

**Roanoke Rapids/Gaston Hydropower Project
American Shad Working Group Meeting
30 January 2018**

Final Minutes

Participants: Pete Sturke (Dominion), Bob Graham (Dominion), Corey Chamberlain (Dominion), John Ellis (USFWS), Wilson Laney (USFWS), Jeremy McCargo (NCWRC), Kirk Rundle (NCWRC), Fritz Rohde (NMFS – phone), Karen Canody (Dominion – phone), Holly White (NCDMF – phone), Scott Smith (VDGIF – phone)

Pete convened the meeting at 10:10 am. We confirmed who was on the telephone.

Pete noted that Scott and Dan are supposed to call in, as well as Fritz Rohde. Pete reviewed the agenda. Fritz will join us once he gets off another call.

Pete reviewed safety procedures for evacuating the building. Pete asked if there was anything else safety-related, and there wasn't.

Agenda Items

- VA Alosa Taskforce Charter
- NCDMF/NMFS Tagging
 - Recap of 2017
 - Plans for 2018
- NCWRC Sampling
 - Broodstock
 - Juvenile Outmigration
 - Fry Stocking
- Dominion Data Review
 - Bypass Sampling Results
 - Ichthyoplankton
 - Electrofishing
- Bypass Flows for 2018

VA Alosa Taskforce Charter

Bob and Pete attended the VATC, as well as Jeremy, Fritz and Tim Ellis, and Pete indicated that Holly was on the phone. Pete indicated the meeting was pretty good, and there were good presentations by Jeremy, Holly and others. Pete shared the Alosa Task Force Charter with us. The group plans to meet biannually. They will share management plans and strategies. Albert Spells and Michael Odom were there from USFWS. Wilson asked if there was anyone there from the ES Office. They didn't think so. Bob noted that they had not yet received a list of the attendees.

Virginia advised that they are going to cease stocking the James River with American Shad, because they haven't seen a big benefit from the stocking. They said they would have to stock ten times as many as they were stocking, in order to see a result. Jeremy noted that they had not gotten any returns from above Boshers Dam. They put a fishway in at the dam, but Jeremy noted that the structure isn't moving as many American Shad, more Gizzard Shad, and Flathead Catfish. Bob noted that there have been Atlantic Sturgeon seen in the James River, but the sturgeon likely do not get above the dam. They do get up to about 14th Street, which is sort of equivalent to Weldon. There are multiple other dams before

Bosher's, but they have breeches. Bob noted that the Hickory Shad don't go very far past the Fall Line, on the James.

Pete noted that Jeremy and Holly presented there as well, but some of that has already been covered in our October ASWG conference call.

Pete indicated he would send the VATF Charter out, once it is more refined. One aspect is to look at the bottleneck in American Shad restoration. There is also a Hickory Shad Review, a one year project. They are going to do a Run Count program as well, which Alan Weaver is spearheading. There is also a Shared Watershed Coordination program.

Wilson asked if Roger Rulifson had attended, noting that he is doing Hickory Shad work. Roger was not there. The NCWRC staff are aware of what Roger is doing, since they are funding it. Wilson suggested that we may want to invite Roger to a future ASWG meeting, to give us a presentation on his work.

Jeremy noted that coordination is definitely occurring on the Chowan, and suggested that we need to add the Roanoke discussion to the ATF in the future. Wilson noted that the APNEP has also reactivated the Aquatic Fauna MAT, which he chairs, and there is representation on that body from both Virginia and NC. He will keep Dominion posted. Chad Boyce was there for the first meeting which was held in Rocky Mount.

There was further discussion of how Virginia is going to alter their program. Bob indicated that Virginia will be taking a break and reassessing the program. Dominion is looking to join the Policy Committee going forward and will keep the ASWG updated as needed.

In a follow up email from Scott Smith (VDGIF) dated 9 March 2018:

"My understanding is that we won't be doing any Am. Shad this year. Since it takes quite a bit of coordination at the hatchery and biologist levels, it's not something we can just pick up on relatively short notice. So, stocking the Nottoway and Meherrin isn't possible this year. If there's an interest from the group, we can potentially look at that as an option down the road.
Scott"

ACTION ITEM: Send Cape Fear Partnership Plan to ASWG (Wilson?)

