

PROTEST OF DEQ'S PERMIT AUTHORIZING  
CAROLINE COUNTY'S WATER INTAKE APPLICATION  
VMRC JPA #2020-0514/DEQ VWP #20-0514

To: ECCA Board of Directors and Advisory Board Members.

June 9, 2024

RE: Caroline County's Proposal for a Water Intake Structure

The Virginia Department of Environmental Quality (DEQ) has made a tentative decision to grant Caroline County's application to build and operate a water intake structure that will initially **withdraw on a continuous basis 7.90 million gallons from the Rappahannock River, increasing to a maximum of 13.90 million gallons per day.** This is a multi-year permit with a term of 15 years during which period the maximum volume of water authorized by DEQ could be increased. The location of Caroline's proposed water intake structure is approximately 8 miles north of Port Royal on property owned by Cory Garrett. Cory and his family strongly oppose Caroline's permit application and have refused to consider selling any portion of their family farm to Caroline. The Garrett family now faces the possibility that a portion of their property will be involuntarily taken from them through condemnation proceedings brought by Caroline using its power of eminent domain.

The ECCA, Friends of the Rappahannock, the Rappahannock Tribe, and other conservation groups have expressed strong concerns over Caroline's actions and the impact its water intake structure will have on protected aquatic species of life in the Rappahannock such as striped bass, shad, herring, and sturgeon. ECCA has also raised additional concerns in letters and FOIA requests to Caroline and DEQ that have largely been ignored. A full list of ECCA's concerns is attached for your review. **Understand clearly** that the millions of gallons of water Caroline proposes to take from the Rappahannock is not because the water is necessary for the current public service needs of its residential population or even its projected public service needs for residential growth. Instead, millions of gallons will be used to support Caroline's goals for industrial development which include massive data centers that on average use hundreds of thousands of gallons of water each day to cool electronic sensors. Data centers are clearly not public service entities and the water they require should not be labeled or disguised as a "municipal public water supply" need. Yet this is exactly what DEQ has done in the draft permit it has tentatively approved. In short, **Caroline's water intake proposal calls for the use of millions of gallons of Rappahannock water earmarked for an industrial purpose that serves economic and political goals, not the water usage needs of Caroline's residents or the traditional "municipal public water supply" needs of the county.** If allowed, Caroline's permit would establish a dangerous precedent with far reaching consequences to the Rappahannock and other rivers in Virginia. To understand the danger to rural Virginia and its rivers, realize that the data center expansion in Northern Virginia where more than 200 data centers are already located or planned is continuing. It now includes Spotsylvania, Stafford, King George, Caroline, Louisa, and Hanover with no end in sight. Each data center has sensors that must be cooled and water is the cheapest way to do this.

ECCA will file its letter opposing Caroline's permit application and we are urging our board members and others to take the same action. Individual protest letters by our members are important because they must be accepted and considered by DEQ, whereas a protest letter by ECCA may be viewed as a single protest. The more protest letters filed, the better our chances are of stopping the issuance of the water intake permit Caroline is seeking.

If you share our concerns over Caroline's water intake proposal and the dangerous precedent it sets, please consider submitting your own protest letter to DEQ by email addressed to Eric Seavey at [Eric.Seavey@deq.virginia.gov](mailto:Eric.Seavey@deq.virginia.gov). Mr. Seavey has replaced Elizabeth Gallup, the person listed in DEQ's public notice, as the DEQ contact person to receive public comments. Ms. Gallup has left the agency. If you have already sent your protest comments to Elizabeth Gallup, you should consider resending your comments by email or regular mail to Mr. Seavey. Time is of the essence. **Your protest comments must be received by DEQ on or before June 18, 2024.** ECCA recommends that you also send a copy of your protest letter by email to Randy Owen, the Habitat Manager of the Virginia Marine Resources Commission. Mr. Owen's email address is [Randy.Owen@mrc.virginia.gov](mailto:Randy.Owen@mrc.virginia.gov). Please be sure to list the VMRC and DEQ case numbers on your letter. The case number for VMRC is JPA #2020-0514 and for DEQ is VWP #20-0514. If you choose to mail your protest letter which may be easier, the mailing addresses for VMRC and DEQ are as follows:

\*Randy Owen, Habitat Manager, VA Marine Resources Commission, Building 96, 380 Fenwick Road, Ft. Monroe, VA 23651

\*Eric Seavey, Manager, Water Withdrawal Permitting, VA Department of Environmental Quality, P.O. Box 1105, Richmond, VA 23218, street address 1111 E. Main Street, Suite 1400, Richmond, VA 23219

Your individual protest letter does not need to be lengthy. Your opposition expressed in your own words is what is most important. It is also important that you **request DEQ to schedule a public hearing** where the concerns of citizens can be voiced and heard.

