



Maryland
Department of
the Environment

Overview of Maryland's Water Quality Certification for the Conowingo Dam

Presentation to the
Chesapeake Bay Commission

January 3, 2019

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Key Takeaways

1. We have a once-in-a-generation opportunity to get this right.
2. There is a sound scientific and legal basis for the Conowingo water quality certificate.
3. We remain optimistic about a constructive resolution.

Different Perspectives

“A homeowner on a river is not responsible for trash that floats past the homeowner’s property...

I don’t believe there is any verifiable basis for a finding that the dam causes a harm to the Bay ... the principal effect of the dam has been to actually improve water quality.”

- Exelon counsel, transcript of MDE reconsideration meeting, 10/19/2018

- Conowingo is not just a riverfront home – it’s a 4,000’ wide, 10-story dam
- It has fundamentally altered the ecosystems of the River and the Bay, resulting in negative impacts on water quality and ability to attain water quality standards
- Impounded sediment is like a loaded cannon pointed at the Bay
- Environmental benefit of renewable energy must be weighed against detrimental environmental impact
 - Dam does not qualify for Tier 1 renewable energy credits

Introduction

- Section 401 of the Clean Water Act
 - To obtain a federal license for an activity that may result in a discharge into waters of the United States, the applicant must provide the federal agency with a water quality certification (WQC)
 - WQC is a state certification that the discharge will comply with state water quality standards
 - State has 12 months to grant (with or without conditions) or deny a WQC
 - 401 is an important tool in states' efforts to protect their waters
 - Industry has repeatedly lobbied to curtail states' authority
- Conowingo Relicensing
 - Exelon applied to FERC for a new 46-year license in August 2012
 - Exelon's first request for a WQC from Maryland was made in 2013, followed by three withdraw-and-resubmit cycles
- Conowingo Water Quality Certificate
 - MDE issued a WQC with conditions to Exelon in April 2018
 - Conditions address the many ways the dam impacts the River and Bay
 - Exelon is challenging the WQC via administrative and judicial appeals

Highlights of WQC Conditions

- Dissolved Oxygen in the Bay (Nutrients)
 - Exelon must eliminate 6,000,000 lbs. of N and 260,000 lbs. of P annually
 - “Any combination of corrective strategies”, including optional fee-in-lieu
 - Credit for reductions achieved by other Bay jurisdictions (e.g., C-WIP)
- Flow Regime – Aquatic Life and Migratory Fish
 - Immediately: Implement flow regime proposed by Exelon
 - 10 years later: Implement more protective flow regime, unless Exelon demonstrates an alternate flow regime would have equal/greater benefits
- Fish Passage – Restoring Migratory Fish and Mussels
 - Compliance with Settlement Agreement between Exelon and USFWS
 - Additional plans to address invasive species and improved eel passage
- Trash and Debris
 - Builds on Exelon’s historical practice of trash and debris removal, requiring more frequent clamming and skimming

Highlights of WQC Conditions (cont.)

- Chlorophyll-A
 - Elevated chlorophyll-A levels could impact Baltimore drinking water supply
 - Exelon must monitor, and if elevated, submit a plan of correction
 - Exelon must reimburse City of Baltimore for additional treatment costs
- Impacts on Aquatic Habitat
 - Mussels
 - Turtles
 - Waterfowl
 - Sturgeon
 - etc.

Once-in-a-Generation Opportunity

- Exelon is seeking a 46 year FERC license
- Environmental progress at Conowingo has historically been slow

1928

Dam built

1908

As a condition to granting eminent domain power, the Maryland General Assembly required the dam owner to “*construct and maintain sufficient fish ways or fish ladders to permit the passage of fish*”

– 1908 Md. Laws, Chap. 268

1972

First fish lift built
(experimental)

Consequences of Slow Environmental Progress

- Almost 50 years with no required minimum flow
 - Most weekends, flow stopped entirely for 8-48 hours, leading to fish mortality and eliminating stretches of a major artery to the Bay for healthy aquatic life
 - Dam owner could literally “turn the river off”
- 60+ years with no real fishlift
 - American Shad, River Herring and American Eel fisheries decimated
 - Loss of freshwater mussel population means loss of pollution filtration
- 90 years without addressing accumulated sediment
 - Large storm events now trigger massive releases of accumulated materials and associated nutrients during a short timeframe
- 90 years without regular downstream movement of coarse sediment
 - River and upper Bay are starved of coarse sediment, harming aquatic habitat and SAV establishment
 - Less resilience to storm events

