

**Dominion Energy  
DFRTAC meeting  
21 September 2022**

Virtual Conference Call Scheduled from 0900-1200  
Final Meeting Minutes

**Present (Conference Call Attendees):**

Dominion Energy – Peter Sturke, Corey Chamberlain, Taylor Allen, Paul Vidonic, John Swenarton, Caleb Gaston, Susan Gonzalez

NMFS - Fritz Rohde, Kevin Mack, Bjorn Lake

USFWS - John Ellis, Jesus Morales

NCWRC – Jeremy McCargo, Chris Smith

NCDMF – Holly White

VDWR – Scott Smith, Dan Michaelson

Pete starts by introducing the agenda.

- Rapids/Gaston Eelway Catches 2022
- Gaston Eel Distribution sampling results 2022
- **Eelway O&M Manual review**
- Downstream eel update including Fish Friendlier Turbine
- Bypass Anadromous Fish 2022 prelim results
- Upstream American Shad passage
- **Article 401 schedule rev 4**

**Rapids/Gaston Eelway Catches 2022**

The eel passage numbers were presented. The skimmer gate on the south side of the Rapids Bypass is still inoperable, scheduled to be fixed by end of 2022. Delayed due to supply chain issues.

Gaston passage numbers were presented. Numbers are increasing and tracking to beat 2021. Record numbers at the new north Gaston eelway, double previous catches. There were two mortalities at Gaston, perhaps one by snake and one decayed eel discovered in the same day.

Bjorn asked if the snake may have regurgitated the eel? Pete agreed of the possibility but not sure.

Pete showed the Gaston eel lengths are showing increasing size classes since the new eelways have been in operation which is good to see. Kevin Mack agreed that it's great to see the larger size classes in the traps.

Pete noted the eel trap data shows increasing numbers of eel catch during March, April and August thus far in 2022. Will be interesting to see where the rest of 2022 ends up.

**Gaston Eel Distribution sampling results 2022**

Pete moved on to the eel distribution sampling which is ongoing. Spring sampling was conducted and zero eels were observed. During summer 2022 sampling, we collected eels at the Summit West(280mm tagged, and 510mm nontagged), also at Summit East(tagged 176 and a nontagged 318mm, one missed collection).

Kevin asked what methods were being used for the sampling. Pete reported that the stream sections slightly off the map on the diagram were backpack electrofishing stations while those in Lake Gaston they were using an electrofishing boat.

Pete moved on to the community-based monitoring for eel distribution and showed the group the VDWR e-newsletter from June 2022 which has created some responses from anglers reporting catches this summer.

Fritz asked what years were recaptures from and how long were they at large? Do we know how large the tagged vs untagged population of eels in Lake Gaston is?

Pete and Taylor answered that they are not sure on the electrofishing eels as they haven't pulled the tags yet. Some recaptured eels from passage have been pulled. Pete said an action item for next time is to have that data for the group.

Taylor reported that the eels that were recaptured in 2022 at the Gaston Eelways: 8 eels, in the traps were out from 3-672 days. Two length classes from 150 to about 220mm TL.

Fritz asked what the length on the 672day eel was. Taylor said that the eel was 212mm.

**Action item: cover recaptures (workup and proportion at-large) for next meeting.**

### **Eelway O&M Manual review**

Pete asked if anyone in the group has substantial comments they would like to discuss before starting a streamlined page turn review to cover comments.

Bjorn noted that he had a chance to review and has some edits for the group we can discuss as we move through the document. Others noted they had not been able to review yet but will going forward. Pete told the group that there's no due date for submitting to FERC however the requirement in the license is that the DFRTAC collectively put this document together for NMFS approval before submitting to FERC.

Pete started reviewing the document.

Bjorn asked about the tailrace eelway and if the entrance extends below low water mark, what is below that?

Corey says its deep.

No one knows the substrate firsthand, but Corey shared the tailrace is blasted out of rock and probably solid rock at depth.

Bjorn suggested maybe some rope to create habitat.

