Friends of the Cheat
Working to Restore, Preserve, and Promote the Outstanding Natural Qualities of the Cheat River Watershed.

TO: Federal Energy Regulatory Commission (FERC)
Subject: Project No.: P-2459-279 (Lake Lynn Hydroelectric Project) New Major License
Friends of the Cheat Written Comments
Date: October 21, 2023

INTRODUCTION

Friends of The Cheat (FOC) is an environmental non-profit with offices in Kingwood, WV. FOC's mission is to restore, preserve, and promote the outstanding natural qualities of the Cheat River Watershed. Formed in 1994 after a devastating acid mine drainage blowout from an illegally sealed underground mine which captured the attention of the nation, water quality in the Cheat River and Lake Lynn has been restored through the hard work and collaboration of many partners. Therefore, FOC has a long-standing interest in the water quality, flora and fauna, and recreation use of Lake Lynn. As FOC works to maintain water quality, remove man-made barriers to aquatic organism passage, and improve flood resiliency for the watershed's human inhabitants, the care and management of Lake Lynn is of the utmost importance to all of our stakeholders. Eagle Creek is one of those stakeholders, and an industry partner that has a vested interest in the Cheat River and work of FOC. We appreciate the opportunity to comment on the relicensing to maintain and further improve the conditions of Lake Lynn.

PROPOSED ACTION

The applicant states that they are proposing no changes to Project Facilities and Operations. However, the applicant has proposed removal of 307.10 acres from the Project Boundary. This is a change that has garnered the attention of the community and has not been fully studied to assert that its removal is immaterial to the Project. As such, Friends of the Cheat and other interested parties are unable to evaluate how a potential change of this land use may impact water quality, species of interest, recreation, and aesthetics within the Project Boundary. Without this understanding, critique of and suggestions for the implementation of new protection, mitigation, and enhancement (PME) measures are hard to narrow down.

Therefore, to be protective of the resource, FOC requests the following PMEs outlined below as part of the NEPA process to more fully understand how the applicant's Proposed Action and/or Alternatives would affect environmental, recreational, and cultural resources.

CURRENT & NEW PME MEASURES

FOC's comments on the current and new PME measures are outlined below:

Water Quality Monitoring Plan

- FOC requests that a Water Quality Monitoring Plan be included in the NEPA review process rather than after the issuance of the final license. FOC suggests the plan includes the frequency of sample collection, estimated water depth at sampling locations, depth of the monitoring sites in the impoundment and tailrace, and details on reporting of the results (which entities are contacted with results, frequency of reporting, etc.), including when results deviate from established water quality standards.
- FOC requests that in addition to Dissolved Oxygen (DO), the water quality parameters of pH, conductivity, and E.coli be included in the Water Quality Monitoring Plan. Lake Lynn

has historically been impaired for pH caused by untreated acid mine drainage (AMD) in the watershed. Water quality data from the 1940s through the 1990s document Lake Lynn's poor water quality, notably low pH (4-5). Since 2012, the Cheat River mainstem and Lake Lynn have maintained a consistent circumneutral pH (~7). By monitoring pH and conductivity, FOC, WVDNR, and other entities can track improvements to water quality and better understand the overall health of Cheat Lake. This understanding empowers informed management decisions upstream and within the lake. Bacteriological monitoring (E.coli) is important to determine human health and safety of recreational contact with Lake Lynn (particularly, at Cheat Lake Beach).

- FOC requests that data collection and analysis of pH, conductivity, DO, and water temperature take place year-round, and not just from April 1st to October 31st. Water quality parameters fluctuate with seasonal changes and the monitoring and understanding of these changes are important every day of the year. E. Coli monitoring should take place from April 1st through October 31st.