Thank you.

Lisa Mountcastle  
Hill Wellford

## **ECCA's SUMMARY Of CONCERNS:**

### **(1) DEQ's Draft Permit For Caroline's Withdrawal Of Water From The Rappahannock Is Not For A Normal "municipal public water supply" Use Authorized By Virginia law.**

Caroline County's application for a permit to withdraw up to maximum of 13.90 million gallons of water each day from the Rappahannock is **not based on the normal water usage needs of Caroline residents or the public service needs of Caroline County**. Without consultation or consent from the other counties that border the lower Rappahannock and share the water, Caroline proposes to take millions of gallons from the river to support the expansion of huge data centers that Amazon plans to build. Data centers have sensors that must be cooled to keep them from overheating and huge amounts of water are the cheapest way to do this. Thousands of acres of rural lands in Northern Virginia have already been destroyed where data centers have been built. Now data centers are expanding into Caroline, King George, Spotsylvania, and Stafford. **NPR News reports that even "a mid-sized data center consumes about 300,000 gallons of water a day, or about as much as 1000 U.S. households."** A report in **Techtarget.com published in January 2024 stated that a Google data center consumes on average 450,000 gallons of water each day. The Techtarget report noted that "Amazon does not disclose its total water consumption."** We now know from our review of recently released DEQ documents pertaining to Caroline County's Water Intake proposal that Caroline will use water from the Rappahannock to support the industrial requirements of at least three industrial data centers, called "Project Tract, Project Clean Arc, and Project Tricycle." It is apparent that these are placeholder names, not names that identify the actual data centers. The DEQ "Permit Decision Rationale" provisions (page 10) on the water requirements for these data centers states that Caroline's projections are "estimations" based on industry research and literature about data centers generally, rather than projections of actual water needs of identifiable users. News articles discovered by ECCA identify the following data centers planned by Amazon for Caroline County: Carmel Church Data Hub Complex, Valco Data Center Park, and Orrock Data Center Campus. There are likely to be more as the unrestrained expansion of data centers continues.

Water withdrawn from the Rappahannock to cool the sensors of an industrial data center cannot be categorized as a bona fide "municipal public water supply" use. But that is what DEQ has done in the draft permit it has issued for Caroline. The draft permit clearly states: "The permitted withdrawal will be used to provide a municipal public water supply" and that "Other uses are not authorized by this permit." However, DEQ then proceeds to include the water requirements of the data centers in its authorized use of the water to be withdrawn by Caroline. Amazon is clearly not a public service entity. It is an out-of-state

corporate enterprise, existing for the benefit of its executives and shareholders, which offers no public service benefits to the residents of Caroline or any municipality.

DEQ should never have issued a draft water withdrawal permit to Caroline. ECCA believes that DEQ's action, if implemented, would be a violation of Virginia's Public Trust Doctrine. That doctrine requires that the Commonwealth's environmental agencies (DEQ and VMRC) hold in trust and manage the natural resources of the state, including its navigable waters and wildlife, for the public's benefit. If DEQ persists in issuing the water withdrawal permit it has tentatively approved, it is ECCA's opinion that DEQ will have exceeded its authority. The draft permit should be rescinded.

We need to wake-up to what is happening and protect the Rappahannock. The Rappahannock is our SCENIC RIVER, a time-honored natural resource that requires our stewardship and protection. The Rappahannock is a treasured natural resource, a State Scenic River, not an industrial asset of a county that can be exploited to support the business development goals of county supervisors or any political agenda. Until now, Caroline's plan to draw millions of gallons of water from the Rappahannock to service data centers appears to have been an under-the-radar subject. It is now out in the open for the public to see. The permit must be denied.

