



January 11, 2018

Elder Ghigiarelli
Deputy Program Administrator
Wetlands and Waterways Program
Maryland Department of the Environment
1800 Washington Blvd
Baltimore, Maryland 21230-1718

**Re: Comments on Section 401 Water Quality Certification Application
Conowingo Hydroelectric Project (FERC Project No. 405)**

Thank you for providing the Commonwealth of Pennsylvania, Department of Environmental Protection (PADEP) with the opportunity to comment on Exelon Generation Company, LLC's (Exelon's) pending application for 401 Water Quality Certification (WQC) for the Conowingo Dam, FERC Project No. 405 (MD 401 WQC Application). PADEP provides the following comments:

1. Erosion and Sedimentation and Nutrient Reduction

Exelon proposes to conduct sediment/nutrient reduction within project boundaries by using erosion and sedimentation best management practices ("BMPs") on certain areas. A detailed plan has not been provided. Exelon does not propose any maintenance dredging study or program to remove sediment from the Conowingo Pond. Exelon should provide a detailed Erosion and Sediment Control (E & S Control) plan and post construction monitoring plan, both of which identify specific areas where E & S Control BMPs will be implemented, what controls will be utilized/installed, annual estimates of sediment removal for each identified BMP, and should also include/propose sediment removal from Conowingo Pond will be completed.

PADEP recommends stream restoration activities including, but not limited to: in-stream habitat/grade control structures, floodplain restoration, stream bank stabilization, dam removals, riparian tree/shrub plantings and buffers, wetland construction, and agricultural BMPs. These activities should reduce pollution into the Susquehanna River and help Exelon satisfy Maryland (MD) State Water Quality Standards. PADEP also recommends that Exelon expand these activities beyond Exelon's project boundary into the Commonwealth of Pennsylvania and MD Watersheds within Conowingo Pond and below Conowingo Dam. Watersheds tributary to the lower Susquehanna River should also be considered and proposed in order to maximize the benefits to water quality in the Susquehanna River and Chesapeake Bay resulting from these activities.

Additionally, as partners in the Chesapeake Bay Program Partnership PADEP looks forward to continuing our work with MD to complete the Midpoint Assessment of the Chesapeake Bay Total Maximum Daily Load. Key to that assessment is evaluating the problems arising from the additional loading of nutrients and sediment now entering the

Chesapeake Bay due to the loss of trapping capacity of the Conowingo Dam. Exelon must be a key player in the identification of solutions and the implementation of a final plan to address these issues both through restored capacity behind the dam and funding and implementation of BMPs that net reductions in sediment loading. PADEP encourages you to include Exelon's involvement in this effort as a condition of their WQC.

2. American Eel Passage

American Eel restoration efforts are being conducted and improved throughout the Lower Susquehanna River via the Exelon Muddy Run Pumped Storage Project (Muddy Run Project) PADEP Water Quality Certification (WQC). PADEP supports improvements/modifications to the East Fish Lift (EFL) & West Fish Lift (WFL) with a long-term goal of volitional American Eel passage. Identifying fish passage barriers (within the spillway and tailrace), eliminating passage barriers (velocity, entrainment, etc.), and stabilizing tailrace flows should aid in overall fish passage goals. MD should require Exelon to provide detailed plans on how each of these goals will be achieved.

In addition, if any changes are proposed to occur to the American Eel passage program currently being implemented pursuant to the PADEP's WQC for Muddy Run Project and as part of the Conowingo Dam facility, PADEP requests to be notified 90 days in advance of any such changes and confirmation that any such changes do not conflict with the requirements of PADEP's WQC for the Muddy Run Project.

3. Anadromous Fish Passage

American Shad and river herring restoration efforts are being conducted and improved throughout the Lower Susquehanna River via the relicensing process. PADEP supports improvements/modifications to the EFL & WFL with a long term volitional passage goal for anadromous fish. Identifying fish passage barriers (within the spillway and tailrace), eliminating passage barriers (velocity, entrainment, etc.), and stabilizing tailrace flows should aid in achieving overall fish passage goals. Exelon should provide a detailed plan and implementation schedule to address how improved fish passage will be achieved. See also, comment #6 below.

4. MD Water Quality Standards

Exelon states all MD State Water Quality Standards and Criteria will be met with issuance of the new license. PADEP recommends Exelon be required to enhance the proposed monitoring plan with the addition of sondes and transects at varying depths and locations within the Conowingo Pond, spillway, and tailrace. PADEP also recommends enhanced monitoring to include additional macroinvertebrate monitoring stations. The addition of these items, will provide a more accurate monitoring assessment and finer details for determining whether MD State Water Quality Standards are being met.

5. Recreational Uses Within Project Waters

Exelon should commit to improving and modifying the existing boat ramps and the current trail and park system to increase boating and fishing opportunities. Detailed plans and schedule of implementation of all the recreational use improvement projects should be developed and outlined within the MD 401 WQC Application. Any proposed improvements to existing or any new recreational facilities that occur within waters of the Commonwealth or adjacent areas may need authorizations from PADEP. Exelon should consult with PADEP, as necessary, to determine if any proposed improvements require permits from PADEP.

