

**CRASC Technical Committee
Meeting Minutes/Notes
November 3, 2014**

Agenda Item

1) Call to order, approval of Minutes (Caleb Slater)

Chair Caleb Slater started the meeting at 10:10 a.m., call-in by Bill McDavitt. Members Bill Ardren (USFWS) and Dan McKinley (USFS) were unable to participate. Minutes of the June 12, 2014 meeting were not available at the start of meeting but were later.

2) Coordinator's Report (Ken Sprankle)

Mr. Sprankle referred to a handout report. Updates on fish passage counts were reviewed among facilities. The final shad count at Holyoke was noted to fall at the 75th percentile for the time series 1976 to 2014. It was noted that % passed out of Gatehouse at Turners Falls in relation to Holyoke was a time series high of 10.8%, with 39,914 passed. Subsequent passage at Vernon Dam as a % relative to gatehouse was very high, with 27,706 passed or 69%. Sea lamprey counts were discussed as the numbers counted passed at Vernon appeared low. Lael Will discussed how the Salmon Soft setting and lamprey behavior in the viewing window affect these counts, positioning, lighting, holding, movements. The group discussed that this is an understandable issue. It was agreed that perhaps Alex Haro at Conte may be able to improve Salmon Soft ability to "better" count lamprey. This was to be checked into. Lael noted that in 2015, TransCanada will be operating all the fishway counter systems and starting as early as possible – March – depends on ice as part of FERC studies. It was noted that the "agencies" have instituted fishway inspections with USFWS Engineers so we must try and still have those done.

American eel passage was discussed after viewing a figure of the highest eel pass counts in the time series from Holyoke Dam. The figure showed a pulse of eels passing in October after a low passage period of numerous weeks since the summer. The group discussed how in other systems eel passes are often shut down in late summer. These data suggested fall movement occur and we should make sure to have eel passes/traps-transfers operating. Size of Holyoke eels at passes was discussed, generally smaller eels up to 275mm. Steve Gephard stated he would provide Coordinator Office with both eel count data and lamprey count data for various sites/rivers soon. Steve noted that it would be good to include other sites like Manhan, Eightmile, and Mattabeset fish count data. Ken agreed but noted existing database set-up is not easily manipulated and he would work to resolve in winter.

Lastly, the 2015 Research Forum was discussed. It was noted that in the past Coordinator arranged for speakers and topics with input but would be good to maybe have others more directly involved. Caleb Slater said he would like to have the Forum at the new MADFW Office. Timing would be late February early March and people thought that may work but we should see if the distance to Westborough MA would affect attendance. It was going to be looked into by Caleb and Ken and it was agreed that a diversity of topics to reflect the nine various Tech subcommittees would be an idea.

3) Fish Passage Subcommittee (John Warner)

John Warner gave a verbal report and noted that for smaller FERC projects in the basin not much to report. He noted the 5 FERC main stem project relicensing was very active, is very schedule driven and has lots of things occurring. He noted that with the VY closure occurring this year – many studies were deferred to 2015, making next year a very active year. Work has continued and is in progress to get final study plans and even to define some quite large studies such as hydroacoustic studies at TransCanada (FERC meeting pending). Some issues with dwarf wedge mussel studies remain to be resolved. There has been progress in some areas such as habitat studies that could proceed and those interim reports have been provided. Ken Sprankle noted that he intends to install and operate telemetry receivers and conduct mobile tracking downstream of project areas (Holyoke and downstream) to not miss an important data opportunity. Ben Gahagan asked about tag types and if money from coordinator could be used for acoustic tags – answer was no. Micah Kieffer noted that acoustic tags do not permit for determining specific locations, the receivers are typically deployed to just detect in a radius (unless a very costly set-up is used). He noted that he has developed methods to aid in determining locations but it is different than with radio tags clearly that can be directionally located.

Steve Gephard asked that with the plan to tag several hundred shad at the trap at Holyoke Fish Lift that there is a plan to have a meeting to discuss how all of this will occur in relation to regular fish passage and activities like tagging and processing Atlantic salmon returns. It was agreed that there should be a discussion and some clarity on how to integrate these activities. John stated that we can summarize the tagging plans that have been outlined and will be further developed soon and have that discussion prior to early April.

Holyoke's plans for new downstream passage measures have been approved by the four state and federal agencies, the CT R Watershed Council and Trout Unlimited who are the settlement team on this matter. The turbine intake rack spacing will be reduced from 4 inches to 2 inches. This will afford better protection to exclude both shortnose sturgeon adults and juveniles and American eel. John noted that intakes for the bypass will cover much of the water column. Other alterations are being drive by CFD models that showed high turbulence issues at spillway ladder entrance, with changes along dam apron to be made, and changes to spillway ladder entrance. The company is prepping at this time but construction work will not begin until after the spring passage season in 2015.