Recreation Management Plan

- Eagle Creek (EC) proposes the development of a new Recreation Management Plan (RMP). FOC supports the development of a new Recreation Management Plan in consultation and coordination with community partners. FOC requests that a draft Recreation Management Plan be developed as a component of the NEPA process.
- The new RMP should outline the Licensee's commitment to work with stakeholders on planning and building a connection from the Cheat Lake Trail to the Sheepskin Trail, including a plan for opening the gate at the northern end of the trail to create a passageway from the northern end of the Cheat Lake Trail through the dam facility.
- Annual water depth monitoring at the Sunset Beach Marina Public Boat Ramp is proposed. FOC would like to see a more comprehensive assessment of water depth be conducted, not just at this single site. A citizen science survey using free source GIS software could be employed to collect information and narrow down the most problematic areas for inclusion in the sampling plan.
- Lake Lynn is at the terminus of the Cheat River Watershed, which spans 1,426 square miles, and is the deposition area for tons of both naturally occurring sediment and sediment accelerated by human development. Lake Lynn is also receiving thousands of tons of dissolved metals and precipitated (total) metals, from acid mine drainage (AMD) pollution. In 2019, the WVDEP implemented a new regime of treatment for AMD in Muddy Creek, the lower Cheat's most AMD impaired subwatershed. (In 1994 and 1995, AMD pollution events in Muddy Creek impacted the Cheat River Canyon and Lake Lynn, leaving a noticeable ring of sludge along its banks and dropping the pH of Lake Lynn to 4.5.) This new regime features in-stream dosing, which is the addition of treatment chemicals directly to impacted waterways without the collection of sediments precipitated from the chemical treatment. Therefore, despite the notable improvements to pH and reduction to acid and dissolved metal loads to Muddy Creek and the Cheat River since 2019, hundreds of tons of previously dissolved metals are precipitating out of solution and are now being deposited downstream in Muddy Creek and the Cheat River, which are eventually transported to Lake Lynn. The understanding and impact of these sediment loadings has not been studied. Therefore, FOC asserts the importance of a more comprehensive water depth monitoring plan with more sampling locations and, when warranted, the inclusion of bathymetric surveys to assess changes around Sunset Beach Marina and existing conditions in other high use areas.

Shoreline Management Plan

- FOC supports the development of a Shoreline Management Plan and is interested in collaborating on its development and implementation.
- FOC requests that a draft Shoreline Management Plan be developed as a component of the NEPA process. This should expand greatly on the list of allowed activities and facilities and include a framework for granting permissions within the project boundary.
- Aquatic Habitat Mapping should be a component of the plan. Aquatic Habitat Mapping should be performed every 3 years to monitor the spread of invasive species as well as to document change over time of the Aquatic Habitat of Lake Lynn.
- If the result of the Aquatic Habitat Mapping concludes that the spread of invasive species is a threat to water quality and recreation use and safety, an Aquatic Invasive Species Management Plan should be implemented in response.
- Eagle Creek requests to discontinue annual erosion surveys required under the current license. FOC would like to see annual surveys continue through the development phase of the Shoreline Management Plan.

Instream Flow Study

- FOC requests that an Instream Flow study be conducted to thoroughly evaluate the seasonality, duration, and magnitude of streamflow into Lake Lynn to understand the seasonality and correlation of low DO, water temperature, and lake levels, which can improve management and planning processes.

AREAS REQUIRING ADDITIONAL STUDY

Temporal Scope

- FOC requests that the cumulative effects analysis of the next 30-50 years include analyses and consideration of projected impacts from climate change in West Virginia, flood vulnerability of the Cheat River, and areas of habitat and climate refugia for rare, endangered, and threatened species. Resources to consider in these analyses include:
  - WVU Mountain Hydrology Lab
  - NASA DEVELOP in partnership with FOC's "Cheat Water Resources Assessing Climatology and Land Cover Trends and Evaluating Flood Risk of the Cheat River" report and dataset
  - The Nature Conservancy's Resilient Land Mapping Tool
- FOC requests that the geographic scope of the project extend beyond the Albright Power Station Dam as it is currently under consideration for removal with project partners having secured $4M in funding secured for dam removal and river restoration.

Fish Passage & American Eel (Anguilla rostrata)

- FOC requests that American Eel eDNA sampling be continued as part of annual biomonitoring activities and Biomonitoring Plan.

