

**Minutes of CRASC Technical Committee Meeting  
June 14, 2000  
Conte Anadromous Fish Research Center  
Turners Falls, Massachusetts**

**Agenda Items**

**1. Call to Order and Approval of Minutes from the Meeting on February 2, 2000**

Chair Jay McMenemy, Technical Committee Chair, called the meeting to order at about 10:20 a.m.

Mr. John Warner motioned to approve the Minutes from the last meeting, Mr. Ken Sprankle seconded the motion. The minutes were approved with one exception. A change was made to the second to last paragraph in the Shad Studies Subcommittee Update: The Subcommittee agreed to ask CRASC to write letters of support to Congressionals for additional funding at the Sunderland OFA.

**2. CRASC Annual Work Plan and Accomplishment Report**

Ms. Janice Rowan reported that she and Mr. Duncan McInnes would be working on the Plan and providing an update shortly.

**3. Shad Studies Subcommittee Update**

Mr. Ken Sprankle reported the shad transfer numbers from Holyoke as of June 13, 2000:

<b>Agency</b>	<b>In-Basin</b>	<b>Out-of-Basin</b>	<b>Mitigation</b>	<b>Agency Totals</b>
CTDEP	157	291		448
MAMF		137		137
NHFG - Inland	960			960
NHFG - Marine		1068		1068
Research - Conte	80			80
MEDMR		120	1000	1120
Transfer Totals	1197	1616	1000	3813

The total number of shad transferred to date is 3,813 shad, well below the target cap of 5,000 shad.

An additional 864 blueback herring were captured below Holyoke and released upstream of Keene, NH, in the Ashuelot River.

The ASMFC Shad Fishery Management Plan is still operating under the recently adopted Amendment 1. Recently, the State of South Carolina was found out of compliance with the 10 fish recreational creel limit. All other states have been in compliance and are conducting necessary work including creel studies and commercial fishery sampling/reporting programs.

The Shad Studies Subcommittee will address potential for automated scale readers and a scope of work for use in funding proposals at a meeting to be scheduled in July or August.

#### **4. Smolt Advisory Committee Update**

Mr. Doug Aloisi reported that about 48,000 2 year old smolts were successfully stocked this spring, about half the smolts were stocked in the Farmington River and the other half were stocked below the Holyoke dam in the mainstem Connecticut River. Some of the fish were held in the Rainbow holding pools and sampled for furunculosis. A number tested positive using kidney samples. Fewer of those released and recaptured tested positive.

The 1+ parr at Pittsford NFH suffered losses and were treated with oxytetracycline in late April. Water temperatures at the time were perhaps too low for the drug to have any effect. The fish are being treated again now that the water temperatures have increased. Those parr that have begun smoltification as one year olds appear to be suffering the highest mortality which is still continuing in the larger fish, and may be expected to continue at some level throughout the summer. Total mortality is about 10,000 fish, with 50,000 1+ parr remaining.

The fry had a hard time feeding initially because of up and down water temperatures and were switched from starter feed to brine shrimp in May. Concerns about exposure to furunculosis prompted an early immersion vaccine. This was followed by the mortality of about 50,000 fry in a five day period. Results from samples indicated a broad spectrum of bacteria but no final conclusion has been made to explain the loss. The fry have been returned to heated water and given a salt treatment. Mortality is down. The fry are on feed. About 65,000 fry remain. Additional losses are expected from predators when these fish are moved to the uncovered, outdoor raceways.

Mr. Ben Letcher reported that the predator tag study was not conducted. Instead, a few smolts and predators were tagged in the lab to improve the tag design, battery size, and operation. Next year, the tags will be made and tested with smaller batteries.

#### **5. Fish Culture Subcommittee Update**

Mr. Ken Gillette reported that the Subcommittee met on February 8, 2000. The Meeting Minutes are attached.