**(2) VIMS Assessment Of Mortality To The Fish Eggs And Larvae Caused By The Caroline Intake Confirms Continuous Mortality But Does Not Quantify The Risk.**

The water intake structure Caroline plans to build will operate on a 24 hours a day basis. It will draw water from the river killing fish eggs and larvae by impingement, entrainment, and direct contact with the intake screen. According to a computer modeling analysis of fish mortality prepared by the Virginia Institute of Marine Science (VIMS), the mortality of fish eggs and larvae sucked through the screen of Caroline's water intake structure will be 100%, with the kill rate for those that encounter the screen assumed to be same. VIMS has said that its modeling analysis data does not establish that Caroline's single intake structure, standing alone, would likely increase concerns for the overall health risk of fish in the Rappahannock. VIMS cautioned, however, that mortalities of aquatic fauna due to surface water intakes occur throughout the Chesapeake and that **"neither data nor modeling exist that can provide a perspective on this intake's added effect on total system mortality."** VIMS concluded its report by recommending that Virginia **"pursue a comprehensive assessment of cumulative surface water intake effects."**

**(3) DEQ Has Ignored VIMS Caution That Fish Eggs And Larvae Mortality Caused By Water Intake Structures In the Same Tidal Waters Can Only Be Measured By Assessing Their Cumulative Impact.**

Although DEQ is aware of other water intake structures proposed or already existing in the Rappahannock (for example, the proposed King George data center complex), DEQ has proceeded to tentatively approve the Caroline permit without addressing its potential cumulative impact with other intake structures in the same body of water. For DEQ to

ignore the cumulative impact of water intake structures in the spawning areas of the Rappahannock where striped bass, herring, shad, and sturgeon are known to exist is a shocking omission in the regulatory process. At a minimum, DEQ should delay any consideration of approving Caroline's permit application until VIMS can conduct its recommended "comprehensive assessment of cumulative surface water intake effects." DEQ should also require independent monitoring of mortality caused by the Caroline intake structure under the supervision of VIMS or VMRC. DEQ should also insist that all reports and records pertaining to mortality and to the volume of water withdrawn at the Caroline water intake site be available for public review on the websites of VIMS and VMRC.

**(4) The Status Of The King George Data Center Proposed At The Site Of The Old Birchwood Power Plant And Its Water Intake Structure Was Not Considered.**

In 2023, King George County approved a large data center campus to be built on the banks of the Rappahannock at the old Birchwood Power site not far upriver from the Port Royal bridge and in relatively close proximity to the site of Caroline's proposed water intake structure. There was a great deal of controversy over that decision and today the status of that data center campus at the Birchwood site is not settled. There is now a new County Administrator in King George and a change in the Board of Supervisors who have not shown support for the data center plan approved by their predecessors. At this point, the data center issue in King George may be on life support, but if revived would mean that a water intake structure at the Birchwood site would again be a possibility and become an issue for DEQ and VMRC. Given this history, and current status, it is hard to understand how DEQ could justify its assessment of the Caroline water intake structure on a stand-alone basis. That would be like assessing the impact of a single straw in a punch bowl when there are multiple people using their own straws to draw liquid from the bowl at the same time. An isolated evaluation of a single water intake structure is clearly a faulty and unreliable analysis.

**(5) Time-Of-Year Restrictions On Withdrawal Of Water From The Rappahannock Are Required.**

Time of year restrictions to protect fish migration and reproductive behavior of fish species in the project site area were recommended by both VIMS and the Virginia Department of Wildlife Resources (DWR). DEQ acknowledged these recommendations in its draft permit specifying that any instream work related to the construction and installation of the water-intake structure would have to conform to time-of-year restrictions "from February 15 through June 30 and August 1 through November 15 of any year for the protection of the Atlantic Sturgeon and the Anadromous Fish Use Area at the project site." While this is important, DEQ failed to apply time-of-year restrictions on the withdrawal of water at the project site during the critical spawning seasons of these protected fish. A hiatus in the use of the water intake pumps during the spawning periods when fish eggs and larvae are most likely to be present and vulnerable should be a requirement of any permit contemplated by DEQ or VMRC. There should also be specific restrictions on any withdrawal of water during periods of drought.