  According to the "Lake Lynn Hydroelectric Project (FERC No. P-2459) 2021 Annual Status Report - Aquatic Biomonitoring Plan 2021-2023" submitted to FERC on March 1, 2022, the

report of American Eel eDNA sampling efforts conducted by the US Fish and Wildlife Service (qPCR analysis of eDNA filter samples collected in 2021 at Lake Lynn Dam Target species: American Eel (Anguilla rostrata)) found the following:

> *"American Eel eDNA was detected in environmental samples from one of the four sampling events during 2021 below the Lake Lynn Dam. These positive samples were collected during the daylight hours on August 10, 2021. Detection reflected a low quantity of American Eel eDNA present due to amplification of limited number of replicates, and lack of detection at the same sites less than four hours earlier in the day during the night sampling event. Use of a qPCR marker to test the same samples for the presence of a common species, Smallmouth Bass, confirmed that amplifiable DNA was present in all but one of the environmental samples analyzed (10 out of 11), with the inference that samples were handled in accordance with recommended sampling protocols and their quality was not compromised in such a way that would limit successful amplification of American Eel eDNA if it was present. In addition, all samples collected did not demonstrate PCR inhibition and other extraction and PCR negative and positive controls demonstrated expected results."*

While American Eel eDNA was found in low quantity in this study, it is inappropriate with the methods used to infer population size or abundance based on the quantity of eDNA detected. Many factors can influence the detectability of eDNA of a species, including timing and seasonality of sampling, water quality and flow level during sample collection, as well as the life history and inherent characteristics of the target species. The fact that American Eel eDNA was collected in the Cheat Tailwaters, regardless of quantity, confirms their presence in this portion of the Cheat River, even if briefly, and illustrates the need for additional sampling. In addition, three surveys of 90 conducted at the Cheat Lake Tailwater Fishing Pier in the 2022 Cheat Lake Creel Survey indicated that the angler had observed or caught American Eel at or near the Cheat Lake Tailwater Fishing Pier, further corroborating the presence of American Eel in this area.

- Friends of the Cheat requests that any new American Eel eDNA sampling plans be available for review and comment so that groups such as Friends of the Cheat or state and federal agencies such as WVDNR and USFWS can provide input on sampling location, frequency, seasonality, and number of samples collected.

Fish Passage Plan/Prescription

- Friends of the Cheat requests that a Fish Passage Plan or Prescription be included as part of the Licensing approval process. The Plan should investigate the feasibility of fish passage, consider a variety of conceptual fish passage options at Lake Lynn Dam, and include rudimentary cost estimates for implementation. This plan would benefit species such as the American Eel, which is a priority species for the US Fish and Wildlife's National Fish Passage Program. Friends of the Cheat is working to restore connectivity of the Cheat River mainstem through the removal of the Albright Power Station Dam, near Mile Point 30 on the Cheat River. Allowing partial or full fish passage via a fish ladder or other designs at the Lake Lynn dam in tandem with FOC's efforts to remove the Albright Power Station Dam would reconnect all 78.3 miles of the Cheat River.

- Fish Passage would also benefit freshwater mussel species. While the 2020 Freshwater Mussel Reconnaissance Scoping Survey Report only found living native freshwater mussels at the confluence of the Cheat and Monongahela Rivers, restoring fish passage could improve the distribution and reestablishment of mussels into the Cheat River system above the dam. The report states that “The lack of established mussel communities within this reach of the Cheat River is possibly due to water quality influenced by AMD [acid mine drainage]”, but no samples were taken of the possible AMD to verify if this was a significant water quality impairment, and there was no consideration that the Lake Lynn dam may be a contributing factor in the lack of mussel establishment in this reach, despite suitable habitat being present and dams being a significant threat to the viability of native freshwater mussel populations nationwide. Freshwater mussels are reliant on host fish for distribution upstream through a river system. While water quality impairments from acid mine drainage and the original construction of the dam could have eradicated native freshwater mussels in the Cheat River downstream of Lake Lynn Dam, water quality improvements have been documented from treatment of acid mine drainage, and other species sensitive to acid mine drainage have been documented downstream of Lake Lynn dam in the Cheat Tailwaters. Additionally, a Mussel Silo Study that FOC implemented in partnership with the WVDNR in 2022 showed that mussels could survive and grow in Cheat River across 5 locations, from Saint George to Albright, which was historically impaired from acid mine drainage. Ultimately, improving fish passage would likely improve the distribution and presence of freshwater mussels in the Cheat River system. If a Fish Passage Plan were to be developed, Friends of the Cheat could assist in acquiring grant funding for implementation.

