

AGENDA
MARINE RESOURCES COMMISSION
JUNE 23, 2026

**** APPROVAL OF AGENDA.**

- 1. MINUTES** of previous meeting.
- 2. CONSENT AGENDA ITEMS.**
- 3. CLOSED MEETING FOR CONSULTATION WITH, OR BRIEFING BY, COUNSEL.**
- 4. PUBLIC COMMENTS**
- 5. PERMITS** (Projects over \$1,000,000 with no objections and with staff recommendation for approval).
- 6. CAROLINE COUNTY DEPARTMENT OF PUBLIC WORKS, VMRC #2020-0514,**
requests authorization to install a 9 million gallon per day raw water intake structure along the south bank of the Rappahannock River, at 38.2347 N, -77.30815W, between Moss Neck and Olney Corner in Caroline County. The project is protested.
- 7. THOMAS KRAMER, VMRC #2025-1966,**
requests authorization to construct a 34-foot by 16-foot open-sided boathouse over an existing boat lift and construct timber access stairs adjacent to an existing statutorily authorized private pier serving 2749 West Landing Road, situated along the North Landing River in Virginia Beach. This project is protested.
- 8. PUBLIC HEARING**
Proposed amendments to Chapter 4VAC20-270 "Pertaining to Blue Crab Fishery" to establish season and bushel limits for the 2026-2027 commercial blue crab fisheries and to close the 2026-2027 winter commercial crab dredge fishing season.
- 9. RECOMMENDATION**
Funding recommendations from the Recreational and Commercial Fishing Advisory Board.
- 10. LICENSE STATUS REQUEST.**

AGENDA

PAGE 2 ITEMS

2A. ARMY CORPS OF ENGINEERS, VMRC #2025-2791,

requests authorization to hydraulically place up to 200,000 cubic yards of sandy dredged material, resulting from the maintenance dredging of the Winter Harbor Project Channel, upon approximately 3.6 million square feet of state-owned subaqueous bottom, creating a berm approximately 7,100 feet long with an elevation up to six (6) feet above mean low water, adjacent to undeveloped Tax Map parcels #37-A-2 and #36-A-151 along the Chesapeake Bay, near Winter Harbor in Mathews County. Staff recommends approval of the project with our standard dredge conditions and a condition requiring a time of year restriction (TOYR) of April 1 through October 31 of any given year to protect submerged aquatic vegetation (SAV). Additionally, staff recommends permit issuance be contingent upon receipt of revised cross-sectional drawings and a plan view drawing identifying the placement area relative to VIMS mapped SAV beds. The project requires a VMRC subaqueous permit.

2B. CITY OF BRISTOL, VMRC #2026-0380,

requests authorization to construct a 51-foot wide clear span replacement bridge over a 35-foot section of Beaver Creek along Goodson Street in the City of Bristol. The project requires a VMRC subaqueous permit.

2C. CITY OF BRISTOL, VMRC #2026-0379,

requests authorization to construct a 91-foot wide clear span replacement bridge over a 45-foot section of Beaver Creek along Martin Luther King Boulevard in the City of Bristol. The project requires a VMRC subaqueous permit.

2D. NORTHUMBERLAND COUNTY, VMRC #2025-2813,

requests authorization to hydraulically or mechanically maintenance dredge approximately 22,700 cubic yards of state-owned submerged lands, to a depth of minus 10 feet mean low water with beach and near shore (beneficial use) placement of sandy dredge material along properties immediately downstream of the Smith Point Inlet to the Little Wicomico River in Northumberland County. Staff recommends approval of the project with our standard dredge permit conditions. The project requires a VMRC subaqueous permit.

2E. STEPHEN RICHARD, VMRC #2025-2003,

requests authorization to remove and replace five (5) 48-foot low-profile timber groins; reconstruct one (1) 48-foot low-profile stone groin; and to install two (2) 48-foot low-profile stone groins at 199 and 221 Shellfield Road, situated along the Rappahannock River in Essex County. This project requires a VMRC wetlands permit and General Permit #2 (Groin).

2F. CHARLES TANGO, VMRC #2022-2429,

requests authorization to construct and backfill 80 linear feet of vinyl bulkhead and install 65 linear feet

AGENDA

of stone revetment at 5237 Pickett River Drive situated along the James River in Henrico County. Staff recommends approval with the purchase of Virginia Stream and Wetland Mitigation Program credits to compensate for wetland impacts. This project requires a VMRC wetlands permit.

MINUTES

COMMISSION MEETING

May 26, 2026

The meeting of the Marine Resources Commission was held at the Marine Resources Commission main office at 380 Fenwick Road, Bldg. 96, Fort Monroe, Virginia with the following present:

Joseph Grist	Commissioner
Patrick Hand	
Lynn Kellum	
A.J. Erskine	
William Bransom	
Jeremy Headley	Associate Members
Preston White	
Kelci Block	Assistant Attorney General
Gerald Pitt	1 st . Sgt., Marine Police
Justin Worrell	Deputy Chief, Habitat Management
Mike Johnson	Engineer, Habitat Management
Kirstin Travis	Engineer, Habitat Management
Kylie Harris	Engineer, Habitat Management
Ethan Simpson	Deputy Chief, Fisheries Management
Adam Kenyon	Chief, Shellfish Management

Virginia Institute of Marine Science (VIMS):

Lyle Varnell	Emily Hein	Alex Sabo

Others present:

Mike Ware	Charles Duke	Craig Palubinski
Matt Roth	Ryan Lee	Rebecca Frances
Karen Hall	David O'Brien	Wayland Hundle
Tammy Heath	Sara Jefferon	and others.

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APPROVAL OF AGENDA. – Commissioner Joseph Grist asked if there were any changes from the Board members or staff.

Justin Worrell, Deputy Chief, Habitat Management, requested Items 2B & 2C be removed from the agenda as they will be before the Commission next month. Mr. Worrell's comments are a part of the verbatim record.

Associate Member Erskine moved to approve the agenda as amended. Associate Member Headley seconded the motion. The motion carried, 5-0. Associate Member White was not present during the vote.

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MINUTES: Commissioner Grist asked if there were any changes or corrections to be made to the April 21, 2026 meeting minutes.

Associate Member Headley moved to approve the minutes as presented. Associate Member Bransom seconded the motion. The motion carried, 6-0.

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Commissioner Grist swore in the VMRC staff and VIMS staff that would be speaking or presenting testimony during the meeting.

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2. CONSENT AGENDA ITEMS:

- 3A FORD'S COLONY AT WILLIAMSBURG HOMEOWNERS ASSOCIATION, VMRC #2026-0125,** requests after-the-fact authorization to retain a 9.5-foot by 19.5-foot floating dock, a 5-foot by 12-foot kayak launch with handrails, and a 5-foot by 36-foot aluminum gangway along Gordon Creek at 3475 Westport in James City County. Staff recommends approval with triple permit fees of \$900.00, triple royalties of \$108.00, and a civil charge of \$6,000.00, which the applicant has agreed to pay, in lieu of further enforcement

action.

Justin Worrell, Deputy Chief, Habitat Management, reviewed the Consent Agenda Item for the Associate Members. Mr. Worrell’s comments are a part of the verbatim record.

Ryan Leigh, the applicant agent, agreed to the fees. His comments are a part of the verbatim record.

The matter is before the Commission for discussion and action.

Associate Member Bransom moved to approve the after-the-fact request as presented. Associate Member Erskine seconded the motion. The motion carried, 5-0-1. Associate Member White abstained.

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3. CLOSED MEETING FOR CONSULTATION WITH, OR BRIEFING BY, COUNSEL. – No meeting needed

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4. PUBLIC COMMENT:

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5. PERMITS (Projects over \$500,000.00 with no objections and with staff recommendation for approval).

Justin Worrell, Deputy Chief, Habitat Management, reviewed the Page 2 items 2A and 2B for the Associate Members. Mr. Worrell’s comments are a part of the verbatim record.

ITEMS 2B and 2C were removed from agenda at the beginning of meeting.

2A YORK RIVER YACHT HAVEN, VMRC#2026-0319, requests authorization to install and backfill 647 linear feet of vinyl bulkhead two (2) feet channelward of a failing bulkhead, install two (2) 3-foot by 35-foot finger piers and four (4)

boatlifts on F Dock, install seven (7) 3-foot by 30-foot finger piers and eight (8) boatlifts on G Dock, install 34 floating and fixed finger piers of varying widths and lengths creating 40 boat slips on H Dock with 22 boatlifts, and install a 4.5-foot by 505-foot access dock and a 6-foot by 322-foot floating access dock on H Dock - along Sarah Creek at 8109 Yacht Club Road in Gloucester County. Staff recommends approval of the project with a special permit condition to hold a pre-construction meeting with the permittee and contractor. The project requires a VMRC Subaqueous Permit.

- 2B STEPHEN RICHARD, VMRC #2025-2003**, requests authorization to remove and replace five (5) 48-foot low-profile timber groins; reconstruct one (1) 48-foot low-profile stone groin; and to install two (2) 48-foot low-profile stone groins at 199 and 221 Shellfield Road, situated along the Rappahannock River in Essex County. This project requires a VMRC Wetlands Permit and General Permit #2 (Groin).

- 2C CHARLES TANGO, VMRC #2022-2429**, requests authorization to construct and backfill 80 linear feet of vinyl bulkhead and install 65 linear feet of stone revetment at 5237 Pickett River Drive, situated along the James River in Henrico County. Staff recommends approval with the purchase of Virginia Stream and Wetland Mitigation Program credits to compensate for proposed tidal wetland impacts. This project requires a VMRC Wetlands permit.

The matter is before the Commission for discussion and action.

Associate Member Bransom moved to approve the project 2A as presented. Associate Member Erskine seconded the motion. The motion carried, 6-0.

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- 6. C. MARSHAL FLAGG, JR. and ELENA F. FLAGG, VMRC #2026-0543**, request authorization to construct two (2) 80-foot stone breakwaters and one (1) 35-foot stone spur, backfilled with clean sand and native wetland plantings for the construction of a living shoreline adjacent to 188 and 256 Bayview Lane, situated along Indian Creek in Lancaster County. The project is protested by an adjacent property owner.

Kylie Harris, Environmental Engineer, Habitat Management, gave the briefing of the information provided in the staff’s evaluation, with PowerPoint slides. for the Associate Members. Ms. Harris’s comments are a part of the verbatim record.

Agent for the applicant was sworn in and spoke. His comments are a part of the verbatim record.

The matter was before the Commission for discussion and action.

Associate Member Erskine moved to approve the project to include the modification suggested by staff as presented. Associate Member Kellum seconded the motion. The motion carried, 6-0.

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- 7. **RAYMOND CHALLONER, VMRC #2026-0182**, requests authorization to install 208 linear feet of riprap, the toe of which may be installed a maximum of 12 feet channelward of the existing bulkhead, and to remove an existing groin and top dress an existing 60-foot groin serving 15 Barclay Road, situated along the James River in Newport News. This project requires a VMRC Beaches and Dunes permit.

Kirstin Travis, Environmental Engineer, Habitat Management, gave the briefing of the information provided in the staff’s evaluation, with PowerPoint slides. for the Associate Members. Ms. Travis’s comments are a part of the verbatim record.

Karen Hall, representative of the applicant, was sworn in and spoke. Her comments are a part of the verbatim record.

The matter was before the Commission for discussion and action.

Associate Member Hand moved voted to deny the project as proposed. Associate Member Headley seconded the motion. The motion carried, 5-0-1. Associate Member White abstained.

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- 8. **CHARLES DUKE, VMRC NTC #25-05**, reconsideration of Commission order

to refer Mr. Duke to Virginia Department of Professional and Occupational Regulation for failure to comply with NTC #25-05 regarding a violation of VMRC Permit #24-1044.

Mike Johnson, Environmental Engineer, Habitat Management, gave the briefing of the information provided in the staff's evaluation for the Associate Members. Mr. Johnson's comments are a part of the verbatim record.

Mike Ware, representing Mr. Duke, spoke on behalf of the failure to comply. Their comments are a part of the verbatim record.

The matter was before the Commission for discussion and action.

Associate Member Erskine made a motion to reaffirm their March 31, 2026, decision to refer the contractor to DPOR for construction activities upon state-owned subaqueous lands without the necessary permits. Associate Member Bransom seconded the motion. The motion carried, 5-0-1. Associate Member White voted no.

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9. PUBLIC HEARING

Proposal to adopt Chapter 4VAC 20-1420., "Pertaining to Atlantic Tarpon", to establish prohibitions on recreational and commercial harvest and create further gear limitations to decrease the likelihood of mortality on the migratory population of tarpon encountered in Virginia's territorial waters.

Ethan Simpson, Deputy Chief, Fisheries Management, gave a briefing of the information provided in the staff's evaluation, with PowerPoint slides for the Associate Members. Mr. Simpson's comments are a part of the verbatim record.

There were two (2) people that spoke in support of the regulation change. Their comments are a part of the verbatim record.

The matter was before the Commission for discussion and action.

Associate Member Bransom moved to adopt Chapter 4VAC 20-1420, "Pertaining

to Atlantic Tarpon", to establish prohibitions on recreational and commercial harvest and create further gear limitations to decrease the likelihood of mortality on the migratory population of tarpon encountered in Virginia's territorial waters, including a prohibition on bringing tarpon into the boat when caught and a mandate for any commercially caught tarpon to be released into the water immediately. Associate Member White seconded the motion. The motion carried, 6-0.

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10. LICENSE STATUS REQUEST.

Adam Kenyon, Chief, Shellfish Management, gave the briefing of the information provided in the staff's evaluation, with PowerPoint slides. for the Associate Members. Mr. Kenyon's comments are a part of the verbatim record.

Douglas Whitmire has requested to have his Commercial Registration Card reinstated. Mr. Whitmire was not present.

There was no motion.

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There being no further business, the meeting was adjourned at approximately 11:03 a.m. The next Commission meeting will be on **Tuesday**, June 23, 2026.

* * * * *

Joseph Grist, Commissioner

Jamie Hogge, Recording Secretary

CAROLINE COUNTY
VMRC#2020-5014

1. Habitat Management Evaluation dated June 23, 2026.
(Page 1-4)
2. Plan drawings dated May 5, 2025.
(Pages 5-7)
3. Deed, Certificate of Take, and Plat for Parcel 4-A-15 and 4-A-15A in
Caroline County dated July 22, 2024.
(Pages 8-21)
4. VIMS Comments dated June 11, 2019, and February 24, 2023.
(Pages 22-28)
5. VIMS Final Report for Particle Tracking Model dated February 23, 2023.
(Pages 29-75)
6. Virginia DEQ VWP Individual Permit #20-0514 dated November 26,
2025.
(Pages 76-96)
7. Public Comments received through May 15, 2026.
(Pages 97-385)

All project drawings, plans and application information are available at
<https://webapps.mrc.virginia.gov/public/habitat/>

HABITAT MANAGEMENT DIVISION EVALUATION

CAROLINE COUNTY DEPARTMENT OF PUBLIC WORKS, VMRC#2020-0514, requests authorization to install a 9 million gallon per day raw water intake structure along the south bank of the Rappahannock River, at 38.2347 N, -77.30815W, between Moss Neck and Olney Corner in Caroline County. The project is protested.

Narrative

The proposed intake structure is in the tidal reaches of the Rappahannock River, approximately 13 miles downstream of the US Route 1 bridge in Fredericksburg. The Route 1 bridge is also the location of the fall line dividing tidal and non-tidal sections of the river. The project is designed to withdraw approximately 9 million gallons of water per day (mgd) to meet the projected water demands of Caroline County.

The Rappahannock River is approximately 390 feet wide with a depth of -12 feet, mean low water at the location of the proposed intake structure. The intake will extend approximately 80 feet offshore of the southern bank of the river and reside at an elevation of -8 feet mean low water from the top of the structure. The maximum depth of the river is approximately -19 feet mean low water, located approximately 120 feet channelward of the end of the intake.

The intake structure will consist of three, 42-inch wedge-wire screens situated on a tremie concrete base embedded in the river bottom. The intake screens will be connected to a 30-inch raw water line and three 6-inch air burst lines, all located within a 60-inch concrete microtunnel which will be installed via directional drill and connect to upland infrastructure. A temporary cofferdam will be installed to allow for construction activities to be separated from river flow.

Boat traffic in this part of the river consists of shallow draft personal watercraft. There are no commercial docking facilities upstream of the intake location.

The upland portion of the intake will be located on 11 acres of farmland, Tax Map Parcel #4-A-15A, that Caroline County obtained through eminent domain proceedings in July of 2024.

Issues

Pursuant to the Code of Virginia (Code) [§ 28.2-1205.1. Coordinated review of water resources projects](#), a joint public notice of Caroline County's request was posted by the Commission and the Department of Environmental Quality (DEQ) in the Free Lance Star and the Richmond

Issues (cont'd)

Times Dispatch on May 18, 2024. A total of 174 comments were received in opposition to the project with no comments in favor. The majority of the comments submitted were related to the DEQ withdrawal permit that was issued on November 26, 2025, after their public hearing on August 20, 2025. The comments centered on opposition for the use of the water for the cooling of data centers; interbasin transfers of the collected water from the Rappahannock River to be discharged into the Mattaponi River; the amount of water being withdrawn and its effects on the ecology of the river including salinity changes, and impacts to the flora and fauna of the river such as Atlantic Sturgeon and anadromous fish. Protestants include the Friends of the Rappahannock, the Mattaponi Indian Tribe and Reservation, the Upper Mattaponi Tribe, multiple citizens from the project area, and the Rappahannock Tribe, who are currently engaged in a lawsuit with the DEQ regarding permit issuance.

A subaqueous permit is required from the Commission pursuant to Code §28.2-1203 for the proposed encroachment into the state-owned submerged lands of the Rappahannock River. Although the Commission serves as the default local wetlands board for Caroline County, a tidal wetlands permit is not required given that the project is statutorily authorized by Code §28.2-1302.3.10 of the model wetlands ordinance, exempting governmental projects. The Army Corps of Engineers is still evaluating the proposal for their required permit and have not, to date, issued their individual permit.

The Virginia Institute of Marine Science (VIMS) conducted a 3-dimensional hydrodynamic particle tracking model that accurately simulates egg and larval behavior in the waterway and examines the potential for both intake entrainment and screen impingement. The model used the maximum requested withdrawal volume under documented low-flow drought conditions to simulate the environmental conditions that would maximize the probability of egg and larval mortality. Thirty-four model scenarios were run to assess the potential ecological effects of this proposal which resulted in impingement/entrainment of particles (i.e. eggs and larva) below 1% for all the model runs. Ultimately, VIMS did not consider this singular additional source of mortality to cumulatively increase concerns for the health of fish stocks in the Rappahannock River.

As part of their application package, Caroline County submitted their own model (developed by their authorized agent Hazen and Sawyer) to study the effects of the intake upon salinity in the Rappahannock River. This report was run under scenarios with larger withdrawal amounts compared to what is currently being proposed, 13.8 mgd vs. 9 mgd. VIMS reviewed the report and concluded that while sea level rise will result in upriver saltwater intrusion over time, it is unlikely that the proposed withdrawal amounts will exacerbate this phenomenon due to low withdrawal levels relative to upriver volume.

Issues (cont'd)

VIMS' additional recommendations include 1 millimeter mesh screens and a maximum intake velocity of 0.25 feet per second (fps) to protect planktonic fauna life stages. They also recommend the use of cofferdams for instream construction and an instream work time-of-year restriction (TOYR) of February 15 through June 30 for any instream construction activity.

Staff conferred with the Department of Wildlife Resources' Nongame and Endangered Species Program who advised that a TOYR is recommended to protect freshwater mussels recently surveyed from this reach of the Rappahannock River in 2024. Specifically, no work should occur instream between April 15 through June 15 and August 15 through September 30. They further recommended that a mussel survey and relocation be done six months prior to the initiation of construction instream. This is also a requirement of DEQ's recently issued permit for the proposed intake.

Section 28.2-1205.1C of the Code of Virginia states that DEQ and VMRC shall take action on water resource projects concurrently, to the extent practicable, but no more than six months apart. Since DEQ issued their permit in late November 2025, and the current application is considered to be complete, VMRC is required to act on this project at this meeting. This has been confirmed with the Office of the Attorney General.

Summary/Recommendations

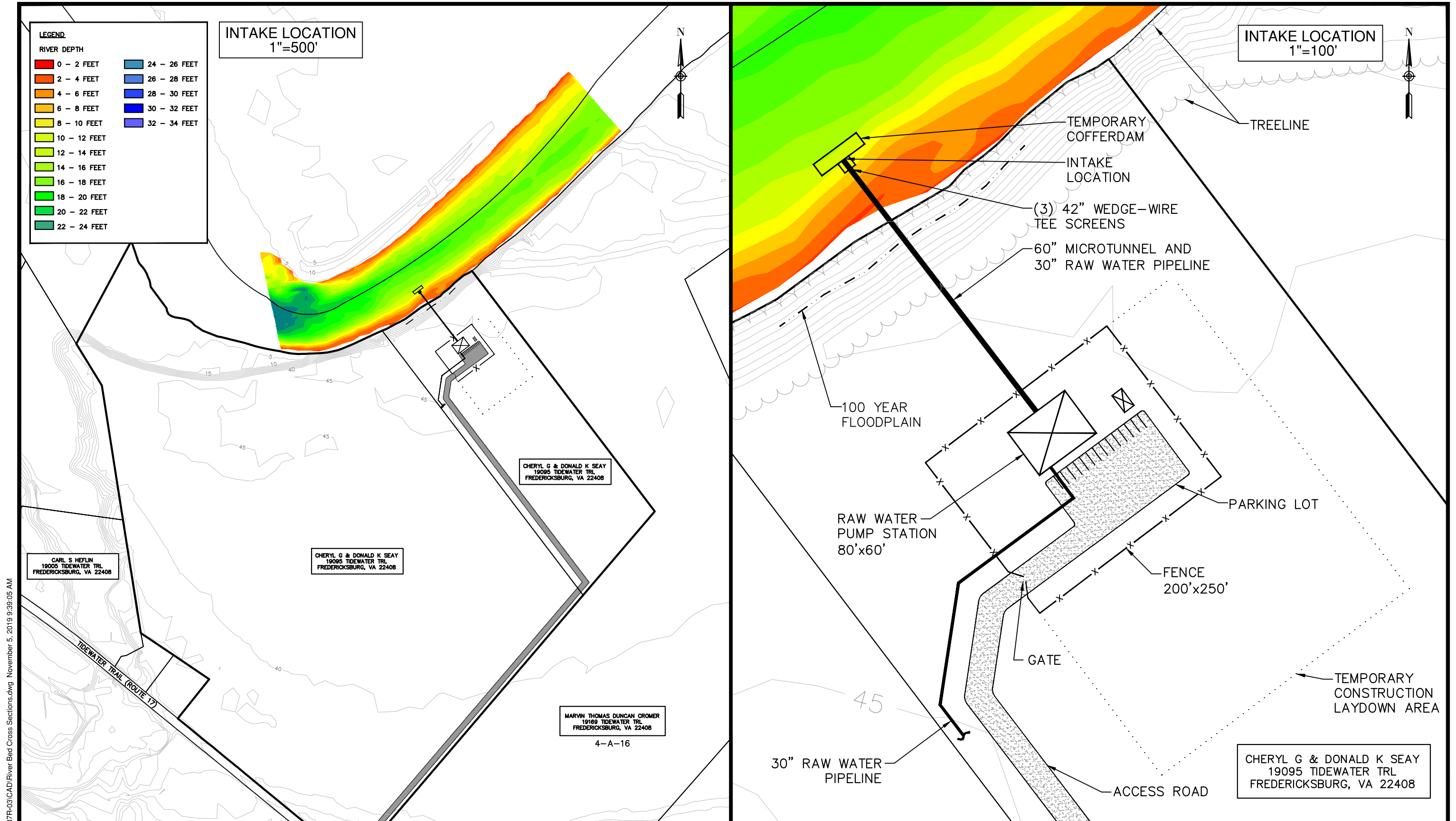
As previously stated, the project requires Commission authorization for the encroachment over state-owned submerged land pursuant to Title 28.2, Chapter 12 of the Code of Virginia. While staff acknowledges all of the protestants' concerns, it is imperative to note that the Commission's statutory jurisdiction over this project results from the physical encroachment of the intake structure over the state-owned submerged lands within the Rappahannock River. The project's impact on the water quality of the waterway is determined by DEQ's permit and not this Commission. It should be noted that the applicant has reduced the proposed withdrawal amounts from 13.9 mgd to 9 mgd. The DEQ permit states that "permitted withdrawal will be used to provide a municipal public water supply. Other uses are not authorized by this permit."

In light of the protestants' concerns with impacts to anadromous fish life history and salinity, staff solicited input from the Commission's scientific advisors at VIMS. Their particle tracking model indicated that mortality due to impingement and entrainment of planktonic fish eggs and larva was below natural mortality levels and would not have a significant impact on fish populations. Additionally, they determined salinity levels would not change due to the proposed withdrawal amounts and the volume of water upstream of the intake location.

Summary/Recommendations (cont'd)

Accordingly, in light of DEQ's jurisdiction and authority to regulate the raw water withdrawal rate, and after evaluating the merits of the project and considering all of the factors contained in Code §28.2-1205, and in Code §62.1-10 which states that public water supply uses for human consumption shall be considered the highest priority, staff recommends approval of the project as proposed. Staff believes that the anticipated public and private benefits of the proposed municipal intake exceed the anticipated public and private detriments and recommends granting the permit with the following special conditions:

- The intake shall be equipped with one millimeter mesh screens and a maximum intake velocity of 0.25 feet per second.
- The instream construction activities shall be accomplished within cofferdams constructed of non-erodible materials as detailed in the current edition of the Virginia Erosion and Sediment Control Handbook.
- An instream work TOYR of February 15 to June 30 to protect fish migratory and reproductive behavior.
- An instream work TOYR of April 15 through June 15 and August 15 through September 30 to protect freshwater mussels.
- A freshwater mussel survey and relocation must be completed six months prior to the initiation of construction instream, 100 meters upstream and 400 meters downstream.



Draper Aden Associates
Engineering • Surveying • Environmental Services

1030 Wilmer Avenue, Suite 100 Blacksburg, VA Raleigh, NC
Richmond, VA 23227 Charlottesville, VA Fayetteville, NC
804-264-2228 Fax: 804-264-8773 Hampton Roads, VA Northern Virginia Virginia Beach, VA

DESIGNED: MSH
DRAWN: JYG
CHECKED: MSH
DATE: 11/4/19

INTAKE LOCATION - PLAN

RAPPAHANNOCK RIVER WATER WITHDRAWAL

CAROLINE COUNTY, VIRGINIA

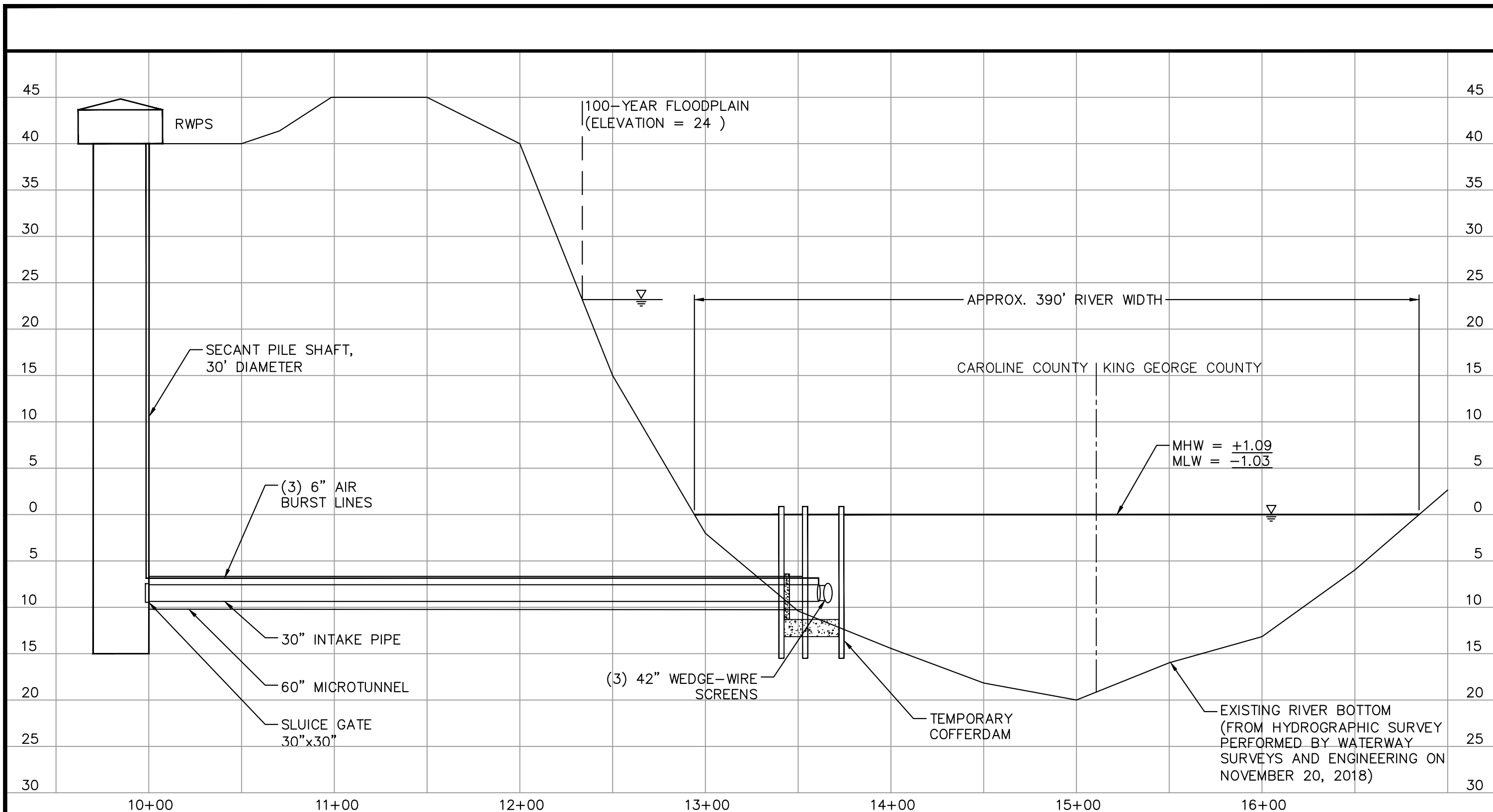
SCALE: AS SHOWN

PROJECT: R15287R-05

FIGURE

1

P:\R15200\R15287R\R15287R-03\CAD\River Bed Cross Sections.dwg November 5, 2019 9:39:07 AM

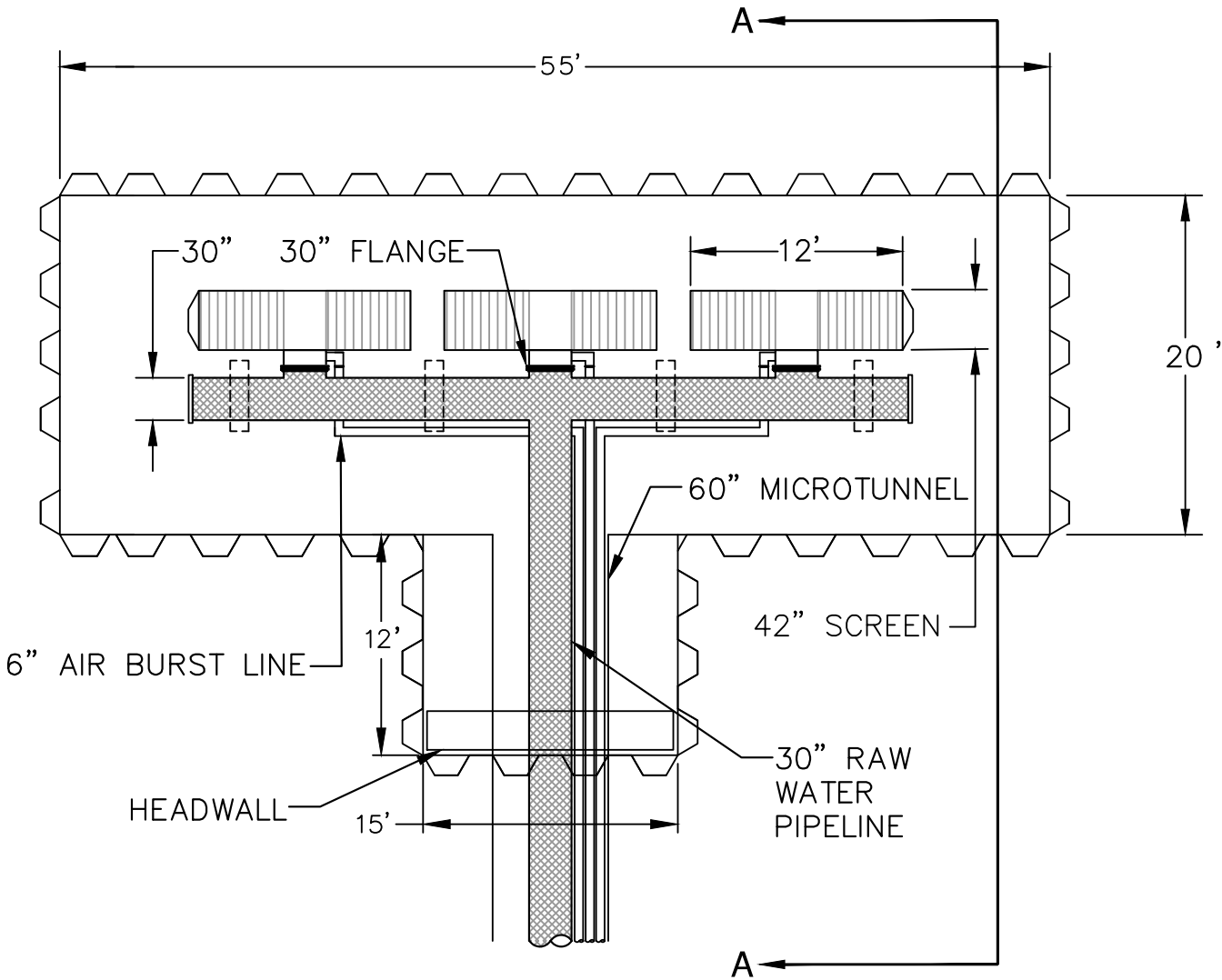


NOTE: VERTICAL AXIS IS ELEVATION IN FEET

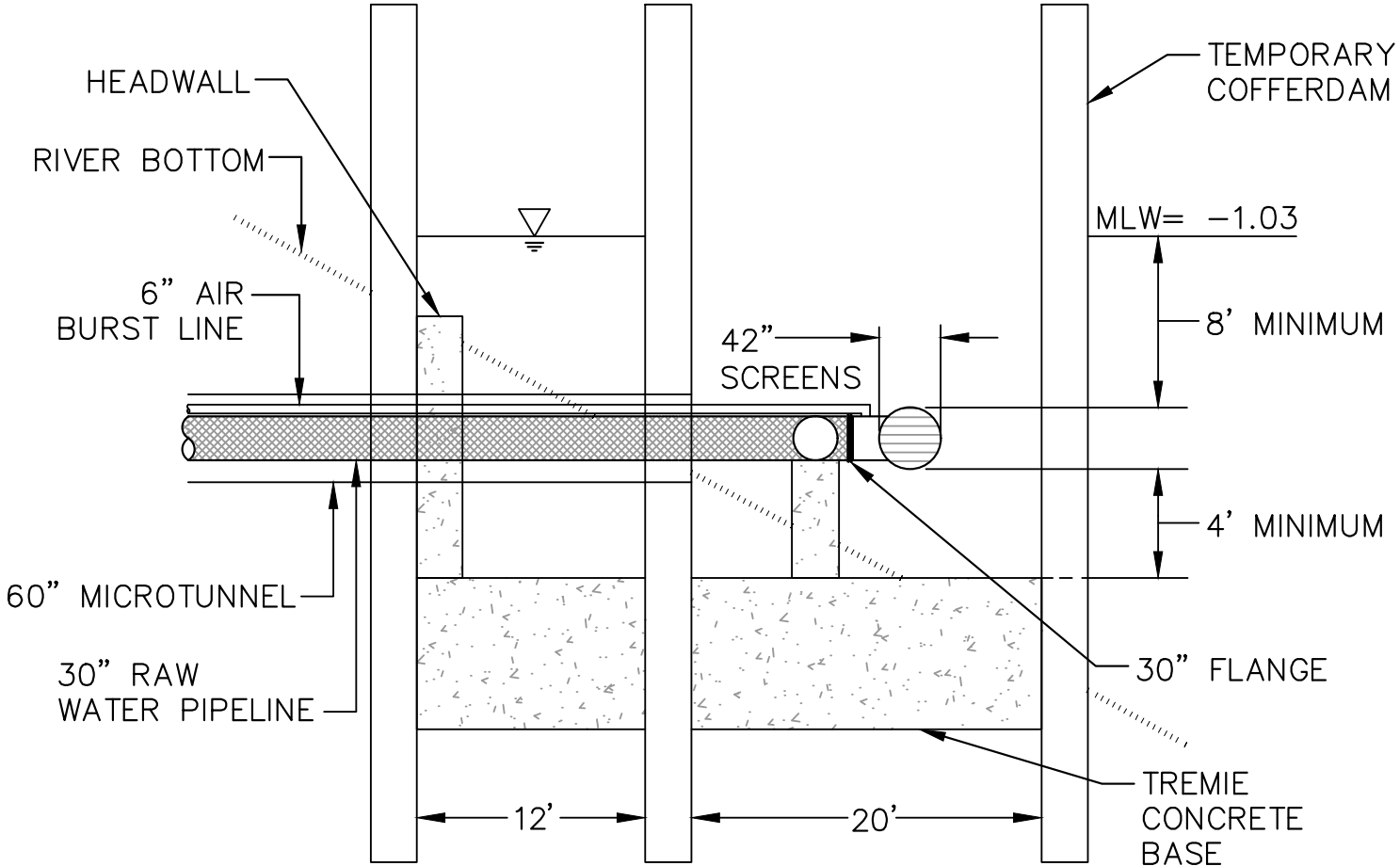
 Draper Aden Associates <i>Engineering • Surveying • Environmental Services</i> 1030 Wilmer Avenue, Suite 100 Blacksburg, VA Raleigh, NC Richmond, VA 23227 Charlottesville, VA Fayetteville, NC 804-264-2228 Fax: 804-264-8773 Hampton Roads, VA Virginia Beach, VA	DESIGNED: MSH DRAWN: JYG CHECKED: MSH DATE: 11/4/19	INTAKE LOCATION PROFILE RAPPAHANNOCK RIVER WATER WITHDRAWAL CAROLINE COUNTY, VIRGINIA	SCALE: HORIZONTAL: 1" = 50' VERTICAL: 1" = 20'	FIGURE 2
			PROJECT: R15287R-05	

ADDITIONAL INFORMATION/REVISIONS Received by VMRC May 5, 2025 /blh

INTAKE SCREENS - PLAN: 1"=10'



INTAKE SCREENS - SECTION A - A: 1"=10'



DESIGNED: MSH
DRAWN: JYG
CHECKED: MSH
DATE: 11/4/19

INTAKE LOCATION - PLAN
RAPPAHANNOCK RIVER WATER WITHDRAWAL
CAROLINE COUNTY, VIRGINIA

SCALE: AS SHOWN
PROJECT: R15287R-05

FIGURE
3

VIRGINIA LAND RECORD COVER SHEET

Commonwealth of Virginia VA. CODE §§ 17.1-223, -227.1, -249

FORM A – COVER SHEET CONTENT

Instrument Date: 7/22/2024

Instrument Type: CSH PL CSH 2 cm

Number of Parcels: 2 Number of Pages: 12

[] City [X] County CAROLINE COURT
CIRCUIT COURT

Tax Exempt? VIRGINIA/FEDERAL CODE SECTION

[] Grantor:

[X] Grantee: 58.1-811 (A) (3)

Business/Name

1 Grantor: GARRETT, CORY D.
2 Grantor: GARRETT, REBEKAH J.
1 X Grantee: COUNTY OF CAROLINE, VIRGINIA
Grantee:

Grantee Address

Name: COUNTY OF CAROLINE, VIRGINIA

Address: P.O. BOX 447

City: BOWLING GREEN State: VA Zip Code: 22427

Consideration: \$78,400.00 Existing Debt: \$0.00 Actual Value/Assumed: \$0.00

PRIOR INSTRUMENT UNDER § 58.1-803(D):

Original Principal: \$0.00 Fair Market Value Increase: \$0.00

Original Book No.: Original Page No.: Original Instrument No.:

Prior Recording At: [] City [] County Percentage In This Jurisdiction: 100%

Book Number: Page Number: Instrument Number:

Parcel Identification Number/Tax Map Number: 4-A-15

Short Property Description: MOSS NECK

JW GARRETT VIRGINIA OUTDOORS FOUNDATION

Current Property Address:

City: PORT ROYAL State: VA Zip Code: 22535

Instrument Prepared By: SANDS ANDERSON PC Recording Paid By: GRANTEE

Recording Returned To: SANDS ANDERSON PC

Address: P.O. BOX 1998

City: RICHMOND State: VA Zip Code: 23218



RECORDED IN
COUNTY OF CAROLINE, VA
SUSAN W. MINARCHI
CLERK OF CIRCUIT COURT
FILED Jul 22, 2024
AT 01:48 pm
BOOK
START PAGE
END PAGE
INSTRUMENT #
240002759

DPB

(Area Above Reserved For Deed Stamp Only)

VIRGINIA LAND RECORD COVER SHEET

Commonwealth of Virginia VA. CODE §§ 17.1-223, -227.1, -249

FORM C – ADDITIONAL PARCELS

Instrument Date: 7/22/2024

Instrument Type: CSH-PL

Number of Parcels: 2 Number of Pages: 12

[] City [X] County CAROLINE COURT
CIRCUIT COURT

Parcels Identification/Tax Map

Prior Recording At:

[] City [] County

Percentage In This Jurisdiction: 100%

Book Number: Page Number:

Instrument Number:

Parcel Identification Number (PIN)/Tax Map Number: 4-A-15A

Short Property Description: MOSS NECK
JW GARRETT PARCEL A VIRGINIA OUTDOORS FOUNDATION

Current Property Address:

City: PORT ROYAL State: VA Zip Code: 22535

Prior Recording At:

[] City [] County Percentage In This Jurisdiction:

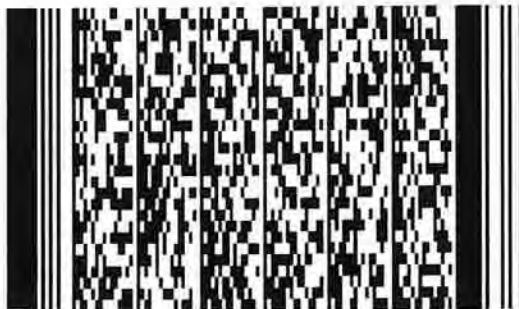
Book Number: Page Number: Instrument Number:

Parcel Identification Number/Tax Map Number:

Short Property Description:

Current Property Address:

City: State: Zip Code:



Tax Map Nos. 4-A-15 & 4-A-15A

**Exempted from recordation taxes and fees under Virginia Code
§§ 58.1-811(A)(3), 25.1-418, and 17.1-279(E)**

Owners (Grantor for Indexing Purposes)

Cory D. Garrett & Rebekah J. Garrett

County (Grantee for Indexing Purposes)

County of Caroline, Virginia

\$ 78,400.00

CERTIFICATE OF TAKE

This Certificate of Take (the "Certificate of Take") certifies that \$78,400.00, which sum has been paid into the Court, is estimated by the **COUNTY OF CAROLINE, VIRGINIA** (the "**County**") to be the fair market value of the land hereinafter described, or interests therein, and damages to the remainder, if any, owned in whole or in part by **CORY D. GARRETT & REBEKAH J. GARRETT** (the "**Owners**"), which the County has directed to be taken in conjunction with the construction, maintenance, operation, and repair of a Water Intake Facility and for all other purposes incidental thereto, for the purpose of providing essential water supply to the citizens of the County, pursuant to a resolution entitled *A Resolution Authorizing the Acquisition for Public Purposes by Purchase or Condemnation of Real Property Owned by Cory D. Garrett and Rebekah J. Garrett, or Their Successors and Assigns, Having Tax Map Nos. 4-A-15A and 4-A-15*, duly adopted by the County Board of Supervisors at its meeting on June 18, 2024, (the "**Resolution**") a copy of which is attached hereto and recorded herewith as "**Exhibit A**".