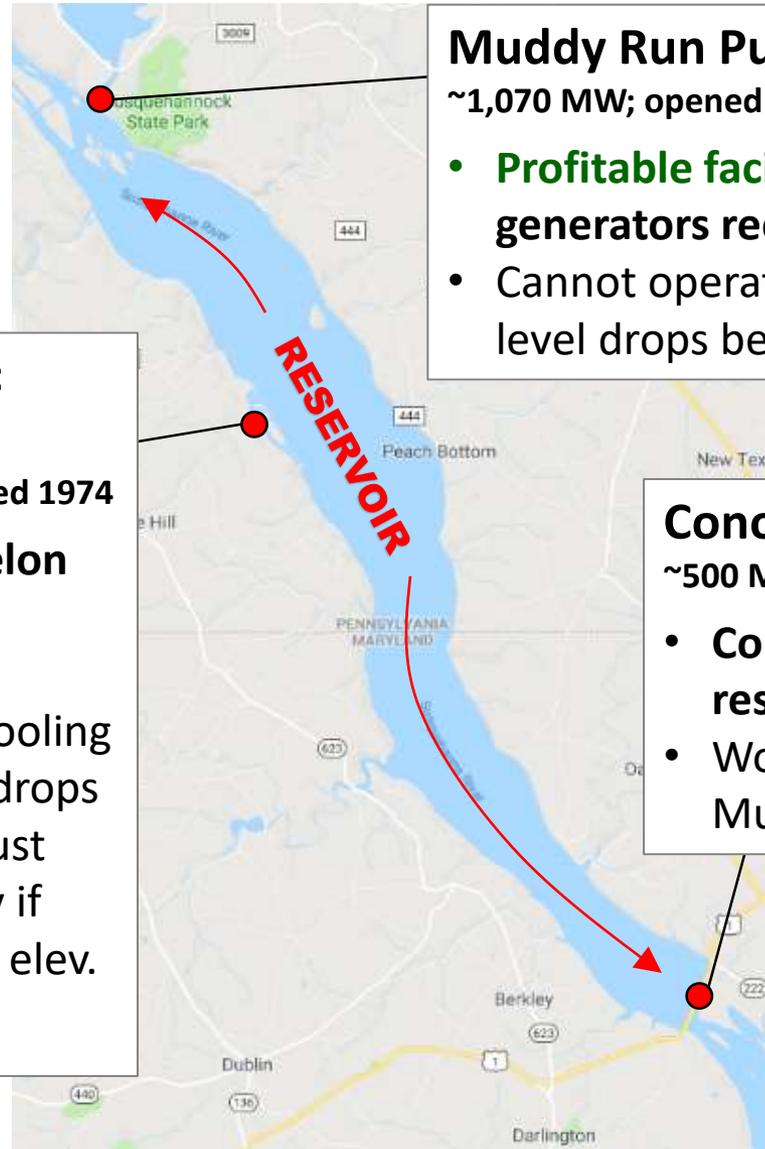
Sound Scientific and Legal Basis

- The dam has fundamentally altered the ecosystems of the River and the Bay; its discharge has negative impacts on water quality and the ability to attain water quality standards
- Legal Basis
 - Plain language of 401 and several Supreme Court cases support Maryland's actions in the Conowingo WQC
 - Industry efforts to weaken 401 actually highlight what a powerful tool it is
- Scientific Basis
 - Science shows the linkage between the WQC conditions and the dam's discharge
 - Not just using Conowingo as a scapegoat to solve a problem in the TMDL model, as has been alleged

Economic Reality

- For 90 years, the dam has generated profits for its owner
- Only a very small portion of those profits have been reinvested in environmental mitigation, and only under pressure to do so
- Meanwhile, environmental challenges have continued to compound, and now the challenges are big
- The fee-in-lieu is a reasonable estimate of the cost of solving the 6,000,000 lb. N / 260,000 lb. P problem caused by the dam

Conowingo in Economic Context



Muddy Run Pumped Storage Facility

~1,070 MW; opened 1966

- **Profitable facility**; turbines and generators recently refurbished
- Cannot operate its pumps if reservoir level drops below elev. 104.7'

Peach Bottom Atomic Power Station

~2,770 MW; units commissioned 1974

- **Profitable facility**; Exelon recently invested \$87 million in upgrades
- Begins experiencing cooling problems if reservoir drops to elev. 104.2', and must shut down completely if reservoir drops below elev. 99.2'

Conowingo Dam

~500 MW; opened 1928

- **Controls the level in the reservoir**
- Workforce shared with Muddy Run

Path Forward

- We remain optimistic about a constructive, environmentally-beneficial resolution
- The WQC
 - The strict 12-month timeline under 401, plus the burden of crafting a 46-year solution, necessitated decisive action on the WQC in April 2018
 - We are confident that the WQC will be upheld on appeal
 - But, the Bay is probably better served by a collaborative approach instead of an adversarial approach
 - MDE's door is always open
- The Conowingo WIP
 - In 2017, recognizing the TMDL requirement to account for the 6 million/260,000 pound nutrient problem caused by the dam, the Bay Partnership developed the CWIP framework
 - “Credit” provision in the WQC makes the CWIP and WQC work together
 - Going forward, the CWIP will be an important part of the multi-jurisdictional strategy to address the dam's impacts