Proposed Change to Project Boundary (Removal of 307.17 Acres from the Project)

- The December 1994 Final Environmental Assessment established that the project recreation sites are a requirement of the current project license, stating that "the proposed trail system and wildlife habitat and nature viewing areas constitute a reasonable, coordinated plan that would help to preserve wildlife habitat and provide for the enjoyment of the public."
- FOC does not fully understand the justification for the removal of these lands from the Project Boundary. Therefore, it is challenging to 1) understand what function(s) are being lost and 2) provide comments on suggestions to balance any potential loss of function.
- These lands are primarily forested, upland areas and riparian areas along the banks of Lake Lynn, which buffer runoff, stabilize soils, and, therefore, are integral to maintaining shoreline and water quality conditions. Removing them from the project would open the land to potential residential or commercial development which, in turn, would negatively impact water quality and available wildlife habitat and potentially impact the safety and experience of recreational users.
- These lands provide habitat for plant and wildlife species, including threatened pollinators such as the Monarch butterfly, a candidate for species protections under the ESA.
- FOC has concerns specific to the proposed removal of the three Nature Viewing Areas (NVA) totaling 63.37 acres. Responses to AIR #2, Exhibit E states that these lands no longer serve a project purpose. FOC asserts that these areas do serve a purpose and function as a preserved natural space. These lands increase the aesthetic value of the recreational areas of the Cheat Lake Park and provide recreation opportunities for users i.e. (wildlife viewing such as bird watching, shoreline relaxation, and nature photography).
- Eagle Creek collected recreation use data during 2020 as part of the Recreation Plan update. Lake Lynn estimated a total of 143,981 recreation days were spent at the Lake Lynn Project recreation sites in 2020. In that study, Eagle Creek calculated an estimate of 103,272 annual users recreated at the Cheat Lake Park. Removing the Nature Viewing Areas adjacent to Cheat

Lake Park would reduce the value of the most used recreational area within the Project Boundary.

- FOC understands that FERC will ultimately determine whether these lands are necessary for project purposes. Regardless of whether these acres remain in the Project Boundary or are released from the project, FOC seeks to cooperatively work with the Licensee to manage the land for the preservation of the ecosystem benefits undeveloped land provides including, as described above, water quality protection, wildlife habitat, pollinator habitat, as well as maintaining the natural viewshed and supporting the recreational interests of the public. FOC strongly urges Eagle Creek to consider the protection of these lands for their conservation values.

REQUEST FOR ANOTHER PUBLIC HEARING

FOC asks FERC to hold a second Public Hearing for the following reasons:

- The Draft Study Plan and process was initiated during the peak of the COVID-19 pandemic, and, as a result, early public awareness and engagement in the project (including that of FOC's) was impacted.
- The 760 page AIR#2 document was only made available to the public on September 11, 2023 with the public meetings happening 2 weeks later on September 25, 2023. This is the document which laid out the details of the proposed boundary adjustment. There is still confusion around Area H (Sunset Beach Marina). AIR #2 states that Area H is proposed for removal but at the public hearing it was stated that this area was not proposed for removal. This needs to be clarified and then the public needs more time to understand the potential implications of the Proposed Boundary Adjustment.
- In the absence of accurate and complete information, misinformation about the Project spread. Another public hearing, with a more experienced FERC facilitator, would allow for a better understanding of EC's Proposed Action and PME measures and lay a foundation for trust between the Licensee and the community through clear, transparent information exchange.

CONCLUSION

On behalf of Friends of the Cheat staff, Board of Directors, and our 500 members, we extend our gratitude for the opportunity to comment on the Project. Once named one of America's Most Endangered Rivers (American Rivers, 1995), the Cheat River and Lake Lynn have been reborn. Water Quality in the Cheat River has never been better in over 50 years. Despite this, the number of concerned citizens contacting FOC about sediment, debris, and general water quality concerns in the lake have only grown over the past 5 years. Guided by the spirit of our founders, FOC seeks to bring stakeholders together to cooperatively solve these problems for the betterment of the Cheat River Watershed. FOC looks forward to continued engagement in the FERC relicensing process.