6. Invasive Species

How does Exelon propose to deal with the current and future invasive species within the project area? Exelon should provide a detailed monitoring/prevention/control/eradication plan for review by MD and the resource agencies. This plan should include, at a minimum, the following invasive species: Blue Catfish, Zebra Mussel, and Snakehead. PADEP recommends modifying the East Fish Lift (EFL) to allow for capture of invasive species when in use. PADEP recommends a fish collection system which allows for invasive species control, such as the Holyoke, MA fishway system, which allows specific species to be collected and analyzed before being transported upstream. This type of system would give Exelon the ability to remove invasive species during the anadromous fish passage season with the additional benefit of improving collection and handling efficiency of study species when needed.

7. Freshwater Mussel Production

In addition to proposed improvements within the WFL and EFL, PADEP recommends increasing mussel biomass within suitable tributaries to aid in water quality improvements. Since mussels need a host (fish) to populate aquatic environments and the Conowingo Dam impedes natural aquatic life movement, Exelon should provide and implement a plan to increase mussel biomass within suitable tributaries to the Susquehanna River.

Currently, there are tributaries that flow within Exelon's project area where mussels are either nonexistent or in low populations (i.e. Octoraro Creek). Exelon should put together a plan to locate such waterways and implement the strategies of that plan to increase mussel populations to improve water quality in the Susquehanna River and Chesapeake Bay. A constructed mussel production facility and/or the current American Eel trap and transport program may help in this effort. Mussel stocking and inoculation or a combination of both could be completed to enhance mussel production within the Susquehanna River and tributaries. These efforts should also help Exelon satisfy MD's state water quality standards.

8. Rare, Threatened & Endangered Species

Exelon should provide a detailed plan on habitat improvement/preservation and monitoring of all State/Federal listed rare, threatened, and endangered species and habitat thereof.

9. Resident Fish Passage

The Conowingo Dam is a major blockage on the Lower Susquehanna River. Resident fish passage concerns are not clearly addressed in the MD 401 WQC Application. Exelon should provide detailed plans to address resident fish passage concerns.

10. Re-Opener in 2030 to Enable Future Compliance

The FERC licenses for the Holtwood Hydroelectric Facility and the Safe Harbor Hydroelectric Facility expire in 2030. The Muddy Run Pumped Storage Project and York Haven Hydroelectric Facility Pennsylvania Water Quality Certifications can both be revised in 2030, as necessary to address demonstrated project impacts and subject to the provisions of each of the respective PA WQCs, and to establish requirements consistent with Section 401 of the Clean Water Act, 33 U.S.C Section 1341, and MD's state water quality standards.

Therefore, to create an opportunity to address changes in the characteristics of the Susquehanna River that may occur by 2030, PADEP recommends that MD include a re-opener to create the ability to revise the MD WQC for Conowingo in 2030 should similar good cause be shown. Adding such flexibility could enhance and materially support Pennsylvania and MD's efforts to protect and restore water quality, ensure compliance with state water quality standards, and facilitate aquatic life passage. It will also provide the opportunity for greater collaboration among the lower Susquehanna River hydroelectric facility operators to achieve these goals. Since the Conowingo Dam is essentially the gatekeeper for numerous water quality related concerns in the Susquehanna River Basin, PADEP urges MD to consider this addition to the WQC.

In conclusion, the Conowingo Dam impedes the natural movement of aquatic life, alters flow dynamics, and changes natural biologic and habitat conditions. With the implementation of comments listed above into the MD 401 WQC, Pennsylvania believes the operator can assist with improvement to aquatic life passage and adherence to water quality standards.

As owner and operator of the Conowingo Dam, Exelon has received considerable economic gain from its impacts to the Susquehanna River. As a result, PADEP believes that Exelon should play a large role in achieving sediment and nutrient reductions in the Susquehanna River to help restore the Chesapeake Bay.

Finally, in the spirit of cooperation, PADEP requests MD to consider the Commonwealth of Pennsylvania to be an interested party in the WQC process. As such, PADEP requests MD to provide PADEP notice of any stakeholder process or any other opportunities to participate in future discussions related to Exelon's MD 401 WQC Application and/or the issues raised in our

letter. Pennsylvania has a strong interest in ensuring Exelon fully complies with any water quality and aquatic life passage requirements that may be required by MD as part of the FERC relicensing. As these important issues are discussed in greater detail, PADEP will likely have more specific information, data, or suggestions related to the improvement of habitat, aquatic life, and water quality. This input should help ensure that Exelon's MD 401 WQC Application meets MD's water quality standards.

Thank you again for the opportunity to comment on the Exelon request for WQC and please contact Veronica Kasi of PADEP at vbkasi@pa.gov or 717.772.4053 should you have any follow-up concerns or questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Patrick McDonnell', written over a white background.

Patrick McDonnell
Secretary

