January 15, 2018

The Honorable Larry J. Hogan
Governor of Maryland
100 State Circle
Annapolis, Maryland 21401

Ben Grumbles, Secretary
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

Elder Ghigiarelli, Jr., Deputy Program Administrator
Wetlands and Waterways Program
Maryland Department of the Environment
1800 Washington Boulevard, Suite 430
Baltimore, Maryland 21230

Re: Conowingo Hydroelectric Project, Application for Water Quality Certification, Application # 17-WQC-02

Dear Governor Hogan, Secretary Grumbles, and Deputy Program Administrator Ghigiarelli:

Please accept the following comments from the undersigned members of the Choose Clean Water Coalition on Exelon Generation Company's (hereafter, Exelon) application for Clean Water Act (CWA) Section 401(a)(1) Water Quality Certification. Exelon is requesting this certification as a necessary precondition of its related application to the Federal Energy Regulatory Commission (FERC) for a new 50-year license for the continued operation of the Conowingo Dam Project. Collectively, our groups represent hundreds of thousands throughout the Chesapeake Bay watershed interested and directly affected by the Maryland Department of the Environment's (MDE) decision to grant water quality certification to Exelon. On behalf of the undersigned members, we urge you to ensure that Exelon plays a large role in mitigating the significant pollution to the Chesapeake Bay that comes from the Susquehanna River and the Conowingo Dam.

We recognize that the Conowingo Dam has played a crucial role in curtailing the sediment pollution that travels down the Susquehanna River and eventually reaches the Bay. However, over time, the Dam's ability to trap pollution has diminished due to sediment build up behind the Dam. As studies have demonstrated that the Dam itself has the ability to negatively impact water quality, Maryland must ensure that impacts of Conowingo Dam's operations on downstream water quality are addressed and mitigated as part of the new operating permit.

Furthermore, Maryland cannot count on FERC to impose conditions needed to prevent or offset Project-induced scouring of sediment and associated nutrients concentrated behind the Dam.[1] Unless Maryland imposes such conditions, its water quality goals and pollution control measures would be undermined by catastrophic sediment and nutrient discharges during one or more predicted high-flow events during the requested license period.[2]

---

[1] Final Multi-Project Environmental Impact Statement for Hydropower Licenses, Susquehanna River Hydroelectric Projects (March 2015) at 139.

[2] *See* USGS, *et al.*, Lower Susquehanna River Watershed Assessment, Maryland and Pennsylvania at 65, Table 4-3 (May 2015) (hereafter "LSRWA"), http://dnr.maryland.gov/waters/bay/Documents/LSRWA/Reports/LSRWAFinalMain20160307.pdf (setting forth the annual exceedance probability for various return interval flow events, with expected flow estimates for the flow gauge at Conowingo Dam).

Exelon has failed to provide sufficient information about the current and future effects of the Conowingo facility's ongoing operation on water quality, and has failed to propose measures to offset those effects. Exelon has also failed to account for the additive effects of climate change upon sediment scouring, and Maryland must consider these impacts in its certification analysis.

We therefore urge Maryland to impose conditions requiring Exelon to participate as a financial partner in a specific plan[3] for large scale pollution reduction projects, on-the-ground restoration projects, best management practices – such as, funding the planting and maintenance of forests and riparian buffers - and other projects to reduce upstream pollution and mitigate downstream impacts in order to maximize the likelihood that applicable water quality standards and other CWA requirements will eventually be met. In addition, as explained below, the permit must include provisions for periodic review to evaluate the progress of these measures, their effects, and the availability of new monitoring data and pollution control technologies. If MDE chooses not to impose strong conditions on this certification, Maryland should deny the application outright due to its deficiencies.

