

**CRASC Technical Committee
Meeting Minutes
June 28, 2006**

1. Call to Order and Approval of Minutes from the Meeting

Chair Caleb Slater called the meeting to order just after 10:00 am and adjourned at 1 pm.

Members of the Technical Committee reviewed the Minutes from the January 26, 2006 meeting. Mr. Steve Gephard motioned to approve the Minutes. Mr. Jay McMenemy seconded the motion and the Minutes were approved.

2. Fish Culture Subcommittee Update

Mr. Mickey Novak updated the Committee on fish culture activities:

- Preliminary information estimated fry stocking for the basin at about 6 million fry with the White River NFH producing about 3.9 million fry and the Pittsford NFH producing about 95,000 fry; The Coordinator's office has not yet received and entered data from all of the states. The spring rains impacted stocking in Connecticut and southern New Hampshire and Vermont, delaying release of some fry.
- The Pittsford NFH also produced about 74,000 smolts, half of which were released in the Farmington River and the remainder released in the mainstem Connecticut River in MA.
- A total of 199 sea-run Atlantic salmon have been documented back to the Connecticut River so far this season; 183 of these sea runs are currently being held at the Richard Cronin NSS; these include 35 grilse and 45 smolt-origin adults; many of the fish are in rough shape and 1 grilse has already died; the run is still going with more returns expected.
- Two grilse were trapped at Vernon and transported to the Richard Cronin NSS.
- One sea run was released upstream of the West Springfield (DSI) fishway and another escaped the trap and moved upstream; Every 10th fish is slated for release, a practice that grew out of the research the Don Pugh conducted in the 1990s. These releases and natural spawning in the river generated a great deal of interest and support; The releases are in the strategic plan and in line with the agreement that exists at the Holyoke dam where releases were made even before radio-tagging studies facilitated tracking; It was generally agreed that releases should be female if that can be determined and size should be limited to 2 sea-winter salmon.
- Normandeau Associates are again radio-tagging adults captured at Holyoke; they have tagged 14 sea runs. One of these was recaptured at Holyoke on June 24. Staff tempered the water and re-released the fish in Hatfield. It was agreed that if any fish accidentally flops on the ground before or after tagging, it will be sent to the Richard Cronin NSS rather than released. Additionally if a radio-tagged salmon is recaptured at West Springfield (DSI), the fish will be taken to the Richard Cronin NSS unless it is the 10th fish which would then be released above Knightville.
- A total of 400 domestic brood stock were transferred from the White River NFH to the Richard Cronin NSS in early spring. They are part of a USGS/UMASS study comparing antibiotics in an attempt to identify an effective replacement for oxolinic acid. The study compares the use of no antibiotic, oxolinic acid, florfenicol and oxytetracycline.

- Henry Bouchard is managing both the Pittsford and Berkshire hatcheries now. Berkshire is currently holding 18,000 feeding Atlantic salmon fry.
- The Holyoke fishlift will be operating through November this year in order to pass sturgeon and resident species.
- The White River NFH expects to PIT tag 3,600 of the 2005 brood stock. To do this, they will need 1,500 more tags at \$3.30/tag. Total cost is expected to be about \$5,000. The USFS may be able to help with this purchase.
- Migratory fish returns to date include 155,862 American shad, 199 Atlantic salmon, 21 blueback herring, 1,698 American eels, 19,013 sea lamprey, 100 striped bass and 1 shortnose sturgeon.
- Over 779 salmon have returned to the Penobscot River and a million alewife have returned to the Union River.
- The Merrimack River fishways have been out of business most of the season due to the rains/flows. Staff have electroshocked over 70 salmon downstream of the fishway.

Discussion

Mr. Gephard reported that there is one confirmed angler kill of a salmon on the Salmon River. The fish had made it upstream of the Leesville dam in high water. The angler submitted a photo of his catch as a record brown trout then ate the proof. This fish needs to be added to the returns count in the “other” category.

A number of suggestions were made to improve the daily Returns Report:

- Under the Vernon salmon returns use the terms captured and passed instead of recaptured and released
- Refer to the DSI fishway as the West Springfield Project
- Delete references to life stage of American eels and lump all of the reported returns under American eel

Mr. Slater reported that the West Springfield eelpass had passed 1,700 eels in one month – more than the total passed in the last five years combined. He attributed this success to new Canadian substrate that was installed last year.

