



Elder Ghigiarelli -MDE- <elder.ghigiarelli@maryland.gov>

Water Quality Certification Application # 17-WQC-02 Digital version of my statement at the Conowingo Dam 401 Water Quality Public hearing

Dan M <dan_marinacci@hotmail.com>

Wed, Dec 6, 2017 at 12:57 PM

To: "Elder.ghigiarelli@maryland.gov" <Elder.ghigiarelli@maryland.gov>

Dear Mr. Elder Ghigiarelli, Jr,

Thank you for holding the public hearing yesterday.

Please see the attached Word document which is (a slightly edited/corrected digital version of) the document I handed to you just prior to my statements at the Conowingo Dam 401 Water Quality Certification public hearing. Perhaps having the digital version will save you some time typing.

Have a great week.

Daniel J. (Dan) Marinacci, PE

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 **I support the relicensing of Conowingo Dam rev 1.docx**
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I SUPPORT THE RELICENSING OF CONOWINGO DAM

My name is Daniel J. Marinacci, PE. I am a Registered Professional (Mechanical) Engineer in multiple states.

I earned my Bachelor's and Master's in Mechanical Engineering from West Virginia University in Morgantown, West Virginia. I am a steam turbine and gas turbine subject matter expert.

I am very fortunate living since 1980 about 20 miles from the Conowingo Dam, as I can visit often to watch and photograph Bald Eagles and other wildlife. During many visits, I meet people from round the world who come to the Conowingo Dam as it is one of the best places in the world to view and photograph Bald Eagles. I always see many fisherman, boaters and kayakers enjoying the recreation opportunities that Conowingo Dam help provide.

Top benefits that Conowingo Dam provides and other comments:

- 1) Conowingo Dam provides **huge financial, recreational and environmental benefits.**
- 2) Nutrients and sediment are **captured by, not created by the dam.** These substances are from upstream sources in the states of Maryland, Pennsylvania and New York. It is unfair to hold the dam's owners responsible for the nutrients and sediments.
- 3) The long-term solution to the sediment and nutrients issues **must be addressed by all three states involved - Maryland, Pennsylvania and New York.**
- 4) Rated at **572 Megawatts**, the Conowingo Dam is Maryland's largest source of **renewable, storable, carbon dioxide emission free power generation.**
- 5) Conowingo Dam produces about **1.6 million megawatt hours of greenhouse gas emission free electrical power annually.** That is enough electrical power to meet the annual needs of **159,000 typical households.**
- 6) Conowingo Dam is one of the best sources in all America for providing **black start power.** Black start power is the electrical power required to restart power plants once the power supplying their grid is lost.
- 7) **Flood prevention** in times of storms/spring melt off.
- 8) **Energy storage:** By wisely managing the reservoir water depth, Conowingo Dam serves as a large capacity energy storage media. By maintaining the depth of the reservoir, Conowingo can regulate and/or store Susquehanna River flow not only for flood prevention in times of storms/spring melt off but also to utilize for peak power demand periods. Thus offsetting the use of inefficient, high carbon dioxide emitting peaking power sources like old, inefficient, coal fired power plants and old, inefficient, oil fired, gas turbines.
- 9) Conowingo Dam is a huge **economic engine for NE Maryland** directly delivering **\$273 Million** in economic benefits locally. It provides about 265 equivalent full time jobs.
- 10) Conowingo Dam pays **\$10 Million annually in state and local taxes** including \$3.8 million in property taxes.
- 11) Conowingo Dam drives regional tourism by **attracting 250,000 recreational visitors** each year. In 2010, Cecil and Harford counties saw over \$200 million of economic activity due to tourism.

Today's society demands massive amounts of power generation. All forms of power generation have issues. Being a West Virginia native, I am very aware of damage done to the environment by both strip and deep coal mining activities in the form of acid runoff and landscape damage. Coal mining is also a very dangerous occupation for many reasons, as I know firsthand. My grandfather was crippled for life because of a coalmine cave in. Air and water pollution issues associated with burning coal are also well known by not only West Virginians but also people worldwide.

The majority of climate scientists accept **carbon dioxide emissions are causing climate change**, which in turn is causing a greater number of and more severe storms like hurricanes. Last September when Hurricane Irma made landfall, it did so within a few miles of my Cousin Brenda's home in Bonita Springs, Florida. Unlike many parts of Bonita Springs, she owns a newly construction home that was built to extremely demanding codes which dictated roofs/windows/shutters that could withstand category 5 hurricanes. Thanks to the codes and tons of heavenly luck, she and her home stood up physically well to the ravages of Hurricane Ira. I wish I could say the same for her place of employment. I also wish I could say Brenda came thru the storm as well mentally as her home did physically.

Conowingo Dam is one of the biggest and best sources in not only America - but worldwide as well - for renewable, carbon dioxide free, power generation with the added benefit of energy storage. As discussed above, Conowingo Dam offers many other benefits and is not the source of the nutrient and sediment. Therefore, its **401 Water Quality Certificate should be issued** and its long term power generation license should be renewed ASAP. **Preventing the renewal of its license due to nutrient and sediment (which comes from upstream) issues would be a major disservice to the local, Maryland's and America's long-term well-being.**

Sincerely,

Daniel J. Marinacci, PE

December 6, 2017