NCDMF/NMFS Tagging

Recap of 2017

Holly indicated that she sent us a pdf of the presentation that Jeremy gave to the task force. They tagged for four years, 2013-2017. The background is that the largest stock of American Shad in NC enters Albemarle Sound.

They have tagged 191 fish, and have detected 116 of them after tagging. Some 26 fish apparently left the sound after tagging. 35 made spawning runs to the Chowan or Roanoke. Most of the fish ascended the Chowan instead of the Roanoke. Holly noted that there are a lot of figures that show us where the individual fish migrated.

Holly summarized the 2017 efforts. They put out 75 tags last year, the most to date. Fin clips were collected on 68 fish. One of the fish was a hatchery fish, but they aren't sure which one it was. Four of the fish were determined to have been Hickory Shad. Twenty-two fish made spawning runs, but all

except one went up the Chowan. They detected four fish outside of NC, one of which was a Hickory Shad. Holly indicated she would be pleased to answer questions.

Plans for 2018

They have 46 tags to put out this year and today was the first day scheduled for work. They plan to tag this week and next, but they want to try to avoid any tagging during the commercial season. They will wait until the season ends on the 24th, then do more tagging.

Jeremy noted that they are also getting fin clips from all of the fish again this year. Wilson asked if any of the fin clips analyzed showed any American Shad of hatchery origin, going up the Chowan River.

Jeremy noted that the number of fish analyzed was pretty low, and the number of fish making spawning runs were lower, so the likelihood of detection is pretty low. Thus far, they are not aware that any fish of hatchery origin have made spawning runs, in either the Chowan or the Roanoke.

Kirk asked how long the tags will last. Holly noted that most of them should be good for two years. They are hoping to hear from some of the 2017 releases, again this year.

Fritz noted that one fish released in 2013, was detected again in 2014.

Holly noted that it is good to know that we are having fish making spawning runs, and also being detected back offshore again.

Kirk asked if they were putting PIT tags in any of the fish. Holly indicated that they did so, in 2013 and 2014, but not since then. They also did not place external tags on the fish.

Wilson asked if the transmitters have return information on them, so that if someone caught one and cleaned it, they might return it. Holly indicated that there is no NCDMF information on it, but they do have the VEMCO information on it.

Holly indicated that they are clipping a pelvic fin, so if someone is aware of that, they might spot one.

NCWRC Sampling

Jeremy noted that they are working with Eric Brittle in VDGIF, to get a set of fin clips from the Chowan tributaries, to see if there are genetic stock differences to test for. If they are different, then fish from the fishery can be tested to determine their river of origin. They don't know yet whether there is a difference yet, or not. They will be working with Heather Evans on this project. They need a base sample from each of the three tributaries.

Bob asked how many are being taken in the Albemarle Sound fishery. Holly indicated it was under 100,000 pounds. Jeremy indicated it is probably around 20,000-30,000 fish. Bob asked if they are mostly female. Probably, although Bob noted that some males may be captured as well. Jeremy noted that any males captured do go to the fish house. Holly checked and indicated that only 60,000 fish were harvested last year.

Fritz noted that not all of the fish tracked, went up Chowan River tributaries. Some of them hung around in the upper Chowan, or perhaps elsewhere.

Jeremy asked Holly how many American Shad are captured in pound nets in the Winton area. She wasn't sure. She indicated that the pound nets are mostly catching river herring. The commercial landings for AS reported from the pound nets, are low, in comparison to the gill net landings. Most of the gill nets are set in the Manns Harbor area, or in between the sound bridge and the Chowan River Bridge. There is gill netting in the Chowan River but that effort is mostly for catfish.