Mr. Gephard noted that there were very few blueback herring observed in the river and that the run is over. He suspects that the few that are here did not straying far from the head of tide. None were captured from CT tributaries for genetics sampling. They were also mostly absent from coastal tributaries.

Mr. Larry Lofton reported that the entire 2003 kelt year class (21 females and 3 males) was lost on June 1, 2006 in an accident at the North Attleboro NFH wherein the pool stand pipe was not replaced. The action that resulted in the loss was contrary to station protocols. This represents a loss of 175,000 green eggs. Mr. Gephard expressed disappointment and urged the USFWS to redouble their efforts to prevent such losses because this is a true loss to the program.

3. Genetics Subcommittee Update

Ms. Kitty Griswold provided an update on sample status at the lab:

- Last fall it was discovered that older DNA samples that had been stored in ethanol had degraded. Minor changes in protocol have permitted continued success in analyzing samples and in the

future samples will be stored in a sub-zero freezer.

- The 2004 smolts have been genotyped for grand-parentage assignment with error checking and results expected by the end of summer.
- A study looking at fry dispersal after stocking in the Sawmill River and West Brook will be completed with results available at the end of August.
- The lab facilitated DNA sampling at Holyoke this spring, by providing Brian Adams and his crew from GCC with collection tools for DNA sampling.
- Funding proposals have been submitted to facilitate continued DNA analysis but currently only one SPP proposal for blueback herring genetics looks likely.
- Because of funding limits, Ms. Griswold has been working a $\frac{3}{4}$ time schedule and will reduce to $\frac{1}{2}$ time in July.

4. Salmon Studies Update

Mr. McMenemy gave the following update:

- Normandeau Associates have tagged and released 14 salmon above the Holyoke dam as part of the Deerfield River study. Three salmon are in the Deerfield River, 1 salmon is in the Mill River- Hatfield, three fish made it to Cabot and then dropped below the mouth of the Deerfield River and three fish have passed the Vernon fishway. One of these is at Bellows and another is in the West River. Two fish have not yet made it to the first monitor at the mouth of the Deerfield River. And one more fish has not been monitored at all.
- Northeast Generation Services, Greenfield Community College and the U.S. Fish and Wildlife Service assessed smolt emigration as in past years. Although 1,163 smolts were marked at Cabot, only 9 of the marked fish were recaptured at Holyoke. High flows that shut down the sampler for 2 weeks interfered during the peak of the run.

Mr. Steve McCormick provided a briefing on the results of a field and lab study that addressed salmon smolt response to acid and aluminum:

- Low pH and high labile aluminum interact to cause mortality and negative physiological impacts on Atlantic salmon smolts.
- These results were observed in Mid and Upper Ball Mountain Brooks but not in other tested streams.
- Fry and parr do not appear to be impacted to the level of mortality. In fact, VTFW has noted good survival and growth in these streams. This prompted some discussion on the possibility of recovery through more buffered waters during emigration.
- Future studies are planned: (1) Deploy 60 samplers in streams throughout New England to survey for labile aluminum and use this data to develop a predictive model; (2) A field comparison using PIT tagged fish in a buffered vs. not buffered sections of the Ball Mountain Brook system; and, (3) Recovery study to see how long recovery takes, how long it takes to flush aluminum from the gills and how that is related to water quality.

Discussion

Assistance is requested from the biologists in identifying prime locations for deploying the samplers and help cabling the samplers in various locations.

There is an opportunity to tie the genetic marking and production program to this study since that work is already addressing some aspects of survival and productivity.

Swim performance may be a factor if it is impacted during recovery, making emigrating smolts more vulnerable to predation.

Sub lethal toxicity may be a factor if fish are exposed but do not die. This might be tied to conditions that have more rarely resulted in massive mortality in incubators as happened at the North Attleboro NFH once falling a late spring snowfall and quick snow melt.

5. Fish Passage Subcommittee Update

Mr. John Warner provided the following updates:

Holyoke – Connecticut River

- Fish Passage Season going well
- New crowder system at shad transport system working well
- Operation protocol with HGE on shad trucking seems to be working
- New Salmon hoist system to tank a big improvement
- Downstream passage investigations ongoing

Turners Falls – Connecticut River

- Plans for new Gatehouse entrance are in revision
- Construction set for 2007
- Project being sold – new owner to be determined

Discussion

Once the shad can pass upstream, some thought needs to be given about how to get them back downstream without delays in the forebay.