Fritz mentioned the group has covered tailrace catch in the past and Bob would be able to answer the past efforts.

The email with the O&M was not received by members of the group due to security error.

Bjorn questioned the use of the term "conveyance flow" for ramp. Maybe use another term.

Jesus mentioned the attraction terms and noise. Maybe add a technical terms page to define these terms.

**ACTION: Add technical and definitely term page to O&M Manual**

Pete moved on to the north and south Rapids Bypass eel traps. He noted that the North Bypass Rapids Eelway is running on a siphon which presents its own challenges for continuing operation with the SAV present in Roanoke Rapids Lake.

Bjorn asked if the siphon downtime is being documented and/or tracked so repairs or solutions can be made accordingly?

Pete does have the information noted by not complied.

Bjorn stated the siphon breaks are useful to document and add in the O&M manual.

**ACTION: Add in tracking method and data for maintenance issues.**

Pete agreed that the information is useful and could develop a way to add the information.

Pete added a section on water use for conveyance flow and smell from the hold tank overflow water being used as a chemical attractant.

Dan asked about stress hormones and is that something to consider?

Bjorn has some papers on eel pheromone. Pete asked if Bjorn could share any papers on the subject, Bjorn agreed.

**Action item: Bjorn Share any papers with group (COMPLETE 9/21/22)**

Bjorn asked about the stocking permit condition in the O&M manual.

Jeremy adds that the permit is written to allow for flexibility in stocking and the reporting is useful. Pete showed the permit to the group and asked Jeremy if there was the potential for a more "permanent" permit considering the nature of the eelways.

Jeremy said he can look into it as long as the reporting deadlines remain intact. It's useful for NCWRC for tracking and data collection purposes.

Bjorn asked about the staffing section, is there qualifications that need to be covered in the section? Corey and Pete agree to add detail to the section for each role.

Bjorn added that the manual needs to describe the steps for startup in detail to make sure the reader knows the timeline needed.

Pete agreed to add some details and enter the tasks into compliance tracking tool such as ECTS or similar.

Bjorn noted the spare parts section needs to be updated with storage location for parts.

Pete added location and notification needs for repairs.

Bjorn commented the winter storage details needed to add or reference in the document. Pete showed this is referenced in the drawings and he added a note in the document to direct the reader to the drawings.

Pete updated the notification frequency for changes on the manual.

Dan agreed that normal meetings is ideal for notification frequency.

Bjorn notes that major changes or downtime over 7 days would need a notification to DFRTAC.

Fritz agrees that 7 days is a good guideline.

Pete added some details per comments and will update and redistribute to the group for future and additional edits.

**Action Item: Pete will edit the redline version and send out to group for concurrence by email by 12/31/22.**

### **Downstream eel update including Fish Friendlier Turbine**

Pete began by discussing the eel population and movement research that's ongoing. He noted that the changes for 2022 is that the team is no longer setting traps in Deep Creek or Johnson Pond due to low catch rates.

Pete covered the catches in the traps for 2022 (May – 17 eels with 1 recap, June – 6 eels with 2 recaps, July 25 eels with 0 recaps and 10 acoustic tags released, August – 16 eels with 1 recap, September and October – TBD).

Pete began covering the Fish Friendlier Turbine project that is ongoing. The team is working on a request for bid process which is looking to start Q4 2022.

The team will be requesting use of the Franke, 1997 Model where eel and turbine specific information is not available on turbine runners.

Pete noted that we're looking at a late November target for a group meeting to assist with the review of turbine engineering and eel survival estimation methods and related information.

Pete also noted that Dominion is looking to complete a physical model test of eels prior to installation so will be seeking review and input from the DFRTAC.

Pete asked Bjorn if he was available at that time and asked the rest of the group if they were interested and available. Bjorn confirmed ability but requested setting up the meeting sooner rather than later to ensure availability. The rest of the group was very interested as well and will attend if possible.