4) Shad and River Herring subcommittees report (Sprankle)

Ken provided a handout and noted that the information contained within were either updates to the mid June meeting report or new information summaries. Starting with river herring assessment work, he noted that the USFWS program's primary objective is to obtain fish samples for age and spawning history determination. However, relative abundance measures are derived and although highly variable are presented in the report. It was noted that a greater amount sample effort occurred in 2014 compared with 2013, various metrics shared. Fish per minute catch rates were typically several times greater at many of the target sampling areas, various measures were discussed and figures were reviewed for graphic representation. Mean blueback sizes (all areas combined) where shown, and summaries on what was taken to lab for aging samples. Fall surveys to determine juvenile blueback levels in the Oxbow MA as compared to Wethersfield Cove were discussed, figures and data were reviewed. A discussion on the use of "backwater areas" by both shad and herring ensued. It is suspected that the Cove has

ongoing influxes and movements with the main stem. More work on this could be explored but bottom line was large (length) bluebacks were shown in the area where pre-spawn transfers were released.

Ken referred to the shad transfers table for 2014, from Holyoke Fish Lift. The transfer of fish to NANFH was discussed and grow-out of juveniles for FERC Study trials. Those trials went well with fish moved successfully, although target size was not achieved. Juveniles remain under observation with dummy tags at Vernon Dam in tanks. In addition a CT River shad population modeling group was convened in July. That group met to discuss approaches to develop a shad model for this river and identified some data needs. One was data on shad physiology and performance relative to water temperature. Drs. Steve McCormick and Castro-Santos subsequently developed an SSP proposal on this and it was submitted to USFWS. We are awaiting word on awards now.

Jacque Benway provided a verbal update on her work with scale reading of HFL shad for 2013. Her analyses showed most males were age 4-5-6, with 13.6% being repeats. Females were primarily ages 5 and 6 with repeats being 7.5%. Sex ration was close to 1:1. However – must check – sampling may have been skewed to improve data for females in 2013 at the LIFT – Ken must check. Jacque noted the age structure remains truncated with very few older aged fish. She described the numbers and types of samples obtained for shad in 2014 but the scales remain to be examined. Jacque also summarized the Juvenile Alosine Survey she operates from below Holyoke to the lower river. In 2014 they collected approximately 8,000 juveniles. The shad geometric mean for all sites in 2014 was 7.5 which is fairly strong and good improvement over the past three years (2010 being extremely strong). Most shad were collected in upper sites (Holyoke and northern CT). For bluebacks the JI was fairly low at approximately 11, and most bluebacks were sampled in lower river sites. 2010 was also a record JI for bluebacks. Steve Gephard noted it is interesting to see the JI, relatively speaking, be poor for bluebacks yet strong for shad this year.

Ben Gahagan gave a verbal report on the Regional River Herring Group he helped to organize and runs. That group met earlier in the month and he will have minutes soon. Highlights included that similar to CT River Hudson River bios noted a very strong blueback run there in 2014. He noted that overall there were mixed reports on river herring but recent years were improved over the early years of 2000 period. He noted there are plans to work on improving communication and data sharing and consistency to be ready for next stock assessment effort. The last identified ASMFC river herring assessment identified many issue that this group seeks to address and benefit various management efforts and aid in directing research or conducting work cooperatively.

Andy Fisk (Commissioner) spoke on his interest to have his organization (CRWC) assist the agencies in migratory fish restoration work using citizen scientists and helping to coordinate activities with agencies. This was well received by the Tech, Ken Sprankle and Steve Gephard noted many examples of how such help could be used on a variety of field activities spring through fall (efishing, pop assessment and for transfer, checking on presence, sea lamprey nest surveys, juvenile popping surveys, eel pop surveys efishing). Ben Gahagan noted review of video or digital fishway count images – to either get first cut numbers or double check. Maine DMR is setting this up now for volunteer counting on-line.

Ken noted as a last item that the American Shad Status Report was being worked on. Progress had been slow but Andy Fisk had provided good comments which he was trying to address. He planned on

getting a revised copy out to Tech in advance of the Commission meeting on 12/11, when it is hope to be resubmitted for their review.