1. Legal Background

a. Application & Procedure

Section 401 of the CWA gives states the authority to review any federally-permitted or licensed activity that may result in a discharge to navigable waters, and to condition the permit or license upon a certification that any discharge will comply with key provisions of the CWA and appropriate state laws.[4] These provisions include Sections 301, 302, 303, 306 and 307.[5] This expansive certification authority preserves a substantial role for the states in protecting water quality, even when permitting authority lies solely in federal hands. When Section 401 applies to a project due to a potential discharge, the certification process applies to the "activity as a whole," relating in any way to the existing or proposed discharge.[6] In the case of a hydroelectric Dam project, for example, a certifying state must apply the certification process to a wide range of actions such as the trapping of nutrients and sediment behind the Dam, changes to stream flow and water temperature, increases in total dissolved gas levels below the Dam, and the release of sediments and nutrients below the Dam during both routine operation and increasingly common storm events.[7]

Section 401(d) of the CWA directs states to include in their certifications any effluent limitations, monitoring requirements, and other limitations and conditions in order to ensure that any discharge will comply with all applicable federal and state water quality laws. Of particular relevance to the license application for the Conowingo Dam are Sections 302 (federal water quality related effluent limitations) and 303 (state water quality standards, implementation plans and total maximum daily loads (TMDLs)), and corresponding provisions of Maryland law.[8]

---

[3] This plan needs to account for the removal of at least 4 million tons of sediment from the Conowingo reservoir annually until 100 million tons are removed. The same level of sediment must be maintained thereafter.

[4] 33 U.S.C. § 1341(a)(1).

[5] 33 U.S.C. §§ 1311, 1312, 1313, 1316 and 1317. For convenience the Section numbers of the Act, rather than U.S. Code citations, are used.

[6] *PUD No. 1 of Jefferson County v. Washington Dept. of Ecology*, 511 U.S. 700, 712 (1994).

[7] Due to climate change, it is predicted that all parts of the U.S. will see increases in storm intensities, and the Northeast will also experience a 58% increase in the average number of days with very heavy precipitation. Garfin et al., *Assessment of Climate Change in the Southwest United States: A Report Prepared for the National Climate Assessment* (2013), at 6, 8, http://www.swcarr.arizona.edu/sites/all/themes/files/SW-NCA-color-FINALweb.pdf; Hall and Stuntz, *Climate Change and Great Lakes Water Resources* (Nov. 2007) at 6-7, http://online.nwf.org/site/DocServer/Climate_Change_and_Great_Lakes_Water_Resources_Rep ort_FI.pdf.

[8] 33 U.S.C. § 1341(a)(1), (d).

If a proposed license or project will not comply with the applicable laws, a state must either deny a Section 401 certification, or conditionally grant certification with "any effluent limitations and other limitations, and monitoring requirements necessary to assure" compliance with the law.[9] If a state denies certification, the federal permit or license for the project may not be issued. In this way, Section 401 grants states the authority to halt projects that illegally harm water quality. Alternatively, in cases where specific permit conditions would ensure compliance with the law, a state may conditionally grant certification and these conditions would become binding limitations on the permit or license.[10]

b. Scope of Authority to Impose Conditions

States have extensive authority to deny or impose conditions during the Section 401 certification process. As EPA has explained in recent guidance, "[c]onsiderations can be quite broad so long as they relate to water quality," and "[c]ertification may address concerns related to the integrity of the aquatic resource and need not be specifically tied to a discharge."[11] In addition to ensuring compliance with the statutorily enumerated provisions of the CWA (Sections 301, 302, 303, 306 and 307), certifying states must assure compliance with "any other appropriate requirement of State law."[12] Courts have consistently interpreted this provision to mean that all state water quality standards must be satisfied.[13] State water quality standards include designated uses for water bodies,[14] as well as the quantitative (numeric) and qualitative (narrative) criteria needed to achieve the designated uses,[15] and anti-degradation.[16] Therefore, certifying states have the obligation to ensure compliance with both numeric and narrative water quality standards and the TMDLs used to achieve compliance with them, and use designations established to protect recreational uses and aquatic life.[17] Indeed, courts have repeatedly allowed certifying states to deny certifications based on the need to comply with state water quality standards, including non-quantitative standards such as the protection of aquatic life and shellfish habitat.[18]

In the case of Exelon's application for certification, the legal mandate to expansively enforce all state water quality standards prevents Exelon from simply relying on the Chesapeake Bay TMDL to absolve itself of any obligation to address the sediment pollution from the Dam. The Chesapeake Bay TMDL does not include a wasteload or load allocation to accommodate discharges of sediment or nutrients scoured from behind the Dam, and does not purport to relieve Exelon of its responsibility for such discharges. MDE must instead look beyond the TMDL and independently ensure that the project's sediment discharges do not interfere with attainment of the Chesapeake Bay TMDL, or with the

---

[9] *Id.* § 1341(d).