Jeremy asked Fritz if sampling around the 158 bridge at Winton would be a good place to try to collect some samples. Holly noted that some of the receivers are in the Wiccacon River. They have put out some more receivers in the upper Chowan River, in the area where they haven't had some in the past. They may have had some there in 2013 or 2014. Jeremy asked her to clarify the area they are trying to pinpoint. She suggested that we look at Slide 8 of her presentation. They had one at the confluence of the Nottoway and Meherrin. They placed a receiver near a tributary just below the Virginia line. They have added some receivers in the Nottoway and Meherrin. They tried to select locations where they know fish already go past. There is another receiver near Chowan River Marker 16. Some of the fish were moving around between 7, 10 and the receiver there at 16. She indicated she didn't have a slide showing where the new receivers are located.

Jeremy noted perhaps some of the fish are Roanoke River fish that just went the wrong way. Jeremy noted that the NCWRC isn't prepared to sample that upper Chowan River area this year. Fritz suggested that we wait until we have results back from the Meherrin, Nottoway and Blackwater, and then reassess. Jeremy hopes that they can get 50 fin clips from each of the three rivers. Wilson noted that he thought Chad Boyce told him that Eric Brittle was going to be doing some creel surveys beginning this year, so hopefully NCWRC could get some fin clips from that source.

Peter noted that they have not gotten out lately to check the Roanoke River receivers yet this year. Four of the Six Dominion VEMCO Receivers have been downloaded and serviced with two receivers having detections from the 2017 season. Tag detections were sent to Jeremy and are awaiting the results. Jeremy noted that the water levels have been very low.

Jeremy gave us his presentation. He noted that most of the numbers were the same as he reported on their conference call. He reported on the 2017 sampling. They sampled from March 2-June 1, using two dipnetters, and sampling 9 sites from NC48 to the powerlines. There are four shoreline sites between the bridges. One middle site is between the bridges. There are two shoreline sites between Kapstone and the power lines. There is one middle site below the Kapstone facility.

They collected 516 AS, for a total CPUE of 46.3 fish per hour, or 7.7 fish per ten minutes. There were variable catch rates, probably affected by discharge. The peak occurred on April 10. There were 401 males, 115 females, for a sex ratio of 3.5:1. There were more females available in April. They collected brood fish in early April. Jeremy noted that in some years, the sex ratio was closer to 1:1. Corey asked about the size of the fish and whether they were seeing any changes. Jeremy noted that the average size can vary among years. The females are always larger than the males. Jeremy noted it would be interesting to look at how the sizes have varied from year to year.

Jeremy reviewed the age distribution. They age the hatchery origin fish. The ages ranged from Age 3 to Age 7. Age 4 males are the most abundant. The males mature earlier, at Age 4, with females maturing usually later. Bob asked if Jeremy thought the 2011 years class was pretty strong. Jeremy noted that he would like to look back and see. He noted that the 2010 year class was pretty poor. The fish aged are the ones that are used for brood stock, and they are aged using otoliths.

Looking at the annual catch rates over time, the CPUE varied in part due to the number of dip netters, and also the sites were changed. Jeremy analyzed the data separately, but noted that the trends are the same. There has been a decline in CPUE, since the 2010-2012 years. Wilson asked if Jeremy had tried to assess the impact of river discharge on the CPUE. He has not. He noted that discharge also could be affecting recruitment as well. Wilson asked if we could examine the AS JAI to assess recruitment. Jeremy noted that the AS data from Albemarle Sound, could include fish recruited from the Chowan as well. He noted that the NCDMF AS JAI data were not all that great. He noted that we could possibly look at the fall electrofishing data for juvenile AS, from the Roanoke, and gain some insight there. He noted that if it is determined that there are genetic differences, we may be able to use that tool to distinguish any fish from the Chowan that may have moved into the Roanoke.

Bob asked about the weak 2010 year class, and whether that may have affected things. It possibly could have, but Jeremy noted that they still were seeing an increase in females (Slide 8). They did see an increase in both males and females, from 2016 to 2017. Bob noted that on the James River, they typically see more males than females as well. He thought that the females are differentially affected by the commercial fishery, but Jeremy indicated the males are harvested as well. Jeremy noted that the numbers of females were lower in years when the commercial season was longer. In the recent years, however, the commercial season was reduced, and the harvest has been lower, but they still haven't seen any increase in the number of females. We clarified that the harvest was about 20,000 fish, but those are mixed stock fish, versus the 20,000 estimate for the Roanoke. Jeremy noted that it is possible, if the genetics are all the same, that the fish could predominantly spawn in the Chowan in one year, and the Roanoke in another year.