**Action item: set up November meeting for FFT**

Pete moved on to timeline for the FFT and Downstream eel studies. He noted that the path forward on FFT is 2027 for U1 replacement. The unit will be tested after install and will look to DFRTAC to help with model testing development.

Target for PO issued for the FFT will be in early 2023.

Bjorn asked if this modeling was CFD or a scale model. Pete confirmed they're looking for a physical scale model, he recalled 1/14<sup>th</sup> scale. Bjorn said that's good.

Pete mentioned the schedule shift with FFT installation timeline out from 2024 to 2027.

### **Article 401 schedule update**

Pete covered the high-level license article schedule which was in Draft form for this meeting. He noted that he will distribute the draft language to the team so the DFRTAC can make any changes and gain any approvals before sending to FERC in June 2023. He noted that one of the major changes to the 401 schedule was to incorporate all the discussions and actions related to the Downstream Eel Passage condition at Roanoke Rapids that have occurred since the last update in December of 2018.

**ACTION: Pete to distribute draft Art 401 rev 4 document.**

### **Upstream American Shad passage**

Pete discussed the flows from 2022 and the comparison between this year and 2021. He also covered the adult electrofishing results which indicated that American Shad catch per unit effort was higher than 2021 however not as high as 2020.

Scott wondered if these changes in CPUE could be in response to the previous year being wet or dry. The group agreed this is an interesting variable that could be investigated but challenging to isolate considering all the other variables.

Pete continued covering the anadromous results from 2022 sampling. He said that the ichthyoplankton results from 2022 were sparse and the numbers were indicative of that. Only 2 American Shad eggs were collected from efforts in 2022. Recent years had high catch rates of Hickory Shad and River Herring eggs however the 2022 results were lower than the 2019-2021 results.

Pete asked NCWRC if they had any American Shad data from 2022. He noted that it wasn't intended to be a surprise topic and understands that these data are likely being processed currently.

Chris Smith noted he has not synthesized the data fully yet, however anecdotally the numbers were down, probably a function of no stocking in 2022. They had challenges in collecting the ~200 fin clips from the Roanoke this year which was, perhaps, due to the lack of stocking. Chris noted NCWRC will probably not want to stock in 2023 but no decision made yet.

Holly gave NCDMF update which included that 2022 was the lowest commercial landing ever in Albemarle sound for American Shad. Approximately 4,000 lbs were harvested this year which pales in comparison to the usual 50-100,000 lbs harvested. She noted that the fishing pressure was reduced so the lack of catch was not a function of presence or abundance of fish. She hopes this means 2022 was a solid recruitment year.

Holly noted she is working on updating the NCDMF management plan and will have more information soon for the upcoming 5-year plan.

Pete discussed with the group that we have a decision to make on upstream American Shad passage as is typical this time of year. He noted that considering the preliminary data from 2022, it's still not warranted to pass American Shad upstream of Roanoke Rapids Dam at this time. He noted that this is a license condition and Dominion needs to notify FERC of the delay by the end of October.

Fritz noted that he is in agreement for delaying for another year as it seems the bulk of American Shad seem to be utilizing the Chowan over the Roanoke River right now.

Corey mentioned that he's been curious about the water chemistry between those rivers as the headwaters of the Roanoke start in the piedmont/valley and ridge vs the Chowan drainage starting in the Coastal Plain. Pete noted he's sent the Marie Bilkovic dissertation from William and Mary before but needs to dig into some of those details again. He recalled a similar discrepancy in abundance of American Shad and Striped Bass between two adjacent rivers – the Pamunkey and Mattaponi Rivers in Virginia.

Kevin asked for clarification on the reasoning for delay in upstream American Shad passage.

Pete and Corey added that FERC needs to be notified and approve of the delay on an annual basis. Specifically, Pete showed the group a proposed new language for the Article 401 schedule related to American Shad passage which included the text "Suspended until further notice. Decision to resume investigating upstream T&T to be determined by DFRTAC." He noted this was not removing this condition but rather transferring it from an annual decision to delay to let the group focus on the science and have the DFRTAC to be used as the hub for the decision to change, when warranted, the process would be more efficient.