The Subcommittee also met to evaluate the egg incubation potential at the Warren State Fish Hatchery. The Subcommittee recommended discontinuing egg incubation at the Warren hatchery until such time as improvements can be made to protect fish health (Meeting Minutes attached).

There was some discussion about the incubation capacity at the White River NFH. Staff and funding are at issue in managing increased numbers of eggs and conducting DNA research. Gillette estimated that the hatchery would need 2 to 3 additional staff in 2001 for up to 6 months each to meet the increased work load given the expected vacancy of the Assistant Manager. The conclusion of the U.S. Fish and Wildlife Service (Service) is that the facility can only maintain 8 million eggs in 2001 (3M less than in 2000) since there are no additional funds for new staff and further budget reductions are anticipated in the coming year. This reduction, combined with the loss of Warren as an incubation site jeopardizes the Commission's production goal.

Chair McMenemy pointed out that the Commission had sent a letter of support (attached) to Federal Congressmen and Senators on behalf of the Service. The Technical Committee recommended that another letter requesting USGS provide staff to the White River NFH to support the genetic research project. The Coordinator was charged with drafting this letter for signature by the Chair of the Commission.

## **6. Salmon Studies Update**

Chair McMenemy reported that PG&E/Normandeau Associates had radio-tagged and released ten salmon above the Holyoke dam. Nine of the fish were also outfitted with temperature tags. The temperature tags have a long life span but must be recovered to collect data. An effort will be made to locate morts and capture the adults, after spawning, to retrieve the tags.

Two of the radio-tagged salmon have passed Vernon, one passed Bellows, another dropped below Holyoke and was trapped at DSI on the Westfield River. The Westfield fish was taken to the Richard Cronin NSS and later transported and released above the Knightville dam.

One untagged salmon is thought to have escaped Holyoke. This fish has apparently passed the Vernon dam and, if possible, will be captured at the Townshend trap on the West River and then returned to the Richard Cronin NSS for spawning in the fall. Otherwise, the Chair recommended that one fish be added to the total returns for salmon at the end of the year.

Mr. Bob Stira reported that the Smolt Estimate Study was unlikely to reveal a good smolt outmigration estimate this year. Only ten of 666 marked smolts have been recaptured at the Holyoke sampler. Mr. Stira guessed that the majority of smolts had emigrated during high flows when the Cabot sampler was not operating.

Mr. Stira also reported that the Kevlar net deployed at the Northfield Mountain Pumped Storage Facility is deteriorating. He said that the company plans to replace the net and reinforce the flotation system before next season.

Ms. Rowan reported that the sea lamprey population assessment at Holyoke is ongoing. Fewer lamprey than expected have been captured and very few recaptures have been observed.

Mr. Stira asked the Technical Committee to consider what precautions are planned for the S.O. Conte Anadromous Fish Research Center to prevent the escape of lab specimens including endangered species and in particular shortnose sturgeon which are not known upstream of the Turners Falls dam. The concern has been prompted by the lab which has requested a hydro connection to the canal for sturgeon fishway research.

## **7. Fish Passage Subcommittee Update**

Mr. Alex Haro reported on the smolt acoustic tag study and the Turners Falls fishway evaluation. Preliminary results in the acoustic tag study show that about 16% of the smolts released in Northfield have made it to the estuary at Elys Wharf, whereas 40% of the smolts released below Holyoke have been observed in the estuary.

Preliminary results in the fishway evaluation reveal 20% shad passage efficiency at Cabot and 13% at Spillway. The new weir configurations are passing fish. The shad pass up to three weirs before resting. There does not seem to be any passage impacts when the ladder is operated with a 6 inch verses a 12 inch differential. One of the observed shad at Holyoke is known to be a repeat spawner.

Ms. Rowan noted that the CRASC had sent a letter of support (attached) to Federal Congressmen and Senators on behalf of the U.S. Army Corps of Engineers requesting support for fishway construction at the Knightville dam on the Westfield River.