Bob noted that there could be some temperature effects as well. He noted that in low flow years, there may not be as much temperature differential between the Chowan and Roanoke. Wilson asked if we have the data to be able to look at the temperature differences. Holly indicated that we have datasondes which have been out since 2008, so there should be ten years of temperature data we can look at. Jeremy noted that what he said about fish using the different rivers, is a working hypothesis. He noted he wished we had Meherrin and Nottoway data for the last three years, during this observed decline.

Corey asked if there had ever been a year since they started tagging, when more fish went up the Roanoke, than up the Chowan. No, that hasn't been the case.

Broodstock

Jeremy reviewed all of the broodstock data. They collected from April 3-6. They collected 313 AS, 155 females and 158 males. One run died because they were double-salted. The hatcheries used were Watha and Edenton. All the broodfish came from the Roanoke River. Broodfish were fin clipped for genetic analysis. Edenton can't regulate temperature as well, so they had pretty poor production. They stocked 257,000 fry at Weldon; Watha stocked 2,483,853 fry below Gaston Dam. The total stocked in the Roanoke was 2.74 million. All the fry were stocked with identifiable genetic markers.

Juvenile Outmigration

They (NCWRC) captured 114 juvenile AS this past fall. They did weekly sampling in Plymouth from September through November. All fin clips have been submitted to the NCSM for analysis.

In 2016, they tested 522 adult AS. Of those 293 were identified as hatchery origin fish, which was a 56 percent contribution. That is the highest they have ever seen. So in 2017, that is the first year that all of the cohorts were testable for genetic origin. This is why the percentage has been increasing from year to year. The bulk of those were from the 2011 year class. That is a pretty high adult hatchery contribution rate.

For the outmigrating juveniles, the percent hatchery was only 13 percent. They tested 83 juveniles, of which 11 were identified as hatchery origin fish, with 5 from the Weldon stockings, and 6 from Roanoke Rapids Lake. Bob asked if Kirk had seen any AS in Roanoke Rapids Reservoir. Kirk has not seen any during any of their sampling. Kirk noted that they have both gill-netted for SB, and shocked for LMB, but have never seen any AS juveniles. Jeremy noted that one of the fish Holly tagged in 2016, was a Gaston-stocked hatchery fish. It showed up in samples Holly provided.

The juvenile hatchery contribution over time is depicted in Slide 13. Jeremy noted that the data through 2009, were based on OTC-marked fish. Also, they switched to solely Roanoke River brood stock in 2011. The percent hatchery contribution has been very variable since 2010. Wilson asked what the number sampled each year was, was it constant? No, it varied from 83 up to several hundred. The target is to get at least a 100, but they also sample over a multi-week period. They don't just want to sample from one day.

Jeremy reviewed the 2016 population estimate using the hatchery contribution model. The number of estimated spawning females ranged from 1,912 up to 5,596, which adjusting for males yields an estimated total population of 6,342 up to 18,564. [There are more details about how these estimates are derived, in the PowerPoint presentation, and the written report which Jeremy will provide.]

Corey asked how holding the fry in the hatchery affects the survival rate. Jeremy explained. He noted that mortality begins to increase in the hatchery, once the fish have absorbed the yolk sac. Also, you want to get them in the river as quickly as you can, in order to have them imprint. Jeremy noted that the time in the hatchery varies as a function of multiple factors. Different fish spawn on different days, so fish could be from 5 to 12 days old, but they are all stocked on the same day. It isn't logistically possible to stock all of the fish at the same age.

Bob noted that they are beginning to look at production foregone, and the data vary from the literature. Jeremy noted that based on conversations with Joe Hightower, and Julie Harris, we have no idea what the true mortality rates are for larvae.

ACTION ITEM: Jeremy to send 2016 genetics report to ASWG

Fry Stocking

Jeremy reviewed the 2018 plans. The spawning stock survey will continue. Stocking will be the same as in 2017, with three broodfish tanks, one for Weldon, and two for Roanoke Rapids. They will continue PBT evaluation of the hatchery contribution. Katy is working on a summary report for the multiple years, to evaluate the population and stocking success.