The amount specified above, or so much thereof as may be directed by the Court, will be paid by the Clerk thereof, pursuant to the Order of the Circuit Court of Caroline County, as provided by Title 15.2, Chapter 19 and Title 25.1, Chapter 3 of the Code of Virginia (1950), as amended (the "**Virginia Code**"). The land and interests therein taken are depicted on that certain plat entitled "*Plat of New Parcel and Easements on Tax Map Parcels 4-A-15 and 4-A-15A*" (the "**Plat**"), prepared by Barry M. Brown, dated July 22, 2024, which is attached hereto, incorporated herein by this reference, and recorded herewith as "**Exhibit B**," and are further described as follows:

Prepared By and Return to:

Christopher M. Mackenzie, VSB #84141
County Attorney, Caroline County, Virginia
SANDS ANDERSON PC
919 E. Main Street
Suite 2300
P.O. Box 1998
Richmond, VA 23219-1998

- A. **Fee Simple Interest.** ALL that certain parcel of land together with all improvements thereon and appurtenances thereto belonging, lying and being in the County of Caroline, Virginia, in fee simple, containing 11.105 acres, more or less, situated on real property identified as Tax Map Parcel # 4-A-15A in the Port Royal Magisterial District, Caroline County, Virginia, as more fully described and depicted as “New Parcel A” on the Plat, *see* Ex. B (the “**Fee Simple Interest**”);

BEING a portion of the same property conveyed to Cory D. Garrett and Rebekah J. Garrett, husband and wife, by Deed from Donald K. Seay and Cheryl G. Seay, husband and wife, dated November 16, 2020, recorded November 18, 2020, in the Clerk’s Office, Circuit Court, Caroline County, Virginia, in Deed Book 1406, page 620.

- B. **New Utility Easement.** The County, its employees, contractors, other agents, assigns, and successors, shall have the permanent, perpetual 20’ easement, privilege and right of access and use (including over, on across, under, and through) to lay, erect, construct, operate, maintain, and or repair (the “**New Utility Easement**”) the Water Intake Facility and all associated underground water pipes, lines, and related Facilities, together with electrical and communication lines and other utilities which are required to operate a water pumping station and to distribute water, including receiving the transmission of electricity and communications needed to operate said water pumping station, including the wires and facilities of any other public service company in aid of or to effectuate such necessary internal telephone or other internal communication purposes; for lighting purposes; and together with any other above- and/or below-ground equipment, accessories, and other appurtenances, which said New Utility Easement is more particularly described as follows:

ALL that certain area identified as “New Utility Easement” on the Plat, *see* Ex. B, with the total area of 1.622 acres, more or less, in aggregate on real property identified as Tax Map Parcels # 4-A-15 and 4-A-15A in the Port Royal Magisterial District, Caroline County, Virginia (comprised of 0.716 acres, more or less, on Tax Map Parcel # 4-A-15A and 0.906 acres, more or less, on Tax Map Parcel # 4-A-15); and

- C. **New Ingress/Egress Easement.** The County, its employees, contractors, other agents, assigns, and successors, shall have the permanent 30’ easement, perpetual privilege and right of access (the “**New Ingress/Egress Easement**” and together with the New Utility Easement, the “**Easements**”) for the purpose of ingress-egress by County and other maintenance and/or public-utility vehicles over and across the lands of the Owners, along with all other rights and privileges reasonably necessary to exercise the said New Utility Easement, which New Ingress/Egress Easement is more particularly described as follows:

ALL that certain area identified as “New Ingress/Egress Easement” on the Plat, *see* Ex. B, with the total area of 1.356 acres, more or less, on real property identified as Tax Map number 4-A-15 in the Port Royal Magisterial District, Caroline County, Virginia.

The Fee Simple Interest and the Easements (together, the “**Property**”) are taken for the purpose of constructing, operating, maintaining, and repairing the water intake facility detailed in the Resolution (the “**Water Intake Facility**”) along with all associate utility pipes, lines, and other facilities (the “**Facilities**”) and all other purposes incidental thereto.

D. Additional Terms and Conditions for the Easements. The Easements are subject to the following additional terms and conditions:

1. The County, its employees, contractors, other agents, assigns, and successors, shall have the right to lay, construct, operate, maintain, and/or repair one or more lines of underground conduits and cables and piping, including, without limitation, one or more lighting supports and lighting fixtures as the County may from time to time determine, and all wires, conduits, cables, transformers, transformer enclosures, concrete pads, manholes, handholes, connection boxes, accessories and appurtenances desirable in connection therewith within the New Utility Easement; the width of said non-exclusive easement shall extend TWENTY (20) feet in width across the lands of the Owners as shown by the Plat.
2. Water piping, electrical, or communication line facilities installed in the New Utility Easement shall remain the property of the County, its successors, and assigns.
3. The County shall have the right to trim, cut, and remove trees, shrubbery, limbs, fences, structures, or other obstructions in the Easements, including those existing at the time of execution of this Certificate of Take, deemed by the County to interfere with the proper and efficient construction, operation and maintenance of the Facilities to be installed in the New Utility Easement or access thereto through the New Ingress/Egress Easement.
4. All of the Facilities, regardless of when constructed, will remain the property of the County.
5. Owners shall not construct or otherwise place or allow on areas of the Easements (the “**Easement Areas**”) any impediments or improvements, including without limitation houses, sheds, buildings, or other structures, or install any underground utilities or facilities, or change existing ground elevation or impound any water in the Easement Area, without obtaining prior written approval of the County.
6. Owners retain the right to any use of the Easement Areas that is not inconsistent with the easement rights herein conveyed and does not interfere with the use of the Easements by the County for the purposes named. No vegetation other than (i) grass, (ii) shrubbery, and (iii) flowers and vegetable plants with root systems that extend no more than 12 inches below the surface at maturity may be planted in the New Utility Easement, provided, however, that such flowers, shrubbery and vegetable plants are planted at Owners’ risk and the County shall have no obligation to replant such flowers,

shrubbery and vegetable plants nor to compensate Owners for such vegetation in the event such vegetation is damaged or destroyed during the exercise of the County's rights under the Easements. Only grass and similar vegetation may be planted in the New Ingress/Egress Easement.

7. The Easements shall run with the land. The County, its agents, successors, and assigns shall have full and free use of the Easements for the purposes named and shall have all rights and privileges necessary to exercise use of the Easements.

E. Virginia Outdoors Foundation's Open-Space Easement Not Subject to Certificate of Take. The Property acquired by the County in this Certificate of Take is encumbered by that certain Open-Space Easement held by Virginia Outdoors Foundation ("VOF"), as more particularly described in Deed Book 1518, page 1, recorded in the Clerk's Office, Circuit Court, Caroline County, Virginia, on October 28, 2022, as the same may be amended or revised in accordance with its terms and controlling statutory authority (the "**VOF Easement**"). The VOF Easement is not the subject of the condemnation described herein. The County's public use of the Property acquired in this Certificate of Take may be accomplished in accordance with the terms of the VOF Easement and/or the statutory framework pursuant to which it was created, including Va. Code § 10.1-1701, and without negative impacts to the conservation values and purposes of the VOF Easement. Additionally, upon the County's acquisition of the Property, the County may elect to obtain approval from the VOF's Board of Trustees for conversion and diversion of the Property as provided in § 10.1-1704 of the Virginia Code as provided for in Para. 15 of the VOF Easement.

The interests described herein are part of the same real estate conveyed to Cory D. Garrett and Rebekah J. Garrett, husband and wife, by Deed from Donald K. Seay and Cheryl G. Seay, husband and wife, dated November 16, 2020, recorded November 18, 2020, in the Clerk's Office, Circuit Court, Caroline County, Virginia, in Deed Book 1406, page 620.

[SIGNATURE PAGE FOLLOWS]

COUNTY OF CAROLINE, VIRGINIA

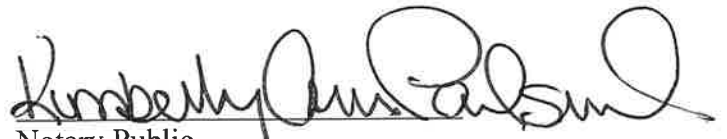
By: 
Charles Culley, County Administrator

Date: 7/22/24

COMMONWEALTH OF VIRGINIA
COUNTY OF ~~CAROLINE~~, to wit:

Hanover
I, the undersigned Notary Public in and for the jurisdiction aforesaid, do hereby certify that Charles Culley, County Administrator of the County of Caroline, Virginia, whose name is signed to the foregoing Certificate of Take, appeared before me and personally acknowledged the same in my jurisdiction aforesaid.

Given under my hand and seal this 22nd day of July, 2024.


Notary Public

My commission expires: 12/31/2025
My commission no. 255315

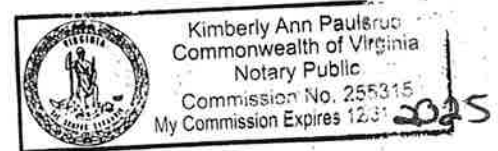


EXHIBIT A

A Resolution Authorizing the Acquisition for Public Purposes by Purchase or Condemnation of Real Property Owned by Cory D. Garrett and Rebekah J. Garrett, or Their Successors and Assigns, Having Tax Map Nos. 4-A-15A and 4-A-15

Caroline County, Virginia

Board of Supervisors

Jeffrey S. Black
Western Caroline District

Clayton T. Forchand
Madison District

Nancy L. Long
Port Royal District

Jeffery M. Sili
Bowling Green District

Floyd W. Thomas
Mattaponi District

Reginald L. Underwood
Reedy Church District

Charles M. Culley, Jr.
County Administrator

Caroline County, VA



R26/24

**A RESOLUTION AUTHORIZING THE ACQUISITION FOR PUBLIC
PURPOSES BY PURCHASE OR CONDEMNATION OF REAL PROPERTY
OWNED BY CORY D. GARRETT AND REBEKAH J. GARRETT
OR THEIR SUCCESSORS OR ASSIGNS HAVING
TAX MAP NOS. 4-A-15A & 4-A-15**

WHEREAS, the County of Caroline, Virginia (the "**County**"), has a need for a new water-intake facility in the Port Royal district of the County that will provide for the water supply to the County and its citizens (the "**Water Intake Facility**"); and

WHEREAS, the providing of water services and maintaining adequate water supply is a public purpose for which the County is authorized to enter upon and take possession of property before the conclusion of condemnation proceedings, including the procedures in Chapter 3, § 25.1-300 *et seq.*, of Title 25.1 of the Code of Virginia of 1950, as amended (the "**Code**"); and

WHEREAS, pursuant to § 15.2-1901, § 15.2-1901.1, § 15.2-1902, § 15.2-1903, and § 15.2-1904 of the Code, the County is authorized to acquire by condemnation, necessary land to permit the construction and operation of the Water Intake Facility in order to provide water to the residents of the County, and the County is vested with the power of eminent domain for the acquisition of land for the purposes of such public use; and

WHEREAS, the Board of Supervisors finds that it is necessary to obtain certain property on Tax Map Nos. 4-A-15 and 4-A-15A, including approximately 11.105 acres of land fronting the Rappahannock River on Tax Map No. 4-A-15A, and easements on Tax Map No. 4-A-15, which is located along Route 17, Tidewater Trail, Moss Neck, Rappahannock Academy, in the County (the "**Property**"), owned by Cory D. and Rebekah J. Garrett (the "**Owners**"), their successors and assigns, to be used for the construction and operation of the Water Intake Facility; and

"Committed To Service, Dedicated To The People"

212 North Main Street, P. O. Box 447, Bowling Green, Virginia 22427
(804)633-5380 – Telephone (804)633-4970 – Fax

www.co.caroline.va.us

WHEREAS, the County has made a bona fide but ineffectual effort to purchase the Property from the Owners, having previously established the just compensation therefor to be \$78,400.00 and having promptly offered in writing to pay the same to the Owners, which offer was rejected; and

WHEREAS, the County has made every reasonable effort to acquire the Property by negotiation; and

WHEREAS, a public hearing on the subject matter of this Resolution was duly held on June 18, 2024, as required by §§ 15.2-1903 and -1905(C) of the Code, at which the Board of Supervisors declared its intent to enter and take the Property for the purposes of supplying water to the citizens of the County, an inherently public use under Code § 15.2-1904(A); and

WHEREAS, the compensation offered to the Owners by the County for the Property is \$78,400.00, in accordance with the County's determination of just compensation therefor;

NOW, THEREFORE, BE IT RESOLVED, that, after due consideration, the Caroline County Board of Supervisors hereby approves and adopts the following resolutions.

RESOLVED, that the construction, operation and maintenance of the Water Intake Facility is approved as a critical public use, necessary to ensure adequate water supply for the health, safety and welfare of the members of the public served by the County; and be it

FURTHER RESOLVED, that the acquisition of the Property by purchase, condemnation or other means, free and clear of any and all liens, judgments, deeds of trust, leases or other conflicting encumbrances, is approved, such acquisition being necessary for the construction of the Water Intake Facility; and be it

FURTHER RESOLVED, that the Property will be used by the County for the Water Intake Facility in furtherance of its public and governmental functions pursuant to the Virginia Code, and that that the acquisition of the Property is for a water facility, which is a public use pursuant to § 1-219.1(A)(i) and (D)(iii) of the Code; that no more private property is being taken than that which is necessary to achieve the public use intended by and for the Water Intake Facility; and that this Resolution otherwise complies with § 1-219.1; and be it

FURTHER RESOLVED, that the County previously has made bona fide efforts to acquire the Property from the Owners, but, to date, those efforts have been ineffectual; and be it

FURTHER RESOLVED, that the County does hereby authorize its County Administrator, staff, and County Attorney, respectively, to take all actions for and on behalf of the County which are or may be appropriate or necessary for the County to acquire the Property through the exercise of its power of eminent domain, including, but not limited to, any actions or proceedings necessary to achieve the transfer of defeasible title by certificate of take pursuant to the procedure established in Chapter 3, § 25.1-300 *et seq.*, Title 25.1 of the Code; the filing of any papers or pleadings with the Circuit Court of Caroline County, Virginia; and other actions related to the initiation of any legal proceedings necessary or appropriate to acquire the Property by eminent domain, *provided, however*, that nothing in this Resolution shall be construed as preventing the continued negotiation by the County Administrator, staff, and/or County Attorney for the acquisition by purchase or other means of the Property before the initiation of any such eminent domain proceedings; and be it

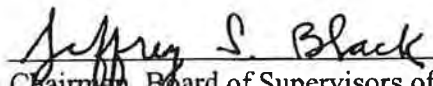
FURTHER RESOLVED, that the Board of Supervisors authorizes the payment into the court or to the clerk thereof, for the Owners' benefit, the sum of \$78,400.00, or the issuance of a certificate of deposit in lieu of payment pursuant to Code §§ 15.2-1904(D) and 25.1-305(A)(2), to be issued by the County Administrator or his designee and countersigned by the Deputy County Administrator for Finance for availability of funds; and be it

FURTHER RESOLVED, that all the actions taken by the County Administrator, staff, and County Attorney in connection with this matter are hereby ratified and confirmed; and be it

FURTHER RESOLVED, that this Resolution shall take effect immediately; and be it

FINALLY RESOLVED, that a copy of this Resolution be filed with the papers of this meeting.

ADOPTED this 18th day of June 2024.


Chairman, Board of Supervisors of
Caroline County

Attest:

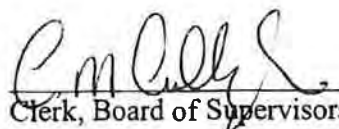

Clerk, Board of Supervisors

EXHIBIT B

Plat of New Parcel and Easements on Tax Map Parcels 4-A-15 and 4-A-15A

Plat Cabinel 4 pages 305A + 305B

INSTRUMENT # 240002759
RECORDED CAROLINE CIRCUIT COURT CLERK'S OFFICE
Jul 22, 2024 AT 01:48 pm
SUSAN W. MINARCHI, CLERK by DPB

NOTES

1. BUILDING SETBACK LINES SHALL CONFORM TO CHAPTER 12-1 OF THE CAROLINE COUNTY CODE.
2. ALL OF THE SUBJECT PARCELS ARE LOCATED IN THE PORT ROYAL DISTRICT.
3. ALL OF THE SUBJECT PARCELS ARE LOCATED WITHIN A VIRGINIA OUTDOORS FOUNDATION OPEN SPACE EASEMENT PER D.B. 1518 PG. 1.
4. SOURCE OF MERIDIAN: NAD83 BASED UPON GPS OBSERVATIONS BY TRC ENGINEERS, INC. ON 4/19/2022.
5. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR TITLE REPORT AND ALL EASEMENTS AND ENCUMBRANCES THAT MIGHT BE DISCLOSED IN A TITLE SEARCH MAY NOT BE SHOWN.
6. THIS PROPERTY IS SUBJECT TO THE REQUIREMENTS OF THE CAROLINE COUNTY CHESAPEAKE BAY PRESERVATION AREA OVERLAY DISTRICT. ANY FUTURE ACTIVITY MAY REQUIRE A SITE SPECIFIC RPA DETERMINATION. ACTIVITIES WITHIN THE RPA ARE SUBJECT TO THE CRITERIA REGARDING ENCROACHMENTS, MODIFICATIONS, OR OTHER ALLOWABLE ACTIVITIES, AS SPECIFIED BY THE CAROLINE COUNTY CHESAPEAKE BAY PRESERVATION ACT PROGRAM. ON-SITE SEPTIC SYSTEMS ARE SUBJECT TO THE SEPTIC PUMP/OUT AND RESERVE DRAINFIELD REQUIREMENTS OF THE CAROLINE COUNTY CSBA PROGRAM.
7. THE PROPERTIES SHOWN HEREON APPEAR TO BE LOCATED IN FLOOD ZONE X AND FLOOD ZONE A, BASED ON A SCALED LOCATION ON FIRM PANEL #51033C0100D EFFECTIVE DATE MAY 23, 2023. THIS FLOOD DETERMINATION IS NOT A RECOMMENDATION BY TRC ENGINEERS, INC. TO NOT PURCHASE OR PURCHASE FLOOD INSURANCE COVERAGE AND DOES NOT IMPLY THAT THE REFERENCED PROPERTY WILL OR WILL NOT BE FREE FROM FLOOD DAMAGE.
8. MATTERS PERTAINING TO ARCHEOLOGICAL OR HISTORIC FEATURES, WETLANDS OR FLOOD CONDITIONS, IF ANY, HAVE NOT BEEN ADDRESSED AS PART OF THIS SURVEY.
9. PURSUANT TO SECTION 2 OF THE CAROLINE COUNTY SUBDIVISION ORDINANCE, THE DIVISION OF LAND FOR PUBLIC USE, WHETHER THROUGH CONDEMNATION OR PURCHASE AGREEMENT, DOES NOT CONSTITUTE A SUBDIVISION.
10. THIS SURVEY WAS PREPARED FOR CAROLINE COUNTY, VA. TRC ENGINEERS, INC. ASSUMES NO LIABILITY FOR REUSE OR MODIFICATION OF THIS DOCUMENT.

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 33°41'24" E	70.98
L2	S 45°53'25" E	119.66
L3	S 51°12'22" E	66.59
L4	S 55°59'42" E	58.38
L5	S 64°01'12" E	51.10
L6	S 63°34'51" E	75.22
L7	S 68°56'02" E	77.85
L8	S 70°21'07" E	59.45
L9	S 76°31'22" E	61.92
L10	S 85°39'03" E	133.06
L11	N 89°38'56" E	101.91
L12	N 75°58'24" E	78.63
L13	N 72°07'09" E	63.03
L14	N 67°15'26" E	30.05
L15	N 74°28'18" E	96.47
L16	N 64°25'52" E	39.07
L17	N 53°12'10" E	50.71
L18	N 66°39'43" E	46.09
L19	N 66°39'43" E	11.53
L20	N 61°31'58" E	55.39
L21	N 67°25'05" E	38.59
L22	N 70°17'24" E	56.74
L23	N 60°57'09" E	39.93
L24	N 48°57'42" E	52.93
L25	N 55°19'51" E	63.91
L26	N 53°52'41" E	119.66
L27	N 44°26'50" E	29.16
L28	N 58°08'08" E	64.73
L29	N 50°08'47" E	83.07

SOURCE OF TITLE

TAX MAP ID: 4-A-15
THIS PROPERTY WAS CONVEYED TO CORY D. GARRETT AND REBEKAH J. GARRETT FROM DONALD K. SEAY AND CHERL G. SEAY BY DEED BOOK 1406, PAGE 622 IN NOVEMBER 16, 2020. IT BEING A PORTION OF THE SAME PROPERTY DEDICATED AS AN OPEN SPACE EASEMENT BETWEEN CORY GARRETT AND REBEKAH GARRETT AND THE VIRGINIA OUTDOORS FOUNDATION, AN AGENCY OF THE COMMONWEALTH OF VIRGINIA, BY DEED BOOK 1518, PAGE 1 IN OCTOBER 28, 2022.

PARCEL AREAS

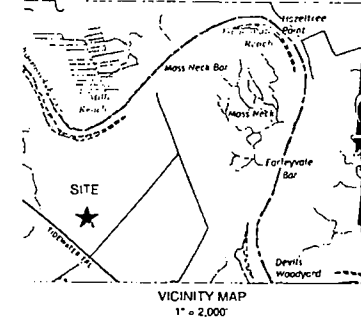
- 4-A-15
- NEW UTILITY EASEMENT: 0.906 ACRES (39,483 SQ. FT.)
- NEW INGRESS/EGRESS EASEMENT: 1.356 ACRES (59,047 SQ. FT.)
4-A-15A
- ORIGINAL: 25.000 ACRES (1,089,998 SQ. FT.)
- NEW PARCEL A: 11.105 ACRES (483,740 SQ. FT.)
- NEW PARCEL B: 13.895 ACRES (605,258 SQ. FT.)
- NEW UTILITY EASEMENT: 0.716 ACRES (31,174 SQ. FT.)

SITE STATISTICS

ZONING: RP
TAX MAP: 4-A-15 & 4-A-15A
MINIMUM YARD REQUIREMENTS:
- SETBACK: 150'
- SIDEYARD: 50'
- REARYARD: 50'

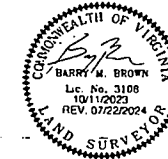
COORDINATE TABLE		
POINT	NORTHING	EASTING
A*	6769188.27	11826343.25
B*	6770066.07	11825674.88
C*	6776417.08	11826135.68
D*	6769632.68	11826733.14

*RODS TO BE SET



SURVEYOR'S CERTIFICATE
TO THE BEST OF MY KNOWLEDGE AND BELIEF ALL OF THE REQUIREMENT AS SET FORTH IN THE ORDINANCE FOR APPROVING PLATS FOR RECORDATION IN CAROLINE COUNTY, VIRGINIA HAVE BEEN COMPLIED WITH.

BY: *Barry M. Brown*
BARRY M. BROWN, L.S. 1104 3108



PLAT OF NEW PARCEL AND
EASEMENTS ON
TAX MAP PARCELS 4-A-15
AND 4-A-15A
CAROLINE COUNTY, VIRGINIA

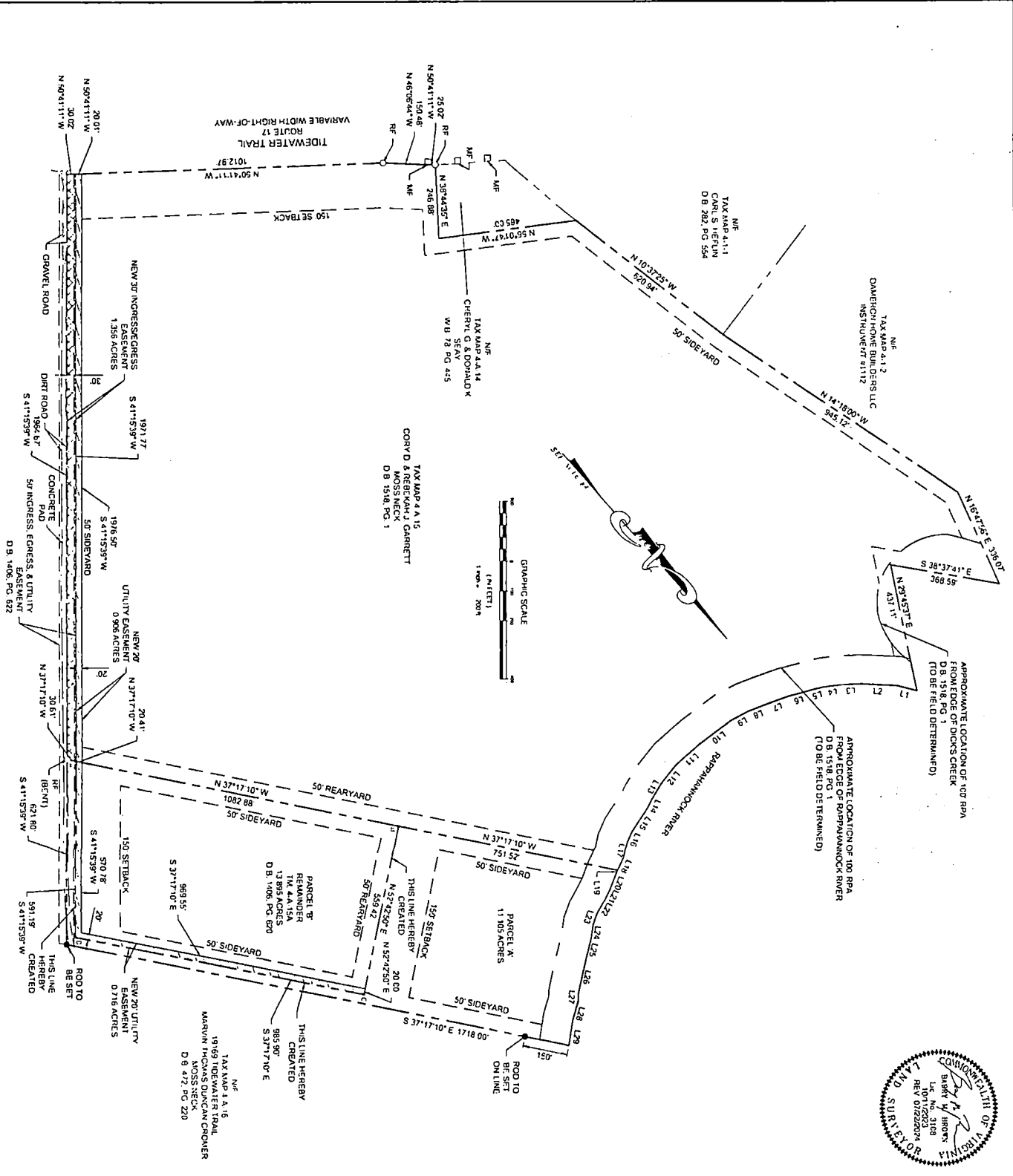
REVISIONS

DESIGNED BY: N/A
DRAWN BY: VDV
CHECKED BY: BMB
SCALE: N.T.S.
DATE: 10/11/2023
PROJECT NUMBER: 2109385

1 OF 2



1030 Wilmer Avenue, Suite 100
Richmond, VA 23227
804-284-2228 Fax: 804-264-8773
www.trccompanies.com
• Blacksburg, VA • Raleigh, NC
• Charlottesville, VA • Northern Virginia
• Newport News, VA • Virginia Beach, VA



PLAT OF NEW PARCEL AND
EASEMENTS ON
TAX MAP PARCELS 4-A-15
AND 4-A-15A
CAROLINE COUNTY, VIRGINIA

REVISIONS

3564000	N/A
DATE	01/11/2023
SCALE	1" = 200'
DATE	01/11/2023
PROJECT NUMBER	2109385



1030 Wilmer Avenue, Suite 100
Richmond, VA 23227
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- Newport News, VA
- Virginia Beach, VA

June 11, 2019

Shana Moore
Water Withdrawal Permit Writer
Department of Environmental Quality
Office of Water Supply
1111 East Main Street, Suite 1400
Richmond, VA 23219

Dear Ms. Moore:

The Virginia Institute of Marine Science has reviewed the pre-application information provided by Caroline County on the proposed surface water intake in the Rappahannock River and provide the following comments specific to potential effects to the estuarine environment. Faculty and staff from the departments of Physical Sciences and Fisheries Science, and the Office of Research and Advisory Services contributed analyses.

The preferred location of the proposed intake is situated in a relatively narrow (< 400 feet wide) section of the Rappahannock River approximately seven feet below mean low water. The applicant has expressed agreement with using wedge wire screen intakes with a slot size of one millimeter, and a maximum through-slot intake velocity of 0.25 feet per second (fps). We understand that Caroline County's projected needs through 2035 require an average of 7.9 million gallons per day (mgd) with a maximum daily withdrawal of 13.8 mgd. The applicant has also provided information on ichthyoplankton near the intake proposed furthest downriver, and an empirical regression model of salinity dynamics in the vicinity of each proposed intake.

The selected screen slot size and through-slot intake velocity represents the most protective available engineering application for reduction of adverse impacts to aquatic eggs, larvae, and juveniles. However, mortality is expected, although at an unknown level, from continuous intake operation. The likelihood of mortality generally correlates with through-slot velocity, and data provided by the applicant show reductions in likely impingement and entrainment from lowered through-slot velocity requirements until water demand reaches its modeled maximum in 2035. These same data also show average withdrawal through-slot velocities remaining below 0.15 fps under maximum water demand. Therefore, the projected steady increases in through-slot velocity over time from a low of ≤ 0.05 fps to meet demands at initial operation will delay maximum mortality likelihoods until peak water demand is achieved.

The Ichthyoplankton Population Impact Analysis (2010) provided by the applicant presents a representative suite of fish species of concern, and guidance on projected mortality levels based on estimated average weekly population levels. This study used data from weekly collections of eggs, larvae, and juveniles over a period of approximately 3.5 months in 2007. Samples were collected in the vicinity of the most downriver of the three candidate intake locations, which is approximately 10 – 11 river miles downriver of the preferred intake location. The reported species are likely incomplete due to study design and limited sampling, but the identified species and life stages can be expected in the vicinity of the preferred intake. Although this study used a conservative withdrawal level much greater than the current requested withdrawals (18 mgd maximum withdrawal versus the 7.9 mgd average withdrawal and 13.8

mgd maximum daily withdrawal), the study relied on a volumetric ratio approach using arbitrarily defined near field and far field regions to calculate estimated population loss percentages. Tidal excursion can be accurately determined, and is defined as the upriver and downriver extent of tidal reach from a fixed point (for this circumstance, the intake). Diurnal tidal dynamics can lead to aquatic life stages encountering the intake multiple times over many tide cycles depending on river flow and tidal excursion distances. Therefore, we cannot attest to the accuracy of this study's results. The applicant and/or the regulatory agencies may wish to consider refining these mortality estimates if a more accurate portrayal of likely mortality is needed for the purposes of compensatory mitigation calculations. If further study is warranted, we recommend a tidal excursion and particle tracking model approach employing various flow regimes. We will gladly provide further detailed guidance if necessary.

The salinity dynamics models present changes resulting from withdrawals in the vicinity of each intake at the average withdrawal level rather than the maximum withdrawal level, and do not provide complete information on downriver effects to salinity intrusion. However, we view these models as sufficient due to the low withdrawal levels relative to upriver volume. Sea level rise will result in upriver salinity intrusion over time, and it is unlikely the proposed withdrawal levels will exacerbate this phenomenon.

Please contact me if you have questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lyle Varnell', with a stylized flourish at the end.

Lyle Varnell
Associate Director for Advisory Services

Cc: Randy Owen, VMRC
David O'Brien, NOAA Fisheries
Amy Ewing, VDGIF

February 24, 2023

Ms. Claire Gorman
Environmental Engineer
Habitat Management Division
Virginia Marine Resources Commission
380 Fenwick Road, Bldg. 96
Fort Monroe, VA 23651

Mr. Joe Grist
Water Withdrawal Permitting and Compliance Manager
Virginia Department of Environmental Quality
1111 East Main Street, Suite 1400
Richmond, Virginia 23219

Dear Ms. Gorman and Mr. Grist:

Personnel from the Virginia Institute of Marine Science departments of Physical Sciences and Fisheries Science, and the Office of Research and Advisory Services have completed the technical review of Caroline County's proposed municipal surface water intake in the Rappahannock River (VMRC #20-0514). Our assessment is based on the potential direct and indirect environmental impacts associated with intake construction and continuous water withdrawal. A major emphasis of our analyses was developing and conducting hydrodynamic particle tracking modeling that simulated the interaction of fish eggs and larvae with the intake. A model is necessary since sufficient localized long-term data are lacking on reproductive capacity, and egg and larval concentrations and distributions throughout most of Virginia's Chesapeake Bay. The modeling approach and ecological interpretation of the results are summarized below. The full final report can be accessed as part of the project documents available for public review. Although presented in the final report, we note here that modeling was conducted by VIMS scientists under contract with Caroline County following our advice to them and state regulatory agencies of the necessity of the information available only through model simulation.

The elements of primary environmental concern include in-water construction, intake screen characteristics, and withdrawal rates. Mortality of fish eggs and larvae can occur from water withdrawal by impingement, entrainment, and direct contact with the intake screen. We understand that the applicant plans to use intake drums with one-millimeter screen slots, which is sufficient to exclude the majority of eggs and larvae from entrainment. Caroline County is proposing to withdraw 13.9 million gallons per day (mgd) by 2035 to meet projected future needs, with 7.9 mgd initially withdrawn to meet post-construction demand. Maximum water volume, and the lesser withdrawal volumes prior to the time that maximum withdrawal is necessary, can be met using a maximum speed of 0.25 foot per second (fps) of water through the 1mm screen slots (through-slot velocity). This level of through-slot velocity, relative to river tidal currents, generally provides protection from impingement of eggs and larvae on the screen surface. However, contact mortality is problematic to mitigate through intake design and operation.

The intake will be constructed within a cofferdam, which significantly decreases the likelihood of adverse environmental effects to local water quality and aquatic living resources during construction. Intake construction will require that the cofferdam remain in-place for an extended time period, but we do not anticipate that it will measurably affect Rappahannock River hydrodynamics. Changes in currents and sediment transport patterns in the immediate vicinity of the cofferdam can be expected, but will not cause adverse environmental impacts.

A time-of-year restriction on in-water disturbances from February 15th – June 30th is generally recommended to protect fish migratory and reproductive behavior. We recommend requiring this restriction for construction and deconstruction of the cofferdam, and all other in-water work. Construction activities within the drained area behind the cofferdam can occur at all times without concern for adverse environmental effects.

Continuous water withdrawal establishes a chronic mortality threat to small and vulnerable fish eggs and larvae. The 1mm screen slots with a maximum 0.25 through-slot velocity represents the accepted protective standard for water withdrawal and serves to mitigate an unknown level of impingement and entrainment mortality. Many fish species' eggs and larvae are highly fragile and mortality from contact with the intake (once or multiple times) that does not result in impingement or entrainment can be expected. Our environmental impact assessment of surface water intakes is conservative and assumes mortality for all contact, with no survival. This is a reasonable scientific approach that provides the expected maximum mortality outcome upon which decisions can be confidently based. Thus, the model results discussed below represent total maximum expected mortalities.

Explanation of the VIMS Model and Modeling Approach

VIMS applied a sophisticated three-dimensional hydrodynamic model with particle tracking to simulate egg and larval mortality. Elements of the model and modeling approach include:

- A 3-dimensional model grid is developed based on river geometry because particle movement depends highly on changes in local hydrodynamics, bathymetry, and geometry. The scale of the grid and shape of individual grid cells varies depending on physical parameters. Larger grid sizes are used in areas remote from the intake as a balance between accuracy and computational efficiency. The length of grid cell boundaries ranges from 1–10m in the general vicinity of the intake. Immediate to the intake the grid is fitted to the cross-sectional area of the intake array, with the smallest grid cell boundaries reduced to 1m.
- Model grids expand well beyond the area local to the intake location and typically encompass the entire tidal waterway and areas of the Rappahannock River beyond its mouth to capture large scale tidal and meteorological forcing factors. Water exchange between the tributaries is complex and can influence hydrodynamics far upriver.
- VIMS applied the SCHISM (Semi-implicit Cross-scale Hydroscience Integrated System Model) model, which uses efficient computation schemes (a hybrid finite-element and finite-volume framework) to solve classical mechanics fluid dynamics equations (Navier-Stokes) that accurately simulates

hydrodynamic fields (surface elevation, current, salinity) and particle movements within a flow regime over time (Eulerian-Lagrangian method for momentum advection, and particle movements). In the vertical dimension, the model uses a highly flexible and efficient hybrid coordinate system developed by VIMS faculty.

- The VIMS model incorporates the upstream and major lateral freshwater inflows simulated from the EPA Phase 6 watershed model, calibrated using long-term data from United States Geological Survey (USGS) monitoring stations. The VIMS model also incorporates tide, salinity, and wind. All dynamics (surface elevation, current, salinity) are accurately simulated within the fine-scale model grid. The particle tracking model contains algorithms that appropriately represent particle movement, settling, mixing, various particle densities, and the biological/ecological parameters of natural mortality, density variances, and vertical migration behaviors.
- The model is calibrated for surface elevation and salinity using data from NOAA and Chesapeake Bay Program monthly monitoring stations.
- The resolution of the grid is sufficiently fine to represent the structure of the intake so that particle contact with the intake can be directly simulated.
- Baseline hydrological conditions for future simulations of intake effects are established by conducting simulations without water withdrawal under various tidal, flow, and wind conditions. Establishing baseline conditions is necessary to assure accuracy of tidal excursion dynamics, and thus particle residence time within the tidal excursion zone around the intake.
- A suite of different hydrological conditions is applied to a series of model runs to simulate movements of eggs and larvae. Each particle can be used to represent an individual or a cluster of ichthyoplankton. Different densities and mortality rates of eggs and larvae of different species can be added to the model to simulate different physical and biological behaviors, and natural population losses. Larval densities and release locations are based on hard data when available but empirically estimated in the absence of data.
- Changes in hydrodynamics near the intake will have effects on ichthyoplankton distribution and the likelihood of encountering the intake screens. The model grid is designed for near-field high resolution around the intake, and different river flow scenarios used as model input are instrumental in demonstrating potential encounters. By analyzing model results under these different hydrological conditions, the simulated impacts of intake operation on the marine resource and environment can be evaluated. The influences of multiple intake withdrawals can also be simultaneously evaluated.
- Numbers of particles contacting the intake can be estimated directly to determine the loss of eggs/larvae. A 'zero' distance (vertical [i.e. depth] and horizontal) approach is applied - once the eggs/larvae contact the intake, mortality is assumed, and these representative particles are removed from the total particle pool.
- The model results provide an information base upon which to develop an accurate quantitative risk assessment by estimating the proportions of organisms from the release concentrations that contact the

intake, and subsequently evaluating the probabilistic population reduction due to contact with the intake over a comprehensive suite of model runs under different hydrological conditions.