5) Salmon Subcommittee (Steve Gephard)

Steve Gephard provided a handout that summarized the number of fry CT stocked out, 198K into Farmington River (119K) and Salmon River (79K) watersheds. Adult returns were summarized but scale reading with Ken Sprankle is set to occur in a few weeks to determine freshwater and sea ages. Egg take in fall of 2014 is going well, with 679K eggs taken at Kensington and expected to end with a total of ~ 820K eggs, an increase from 2013. Steve asked if anyone has had any reports of adults aside from the Sawmill R fish that Ken Sprankle did sample as it was dying. Steve is planning to conduct red surveys in the Farmington River watershed. Bob Stira asked about status of the Genetic Marking program analyses that Dr. Ben Letcher had been running. Ken Sprankle noted that funding was primarily through State of Vermont State Wildlife Grant. He did not know the status of that work but noted he would check into that with Vermont grant contact Ken Cox and Dr. Letcher and update Steve for Salmon subcommittee.

6) Sturgeon Subcommittee (Micah Kieffer)

Micah gave a presentation to discuss both field and lab activities with shortnose sturgeon in the Connecticut River, as well as regional study efforts and findings. Micah used a small set of acoustic receivers to monitor the spillway and tailrace area of Holyoke Dam, and a site just downstream to monitor acoustic tagged SNS. Sample included 17 fish CTDEEP had tagged in CT plus 2 Micah tagged. Fish were in lower CTR and Agawam wintering areas. Movement was described that showed 82% of lower river fish moved upriver with a few individuals entering the tailrace and spillway. Sample sizes were small. Micah's USGS permit also had allowed several dozen SNS to be caught and brought to the Lab in 2013 where studies in the Flume looked at use in upper and submerged orifice entrance use and under different flow/velocities. SNS appeared to use both surface and submerged orifices with no difference, increased velocities where a negative effect to same extent. Acoustic tags in SNS below Holyoke remain good for 2015 so he hope to deploy receivers again. He noted broader studies in the Gulf of Maine (GOM) that are showing lots of movement among GOM Rivers by SNS. Caleb asked about when juvenile imprint given all this movement. That remains unclear. Micah note some lingering questions of management concern – where are age-1,2,3 SNS, movements - simply not understood and a concern relative to Holyoke downstream measures. Karl Meyer asked about studies at Cabot Station vs. rock dam spawning areas. John Warner noted several studies for FERC relicensing are specific to addressing these and as more data is needed we can get it via ESA and NOAA as is occurring with Emergency Gate Report which required additional details to be relevant to agencies concerns.

Steve Gephard asked whether SNS movements are driven solely by fish ready to spawn. Micah believes movements may occur independent of reproductive stage but requires more study. He would like to tag more late stage females in 2015. Funding is an issue at this time for any work in 2015.

7) American eel Subcommittee

Ken Sprankle gave an update based on a release by ASMFC of the approval of Addendum IV on Oct 28, 2014. Highlights are: a 907,671 pound quota – COASTWIDE – so nothing by individual state. It also

reduced the Maine's glass eel quota to 9,688 pounds (2014 landings), and allowed for the continued silver eel fishery in New York on the Delaware River. It also allows states to request a glass eel fishery based on conservation programs. It was noted that eel landings (yellow eels) is relatively low in New England and dominated by Chesapeake Bay states. Steve Gephard noted only two commercial operators and they are in lower Connecticut River for bait. Steve noted politicians have voiced interest in glass eel fishery, so some concern with that being a driver. However, Steve noted the lower Connecticut River and tribs do not appear to lend themselves to likely netting spots, just very different from other areas that are often targeted in other states (smaller coastal systems). Matt Carpenter noted he was on the USFWS American Eel Status Call that was recently held. He was concerned that the matter of climate change and parasites were heavily noted. John Warner noted all the other concerns remain – those two were “newer” ones. Basically Matt noted that we need more data on all life stages. We discussed a plan to meet in winter to set up coordinated assessment work between VT, NH, MA (USFWS) and CT. Maybe establish index sites. This will be further developed in the winter via the Eel Subcommittee.

8) Other Business

- Ken noted that the Fall River dam removal that was being led by Martha Naley (USFWS) and Alex Hackman (MADER) was in final permit stage. The ACOR just recently visited the site and was going to issue approval for the removal. It remains to be seen if the removal can occur before winter.
- Andy Fisk was not present at this time to discuss the listed item of web based fish data program.
- Ken noted that the CT River Landscape Conservation Cooperative (LCC) Pilot was progressing with other staff like John Warner and Tim Wildman (CTDEEP) involved. The Pilot has 14 terrestrial species with associated modeling information, for aquatics, only brook trout had a suitable model available via USGS Conte. An alternate approach was taken to include following fish species – American shad, blueback herring, alewife, shortnose sturgeon, and sea lamprey. This anadromous fish group and their current range were incorporated into the Pilot. Areas of impounded vs. unimpounded habitat were also denoted in the range maps with extra weight to unimpounded/free flowing areas.
- The Meeting Minute for June 12, 2014 Tech were reviewed. Some minor typos were noted. Motion to approve by Steve, seconded by Ben, all were in favor.