Jeremy noted that the ASMFC is working on the next stock assessment for AS.

Jeremy noted that we need to have a discussion about whether to continue the stocking after 2018. After 2018, we will need to discuss how this all applies to the license, and trap and transport of AS. We will need to have that discussion.

Wilson asked if Katy has a target date for the multi-year report. Jeremy said he thinks it will be available this fall. He agreed that the report would provide a useful basis for our further discussion. Wilson and Jeremy noted that the AS Data workshop will be coming up in March. Jeremy will be attending. Wilson will not, since there is little data on AS from the Cooperative Winter Tagging Cruises.

Corey asked if anyone was analyzing any fin clips from offshore fish. Not to our knowledge. But Jeremy noted that there is a mixed stock genetic analysis ongoing for the mixed stock analysis of Delaware Bay fisheries. The samples there have been sent to USFWS, Dr. Meredith Bartron, for analysis. A lot of this is being driven by the different jurisdictions wanting to make sure that the fish that they are producing, are benefitting them. Wilson and Jeremy shared some of the issues involved.

Jeremy noted that NC did get their AS Sustainability Plan approved last fall for a new five-year period.

Wilson advised the group that he has all of the scales from the AS which Josh Raabe sampled for his dissertation on the Little River, tributary to the Neuse. It would be great to have all of those fish aged, so we would be able to answer a lot of questions.

BREAK

Peter noted that we had reached a good stopping point, and asked if we wanted to break for lunch. Everyone did want to take the lunch break. Peter indicated that he would reconvene the webinar and reestablish the phone line at 1:00 pm.

1:00 PM: The meeting reconvened. Scott had joined us on the phone, along with Fritz, Karen and Holly.

Peter reviewed the morning session, for Scott's benefit.

Dominion Data Review

Bypass Sampling Results

Peter began with Slide 6 of the Dominion presentation. He noted that last spring had extremely high flows, so sampling was impacted. Also, there were some afternoon storms which precluded sampling. Pete has talked with Tom, and the plan is to allow him more flexibility this year, since the value of the ichthyoplankton is pretty high, so that is the plan for 2018.

Ichthyoplankton

They got a fair number of American Shad eggs in 2017 (21 total). They also got three Hickory Shad eggs, and some Alewife eggs. The CPUE this year went up substantially. Hickory Shad eggs were less than last year, which may be in part due to the high flows. The peak was close to the NCWRC peak for electrofishing. That peak was in the second week of April, and the eggs were most abundant the following week.

Jeremy asked how that correlated with the flood pulse in the Bypass Reach. It was released April 9-15, so it was right after the pulse when the egg peak was observed.

Electrofishing

The electrofishing data summary was next reviewed. They caught a lot of Striped Bass, and American Shad in 2017. There were some issues, like boat motor failure. The highest CPUE for American Shad was the first or second week of April, similar to the NCWRC peak.

Slide 10 depicted the average annual CPUE of adult anadromous and migratory fishes in the Roanoke Rapids Bypass Reach. The numbers really peaked in 2017. This is the second of five years of the 1067 cfs release. This year (2018) will be year three of one week of a 1067 cfs release, with a 750 cfs average flow during the spawning season.

Bob Graham asked about the Hickory Shad. They were lower, possibly because the water level was lower, during the peak of the Hickory Shad run.

Slide 11 shows the American Shad CPUE for the Bypass Reach. The peak CPUE was reached earlier in 2017, than in previous years.

Slide 12 depicts the length-frequency data for males and females. Females are larger than males. The best year for big females was 2014.

Peter noted it would be good for Tom to have the flexibility to move sampling dates around to accommodate storms, safety, and so forth.

Jeremy addressed how they would be covering the creel survey this year. One of their former LE officers was working seven days a week last year, four for NCWRC, and three for Tom.

Jeremy noted that Tom had taken 25 fin clips from Striped Bass, and those have been sent off for analysis. Jeremy noted that there were some flood flows last year, and some of the SB could have come from upstream. Tom had a good sample of SB, during every sampling interval. He noted that SB were present there all winter as well. March 1 is rather early to have SB there, so either they came from the reservoir, or were river resident fish. There were high flows during February. The fish were not particularly small, or large. The fish sampled were from the spring sampling.