Conclusions and Recommendations

VIMS applied 34 separate model scenarios to assess the potential ecological effects of this proposal. These scenarios incorporated different river flows; physical aspects of passive and active particles (i.e. egg and larval behavior within the water column); and particle release locations of upriver, in the vicinity of, and downriver of the proposed intake location. Approximately 100,000 particles were released for each scenario. Most scenarios were simulated under the low flow condition, which maximizes particle residence time within the area of vulnerability to the intake and results in worst-case circumstances; also consistent with our highly conservative impacts assessment approach. Further model design details can be found in the final report.

Model simulations across the suite of scenarios showed that the percent of particle losses (i.e. contact with the intake array) all were below one percent. Particle losses ranged from 0 to 0.210% for high flow conditions, 0 to 0.242% for moderate flows, and 0 to 0.572% for low flow conditions. Releases upriver of the intake were responsible for the maximum loss levels under each flow condition.

Simulations of intake-derived mortality of fish eggs and larvae, under extreme physical river conditions that serve to facilitate contact with the intake, provide evidence that the likelihood of significant adverse impacts to aquatic fauna directly resulting from the proposed water withdrawal plan and location are minimal. Modeled mortalities are additive components to natural mortality rates, and maximum modeled losses are low and add to high and variable published natural mortality rates. Therefore, we do not consider this singular additional, yet continuous, source of mortality to cumulatively increase concerns for the health of fish stocks in the Rappahannock River.

Although comparatively minimal as a singular source of mortality, the continuous withdrawal of Rappahannock River surface water also establishes a continuous low-level threat to several life history stages for a suite of aquatic fauna. Model data demonstrate that ongoing mortality can reasonably be expected. Regardless of the anticipated level of additional mortality, we recommend consideration of compensatory mitigation for known sources of losses beyond those attributable to natural mortality. Reductions in through-slot velocities is one strategy that can mitigate some of the expected mortality. Lower through-slot velocities equate to lower probabilities of impingement, entrainment, and contact mortality. Through-slot velocities for continuous withdrawal intakes generally correlate with withdrawal volumes. Therefore, through-slot velocities below the 0.25 fps protective standard may be feasible prior to the need for the maximum withdrawal level. However, we stress that this strategy can only provide partial mortality mitigation and cannot be expected to eliminate losses.

Model results demonstrate that the proposed intake will likely be responsible only for minor increases in mortality of fish eggs and larvae. However, mortalities of aquatic fauna due to surface water intakes occur throughout the Chesapeake Bay and neither data nor modeling exist that can provide a perspective on this intake's added effect on total system mortality. Although presently unavailable, we consider it to be in the best interest of the Commonwealth to pursue a comprehensive assessment of cumulative surface

water intake effects. These data would provide the foundation for balancing the societal needs for tidal freshwater with respect to overall Bay health and the Bay-based fisheries economy.

Please contact me if you have questions or require further information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lyle Varnell', with a stylized, flowing script.

Lyle Varnell
Associate Director for Advisory Services

**Apply a Particle Tracking Model to Analyze Impacts of Water Intake on
Ichthyoplankton Mortality in Tidal Freshwater Region of the Rappahannock
River**

Final Report Submitted to

Hazen and Sawyer
1555 Roseneath Road, Richmond, VA 23230

by

Qubin Qin, Jian Shen, Troy Tuckey

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February 3, 2023

1. Introduction

Caroline County, Virginia, seeks to develop a new water supply source in the upstream Rappahannock River that will include the construction of a new water intake. The currently proposed intake has the capacity to meet the average daily water demand of 7.9 million gallons per day (mgd) and a maximum daily demand of 13.9 mgd, based on projected water demands for the planning year of 2035. The proposed intake location is approximately 30 km upstream of the Route 301 bridge over the Rappahannock River near Port Royal. The impacts of the intake on the mortality of ichthyoplankton and the ecosystems in the tidal freshwater region of the Rappahannock River are not well known. The location of the water intake is influenced by the tide, and because of the interaction of tide and freshwater discharge, it creates a difficult situation to accurately analyze the environmental impacts of the intake.

One of the key potential impacts of the intake operation on marine resources is causing an increase in the mortality of fish eggs and larvae. Because of the complex geometry and large variations of freshwater discharge in this tidal freshwater region, tidal flow can transport ichthyoplankton back and forth across the intake and potentially increase mortality. However, ichthyoplankton transport pathways and retention time in this region are unknown. It is unclear if ichthyoplankton spawned in this freshwater region will be affected by the intake. To provide sound scientific-based information for the environmental assessment, a numerical modeling approach can be used to simulate ichthyoplankton dispersion and changes in mortality caused by the intake.

The Virginia Institute of Marine Science (VIMS) assisted Caroline County to conduct the modeling study. VIMS developed a fine-resolution model to simulate tidal flow and larval transport processes in the Rappahannock River. With the use of the model, the changes in hydrodynamic conditions in terms of currents and water exchange can be evaluated, which will provide valuable information for understanding the impacts of intake on ichthyoplankton transport and the living resources found in the adjacent region. VIMS used a particle tracking model to simulate fish egg and larval movement and to accurately evaluate probabilistic increases of mortality due to the intake under different hydrological conditions. The model results documented in this report provide supporting information for the risk assessment. This approach not only can address the current issues, but will also be able to address future needs in this region.

2. Methods

2.1. Fish ichthyoplankton in the study area

Fish community data from the VIMS Striped Bass Seine Survey (seine survey, hereafter) were used to characterize fish species in Chesapeake Bay river systems. The seine survey has been conducted since 1965, though the time series for this analysis was restricted to more recent years as abundance of fishes in Chesapeake Bay river systems have changed over time (e.g., decline of American shad). VIMS used the most recent 20 years of data (1999 – 2018) (Table 1). The seine survey is conducted during summer providing data on resident species, as well as others that use these habitats seasonally as nurseries for larvae and juveniles. Each year,

sampling the fish community consists of five visits to each site that are conducted approximately two weeks apart. Fishes are sampled with a 30.4 m beach seine that is set from shore by anchoring one end of the net in place and extending the other end of the net as far offshore as possible or until a depth of 1.2 m is reached. The offshore end is then swept towards the shoreline while maintaining the same net extension thereby completing an arc. The two ends are hauled onshore and the catch is sorted to species, counted, measured, and released. The area covered is approximately one quarter of a circle.

The representative fish species in the region are blueback herring (spawn from April – May, semi-demersal eggs), Inland silversides (spawn from April – September, demersal and sticky eggs), and striped bass (spawn from April – June, buoyant eggs). The blueback herring and striped bass spawn in the middle of the river and inland silversides spawn along the shoreline near vegetation. These species were selected to represent a range of biological characteristics that the tidal freshwater ichthyofauna possess. These species are common to tidal rivers in Virginia and have published details about their life history that can be used in the modeling exercise. They represent managed species (striped bass, blueback herring) and forage species (inland silversides) that would be vulnerable to the intake and thus relevant to the discussion of potential impacts.

Table 1. Fish species composition and density (mean number of fish per 100 m²) from the two seine survey sites in Chesapeake Bay river systems. Gray highlights indicate species identified in Arcadis (2010) and blue highlights indicate abundant species identified from seine survey catches for which larval mortality estimates will be sought for potential use in the particle tracking model.

Species	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Alewife					6.9								0.6			1.7				70.9
American eel	1.5	0.5	1.2		2.2	2.3			2.1	1.7			0.7	1.8		2.8		4.2		1.1
American shad		0.8	1.5		2.3	4.9		3.5	0.9			4.2	9.8	2.6	3.6	17.6	18.7	9.2	13.4	16.6
Atlantic menhaden				0.9														0.9		
Atlantic needlefish								3.4												
Atlantic silverside											1.7									
Banded killifish	3.8	1.6	1.5		16.7	29.7	10.9	2.5	27.9	13.9		24.0	288.7	99.0	3.2	33.9	18.1	27.2	44.8	12.5
Bay anchovy	4.6		1.1	1.7							0.7						3.4			
Black crappie	0.9	0.5	1.1			1.5				0.9										
Blue catfish		1.1	2.7		4.9	12.3	7.6	3.4	0.9	3.0	0.5	1.5	3.9	2.8	3.7	1.5	1.3	0.0	3.2	5.6
Blueback herring		62.9	7.2		23.6	112.2	1.5		9.2			24.8	147.1		70.9	25.0	40.6	3.6	26.7	20.9
Bluegill	2.6		2.8	0.7	2.5	2.4	3.1	1.9	2.6	3.4	0.9	0.5	3.2	2.3	3.2	3.0	3.1	2.2	5.1	4.2
Bluespotted sunfish																	1.3		0.5	
Bridle shiner																2.8				
Brown bullhead																2.4				1.1
Channel catfish	0.9	1.0		0.5	1.5	1.1	2.5	2.5	1.0		1.1		0.8	0.9	1.5		0.9			
Common carp										2.6		2.2	0.9						0.5	
Eastern silvery minnow	1.7	0.5	2.7	0.9	65.4	8.4	4.6	1.3		3.4	14.7	9.6	376.3	2.6	2.9	8.1	9.3	26.7	18.7	2.8
Flathead catfish																				1.1
Gizzard shad	2.0	0.5	0.7	10.5	2.2	1.1		2.2	1.5	5.0	232.7	2.4	6.3	8.7	0.7	2.1	0.8	0.0		
Golden shiner				0.5	1.5	0.9						0.9						3.4		
Hickory shad							1.5													
Hogchoker	7.5	1.1	1.1	3.2	4.4		1.4	11.4	2.4		3.6	6.8	5.7	5.1		9.0	1.9	2.8	6.7	3.6
Inland silverside				0.5	2.1	2.7		1.0	0.8	4.5	457.6	1.1	2.0	1.6	3.2	3.6	0.9	2.9	4.2	1.6
Largemouth bass	1.1			0.9			1.5	1.4			4.7		1.7	3.5	2.0	1.9		4.3	7.0	3.2
Longear sunfish										0.9										
Longnose gar																			4.9	3.0
Margined madtom							1.5													
Mosquitofish	4.6				1.1				0.5		7.7	1.7	9.4	13.4		4.3		5.9		
Mummichog	0.9		6.6		49.8	3.1	1.2		2.1		2.6	36.3	69.4	39.3		4.9		35.1		
Pumpkinseed	3.8			0.9	5.9		1.2	4.8	6.1	8.9	1.8	1.9	3.7	2.2	1.7	4.1	1.9	9.3	33.7	9.7
Redbreast sunfish								1.5				6.0	1.3	1.7	1.3			7.3	3.1	4.0
Satinfin shiner	14.3	6.9	8.6	6.0	33.6	7.6	29.0	6.0	14.2	11.2	1106.0	12.5	14.7	22.3	4.7	22.7	12.6	22.4	56.1	19.8
Smallmouth bass								3.4			4.6	0.9	3.4	1.5						
Spot	3.6																			
Spottail shiner	20.6	17.8	21.7	6.7	5.2	24.6	48.1	10.0	33.1	21.7	14.7	93.1	64.9	75.7	31.0	40.2	22.1	11.6	18.7	37.4
Striped bass	1.5	1.1	8.9	0.7	12.9	3.6	4.9	1.1	5.4	3.2	1.8	2.7	17.9		4.6	7.5	2.1	8.5	5.8	0.7
Tadpole madtom									0.9				0.9							
Tessellated darter	2.1	2.5	4.5	0.5	2.6	2.5	1.3	3.5	3.9	3.4	6.6	2.9	6.4	19.1		9.3	1.5	5.0	4.0	10.5
Threadfin shad	3.4											1.0	0.8	1.1	3.0					
White catfish													0.9							
White crappie							1.5													1.5
White perch	33.2	15.4	17.3	10.3	2.9	15.4	10.8	8.0	5.8	3.4	6.8	9.3	15.6	9.0	15.4	13.5	15.0	8.1	2.1	16.3
Yellow perch	5.4	2.6	5.5	3.5	10.5	1.3	3.5	4.2	6.4	2.3	9.9	2.1	3.1	1.4	0.6	1.7	2.0	3.0	2.2	3.3

2.2. Model development

The Semi-implicit Cross-scale Hydrosience Integrated System Model (SCHISM) was developed for the Rappahannock River. SCHISM uses a semi-implicit time-stepping scheme applied in a hybrid finite-element and finite-volume framework to solve the Navier-Stokes equations and uses a Eulerian-Lagrangian method to treat the momentum advection. In the vertical dimension, the model uses a highly flexible and efficient hybrid coordinate system (Zhang et al., 2015). This model simulating the entire Rappahannock River was developed based on the published Chesapeake Bay model (Figure 1). First, the bay model grid was refined in the Rappahannock River using the bathymetry data provided by USGS and NOAA. After the refinement and calibration in hydrodynamics, the domain of the Rappahannock River was cut from the bay model and forms the model for the river only. The open boundary conditions for the Rappahannock River model were provided by the bay model, and the model incorporates the upstream and lateral freshwater discharges obtained from the EPA Phase 6 watershed model. The unstructured grid model is flexible and is capable of simulating complex changes in geometry within 1-10 m resolution.

This model was calibrated for the Rappahannock River for both surface elevation and salinity. The results show that the model simulated tidal range and salinity intrusion along the Rappahannock River were satisfactory, and the model is capable of conducting accurate simulations (Figures 2 and 3). The model grid was refined near the location of the proposed water intake to accurately represent the complex geometry and bathymetry (*in situ* measured data) in that region.

The proposed intake design has 1 mm slot openings with a maximum through slot velocity of 0.25ft/sec and a 13.9 mgd maximum withdrawal rate. The horizontal model grid is shown in Figure 4. Particularly, the intake area (60 feet long and 20 feet wide) is represented by 140 quadrilateral grid elements with a resolution as fine as 0.82 m (2.7 feet), and each intake screen is represented by 4 grid elements (12 in total for the 3 intake screens, Figure 5). The water depth is set to be 12.5 feet MLW at the intake area and the water column is represented by 5 vertical layers. The bathymetry data for the Rappahannock River were obtained from NOAA chart and bathymetry data for the area around the intake were provided by Draper Aden Associates. With this high-resolution model grid, the model is able to simulate complex dynamics in the near-field of the intake. In the model, water is withdrawn continuously at the location of the intake, and the withdrawal rate of water by the intake was set to be 13.9 mgd (i.e., $0.609 \text{ m}^3/\text{s}$). The withdraw rate for each grid element representing the intake is set to be $0.05075 \text{ m}^3/\text{s}$ ($= 0.609 \text{ m}^3/\text{s} \div 12$).

The hydrodynamic model was run first for the two-year period from 2010-2011 to provide the hydrodynamic field for the particle tracking model. The particle tracking model was run for the year of 2011. Two cases were conducted for evaluating the changes in hydrodynamics in the Rappahannock River due to the intake construction. Case “Normal” and Case “Withdrawal” refer to the one without and with the intake, respectively.

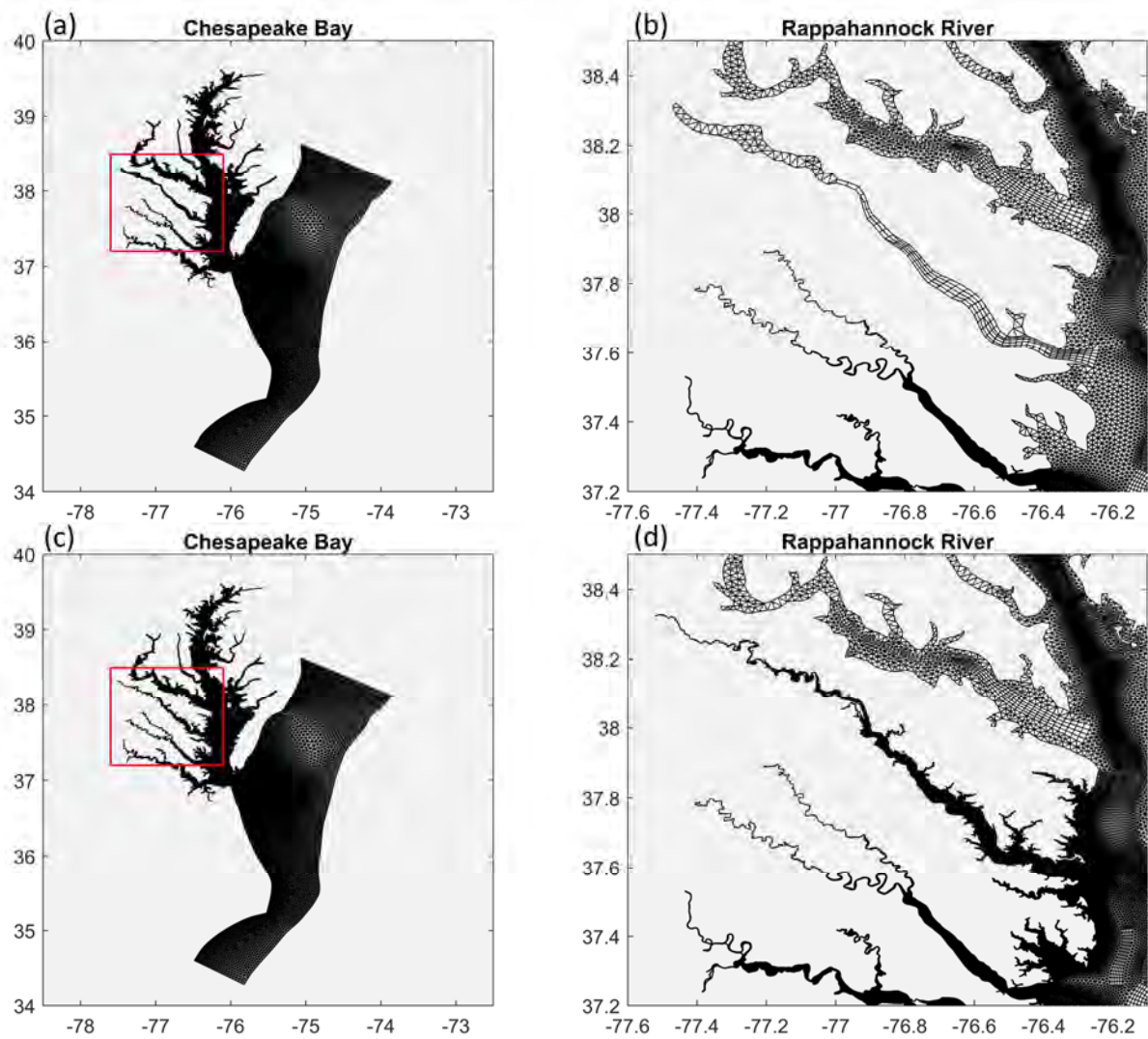


Figure 1. Comparison of the grid density in the old version of the bay model (a and b) and the new version (c and d).

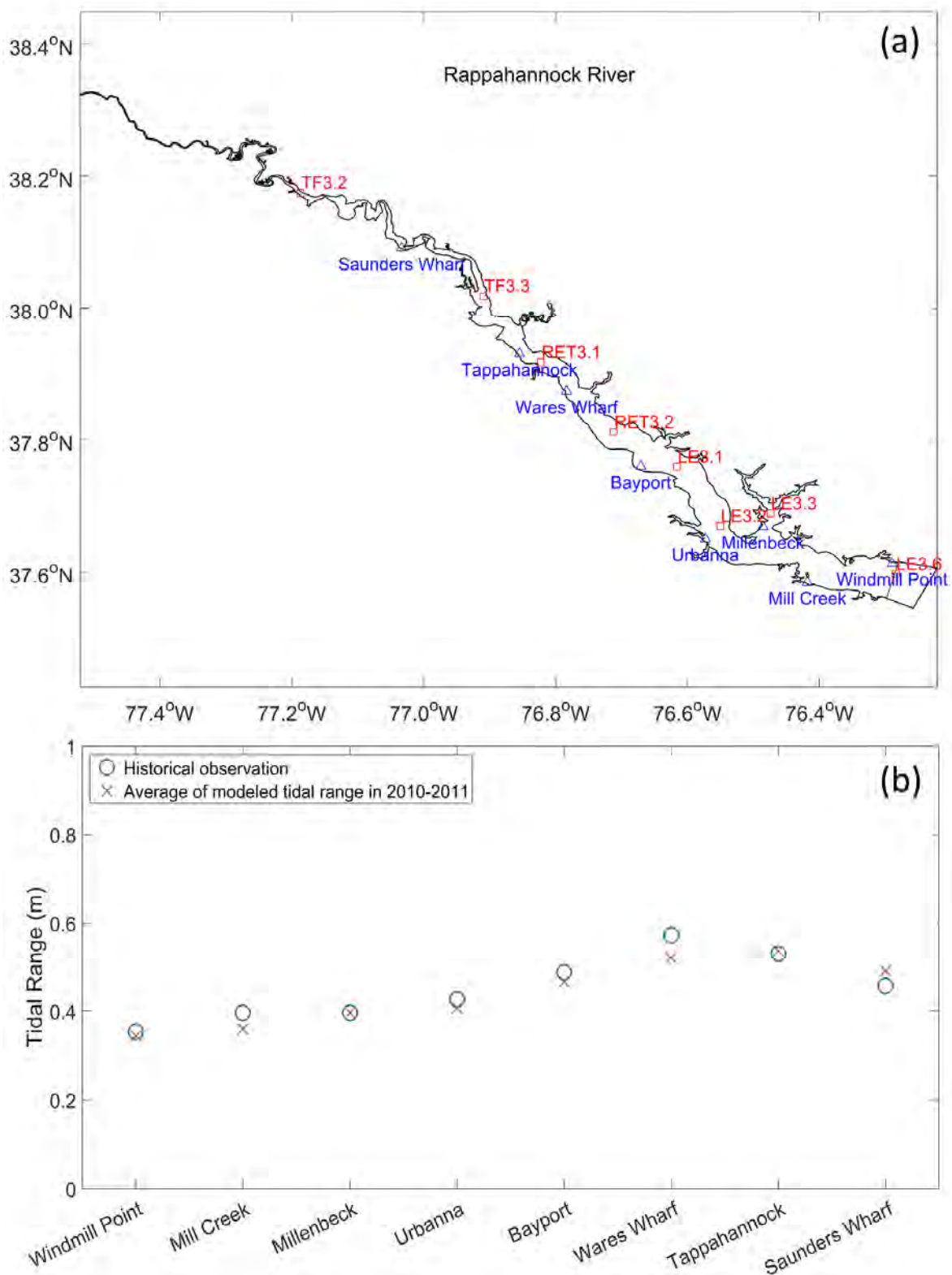


Figure 2. (a) Map of the Rappahannock River model domain with long-term monitoring stations (red squares) and NOAA tidal range stations (blue triangles); (b) Comparison of modeled tidal range and NOAA historical observations along the Rappahannock River.

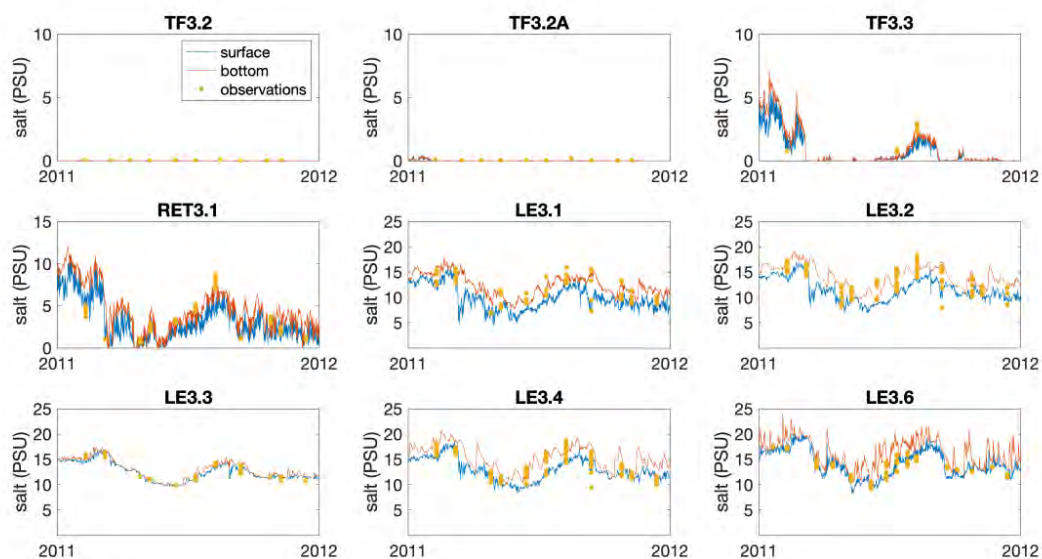


Figure 3. Comparison of modeled salinity and observations in the long-term monitoring stations along the Rappahannock River.

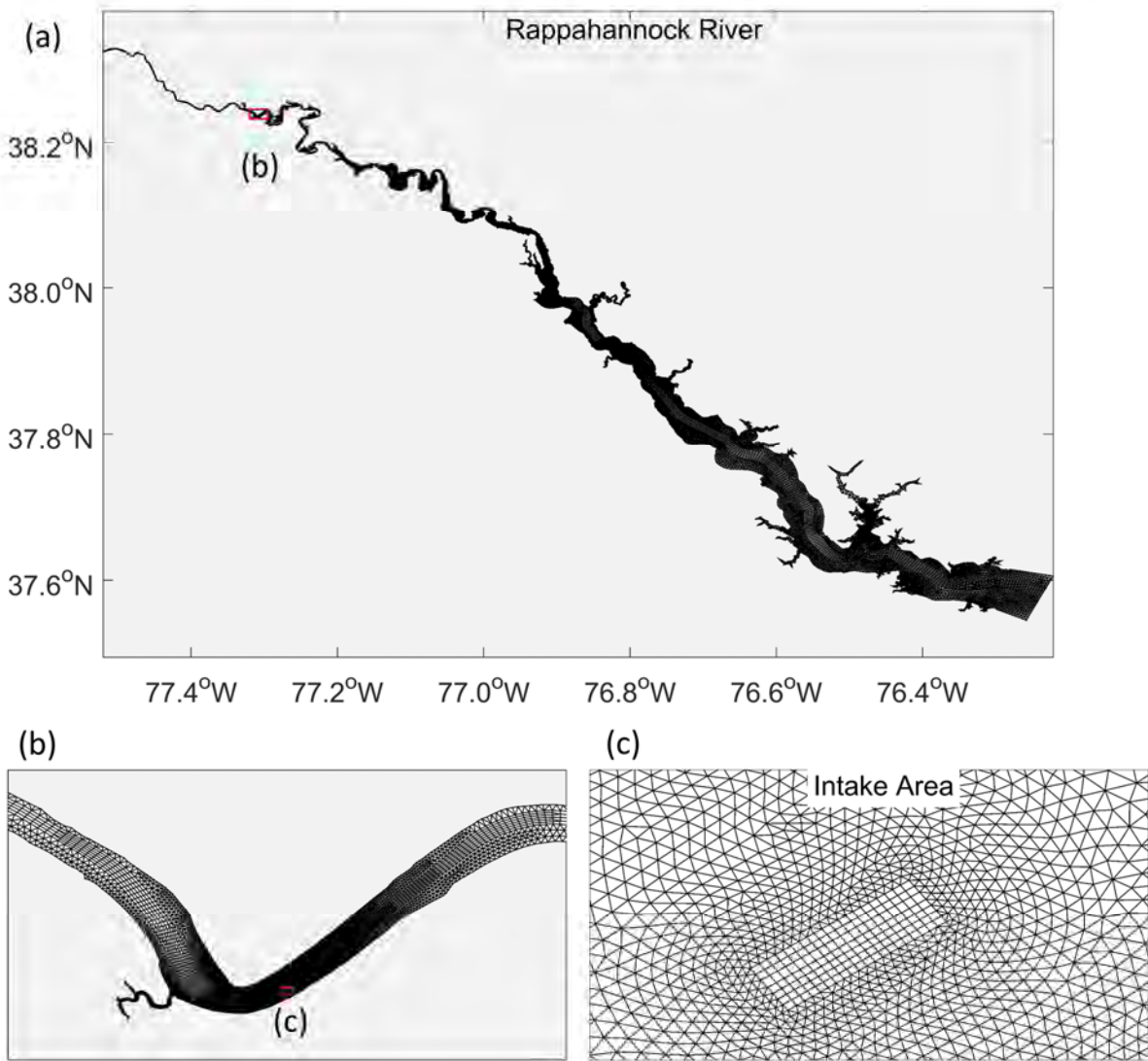


Figure 4. The extended Rappahannock River model grid with high resolution near the vicinity of the intake.

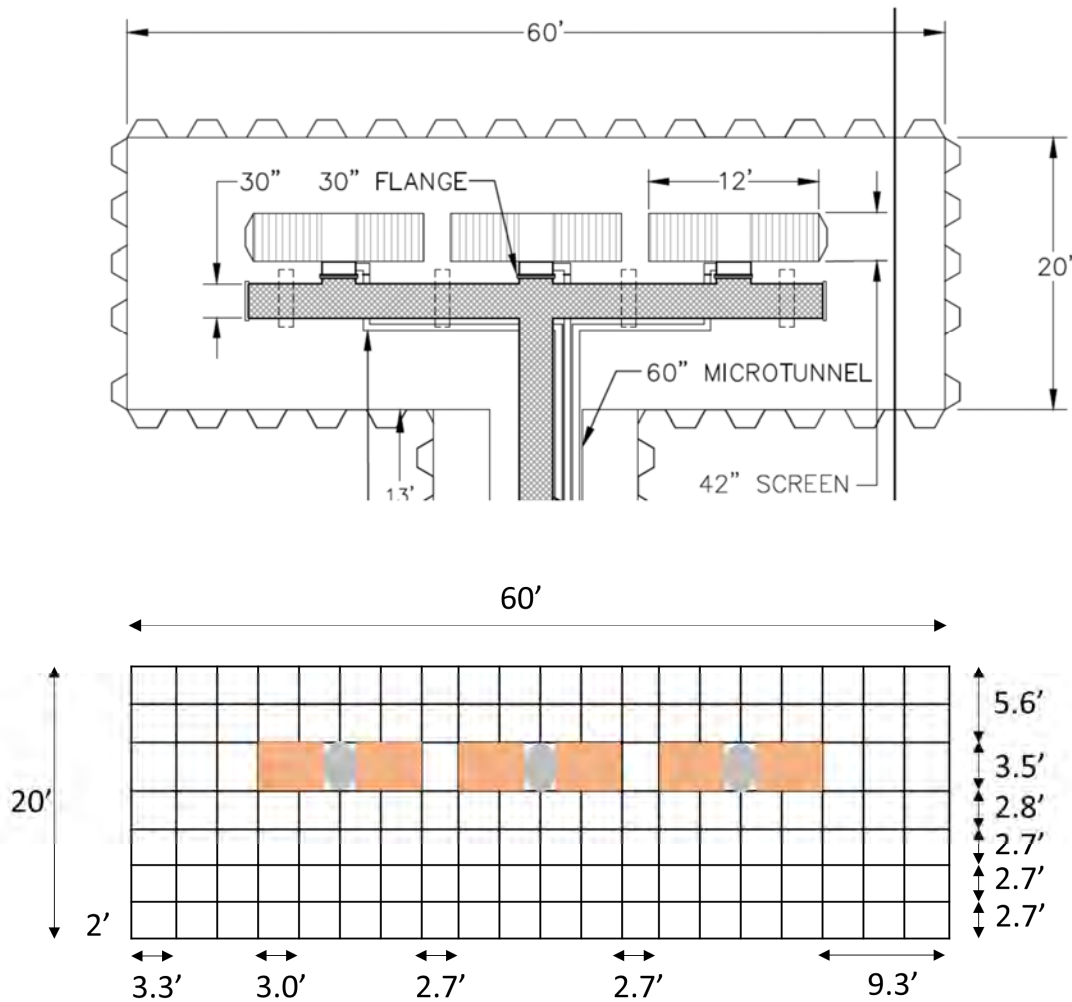


Figure 5. The grid designed for the intake area. Each of the 3 functional intake screens is represented by 4 grid elements.

2.3. Particle Tracking model

The Particle Tracking Model (PTM) has been broadly applied to coastal projects including studies of dredged material dispersion and fate, and oyster and larval fish dispersion and recruitment (e.g., Blumberg et al., 2004, Gallego et al., 2007, Torri et al., 2018). The particle tracking algorithms can incorporate transport, settling, deposition, mixing, and resuspension processes. In this study, we used a particle tracking model imbedded in the SCHISM modeling system (schism.wiki) to simulate fish egg and larval transport. Specifically, the SCHISM hydrodynamic model generated a hydrodynamic field for the PTM to use. The PTM is a Lagrangian particle tracker designed to allow the user to simulate particle transport processes (Chiu et al., 2018; Du et al., 2020). Each particle can represent an individual or a cluster of ichthyoplankton. Different densities and mortality rates of fish eggs and larvae of different species can be added to the PTM to simulate diverse physical and biological behaviors. Although

the actual densities of eggs/larvae vary with time, we can estimate losses as a proportion of organisms in the river that encounter the intake and do not need absolute numbers. The combination of the high-resolution hydrodynamic model and the PTM, the complex dynamic fields with high swirl and vortices near the intake can be accurately simulated. Therefore, the removal of fish eggs and larvae can be simulated directly in our study with the use of the fine-resolution grid. When particles encounter the intake, they are removed from the system. This avoids uncertainty introduced by the probability method to determine entrainment that are used by some models with coarse-resolution grid (Varnell et al. 2008, Blumberg et al. 2004). The computed removal rate of particles provides an estimate of the conditional mortality rate resulting from the operation of the intake.

2.4. Particles that represent ichthyoplankton

It is well known that larval fish swimming behavior can alter the distribution of the larvae in aquatic systems. To better represent fish eggs or larvae, two different particles were used in the study - passive particles vs. active particles. The passive particles are neutrally buoyant particles, such as neutrally buoyant fish eggs or larvae. Their transport is strictly determined by the hydrodynamic field. The active particles are allowed to move upward or downward in the model to represent the rise of buoyant eggs or settling of heavier, demersal eggs in the water column, as well as the upward swimming behaviors of fish larvae.

For the fish eggs, their vertical speeds (ω) are dependent on the buoyancy and gravity of the particles, which is computed using the Stokes equation:

$$\omega = \frac{(\rho_e - \rho_w)}{18\mu} g R^2$$

where g is the gravitational field strength (m/s^2), R is the diameter of the spherical particle (m), ρ_e is the mass density of the egg (kg/m^3), ρ_w is the mass density of the water (kg/m^3), and μ is the dynamic viscosity (kg/(m*s)). $\mu = 0.001 \text{ kg/(m*s)}$ at 20°C . The velocity computed using the Stokes equation is usually applied for the particle Reynold number ($Re_p = \rho_w \frac{\omega R}{\mu}$) less than 0.5, i.e., $Re_p < 0.5$ (Dey et al., 2019). Outside of this range, the turbulent drag due to the wake behind the particle becomes important, which leads to a smaller vertical speed of the particles computed using the Stokes equation.

The characteristic size of fish eggs is about 1 mm in diameter. The mass density of fish eggs varies with species and environmental conditions such as temperature. The temperature effect on egg velocity through the change of mass density of eggs, however, is considered to be negligibly small (Sundby and Kristiansen, 2015). The eggs of striped bass in the Pamunkey River, a tidal freshwater river, have been reported to have a mass density of around 1.0018 g/cm^3 , and a diameter of 1.84 mm (Bergey et al., 2003). In the tidal freshwater region where salinity is less than 0.5 psu, the mass density of the water is about 1.0 g/cm^3 ; thus, $\rho_p > \rho_w$ and the eggs can be considered as demersal eggs (Sundby and Kristiansen, 2015). This gives a settling velocity $v = 0.0033 \text{ m/s}$ (or 0.33 cm/s) and provides base velocity for fish eggs in the study area, since the egg diameters of silverside and blueback herring are not significantly

different from that of the striped bass. The egg diameters are about 0.9 – 1.2 mm for the silverside and 0.87 – 1.11 mm for the blueback herring. However, $\omega = 0.0033$ m/s results in $Re_p = 6.1$, beyond the allowable range for using the Stokes equation ($Re_p < 0.5$). Other empirical formulae for computing vertical speed for eggs have been used in the literature based on experiments (Sundby, 1983; Dey et al., 2019). Here we used the one for the spherical particle in Ferguson and Church (2004) as:

$$\omega = \frac{SgR^2}{18\nu + (0.3SgR^3)^{0.5}}$$

where $S = (\rho_e - \rho_w)/\rho_w$ and $\nu = \mu/\rho_w$ is the kinematic viscosity of the water (10^{-6} kg/(m*s) at 20 °C). Using this equation, the settling velocity for fish eggs in the study area is about 0.25 cm/s, a little less than 0.33 cm/s obtained from the Stokes equation. Using other empirical equations results in velocities with similar values.

Settling velocity computed using equations that are based on laboratory experiments, and speed can vary in natural systems due to different factors (Dey et al., 2019). In estuaries where the turbulent mixing is significant, turbulence strongly impacts the velocity. Experiments suggest that the settling velocity of the particle in turbulent flows can either increase or decrease compared to that in laminar flows (Brandt and Coletti, 2022). As a result, to broaden the applicability of the model we considered the settling velocities of eggs that span a wide range in nature and chose five representative vertical velocities (-1, -0.3, -0.1, -0.01, and -0.001 cm s⁻¹). By using a range of vertical velocities, we account for the variability in egg diameter and egg density that exists among fish species and represent the suite of fish that may be spawning in the vicinity of the intake rather than a single species. Note that the smallest velocity of -0.001 cm s⁻¹ (about -0.86 m d⁻¹) is close to the values used in numerical models for the settling velocity of phytoplankton in estuaries (Shen and Qin, 2019).

In developing the model to include larval fish behavior, we assumed a constant upward swimming velocity for each active particle. Downie et al. (2020) argue that routine swimming speeds or the in-situ swimming speeds of fish larvae should be used in the model. Since we do not know the actual swimming speed for many species, we chose a range of possible swimming speeds. For example, the swimming speed of striped bass larvae is between 0.54 cm s⁻¹ and 2.64 cm s⁻¹ (Peterson and Harmon, 2001). Other species are likely to have faster and slower speeds compared with striped bass and swimming speed also depends on fish length. Thus, by using two different rates in the model we account for a wide range of potential swimming speeds that may be observed. We ignored the horizontal swimming speed of larvae since it is negligible compared to the horizontal advections dominated by currents. In total, we tested seven vertical velocities to represent different groups of eggs (buoyant, neutrally buoyant, and demersal) and larvae (Table 2). We believe the seven vertical velocities used in this study represent a variety of potential sinking/swimming velocities representative of eggs and larvae found in the Rappahannock River.

Table 2. Particles, vertical velocity, and the representatives.

Particle	Vertical velocity (cm/s)	Representative
Passive	0	Neutrally buoyant eggs
Active	-1	Demersal eggs
Active	-0.3	Demersal eggs
Active	-0.1	Demersal eggs
Active	-0.01	Demersal eggs
Active	-0.001	Demersal eggs
Active	1	Larvae
Active	10	Larvae

2.5. Forward tracking and backward tracking

Both forward and backward particle tracking methods were used as each method provides a different perspective on the interaction between particles and the intake. For the forward tracking method, we chose the locations to release the particles and tracked their trajectories at each time point during the study period ($t = t_0, t_1, \dots, t_{end-1}, t_{end}$). The forward tracking method directly computes the percentage of particles that ultimately encounter the intake, which is the total percent removed. The maximum daily removal rate is further computed by counting the highest daily percent removed over the study period. For the backward tracking method, given a simulation period, the particles are released at the end of the period ($t = t_{end}$) within the model grid cells representing the intake, and the transport velocities and swimming or settling velocities are reversed in their directions, and we track the movement of the particles backward to the beginning of the period ($t = t_{end}, t_{end-1}, \dots, t_1, t_0$). The backward tracking method provides information on the origins of particles that encounter the intake.

Understanding the potential influence of a particular grid cell on the number of particles that are removed by the intake can be based on time or the number of particles that originate from that grid cell. The overall frequency of particles (or eggs and larvae) that are removed by the intake from one specific grid cell is defined as the ratio of the points in time that particles from that grid cell are removed by the intake divided by the total number of time points that exist during the chosen time period. Denoted as $f_{i,j}$, the frequency at the grid cell j at time point $t = t_i$, if there is more than one particle in that grid cell that is removed by the intake, the frequency equals 1 ($f_{i,j} = 1$) at that time point, otherwise $f_{i,j}$ equals 0. The overall frequency of each grid cell over the computation period was computed as $\langle f_j \rangle = \frac{1}{N} \sum_i f_{i,j}$, where N is the total number of time points during the simulation period. For example, if the total simulation period is 1 day, and time is assessed every 1 hour, then $N = 1 \text{ day} / 1 \text{ hour} = 24 \text{ hours} / 1 \text{ hour} = 24$. If the frequency of a grid cell equals one, it means that this grid cell always has a fraction of particles that are removed by the intake during the simulation period (e.g., in the example provided, the frequency would be 24 time periods that the grid cell contained a particle that was removed by the intake divided by 24 hours that the simulation was run, $24/24 = 1$). If the grid cell is located at the head of the estuary, it suggests how frequently particles released from the freshwater flow are

removed by the intake. Note that for short run periods, the frequency only represents the frequency of particles at that location that are removed by the intake during that period (i.e., the frequency is dependent on the time period that was chosen and not representative of longer time periods). Thus, for areas that are relatively far from the intake, the computed frequency does not represent their long-term means. By examining the frequency distribution, the impact area can be evaluated.

