending USFWS Fisheries Program approval

Approximately 3,258 post-spawning fish will be available from WRNFH.

Fish & Gamete Requests:

Agency	Fish & Gamete Request	Number Approved
USGS-Conte Lab (Letcher)	5,000 eyed domestic eggs to compare differences among stocks in feeding/growth	5,000 eggs
USGS-Conte Lab (McCormick)	4,000 eyed eggs in January 2002 and January 2003 for endocrine disruption study	4,000 eggs
RIFW (Lipsky)	Sea-run milt for one female	Milt from one sea-run male at WSS
USGS-Conte Lab (McCormick)	400 WRNFH smolts in April 2002	400 smolts

Approximately 4,000-4,500 WRNFH smolts will be available for studies and research in 2002. Hydro/fish passage study requests have not been received through the number required is estimated at about 2,000 smolts.

Pre-smolt Vaccinations

Mr. Doug Aloisi reported that the Pittsford NFH would not be ready to hold smolts as planned in the spring of 2002 because the USFWS funding transfer for the water treatment system has been obstructed in the Senate. The options for managing smolts follow:

1. Vaccinate the pre-smolts at WRNFH and transfer to PNFH regardless of the status of the water treatment system project
2. Retain the pre-smolts at WRNFH for full production as smolts
3. Release the pre-smolts as parr

Vaccination is estimated to cost \$6,000 for 100,000 smolts (@1 liter/10,000 fish).

Additional costs including injection equipment and labor are also expected though these may be addressed in-kind if injectors are available and if a crew can be made available to inoculate and fin clip the fish this spring. Vaccination is absolutely essential if the fish are moved to the PNFH. The USFWS has not funded the PNFH nor the WRNFH to address these additional costs.

*The Technical Committee agreed to bring smolt production concern to the attention of the CRASC.

Other Business

Mr. Parker, MAEOEA, suggested that an outreach program is needed to explain CRASC and what CRASC does.

Mr. Gephard indicated that he would be making a presentation for CRASC at the Electric Power Research Institute (EPRI) meeting in Connecticut on November 15-16, 2001. EPRI will review and revise the Connecticut River ecological study originally completed as part of the planning process for the Connecticut Yankee Nuclear Power Plant (second in the nation).

Holyoke Water Power has scheduled a canal shutdown at Holyoke from October 20-27, 2001.

Connecticut River fish return totals, to date, include:

- 40 Atlantic salmon (4 released)
- 281,299 American shad
- 5,514 gizzard shad
- 10,606 blueback herring
- 22 alewife
- 58,993 sea lamprey
- 1,220 striped bass
- 4 shortnose sturgeon

Of the 272,220 American shad that passed Holyoke, only 1,540 shad passed Gatehouse.

Personnel Updates:

The WRNFH is in the process of selecting a Biological Technician.

The RCNSS has completed the paperwork to advertise a Biological Technician position.

The NHFG is interviewing to fill the Biologist position in the Keene office.

The CRASC provided a letter of support to the North Atlantic Salmon Conservation Organization regarding NASCO's International Cooperative Salmon Research Program.

Ms. Rachel Bickel installed an impressive summer-long salmon display at the Brattleboro Food Coop in Brattleboro, Vermont, which included an 130 foot long series of salmon art, the salmon life cycle, and CRASC brochures. The display was in keeping with a Coop policy of displaying nature art on its windows.

9. Selection of Next Year's Technical Committee Meeting Dates

The Technical Committee agreed to wait until the CRASC meeting to establish at least two meeting dates for 2002. It was recommended that the CRASC meet on the same days as scheduled last year [11/15/00, 12/20/00, 3/21/01].

[The CRASC meeting scheduled for October 25, 2001 was cancelled but will be rescheduled.]

The meeting was adjourned at 2:15 pm

Attendance

Janice Rowan	USFWS
Jay McMenemy	VTFW
Steve Gephard	CTDEP
Steve Roy	USFS
Caleb Slater	MAFW
John Warner	USFWS
Duncan McInnes	NHFG
Keith Nislow	USFS
Larry Lofton	USFWS
Joe Ravita	CTDEP
Doug Aloisi	USFWS
Ken Gillette	USFWS
Ben Letcher	USGS
Christine Lipsky	RIFW
Bruce Williams	USACOE
Michael Parker	MAEOEA
Mickey Novak	USFWS
Alex Haro	USGS
Bob Stira	Northeast Generation Services
Tom Menard	MA Public - CRASC
Ben Rizzo	USFWS
Jon Truebe	Lakeside Engineering
Darleen Cutting	USFWS
Adam Gorlick	Associated Press
Warren Fisher	Volunteer NH/VT
Rosemarie Fisher	Volunteer NH/VT
Stephen D. McCormick	USGS