Connecticut River Atlantic Salmon Commission
Turners Falls, Massachusetts
Meeting Minutes
July 10, 2012

Agenda Items:

1. Determination of Quorum, Approval of Today's Agenda & Minutes of the November 10, 2011 Meeting.

Chair Mr. Bill Hyatt called the meeting to order at 10:10 a.m. and adjourned at 12:15 p.m.

Mr. Hyatt opened the meeting, and the Commissioners introduce themselves followed by the general audience.

No changes to the agenda were made, and the minutes of the last CRASC meeting on November 10, 2011 were reviewed. A motion to accept the minutes from that meeting was made by Mr. Jones, seconded Mr. Palmer, all were in favor.

2. Report of the Executive Assistant

Mr. Sprankle provided a handout and reviewed his report, refer to attachment for details. Highlights of the report include a review of basin facility fishway and trap counts for 2012 to this date. It was noted that passage count totals for American shad were up dramatically compared to the recent years (500,900), Atlantic salmon facility counts were at low levels (50) documented, blueback herring counts at Holyoke remain very low, and sea lamprey counts at Holyoke were very low, although within the range of normal variation. It was noted that the 10,295 American shad counted on the Westfield River was a record, doubling 2011 (also a record year). He noted that Holyoke Fish Lift had the fifth highest shad passage count in its time series (490,431). It was noted that Vernon Dam ladder, following study telemetry by Conte Lab with funding from TransCanada and inspections work by Conte and USFWS staff, resulted in ladder fixes prior to 2012 season. Over 10,000 shad have passed this year compared with 46 in 2011.

Mr. Sprankle continued with updates on regional fish passage updates from the Northeast which generally indicate continued low counts for many anadromous fish species where monitoring is in place. United States Atlantic salmon return numbers were reviewed also and were also substantially reduced from 2011 numbers at this time. A summary of fish count data for select species was reviewed in figures with river discharge, turbidity and water temperature figures also reviewed for 2011 and 2012. The spring of 2012 was noted as having extremely low flows in early spring and greatly elevated temperatures, before "normalizing' for the month of May.

Mr. Sprankle reviewed the American shad Movement and Survival study (year 2) undertaken by USGS Conte Lab (Dr. Castro-Santos) and his office, begun in 2011 with funding support in year 2 (National Fish and Wildlife Foundation Grant, USFWS Grant, TransCanada, FirstLight Power) and in partnership with Holyoke Gas and Electric as well. A total of 16 receivers were set up downstream of Turners Falls Dam, 5 new sites between Holyoke and TF. The TF Canal System had the standard extensive telemetry array. Another 9 receivers were set up from TF to Vernon Dam, with 3 new sites. All dam's fishways had PIT antennas in place. In the lower river a total of 89 fish were radio/PIT tagged (double tagged) and another 56 PIT only tagged. At Holyoke, 76 shad were double tagged and another 53 PIT only tagged. At Cabot Ladder exit, 120 shad

were double tagged with another 120 PIT only tagged. No results are available at this time. Data collection is going very well and will run through early August.

Shad transfers occurred in May and early June at HFL. CTDEEP, NHFG, and RIDFW all obtained shad for restoration programs in and out-of basin. Data are still not final on numbers. Conte Lab also obtained fish for paired releases (tagging study) at Cabot.

The relatively large shad run was not expected and other systems remain at low levels of abundance. The juvenile index survey from CTDEEP did not indicate and large year-classes having been produced 3- 6 years prior.

Mr. Hyatt asked if there was a motion to accept the report, which was made by Mr. Palmer, seconded, and all were in favor.

3. Report of the Technical Committee Chair and Subcommittee Reports

Dr. Slater provided a handout report that provided a summary of the June 26, 2012 Technical Committee meeting. The report provides updates for each agenda item and will be summarized here. **The report provided in the meeting packets contain detailed information summarized below and in some cases inserted below.**

Assignments for Chairs of the nine updated Subcommittees were reviewed. These groups will start meeting soon to address a diversity of diadromous species and habitat concerns.

Table 1. CRASC Tech Subcommittees and chairs (as of June 26, 2012).