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

### **HYDRO LICENSING**

#### ***Holyoke Project***

- License issued in August 1999 to Holyoke Water Power Company (Northeast Utilities).
- Appeals of license and state 401 Water Quality Certificate are ongoing.
- Negotiations between HWP and Mass DEP on 401 have been ongoing and are likely to reach settlement on 401 disputes that will involve both minimum flow releases and fish passage.
- Negotiations with FWS and NMFS will be needed to modify fishway prescriptions

#### ***Fifteen Mile Falls Project - Connecticut River - NH/VT***

- Smolt radio-tagging study was conducted this spring.
- Initial smolt releases were reported to pass downstream under very high flows
- After subsequent releases there were over 60 fish above Moore and some above Comerford.
- Initial review of results suggest good downstream movement but no passage.

## **FISH PASSAGE ACTIVITIES**

### **Upstream Passage**

#### ***Turners Falls***

- Evaluations of shad passage are being undertaken again this year by NU and Conte - Alex Haro. Focus is on evaluations of experimental modifications made to the Cabot fishway.
- Some problems were noted at Turners Falls:
  - the “flip lip” on Cabot bypass discharge was not installed before smolt season and later high flows resulted in shutdown of Cabot bypass and sampler
  - the head differential at the Cabot Ladder entrance was debated and modified
  - debris clogged the spillway ladder
  - the pit tag reader at one of the Cabot Ladder entrance gates was damaged
- Passage totals at Cabot have been a concern. Gatehouse passage count of only 905 accounts for only 8% of Cabot and Spillway totals, and is less than ½ of the Spillway total of 2,105 shad. Ben Rizzo, Bob Stira and Alex Haro inspected the fishways yesterday. The flumes and flow field between the spillway ladder and gatehouse ladder were inspected with no apparent problems noted. Possible reasons for poor passage could be that shad coming up the spillway ladder are exiting the gatehouse entrance back into the canal, the counts are incorrect, or shad are passing at night.

### **Downstream Passage**

#### ***Deerfield #2, #3, #4 - Deerfield River - MA***

Smolt bypass effectiveness studies were repeated this spring targeted at testing modifications made at #2 and #4. Anticipate disappointing results at #2 based on visual observations. Preliminary results not yet reviewed.

#### ***Gardners Falls - Deerfield River - MA***

Smolt bypass effectiveness studies were repeated this spring after modifications to the louver array and gate were made. Initial results were not as good as hoped but reportedly were better after the bypass spill was increased. Plunge pool modifications were tested - no results reported yet. Preliminary results received but not yet reviewed.

#### ***Cavendish - Black River - VT***

Bypass with flow inducer was re-evaluated this spring and bypass survival was tested. Results not yet received but survival of smolts using the bypass was reportedly far better than in past assessments.

#### ***Wells River/Boltonville and Newbury Project - Wells River - VT***

Service notified owners of need for passage in September. Site visit planned for late November did not materialize. Needs to be scheduled.

### **Other News**

- The new owners of the Brockaways Mill dam on the Williams River a long-defunct hydro project have agreed to install a screen and bypass structure on the project prior to turbine start-up. Curt Orvis and I will be inspecting the site tomorrow.

- International paper is in the process of selling their Turners Falls Project (in the old IP paper Mill on the canal). IP has run the project under an agreement with NU to forego generation in return for payments. The new owners indicated that NU will exercise their option to abandon the agreement. That could mean continuous operations at IP in the future. Ben Rizzo, Curt Orvis and I met with project owners to discuss concerns about downstream passage (entrainment) and upstream passage (false attraction). The major concern is false attraction of upstream migrants. Substantial tailrace modifications would, at a minimum be needed.

## **8. Genetics Subcommittee Update**

Mr. Letcher discussed results of research on salmon families stocked into the West Brook. Initial results show that 81% of the salmon sampled in the study site are from the six families released in the site. The remainder were fish stocked outside the study site. Individual family differences have been observed in weight suggesting a genetic component in growth variation that remains true in the hatchery and the wild. Additional information will be collected on the affect of the environment on genetic expression to determine if these family growth patterns hold up when the families are stocked in different rivers.