Construction of a new lift at Cabot has been discussed for 2008. However, Northeast Generation Services has not initiated design because of the pending sale. In order not to lose too much momentum, it would be prudent to get the history of this idea, including current owner recognition that a lift is a solution and something that needs to be built at Cabot, in a letter to FERC. Letters might be sent by the USFWS, MDFW and/or CRASC.

Vernon – Connecticut River

- New higher capacity units being installed to replace old units
- TransCanada agreed to Downstream passage effectiveness testing (and we need to consider looking at upstream passage afterward also to make sure that it is not impacted)
- TransCanda will double shift labor to avoid excavation noise impacts to Spring 2007 fish passage

Fifteen Mile Falls – Connecticut River

- Moore bypass sampler was modified and tested [55% effective on hatchery smolts]

- Modifications appear to have improved passage effectiveness, though smolts are still moving through the project which is very late
- Cause of late passage could be natural/temps or passage inefficiencies

Discussion

The current protocol is to trap smolts at the Moore facility then transport them downstream below McIndoes, bypassing passage issues at Commerford. TransCanada understands that the passage issue has not been adequately addressed.

Fiske Mill - Ashuelot River

- FERC approved Denil ladder design and have given construction go-ahead
- Construction should start soon

West Swanzey/Homestead Woolen Mill Dam – Ashuelot River

- Town refused to take ownership of dam to save it
- Owner actively pursuing removal
- Some historic issues and structural integrity of historic covered bridge still being worked on
- Removal targeted for 2007

Discussion

Downstream passage at the Brockways Mills on the Williams River is to be built this summer.

Downstream passage improvement (blasting ledge below the bypass) is planned for the Slack Dam on the Black River.

Smolt passage issues that were observed in 2005 at the West Springfield (DSI) fishway were not repeated this year. Changing the location of the trash boom resolved the problem.

The USFWS funded 2 projects in 2006: One (\$50,000) will address two culverts on Bronson Brook in Worthington, MA. This project will also include some habitat restoration. Another project provides \$5,000 in funding for the removal of the East Burke dam in VT.

The Nature Conservancy is moving forward on the Ashuelot River Continuity Study, training volunteers to assess stream crossings so that obstructions can be strategically addressed.

The Nature Conservancy is also working on a proposal with the Silvio Conte National Fish and Wildlife Refuge to establish refuge property in Richmond and Winchester, NH in the Roaring Brook watershed.

It looks like the New Home dam eelpass on the Millers River in Orange, MA will be built in the next month or so potentially permitting some eel passage monitoring this season.

6. Shad Studies Subcommittee Update

Mr. Slater provided the following updates:

- Construction of a new entrance at the Turners Falls gatehouse is planned for 2007.

- No progress has been made on developing an improved shad population model. This project requires additional funding before it can go any further.
- Striper anglers are now using shad for bait though this is illegal in MA. The MDFW is making changes to the regulations to further clarify this and assist enforcement. Shad are not legal for bait fish in CT either.
- Justin Davis, UCONN graduate student, has been conducting research into shad, herring, and striped bass interactions. His work has clearly documented that stripers are preying on shad.
- Shad transfers were challenged by too many fish in the lifts which impacted mortality and by three weeks of lift closures this spring. To date, we know that NHFG hauled 323 shad to the Ashuelot River, the USFWS hauled 283 shad to the mainstem, the CTDEP hauled 58 shad to the mainstem and another 333 to the Eightmile, Little, Naugatuck, Quinnipiac and Farmington Rivers. We do not have final numbers from the USGS Conte Anadromous Fish Research Center. The Maine Department of Marine Resources also hauled shad but we do not have the numbers yet. The hauling season is over with only about 200 shad passing daily now.
- Sixty Connecticut River shad were tested for fish health certification in case any could be moved to the Nashua NFH. Results are expected shortly.

Discussion

Mr. Gephard requested 1,000 YOY juvenile American shad from the Holyoke sampler once it was established that they could easily be collected there. The sampler will operate two days/week on Monday and Wednesday from mid-day through evening. The shad will be used to evaluate downstream fish passage on the Shetucket River. The Committee approved the request.

Mr. Lofton reported that they were electroshocking shad on the Merrimack River since the fishways have been ineffective this spring. They have successfully captured enough adult shad to have 300,000 feeding fry and 1-2 million eggs incubating at the Nashua NFH. These fry will be released in the Merrimack River. Additional adults are being held in tanks at the dam. These adults were injected with hormones to encourage spawning and the eggs will be filtered out of the tank water. These eggs will be hatched at the North Attleboro NFH with a goal of stocking 3 million shad fry into the Charles River. Fish health results are pending completed analysis.