Paul clarified the DFRTAC would still be tasked annually with reviewing the data and decision, but the requirement for a FERC notification/decision would be suspended and revisited when warranted and justified by the DFRTAC.

Fritz noted that he's okay with the language but will have to think about it separately from the current meeting. He also noted that NMFS has an update with their management (Pace) the following morning where this change will likely be discussed. Pete asked Fritz to let him know if anything comes from that or if they need anything additional.

**ACTION: Fritz to discuss with NMFS. COMPLETE 9/22/22. NMFS okay with draft language.**

Pete recentered the conversation for the short-term license reporting and asked the remaining group members present if they are okay with delaying for 2023.

Jeremy, Scott, and Holly agreed that the annual delay is fine and that the Article 401 language is acceptable for now as long as the condition isn't removed entirely. Pete assured the group that's not the intent but rather transferring focus from passage to the resource management objectives. Pete also noted that he needs to discuss with USFWS.

**ACTION: Follow up with USFWS on delay.**

**FERC DECISION: DFRTAC with exception of USFWS (not-present) agreed to delay Upstream American Shad passage. USFWS agreed. Consultation complete via email with John Ellis (USFWS) on 12 October 2022 (attached below).**

Holly shared their recent data on shad collection, catch is down as is evident by the JAI numbers from 2022.

Pete shared the schedule that's usually reviewed and noted that 2023 could be the last bypass electrofishing and ichthyoplankton sampling year and reminded that if we need to add any analysis for the last year for the report (in 2025) we should discuss and keep an eye on the data.

**Summary**

Pete covered the upcoming field events and asked if the upcoming FFT meeting could be in person.

Fritz, Holly, Bjorn, Scott, and Dan can be in person for the meeting in needed.

Corey added that the U1 turbine will be removed so the timing will be perfect to tour.

Pete will try to schedule for the tour during outage.

Pete restated to groups concurrence with delaying the shad passage another year.

Pete covered the upcoming meeting and conferences including the Southern Division AFS meeting which will have an Eel Symposia for February 2023. Kevin tentatively plans to present at that meeting assuming travel gets approved.

||Meeting adjourned 12:00||

**From:** [Ellis, John](#)  
**To:** [Peter M. Sturke \(Services - 6\)](#); [Morales, Jesus J](#)  
**Cc:** [Taylor K Allen \(Services - 6\)](#)  
**Subject:** [EXTERNAL] Re: [EXTERNAL] Roanoke Rapids American Shad  
**Date:** Wednesday, October 12, 2022 11:15:38 AM  
**Attachments:** [image001.png](#)

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Pete,

I am ok with delaying the upstream trap and transport. I think it is good to keep it as an annual decision so that the discussion will take place especially as several of the original folks have retired and more will be over the next few years. I'd hate for the idea to make a decision get lost over time.

John

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**From:** Peter.M.Sturke@dominionenergy.com <Peter.M.Sturke@dominionenergy.com>  
**Sent:** Wednesday, October 12, 2022 10:41 AM  
**To:** Ellis, John <john\_ellis@fws.gov>; Morales, Jesus J <jesus\_morales@fws.gov>  
**Cc:** taylor.k.allen@dominionenergy.com <taylor.k.allen@dominionenergy.com>  
**Subject:** [EXTERNAL] Roanoke Rapids American Shad

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Good morning John and Jesus,  
I'm attempting to finalize the DFRTAC meeting minutes from the 21 September 2022 meeting and I realized we haven't had the chance to catch up yet about the groups decision to delay upstream American Shad Trap and Transport. My apologies that this conversation has been elusive. Do you, or USFWS, have any concerns or reason not to delay this license requirement for 2023? The draft minutes are attached here if you would like to review the discussion that occurred. We're also looking to revise the Article 401 schedule in the coming year so I would expect there will be some discussion surrounding that license requirement in the near future.

Will get these out to the group once I hear from you!

Thanks,



**Pete Sturke**

Biologist

Dominion Energy

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