**(6) The Risk Of Saltwater Intrusion If Millions Of Gallons Of Freshwater Are Withdrawn From The Freshwater Sections Of The Rappahannock Has Not Been Adequately Addressed.**

Tidal rivers like the Rappahannock are saltwater at their juncture with the Bay but become brackish as they head inland and eventually become freshwater. One impact of climate change we are already beginning to experience is an increase in salinity in the brackish waters of Virginia's tidal rivers. A report published by Virginia Tech in May 2023 on salinity in the Rappahannock addresses this issue, noting that rising sea levels due to climate change "can push saltwater further upstream in tidal rivers than in previous years." The Virginia Tech report also stated that "another factor responsible for increased salinity levels is evaporation" from the surface of the water due to warmer temperatures which intensifies the salt content of the water left behind that a farmer may be planning on using for irrigation. Farmers who rely on the Rappahannock and its tidal tributaries for irrigation have good reason to be concerned about Caroline's daily withdrawal of millions of gallons of water from the Rappahannock. When large volumes of freshwater are taken out, particularly on a continuous daily basis, the salt content of the remaining water increases. Farmers understand this. However, it is not only farmers who should have this concern. Saltwater intrusion impacts all residents of our region. It affects every user and every use of the Rappahannock's water. It is a risk that increases with the warming of our climate, with periods of draught, and with every water intake structure that DEQ grants or renews permitting withdrawal of freshwater from the Rappahannock.

**(7) There Should Be No Inter-Basin Transfer Of Water Withdrawn From The Rappahannock Into Another Water Basin.**

DEQ's decision to allow water removed from the Rappahannock and treated by Caroline to be discharged into the Mattaponi, another water basin, has no legal justification and should not be allowed. This decision appears to be based on Caroline's goal to avoid the expense of returning the discharge of treated water back into the Rappahannock. If allowed, this is a terrible precedent. The discharge water belongs to the Rappahannock and, after treatment, should be returned as freshwater to the Rappahannock. If Caroline can demonstrate that it is not feasible to return the treated discharge water back into the Rappahannock for any reason, then DEQ should require that it be stored and retained by Caroline for its future use so as to reduce the volume of freshwater to be withdrawn from the Rappahannock in the future.

**(8) DEQ Failed To Consider The Impact Of Its Decision On The Water Rights Of Other Counties That Border The Rappahannock.**

DEQ's draft decision to approve Caroline's water withdrawal application does not consider the impact of that decision on other counties in the Rappahannock river basin that border the Rappahannock in close proximity to Caroline. Regional water supply planning is supposed to be required pursuant to Virginia law. Regional planning among counties in the same river basin is particularly important now given the fact that the impact of global warming we are currently experiencing exceeds what was forecasted by our state and federal agencies just three years ago. Reasonably current data pertaining to the

Rappahannock should obviously be a critical component of DEQ's decision. A report commissioned by Virginia's General Assembly, issued in June 2021 by the Virginia Academy of Science, Engineering, and Medicine (VASEM), sent a strong warning about the impact of climate change on the Commonwealth. That report emphasized that the impact would be particularly acute in the tidewater regions of the Chesapeake where the rate of sea-level rise, land subsidence, and saltwater intrusion is "among the highest in the United States." DEQ's decision fails to acknowledge the VASEM report, which all state agencies received, and relies on data pertaining to the Rappahannock that in many instances hasn't been updated for well over five or more years. DEQ's decision also ignores recommendations in the comments of other state agencies that more reliable data of a current nature be obtained and analyzed.

**(9) DEQ's Approval Of The Water Withdrawal Permit Requested By Caroline Would Create A Dangerous And Far-Reaching Precedent.**

If Caroline is allowed to withdraw water from the Rappahannock to service data centers, all rivers in the Commonwealth where data centers are proposed to be located and where they already exist are likely to be similarly targeted by the data center industry. The waters of Virginia are intended to be protected and managed by the Commonwealth's environmental agencies (Virginia's Secretary of Natural Resources, DEQ, VMRC, and other state agencies) for the beneficial use of the public and the protection of the aquatic species of life the waters sustain. DEQ's proposed permit for Caroline sets a dangerous and far-reaching precedent that if followed is likely to result in enormous damage to the natural resources of Virginia. If Caroline is permitted by DEQ to withdraw water from the Rappahannock to be used by data centers to cool their sensors, what would stop DEQ from granting water withdrawal permits to other counties bordering rivers of the Commonwealth for the same purpose?