Kirk indicated if they need more vials for samples, the NCWRC can provide them.

Corey asked Pete to show the spreadsheet which has the discharge values. One of the flood periods had a turbine down, so there was more water going downstream. Jeremy noted that a lot of people were upset. Jeremy noted that Ashley couldn't hold any more in Kerr. He noted that the hunt club downstream, wants to see the lake kept at 285 ft, so they would never flood.

We had some discussion of what the flows had been in the past. There were periods when the discharge was at 95,000, and over 50,000 for several weeks.

Jeremy was asked if he wanted to go through the DIDSON report. He indicated that the numbers are pretty much the same.

Corey noted that he was surprised at how many SB there are coming up the river, given that they are an apex predator. Jeremy noted that the drift gill nets didn't work all that well. Someone who knows gill-netting, might do better. They did sample SB and Hickory Shad, but not many AS. He noted that it is easier to electrofish in shallow water.

Bob asked if it would be at all worthwhile, to compare with the CPUE at Weldon, proportionately. The two species will have different catchability, but the density would be lower downstream

Jeremy felt that the Hickory Shad, and SB, sampling at Weldon would perhaps be a better place from which to compare the data; unfortunately, they don't quantify the American Shad that they are seeing. They could compare from three places, but the catchability issues would be too hard to overcome. Jeremy noted that the typical SB catch rate at Weldon is 150-200, and AS is five times lower than that rate. The AS numbers are so low, they are hard to sample unless they are concentrated. Even drift netting is uncertain.

Jeremy noted that they do have creel data for Hickory Shad anglers, fishing at Weldon, and they do catch American Shad, but the numbers are even more skewed, with hundreds of Hickories, and few American Shad. The ratio between Hickory Shad, and American Shad, is really skewed.

John Ellis and Bob Graham noted that far more Hickory Shad are caught at Weldon, than American Shad.

Jeremy noted that there is a one-fish limit for AS.

Bob asked if the Hickory Shad sizes have remained the same. Kirk and Jeremy noted that in some years, there are a lot of larger females. Jeremy noted that Roger Rulifson has all the Hickory Shad data that NCWRC has collected, and asked him to make sense of the data. Roger will be looking at some of these variables. They should have a good size representation.

Wilson noted that eDNA may prove to be a viable technique in the future, for estimating run size, should the technique prove to have value. We noted that you would likely have to verify the technique, for species. Jeremy explained how Roger Rulifson is going to approach his eDNA work with river herring. We explained further how the sampling and testing will be done. Hopefully it will all work out.

Bob noted that Article 401 of the License has a fish passage schedule. The last time it was revised, was 2009. He and Pete have talked about the need to revise that article, especially since there have been other changes.

*They will provide a draft for review.

Jeremy asked what that entails. Bob noted that it lays out the timelines for passage activities and is something they have to send to FERC. It is not amending the license.

Pete noted that for this meeting, they want to have everyone discuss the license requirement trap/transport of American Shad. Historically it has been delayed. The numbers have not really increased. They believe it isn't worth taking any more fish out of the river. It won't be worthwhile to make that effort. Jeremy was okay with continuing to delay. So were Wilson and John. Jeremy indicated he would like to have Fritz develop a DNA test so we could test fish on the boat, to determine whether they were hatchery or wild in origin.

**All agreed to continue to suspend upstream passage of American Shad in 2018.*

Jeremy noted that one big thing we need to consider, is why we haven't been getting any increase in the AS on the Roanoke, and/or why we aren't getting more response to 20 years of stocking. Bob noted that there is no difference in the James River as well. It suggests there may be something going on, in the ocean.

Jeremy noted that it could also mean that the fish can't successfully spawn lower in the river.

Corey noted that there should be some spawning in the Chowan system, as well.

Jeremy noted that the Sound is sustaining a 60,000-pound harvest, but he isn't willing to say that all of those fish are coming from the Chowan.