[10] *Id.* § 1341(d), (a)(1).

[11] 33 U.S.C. § 1341(a)(1) (stating that certification is required when an activity "may" result in a discharge); *see also* U.S. EPA, *Clean Water Act Section 401 Water Quality Certification: A Water Quality Protection Tool for States and Tribes* (2010) at 4, https://www.epa.gov/sites/production/files/2016-11/documents/cwa_401_handbook_2010.pdf ("EPA § 401 Guidance").

[12] 33 U.S.C. § 1341(d).

[13] *See, e.g.*, *PUD No. 1 of Jefferson Co.*, 511 U.S. 700 (holding that state water quality standards, including minimum stream flow requirements, should be enforced through § 401 certifications).

[14] 40 C.F.R. § 131.10.

[15] *Id.* § 131.11.

[16] *Id.* § 131.12.

[17] *Anacostia Riverkeeper Inc. v. Jackson*, 798 F. Supp. 2d 210, 238 (D.D.C. 2011) (holding that a state's total maximum daily loads for a water body must ensure protection of all state water quality standards, including *all* designated uses and water quality criteria, in order to satisfy the CWA).

[18] *See, e.g.*, *AES Sparrows Point LNG v. Wilson*, 589 F.3d 721, 733 (4th Cir. 2009); *Islander East Pipeline Co., LLC v. McCarthy*, 525 F.3d 141 (2d Cir. 2008).

designated uses which ensure support of estuarine and marine aquatic life and shellfish harvesting.[19] MDE must also ensure compliance with Maryland's narrative water quality standards, which prohibit pollution by any material in an amount that would "[c]hange the existing color to produce objectionable color for aesthetic purposes" or "[i]nterfere directly or indirectly with designated uses," among other things.[20] In other words, MDE may not grant Section 401 certification unless it imposes conditions which prevent the violation of all numeric and narrative water quality standards, and all designated uses.

2. MDE Should Either Deny Certification or Establish Conditions on its Certification Sufficient to Offset Project-Induced Effects on Nutrient and Sediment Discharges.

Because the enormous quantity of sediment accumulated behind the Conowingo Dam is subject to massive overflow in the event of major storm events, causing catastrophic damage, there is no way that MDE can issue a certification that operation of the Dam and resulting discharges during the life of the requested operating license will at all times comply with applicable water quality standards, TMDLs and other requirements. Therefore any Section 401 certification for the Conowingo Dam Project should include conditions requiring Exelon to play a role in the cleanup efforts for the Conowingo Reservoir. While it is true that the origin of the sediment and nutrients from behind the Dam is mostly from upstream of Conowingo, the Dam does alter the form of these sediments and nutrients and the timing by which they enter the Chesapeake Bay.[21] For example, the Dam changes the grain size profile of downstream sediments, preferentially passing finer sediments that tend to stay in suspension longer, with potential negative effects on downstream water clarity and underwater grasses. Coarser materials are preferentially retained by the Dam, again with negative downstream impacts as these materials are needed to build and protect desirable habitats, like islands and shorelines, for fish spawning and rearing, mussels and Submerged Aquatic Vegetation. These are all incremental impacts directly, indirectly, or cumulatively caused by Conowingo Dam's impoundment and artificial release of the Susquehanna River.

In addition to these impacts, scouring events caused by high flows mean more nutrients and sediments will flow downstream than are attributed to upstream sources. The Dam has historically trapped an average of 50-67% of the annual sediment load (1.5 to 2 million tons),[22] along with the nitrogen and phosphorus attached to the trapped sediment. If not for the Conowingo Dam, this load would have been delivered to the lower Susquehanna River and Chesapeake Bay at normal rates. The Dam and its reservoir have produced an enormous artificial repository of sediment and associated nutrients that can be scoured by high flow events, re-mobilized, and delivered downstream by large storm-induced

---

[19] *See* COMAR 26.08.02.08(B) (designating the Susquehanna as Class I-P and Class II in various segments); COMAR 26.08.02.02 (designating Class II waters as "Support of Estuarine and Marine Aquatic Life and Shellfish Harvesting").