CRASC Tech Subcommittee	Chair and Vice Chair	Agency
Salmon	Steve Gephard & Vice Lenny Gerardi	CTDEEP & VTDFW
Shad	Ken Sprankle	USFWS
River Herring	Steve Gephard	CTDEEP
Sturgeon	Micah Kieffer	USGS
American Eel	Tim Wildman	CTDEEP
Sea Lamprey	Melissa Grader	USFWS
Fish Culture	Dan Marchant	MADFW
Fish Passage	John Warner	USFWS
Habitat	Steve Gephard & Vice Matt Carpenter	CTDEEP & NHFG

Salmon Subcommittee

There was a discussion about the radio tracking of tagged salmon released at Holyoke given Jay McMenemy's retirement as he used to coordinate the tracking of these fish. Mr. Cox stated that monitoring will be reduced from the past but Melissa Belcher will be conducting some tracking. The upper main stem ladders will identify passage of these fish by digital monitoring.

Mr. Gephard gave a report on the 2012 U.S. Atlantic Salmon Assessment Committee Meeting

which was held at the Conte Lab in Turners Falls, March 5 – 8. This working meeting is held each year to produce a report that summarizes activities undertaken the previous year in the U.S. relative to Atlantic salmon restoration and recovery. It covers descriptions of adult returns, fisheries, stock assessments, program summaries (e.g. the Connecticut program, the Merrimack program, etc.), fish health updates, etc. Report No. 24 covering 2011 activities is now posted on a NOAA website: www.nefsc.noaa.gov/USASAC/. It is 185 pages long with 39 tables and figures and 20 appendices. It is not appropriate to summarize its contents now since it focuses on 2011 returns and our focus has already shifted to the 2012 returns. However, this is a valuable reference document that can provide long-term information on Atlantic salmon in New England. The 2012 Report will be generated at the March 2013 meeting, expected to take place in Old Lyme, CT.

Fish Culture Subcommittee

Mr. Dan Marchant provided a handout on fish culture activities. Highlights of the report include the best current data on fry stocked in the basin this spring which was a total of 2.2 million fry, which came from 4.94 million eggs taken in fall 2011.

RCNSS
Stocked approximately 82,000 feeding fry.

DDENFH
Released 82,400 smolts this spring and 11,900 parr last fall.
For 2013 release there are over 95,000 salmon, some of which will be available for fall release.

BNTH
Released 4,200 parr last fall and 3,800 smolts this spring
For 2013 release there are approximately 9,000 salmon.

KSFH
Released 416,600 fry during spring distribution. Survival from egg to fry was again less than historic average. An investigation to improve survival through the eyed egg stage is ongoing. As part of this process, pipelines have been disinfected and a treatment regime is planned to improve egg eye-up.
Brood fish on site are expected to produce 2.5 to 3.0 million eggs in fall 2012.

RRSH
Released approximately 1.57 million fry basin-wide. These fry originated from eggs produced at RRSH and WRNFH.
Brood fish on site are expected to produce 1.5 million eggs in 2012.

RXFCS
Released approximately 162,000 fry to VT waters. These fish originated from eggs provided by Kensington SFH.
The facility is in the process of engineering for re-building after the damage from flooding 2011. The outdoor rearing area will be re-built. The indoor rearing and incubation area is intact and capable of supporting egg incubation in the fall, provided construction activities don't interfere.

WRNFH
WRNFH staff transported fry from RXFCS and RRSH to VT waters.

Mr. Novak reported that Cronin National Salmon Station has 40 adult returns on station, all of which are multi-sea winter fish. There have been no grilse captured or observed. Only one of the adult fish has an

adipose clip (smolt origin).

Fish Passage Subcommittee

Mr. John Warner provided a handout and described two meetings held by the CRASC affiliated Fish and Wildlife agencies last winter to address the pending relicensing of five large CT river hydroelectric projects (Turners Falls Dam, Northfield Mtn Pump Storage, Vernon dam, Bellows Falls Dam, and Wilder Dam). The meetings were centered on 1) fish passage (up and downstream issues), 2) fish population impacts (e.g., shortnose sturgeon), and 3) environmental conditions (spill flows, operational flows, bypassed river reaches). This fall the Preliminary Application Documents will be due and time lines for actions by FERC will begin as the relicensing process takes five and a half years.