The other method, based on counts of particles, that was used to assess the impact of individual grid cells we call: *Contribution*. The source of particles (or larvae or eggs) from each grid cell was evaluated by estimating the percentage of particles coming from that grid cell that are removed by the intake during the simulation period. For each time point t_i , $m_{i,j}$ denotes the number of particles in grid cell j that ultimately encounter the intake. In the back-tracking model, $m_{i,j}$ is computed by counting the number of particles in that grid cell at t_i . The contribution of one grid cell j over a portion of the computation period (from the beginning of the back tracking t_{end} to the time point t_i) was computed as $Contribution_{i,j} = \frac{1}{M_i} m_{i,j}$, where $M_i = \sum_j m_{i,j}$ is the total number of particles in the study area at t_i . Thus, the contribution of grid cell j over the entire computation period (from t_{end} to t_0) was computed as $Contribution_{0,j} = \frac{1}{M_0} m_{0,j}$.

2.6. Model scenarios

2.6.1. Forward tracking scenario

Multiple forward particle tracking scenarios were conducted to investigate the potential impacts of the intake on ichthyoplankton survival (Table 3). We first designed five forward tracking scenarios (Scenarios 1-5) to evaluate the impacts of release method (one-time release of all particles at a given time vs. continuous release of particles (scenario 5) over a period of time) and location on the percentage of particles that encounter the intake (Figures 6 and 7). By testing different release locations and release methods we are able to evaluate which method and location lead to the greatest removal of particles due to the intake. For one-time release scenarios, the release region is designed to be on the scale of tidal excursion that is between 6.8-9.9 km at the intake (Geyer and Signell 1992). Locations in the vicinity, upstream region, and downstream region of the intake were chosen for Scenarios 1-3, respectively. Scenario 4 was also run with a location further downstream of the intake, which was used as an additional scenario to Scenario 3 to verify if a downstream release would be significantly impacted by the intake. For Scenario 5, particles were released continuously over a period of 21 days (5/28/2011-6/17/2011) and the number of particles released each day was proportional to the freshwater discharge of the river (Figure 8). This assumes that the loadings of fish eggs or larvae are proportional to freshwater discharge. Thus, the scenario accounts for eggs or larvae transported by river discharge from upstream locations that are beyond the model domain. Also, these five scenarios show the movement of particles under moderate flow conditions. In Scenarios 1-4, released on 5/28/2011, particles experience a daily discharge of $50.69 \text{ m}^3 \text{ s}^{-1}$ during the release date (May 28) and 5-day average discharge of $45.19 \text{ m}^3 \text{ s}^{-1}$; for Scenario 5, the 21-day release occurs during an average discharge of $28.10 \text{ m}^3 \text{ s}^{-1}$ (Table 4). These two discharge rates are

between the median discharge of $28.3 \text{ m}^3 \text{ s}^{-1}$ and the mean discharge of $48.3 \text{ m}^3 \text{ s}^{-1}$ over the 116-year time-series (Figure 9).

Scenarios 6-13 were conducted to investigate the effects of flow on the percent of particles that encounter the intake. On timescales longer than the spring-neap tide cycle, the change in flow conditions are largely determined by variability in river discharge. Thus, the scenarios were designed to account for different river discharge rates. For high-flow, one-time release scenarios, particles were released on 3/7/2011 at a daily discharge rate of $781.56 \text{ m}^3 \text{ s}^{-1}$, which was higher than the 99.8th percentile from the discharge time series. The mean discharge for the next five days reached $440.12 \text{ m}^3 \text{ s}^{-1}$, exceeding the 99.2th percentile of the discharge rate for the time series. For low-flow, one-time release scenarios, particles were released on 7/17/2011 at a daily discharge rate of $6.37 \text{ m}^3 \text{ s}^{-1}$, which was lower than the 10th percentile of the time. The mean discharge for next five days was $6.51 \text{ m}^3 \text{ s}^{-1}$. For the high-flow, continuous release scenarios, particles were released continuously beginning on 3/7/2011 (Figure A1), at a 21-day-average discharge of $179.53 \text{ m}^3 \text{ s}^{-1}$ (above 96.3th percentile) and a 30-day-average discharge of $138.54 \text{ m}^3 \text{ s}^{-1}$ (above 94.5th percentile). For the low-flow, continuous release scenarios, particles were released continuously beginning on 7/17/2011 (Figure A2), at a 21-day-average discharge of $4.69 \text{ m}^3 \text{ s}^{-1}$ (below 10th percentile) and a 30-day-average discharge of $12.15 \text{ m}^3 \text{ s}^{-1}$ (below 23th percentile). Note that because we focused on the transport processes and not biological processes, the study period does not necessarily coincide with the spawning periods of the species. We chose the three periods in 2011 to investigate impacts of the intake under different flow conditions. The different spawning periods are also likely to experience different flow conditions, such as shifts between the wet and dry years, so the model results should be applicable across species and flow conditions.

In addition, 14 one-time release scenarios (Scenarios 14-27) and seven continuous release scenarios (Scenarios 28-34) were conducted for each vertical velocity of the active particles. Because it is more meaningful to assess worst-case situations for the intake-caused mortality of eggs or larvae, we focused on low flow conditions that potentially result in high conditional mortality rates.

For this study, we only released particles at the surface for all the forward tracking scenarios and did not explore the results if the particles were released at different vertical positions in the water column. We expect that any differences due to the vertical position of particle releases would be small because of the shallow water depth and strong vertical mixing found in this tidal freshwater estuary. All scenarios were tracked for 30 days after the release of particles.

To evaluate any potential bias resulting from the initial number of particles (10,000) that were released, we repeated the five scenarios with a 2.5-fold and a ten-fold increase in particle number (i.e., 25,000 and 100,000 particles, respectively). The results show that the percent of particles removed by the intake in the 2.5-fold and 10-fold scenarios are close to those from the original Scenarios (Figure A3). This indicates that 10,000 particles are sufficient to provide a robust estimate of potential impacts for this study, while more particles will further reduce

uncertainties. Here, both the results of 10,000-particle cases and 100,000-particle cases will be presented.

Table 3. The release method, location, flow condition, and vertical velocity of the 34 forward particle tracking scenarios. In those scenarios where particles are released continuously, the release period is 21 days, and the number of particles release is proportional to daily freshwater discharge. The vertical velocity of the particle can be either upward (+) or downward (-).

Scenario	Release method	Release location	Flow condition	Vertical velocity (cm s ⁻¹)
1	One time	Vicinity of the intake	Moderate	0
2	One time	Upstream of the intake	Moderate	0
3	One time	Downstream of the intake	Moderate	0
4	One time	Further downstream than Scenario 3	Moderate	0
5	Continuously	Head of the Rapp. of the model grid	Moderate	0
6	One time	same as Scenario 1	High	0
7	One time	same as Scenario 1	Low	0
8	One time	same as Scenario 2	High	0
9	One time	same as Scenario 2	Low	0
10	One time	same as Scenario 3	High	0
11	One time	same as Scenario 3	Low	0
12	Continuously	same as Scenario 5	High	0
13	Continuously	same as Scenario 5	Low	0
14	One time	same as Scenario 1	Low	-1
15	One time	same as Scenario 1	Low	-0.3
16	One time	same as Scenario 1	Low	-0.1
17	One time	same as Scenario 1	Low	-0.01
18	One time	same as Scenario 1	Low	-0.001
19	One time	same as Scenario 1	Low	1
20	One time	same as Scenario 1	Low	10
21	One time	same as Scenario 2	Low	-1
22	One time	same as Scenario 2	Low	-0.3
23	One time	same as Scenario 2	Low	-0.1
24	One time	same as Scenario 2	Low	-0.01
25	One time	same as Scenario 2	Low	-0.001
26	One time	same as Scenario 2	Low	1
27	One time	same as Scenario 2	Low	10
28	Continuously	same as Scenario 5	Low	-1
29	Continuously	same as Scenario 5	Low	-0.3
30	Continuously	same as Scenario 5	Low	-0.1
31	Continuously	same as Scenario 5	Low	-0.01
32	Continuously	same as Scenario 5	Low	-0.001
33	Continuously	same as Scenario 5	Low	1
34	Continuously	same as Scenario 5	Low	10

Table 4. Statistics of Rappahannock River discharge on selected release dates and periods after the release.

Discharge condition	Release Date	Daily (m ³ /s)	5-d mean (m ³ /s)	21-d mean (m ³ /s)	30-d mean (m ³ /s)
Moderate	May 28, 2011	50.69	45.19	28.10	30.56
High	March 07, 2011	781.56	440.12	179.53	138.54
Low	July 17, 2011	6.37	6.51	4.69	12.15

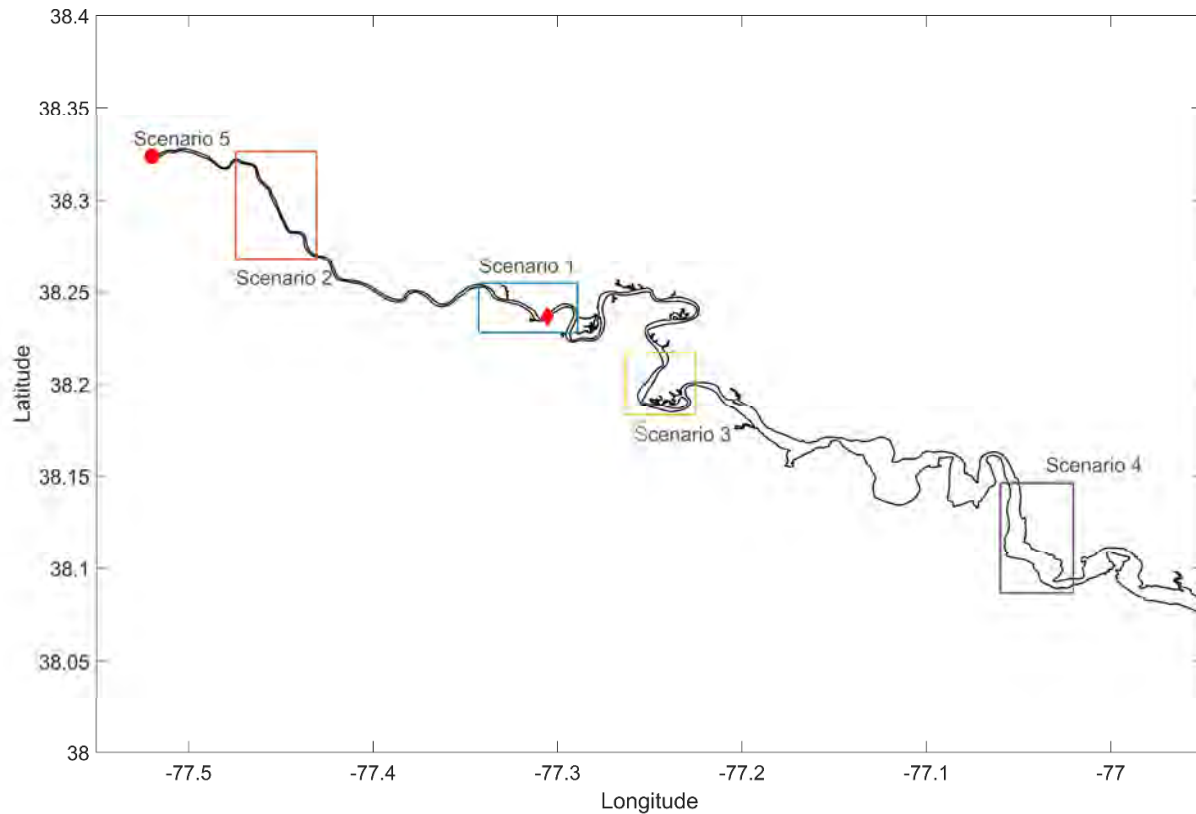


Figure 6. Map showing the release locations of the particles for the 5 scenarios of forward particle tracking (Scenarios 1-5). The red diamond shows the location of the intake.

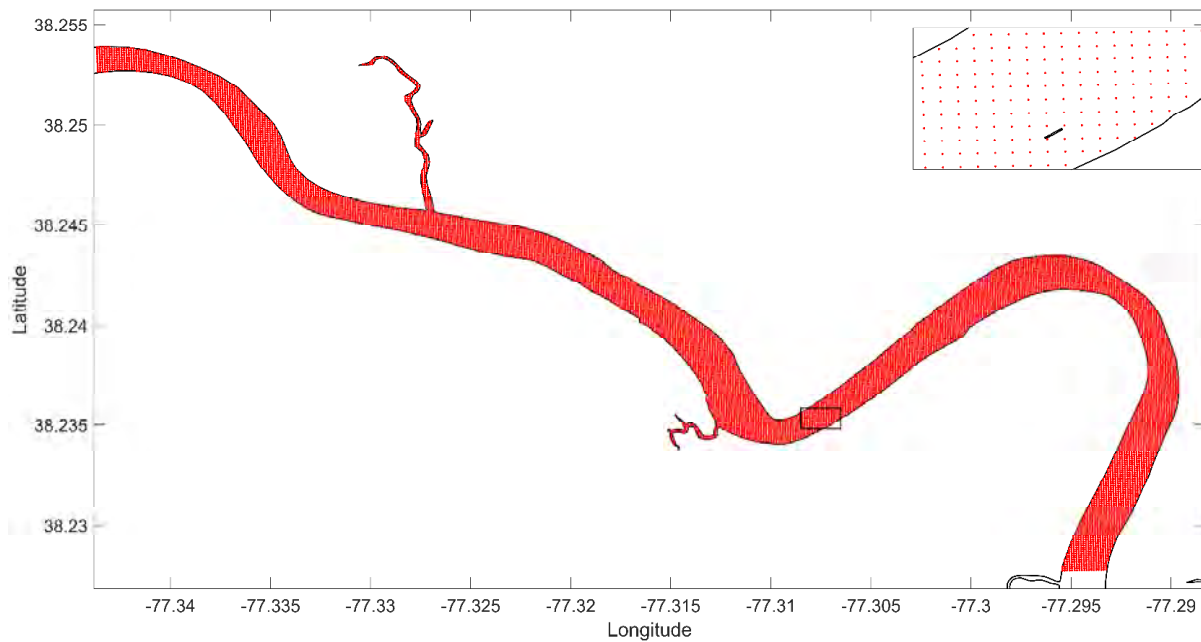


Figure 7. Initial distribution of 10,190 particles in Scenario 1, shown as an example. All the particles are released on 5/28/2011 at the surface of the area.

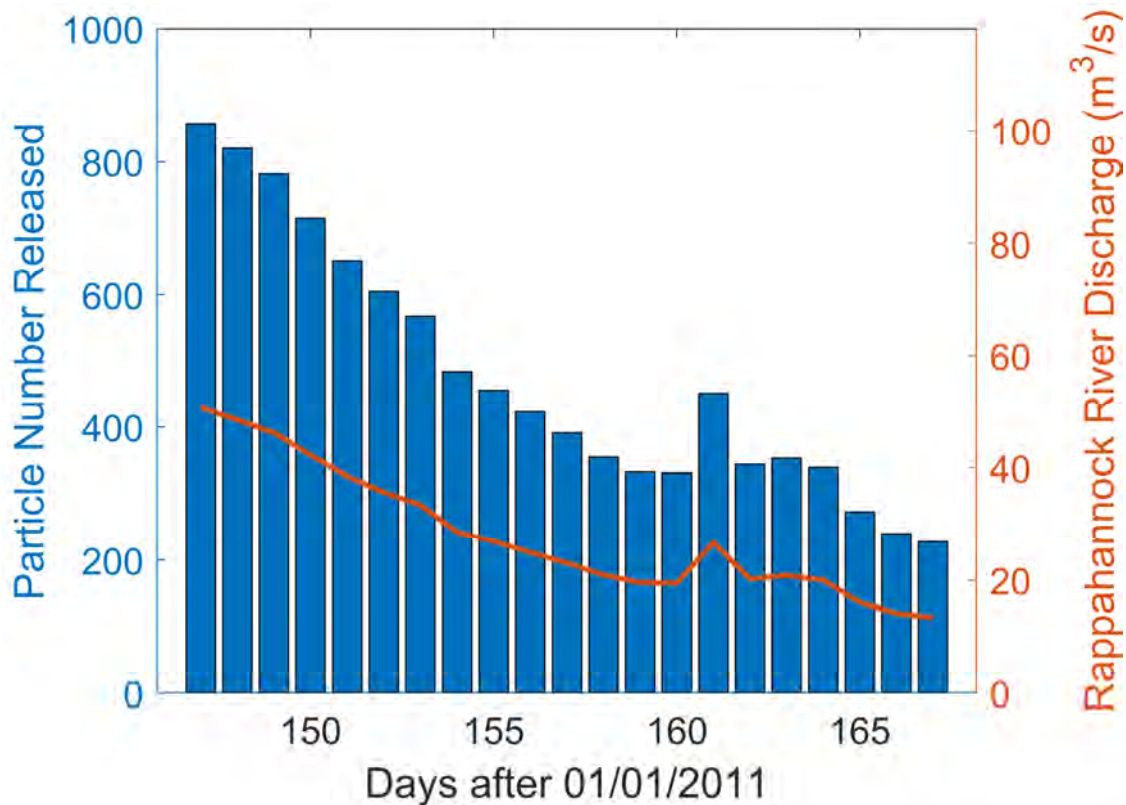


Figure 8. Particle release in Scenario 5 with 10,000 particles, at the surface of the uppermost grid cell in the Rappahannock River in the model for the 21 days (5/28/2011-6/17/2011). The number of particles released is proportional to the daily freshwater discharge of the Rappahannock River.

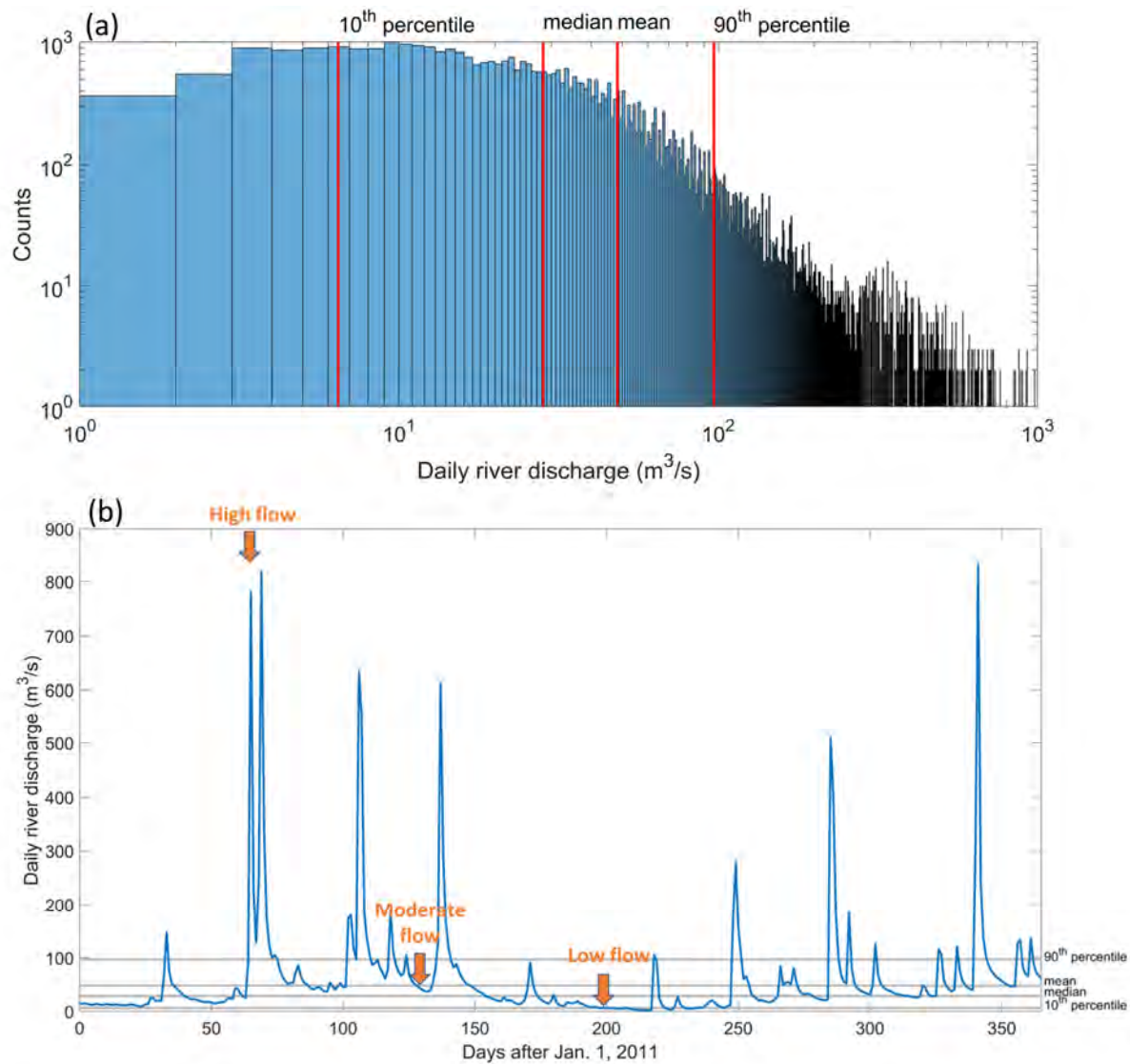


Figure 9. (a) Statistics of daily river discharge of the Rappahannock River from 1907 to 2022. (b) Daily river discharge of the Rappahannock River in 2011, the year used for the particle tracking model. Arrows mark the selected dates to investigate the impacts of river flow conditions.

2.6.2. Backward tracking scenario

Whereas the forward tracking scenarios are straightforward in how to estimate the percentage of particles that are removed by the intake for given release locations, the number of release locations is limited to those chosen a priori. To better understand the sources of larvae that are removed by the intake and the percentage of source contributions from different locations, we conducted a backward tracking scenario during a moderate flow condition.

The backward particle tracking method was applied to the Rappahannock River model. Starting from 6/27/2011, three particles were released every 10 min from the intake location and

tracked from June 27 to May 28, and a total of 12,960 particles were released. The locations of particles were output every 15 minutes. Both the frequency of the presence of larvae that were removed by the intake in one grid cell and the contribution from each grid cell were computed.

3. Results and discussion

3.1. Impact of the intake on hydrodynamics

To evaluate the impact of the intake that has a water withdrawal rate of 13.9 mgd on local hydrodynamics, we conducted two model runs, Case “Normal” is the simulation without the intake, and Case “Withdrawal” is the simulation with the intake. The withdrawal of freshwater by the intake will likely have a larger impact on hydrodynamics during the low-flow, summer period. Therefore, we chose the summer of 2011 as our reference period, when discharge was at about the 10th percentile of the long-term river discharge of the Rappahannock River,

We compared the horizontal velocities at the surface at one location in the intake area (Figure 10a-c). We found significant differences in the horizontal velocities between the two cases. The difference in horizontal velocities at the surface was up to 0.046 m s⁻¹ with a mean of 0.010 m s⁻¹ during this period, whereas the surface velocity had a mean of 0.191 m s⁻¹ and a maximum of 0.343 m s⁻¹ under “Normal” condition. The time series of elevations between the two cases were also compared at the same location (Figure 10d-f). There is a small decrease in elevation (on the order of 1 millimeter) when the intake was operating compared with “Normal” conditions, which indicates that the total volume of water does not change as tide dominates the transport of water into the Rappahannock River. The intake affects bottom horizontal velocities near the intake when operating during low-flow periods and at a maximum withdrawal rate of 13.9 mgd, but there is no significant change in water volume.

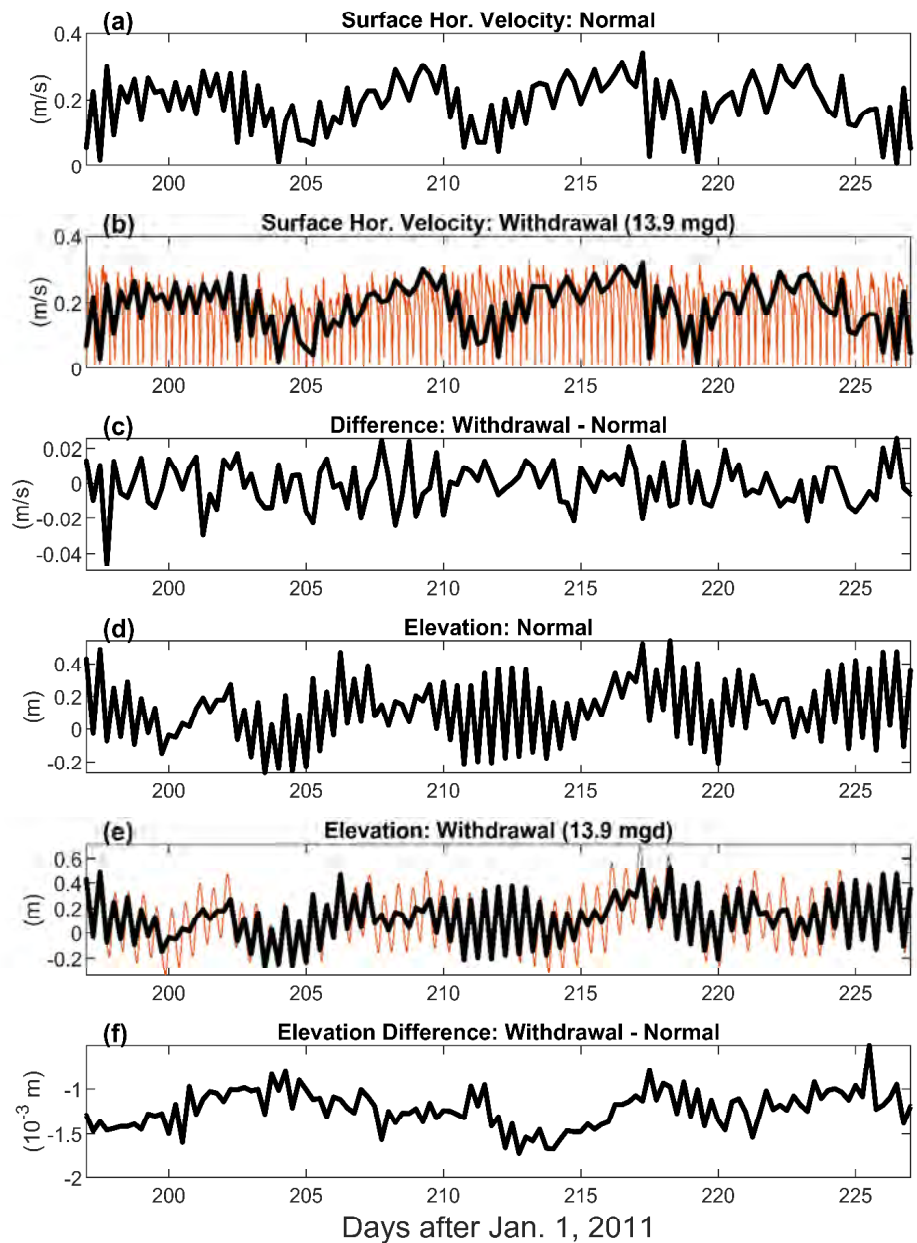


Figure 10. Time series of the speed of surface horizontal velocities (a-c) and elevation (d-f) at one location of the intake area under "Normal" (without the intake) and "Withdrawal" (with the intake) conditions and the difference between the two conditions. The comparison is based on data having the frequency of 6 hours (black lines). The data having a higher frequency of 15 minutes are also added to the withdrawal case for a better illustration of the model performance

3.2. Scenarios for evaluating the impacts of release methods and locations

3.2.1. Backward tracking scenario

After 31 days of backward tracking (June 27 to May 28), the cumulative particle distribution covers the entire portion upstream of the intake and a short distance downstream (Figure 11). Ichthyoplankton originating from these areas are the only particles that may be impacted by the intake during the 31-day period.

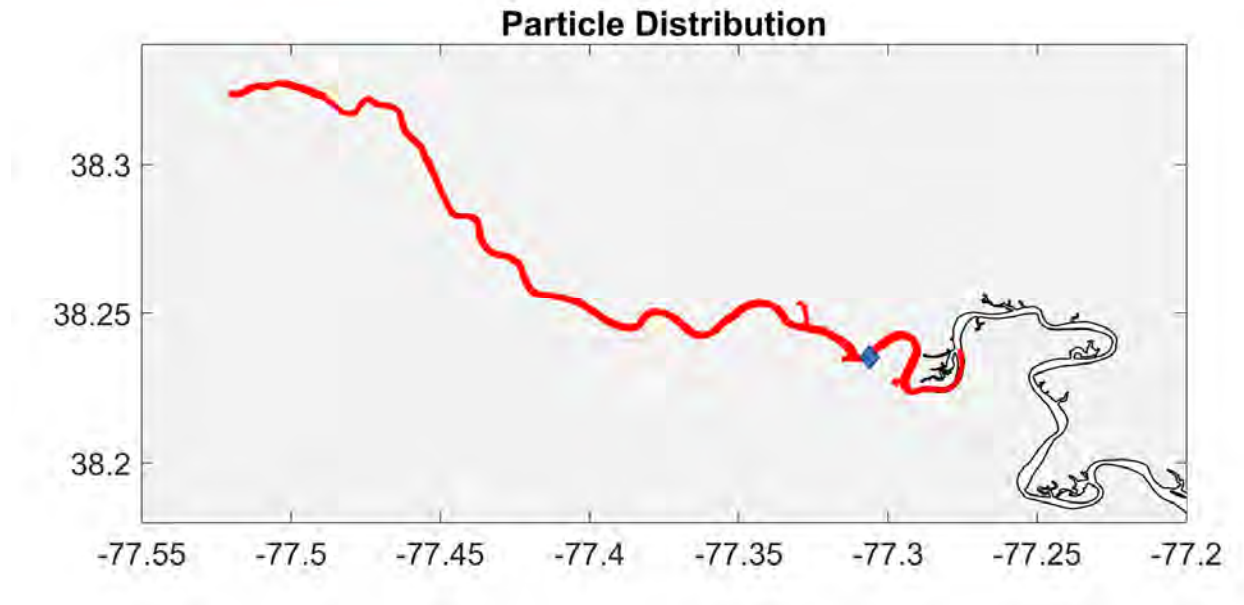


Figure 11. Cumulative distribution of particles originally released from the location of the intake in the back-tracking scenario. The blue diamond shows the location of the intake.

3.2.2.1. Frequency of the particle removal

Particles originating in the locations upstream of the intake had a relatively higher frequency of being removed by the intake compared with those that originated downstream of the intake (Figure 12). We found that the along-estuary gradients of the frequency were less than the cross-sectional gradients. In the cross-sectional direction, the deep channel shows a higher frequency than the shoals. The particles in the channel can be transported downstream at a higher rate than those at the shoals, and therefore have a higher chance to be removed by the intake. This is the opposite of the flushing effect, which usually shows stronger flushing by tidal currents in the channels than the shoals and less time for particles to be removed by the intake.

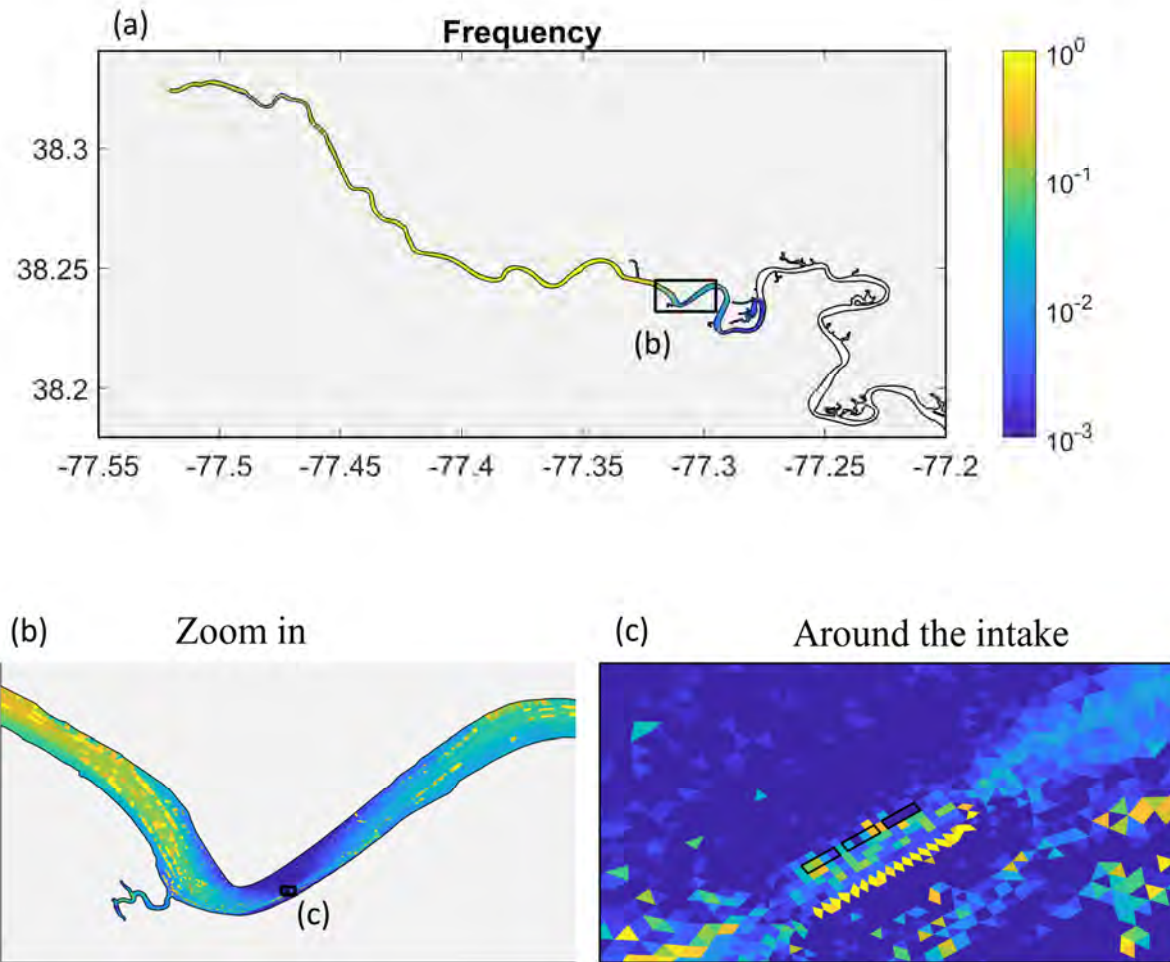


Figure 12. Computed frequency of the particle removal based on the backward-tracking results in the upper Rappahannock River (a-b), and the local area around the intake (c). The locations of the 3 intake screens are denoted by the black boxes.

3.2.2.2. Contribution

Results from the backward tracking model under moderate flow conditions show that the highest contribution was about 69% at the location where the freshwater discharge enters the Rappahannock River in the model domain (Figure 13). Because this analysis was based on the distribution of particles on 5/28/2011 in the study area, this suggests that about 69% percent of particles that were removed by the intake during the 31-day tracking period originally came from the upstream area of the Rappahannock River. Additionally, the contribution of particles from the downstream of the intake in the Rappahannock River was low or equal to zero indicating that few particles are removed by the intake under moderate flow from the downstream. Considering other locations within the Rappahannock River, the maximum contribution was about 3.7% at a location near the Virginia State Route 3 (Figure 13a). This indicates that particles appearing at

this location contributed to about 3.7% of total particles that were removed by the intake from the entire system during the simulation period. Note that not all of the particles that appear in a particular grid cell will ultimately be removed by the intake. To compute the fraction of particles from a grid cell that are removed by the intake, the forward particle tracking model is needed.

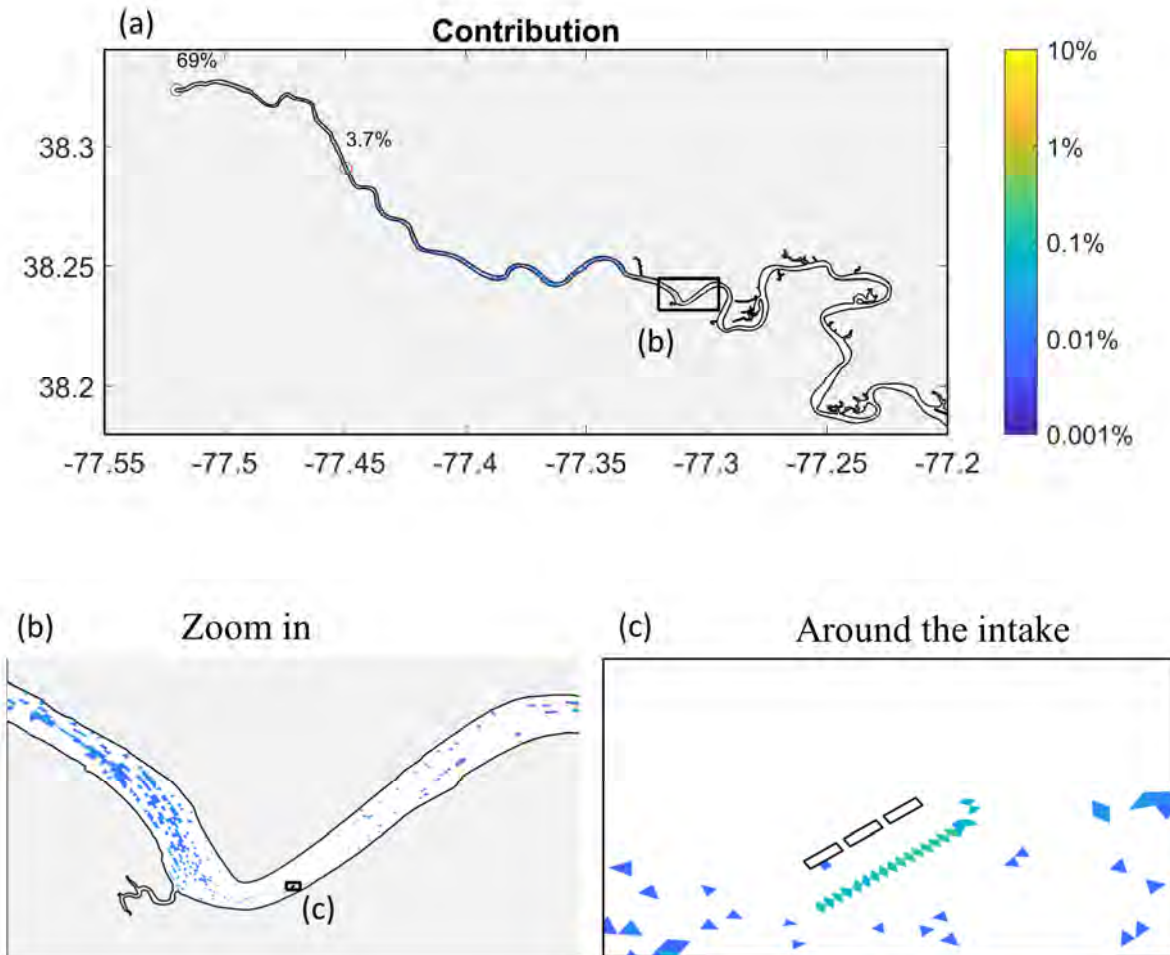


Figure 13. Computed contribution of the particles released at each location to the particles that encounter the intake during the study period, based on the backward-tracking results in the upper Rappahannock River (a-b) and the local area around the intake (c). The locations of the three intake screens are denoted by the black boxes. The red circles mark the locations with the two highest contribution (= 69% and 3.7%) in this area. Note that the location with the highest contribution marked by the red circle (in (a)) is where the freshwater discharge enters the Rappahannock River in the model.

3.2.2. Forward tracking scenarios

Statistics of the five scenarios with around 100,000 particles are listed in Table 5. Under moderate flow conditions, Scenario 2 (one-time release upstream of the intake) resulted in the highest number of particles ($n = 258$) and the highest percent of particles (0.242%) that were removed by the intake (Table 5). The second most impactful scenario, Scenario 5 (continuous releases at the head of the River), resulted in the removal of 0.233% of the particles. Under Scenario 1 (one-time release near the intake), 0.065% of the particles were removed by the intake. The other two scenarios showed no loss (Table 5). These results show that particles released from locations downstream of the intake in the Rappahannock River are much less likely to be removed by the intake under moderate flow conditions compared with release locations upstream or near the intake.

Those scenarios with around 10,000 particles are presented for visual demonstrations. Under Scenario 1, particles move back and forth along the Rappahannock River by tide (Figure 14a-b). As the tides change and particles are dispersed, eight particles are removed by the intake within one day (i.e., entrained, impinged, or damaged through contact; Figure 14c-d). The major removal of particles happens within the first two days, and the number of particles that are removed by the intake reaches the maximum after 1.5 day ($n = 11$; Figure 14e). On the subtidal scale, the particles are either settled to the bottom or transported downstream (Figure 14f). Under Scenario 2, particles are transported from the release location to the vicinity of the intake within two days (Figure A4a-b). Tidal processes transport the particles back and forth across the location of the intake and the number of particles that are removed by the intake increases from 6 particles to 14 particles in 5 hours on May 29 (Figure A4c-d). As time continues, the number of particles that are removed by the intake increases to 18 on June 3, though most have been transported downstream (Figure A4e-f). Under Scenarios 3 and 4 where the release locations occurred downstream of the intake, the only way for particles to reach the intake is through tidal transport and the overall number of particles that are removed by the intake was zero (Figures A5 and A6). For one-time release scenarios, particles are removed by the intake within the first few days after initial release (Figure 15). Under continuous release Scenario 5 where particles are released upstream of the intake in the Rappahannock River, particles are removed by the intake over a 24-day period (Figure 15). A total of 23 particles are eventually removed by the intake for the 10,000-particle case of Scenario 5 (Figure A7).