[20] COMAR 26.08.02.03.

[21] Lawrence P. Sanford, Stephanie Barletta, UNCES Horn Point Laboratory, Cambridge, MD, Grace Massey, Kelsey Fall, Virginia Institute of Marine Science, Gloucester Point, VA. The Impacts of Conowingo Particulates on the Chesapeake Bay: Suspended Particle Size, Settling and Transport. UMCES Contribution TS-705-17. Final Report to Exelon Generation and Gomez and Sullivan, July 2017; *see also Cornwell, J., M. Owens, H. Perez, and Z. Vulgaropulos. 2017. The Impact of Conowingo Particulates on the Chesapeake Bay: Assessing the Biogeochemistry of Nitrogen and Phosphorus in Reservoirs and the Chesapeake Bay. UMCES Contribution TS-703-17. Final Report to Exelon Generation and Gomez and Sullivan. July 28, 2017.*

[22] *See* Final Study Report: Sediment Introduction and Transport Study: RSP 3.15 (Aug. 2012) at 11, 14-15 ("FSR 3.15"), http://mde.maryland.gov/programs/Water/WetlandsandWaterways/Documents/ExelonMD/FERC /Conowingo-FRSP-3.15.pdf; *id.* at 58 tbl.3.2-1 (citing Michael J. Langland, *Bathymetry and Sediment-Storage Capacity Change in Three Reservoirs on the Lower Susquehanna River, 1996- 2008* (2009) (hereafter "Langland (2009)"): sediment accumulation rate for 1996-2008 was 1.5 million tons/year; for 1959-2008 average rate was 2 million tons/year); *see also* FSR 3.15 app. F at 5 (Exelon's bathymetric survey of Conowingo Pond, estimating 1.45-1.69 tons deposited annually based on 2008-2011 average).

flows.[23] These scoured loads produce additional pollutant loads at times when the downstream receiving waters are already vulnerable, receiving their heaviest loads of suspended pollution from the Susquehanna River watershed.[24]

A recent study from the University of Maryland Center for Environmental Science (UMCES) shows increased mobilization of harmful nutrients during these scour events.[25] As explained in the study, much of the phosphorus released during scour is, initially, in a form that is not bioavailable (due to binding with iron). However, some particles do settle in the mid-Bay and others are eventually transported there. Under conditions in the mid-Bay, particularly anoxia, this phosphorus can become available for uptake by phytoplankton and, therefore, can contribute to eutrophic conditions, including depressed dissolved oxygen. There is a substantial amount of adsorbed ammonium in the sediments behind the Dam, at concentrations exceeding those in similar sediments downstream. This ammonia will be mobilized during scour events adding nitrogen loads to downstream waters.

The threshold flow needed to produce scouring will be surpassed many times during the requested license period.[26] Scoured loads deliver much greater quantities of sediment and nutrients to the Chesapeake Bay than the natural loading that would have occurred during the same flow events had the Project not been in place. Particularly in the case of very large storms – such as 25-year, 50-year, 75-year, and 100-year return interval flow events, for which there is a substantial to reasonable likelihood of occurrence during the requested license period, as discussed below – project- induced scouring could overwhelm pollution reductions undertaken upstream in the lower Susquehanna River watershed.

The effects of climate change will also likely lead to more frequent and severe scouring events at the Project. Over the past century or so, the Northeast (including the Chesapeake Bay region) has experienced increases in the average annual temperature, amount of precipitation, and amount of extreme precipitation events, and these trends are expected to continue and strengthen in the coming years due to climate change.[27] These significant climate-related impacts must be considered by MDE during the certification process because they will likely increase the predicted levels of scouring threshold exceedances that were originally assumed for the Project.