Dr. Brett Towler was asked to review preseason fishway inspections which were instituted following an agency meeting last fall where concerns about fishway operations relative to design plans and agreed-to modifications were discussed. Holyoke, Turners Falls and Vernon Dam were inspected using a new systematic form created with input from Dr. Alex Haro and others. Serious issues at Vernon Dam were identified and promptly addressed by Trans Canada. As noted earlier, shad passed at Vernon in 2011 totaled 46 and is over 10,000 this year. In season monitoring has continued and brought emerging issues quickly to light. In all cases necessary fixes were quickly made by either TransCanada or First Light Power.

Mr. Len Gerardi asked if we could include a requirement for this type of monitoring in the new FERC licenses discussed earlier. Mr. Warner stated yes. It will be important to ensure these elements are included in those discussions.

Holyoke – Connecticut River

- Consulting parties (FWS, NOAA, MDFW, TU, CRWC) have agreed on the new design for the downstream passage system at Hadley Falls Station
- HG&E proceeding with construction drawings
- We will need to review construction schedule and implications for operating upstream fish passage facilities during construction

Turners Falls – Connecticut River

- 2012 Gatehouse shad passage evaluations by Conte Lab - Haro/Castros-Santos – ongoing

Vernon – Connecticut River

- Ladder problems noted last year were corrected – reports suggest generally good operating conditions
- Ongoing shad migration study could shed light on overall passage success

Connecticut River Relicensings (Turners Falls Northfield Mountain, Vernon, Bellows Falls and Wilder projects – Licenses expire in 2018)

- Preliminary Application Document (PAD) for each project will be prepared and distributed in October 2013.
- Public meetings to follow PAD - opportunity to raise issues/ identify study needs.
- Potential for meetings with owners prior to PAD but not required.
- Preliminary data collection on mussels, flows, river temperatures etc ongoing.

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Fifteen Mile Falls – Connecticut River

- Moore dam sampler operated without flow inducers in 2012.
- Captured smolts were transported below Vernon Dam rather than below McIndoes. As of June 18, 1,375 were captured (approx same as 2011)

Gilman Dam – Connecticut River

- Guidance screen and new bypass completed and operated

Fiske Mill - Ashuelot R.

- Fish lift operational in mid-May after gliches worked out but high river flows and no tailrace barrier may have affected passage numbers
- 2 sea lampreys, and a number of trout, suckers and smallmouth bass lifted. One large salmonid lifted
- Tailrace barrier to be installed for 2013

New Hydro Proposals at Corps Dams – West, Black and Westfield Rivers

- Licenses issued for Ball Mtn and Townshend dams
- FERC will not require specific downstream passage and entrainment measures since Corps has final say on anything built at their dams.
- Start of construction uncertain

Mr. Gephard gave updates on non-FERC jurisdiction projects in CT which included plans to build a fishway on the dam at Rogers Lake (a lower main stem trib), the Eightmile River, the Ed Bills Pond Dam removal, Mattabasett River fishway (will open 60 miles of habitat), and movement on getting a design for a replacement of the Rainbow Dam fish ladder, in addition the breached Spoonville Dam which is believed to present a fish passage barrier will be fully removed.

Shad Subcommittee

Mr. Sprankle provided a handout.

River Herring

Mr. Gephard started by noting that NOAA is holding three meetings on river herring associated with their review of the potential listing of these species under the ESA. He attended the first meeting which focused on stock structure; the others will cover risk of extinction and potential impacts of climate change. There has been progress made with the NE Fish Mangt Council and Mid Atlantic Fish Mngt Council on the monitoring of bycatch which may impact river herring and shad. The bycatch may occur in the Atlantic Herring fishery and other small mesh mid-water trawl fisheries (squid, butterfish). Data is lacking.

4. Salmon Update

- Genetic Marking Study – Jason Coombs stated Dr. Letcher was unable to attend the meeting and he could only report that they did not have any results ready for this meeting. He further stated they are close to being able to provide results and those should be available in one month
- NASCO update – Mr. Gephard provided a handout. He noted his attendance at the June NASCO meeting and the fact that the expired Greenland catch agreement was reset without any issues. Greenland will not be exporting any catch. Other agreements were also made for smaller fisheries.
    - Karl Meyer asked if climate change was discussed. Mr. Gephard noted not at this meeting but at the SALSEA meeting he attended in the fall and he commented that shifts in prey and predators have been observed in a northward direction.
- USFWS – Ms. Weber stated that USFWS values the partnership of the CRASC and its role in restoring migratory fishes and habitat in the basin. She noted USFWS believes this Commission is important to achieving these goals but noted that the salmon program has been performing very poorly for over two decades in terms of adult returns (tied to greatly reduced marine survival rates since 1992) which coupled with fiscal challenges and shifting priorities, such as the ESA Maine Salmon, make it necessary for USFWS to