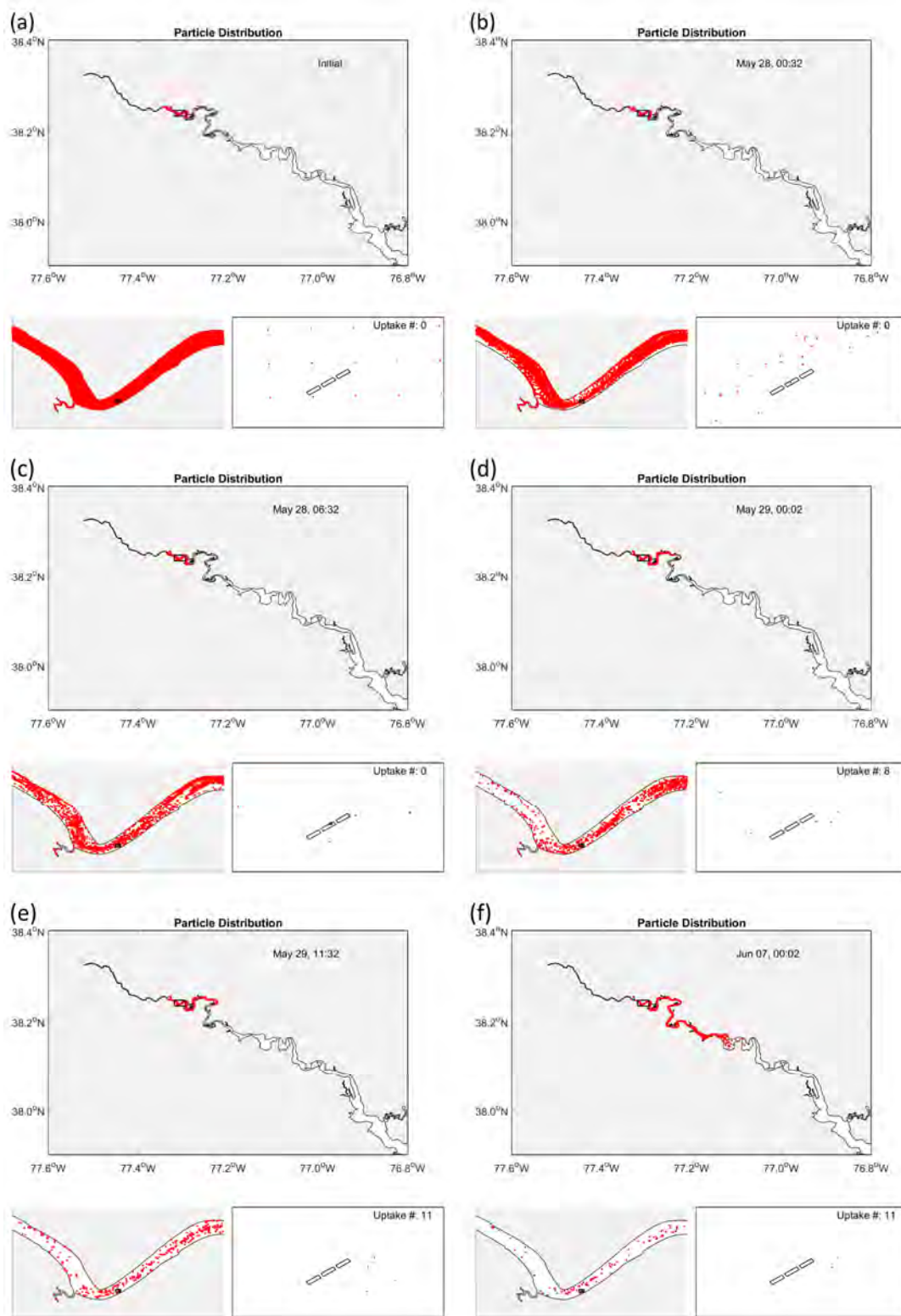


Figure 14. Distribution of particles (red dots) in Scenario 1. (a) Initial distribution at 5/28/2011. (b) After half hour. (c) After 6.5 hours. (d) After 1 day. (e) After 1 day and 11.5 hours. (f) After 10 days. Blue dots denote those particles that are eventually removed by the intake.

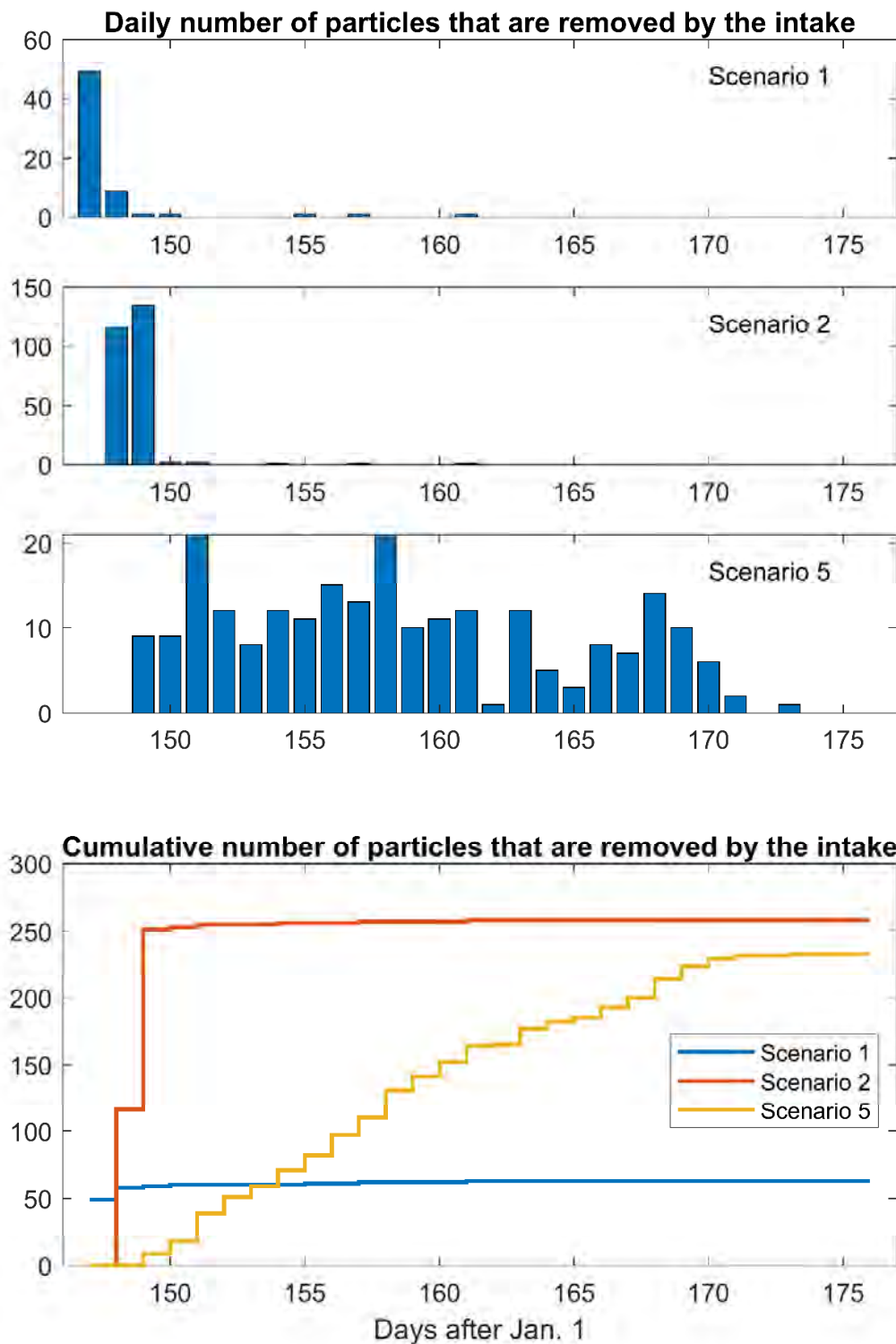


Figure 15. Daily statistics of the number of particles that are removed by the intake for Scenarios 1, 2, and 5 with about 100,000 particles released.

Table 5. The statistics of the forward particle tracking scenarios 1-5 under moderate flow conditions.

Scenario	Release method	Total number of particles released	Number of particles that encounter the intake	Percent of particles that encounter the intake	Maximum daily percent
1	One time	97,663	63	0.065%	0.050%
2	One time	106,746	258	0.242%	0.126%
3	One time	102,040	0	0	0
4	One time	101,767	0	0	0
5	Continuously	100,005	233	0.233%	0.021%

3.2.3. Summary of passive particle simulations

Results from the forward and backward tracking models show that particles released from locations upstream of the intake are more likely to be removed than those released from downstream locations. River discharge from the Rappahannock river quickly transport particles downstream and moves them away from the intake. Whereas tidal processes disperse particles upstream and downstream, river discharge likely dominates the particle transport process when flow is moderate. Thus, only a small portion of released particles are transported upstream after their initial release and all particles are eventually transported downstream.

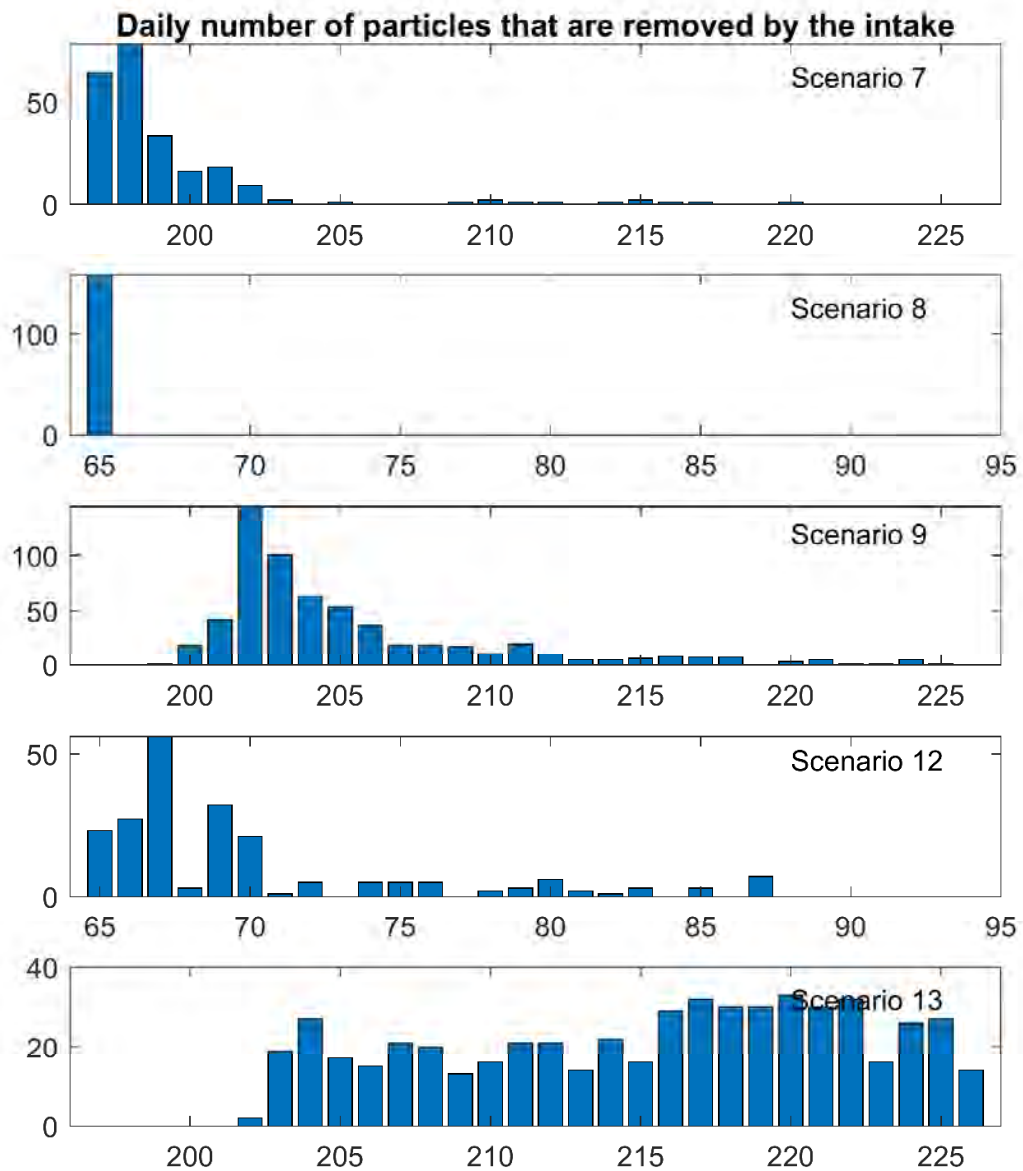
3.4. Scenarios that examine potential impacts of river discharge

Under one-time release scenarios, we compared the results of previous scenarios with the same release location but under different flow conditions (Scenarios 1, 6, and 7; Scenarios 2, 8, and 9; Scenarios 3, 10, and 11). We found that a lower discharge rate led to higher total removal of particles by the intake (Table 6 and Figure 16). This was expected because a lower discharge rate results in weaker downstream transport of particles and longer retention, thus increasing the probability of particles being removed. Under Scenario 9 (low flow), the highest percent of particles removed was 0.572% (Table 6). Under high flow conditions, the particles were advected outside of the study area more quickly and the particles had a lower chance to be removed by the intake.

Under continuous release scenarios 12 and 13, a greater proportion of total particles are released with the highest discharge rate and the particle number around the intake increases, however this does not increase the percent of particles that are removed by the intake, because the higher discharge rate leads to stronger advection and more particles are advected outside the study area. Scenario 13 (continuous release upstream of the Rappahannock River under low flow conditions) resulted in the high percent (0.543%) of particles that were removed. Nevertheless, the total percent removed may not only depend on the mean discharge over the tracking period, but may also depend on the location of the intake screens or the pattern of flow variability during the study period.

Table 6. Summary of the forward particle tracking Scenarios 6-13, considering the impact of flow conditions.

Scenario	Release method	Release Location	Total number of particles released	Number of particles that encounter the intake	Percent of particles that encounter the intake	Maximum daily percent
6	One time, high flow	Vicinity of the intake	97,663	0	0	0
7	One time, low flow	Vicinity of the intake	97,663	232	0.238%	0.080%
8	One time, high flow	Upstream of the intake	106,746	158	0.148%	0.148%
9	One time, low flow	Upstream of the intake	106,746	611	0.572%	0.136%
10	One time, high flow	Downstream of the intake	102,040	0	0	0
11	One time, low flow	Downstream of the intake	102,040	0	0	0
12	Continuously, high flow	Head of the Rapp. of the model grid	100,001	210	0.210%	0.056%
13	Continuously, low flow	Head of the Rapp. of the model grid	100,001	543	0.543%	0.033%



3.5. Scenarios investigating active particles

We conducted 21 scenarios to investigate active particles with seven different vertical velocities that represent sinking eggs and larvae with swimming behaviors. Active particles alter their position in the water column and this interacts with the hydrodynamic field and changes the potential dispersal pattern relative to passive particles.

Active particles released near the intake (Scenarios 14-18) had non-zero removal for all downward velocity scenarios (Table 7). The largest removal rate was 0.174% (Scenario 18) with a settling velocity of -0.001 cm s^{-1} , which was slightly lower than that observed for passive particles under Scenario 7 (0.238%). Particles with relatively fast settling velocities (-1 , -0.3 , and -0.1 cm s^{-1}) experienced higher removal rates during the first two days compared with scenarios with relatively slow settling velocities (-0.01 and -0.001 cm s^{-1} ; Figure 17). The fast-settling velocities result in fewer particles in the water column that are available to the intake, so they are only vulnerable for the first few tidal cycles. Conversely, slower settling velocities increase the chance that particles encounter the intake because more particles remain in the water column, increasing the possibility of removal in subsequent tidal cycles. In the extreme case, the lowest settling velocity described by Scenario 7 (passive particle under low flow) shows that the highest daily removal rate was not until the second day (Figure 16).

This impact of downward velocity on the removal rate was even more clearly shown by Scenarios 21-25 that releases particles upstream of the intake, where all but one scenario (Scenario 25) had zero removal (Table 7). The removal rate of 0.308% with a settling velocity of -0.001 cm s^{-1} was still lower than the removal rate of 0.572% for passive particles under Scenario 9. For all one-time release scenarios with upward velocities, there was no removal of particles by the intake.

Seven continuous release scenarios with active particles were investigated and those with upward velocities or relatively fast downward settling velocities (Scenarios 28-31 and 33-34) showed no loss due to the intake, indicating the low chance for demersal eggs or larvae to encounter the intake if they are spawned at the upstream locations that are beyond the model domain. The greatest impact observed for active particles under continuous release scenarios was under Scenario 32 with a relatively slow settling velocity of -0.001 cm s^{-1} and a removal rate of 0.294% (Table 7).

It was interesting to find that the scenarios with particles released upstream of the intake (either one-time or continuous releases) resulted in lower removal rates compared with releases near the intake. The low removal rate for active particles suggest that downward settling particles will settle to the bottom and will end their journey before reaching the intake. Active particles with upward swimming velocities will travel a much longer distance than particles that settle, but they remain near the surface and have little chance of removal by the intake located near the riverbed.

Table 7. The statistics of the forward particle tracking scenarios 14-34. The vertical velocity of the particle can be either upward (+) or downward (-).

Scenario	Vertical velocity (cm/s)	Representative	Release method	Release Location	Total number of particles released	Number of particles that are removed by the intake	Percent of particles that are removed by the intake	Maximum daily percent
14	-1	Demersal egg	One time, low flow	Vicinity of the intake	97,663	95	0.097%	0.095%
15	-0.3	Demersal egg	One time, low flow	Vicinity of the intake	97,663	21	0.022%	0.022%
16	-0.1	Demersal egg	One time, low flow	Vicinity of the intake	97,663	43	0.044%	0.034%
17	-0.01	Demersal egg	One time, low flow	Vicinity of the intake	97,663	128	0.131%	0.078%
18	-0.001	Demersal egg	One time, low flow	Vicinity of the intake	97,663	170	0.174%	0.072%
19	1	larvae	One time, low flow	Vicinity of the intake	97,663	0	0	0
20	10	larvae	One time, low flow	Vicinity of the intake	97,663	0	0	0
21	-1	Demersal egg	One time, low flow	Upstream of the intake	106,746	0	0	0
22	-0.3	Demersal egg	One time, low flow	Upstream of the intake	106,746	0	0	0
23	-0.1	Demersal egg	One time, low flow	Upstream of the intake	106,746	0	0	0
24	-0.01	Demersal egg	One time, low flow	Upstream of the intake	106,746	0	0	0
25	-0.001	Demersal egg	One time, low flow	Upstream of the intake	106,746	329	0.308%	0.050%
26	1	larvae	One time, low flow	Upstream of the intake	106,746	0	0	0
27	10	larvae	One time, low flow	Upstream of the intake	106,746	0	0	0
28	-1	Demersal egg	Continuously, low flow	Head of the Rapp. of the model grid	100,001	0	0	0
29	-0.3	Demersal egg	Continuously, low flow	Head of the Rapp. of the model grid	100,001	0	0	0
30	-0.1	Demersal egg	Continuously, low flow	Head of the Rapp. of the model grid	100,001	0	0	0

31	-0.01	Demersal egg	Continuously, low flow	Head of the Rapp. of the model grid	100,001	0	0	0
32	-0.001	Demersal egg	Continuously, low flow	Head of the Rapp. of the model grid	100,001	294	0.294%	0.025%
33	1	larvae	Continuously, low flow	Head of the Rapp. of the model grid	100,001	0	0	0
34	10	larvae	Continuously, low flow	Head of the Rapp. of the model grid	100,001	0	0	0

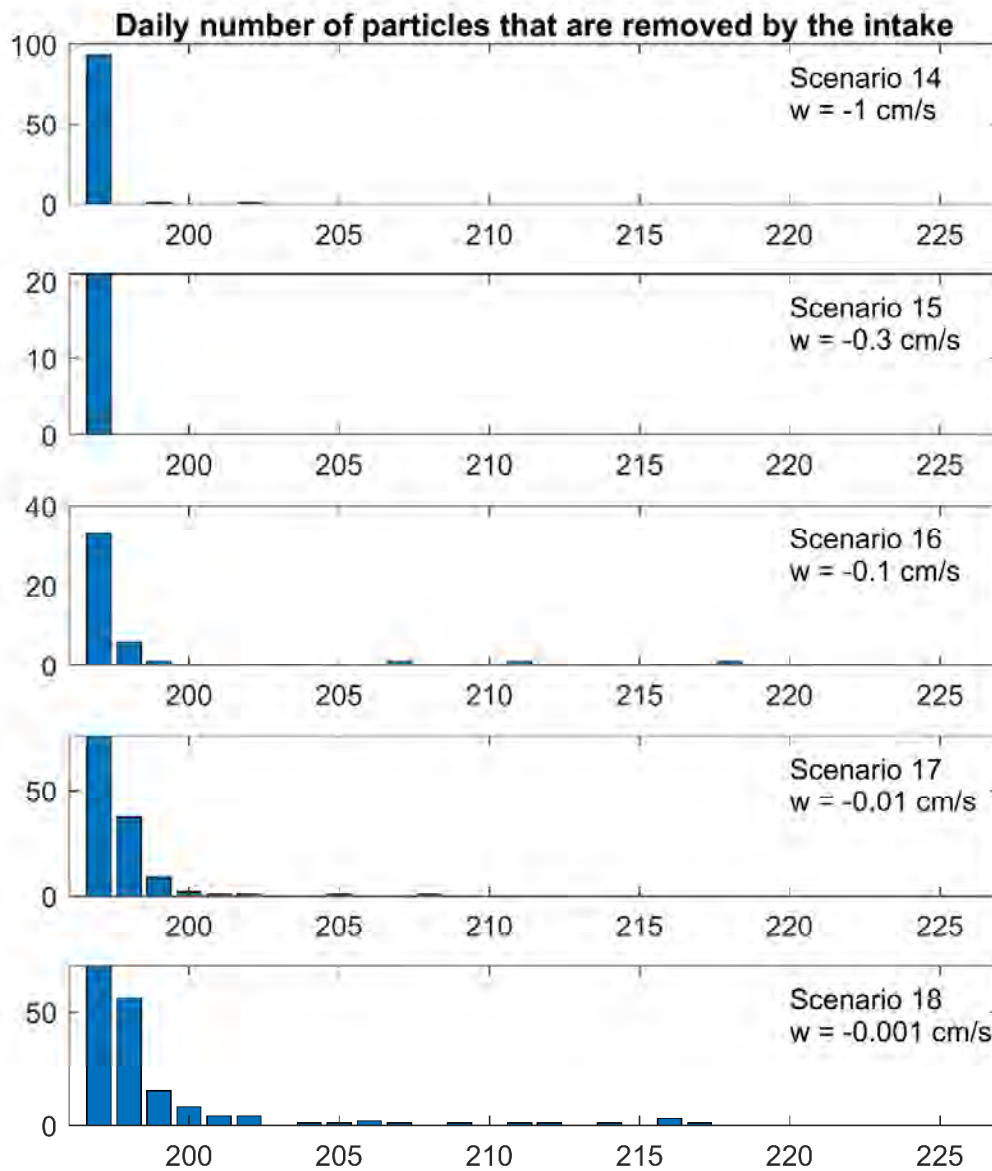


Figure 17. Daily statistics of the number of particles that are removed by the intake for Scenarios 14-18 where the release location is around the intake.

3.6. Impact of the intake on ichthyoplankton survival

One main purpose of the present modeling effort was to examine potential impacts of the water intake on ichthyoplankton survival. In this study, the results of 34 different modeling scenarios show that the total percent of particles removed due to the intake ranged from 0 to 0.5-0.6%, and the maximum daily removal rate ranged from 0 to 0.15% per day (Figures 18 and A8; Table A1). Because the flow rate only changes in the near the intake region and it causes minor changes in velocity field away from the intake, only particles that are close to the intake have the potential to be removed. Another factor contributing to the low removal rate is that the intake is located in a high flow region where a large portion of the larvae are quickly transported out of the intake region. This suggests that even under the conservative assumption that impingement and entrainment cause 100% mortality of the ichthyoplankton that encounter with the intake, the conditional mortality rate caused by the intake is estimated to be below 0.5-0.6%. If there is potential for survival of impinged ichthyoplankton for some species, as suggested by some experimental studies (EPRI, 2000), then the conditional mortality rate would be even lower. It is known that natural mortality is typically high for ichthyoplankton and most estimates of the mortality on the order of about 20% per day (Metaxas et al., 2009; White et al., 2014). For example, among the three representative fish species in the region, larvae of striped bass have the lowest daily mortality of 10.4-32.9% while larvae of blueback herring and inland silverside have daily mortality rates of 88-99%; other fish species also have natural daily mortality rates much greater than the maximum daily removal rate of 0.15% (Abraham, 1985; Greene et al., 2009; Jenkins and Burkhead, 1993; Limburg et al., 1999; Phillips et al., 2007; Rutherford et al., 1997; Walsh et al., 2005). Thus, mortality due to the intake is orders of magnitude less than natural mortality. From this modeling study, the intake operation with a flow rate of 13.9 mgd has a low impact on ichthyoplankton survival in this area. Whereas there is increased mortality due to the intake, the increase is unlikely to cause serious harm to fish eggs and larvae.

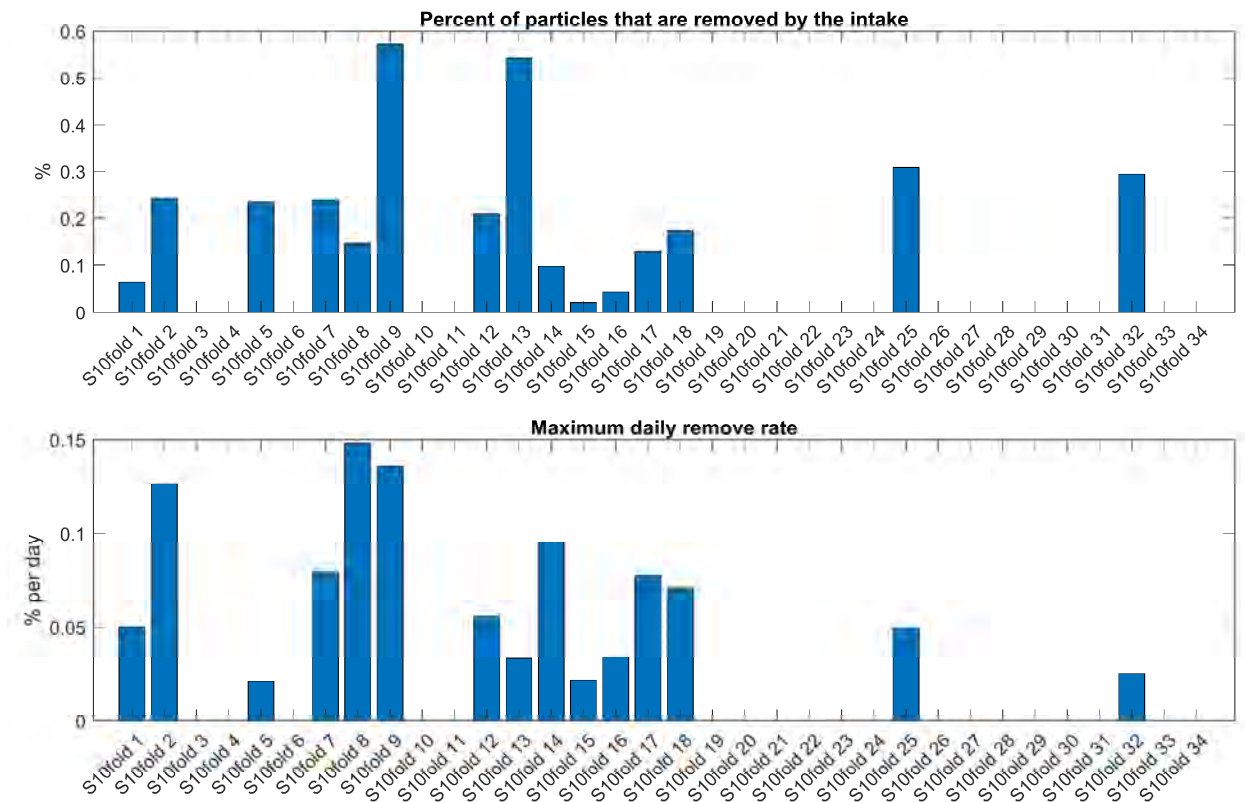


Figure 18. A summary of all of the forward-tracking scenarios showing the total number of particles removed by the intake (i.e., percent of particles that are removed by the intake) and the maximum daily removal rate, for 100,000-particle cases.

4. Conclusions

We investigated the potential impacts of a proposed municipal water intake on the survival of ichthyoplankton in a tidal freshwater estuary. We used an unstructured grid model with fine resolution in the vicinity of the intake to simulate river hydrodynamics and a particle tracking model to simulate the transport of ichthyoplankton (passive and active particles). The model results show that the intake, with a withdrawal rate of 13.9 mgd, can alter the velocity of the tidal flow near the intake, but does not have significant impacts on the hydrodynamics in the Rappahannock River.

Forward and backward particle tracking approaches were used to investigate the potential impacts of the intake. Two variables, “frequency” and “contribution”, were computed in the backward tracking scenario to identify the major sources of ichthyoplankton that were removed by the intake. Ichthyoplankton that are found in the channel have a greater probability of being removed by the intake than those found along the shoals. This is because the flushing effect is stronger in the channel created by faster currents and has the greater ability to transport particles to a larger area and increases the chance of them to be removed by the intake. Additionally,

ichthyoplankton that originate upstream of the intake are removed to a greater extent than those originating downstream of the intake. The model results also show an increase in the percent of ichthyoplankton that are removed during dry years or seasons under low flow conditions. Since spawning seasons of other species will likely encounter low flow periods, our results suggest impacts could be more important for those species that spawn during dry summer months.

The pathways of active particles were different from passive particles, indicating that the vertical velocity of ichthyoplankton can alter the transport and distribution of eggs and larvae and hence the removal rate due to the intake. For example, particles that represent demersal eggs with negative vertical velocities had a variety of outcomes with only the slowest sinking rates resulting in removal by the intake if they were released upstream. Additionally, for particles that represent larvae with upward swimming velocities, the current location and design of the intake likely has limited impacts because the screens were located in the lower half of the water column and larvae at the surface avoided the intake. Thus, larval fish behavior can alter impacts from water intakes with those impacts determined by swimming speeds and location relative to the intake. Furthermore, other behaviors not studied here could alter impacts of water intakes, such as daily migration between surface waters at night and bottom waters during day. These different migration patterns are more complex and require additional modeling efforts.

The total removal (percent) of particles and the maximum daily removal rate in all the model scenarios was below 0.6% and 0.15%, respectively, which is two orders of magnitude lower than natural mortality rates of ichthyoplankton. It is expected that the removal rate would be lower if the proposed intake would be operated with lower withdrawal rates than the maximum withdrawal rate considered in the model scenarios. This indicates that the current design of the intake has comparatively low impacts on the ichthyoplankton in this estuary. The numerical modeling approach used here simulates ichthyoplankton dispersal and changes in mortality caused by the intake under a variety of river flow conditions (e.g., high, moderate, and low flows), which provides scientific-based assessment of potential impacts that would otherwise not be possible.

References

- Abraham, B. J. 1985. Species Profiles: Life history and environmental requirements of coastal fishes and invertebrates (Mid-Atlantic) Mummichog and Striped Killifish. U.S. Fish and Wildlife Service, Biological Report 82.
- Arcadis, 2010. Caroline county water intake-ichthyoplankton population impact analysis. A report prepared by Arcadis.
- Bergey, L.L., Rulifson, R.A., Gallagher, M.L. and Overton, A.S., 2003. Variability of Atlantic coast striped bass egg characteristics. *North American Journal of Fisheries Management*, 23(2), pp.558-572.

- Blumberg, A.F., Dunning, D. J., Li, H., Heimbach, D., Geyer, W.R. 2004. Use of a particle-tracking model for predicting entrainment at power, plants on the Hudson River. *Estuaries*, 27(3): 515-526.
- Brandt, L. and Coletti, F., 2022. Particle-Laden Turbulence: Progress and Perspectives. *Annual Review of Fluid Mechanics*, 54, pp.159-189.
- Chiu, C.M., Huang, C.J., Wu, L.C., Zhang, Y.J., Chuang, L.Z.H., Fan, Y. and Yu, H.C., 2018. Forecasting of oil-spill trajectories by using SCHISM and X-band radar. *Marine pollution bulletin*, 137, pp.566-581.
- Dey, S., Ali, S.Z. and Padhi, E., 2019. Terminal fall velocity: the legacy of Stokes from the perspective of fluvial hydraulics. *Proceedings of the Royal Society A*, 475(2228), p.20190277.
- Downie, A.T., Illing, B., Faria, A.M. and Rummer, J.L., 2020. Swimming performance of marine fish larvae: review of a universal trait under ecological and environmental pressure. *Reviews in Fish Biology and Fisheries*, 30(1), pp.93-108.
- Du, J., Park, K., Yu, X., Zhang, Y.J. and Ye, F., 2020. Massive pollutants released to Galveston Bay during Hurricane Harvey: Understanding their retention and pathway using Lagrangian numerical simulations. *Science of The Total Environment*, 704, p.135364.
- EPRI (Electric Power Research Institute). Review of entrainment survival studies: 1970–2000. EPRI Report No. 1000757, Palo Alto, CA, 2000.
- Ferguson, R.I. and Church, M., 2004. A simple universal equation for grain settling velocity. *Journal of sedimentary Research*, 74(6), pp.933-937.
- Froese, R. and D. Pauly. Editors. 2019. FishBase. World Wide Web electronic publication. www.fishbase.org, version (12/2019).
- Gallego, A., North, E. W., Petitgas, P. Browman, H., 2007. Advances in modelling physical–biological interactions in fish early life history. *Marine Ecology Progress Series*, 347: 121-126.
- Geyer, W.R. and Signell, R.P. 1992. A Reassessment of the Role of Tidal Dispersion in Estuaries and Bays. *Estuaries*, 15(2), 97–108.
- Greene, K. E., J. L. Zimmerman, R. W. Laney, and J. C. Thomas-Blate. 2009. Atlantic coast diadromous fish habitat: A review of utilization, threats, recommendations for conservation, and research needs. Atlantic States Marine Fisheries Commission Habitat Management Series No. 9, Washington, D.C.
- Jenkins, R. E., and N. M. Burkhead. 1993. Freshwater fishes of Virginia. American Fisheries Society, Bethesda, MD.
- Kneib, R. T. 1993. Growth and mortality in successive cohorts of fish larvae within an estuarine nursery. *Marine Ecology Progress Series* 94:115-127.

- Limburg, K. E., M. L. Pace, and K. K. Arend. 1999. Growth, mortality, and recruitment of larval *Morone* spp. In relation to food availability and temperature in the Hudson River. *Fishery Bulletin* 97:80-91.
- Metaxas, A. and Saunders, M. 2009. Quantifying the “Bio-” Components in Biophysical Models of Larval Transport in Marine Benthic Invertebrates: Advances and Pitfalls. *Biol. Bull.* 216(3), 257–272;
- Peterson, R.H. and Harmon, P., 2001. Swimming ability of pre-feeding striped bass larvae. *Aquaculture International*, 9(5), pp.361-366.
- Phillips, E. C., Y. Ewert, and P. A. Speares. 2007. Fecundity, age and growth, and diet of *Fundulus diaphanous* (Banded Killifish) in Presque Isle Bay, Lake Erie. *Northeastern Naturalist* 14:269-278.
- Rutherford, E. S., E. D. Houde, and R. M. Nyman. 1997. Relationship of larval-stage growth and mortality to recruitment of Striped Bass, *Morone saxatilis*, in Chesapeake Bay. *Estuaries* 20:174-198.
- Shen, J. and Qin, Q., 2019. James River Water Quality Model Refinement and Scenario Simulations. Special Reports in Applied Marine Science and Ocean Engineering (SRAMSOE) No. 474. Virginia Institute of Marine Science, William & Mary. doi: 10.25773/j0fa-yk48
- Shen, J. Wang, Y., Sisson, M., 2016. Development of the hydrodynamic model for long-term Simulation of water quality processes of the tidal James River, Virginia. *Journal of Marine Science and Engineering*. 4(4), 82.
- Sundby, S. and Kristiansen, T., 2015. The principles of buoyancy in marine fish eggs and their vertical distributions across the world oceans. *PloS one*, 10(10), p.e0138821.
- Sundby, S., 1983. A one-dimensional model for the vertical distribution of pelagic fish eggs in the mixed layer. *Deep Sea Research Part A. Oceanographic Research Papers*, 30(6), pp.645-661.
- Torri, M., Corrado, R., Falcini, F., Cuttitta, A., Palatella, L., Lacorata, G., Patti, B., Arculeo, M., Mifsud, R., and Mazzola, S.; et al. 2018. Planktonic Stages of Small Pelagic Fishes (*Sardinella Aurita* and *Engraulis Encrasicolus*) in the Central Mediterranean Sea: The Key Role of Physical Forcings and Implications for Fisheries Management. *Prog Oceanogr*, 162, 25–39, doi:10.1016/j.pocean.2018.02.009.
- Varnell, L.M., D.A. Evans, D.M. Bilkovic, and J.E. Olney. 2008. Estuarine surface water allocation: a case study on the interactive role of science in support of management. *Environmental Science & Policy* 11, 602-612.
- Walsh, H. J., L. R. Settle, and D. S. Peters. 2005. Early life history of Blueback Herring and Alewife in the Lower Roanoke River, North Carolina. *Transactions of the American Fisheries Society* 134:910-926.

White, J.W., Morgan, S.G., and Fisher, J.L. 2014. Planktonic Larval Mortality Rates Are Lower than Widely Expected. *Ecology*, 95(12), 3344–3353.

Zhang, Y.J., Ateljevich, E., Yu, H.C., Wu, C.H. and Jason, C.S. 2015. A new vertical coordinate system for a 3D unstructured-grid model. *Ocean Modelling*, 85: 16-31.

Appendix

Table A1. The release method, location, flow condition, vertical velocity, percent of particles that are removed by the intake, and maximum daily removal rate of the 34 forward particle tracking scenarios. In those scenarios where particles are released continuously, the release period is 21 days, and the number of particles release is proportional to daily freshwater discharge. The vertical velocity of the particle can be either upward (+) or downward (-).