MDE cannot rely on the Chesapeake Bay TMDL to account for the effects of climate change, and must independently analyze the best available climate projections for the region in order to account for these additive impacts. Fundamentally, MDE has a legal obligation to consider more than mere TMDL

---

[23] *See* FSR 3.15 at i, 10-11; Michael J. Langland & Robert A. Hainly, *Changes in Bottom- Surface Elevations in Three Reservoirs on the Lower Susquehanna River, Pennsylvania and Maryland, Following the January 1996 Flood—Implications for Nutrient and Sediment Loads to Chesapeake Bay* (1997) (hereafter, "Langland & Hainly (1997)"); Langland (2009); Robert M. Hirsch, *Flux of Nitrogen, Phosphorus, and Suspended Sediment from the Susquehanna River Basin to the Chesapeake Bay during Tropical Storm Lee, September 2011, as an Indicator of the Effects on Reservoir Sedimentation on Water Quality* (2012) (hereafter "Hirsch (2012)").

[24] LSRWA at 78 (noting that proportion of scoured sediment loads increases with higher flows); *id.* Table 4-7 (Scour and Load Predictions for Various Flows in Conowingo Reservoir).

[25] Cornwell, J., M. Owens, H. Perez, and Z. Vulgaropulos. 2017. The Impact of Conowingo Particulates on the Chesapeake Bay: Assessing the Biogeochemistry of Nitrogen and Phosphorus in Reservoirs and the Chesapeake Bay. UMCES Contribution TS-703-17. Final Report to Exelon Generation and Gomez and Sullivan. July 28, 2017.

[26] LSRWA at 65, Table 4-3.

[27] Kunkel, K. E., L. E. Stevens, S. E. Stevens, L. Sun, E. Janssen, D. Wuebbles, and J. G. Dobson, 2013: Regional Climate Trends and Scenarios for the U.S. National Climate Assessment: Part 9. Climate of the Contiguous United States, NOAA Technical Report NESDIS 142-9, *available at* https://scenarios.globalchange.gov/sites/default/files/NOAA_NESDIS_Tech_Report_142-1- Climate_of_the_Northeast_U.S_1.pdf ("Kunkel et al."); *see also* Raymond Najjar, *Climate Change in the Northeast U.S.: Past, Present, and Future*, The Pennsylvania State University, Chesapeake Climate Projections Workshop, March 7-8, 2016, available at http://www.chesapeake.org/stac/presentations/258_Najjar%20Climate%20Chesapeake.pdf ("Najjar").

compliance (or noncompliance) because MDE must also analyze whether the Project as a whole will interfere with the river's designated uses[28] and narrative water quality standards under the expected climate conditions in the coming decades. The Chesapeake Bay TMDL does not analyze the effects of the Conowingo Dam on Maryland's state water quality standards under any conditions, much less under the projected future climate in the Northeast, and this climate analysis is an essential component of the state certification process. Furthermore, any increases in nutrient and sediment pollution from the Dam due to climate change were simply not considered in the Chesapeake Bay TMDL.

The TMDL's assumptions about pollution levels did not account for the additive effects of climate change. In fact, only a very vague and preliminary assessment of climate change was completed for the Chesapeake Bay TMDL as a whole in 2010, due to limitations in the modeling that was available at the time.[29] Although the TMDL's Midpoint Assessment is incorporating more up-to-date information about the impacts of climate change,[30] it remains unclear precisely how climate change impacts will change the TMDL load allocations, if at all.[31] Moreover, there are no indications the Midpoint Assessment will consider the impacts of climate change on the Conowingo Dam's specific effects. MDE must complete its own, independent analysis of the effects climate change will likely have on the Conowingo Dam Project's impacts to Maryland's water quality standards. This is consistent with the "Goals and Outcomes" in the Chesapeake Watershed Agreement of 2014, p. 14, which call on the Bay Partners to address the need for "climate resiliency." In the Agreement the Bay Partners committed to, among other things, "pursue, design and construct restoration and protection projects to enhance the resiliency of Bay and aquatic ecosystems from the impacts of coastal erosion, coastal flooding, more intense and frequent storms and sea level rise." These objectives must be considered by MDE and Exelon in the context of any license renewal for the Conowingo Dam.