no longer produce any salmon in culture facilities for this restoration program. This change means White River National Fish Hatchery and Dwight D Eisenhower (following 2013 smolt stock out) will no longer culture salmon for the CT River Program. The Service will monitor other salmon rivers and if any significant improvements are observed in remaining U.S. rivers that can be raised for discussion.
    - Mr. Hyatt asked what this meant for Cronin Station
    - Ms. Weber stated Service will be considering its options for Cronin
- Mr. Hyatt stated that CT will keep Kensington State Fish Hatchery in operation and its primary purpose will be to raise broodstock Atlantic salmon which have become popular fisheries in designated rivers outside of CT basin. As a by-product of this program, eggs can be obtained, producing ~400,000 per year which they would stock into target habitat reaches. This would also serve as a potential genetic bank, keeping the strain we have in hand alive. It is unclear if this design would be able to maintain a genetically viable strain, as intended, and that will need to be examined more closely. With this move and USFWS position, he recommended tasking the Tech with how to move forward, address genetic questions, and where to stock, what are the options and best information on this. He also noted an intention to continue to provide salmon eggs for class room programs.
    - Mr. Palmer commented VT would be interested in staying involved in a stream stocking program. He stated VT could receive eggs for incubation (several hundred thousand) and stock them as fry but would not maintain any broodfish. He believes there is value to having salmon present in the state's streams even if the possibility of restoration (self-sustaining) is not likely.
    - Mr. MacCallum stated we have a Strategic Plan that we have not fully implemented, calls for 10 million fry to be stocked out, we have been stocking ~ 6M in recent years. This past year it was ~2M. USFWS has stated that they will no longer culture fish and that results in a production loss of ~60% -70% of fry and the smolts – we must have the Tech Committee respond back to us on what this means relative to the Strategic Plan. He noted we are not here to operate a broodstock fishery program. What are the resources left to work with? The status of Cronin is unclear. Staff support is unclear. We must understand what the resources are and what logical options are.
    - Mr. Hyatt concurred and asked what kind of timing for Tech feedback on this charge?
    - Mr. MacCallum stated early October.
    - Ms. Weber asked Mr. MacCallum to clarify his charge.
    - Mr. MacCallum stated an example would be - do we focus on the Farmington River, when fish come back what do we do with them, he needs to have this information to bring before his Fish and Wildlife Board and for CRASC to determine best course forward.
    - Mr. Hyatt agreed, and stated **there were three charges to the Tech Committee: 1) given the remaining resources of the Program, what are the best options to continue forward (based on existing Strategic Plan), 2) what are the likely outcomes of those options, and 3) what are implications to maintaining desired genetic diversity, existing strain, characteristics, under these options. Fourth added below.**
    - Mr. Palmer noted that the Strategic Plan was more specifically designed to address implementation of the Restoration Program and has goals such as stock 10 million fry, etc. , and does not go into specifics on adult return number goals. He stated that the over-arching goal of restoring a self-sustaining, is that realistic, given what we have seen to date and limitations we now face? We can revisit

that goal after the Tech reports back in October.