Scenario	Release method	Release location	Flow condition	Vertical velocity (cm s ⁻¹)	Percent of particles that are removed by the intake	Maximum daily removal rate
1	One time	Vicinity of the intake	Moderate	0	0.065%	0.050%
2	One time	Upstream of the intake	Moderate	0	0.242%	0.126%
3	One time	Downstream of the intake	Moderate	0	0	0
4	One time		Moderate	0	0	0
5	Continuously	Head of the Rapp. of the model grid	Moderate	0	0.233%	0.021%
6	One time	same as Scenario 1	High	0	0	0
7	One time	same as Scenario 1	Low	0	0.238%	0.080%
8	One time	same as Scenario 2	High	0	0.148%	0.148%
9	One time	same as Scenario 2	Low	0	0.572%	0.136%
10	One time	same as Scenario 3	High	0	0	0
11	One time	same as Scenario 3	Low	0	0	0
12	Continuously	same as Scenario 5	High	0	0.210%	0.056%
13	Continuously	same as Scenario 5	Low	0	0.543%	0.033%
14	One time	same as Scenario 1	Low	-1	0.097%	0.095%
15	One time	same as Scenario 1	Low	-0.3	0.022%	0.022%
16	One time	same as Scenario 1	Low	-0.1	0.044%	0.034%
17	One time	same as Scenario 1	Low	-0.01	0.131%	0.078%
18	One time	same as Scenario 1	Low	-0.001	0.174%	0.072%
19	One time	same as Scenario 1	Low	1	0	0
20	One time	same as Scenario 1	Low	10	0	0
21	One time	same as Scenario 2	Low	-1	0	0
22	One time	same as Scenario 2	Low	-0.3	0	0
23	One time	same as Scenario 2	Low	-0.1	0	0
24	One time	same as Scenario 2	Low	-0.01	0	0
25	One time	same as Scenario 2	Low	-0.001	0.308%	0.050%
26	One time	same as Scenario 2	Low	1	0	0
27	One time	same as Scenario 2	Low	10	0	0
28	Continuously	same as Scenario 5	Low	-1	0	0
29	Continuously	same as Scenario 5	Low	-0.3	0	0
30	Continuously	same as Scenario 5	Low	-0.1	0	0
31	Continuously	same as Scenario 5	Low	-0.01	0	0
32	Continuously	same as Scenario 5	Low	-0.001	0.294%	0.025%
33	Continuously	same as Scenario 5	Low	1	0	0
34	Continuously	same as Scenario 5	Low	10	0	0

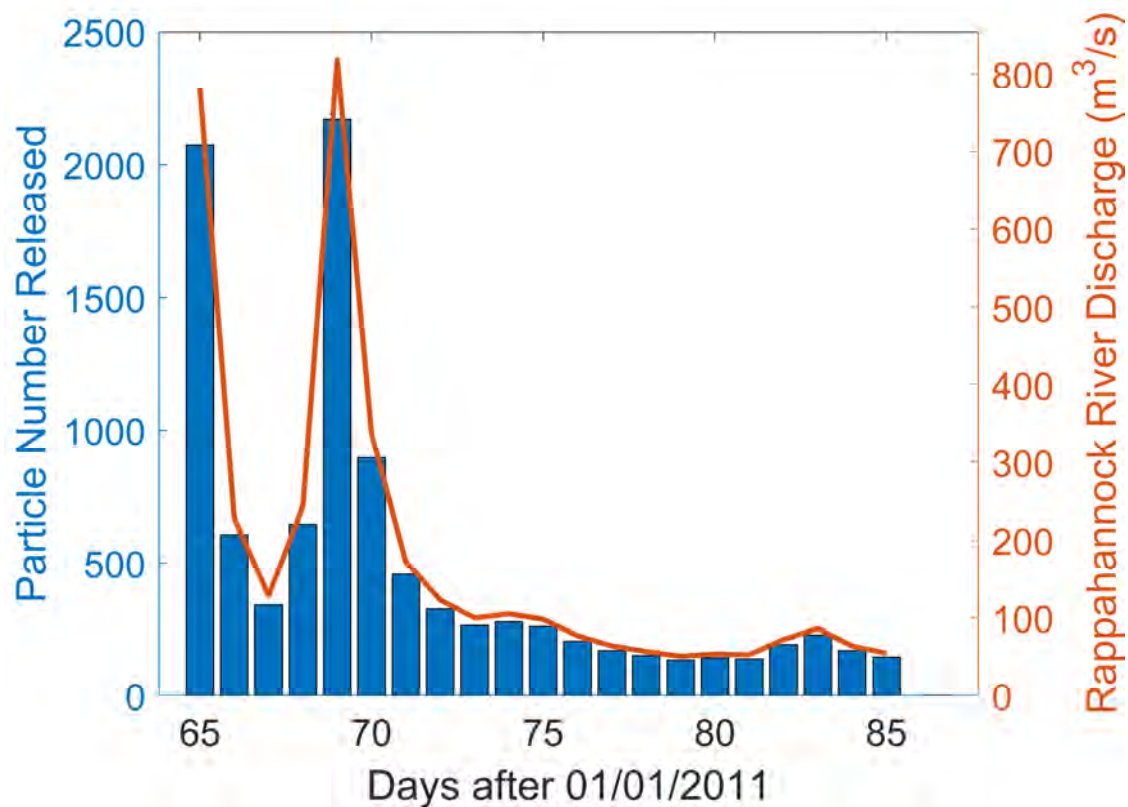


Figure A1. Particle release in Scenario 12 with 10,000 particles, at the surface of the uppermost grid cell in the Rappahannock River in the model for the 21 days (3/7/2011-3/27/2011). The number of particles released is proportional to the daily freshwater discharge of the Rappahannock River.

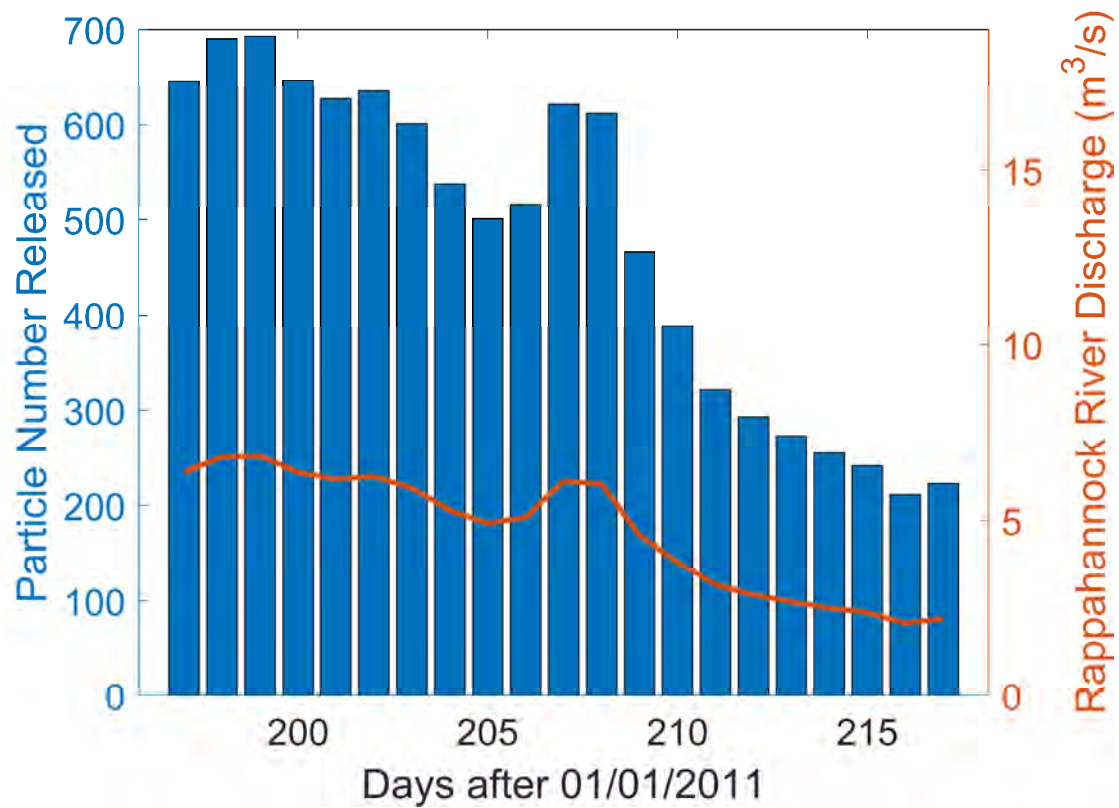


Figure A2. Particle release in Scenario 13 with 10,000 particles, at the surface of the uppermost grid cell in the Rappahannock River in the model for the 21 days (7/17/2011-8/06/2011). The number of particles released is proportional to the daily freshwater discharge of the Rappahannock River.

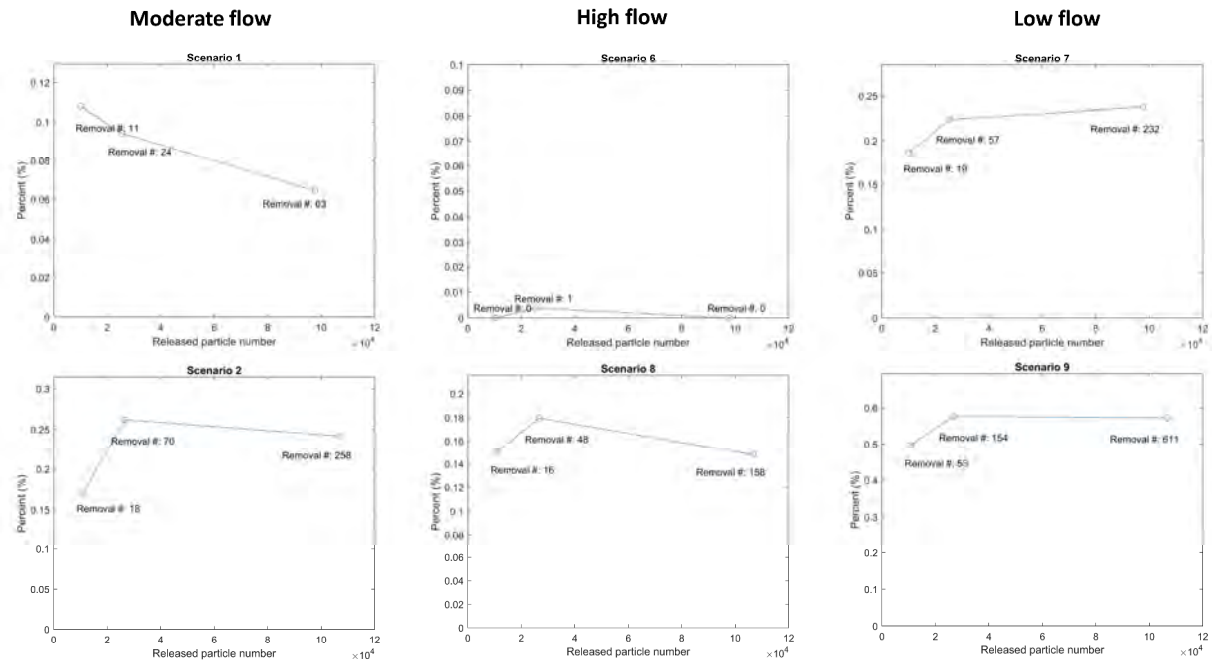


Figure A3. Comparison of the removal percent of particles by the water intake between cases of about 10,000, 25,000, and 100,000 particles for each of Scenarios 1, 6, 7, 2, 8, and 9.

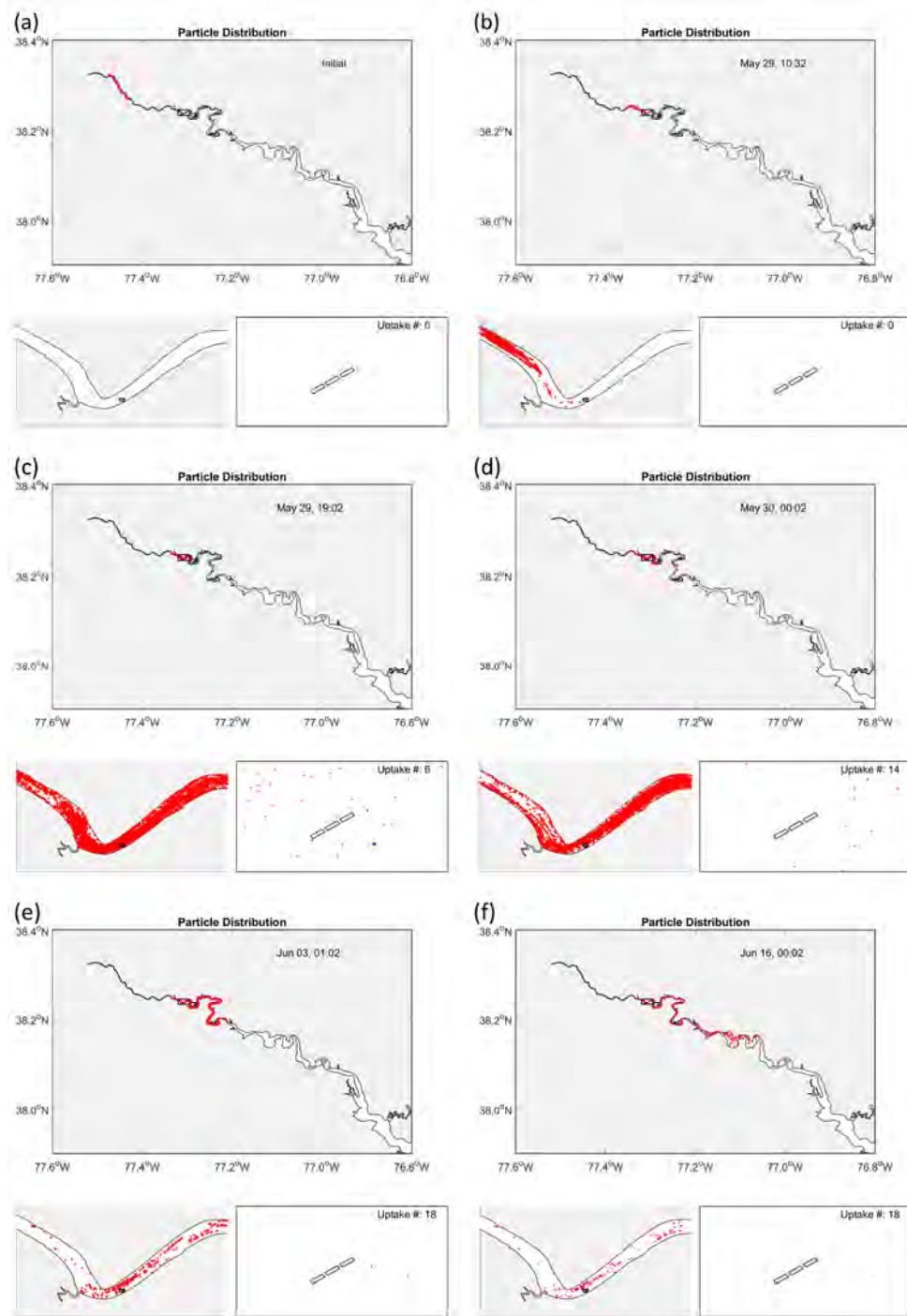


Figure A4. Distribution of particles (red dots) in Scenario 2. (a) Initial distribution at 5/28/2011. (b) After 10.5 hours. (c) After 19 hours. (d) After 1 day. (e) After 6 days and 1 hour. (f) After 19 days. Blue dots denote those particles that are eventually removed by the intake.

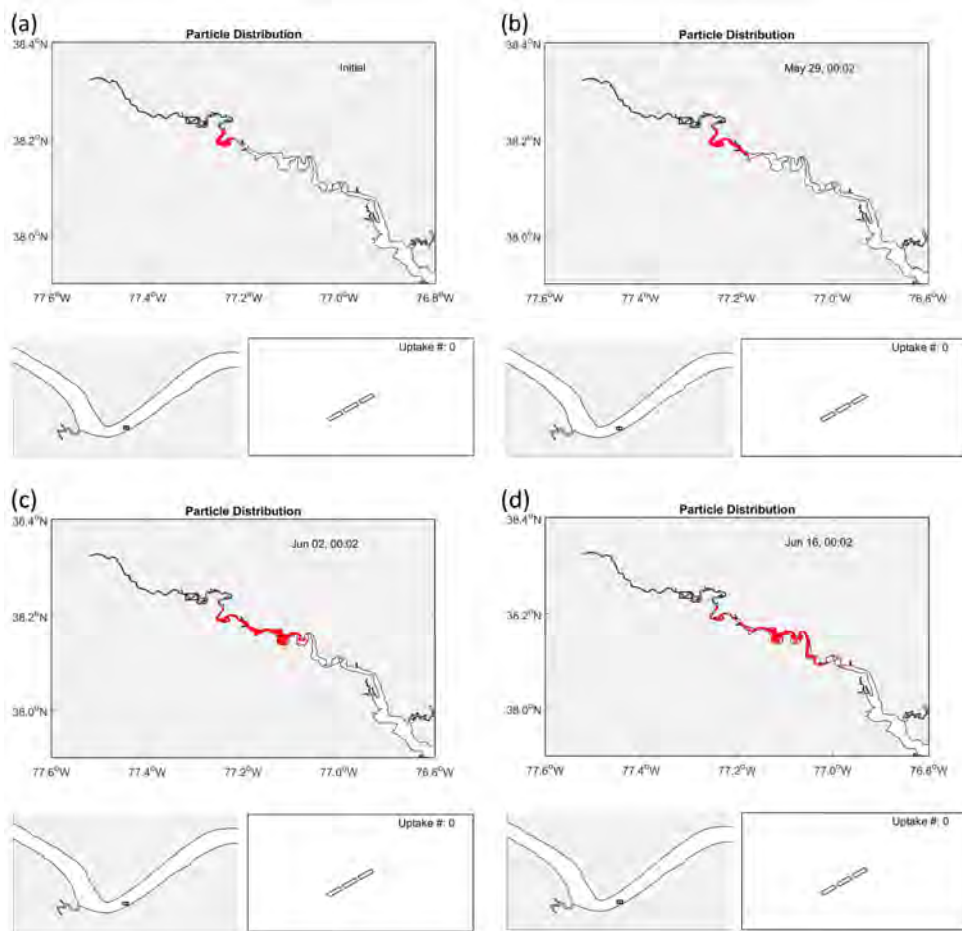


Figure A5. Distribution of particles (red dots) in Scenario 3. (a) Initial distribution at 5/28/2011. (b) After 1 day. (c) After 5 days. (d) After 19 days. Blue dots denote those particles that are eventually removed by the intake.

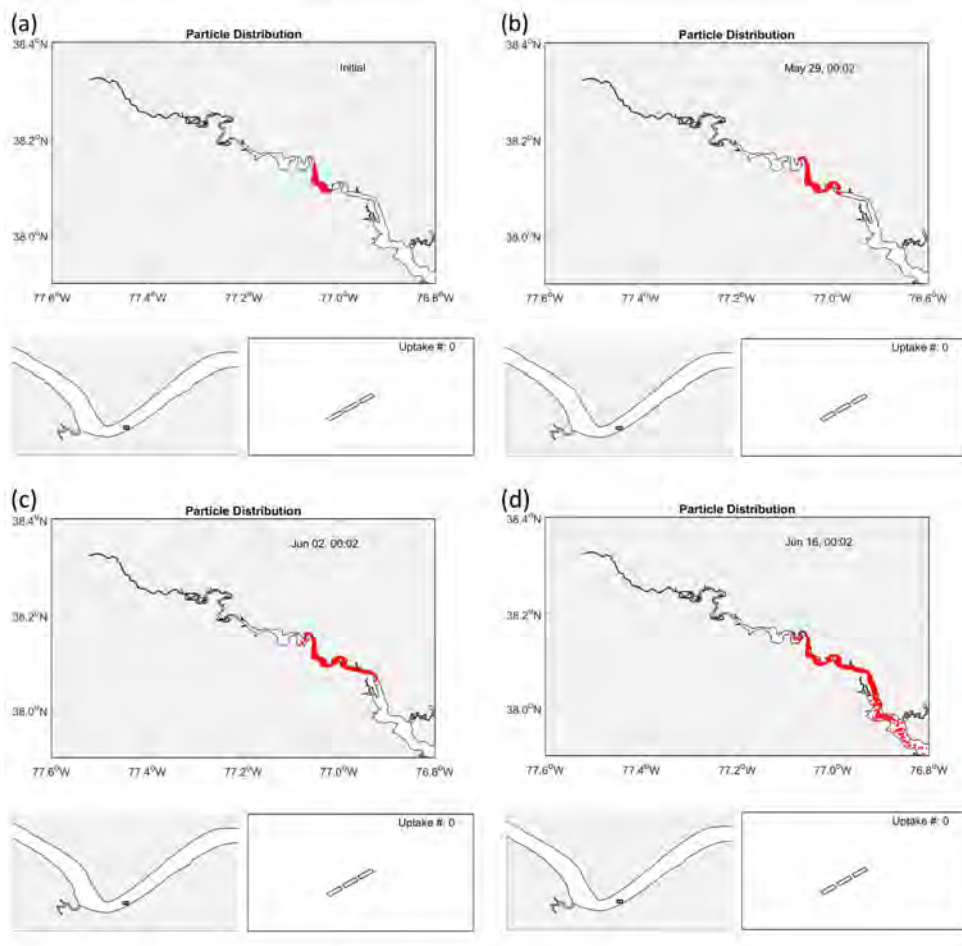


Figure A6. Distribution of particles (red dots) in Scenario 4. (a) Initial distribution at 5/28/2011. (b) After 1 day. (c) After 5 days. (d) After 19 days. Blue dots denote those particles that are eventually removed by the intake.

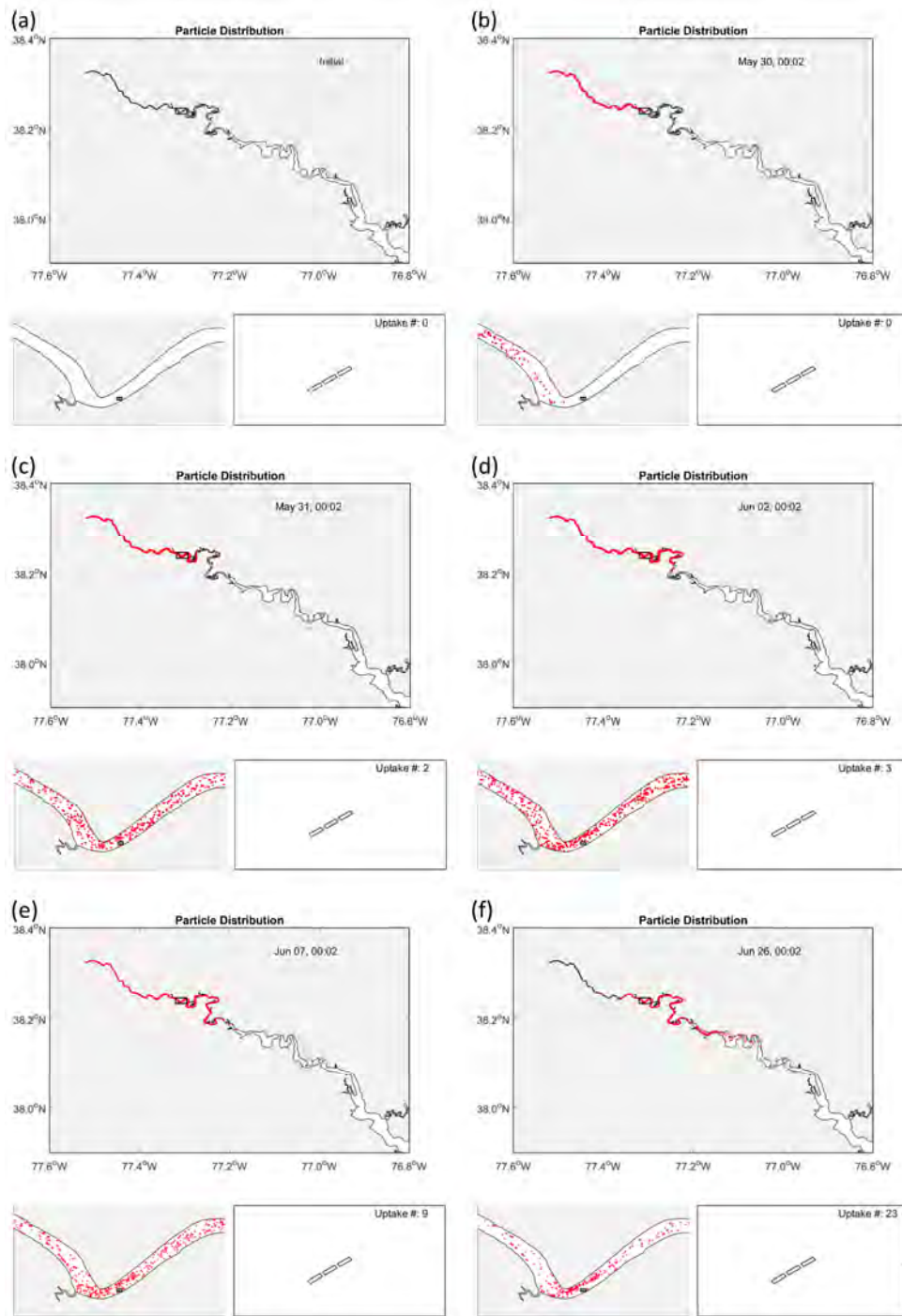


Figure A7. Distribution of particles (red dots) in Scenario 5. (a) Initial distribution at 5/28/2011. (b) After 2 days. (c) After 3 days. (d) After 5 days. (e) After 10 days. (f) After 29 days. Blue dots denote those particles that are eventually removed by the intake.

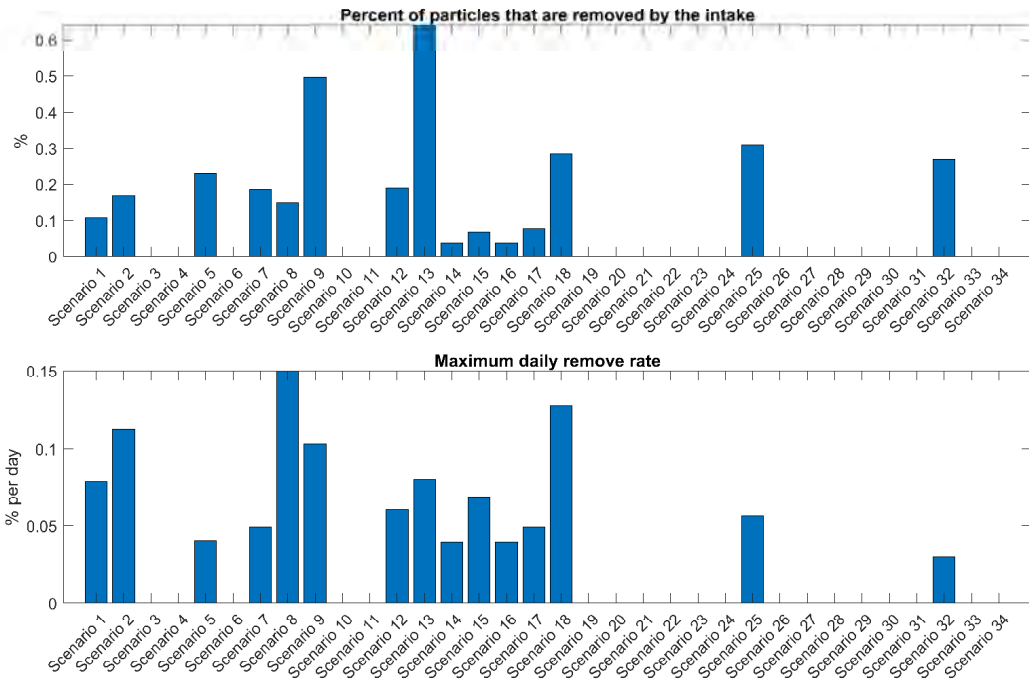


Figure A8. A summary of all of the forward-tracking scenarios showing the total number of particles removed by the intake (i.e., percent of particles that are removed by the intake) and the maximum daily removal rate, for 10,000-particle cases.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

VWP Individual Permit No. 20-0514

Effective Date: November 26, 2025

Expiration Date: November 25, 2040

VIRGINIA WATER PROTECTION PERMIT ISSUED PURSUANT TO THE STATE WATER CONTROL LAW AND SECTION 401 OF THE CLEAN WATER ACT

In compliance with § 401 of the Clean Water Act, as amended (33 USC § 1341) and the State Water Control Law and regulations adopted pursuant thereto, the department has determined that there is a reasonable assurance that this VWP permit, if complied with, will protect instream beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to a significant impairment of state waters or fish and wildlife resources. In issuing this VWP permit, the department has not taken into consideration the structural stability of any proposed activities.

Permittee: Caroline County Department of Public Utilities

Facility Caroline County Rappahannock River Water Supply

Facility Address: 19095 Tidewater Trail, Fredericksburg, Virginia 22408

Activity Location: The project is located throughout Caroline County, Virginia. The proposed intake is located on the south side of the Rappahannock River off of Route 17. The proposed raw water pipeline connecting the intake to the proposed water treatment plant (WTP) is estimated to travel 35 miles starting from the intake located along the rights-of-way of Route 17 (Tidewater Trail), Route 301 (AP Hill Boulevard), Route 207 (Rodgers Clark Boulevard), and ending at the proposed WTP location on Gravel Hill Road off of Route 1 (Jefferson Davis Highway).

Activity Description:

Caroline County Public Utilities proposes to develop a new raw water supply system to supply Caroline County, the Town of Port Royal and the Town of Bowling Green. This permit authorizes the impacts to wetland and streams associated with the construction activities of the project. Construction activities include: a raw water pump station and associated infrastructure, an intake structure located on the south bank of Rappahannock River, the installation of approximately 35 miles of water line for the transfer of raw water from the intake to the proposed water treatment plant (WTP) located in the vicinity of Carmel Church, VA, which will connect to a new distribution system as well as to parts of the existing distribution

system. The withdrawal is used for municipal public water supply. Permitted activities shall be conducted as described in the Joint Permit Application dated March 24, 2020, received on March 27, 2020, and supplemental materials, revisions and clarifications received through May 20, 2025.

The Permittee's authorized water withdrawal shall not exceed:

<u>1,832</u>	Million gallons per year,
<u>237</u>	Million gallons per month,
<u>9.0</u>	Million gallons per day,
<u>7.0</u>	Million gallons per day upon declaration of a drought warning.
<u>6.0</u>	Million gallons per day upon declaration of a drought emergency.

The permitted withdrawal will be used to provide a municipal public water supply. Other uses are not authorized by this permit.

The permitted activity shall be in accordance with this Permit Cover Page, Part I - Special Conditions, and Part II - General Conditions.



Bryant Thomas
Director, Water Resources Division

11/26/2025

Date

Part I – Special Conditions

A. Authorized Activities

1. This permit authorizes the construction of a new surface water intake, pump station, raw water pipeline, finished water pipeline connecting to the distribution system, water treatment plant, and surface water withdrawals from the Rappahannock River for public water supply.
2. This permit authorizes the total impact to 0.76 acres of surface waters, consisting of 0.06 acres of permanent impacts and 0.70 acres of temporary impacts as indicated below.
 - a. Permanent impacts consist of 50 linear feet of stream.
 - b. Conversion impacts consist of 0.03 acres of wetland impacts, conversion from forested to non-forested.
 - c. Temporary impacts consist of 466 linear feet of stream and 0.45 acres of wetlands.
 - d. Authorized surface water impacts described under this condition shall be as depicted on the impacts map¹ dated September 11, 2023, and the Narrative Description of Proposed Impacts dated October 19, 2023².
3. The permittee shall conduct authorized activities as described in the Joint Permit Application and supplemental materials, revisions, and clarifications. Any changes to the authorized activities or impacts map that affect permitted areas shall be submitted to the Department immediately upon determination that changes are necessary, and Department approval shall be required prior to implementing the changes.
4. The permit authorizes the temporary use of mechanical equipment in surface waters in accordance with all applicable permit conditions.
5. The permittee shall notify the Department of any changes in authorized impacts to surface waters, of any modifications of the intake structure, or any changes to the design or type of construction activities in surface waters authorized by this permit. Department approval shall be required prior to implementing the changes. Any additional impacts, modifications, or changes shall be subject to individual permit review or modification of this permit.

B. Permit Term

1. This permit is valid for fifteen (15) years from the date of issuance. A new permit may be necessary for the continuance of the authorized activities, including water withdrawals, or any permit requirement that has not been completed, including compensation provisions.
2. The permittee shall submit a new permit application at least 270 calendar days prior to the expiration of this permit if reissuance will be requested.

¹ Refer to the 4th Additional Information Response – Appendix G – Project Drawings, dated September 11, 2023.

² Refer to the 5th Additional Information Response – Appendix I – Narrative Description of Proposed Impacts, dated October 19, 2023.

C. Standard Project Conditions

1. This permit does not constitute, convey, or imply authority to any permittee to unlawfully or incidentally take any threatened or endangered species that are protected by Virginia laws or regulations, pursuant to § 3.2-1000 through -1011; § 29.1-563 through -570; and 4VAC15-20 *et seq.* In accordance with recommendations from the Virginia Department of Wildlife Resources (DWR), the permittee shall comply with the following Time-of-Year Restriction (TOYR) and shall complete a mussel survey prior to performing instream work as specified below:
 - a. Instream work in the Rappahannock River necessary to install the intake and/or associated infrastructure shall adhere to a TOYR and shall not be conducted from February 15th through June 30th and August 1st through November 15th of any year for the protection of the Atlantic Sturgeon and the Confirmed Anadromous Fish Use Area at the project site.
 - b. Instream work in the Rappahannock River shall also adhere to a TOYR from April 15th through June 15th and August 15th through September 30th due to the presence of freshwater mussels.
 - c. The permittee shall perform a mussel survey and relocation, per the Virginia Department of Wildlife Resources (DWR) and the U.S. Fish and Wildlife Service (USFWS) approved Freshwater Mussel Guidelines of Virginia, prior to commencing work.
 - i. All work at stream crossing impact sites not listed in the final Freshwater Mussel Guidelines for Virginia shall occur when the stream is not flowing or behind cofferdams. No flow “dry” conditions can be naturally occurring (seasonal break in flow) or created through the installation of cofferdams or similar techniques to isolate the impact site.
 - ii. Each mussel survey shall be performed from 100 meters upstream through 400 meters downstream of the impact area of the proposed Rappahannock River intake location. The survey shall be performed by a qualified, permitted biologist, no more than six months prior to the start of construction. Each survey shall be performed by a qualified, permitted biologist and conducted in accordance with DWR and U.S. Fish and Wildlife Services (USFWS) draft Freshwater Mussel Guidelines for Virginia dated November 16, 2018, or as amended.
 - iii. The permittee shall submit a report, or reports, summarizing the results of each mussel survey to DWR and the Department for review and approval. The agencies shall review all of the surveys completed for impact areas. Based upon the results, DWR will provide final recommendations regarding the protection of listed species known from the area. The recommendations may include relocations of documented listed species, and/or requests for adherence to TOYR at sites not currently listed in Part I.C.1 and Part I.C.2. If mussel relocations are necessary, the Permittee shall coordinate with DWR and the USFWS. Mussel relocations shall be conducted in accordance with the DWR, and USFWS draft Freshwater Mussel Guidelines for Virginia dated November 16, 2018, or as amended.
 - d. The permittee shall coordinate with the USFWS regarding potential impacts upon federally Endangered northern long-eared bats associated with and prior to any tree removal. The

permittee shall comply with the following Time-of-Year Restriction (TOYR): No tree clearing shall occur from April 1 – November 14³ of any year, in order to protect the Northern Long-Eared Bat (*Myotis septentrionalis*), a species listed as Threatened under the Federal Endangered Species Act. The permittee may elect to perform a survey, in accordance with the [FWS Bat Survey Guidelines](#)⁴ for the Northern Long-Eared Bat within the project boundary and coordinate results with the U.S. Fish and Wildlife Service. Should the survey document the absence of the species within the project boundary and upon review and approval from the Department the TOYR may be removed.

2. Wells within a 1,000-foot radius from the project area shall be marked per Virginia Department of Health (VDH) standards to protect the wells from potential damage.
3. The activities authorized by this permit shall be executed in such a manner that any impacts to beneficial uses are minimized. As defined in § 62.1-44.3 of the Code of Virginia, "beneficial use" means both instream and off stream uses. Instream beneficial uses include, but are not limited to, the protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, and cultural and aesthetic values. The preservation of instream flows for purposes of the protection of navigation, maintenance of waste assimilation capacity, the protection of fish and wildlife resources and habitat, recreation, cultural and aesthetic values is an instream beneficial use of Virginia's waters. Off stream beneficial uses include, but are not limited to, domestic (including public water supply), agricultural uses, electric power generation, commercial, and industrial uses.
4. No activity shall substantially disrupt the movement of aquatic life indigenous to the water body, including those species which normally migrate through the area, unless the primary purpose of the activity is to impound water.
5. Flows downstream of the project area shall be maintained to protect all uses.
6. No activity shall cause more than a minimal adverse effect on navigation, and no activity shall block more than half of the width of the stream at any given time.
7. The activity shall not impede the passage of normal or expected high flows, and any associated structure shall withstand expected high flows.
8. All required notifications, reports, and submittals shall include project name and permit number and be submitted electronically to withdrawal.permitting@deq.virginia.gov. Alternatively, they can be mailed to the office stated below, unless otherwise directed in writing by the Department subsequent to the issuance of this permit: Department of Environmental Quality, Attn: Water Permitting Division, P.O. Box 1105, Richmond VA 23218.
9. All reports required by this permit and other information requested by the Department shall be signed by the permittee or a person acting in the permittee's behalf, with the authority to bind the permittee. A person is a duly authorized representative only if *both* criteria below are met. If a representative authorization is no longer valid because of a change in responsibility for the overall operation of the facility, a new authorization shall be immediately submitted to the Department.

³ Refer to the Appendix O – [The Department of Wildlife Resources Time of Year Restrictions](#), dated September 29, 2023.

⁴ Refer to Appendix Q – [The U.S. Fish and Wildlife Service Bat Survey Guidelines](#), dated March 2024.

- a. The authorization is made in writing by the permittee.
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
10. All submittals shall contain the following signed certification statement:
- "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*
11. Any fish kills or spills of fuels or oils shall be reported to the Department immediately upon discovery at (804) 396-0150 or <https://portal.deq.virginia.gov/v2/prep/search>. If the Department cannot be reached, the spill or fish kill shall be reported to the Virginia Department of Emergency Management (VDEM) at 1-800-468-8892 or the National Response Center (NRC) at 1-800-424-8802. Any spill of oil as defined in § 62.1-44.34:14 of the Code of Virginia that is less than 25 gallons and that reaches, or that is expected to reach, land only is not reportable, if recorded per § 62.1-44.34:19.2 of the Code of Virginia and if properly cleaned up.
12. The Department shall be notified in writing within 24 hours or as soon as possible on the next business day when potential environmentally threatening conditions are encountered which require debris removal or involve potentially toxic substances. Measures to remove the obstruction, material, or toxic substance or to change the location of any structure are prohibited until approved by the Department.
13. Virginia Water Quality Standards shall not be violated in any surface waters as a result of the project activities.
14. Continuous flow of perennial springs shall be maintained by the installation of spring boxes, French drains, or other similar structures.
15. All excavation, dredging, or filling in surface waters shall be accomplished in a manner that minimizes bottom disturbance and turbidity.
16. All in-stream activities shall be conducted during low-flow conditions whenever practicable.
17. Erosion and sedimentation controls shall be designed in accordance with the Virginia Erosion and Stormwater Management Regulation, 9VAC25-875.

18. All construction, construction access, and demolition activities associated with this project shall be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by this permit. Wet, excess, or waste concrete shall be prohibited from entering surface waters.
19. All fill material placed in surface waters shall be clean and free of contaminants in toxic concentrations or amounts in accordance with all applicable laws and regulations.
20. Measures shall be employed at all times to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters.
21. Machinery or heavy equipment in temporarily impacted wetlands shall be placed on mats or geotextile fabric, or other suitable means shall be implemented, to minimize soil disturbance to the maximum extent practical. Mats, fabrics, or other measures shall be removed as soon as the work is complete in the temporarily impacted wetland.
22. Stream channel restoration activities shall be conducted in the dry or during low flow conditions. When site conditions prohibit access from the streambank or upon prior authorization from the Department of Environmental Quality, heavy equipment may be authorized for use within the stream channel. The equipment shall be stationed on cobble bars.
23. Temporary disturbances to wetlands, stream channels, and/or stream banks during project construction activities shall be avoided and minimized to the maximum extent practicable.
24. All temporarily disturbed wetland areas shall be restored to preconstruction conditions within 30 calendar days of completing work in the areas, which shall include reestablishing pre-construction contours, and planting or seeding with appropriate wetland vegetation according to cover type (emergent, scrub/shrub, or forested), except for invasive species identified on the Department of Conservation and Recreation's (DCR's) Virginia Invasive Plant Species List. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed surface waters through the second-year post-disturbance.
25. All temporarily impacted streams and stream banks shall be restored to their original elevations and contours within 30 calendar days following the construction at that stream segment, and the banks shall be seeded or planted with the same vegetative cover type originally present along the banks, including supplemental erosion control grasses if necessary but not including invasive species identified on DCR's Virginia Invasive Plant Species List. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed surface waters through the second-year post-disturbance.
26. All materials (including fill, construction debris, excavated materials, and woody materials, that are temporarily placed in wetlands, in stream channels, or on stream banks) shall be placed on mats or geotextile fabric, shall be immediately stabilized to prevent the material or leachate from entering surface waters, and shall be entirely removed within 30 calendar days following completion of that construction activity. After removal, disturbed areas shall be returned to original contours, shall be stabilized, and shall be restored to the original vegetated state within 30 calendar days. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed surface waters through the second-year post-disturbance.

27. Temporary instream construction features such as cofferdams shall be made of non-erodible materials.
28. All non-impacted surface waters that are within the project or right-of-way limits, and that are within fifty feet of any project activities, shall be clearly flagged or demarcated for the life of the construction activity within that area. The permittee shall notify all contractors and subcontractors that no activities are to occur in these marked areas.

D. Surface Water Withdrawals

1. Surface water withdrawn from Rappahannock River and authorized under this permit is to be used for public water supply.
2. Except as specified in Part I.D.5, the withdrawal of water from Rappahannock River shall not exceed the following:
 - a. A maximum daily withdrawal of 9.0 (Mgal/d);
 - b. A maximum daily withdrawal upon drought warning declaration of 7.0 (Mgal/d);
 - c. A maximum daily withdrawal upon an emergency drought declaration of 6.0 (Mgal/d);
 - d. A maximum monthly withdrawal of 237 (Mgal); and
 - e. A maximum annual withdrawal of 1,862 (Mgal).
3. The permittee shall install intake screens with openings no larger than one millimeter in width and height for mesh screens or a slot size of one millimeter in width for wedge-wire screens. The permittee shall ensure that the maximum approach velocity as measured by six inches or closer across the entire screen and does not exceed 0.25 feet per second.
4. The permittee shall submit a Drought Management Plan to the Department for review and approval within 180 days before the commencement of withdrawal. Any revisions to the approved plan shall be submitted to the Department for review and approval prior to implementing the change. The plan shall include, at a minimum, the following:
 - a. Development of drought stages including when and how each stage will be implemented; and,
 - b. Description of the conservation measures to be implemented during each drought stage.
5. When a drought is declared in the Northern Coastal Plain Drought Evaluation Region or by Caroline County in accordance with the County's Drought Management Ordinance, the permittee shall implement either the provisions directed by the Commonwealth, the Drought Management Ordinance or the voluntary or mandatory conservation measures as detailed in *Attachment A* of this permit, whichever is the most restrictive. The permittee shall be responsible for determining when droughts are declared. The permittee shall retain records documenting voluntary or mandatory conservation measures implemented during any declared drought period.