Finally, the Lower Susquehanna River Watershed Assessment (LSRWA) had some key findings in terms of the Dam's effects on dissolved oxygen, water clarity, and chlorophyll *a* concentrations (See Attachment 1) - as outlined in the attached Comment from the Chesapeake Bay Foundation (See Attachment 2). We also attached a letter from Waterkeepers Chesapeake and an independent third-party review that further discusses this issue in detail (See Attachment 3).

3. Recommendations

Under the CWA, Maryland is responsible for setting forth any effluent limitations or any other conditions or limitations and monitoring requirements that may be necessary to assure compliance with the Act, including applicable water quality standards and the Chesapeake Bay TMDL. In order to preserve the

---

[28] *See, e.g.*, 33 U.S.C. § 1341(d); *PUD No. 1 of Jefferson Co. v. Wa. Dep't of Ecology*, 511 U.S. 700 (1994) (holding that state water quality standards, including minimum stream flow requirements, should be enforced through § 401 certifications); *Anacostia Riverkeeper Inc. v. Jackson*, 798 F.Supp.2d 210, 238 (D.D.C. 2011) (holding that a state's total maximum daily loads for a water body must ensure protection of all state water quality standards, including *all* designated uses and water quality criteria, in order to satisfy the CWA); *AES Sparrows Point LNG v. Wilson*, 589 F.3d 721, 733 (4th Cir. 2009); *Islander East Pipeline Co., LLC v. McCarthy*, 525 F.3d 141 (2d Cir. 2008); *see also supra* part I.C of these comments.

[29] EPA, Chesapeake Bay TMDL, App. E, https://www.epa.gov/sites/production/files/2015-02/documents/appendix_e_climate_change_final.pdf.

[30] EPA, Chesapeake Bay TMDL 2017 Mid-Point Assessment: Guiding Principles and Options for Addressing Climate Change Considerations in the Jurisdictions' Phase III Watershed Implementation Plans (Dec. 13, 2016), http://www.chesapeakebay.net/channel_files/24456/ii.f._climate_options_for_phase_iii_wips_cr wg_briefing_document_12.13.16.pdf.

[31] *See, e.g.*, *Chesapeake Bay TMDL 2017 Midpoint Assessment Policy Options and Implementation Considerations for Addressing Climate Change in Jurisdictions' Phase III Watershed Implementation Plans* (Sept. 6, 2017) (noting that the relevant committee has not yet decided whether to change the TMDL's quantitative load allocations to account for the impacts of climate change), *available at https://www.chesapeakebay.net/channel_files/25446/mpa_climate_change_policy_option_briefi ng_memo_wqgit_090617.pdf.*

state's water quality standards, the state must address two separate problems - the sediment that is trapped in the Dam's reservoir and the sediment now flowing through the Dam due to its inability to trap any more sediment. Any Section 401 certification issued to support a renewed FERC license for the Conowingo Dam Project must include: (1) a number of conditions requiring Exelon to contribute financially to a specific mitigation and cleanup plan; (2) a detailed analysis of the effects of climate change; (3) a detailed analysis of the Conowingo Dam dredging pilot project that considers the potential water quality effects of adsorbed ammonia in Conowingo Reservoir that would be released during dredging; and (4) adaptive management to take into account changing conditions and pollution reduction technologies that will occur during the life of the license, as discussed below.

The mitigation and cleanup plan should include large scale pollution reduction projects, on-the-ground restoration projects, best management practices, and other projects to reduce upstream pollution and mitigate downstream impacts. For instance, measures could include financial assistance for nutrient reduction projects upstream of the Dam, in Maryland, Pennsylvania, and New York such as agricultural conservation practices, wastewater treatment plant upgrades, green infrastructure, and restoration of the system's "natural filters" (i.e., propagation of freshwater mussels and oyster restoration downstream). The goal is to have mitigation efforts in place to ensure pollution reductions equivalent to the maximum amounts of nutrients estimated to be associated with sediments scoured from behind the Dam and any additional pollution produced as a result of the Dam's presence and operation.