- Ms. Weber stated we should revisit expectations based upon existing levels of resources and known performance.
- Dr. Slater stated we will need to discuss if restoration is possible under a "new" (reduced program) scenario.
- Ms. Weber commented was it ever possible even before this point.
- Mr. Archambault stated Service can have Northeast Fisheries Center, population dynamics staff run models on adult returns given reduced stocking and other scenarios – work that has been developed already and reported on in past.
- Dr. Slater stated that would be helpful to the Tech, and we will use all available resources to address the charges of the CRASC when meeting.
- Mr. MacCallum restated that he would like to have the CRASC next meet in first two weeks of October, or earlier and it was agreed that the Tech could have the necessary report ready by that time window.
- Mr. Hyatt directed Dr. Slater to have the Tech report back on those charges and noted that NOAA Fisheries scientists had provided a letter supporting any plans to keep the existing population (southern most extent) in existence (e.g., respect to climate change and region-wide salmon management).
- Mr. Jones commented that there are two main stem fishways (Bellows Falls and Wilder Dam) that were initially, principally designed/intended for salmon passage. It is important that we also think about the implications of program changes for these facilities and their operations.
- Mr. Hyatt noted that this is also an important question that must be considered.
- Mr. Jones stated what do we tell these owner/operators?
- Mr. Hyatt stated that **this will also be charged to the Tech for them to address Charge #4 – What are recommendations for upper main stem and fishways (up/down) bypasses and salmon program**.
- Mr. Palmer noted that any modeling exercise as we have seen in the past will provide results we can reasonable expect – given continued low marine survival rates. Given the continued low marine survival rates, we were not going to achieve a self-sustaining population.
- Mr. Hyatt stated we still have year classes in the basin and out at sea and things may change.
- Mr. Meyer asked is what CTDEEP proposing for their facility a put-and-take fishery?
- Mr. Hyatt stated that this transition period and KSFH's role is driven by CTDEEP anglers which value the broodstock fishery. It's extremely popular and their maybe other changes at that facility to increase trout production.
- Mr. Meyer questioned "is this no longer a restoration program?"
- Mr. Hyatt answered we have to see what our options are from the Technical Committee.
- Mr. Hyatt continued on the topic of Salmon in the Schools and stated CTDEEP will be able to support it for the next two years wherever it currently exists.
- Ms. Weber stated the USFWS supports classroom work with children too.
- Mr. Jim Carroll stated it is important to have this discussion as there are new schools interested in this program, we must be able to explain the future outlook, and this information is helpful.
- Mr. Gephard stated there should be no new schools added, effectively capping numbers.

- Mr. Archambault stated that there could also be a shift to brook trout in the class

room instead.

5. Discussion of CRASC Mission

Mr. Andy French was introduced to talk about the DOI Blueways Initiative. He provided a handout that included the legislative mandates of the Conte Refuge and potential benefits of the Blueways initiative. He described the criteria development and the fact the Blueways is designed to improve federal agency cooperation to address recreation, educational and conservation concerns. The CT River is one of only a few pilot areas. He further continued that the Conte Refuge has a Friends Group that has been extremely successful in competing for national competitive funds for many projects. This group's new Stewardship Committee is intended to partially address conservation issues, and he stated, that the CRASC's interests should be the Conte Refuge's interests relative to aquatic resources and habitats. Mr. French noted that Mr. Sprankle was directed at Tech Meeting to represent CRASC on this Committee which he agreed to. Mr. Sprankle asked the Commissioners to verbally concur with his representation of CRASC on that Committee which they did.

Mr. Hyatt stated prior to CRASC (1983) shad, river herring were very important species, these and others will be increasing in CRASC's mission, many new subcommittees as noted earlier.

Mr. Meyer asked if any states move out of the program would we consider changing the name of the Commission?

Mr. Hyatt stated no, not at this time.

Mr. Meyer noted that this will likely present some confusion to the public over time.

6. Development of Standardized Fish Metrics for 401 Water Quality Certification

Mr. Andy Fisk was introduced and described how CRASC and CRWC have similar goals and have and will continue to work collaboratively on these. He noted that he had presented this same information at the January Tech were the Tech endorsed his premise and he was asked to come before the Commission. Mr. Fisk's goal is to work on developing a consistent standards in biological criteria for using the State's DEP and Fisheries agency staff. He noted some states are making progress with these two branches working together but can be improved. He noted Clean Water Act is power tool, using biological criteria (alga, bugs, fish) that can be placed in model to change current slide into weakening and degradation of water quality under current government approach. He would like to use existing data from the EPA survey, state agency staff, and a consultant to develop criteria, this will require staff meeting time, which the consultant would use to develop a model and the CRWC could then handle the public involvement which is an important component. He would like to create a biological condition gradient (like an IBI), uses range of conditions. We can then work towards having target fish communities. With upcoming relicensing of 5 mainstem hydro power projects this would be a helpful tool. He would like to use the Tech Committee in that process – limited time commitment – meeting or two – develop consistent standards to help prevent erosion of water quality standards.