Upon declaration of a drought watch, warning, or emergency within the Northern Coastal Plain drought evaluation region, or Caroline County; including the Towns of Bowling Green and Port Royal, the following conditions shall be implemented.

- a. The maximum daily volume withdrawn from the Rappahannock River shall not exceed 7.0 Mgal/d during a declared drought warning.
- b. The maximum daily volume withdrawn from the Rappahannock River shall not exceed 6.0 Mgal/d during a declared drought emergency.
- c. The authorized monthly withdrawal limit as authorized by Part I.D.2.c.
- d. The Permittee shall provide weekly reports including the volume of water withdrawals from the Rappahannock River, and any voluntary or mandatory conservation measures implemented. Reports are to be submitted to the Department each Monday during a declared drought period, including any week where a drought declaration is lifted or reduced in declaration stage. The report shall include the following information:
 - i. The permittee's name and address;
 - ii. The permit number;
 - iii. The source(s) from which water is withdrawn;
 - iv. The location (latitude and longitude) of each point of water withdrawal;
 - v. Information listed in Part I.E.2;
 - vi. The daily volume of water withdrawn from the Rappahannock River (million gallons per day);
 - vii. The cumulative volume (million gallons) of water withdrawn each month and for the calendar year;
 - viii. The maximum daily volume (million gallons per day) of water withdrawn as calculated on the last day of the monitoring period;
 - ix. In the last report for the calendar year, the largest single day withdrawal volume (million gallons) that occurred in the year and the month in which it occurred; and,
 - x. The method of measuring each withdrawal.
6. The Permittee shall complete a study on the feasibility of reducing or eliminating the transfer of inter-basin flows and returning wastewater to the Rappahannock River Basin. The study and results of the study shall be submitted to the Department for review and approval within five years of permit issuance. The study shall include an implementation plan and schedule for any identified feasible alternative.

E. Water Withdrawal Monitoring, Recordation and Reporting Conditions

1. At least 120 days before the commencement of withdrawal, the Permittee shall submit a *Monitoring and Operations Plan* for Department review and approval. Once approved, the plan shall be incorporated by reference and become an enforceable part of this permit. At a minimum, the plan shall include the following:

- a. Procedures for operating the intake to ensure compliance with all water withdrawal conditions of this permit; and
 - b. Procedures for recording withdrawals as well as all other monitoring and reporting requirements in Part I.E, including a sample of the reporting form or table that will be used.
2. On each day that a withdrawal occurs, the permittee must monitor and record the following, for each pump:
 - a. Date and time; and
 - b. Total amount of water withdrawn each day.
3. The permittee shall monitor withdrawals from the Rappahannock River on a daily basis using flow totalizer technology to confirm that the withdrawals are in compliance with this permit. Such meters shall produce volume determinations within plus or minus 10% of actual flows. A defective meter or other device must be repaired or replaced within 60 days. A defective meter is not grounds for not reporting the withdrawals. During any period when a meter is defective, generally accepted engineering practice shall be used to estimate withdrawals and the period during which the meter was defective must be clearly identified in the report.
4. The permittee shall report any withdrawal not in compliance with Parts I.D.2 by the fifth (5th) day of the month following the month in which the withdrawal or release occurred.
5. The permittee shall submit a water withdrawal monitoring report to the Department semi-annually. The semi-annual monitoring period shall be as follows: January through June and July through December. The daily records shall be tabulated by month. The report shall be submitted to the Department by February 10th and August 10th of every year within the permit term. The report shall include the following information:
 - a. The permittee's name and address
 - b. The permit number
 - c. The source(s) from which water is withdrawn
 - d. The location (latitude and longitude) of each point of water withdrawal
 - e. Information listed in Part I E 2
 - f. The daily volume of water withdrawn from the Rappahannock River (million gallons per day)
 - g. The cumulative volume (million gallons) of water withdrawn each month and for the calendar year
 - h. The maximum daily volume (million gallons per day) of water withdrawn as calculated on the last day of the monitoring period

- i. In the last report for the calendar year, the largest single day withdrawal volume (million gallons) that occurred in the year and the month in which it occurred
 - j. The method of measuring each withdrawal
 - k. If during a semi-annual reporting period a drought warning or emergency is declared, the report shall include a summary of any voluntary or mandatory conservation measures implemented during the drought event.
6. Water withdrawal monitoring and reporting activities shall comply with this section, Part I C, and Part II. All records and information that result from the monitoring and reporting activities required by this permit, including any records of maintenance activities to the withdrawal system, shall be retained for the life of the permit. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or as requested by the Department.

F. Water Loss Auditing

1. Within one year of permit issuance, the Permittee shall submit a Water Loss Auditing Plan in accordance with the American Water Works Association (AWWA) methodology using the most recent version of the AWWA Water Audit Software or another Department approved methodology to estimate water loss for Department review and approval. Once approved, the plan shall be incorporated by reference and become an enforceable part of this permit.
2. The Permittee shall conduct annual water loss audits based on the approved Water Loss Auditing Plan and develop an annual comprehensive report. Within two years of permit issuance, the permittee shall notify the Department that the water loss audit has been initiated. This document shall include activities completed or initiated since submission of the plan.
3. The first Water Loss Audit Report shall be submitted to the Department by the end of the fourth year of permit issuance (2029). Thereafter, the Permittee shall report the results of the annual water loss audits in a report submitted at a minimum of every three years.

G. Leak Detection and Repair

1. Within one year of permit issuance, the Permittee shall submit a Leak Detection and Repair Plan to the Department for review and approval. Once approved, the plan shall be incorporated by reference and become an enforceable part of this permit. The plan shall indicate how its implementation will be informed by the results of the annual water loss audits. The plan shall include:
 - a. A description of how the water loss audit results is expected to inform prioritization of actions to address water losses.
 - b. Where practicable, a process for the identification of equipment needs to quantify and reduce water losses.
 - c. A description of the plan's effectiveness in addressing water loss, including revisions to those elements of the Annual Water Loss Audit process that can be improved over the short and long term.

2. The first Leak Detection Repair Plan shall be submitted to the Department by the end of the fourth year of permit issuance (2029). Thereafter, the Permittee shall report the results of the annual water loss audits in a report submitted at a minimum of every three years.

H. Stream Modifications, Including Intake/Outfall Structures

1. Redistribution of existing stream substrate for erosion control purposes is prohibited.
2. Material removed from the stream bottom shall not be deposited into surface waters unless otherwise authorized in this permit.
3. Riprap apron for all outfalls shall be designed in accordance with Virginia Erosion and Stormwater Management Regulation, 9VAC25-875.
4. For streambank protection activities, structures and backfill shall be placed as close to the streambank as practical, while still avoiding and minimizing impacts to surface waters to the maximum extent practical. No material shall be placed in excess of the minimum necessary for erosion protection.
5. Asphalt and materials containing asphalt or other toxic substances shall not be used in the construction of submerged sills, breakwaters, dams, or weirs.
6. Any outfall structure shall be constructed and maintained to prevent downstream sediment deposition, erosion, or scour that may be associated with normal flow and any expected storm flows. Construction shall include the use of an appropriately sized riprap outlet protection apron at the outfall site.

I. Installation of Utilities

1. All utility line work in surface waters shall be performed in a manner that minimizes disturbance in each area. Temporarily disturbed surface waters shall be restored in accordance with Part I.C.22, C.23, and C.24, unless otherwise authorized by this permit.
2. Material resulting from trench excavation may be temporarily side cast into wetlands not to exceed a total of 90 calendar days, provided the material is not placed in a manner such that it is dispersed by currents or other forces.
3. The trench for a utility line cannot be constructed in a manner that drains wetlands (e.g., backfilling with extensive gravel layers creating a French drain effect).

J. Road Crossings

1. Access roads authorized by this permit shall be constructed to minimize the adverse effects on surface waters to the maximum extent practicable and to follow as near as possible pre-construction contours and elevations.
2. Installation of pipes and road crossings shall occur in the dry via the implementation of cofferdams, sheet piling, stream diversions or other similar structures.

3. All surface waters temporarily affected by a road crossing shall be restored to their original elevations immediately following the removal of that particular temporary crossing. Temporary access roads shall be removed entirely following activity completion.

K. Project Construction Monitoring and Submittals (Impact Sites)

1. The permittee shall submit written notification at least **ten (10) calendar days** prior to the initiation of land disturbance or construction activities in permitted areas. The notification shall include preconstruction photographs, and a projected schedule for initiating and completing work at each permitted impact area.
 - a. Pre-construction photographs shall be taken at each impact area prior to initiation of activities within impact areas.
 - b. Photographs shall depict the impact area and the nonimpacted surface waters immediately adjacent to and downgradient of each impact area.
 - c. Each photograph shall be labeled to include the following information: permit number, impact area number, date and time of the photograph, name of the person taking the photograph, photograph orientation, and photograph subject description.
2. Site inspections shall be conducted **once every calendar month** and recorded on the *Monthly VWP Permit Inspection Checklist (Attachment C)* by the permittee or by the permittee's qualified designee during active construction within authorized surface water impact areas. Monthly inspections shall be conducted in the following areas: all authorized permanent and temporary impact areas; all avoided surface waters, including wetlands, stream channels, and open water; surface water areas within 50 feet of any land disturbing activity; and all on-site areas designated for permanent preservation. The *Monthly VWP Permit Inspection Checklist (Attachment C)* shall be completed in its entirety for each monthly inspection and shall be kept on-site and made available for review by Department staff upon request during normal business hours.
3. The *VWP Permit Construction Status Update Form (Attachment B)* enclosed with this permit shall be completed in June and December of every year for the duration of this permit. The *VWP Permit Construction Status Update Form (Attachment B)* shall include reference to the VWP permit authorization number and one of the following statements for each authorized surface water impact location:
 - a. Construction activities not yet started;
 - b. Construction activities started;
 - c. Construction activities started but are currently inactive, or;
 - d. Construction activities complete.
4. The *VWP Permit Construction Status Update Form (Attachment B)* shall be submitted and must be received by the Department no later than January 10 and July 10 of every year.
5. The permittee shall notify the Department within 24 hours of discovering impacts to surface waters including wetlands, stream channels, and open water that are not authorized by this permit. The

notification shall include photographs, estimated acreage and/or linear footage of impacts, and a description of the impacts.

6. The permittee shall submit a written notification of completion within 30 calendar days after the completion of all activities in all permitted impact areas authorized under this permit.

L. Compensatory Mitigation

1. All temporarily disturbed wetland areas shall be restored to preconstruction conditions within 30 calendar days of completing work in the areas, which shall include re-establishing pre-construction contours, and planting or seeding with appropriate wetland vegetation according to cover type (emergent, scrub/shrub, or forested), except for invasive species identified on the Department of Conservation and Recreation Invasive Alien Plant Species of Virginia list. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed wetlands for a minimum of two years after the area is restored.
2. All temporarily impacted streams and stream banks shall be restored to their original elevations and contours within 30 calendar days following the construction at that stream segment, and the banks shall be seeded or planted with the same vegetative cover type originally present along the banks, including supplemental erosion control grasses if necessary but not including invasive species identified on the Department of Conservation and Recreation Invasive Alien Plant Species of Virginia list. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed streams and stream banks for a minimum of two years after the area is restored.

Part II – General Conditions

A. Duty to Comply

The permittee shall comply with all conditions and limitations of the VWP permit. Nothing in this chapter shall be construed to relieve the permittee of the duty to comply with all applicable federal and state statutes, regulations, toxic standards, and prohibitions. Any VWP permit violation, or noncompliance is a violation of the Clean Water Act and State Water Control Law and is grounds for enforcement action, VWP permit termination, VWP permit revocation, VWP permit modification, or denial of an application for a VWP permit extension or reissuance.

Nothing in this VWP permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

B. Duty to Cease or Confine Activity

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the activity for which a VWP permit has been granted in order to maintain compliance with the conditions of the VWP permit.

C. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any impacts in violation of the VWP permit that may have a reasonable likelihood of adversely affecting human health or the environment.

D. VWP Permit Actions

A VWP permit may be modified in whole or in part, revoked and reissued, extended, transferred, or terminated in accordance with 9VAC25-210-180 of the Virginia Administrative Code.

1. During the drafting and authorization of a permit modification, only those conditions to be modified shall be addressed with preparing a draft modified permit. VWP permit terms and conditions of the existing permit shall remain in full force and effect during the modification of the permit.
2. This VWP permit may be modified upon the request of the permittee or upon department initiative when any of the following developments occur:
 - a. When new information becomes available about the project or activity covered by the VWP permit, including project additions or alterations, that was not available at VWP permit issuance and would have justified the application of different VWP permit conditions at the time of VWP permit issuance;
 - b. When a change is made in the promulgated standards or regulations on which the VWP permit was based;
 - c. When changes occur that are subject to "reopener clauses" in the VWP permit; or

- d. When developments applicable to surface water withdrawals occur as specified in 9VAC25-210-380 of the Virginia Administrative Code.
3. When this VWP permit authorizes surface water withdrawals, it may be modified when any of the following developments occur:
 - a. When the department determines that minimum instream flow levels resulting directly from the permittee's withdrawal of surface water are detrimental to the instream beneficial use, existing at the time of permit issuance, and the withdrawal of surface water should be subject to further net limitations or when an area is declared a surface water management area pursuant to §§ 62.1-242 through 62.1-253 of the Code of Virginia, during the term of the VWP permit.
 - b. Significant changes to the location of the surface water withdrawal system are proposed such that the Department of Environmental Quality determines a new review is warranted due to the potential effect of the surface water withdrawal to existing beneficial uses of the new location.
 - c. Changes to the permitted project or the surface water withdrawal, including increasing the storage capacity for the surface water withdrawal, that propose an increase in the maximum permitted withdrawal volumes or rate of withdrawal or that cause more than a minimal change to the instream flow requirements with potential to result in a detrimental effect to existing beneficial uses.
 - d. A revision to the purpose of the surface water withdrawal that proposes to include a new use or uses that were not identified in the permit application or a modification of the existing authorized use or uses such that the use description in the permit application and permit is no longer applicable. Examples of uses include, but are not limited to agricultural irrigation, golf course irrigation, public water supply, manufacturing, and electricity generation.
 4. When the permittee has submitted a timely and complete application for reissuance of an existing VWP individual permit, but through no fault of the permittee, the department does not reissue or reissue with conditions a VWP individual permit or the department does not provide notice of its tentative decision to deny the application before an existing VWP individual permit expires, the conditions of the expiring VWP individual permit shall be administratively continued in full force and effect until the effective date of a reissued permit or the date on which the department denies the application. Timely application shall be a minimum of 180 days for an individual permit or a minimum of 270 days for an individual permit for a surface water withdrawal, unless otherwise specified in the existing permit.
 5. Any permittee desiring to continue a previously permitted activity after the expiration date of this VWP permit shall apply for and obtain a new permit or, if applicable, shall request an extension in accordance with 9VAC25-210-180 of the Virginia Administrative Code. Any permittee with an effective VWP permit for an activity that is expected to continue after the expiration date of the VWP permit, without any change in the activity authorized by the VWP permit other than as may be allowed under 9VAC25-210-180, shall submit written notification requesting an extension. The permittee must file the request 90 days prior to the expiration date of the VWP permit. VWP permit modifications shall not be used to extend the term of a VWP permit beyond 15 years from the date

of original issuance. When a permit term, other than that of an Emergency Virginia Water Protection Permit, is less than 15 years, an extension of the permit terms and conditions may be granted in accordance with 9VAC25-210-180. Emergency Virginia Water Protection Permits shall not exceed a duration of one year or shall expire upon the issuance of a regular Virginia Water Protection Permit, whichever comes first.

6. This VWP permit may be transferred to a new permittee only by modification to reflect the transfer, by revoking and reissuing the permit, or by automatic transfer. Automatic transfer to a new permittee shall occur if the current permittee: a) Notifies the department of the proposed transfer of the permit and provides a written agreement between the current and proposed permittees containing the date of transfer of VWP permit responsibility, authorization, and liability to the new permittee; and b) the department does not within 15 days notify the existing permittee of its intent to modify the VWP permit.
7. After notice and opportunity for a formal hearing pursuant to § 62.1-44.15:02 of the Code of Virginia, a VWP permit can be terminated for cause. Reasons for termination for cause are as follows:
 - a. Noncompliance by the permittee with any condition of the VWP permit;
 - b. The permittee's failure in the application or during the VWP permit process to disclose fully all relevant facts or the permittee's misrepresentation of any relevant facts at any time;
 - c. The permittee's violation of a special or judicial order;
 - d. A determination by the department that the permitted activity endangers human health or the environment and can be regulated to acceptable levels by VWP permit modification or termination;
 - e. A change in any condition that requires either a temporary or permanent reduction or elimination of any activity controlled by the VWP permit; and
 - f. A determination that the permitted activity has ceased and that the compensation for unavoidable adverse impacts has been successfully completed.
8. The department may terminate this permit without cause when the permittee is no longer a legal entity due to death, dissolution, or when a company is no longer authorized to conduct business in the Commonwealth. The termination shall be effective 30 days after notice of the proposed termination is sent to the last known address of the permittee or registered agent, unless the permittee objects within that time. If the permittee does object during that period, the department shall follow the applicable procedures for termination under § 62.1-44.15:25 of the Code of Virginia and 9VAC25-230 of the Virginia Administrative Code.
9. This VWP permit may be terminated by consent, as initiated by the permittee. The permittee shall submit a request for termination by consent within 30 days of completing or canceling all permitted activities and all required compensatory mitigation requirements. When submitted for project completion, the request for termination by consent shall constitute a notice of project completion. The director may accept this termination on behalf of the department. The permittee shall submit the following information:
 - a. Name, mailing address, and telephone number;

- b. Name and location of the activity;
- c. The VWP permit number; and
- d. One of the following certifications:
 - i. For project completion: "I certify under penalty of law that all activities and any required compensatory mitigation authorized by a VWP permit have been completed. I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit."
 - ii. For project cancellation: "I certify under penalty of law that the activities and any required compensatory mitigation authorized by this VWP permit will not occur. I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit, nor does it allow me to resume the permitted activities without reapplication and issuance of another permit."
 - iii. For events beyond permittee control, the permittee shall provide a detailed explanation of the events, to be approved by DEQ, and the following certification statement: "I certify under penalty of law that the activities or the required compensatory mitigation authorized by this VWP permit have changed as the result of events beyond my control (see attached). I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit, nor does it allow me to resume the permitted activities without reapplication and issuance of another permit."

E. Inspection and Entry

Upon presentation of credentials, the permittee shall allow the department or any duly authorized agent of the department, at reasonable times and under reasonable circumstances, to conduct the actions listed in this section. For the purpose of this section, the time for inspection shall be deemed reasonable during regular business hours. Nothing contained herein shall make an inspection time unreasonable during an emergency.

- 1. Enter upon any permittee's property, public or private, and have access to, inspect and copy any records that must be kept as part of the VWP permit conditions;

2. Inspect any facilities, operations or practices (including monitoring and control equipment) regulated or required under the VWP permit; and
3. Sample or monitor any substance, parameter, or activity for the purpose of ensuring compliance with the conditions of the VWP permit or as otherwise authorized by law.

F. Duty to Provide Information

The department may request (i) such plans, specifications, and other pertinent information as may be necessary to determine the effect of an applicant's discharge on the quality of state waters or (ii) such other information as may be necessary to accomplish the purposes of this chapter. Any owner, permittee, or person applying for a VWP permit or general permit coverage shall provide the information requested by the department.

G. Monitoring and Records Requirements

1. Monitoring of parameters, other than pollutants, shall be conducted according to approved analytical methods as specified in the VWP permit. Analysis of pollutants will be conducted according to 40 CFR Part 136 (2017), Guidelines Establishing Test Procedures for the Analysis of Pollutants.
2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
3. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart or electronic recordings for continuous monitoring instrumentation, copies of all reports required by the VWP permit, and records of all data used to complete the application for the VWP permit, for a period of at least three years from the date of permit expiration. This period may be extended by request of the department at any time.
4. Records of monitoring information shall include:
 - a. The date, exact place and time of sampling or measurements;
 - b. The name of the individuals who performed the sampling or measurements;
 - c. The date and time the analyses were performed;
 - d. The name of the individuals who performed the analyses;
 - e. The analytical techniques or methods supporting the information such as observations, readings, calculations and bench data used;
 - f. The results of such analyses; and
 - g. Chain of custody documentation.

H. Property rights

The issuance of a VWP permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize injury to private property or any invasion of personal rights or any infringement of federal, state or local laws or regulations.

I. Reopener

This VWP permit may be reopened for the purpose of modifying the conditions of the VWP permit to meet new regulatory standards duly adopted by the board. Cause for reopening VWP permits includes but is not limited to when the circumstances on which the previous VWP permit was based have materially and substantially changed, or special studies conducted by the board or the permittee show material and substantial change, since the time the VWP permit was issued and thereby constitute cause for VWP permit modification or revocation and reissuance.

J. Compliance with State and Federal Law

As to the permitted activity(ies), compliance with a VWP permit constitutes compliance with the VWP permit requirements of the Law and regulations.

K. Severability

The provisions of this VWP permit are severable.

L. Oil and Hazardous Substance Liability

Nothing in this VWP permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under § 311 of the Clean Water Act or §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

M. Unauthorized Discharge of Pollutants

Except in compliance with a VWP permit, unless the activity is otherwise exempted or excluded, no person shall dredge, fill, or discharge any pollutant into, or adjacent to surface waters; withdraw surface water; otherwise alter the physical, chemical, or biological properties of state waters regulated under this chapter and make them detrimental to the public health, to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, for recreation, or for other uses; excavate in wetlands; or on or after October 1, 2001, conduct the following activities in a wetland:

1. New activities to cause draining that significantly alters or degrades existing wetland acreage or functions;
2. Filling or dumping;
3. Permanent flooding or impounding; or
4. New activities that cause significant alteration or degradation of existing wetland acreage or functions.

PERMIT DECISION RATIONALE

Virginia Water Protection Individual Permit No. 20-0514

Caroline County Rappahannock River Water Supply Project, Caroline County, Virginia

This document provides pertinent information concerning the legal basis, scientific rationale, and justification for the issuance of the VWP permit listed below. The Department of Environmental Quality (Department or DEQ) has reviewed the application for the Virginia Water Protection (VWP) Individual Permit Number 20-0514 and has determined that the project qualifies for an individual permit. Based on the information provided in the application and in compliance with § 401 of the Clean Water Act as amended (33 USC 1341 et seq.) and the State Water Control Law and regulations, the Department has determined that there is a reasonable assurance that the activity authorized by this permit will protect instream beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to significant impairment of state waters or fish and wildlife resources, provided the Permittee complies with all permit conditions. Surface water impacts have been avoided and minimized to the maximum extent practicable.

Approved:



Bryant Thomas
Water Resources Division Director

11/26/2025
Date

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
1	BOBBIE TODD	05/17/2024 14:49:26 PM	OPPOSE

THE RAPPAHANNOCK TRIBE HAS CONCERNS ABOUT THE DRAFT WATER INTAKE PERMIT ISSUED TO CAROLINE COUNTY. THE TRIBE DOES NOT OPPOSE WATER INTAKE FROM THE RAPPAHANNOCK RIVER FOR DRINKING WATER BUT IS OPPOSED TO THE USE OF WATER INTAKE FOR INDUSTRIAL COOLING WATER PURPOSES, ESPECIALLY FOR DATA CENTERS. THE REASONS FOR THE TRIBE’S OPPOSITION ARE LISTED IN THE ATTACHED LETTER. THE RAPPAHANNOCK TRIBE REQUESTS A PUBLIC HEARING REGARDING THIS PERMIT.

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=915

VIA EMAIL & PUBLIC COMMENT WEBSITE

May 17, 2024

Elizabeth Gallup
Surface Water Withdrawal Team Leader
Virginia Department of Environmental Quality
Richmond, VA 23218
Elizabeth.Gallup@deq.virginia.gov

Allison Major
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silvia.b.gazzera@usace.army.mil

RE: *Caroline County Draft Permit for Application No. 2020-0514*

Dear Ms. Gallup, Ms. Major and Ms. Gazzera:

Through this letter, the Rappahannock Tribe raises its concerns about the draft water intake permit issued to Caroline County. **The Tribe does not oppose water intake from the Rappahannock River for drinking water but is opposed to the use of water intake for industrial cooling water purposes, especially for data centers.** The reasons for the Tribe's opposition are listed below. **The Rappahannock Tribe requests a public hearing regarding this permit.**

MAJOR CONCERNS:

1. *If permitted, the data center project will impact migratory fisheries including, but not limited to, federally protected Atlantic Sturgeon, as well as River Herring, American Shad, and Striped Bass.*

The Virginia Department of Wildlife Resources (VADWR) has previously noted that federally endangered and threatened sturgeon are found within the project's area.¹ The Essex County Conservation Alliance (ECCA) has also found sturgeon in the area. ECCA has evidence that sturgeons have been found, caught, and released in pound nets in the Rappahannock River over the last five years. In addition to the photographs documenting the presence of sturgeon, the ECCA has published at least two articles about them in the organization's magazine.² In addition, the Rappahannock river is strongly considered an active sturgeon habitat, and NOAA (the National Oceanic and Atmospheric Administration) and VADWR have both designated it as an important migratory fish habitat.

2. If permitted, the data center project will affect the water supply of tribal land located downstream.

Caroline County Director of Public Works/Utilities Joseph Schiebel noted in his October 30, 2023 town hall presentation on the environmental impacts of data centers that "water demands increase when the temperatures rises [sic]."³ Given that the earth is warming at a historic rate and temperatures continue to increase, the potential for the Rappahannock River to be abused is ripe.

Not only was the Rappahannock River placed on drought watch status at the end of 2023,⁴ but "2023 was the warmest year on record globally. The trend has clearly been toward warmer average temperature years nationally, regionally, and locally in recent decades — not a steady upward line but a tendency for more frequent years ranking among the warmest and fewer ranking among the coolest as average temperatures go up and down quite a bit as we focus more on a smaller region."⁵ The Rappahannock River is of utmost importance to the Tribe. "The areas surrounding the Rappahannock River are the ancestral homelands of the Tribe, and the Tribe continues to live, visit, and conduct traditional cultural practices along the river. Native fish, bird, and plant species along the river are of cultural significance to the Tribe."⁶

¹ (See emails from VADGIF employee Amy Ewing, true and correct copies of which are attached hereto, as Exhibit "A.")

² True and correct copies of these ECCA photos and articles are attached hereto as Exhibit "B."

³ See Slide 5 of "Public Utilities Presentation," available at <https://co.caroline.va.us/CivicAlerts.aspx?AID=997> (last accessed November 21, 2023).

⁴ Domina, G. (2023, December 7). *Drought Advisory Announced – What does it mean for the Rappahannock River?*. Friends of the Rappahannock. <https://riverfriends.org/drought-advisory-announced/> (last accessed February 19, 2024).

⁵ Myatt, K. (2024, January 5). *Snow and ice are likely this weekend as El Niño winter follows expected track*. Cardinal News. <https://cardinalnews.org/2024/01/03/snow-and-ice-are-likely-this-weekend-right-on-track-for-an-el-nino-winter/>

⁶ Everett, K. (2022, April 7). *Rappahannock tribe acquires sacred site, ensuring perpetual conservation of Tribe's homeland and Bald Eagle Habitat*. Chesapeake Conservancy. <https://www.chesapeakeconservancy.org/2022/04/01/rappahannock-tribe-acquires-sacred-site-ensuring-perpetual-conservation-of-tribes-homeland-and-bald-eagle-habitat/> (last accessed February 23, 2024).

3. *The data center project will pollute natural resources with its use of diesel back-up generators.*

The use of diesel back-up generators will create pollution. According to the U.S. Environmental Protection Agency (EPA), "Human health, our environment, global climate and environmental justice are all affected by diesel emissions"⁷ in the following ways:

- "Human Health - Exposure to diesel exhaust can lead to serious health conditions like asthma and respiratory illnesses and can worsen existing heart and lung disease, especially in children and the elderly. These conditions can result in increased numbers of emergency room visits, hospital admissions, absences from work and school, and premature deaths."⁸
- "Environment - Emissions from diesel engines contribute to the production of ground-level ozone which damages crops, trees, and other vegetation. Also produced is acid rain, which affects soil, lakes and streams and enters the human food chain via water, produce, meat, and fish. These emissions also contribute to property damage and reduced visibility."⁹
- "Global Climate - Climate change affects air and water quality, weather patterns, sea levels, ecosystems, and agriculture. Reducing greenhouse gas (GHG) emissions from diesel engines through improved fuel economy or idle reduction strategies can help address climate change, improve our nation's energy security, and strengthen our economy."¹⁰

4. *This data center project is one of many, and the lack of coordination between the state and local governments regarding the use of natural resources is detrimental and will have deleterious effects for the tribe, Caroline County residents, and the Commonwealth at large.*

Local governments should be coordinating with each other and the state to determine the cumulative impacts that the data center projects will have on the environment and the health and safety of Commonwealth residents. "Leaders should not separate the joy they feel in attracting data centers from the pain their constituents feel in living with data centers and transmission lines, breathing

⁷ United States Environmental Protection Agency. (n.d.). Learn About Impacts of Diesel Exhaust and the Diesel Emissions Reduction Act (DERA). <https://www.epa.gov/dera/learn-about-impacts-diesel-exhaust-and-diesel-emissions-reduction-act-dera>

⁸ *Id* (commas added for clarity).

⁹ *Id* (commas added for clarity).

¹⁰ *Id* (commas added for clarity).

pollution from diesel back-up generators, and having the quality and quantity of their freshwater resources threatened.”¹¹

Most of Caroline County’s justification for 13.9 million gallons (about 52617199 L) per day is from Transit Oriented Development and mention of a “Water Master Plan.” However, the Transit Oriented Development only covers “commercial” water demand not industrial demand, and industrial demand in this project is listed higher than any other category (4.63 mgd).¹² Data centers would make up part of the one-third of water usage that is considered “industrial” by the county,¹³ and the Tribe finds this use of valuable water resources to cool data centers to be unacceptable.

Additionally, no justification has been given for the discharge of used water into the Mattaponi basin. The intake of 13.9 million gallons of water per day from the Rappahannock river is a NET LOSS because of this design. To date the tribe has not seen any information that justifies this activity as the only course of action.

The Potomac aquifer is currently shrinking for similar reasons, and the fact that there is not enough groundwater to go around is an important reason to NOT take surface water for data centers. “Groundwater withdrawals by companies, municipalities, and homeowners in eastern Virginia have diminished the groundwater supply in the Potomac Aquifer, making the region vulnerable to land subsidence, sea-level rise, and saltwater intrusion. The aquifer’s groundwater is a limited natural resource because the surrounding clay and bedrock prevent water from recharging naturally.”¹⁴ Solving a “water use” problem by increasing water use from another source for industrial purposes is not a viable solution.

Furthermore, the state government does not have the data nor the regulations in place to ensure that this permit will not affect drinking water access for downstream communities. It is the tribe’s position that if a permit is issued, corroborating data regarding water supply should be obtained.

* * *

¹¹ Main, I. (2023, November 21). *A 5-point plan for Virginia’s Data Centers*. Virginia Mercury. <https://www.virginiamercury.com/2023/11/21/a-5-point-plan-for-data-centers/?emci=496854f4-d787-ee11-8925-00224832e811&emdi=8555631c2-6988-ee11-8925-00224832e811&ceid=344506>

¹² See Caroline County October 19, 2023 Letter in Response to Virginia Department of Environmental Quality (VADEQ) Request for Additional Information, pp. 3-5.

¹³ “Currently, about 44% of the county’s water is used for residential purposes: drinking, cooking, washing, bathing and flushing toilets. Another 23% goes to businesses such as restaurants and offices and the remaining 33% is for industrial users, according to the county. . . . Caroline officials listed data centers in the last category[.]” Dyson, C. (2024, January 24). *Caroline explains water woes, need for river withdrawal*. The Free Lance-Star. https://fredericksburg.com/news/local/caroline-county-explains-water-woes-need-to-withdraw-water-from-rappahannock-river/article_12fcae92-ba19-11ee-8ccc-1307fe4c9724.html (last accessed February 19, 2024).

¹⁴ Hampton Roads Sanitation District. (n.d.). *The Potomac Aquifer: A diminishing resource*. HRSD. <https://www.hrsd.com/swift/potomac-aquifer-diminishing-resource> (last accessed February 23, 2024).

Lastly, as you may be aware, Virginia House Bill 1157 passed on April 17th, 2024, and that bill requires **meaningful** consultation with federally recognized tribes like the Rappahannock. However, Caroline County has never consulted with the Tribe. County officials met with the Tribe once – to say what they were doing. **That is not consultation.** The Rappahannock Tribe has also requested to meet with Amazon Web Services about the proposed data center to discuss concerns and they refused to do so.

Given the lack of meaningful consultation, along with all of the aforementioned reasons, the Rappahannock Tribe opposes the granting Caroline County a water intake permit to the extent that it allows the taking of water from the river named after the Tribe to use for the purposes of data center cooling or otherwise designated “industrial use”. **The Rappahannock tribe formally requests a public hearing be held for this draft permit.**

With respect,



G. Anne Richardson
Chief, Rappahannock Tribe
Rappahannock Tribal Center
5036 Indian Neck Road
Indian Neck, VA 23148
info@rappahannocktribe.org

CC (via email):

Joseph Schiebel, Director
Caroline County Department of Public Utilities
jschiebel@co.caroline.va.us

Eric Seavey, Water Withdrawal Permitting Manager
Virginia Department of Environmental Quality
eric.seavey@deq.virginia.gov

Elizabeth Gallup, Surface Water Withdrawal Team Lead
Virginia Department of Environmental Quality
elizabeth.gallup@deq.virginia.gov

Claire Gorman, Habitat Management
Virginia Marine Resources Commission
claire.gorman@mrc.virginia.gov

EXHIBIT "A"



Ewing, Amy <amy.ewing@dgif.virginia.gov>

ESSLog# 38809_pre-app_CarolineCountyIntake_DGIF_AME20190627

1 message

Ewing, Amy <amy.ewing@dgif.virginia.gov>

Thu, Jun 27, 2019 at 12:38 PM

To: "Moore, Shana" <shana.moore@deq.virginia.gov>

Cc: Watson Brian fci48971 <brian.watson@dgif.virginia.gov>, Scott Smith <scott.smith@dgif.virginia.gov>, Robert Greenlee <bob.greenlee@dgif.virginia.gov>, Paul Bugas <paul.bugas@dgif.virginia.gov>

Shana,

Based on the information presented during the pre-application meeting and a review of the shapefiles for the proposed Caroline County intake on the Rappahannock River, we offer the following preliminary comments and recommendations:

As you know, we typically recommend that to best protect resident aquatic species from impingement and entrainment, the proposed surface water intake be fitted with a 1mm mesh screen and that the intake velocity not exceed 0.25 fps. In addition, to ensure continued access to necessary instream habitats, we recommend that the intake not withdraw more than 10% instantaneous flow and/or result in significant changes in water quality, as depicted by changes in salinity. We are not yet comfortable that the modeling that has been done so far for this project clearly depicts anticipated salinity changes during times when the system is most vulnerable, which is where our concern typically rests. It appears the model looked at changes that may occur across an entire year assuming usage of the average day withdrawals. However, even with these obscured results, changes in salinity were expected to occur at all three sites assessed. So that we can clearly assess whether anticipated changes in salinity resulting from operation of the proposed intake, we recommend that modeling be performed assuming usage of max day withdrawals during periods of drought. Upon review of the results of such modeling, we will make additional comments regarding the impact salinity changes may have on resident and migratory aquatic fauna.

We document federal Endangered Atlantic sturgeon from the project area. This stretch of the Rappahannock River has been designated a Threatened and Endangered Species Water due to the presence of this species. The Rappahannock River at this location also has been designated a confirmed Anadromous Fish Use Area. If any instream work in the Rappahannock River is necessary to install this intake and/or associated infrastructure, we recommend that such work adhere to a time of year restriction protective of these species from February 15 through June 30th and August 1 through November 15 of any year.

Also as mentioned during our conference call, the segment of the Rappahannock River on which the proposed intake is located, is known to be highly productive for freshwater mussels, particularly for alewife floaters and tidewater muckets, both of which are Tier IV a Species of Greatest Conservation Need (SGCN). Based on the productivity in this area, we collect broodstock from this part of the river and also have released propagated mussels in the Rappahannock River. Based on recent surveys, the data from which have not been entered into our systems, state threatened green floaters have now been documented from below the Rappahannock River fall line, so must also be considered as potentially present from the project area. As such, it is likely that we will recommend that prior to any instream work, a mussel survey be performed from 100 meters upstream through 400 meters downstream of impact areas. This survey should be performed by a qualified, permitted biologist, preferably no more than six months prior to the start of construction. If mussel relocations are necessary, they should be coordinated with Brian Watson, VDGIF Region II Aquatic Resources Biologist (434-525-7522), and no federally listed species should be relocated without first coordinating with the USFWS (804-693-6694). All survey and relocation activities should adhere to the attached draft guidance. In addition, we recommend a time of year restriction on all instream work (not including any mussel surveys) from April 15 through June 15 and August 15 through September 30 of any year. Survey results should be made available to Amy Ewing in VDGIF's Headquarters office in Henrico and Brian Watson in VDGIF's Forest Office. Upon review of the results, we will make final recommendations regarding the protection of listed species known from the area. All survey reports should reference the five-digit ESSLog# displayed in the subject line of this email.

<https://mail.google.com/mail/u/1/?ik=e7bfecb2f8&view=pt&search=all&permthid=thred-a%3A4597373938713898817%7Cmsg-a%3A861221272298...> 1/3

We recommend conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. To minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting, we recommend use of matting made from natural/organic materials such as coir fiber, jute, and/or burlap. To minimize harm to the aquatic environment and its residents resulting from use of the Tremie method to install concrete, installation of grout bags, and traditional pouring of concrete, we recommend that such activities occur only in the dry, allowing all concrete to harden and cure prior to contact with open water.

We historically document bald eagle nests from the project area. To ensure protection of bald eagles in compliance with the Bald and Golden Eagle Act, we recommend using the Center for Conservation Biology (CCB) [Eagle Nest Locator](#) to determine if any active eagle nests are known from the project area. If active bald eagle nests have been documented from the project area, we recommend that the project move forward in a manner consistent with [state and federal guidelines for protection of bald eagles](#); and coordination, as indicated, with the U.S. Fish and Wildlife Service regarding possible impacts upon bald eagles or the need for a federal bald eagle take permit.

Once the preferred route for the waterline has been determined, we will provide comments about any impacts that might have on wildlife and/or resources under our jurisdiction. Typically, we prefer that such utilities be co-located within already-disturbed corridors.

To minimize overall impacts to wildlife and our natural resources, we offer the following comments about development activities: We recommend that the applicant avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable. Avoidance and minimization of impact may include relocating stream channels as opposed to filling or channelizing as well as using, and incorporating into the development plan, a natural stream channel design and wooded buffers. We recommend maintaining undisturbed naturally vegetated buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams. We recommend maintaining wooded lots to the fullest extent possible. We generally do not support proposals to mitigate wetland impacts through the construction of stormwater management ponds, nor do we support the creation of in-stream stormwater management ponds.

We recommend that the stormwater controls for this project be designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape. This should include, but not be limited to, utilizing bioretention areas, and minimizing the use of curb and gutter in favor of grassed swales. Bioretention areas (also called rain gardens) and grass swales are components of Low Impact Development (LID). They are designed to capture stormwater runoff as close to the source as possible and allow it to slowly infiltrate into the surrounding soil. They benefit natural resources by filtering pollutants and decreasing downstream runoff volumes.

We recommend that all tree removal and ground clearing adhere to a time of year restriction protective of resident and migratory songbird nesting from March 15 through August 15 of any year. We recommend coordination with the USFWS regarding potential impacts upon federally Threatened northern long-eared bats associated with tree removal.

We recommend adherence to erosion and sediment controls during ground disturbance. To minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting, we recommend use of matting made from natural/organic materials such as coir fiber, jute, and/or burlap.

This project is located within 2 miles of a documented occurrence of a state or federal threatened or endangered plant or insect species and/or other Natural Heritage coordination species. Therefore, we recommend coordination with VDCR-DNH regarding the protection of these resources.

Thanks! Amy

Amy Ewing

Environmental Services Biologist

Manager, Fish and Wildlife Information Services

<https://mail.google.com/mail/u/1/?ik=e7bfecb2f8&view=pt&search=all&permthid=thread-a%3A4597373938713898817%7Cmsg-a%3A861221272206...> 2/3

6/27/2019



Commonwealth of Virginia Mail - ESSLog# 38800_pre-app_CarolineCountyIntake_DGIF_AME20100827

P 804.367.2211

Virginia Department of Game & Inland Fisheries

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A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228

www.dgif.virginia.gov

<https://mail.google.com/mail/u/1?ik=e7bfecb2f8&view=pt&search=all&permthid=thread-a%3Ar4597373938713898817%7Cmsg-a%3Ar8d1221272296...> 3/3



Ewing, Amy <amy.ewing@dwr.virginia.gov>

Re: ESSLog# 38809_20-0514_Caroline County Intake_DGIF_AME20200602

1 message

Ewing, Amy <amy.ewing@dwr.virginia.gov>

Mon, Jul 13, 2020 at 3:10 PM

To: "Arnold, Roger" <ramold@hazenandsawyer.com>

Cc: "Moore, Shana" <shana.moore@deq.virginia.gov>, "amy.ewing@dgif.virginia.gov" <amy.ewing@dgif.virginia.gov>, "Tabor, Chris" <ctabor@hazenandsawyer.com>, "jschiebel@co.caroline.va.us" <jschiebel@co.caroline.va.us>

Thank you. Please note the TOYR for anadfish/sturgeon is February 15 through **June 30** and August 1 through November 15 of any year. I apologize if I originated that mistake. Please confirm no instream work through June 30th. Everything else seems appropriate.