We recommend that MDE require a number of cleanup actions as a condition on the license because one type of cleanup effort alone will not be enough. In assessing whether to dredge behind Conowingo Dam as one cleanup option, MDE must consider the potential water quality effects of adsorbed ammonia in the reservoir that would be released during dredging. We recommend that additional modeling scenarios be run with the new information from the Conowingo Dam dredging program, along with a review of other recent studies, about the fate, transport, form, and concentrations of nutrients and sediments from the Conowingo Reservoir, to assess the impact on water quality standards attainment. The State must act fast - if Maryland does not deal with the trapped sediment behind the Dam, all of our efforts to clean up the bay and meet the state's 2025 TMDL goals could be devastated by one major storm. Maryland cannot wait to start these cleanup efforts – Maryland must partner with Exelon and other stakeholders and start the process now. Exelon must contribute financially to a specific plan for removing sediment and must act as a partner in implementing other remedial measures.

Finally, the certification must require that the measures to reduce or eliminate pollution, including sediment overflow that are incorporated into the license reflect the need for adaptive management. Experience in working to restore the Bay and its watershed over the past several decades has taught us that as we proceed, new information becomes available, new pollution control measures will become available, and measures that today seem prohibitively expensive may become cost-effective in the future. For example, if beneficial reuse of dredged material from behind the Dam becomes a possibility, then enormous opportunities to reduce and prevent pollution will become available. Other new technologies not yet known will certainly emerge, and as performance monitoring data becomes available we will become smarter about which measures are most cost-effective. This is why in the Principles laid out on the first page of the Chesapeake Watershed Agreement of 2014 the Partners committed to "**[a]daptively manage** at all levels of the Partnership to foster continuous improvement" (emphasis in original).

In the context of the 50-year lifetime of the anticipated license renewal for the Conowingo Dam, we recommend that the certification require as a condition of the license that the pollution control strategy be revisited at least every five years at which point the licensee, MDE and other interested parties will conduct a comprehensive assessment of the performance of the pollution control measures then in

place, and opportunities to employ new technologies and measures, and accomplish the goals of pollution reduction and prevention as cost-effectively as possible so as to get the greatest environmental protection for the funds expended. Because of the importance of the Dam to the entire community, there should be an opportunity for public participation and opportunity for comment. Universities and other sources of expertise should be included in the review process.

If MDE chooses not to impose strong conditions on this certification, Maryland should deny the application outright due to its deficiencies.[32]

We thank you for the opportunity to comment on this important state action.

Sincerely,

American Canoe Association
American Rivers
Anacostia Watershed Society
Audubon Naturalist Society
Blue Water Baltimore
Coalition for Smarter Growth
Delaware Nature Society
Earth Forum of Howard County
Eastern Pennsylvania Coalition for Abandoned Mine Reclamation
Elk Creeks Watershed Association
Float Fishermen of Virginia
Friends of Accotink Creek
Friends of Lower Beaverdam Creek
Friends of St. Clements Bay
Friends of the Middle River
Friends of the Nanticoke River
Friends of the Rivers of Virginia
Lower Susquehanna Riverkeeper
Maryland Conservation Council
Maryland Environmental Health Network
Maryland League of Conservation Voters
Middle Susquehanna Riverkeeper
Nanticoke Watershed Alliance
National Parks Conservation Association
National Wildlife Federation
Natural Resources Defense Council
Nature Abounds
PennFuture
Pennsylvania Council of Churches
Piedmont Environmental Council
Potomac Conservancy
Potomac Riverkeeper Network

[32] See attached comment from Waterkeepers Chesapeake on the application's deficiencies.

Protecting Our Waters
Rachel Carson Council
Rivertown Coalition
Rockfish Valley Foundation
Savage River Watershed Association
Shenandoah Valley Network
ShoreRivers
Sierra Club - Maryland Chapter
Southwings
St. Mary's River Watershed Association
Virginia Conservation Network
Virginia League of Conservation Voters
Waterkeepers Chesapeake
West Virginia Rivers Coalition