Corey asked how the Roanoke is comparing with the Tar, and Cape Fear, and other systems.

Jeremy noted that there are more fish there, based on catch rates, but the commercial harvest there is not nearly as great. Jeremy noted that there is little or no SB production occurring, except in the Roanoke.

Wilson noted the graph in Hightower et al. 1996, which suggests that even with the dam in place on the Roanoke, there were a lot of fish being produced. But, the data in that paper came from the Greenfield Fishery day book, which we think was in the Sound, so fish captured there could have come from the Chowan, as well as the Roanoke.

Jeremy and Wilson explained how the new AS assessment may shed some light on the issues.

Kirk noted that there are multiple factors at work in determining the strength of the population, although you would think that there is plenty of good spawning habitat in the Roanoke.

Corey asked about the AS populations in the Pamunkey and Mattaponi. Bob and Pete thought that those were pretty good.

Jeremy noted that they were stocking AS fry back in the 1800's, from multiple sources, in the Roanoke River. Jeremy noted that one argument for not moving adults upstream, is that the fish suffer turbine mortality coming back downstream.

Bob projected the revised schedule for License Article 401, which deals with American Shad passage. Bob noted that it has been revised several times. The green text which he projected on the screen, was done in 2010. They will send it out for review, once it has been edited and reformatted. Pete noted that some of the information clearly needs to be updated. Pete indicated that they will update the AS provisions, as well as the American Eel provisions.

Bob and Pete noted that it is due for an update.

ACTION ITEMS: Dominion to provide updated Article 401 schedule for fish passage to ASWG

FERC NOTES: ASWG agreed to continue suspension of upstream passage of American Shad in 2018.

Bypass Flows for 2018

Corey noted that the flows are not changed from last year; they just shifted them a day or so. They are pretty much exactly the same as last year.

Other

Bob asked if there have been any developments on sturgeon. Jeremy noted that the NCDMF received funds from NMFS, to add more receivers in the Sound. Most of NCWRC coastal inland fisheries staff and several aquatic non-game biologists will be on the salvage permit, so they should be called if anyone finds a dead one. Jeremy explained that NMFS has a permit in place, for the entire coast, for salvage.

Pete noted that he had done some of this salvage from 2009-2011 while a grad student at VCU, on the James prior to the ESA listing. They had found a portion of notochord, and some scutes likely from boat strikes.

Wilson noted that Jean Richter had found one Atlantic Sturgeon on the Cashie.

Corey asked about Atlantic Sturgeon on the Tar River. Other than anecdotal observations, very little data exists for sturgeon in the Tar River. We briefly discussed Atlantic Sturgeon presence in other NC rivers.

We discussed the possibility that Dominion could possibly merge with a company in South Carolina, so that could involve some sturgeon work as well.

Pete asked Scott if he had anything from VDGIF that he wanted to report. Scott noted that last fall, there were a lot of Atlantic Sturgeon in the James River. They had to delay their electrofishing, since the first day they went out, they shocked up seven. Also, someone in Richmond, Capt. Mike Ostrander, was taking people out to see the Atlantic Sturgeon breach. Bob noted that he had been on the tour and highly recommends it. Scott noted that they had to push their sampling back to October, when the water temperatures dropped.

Scott confirmed that he had been in touch with Eric Brittle, and Eric had sent him a message and indicated that he thought it would be easy to procure some AS fin clips for NCWRC. Wilson asked if they were doing any creel survey work for AS on the Chowan tributaries in 2018. Scott said it has been discussed, but he doesn't know if they have actually settled on any dates or not.

Kirk noted that he understood they (NCWRC) were required to do creel surveys on Gaston, and Roanoke Rapids. He just needs to know when those need to be done. He asked Bob to let him know, for planning purposes. He wasn't sure whether there was a five-year, versus six-year, interval required. Scott thought it was six years, because it was likely tied into the recreational survey, which FERC does on a six-year cycle. Bob confirmed it was six years.

Pete noted that 2021 was therefore going to be a busy year as there are several other license requirements that require field surveys which occur that same year.

Bob noted that Corey had done the Fisheries Plan, for FERC, having taken that over. The meeting adjourned at approximately 2:15 PM.