Mr. Gabe Gries commented on the Vermont Yankee permit. The conditions provided a window for passage in the spring. The permit was appealed by several groups and once that happened VT Yankee stepped in and appealed the permit as well.

7. New England Joint Ventures

Mr. Slater reported that the State Directors met at the NHFG headquarters on May 22, 2006. They have requested a list of well-developed research needs from the U.S. Atlantic Salmon Assessment Committee by August; They will meet again in NH on August 25, 2006.

Mr. Gephard provided a summary of the highlights of the most recent NASCO meeting:

- The West Greenland catch was again limited to a subsistence fishery (~20 metric tons)
- All parties agreed to a three-year regulatory measure for West Greenland since the prefishery abundance is expected to remain low for the next three years thus predicting a zero catch for technical advice – this will save time for looking at other issues
- NASCO agreed to allow greater participation from NGOs

- NASCO will continue to pursue international research and cooperation
- The U.S. Atlantic Salmon Assessment Committee will likely be requested to complete some work on how various agreements will be implemented by the U.S. with a November due date on this assignment

8. Status of Hiring and Budgets at State and Federal Facilities

- MDFW currently has three seasonals who have stocked fry and monitored fish passage at DSI, and they will be conducting index site assessments; The Roger Reed SFH is fully staffed and has expanded incubation capacity to two million eggs so that it will no longer be necessary to transfer eggs to the White River NFH for incubation
- VTFW recently filled district biologist vacancies at the Roxbury and St. Johnsbury offices
- NHFG funded fishway monitoring at Vernon and Bellows using the last of the 2004 CRASC Congressional add
- CTDEP has the same staffing level but has been dealing with unexpected equipment and facility break downs this year
- USFS has the same level of staffing and expects to be level funded next year
- The Connecticut River Coordinator's Office currently has one SCA intern, Sean Krueger, and no funding currently available for a seasonal next year
- The Richard Cronin NSS hired Darren Desmarais to fill a permanent full time biologist position last April
- The White River NFH just hired Dan Wong (from NANFH) to fill a senior biologist position
- Henry Bouchard was promoted to Project Leader of the Pittsford NFH. The station has one SCA intern as of June 12 and 1 vacancy
- The House mark was okay for hatcheries and showed an increase for fish passage as well as the National Fish Habitat Initiative; The Senate is likely to look at its budget recommendations shortly and this will provide a better idea of what the USFWS Fisheries budget may look like in 2007
- Steve Garabedian was introduced as the new Director of the Conte Anadromous Fish Research Center; He said that he expects a flat budget and added that he is participating in a five-year strategic review at Leetown

9. Other Business

- The USEPA has completed the Connecticut River Fish Tissue Contaminant Study (2000) with a report due out very soon.
- The Vermont Institute of Natural Science has announced that it will no longer support community education programs like the salmon-in-the schools program in NH and VT. Consequently, the Coordinator is working with folks from the CRSA, SVNHM, NHFG, and the hatcheries to ensure that the educational program will continue without interruption.
- The SO Conte National Fish and Wildlife Refuge has developed the annual schedule for pulling water chestnut in CT and MA starting in July. They are looking for volunteer assistance.
- Mr. Haro provided an on-site demonstration of the pilot Salmonsoft automated fish counting system at Cabot fishway. This study was funded by Northeast Generation Services and the USFWS. The demonstration was impressive generating interest in use of the system elsewhere in the basin.

ATTENDANCE

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| Janice Rowan | USFWS |
| Caleb Slater | MDFW |
| Jay McMenemy | VTFW |
| Steve Roy | USFS |
| Steve Gephard | CTDEP |
| Steve McCormick | USGS |
| Brian Adams | GCC |
| Steve Rideout | Citizen |
| Ted Castro-Santos | USGS |
| Kitty Griswold | USGS |
| Sean Kruger | SCA |
| Krystal Oldread | Volunteer |
| Mickey Novak | USFWS |
| Henry Bouchard | USFWS |
| Dan Marchant | MDFW |
| Warren Fisher | Volunteer |
| Tim Wildman | CTDEP |
| Bill Archambault | USFWS |
| Darleen Cutting | USFWS |
| Gabe Gries | NHFG |
| John Warner | USFWS |
| Larry Lofton | USFWS |
| Steve Garabedian | USGS |
| Alex Haro | USGS |