7. Vermont Yankee, expired permits and CRASC letter

Mr. Sprankle directed Commissioners to a letter written by him as a Service Biologist to address a charge by the VT Agency of Natural Resources to the Committee (VY Advisory) he serves on regarding the operation of that power station (with other state and federal biologists), operated by

the State of Vermont. The charge was to address the NPDES 316 A permit which specifically addresses the discharge of heated water by the plant (not the intake which are the issues of organism impingement and entrainment). The letter was written using available published research, USFWS independently gather temperature monitoring data, and recent research findings from the shad movement study covered earlier. The letter points to serious concerns and questions regarding potential impacts to the restoration goals for Atlantic salmon, American shad, blueback herring and also federally endangered shortnose sturgeon. The year-round release of heated water coincides with critical periods for migratory fish which are known to be delayed in and around dams/fishways, both for upstream and downstream movements. The VY plant discharges heated water immediately upstream of Vernon Dam – impacts to CRASC priority fish species have not been adequately studied and thus the letter states as the EPA guidance directs cumulative effects must be considered. Simply stated, there are important biologically based concerns (as outlined and supported in the letter in detail) related to VY's thermal discharge that strongly suggests potential negative effects occurring on restoration species (adults and juveniles) for most if not the entire year.

As a further example, American shad passage numbers have improved in 2012 at Vernon Dam; this does not change the fact that these fish are spending extended periods of time in river water artificially heated by a VY water discharge. Due to compliance being determined further downstream (0.4 miles below dam) using a model, and the thermal discharge/mixing still occurring in the dam's forebay and tailrace of Vernon Dam, the habitats adjacent and downstream of the discharge and in the tailrace are subject to more extreme temperature variations (higher values occur more frequently in greater magnitude). At this life-stage and time frame, fish are on the verge of spawning due to river temps being in the upper 60s to low 70sF and energy expenditures following costs associated with passing three fishways to reach the base of Vernon Dam (river mile 141) have already required significant physiological costs. This situation can logically be reasoned to cause a reduction in shad passing upstream of Vernon Dam – directly due to exposure to heated water – it is basic fish biology, physiology, published in the literature and logically reasoned to impact restoration goals relative to adult shad numbers above this dam. Please refer to the letter for more details.

- Mr. MacCallum noted he viewed the letter as well done and since it came from the Coordinator that should imply CRASC endorsement, given states help fund his office.
- Some discussion followed that the letter was written as a technical review of important concerns raised by the USFWS – does not reflect any other agency/organization endorsement.
- Mr. Hyatt asked the Commission do we want to endorse this letter?
- All Commissioners stated they support a letter which reiterates the Service's concerns' as the Commission's concerns.
- Mr. Hyatt put the matter to a vote following a motion and seconding, all were in favor with one recusal (Mr. Eric Palmer).
- Mr. Hyatt stated a draft letter will be drafted and circulated among the Commissioners before final signature under his name.
- Mr. Palmer requested that the draft letter circulation not go to VTDFW (his Director or himself)

- There was a motion, seconded to adjourn, all were in favor.

Meeting adjourned at 12:24 p.m.

ATTENDANCE

Name	Affiliation
Bill Hyatt	CTDEEP/BNR
Wayne MacCallum	MA/DFW
Stephen Gephard	CTDEEP/Inland Fisheries
Ken Sprankle	USFWS/CTRC
Mark Tisa	MA/DFW
Eric Palmer	VTFW
Peter Basta	VT Public Sector
Robert A. Jones	CT Public Sector
Joe McKeon	USFWS
Len Gerardi	VTFW
David Detmold	Montague Reporter
Karl Meyer	Journalist
Melissa Grader	USFWS
Caleb Slater	MADFW
Glenn Normandeau	NHFGD
Wendi Weber	USFW
Bill Archambault	USFWS
Catherine Hibbard	USFWS
Bob Stira	FLPR/GDF SUEZ
Jim Carroll	CRSA
Dick Bell	CRSA
Andy French	Conte NFWR
Andrew Fisk	CRWC
Elizabeth Kendall	Capitol Region Education Council
Dan McKinley	USFS
Steve Roy	USFS
Jason Coombs	USFS
Bill Ardren	USFWS
Darren Desmarais	USFWS
Darleen Cutting	USFWS