Mr. Letcher proposed to expand this work to include Maine and aquaculture salmon. The National Marine Fisheries Service (NMFS) has agreed to fund the research. The objective of this expansion is to better understand the meaning or expression of differences in genetic variability. The Technical Committee agreed that the proposal is very interesting and recommended that Mr. Letcher speak with fish health professionals at the Lamar Fish Health Unit to determine whether disease issues can be resolved. Alternatively, it was suggested that the research take place in Maine where some of the disease and stock issues may be less problematic.

## **9. Other Business**

Ms. Rowan reported that, as of this morning, migratory fish counts documented in the river include: 215,004 shad, 57 salmon, 9,570 blueback herring, 34, 597 gizzard shad, 14, 241 lamprey, and 144 striped bass. Shad and herring returns are up compared to last year, while salmon, lamprey and stripers are down. The gizzard shad numbers are close to last year's figure. Salmon are still trickling in as the water remains high and cold throughout the basin. Boards haven't been fully installed at Holyoke all season which is an event that usually drives up the counts at that fishway. [Returns to date are also down on the Merrimack River (26), Pawcatuck River (1), and Penobscot River (150), and, reportedly in a number of Canadian rivers as well.]

Ms. Rowan announced a working group meeting on June 28 at the White River NFH to discuss options for managing sea-run salmon incubation given fish health concerns.

The USEPA has announced intentions to develop standards and guidelines for the discharge of pollutants from aquaculture facilities. The focus is on nutrients but may also consider pathogens, antibiotics, and other chemicals. The process is expected to lead to new regulations by 2004. More information is available from Mr. Mike Clipper at 202/260-1278.

Chair McMenemy noted that VTFW had stocked about 2.7 million fry, Mr. Sprinkle reported that NHFG had stocked about 1.7M fry and Mr. Caleb Slater reported that MAFW had stocked about 2.1M fry this year. Final totals will be reported when the data is received and entered into the database.

Ms. Rowan and Mr. Steve Gephard, CTDEP, attended the U.S. Section to the North Atlantic Salmon Conservation Organization (NASCO) meeting in Gloucester, MA, in May. Mr. Gephard went on to attend the NASCO meeting earlier this month in Canada. The pre-fishery abundance estimates for North American stocks were abysmal for this return year with some improvement projected for next year. The ICES report is available on the Internet at: [www.ices.dk/reports/acfm/2000/wgnas](http://www.ices.dk/reports/acfm/2000/wgnas). Negotiated quotas expire this year leading to concerns that the Faroese fisheries will be reinitiated in 2001.

The Connecticut River Watershed Council is holding a Source-to-the-Sea River Cleanup on October 7. They are seeking volunteers and group sponsors. Interested parties should contact Ms. Peg McDonough at 413/529-9500.

The NMFS has requested that the USEPA assist the CRASC in identifying the significance of salmon habitat in the Mascoma River/Great Brook Complex because of combined sewage overflows in these streams and in the mainstem Connecticut River in New Hampshire.

#### **10. Next Meeting Date**

The next Technical Committee meeting is scheduled for September 20, 2000 at 10 a.m. at the Conte Lab.

The meeting was adjourned at 12:15 p.m.

### Technical Committee Meeting Attendance

Janice Rowan	USFWS
Jay McMenemy	VTFW
Ken Sprankle	NHFG
Adam Goncalves	USFWS
Caleb Slater	MAFW
Ben Letcher	USGS/BRD
Jon Truebe	Lakeside Engineering
Michelle Babione	USFWS
John Warner	USFWS
Alex Haro	USGS/BRD
Bob Stira	Northeast Utilities Service Company
Phil Herzig	USFWS
Doug Aloisi	USFWS
Ken Gillette	USFWS
Curt Orvis	USFWS
Darren Desmarais	USFWS
Rose Fisher	
Warren Fisher	