Thanks, Amy

**Amy Martin Ewing**

Environmental Services Biologist
Manager, Fish and Wildlife Information Services
804.367.2211

Virginia Department of Wildlife Resources

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7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228

www.VirginiaWildlife.gov

On Mon, Jul 13, 2020 at 3:03 PM Arnold, Roger <ramold@hazenandsawyer.com> wrote:

Amy,

We appreciate your review of the proposed project. Please refer to the attached response letter regarding the time of year restrictions and mussel survey.

Thank you,

Roger

Roger B. Arnold, P.E.

Associate | Hazen and Sawyer

1555 Roseneath Road, Richmond, VA 23230

(804) 545-5095 (direct) | (804) 366-5415 (mobile)

ramold@hazenandsawyer.com | hazenandsawyer.com

----- Forwarded message -----

From: Ewing, Amy <amy.ewing@dgif.virginia.gov>

Date: Tue, Jun 2, 2020 at 12:58 PM

Subject: ESSLog# 38809_20-0514_Caroline County Intake_DGIF_AME20200602

<https://mail.google.com/mail/u/0/?ik=e7bfecb2f8&view=pt&search=all&permthid=thred-a%3Ar7175085995593037564%7Cmsg-a%3Ar307066737473...> 1/3

7/13/2020

Commonwealth of Virginia Mail - Re: ESSLog# 38809_20-0514_Caroline County Intake_DGIF_AME20200002

To: Moore, Shana <shana.moore@deq.virginia.gov>
Cc: Scott Smith <scott.smith@dgif.virginia.gov>

Shana,

I have been looking over the application for the subject project. You should have my comments from the pre-application meeting and review. They basically remain the same, other than we appreciate their adherence to our recommendations for the intake sizing and intake velocity. I didn't see anything in their plans about adhering to the TOYR or really any of the guidance we provided. I recommend they update it to include our recommendations for protection of anadromous fishes, including federally Endangered Atlantic Sturgeon, and listed freshwater mussels as depicted in the attached.

We continue to recommend consideration of salinity impacts and continued coordination with us and VIMS regarding those impacts.

It appears both pipeline corridors appear to be co-located with major roadways, which we typically support. Unfortunately, due to limited capabilities at my home office, I cannot efficiently review the pipeline corridors, but reiterate our general comments regarding linear utilities. If any instream work is necessary to install the pipeline, we recommend that the lat/long coordinates for each stream crossing be provided to us for further review, along with a shapefile of the finally chosen route.

The North Anna River is located downstream of proposed new WTP site. The North Anna River at this location has been designated a Confirmed Anadromous Fish Use Area and a Threatened and Endangered Species Water due to the presence of Atlantic Sturgeon. If any instream work in the South Anna River and/or its tributaries is necessary to develop the new treatment plan, we recommend additional coordination with us regarding that work.

All other/additional comments provided during earlier review remain valid.

Thanks, Amy

Amy Martin Ewing

*Environmental Services Biologist
Manager, Fish and Wildlife Information Services*
P 804.367.2211

Virginia Department of Game & Inland Fisheries

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7/13/2020

Commonwealth of Virginia Mail - Re: ESSLog# 38809_20-0514_Caroline County Intake_DGIF_AME20200602

<https://mail.google.com/mail/u/0?ik=e7bfecb2f8&view=pt&search=all&permthid=thread-a%3Ar7175085995593037584%7Cmsg-a%3Ar-307086737473...> 3/3

EXHIBIT “B”









ATLANTIC STURGEON STOIRY FOR ECCA MAGAZINE 2021

Below are edited notes from Dr. Matt Balazik, who holds joint appointments with Virginia Commonwealth University and the U.S. Army Corps of Engineers, on his Atlantic sturgeon tagging studies in the Rappahannock 2015-2019, funded by the National Oceanic and Atmospheric Administration (NOAA) under the Endangered Species Act. The photos show Leedstown waterman Wayne Fisher with a male Atlantic sturgeon caught last year in his pound net between Beverly Marsh and Carters Wharf and quickly released alive. Wayne reports that in the late Spring and Fall seasons, such sturgeon are not uncommon catches in his nets.

Rappahannock River—Fall, 2015

Balazik and his crew made two exploratory sampling trips to the Rappahannock River in the Fall of 2015, launching their skiff at Hicks Landing. Recreational boaters had reported adult sturgeon breaching in the Hicks Landing-Hopyard Bar area. They set their gill nets for two days, one just downstream of Hicks Landing and once just above Hopyard Bar. They captured one male sturgeon, which expelled milt during collection, and surgically implanted a telemetry tag to track the fish's movements across the broad array of receivers deployed cooperatively by multiple research institutions throughout the Chesapeake and along the Atlantic coast. He noted at the time that the presence of adults suggests that Fall spawning occurs in the Rappahannock as it does in the James, the York (including the Pamunkey and Mattaponi), and the Nanticoke (including Marshyhope Creek).

Rappahannock River—Fall, 2016

VCU personnel made five sampling trips to the Rappahannock during the 2016 Fall spawning run, setting their gill nets on September 19-21 and September 30-October 1 in several reaches between Camden, below Port Royal, and Hopyard Bar. To reduce the catch of large, ripe females, they deployed only 25 cm to 32 cm stretch mesh nets instead of ones with larger mesh sizes. The nets never blocked more than half of the river channel's width to ensure that some Atlantic Sturgeon could pass without interference.

Operating on strict guidelines to protect fish health, the team chose not to sample on September 21 due to relatively low dissolved oxygen levels (5.3 mg/l) and high water temperatures (27^o C/81^o F). Even so, they caught seven male fish during this period and surgically placed a 10-year VEMCO tag in each, following protocols permitted under their scientific and Endangered Species Act collecting permits. All seven fish expelled sperm, and six had spawning rubs on their underbellies.

VCU and VIMS receiver arrays provided telemetry data for the Rappahannock, showing when the tagged fish left the upper River. Other researchers' receivers detected the fish offshore later. One of the seven males was a recapture that had been tagged originally by the U.S. Fish & Wildlife Service at the mouth of the Rappahannock on December 13th, 2007, when the fish was 85 cm/34" in length. It had nearly doubled in length between captures. The male caught and tagged in the Rappahannock in 2015 pinged a receiver at the mouth of the River in early September, 2016 but did not move up the river at that time. Currently they do not know where the fish tagged in 2015 went during the 2016 Fall spawn season. Adult males typically move upstream when the water temperature drops to approximately 28^o C/82.5^o F. This behavior is

consistent with that of James River fish. Rappahannock males generally migrate out of the river when water temperatures drop to around 20° C/68°F, also similar to James River fish.

Rappahannock River—Fall, 2017

Dr. Balazik and his team significantly modified their Rappahannock sampling in the Fall of 2017. They changed the sampling area to accommodate another research group working in the area they had targeted the previous two years (Camden to Hopyard Bar). They felt it better for the spawning adults to avoid putting on too much pressure, because they had (and still have) little information on the actual population size of the Rappahannock's spawning fish. Thus, they decided to sample downstream for post-spawn fish. In spite of expending three times the effort of previous years, they did not catch any adult sturgeon in the Rappahannock during 2017. This result was a surprise, since it had been relatively easy during the previous two years to catch adults, though they realized that they had significantly changed their sampling area. The catch failure may simply resulted from a poor spawning run, but Balazik notes that they still have too little data to elucidate trends in the Rappahannock.

Rappahannock River—Fall, 2018

As was the case in the James, 2018's warm water temperatures and heavy river flows hindered adult sampling in the Rappahannock. The team could not start upstream sampling until mid-September due to high water temperatures. Those temperatures finally dropped, and they started sampling on September 12th in the Camden-to-Hopyard Landing area where they had had great success in 2015 and 2016. Despite heavy flow, they were able to get their net anchors to hold, but the nets themselves loaded up with fallen leaves and torn-out underwater grasses. They spent ten days sampling upstream and caught two adult males, both on September 14th. They had thick milt running during processing and tagging.

They continued sampling upstream until October 11th, then moved downstream to Tappahannock in an attempt to catch sturgeon leaving the river. Colder temperatures allowed for longer gill net soak times. They had nets out almost around the clock from October 15th to October 21st but unfortunately were unsuccessful.

In the process, they met several local people along the upper Rappahannock River that shared stories of adult sturgeon being caught in the deep holes at the base of the old Embrey Dam at Fredericksburg during the spring. These deep holes, of course, filled with silt when the dam went down in 2004. Some of the people also told of a few adult sturgeon caught in the 1970s and 1980s [which squares with stories Wayne Fisher heard from his father and the Oliff brothers, with whom they fished].

Rappahannock River—Fall, 2019

September temperatures were lower in the Rappahannock, allowing for two short sampling trips before work could start in the James. The team caught two adults in the Camden area. Both had spawning rubs, and the team implanted telemetry tags. They also detected three fish in the sampling area that had been captured at Hicks Landing in 2016 and 2018.

Rappahannock River—2020-21

COVID shut down Matt Balazik's research opportunities on the Rappahannock, but Wayne Fisher and his family continued to fish their pound nets for blue catfish. In the process, he reports that "We caught some big sturgeon last year, including three in one day in October. One weighed around 125 pounds" (see photo), so the fall spawning run continues. We'll hope to hear more from both of these fishermen, scientific and commercial, in the fall of this year. Wayne also reports "a few small sturgeon this spring," hopeful signs of young natives that are spending their first couple of years in their home river.

Further Notes

Atlantic sturgeon researchers have been able to take small fin clips from their fish without causing harm, in order to analyze their genetic makeup. In a remarkable turn, the Nanticoke/Marshyhope fish seem to be more related to the York/Pamunkey/Mattaponi fish than to the stock in the James. When we asked Dr. Balazik about the Rappahannock, he replied, "We have very few genetics clips from there. As of right now, it seems that they mostly resemble the James River population and not the York and Marshyhope. Again, though, the current sample size is small, so it is difficult to fine-tune the population work yet."

This year, Dr. Balazik would like to deploy a new tool that has the potential to assess the size of the stock more efficiently. It is a sophisticated side-scan sonar system developed cooperatively with researchers at NOAA and Clemson University for sampling multiple Atlantic coastal rivers. It has shown great promise to date on the James and several South Carolina rivers. Unfortunately, he does not have funding for work specifically on the Rappahannock this year, and he has contracted obligations on the James that "have been piling up due to Covid-19 stuff."

Thus the conclusions for the Rappahannock's Atlantic sturgeon are tantalizing. Certainly, the fish are there and attempting to spawn, which is great news. ECCA will stay tuned for the time that researcher team becomes able to give our river's sturgeon the attention they deserve.

PS In a tantalizing incident on the Potomac, last spring a couple of regular anglers out of Fletcher's Boat House in Washington, DC caught and expertly released an even rarer shortnose sturgeon (*Acipenser brevirostrum*) while jigging for other species. It was the first from the Potomac in many years. Studies have turned up more shortnose sturgeon in the upper Chesapeake Bay, including at least one tagged in the Chesapeake Bay but later relocated in the Chesapeake and Delaware Canal and the Delaware River, which has a stronger stock than any Chesapeake rivers.

On this catch, Matt Balazik commented, "We've caught two shortnose in the James River. Genetics and telemetry data show both fish were from the Delaware. The gravid female we telemetered in February 2018 went through the Chesapeake/Delaware Canal a few months after being tagged and has been in the Delaware since. Neither of the two fish we caught in the James were near hypothesized spawning habitat. The recent one in the Potomac was in prime spawning habitat during the right time of year. Very interesting collection. I would have loved to have gotten a genetic sample and a telemetry tag in that fish. I talked to the two guys that caught the shortnose; they did everything perfectly. Much better than I would have probably done."

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
2	TIM DAVIS	05/19/2024 10:48:01 AM	NO POSITION

I HAVE NO POSITION ON THIS PROJECT YET BECAUSE AS OF 5/19/2024, I CANNOT FIND THE PERMIT ON EITHER THE VMRC OR THE DEQ WEBSITES, EVEN THOUGH THE PUBLIC NOTICE DATED 5/18/2024 STATES IT SHOULD BE VIEWABLE AT [HTTPS://WWW.DEQ.VIRGINIA.GOV/PERMITS/PUBLIC-NOTICES/WATER/WATER-WITHDRAWAL](https://www.deq.virginia.gov/permits/public-notices/water/water-withdrawal). I AM REQUESTING THAT THE PERMIT BE MADE VIEWABLE, AND THAT THE 30 DAY PERIOD FOR COMMENTS BE RESTARTED ONCE THE PERMIT CAN BE VIEWED.

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
3	KATHERINE SORRELL	05/30/2024 17:58:30 PM	OPPOSE

CULTURAL HERITAGE PARTNERS SUBMITS THESE COMMENTS ON BEHALF OF OUR CLIENT, THE UPPER MATTAPONI TRIBE. THE TRIBE HAS SIGNIFICANT CONCERNS THAT THIS PROJECT WILL AFFECT AQUATIC SPECIES HABITAT AND WATER QUALITY IN THEIR ANCESTRAL TERRITORY. FURTHERMORE, THIS DRAFT PERMIT HAS NOT ADEQUATELY CONSIDERED THE ENVIRONMENTAL IMPLICATIONS OF THE SUBSTANTIAL INTERBASIN WATER TRANSFER PROPOSED IN THIS PERMIT, NOR HAS IT CONDUCTED SUFFICIENT ANALYSIS OF THE POTENTIAL HABITAT IMPACTS. THE TRIBE REQUESTS THAT VMRC AND DEQ REQUIRE A PUBLIC HEARING FOR THE DRAFT WATER WITHDRAWAL PERMIT GIVEN ITS SIGNIFICANT ENVIRONMENTAL IMPACTS AND SUBSTANTIAL PUBLIC OPPOSITION TO THIS PROJECT.

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=930

May 30, 2024

Virginia Marine Resources Commission
Habitat Management Division
380 Fenwick Road, Building 96
Hampton, Virginia, 23651

Re: Caroline County Habitat Permit Application 2020-0514

Dear Commissioners,

Cultural Heritage Partners submits these comments on behalf of our client, the Upper Mattaponi Tribe (“Tribe”), on the Caroline County Habitat Permit Application and associated Draft Water Withdrawal Permit, No. 2020-0514. The Tribe has significant concerns that this project will affect aquatic species habitat and water quality in their ancestral territory. Furthermore, this Draft Permit has not adequately considered the environmental implications of the substantial interbasin water transfer proposed in this permit, nor has it conducted sufficient analysis of the potential harms to juvenile sturgeon populations and sturgeon breeding, among other species health concerns. **The Tribe requests that VMRC and DEQ require a public hearing for the Draft Water Withdrawal Permit given its significant environmental impacts and substantial public opposition to this project.** Additionally, the Tribe requests a government-to-government meeting with both the Virginia Marine Resources Commission (VMRC) and Department of Environmental Quality (DEQ) regarding the permit.

1. The inter-basin water transfer has significant environmental implications for the Mattaponi and Rappahannock Rivers, which have not been fully studied.

This permit proposes to remove up to 13.9 million gallons per day of water from the Rappahannock River, increasing downstream salinity and reducing Rappahannock water flow, while adding a similar amount to the Mattaponi River, reducing downstream salinity and increasing Mattaponi River flow. DEQ’s Permit Decision Rationale document (PDR) lists this concern when it copies comments from the Rappahannock Tribe, but DEQ does not otherwise address the interbasin transfer issue.

The Mattaponi River is a small river already prone to flooding, and this permit could potentially allow water flow to increase by up to 20-85% above its current daily flow levels depending on the time of year, which is an alarming change. The Tribe requests that this permit not be granted unless and until the permit includes flooding and erosion mitigation funding for counties and reservations along the Mattaponi River

and investigates the habitat implications of the reduction of salinity and increased flow in the Mattaponi River.

Additionally, culturally significant species including shad, oysters, Atlantic sturgeon, blueback herring, alewife, striped bass, and menhaden are all located in the areas of the Mattaponi and Rappahannock Rivers downstream of the proposed water withdrawal and water release areas. Fish species are affected by water salinity, including in their breeding and juvenile stages. Oyster populations vary in their tolerance and preferences for different salinity levels. Atlantic Sturgeon have been found in the Rappahannock River within two miles of proposed Intake #3, and the Virginia Department of Wildlife Resources has documented the federally endangered Atlantic Sturgeon in the project area, which is listed as an Anadromous Fish Use Area and a Threatened and Endangered Species Water as a result, as has the nearby North Anna River. Despite the DWR and the Rappahannock Tribe expressing concerns about sturgeon habitat and impacts on sturgeon due to the water withdrawals in this area, DEQ has not addressed these concerns substantively enough, and the limited analysis has focused on potential impacts in the Rappahannock River rather than also considering unanticipated consequences from interbasin transfer to the Mattaponi River. DWR has also recommended consideration of salinity impacts and coordination with DWR and VIMS regarding salinity impacts of this project.

While recent submissions to the permit include some analysis of expected river salinity on the Rappahannock River, the Tribe has not seen an analysis that includes consideration of this interbasin transfer on the salinity, flood-susceptibility, or habitat quality of the Mattaponi River, which should be conducted in order to fully and meaningfully consider the environmental impacts of this permit.

2. The Tribe and the populations along the Mattaponi River should not experience environmental consequences from data centers located in Caroline County, which have few benefits for Mattaponi inhabitants.

Thus far, communities in King William County and other counties downstream of interbasin transfer points have not been notified that this project has the potential to affect water salinity and average flow rates on the Mattaponi River. These impacts are generally being incurred to benefit commercial and industrial projects located in Caroline County, but they are affecting communities and taxpayers across several counties, many of whom have no elected representation with a voice regarding this project. The substantial motivation for this specific project is private commercial and industrial development, especially for the benefit of the data center industry. This project also affects the water rights of people downstream of the Rappahannock River withdrawal. Given all these environmental effects, DEQ should ensure that a draft permit considers ways that these effects can be minimized and avoided such as by eliminating the need for interbasin transfer and providing appropriate mitigation for other potential adverse effects.

3. Aspects of the commercial uses and need for the permit are overstated.

The Tribe has concerns that some of the commercial justifications for this permit are speculative and over-estimated. For example, DEQ's Permit Decision Rationale (PDR) document uses the proposed high-speed passenger service between Charlotte, NC and Washington, DC, "transit-oriented development," as a reason why the Caroline County population is going to increase over the next 30 years. The PDR suggests that transit-oriented development will increase water needs in Caroline County by 25% over the next five years. However, it is not clear what PDR is using as the basis for these estimates. The Southeast High

Speed Rail Corridor from Washington, DC, to Richmond, VA, is expected to cost \$53 billion in construction and design costs, is not yet fully funded, and is expected to take around ten years to complete construction once it is funded. DEQ and VRMC should request additional information from the applicant regarding this expected TOD increase in the public residential drinking water need, as this project may in fact be much more driven by commercial and industrial needs than any public necessity.

4. The Tribe requests a public hearing so that these concerns can be fully evaluated.

Given the significant concerns regarding the impacts of this project, including by two state and federally-recognized Tribal Nations in Virginia, a public hearing is an appropriate next step for VMRC and DEQ to consider this draft permit application.

* * *

Thank you for your consideration of the Tribe's concerns regarding this project. The Tribe looks forward to further conversation with your agency.

Sincerely,

/s/

Katherine Sorrell
Counsel to the Upper Mattaponi Tribe
Attorney-at-Law
Cultural Heritage Partners PLLC

CC:

Allison Major, VWP Permit Writer, Water Division, Virginia Department of Environmental Quality
Ellen Keane, Bycatch Reduction and Outreach, Greater Atlantic Regional Fisheries Office, National Oceanic and Atmospheric Administration
Lynn Lankshear, Atlantic Sturgeon Coordinator, Greater Atlantic Regional Fisheries Office, National Oceanic and Atmospheric Administration
Sylvia Gazzera, Project Manager, U.S. Army Corps of Engineers

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
4	KAREN A GREENAWAY	05/31/2024 13:22:15 PM	OPPOSE

I OPPOSE THIS PROJECT BECAUSE AS AN OWNER OF LAND THAT FRONTS THE RAPPAHANNOCK RIVER ABOUT 4 MILES SOUTH OF PORT ROYAL I AM CONCERNED THAT THE WITHDRAWAL OF WATER WILL HAVE A DIRECT AFFECT ON THE HEALTH OF THE WELL AND SEPTIC SYSTEMS ON MY PROPERTY. MY ONLY WATER SUPPLY IS WELL WATER WHICH IS SOURCED DIRECTLY FROM WATER THAT FEEDS THE RAPPAHANNOCK RIVER. A LARGE AMOUNT OF WATER TAKEN FROM THE RIVER WITHOUT REPLACING IT WILL DIRECTLY STRESS MY WATER SUPPLY BECAUSE IT WILL SUCK WATER OUT OF THE DEEP SOURCES OF WATER THAT SUPPLY THE RIVER, DIVERTING THE WATER FROM MY AND MY NEIGHBORS PROPERTIES AND OUR WELLS. IN ADDITION, THE LOWER WATER LEVELS WILL DRAIN THE WATER IN THE CREEKS AT THE BACK AT MY HOUSE THAT PROVIDE HABITAT FOR MIGRATORY BIRDS AND BEAVERS WHICH HELP KEEP THE CREEKS HEALTHY WITH MINIMAL MOSQUITO PROBLEMS. WITHOUT THE SUFFICIENT TIDAL WATERS, THOSE CREEKS BECOME STAGNATE AND A BREEDING GROUND FOR DISEASE. THE CREEKS DRYING UP WILL ALSO AFFECT THE EXCELLENT HUNTING GROUNDS THAT MY NEIGHBOR USES AS A FOOD SOURCE. IN ADDITION, THE FARMERS WHO FARM DIRECTLY NEXT TO MY LAND WILL LOSE A SIGNIFICANT SUPPLY OF WATER FOR THEIR CROPS WHICH DO NOT HAVE TO BE IRRIGATED, BUT LESS WATER IN THE RIVER MEANS A LOWER WATER TABLE WHICH WILL HAVE A DIRECT AFFECT ON THE HEALTH OF THE SOIL. FRANKLY, THIS IDEA OF TAKING WATER FROM ONE RIVER TO FEED ANOTHER HAS BEEN TRIED IN WESTERN STATES AND IT NEVER WORKS WITHOUT HURTING THE COMMUNITY SUPPLY OF WATER. I AM SURE THIS IS A GREAT IDEA FOR DEVELOPERS, BUT IT IS A TERRIBLE IDEA FOR THE HEALTH OF THE RAPPAHANNOCK AND THE CITIZENS OF CAROLINE COUNTY WHO VALUE THIS RIVER FOR ITS BEAUTY, BUT RELY ON THIS RIVER FOR LIFE. COME UP WITH SOME OTHER IDEA, BUT NOT THIS ONE. BECAUSE THIS WILL PERMANENTLY DAMAGE THE HEALTH OF THE RAPPAHANNOCK AND THE COMMUNITY THAT LIVES DOWNSTREAM FROM THIS WITHDRAWAL.

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=932



Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
5	SARAH F SOUTHWORTH	06/04/2024 18:32:31 PM	OPPOSE

I OPPOSE THIS PROJECT DUE TO THE NEGATIVE IMPACT OF REMOVING THIS AMOUNT OF WATER FROM THIS RIVER AND THE NATURAL AND PHYSICAL CONSEQUENCES THE DAILY UPTAKE OF THIS LARGE AMOUNT OF WATER WILL CREATE UPON THE RIVER, THE AQUATIC LIFE, THE NATURAL SPECIES THAT RELY UPON THIS WATER SUPPLY, THE DEPTH OF THE RIVER, ETC.. I OWN SEVERAL PROPERTIES IN CAROLINE COUNTY AND THIS COUNTY SHOULD NOT BE CONSIDERING THE RAPPAHANNOCK RIVER AS A SOLUTION TO THE COUNTY'S POOR PLANNING FOR A WATER SUPPLY. THIS PROJECT SHOULD BE REJECTED.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
6	CHARLES R ROBBINS	06/04/2024 20:50:30 PM	OPPOSE

AS A LANDOWNER ON THE RAPPAHANNOCK RIVER IN RICHMOND COUNTY AND A NATIVE OF CAROLINE COUNTY, I AM CONCERNED ABOUT THE ENVIRONMENTAL IMPACT OF REMOVAL OF THE WATER, AS WELL AS THE FACT THAT THERE IS NO COMPENSATION OR REPARATIONS BEING MADE FOR USE OF THE WATER. IF I WANT TO ADD ON TO MY HOUSE IN RICHMOND COUNTY, I HAVE TO APPLY FOR APPROVAL AND PROVIDE SOME SORT OF REPARATION AS AN OFFSET. CAROLINE COUNTY SHOULD IMPLEMENT SUBSTANTIAL IMPROVEMENTS TO THE WATER QUALITY ALONG THE RAPP RIVER WHERE IT TOUCHES CAROLINE COUNTY AS A MINIMUM FOR THIS REQUEST TO BE APPROVED.

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
7	CHASE A WERNER	06/05/2024 08:34:20 AM	OPPOSE

THIS PROJECT IF APPROVED, WOULD BE DUMPING 14 MILLION GALLONS OF “WASTE WATER” INTO THE MATTAPONI WHICH IS VIRGINIA’S MOST PRISTINE WATERSHED. ALSO THE MATTAPONI DOES NOT HANDLE INFLUXES OF WATER WELL. THIS IS EVIDENT AFTER EVERY MAJOR RAINSTORM, WHEN THE RIVER FLOODS. IN ADDITION TO THE ABOVE ISSUES, IF THE WATER IS BEING USED TO COOL INDUSTRIAL SITES IT ALSO POSES A THREAT TO RAISE THE TEMPERATURE OF THE WATER ENTERING THE RIVER.

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
8	GREG LEAKE	06/06/2024 09:49:49 AM	OPPOSE

I OPPOSE THIS PROJECT DUE TO ITS SCALE 855 ACRES , ITâ€™S IMPACT ON THE ENVIRONMENT, THE LACK OF A SUFFICIENT STUDY FOR ITS LONGTERM IMPACT ON THE RAPPAHANNOCK RIVER BASIN AND ITâ€™S RESIDENTS, AND THE FAILURE BY LOCAL OFFICIALS TO ADEQUATELY PROMOTE PUBLIC DEBATE OF THE PROPOSAL WITH THE PUBLIC. NOTHING ABOUT THIS PROJECT IS GOOD FOR THE HEALTH OF THE RIVER OR THE WILDLIFE AND RESIDENTS WHO DEPEND ON THE RIVER FOR DRINKING WATER AND SUBSTINENCE. I COULD MENTION THE EXCESSIVE AMOUNTS OF WATER NEEDED FOR OPERATION 14 MILLION GALS/DAY WHICH WILL NOT BE REUSED , POWER CONSUMPTION SUBSTATION REQUIRED , AIR CONTAMINATION FROM DIESEL EXHAUST , NOISE CONTAMINATION FROM GENERATORS , AND OTHER OBVIOUS CONCERNS. THE RURAL NATURE OF CAROLINE COUNTY DEMANDS CARE AND CONCERN BY THE HUGE CORPORATIONS THAT ARE NOW DEMANDING OUR LOCAL RESOURCES FOR THEIR BENEFIT. THIS PROJECT WILL AFFECT NOT ONLY MYSELF, BUT ALL OF US IN THE VICINITY, BOTH LONGTERM AND SHORT. WITH CLIMATE CHANGE, RISING TEMPERATURES AND INCREASING DEMAND FOR A LIMITED SUPPLY OF WATER, WE ALL NEED TO SAFEGUARD OUR RESOURCES MORE CLOSELY FOR OUR FUTURE DEPENDS ON IT. A PUBLIC HEARING IS REQUESTED.

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Number	Name	Received	Position
9	ROBERT HODGES	06/06/2024 11:32:20 AM	NO POSITION

THE APPLICATION THAT I DOWNLOADED AND REVIEWED FILENAME - PNDRAFTPKG.PDF DID NOT INCLUDE A SECTION ON THE IMPACTS OF SEA-LEVEL RISE AND MODELING OF HOW SEA-LEVEL RISE COULD IMPACT FUTURE WATER SALINITY, SHORELINE IMPACTS AND ANCILLARY ISSUES CAUSED BY ANTICIPATED SEA-LEVEL RISE.

I SUPPORT AMENDING THE APPLICATION TO INCLUDE THE AFOREMENTIONED SEA-LEVEL RISE ANALYSIS AND IMPACTS FOR A PROJECT THAT IS LIKELY TO HAVE A USEFUL LIFE IN EXCESS OF 100 YEARS.

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Number	Name	Received	Position
10	BRIAN K RISLEY	06/06/2024 18:04:52 PM	OPPOSE

WHY SHOULD SOMEONE BE ABLE TO TAKE MILLIONS OF GALLONS OF WATER OUT AND RETURN NO WATER
? I'M VERY CONCERNED ABOUT MESSING WITH ECOSYSTEM.

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Number	Name	Received	Position
11	DOUG L HANCOCK	06/07/2024 15:07:40 PM	OPPOSE

THIS PROJECT IS REQUESTING TO PULL A LARGE AMOUNT OF WATER OUT OF A PUBLIC RIVER FOR THE PROFIT OF A PRIVATE CORPORATION. THIS PROJECT IS JUST ONE OF MANY PLANNED PROJECTS THIS CORPORATION INTENDS TO BUILD IN THE SURROUNDING AREA. ALL OF THESE PROJECTS WILL HAVE SIMILAR WATER PULL REQUESTS. THIS WILL HAVE AN ADVERSE IMPACT ON THE RIVER AND THE ECOSYSTEM IT PROVIDES. THEREFORE, I AM REQUESTING THIS PERMIT BE DENIED.

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Number	Name	Received	Position
12	MARILYN SOUTH	06/07/2024 16:50:58 PM	OPPOSE

THE INCREASE IN SALT WATER MOVING UP THE RAPPAHANNOCK RIVER COULD NEGATIVELY IMPACT THE MIGRATORY FISH POPULATION.

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Number	Name	Received	Position
13	KATE WHITEHEAD	06/08/2024 11:49:15 AM	OPPOSE

WITHDRAWING THIS QUANTITY OF WATER FROM THE RAPPAHANNOCK AND RETURNING WASTEWATER TO THE MATTAPONI IS A CONFUSING PROPOSAL THAT IGNORES AVAILABLE DATA REGARDING RIVER SALINITY, AS WELL AS DISREGARDS THE LAND RIGHTS OF THE GARRETT FAMILY.

INFORMATION FROM CAROLINE COUNTY REGARDING NEED FOR WATER IS AT BEST UNCLEAR AND AT WORST DISINGENUOUS. WHILE THE COUNTY IS GROWING AT A DOUBLE-DIGIT RATE, THE NEED FOR THIS AMOUNT OF WATER APPEARS TO BE MORE ABOUT COURTING POTENTIAL DATA CENTERS THAN SUPPORTING FUTURE RESIDENTS. JEOPARDIZING THE HEALTH OF THE RAPPAHANNOCK AND FORCIBLY SEIZING MULTIGENERATIONAL FARMLAND DO NOT SEEM WORTHY TRADES FOR THE POTENTIAL FINANCIAL GAINS OF DATA CENTERS.

APPLICATION NUMBER 202000514 HAS NOT YET BEEN APPROVED AND IT DOES NOT NEED TO BE APPROVED. I HOPE THE DEQ VALIDATES THE CONCERNS OF COUNTY CITIZENS AND RIVER ADVOCATES BY DENYING THIS PERMIT.

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Number	Name	Received	Position
14	PAIGE TOTARO	06/09/2024 07:05:02 AM	OPPOSE

I AM EXTREMELY CONCERNED THAT THIS REMOVAL OF FRESH WATER FROM THE RIVER ABOVE THE SALT WATER LINE WILL PERMANENTLY CHANGE THE LANDSCAPE OF OUR RIVER. CHANGING THE SALINITY LEVELS IN THE RIVER CAN HARM THE FRESH WATER MARSHES AND HABITATS. REMOVING SUCH A LARGE QUANTITY OF WATER AND NOT REPLACING IT MAY IMPACT OUR WATER TABLE BELOW THE REMOVAL POINT, WHICH IS ALREADY LOW. I HAVENâ€™T SEEN ENOUGH DATA TO CONVINCE ME THAT THIS WOULD NOT HAVE A NEGATIVE IMPACT ON THE PEOPLE AND WILDLIFE BELOW THE REMOVAL POINT.

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Number	Name	Received	Position
15	REGINA MORIARTY	06/15/2024 16:57:01 PM	OPPOSE

THIS COMMENT IS IN OPPOSITION TO THE PERMIT THAT WOULD ALLOW CAROLINE COUNTY TO WITHDRAW 13.9 MILLION GALLONS OF WATER DAILY FROM THE RAPPAHANNOCK RIVER. I STAND IN SUPPORT OF THE ENVIRONMENTAL, CULTURAL AND HISTORICAL ORGANIZATIONS AS WELL AS INDIVIDUALS THAT OPPOSE THIS PERMIT FOR THE MANY REASONS THAT HAVE BEEN WELL-ARTICULATED IN THESE COMMENTS. MY QUESTION TO THE VMRC IS: WILL THE OTHER ELEVEN COUNTIES ALONG THE RIVER AND FREDERICKSBURG ALSO BE ALLOWED TO WITHDRAW MILLIONS OF GALLONS OF WATER DAILY FOR THEIR OWN DATA CENTERS AND THEN DEPOSIT THE OUTPUT IN A DIFFERENT WATERSHED? WHAT WILL THE RIVER LOOK LIKE THEN? AS A COMMUNITY, WE NEED TO ADDRESS WATER NEEDS FOR FUTURE GENERATIONS: WILL SO MUCH WATER BE SIPHONED FROM THE RIVER THAT IT DIES? WILL OUR AQUIFERS DRY UP? ARE MORE RESERVOIRS NEEDED? THE USE OF THE WATER OF THE RAPPAHANNOCK SHOULD BE A COORDINATED EFFORT WITH INPUT FROM ALL COUNTIES AND CITIZENS ALONG THE RIVER TO DETERMINE THE BEST APPROACH TO KEEP THE RAPPAHANNOCK RIVER HEALTHY AND SCENIC, HONORING ALL THE PEOPLES THAT HAVE LIVED ALONG THE RIVER FOR CENTURIES. AND, OH YES, BE THERE TO PROVIDE WATER FOR FUTURE GENERATIONS.

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Number	Name	Received	Position
16	STEPHEN H MONTGOMERY	06/09/2024 17:54:01 PM	OPPOSE

WITHDRAWING WATER FROM ONE LARGE BODY OF WATER AND DISCHARGING THE WASTE WATER INTO AN ENTIRELY DIFFERENT BODY OF WATER MAKES NO SENSE. THE POTENTIAL COMPLICATIONS OF THIS PRACTICE SHOULD OVERRULE THE PERMITTING OF IT. THE VOLUME OF WATER BEING REMOVED ALSO PRESENTS AN UNACCEPTABLE RISK OF ALTERING THER HABIT BY ALTERING THE SALT/FRESH WATER LINE.

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Number	Name	Received	Position
17	BRENDA H HYNSON	06/10/2024 08:30:05 AM	OPPOSE

THE RAPPAHANNOCK RIVER WATER WITHDRAWAL WILL HAVE AN ADVERSE EFFECT ON THE RAPPAHANNOCK RIVER WATERSHED AND THE ADJACENT COUNTIES GOING ALL THE WAY DOWN TO THE CHESAPEAKE BAY FOR APPROXIMATELY 100 MILES . MOREOVER, TRANSFERRING RIVER WATER FROM ONE RIVER TO ANOTHER WATERSHED WILL HAVE AN ADVERSE IMPACT ON THE WATER LIFE/AQUATIC ORGANISMS THAT ARE NOW THRIVING IN BOTH OF THOSE ECOSYSTEMS. THE WATER WITHDRAWAL AMOUNT THAT CAROLINE COUNTY'S APPLICATION INDICATES WILL HAVE A DEVASTATING IMPACT TO FARMS DOWN STREAM IN THE NORTHERN NECK. THAT ARE ON BOTH SIDES OF THE RAPPAHANNOCK RIVER GOING TO THE CHESAPEAKE BAY. BECAUSE, THE RAPPAHANNOCK RIVER IS ONE OF THE MOST SCENIC AND BEST PROTECTED RIVER CORRIDORS IN THE CHESAPEAKE BAY WATERSHED, CAROLINE COUNTY'S "PERMIT REQUEST" SHOULD BE DENIED.

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Number	Name	Received	Position
18	PATRICA CLARKE	06/10/2024 10:41:28 AM	OPPOSE

FROM: PATRICIA CLARKE <PTCLARKE73@GMAIL.COM> \R\NSENT: SATURDAY, JUNE 8, 2024 4:27 PM\R\NTO: MRC - WEB INFO <WEB.INFO@MRC.VIRGINIA.GOV>\R\NSUBJECT: WITHDRAWAL OF WATER FROM RAPPAHANNOCK RIVER\R\N\R\NHI, \R\N\R\NI LIVE IN ESSEX COUNTY VA AND USE THE RAPPAHANNOCK RIVER. I'M TOTALLY AGAINST THE PROPOSED PLAN FOR CAROLINE COUNTY TO WITHDRAW WATER FROM THE RAPPAHANNOCK AND DISPOSE THE WASTE IN THE MATTAPONI RIVER. I ALSO OWN PROPERTY IN KING & QUEEN. THIS IS ALL FOR A DATA CENTER. THEY ARE CLAIMING FOR HUMAN CONSUMPTION BUT THAT IS BY FAR THE FULL TRUTH. THIS WILL EFFECT THE ECOSYSTEM ON THE THE RAPPAHANNOCK AND MATTAPONI. PLEASE FORWARD TO THE CORRECT TEAM\R\N\R\NTHANK YOU,\R\N\R\NPATRICA CLARKE

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Number	Name	Received	Position
19	JOSEPH F MCCAULEY	06/10/2024 12:26:31 PM	OPPOSE

THERE IS INSUFFICIENT DATA ON HOW THIS PROJECT WOULD IMPACT FISHERIES IN THE RAPPAHANNOCK RIVER, ESPECIALLY IMPERILED SPECIES SUCH AS RIVER HERRING, AMERICAN SHAD, STRIPED BASS, AND THE ENDANGERED ATLANTIC STURGEON. I AM ALSO CONCERNED ABOUT THE PRECEDENT OF WITHDRAWING 13.9 MILLION GALLONS OF WATER PER DAY FROM THE RAPPAHANNOCK AND DISCHARGING ALL RESIDUAL WASTE WATER INTO A DIFFERENT WATERSHED, THE MATTAPONI, POTENTIALLY CAUSING A CRITICAL SEASONAL WATER DEFICIT IN THE RAPPAHANNOCK. THIS APPLICATION SHOULD BE DENIED, AND AT A MINIMUM, A PUBLIC HEARING SHOULD BE SCHEDULED.

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Number	Name	Received	Position
20	STEPHEN M COLANGELO	06/10/2024 15:11:29 PM	OPPOSE

WE SHARE THE CONCERNS EXPRESSED PUBLICLY BY THE RAPPAHANNOCK TRIBE, FRIENDS OF THE RAPPAHANNOCK, AND OTHERS ABOUT THE POTENTIAL IMPACT THE PROPOSED WATER WITHDRAWAL WOULD HAVE ON SPECIES THAT RELY ON ADEQUATE WATER FLOWS THROUGHOUT THE YEAR. SPECIES OF CONCERN INCLUDE ATLANTIC STURGEON, RIVER HERRING, AMERICAN SHAD, AND STRIPED BASS. POPULATIONS OF EACH OF THESE SPECIES ARE DEPRESSED, AND THE ATLANTIC STURGEON IS LISTED AS ENDANGERED.

WE ARE ALSO CONCERNED THAT THE WATER WITHDRAWN FROM THE RAPPAHANNOCK RIVER AND USED FOR MUNICIPAL OR INDUSTRIAL PURPOSES WILL NOT BE RETURNED TO THE RAPPAHANNOCK BUT INSTEAD DELIVERED TO THE MATTAPONI WATERSHED, SETTING AN UNWISE AND SHORTSIGHTED PRECEDENT. INCREASED SALINITY FROM LOW WATER FLOWS WILL BE DEVASTATING TO CERTAIN SPECIES OF PLANTS AND ANIMALS.

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Number	Name	Received	Position
21	GREGG KNEIPP	06/10/2024 16:05:03 PM	OPPOSE

THE APPLICATION APPEARS TO BE INADEQUATE BASED ON THE FOLLOWING:

THE PERMITTEE SHOULD BE REQUIRED TO SUBMIT A DROUGHT MANAGEMENT PLAN BEFORE THE PERMIT IS GRANTED. HOW CAN THE PUBLIC DETERMINE IF WHAT THE PERMITTEE IS PLANNING IS ADEQUATE BEFORE THE PERMIT HAS BEEN ISSUED.

IT IS DISTURBING THAT THE PERMITTEE CAN DETERMINE WHEN DROUGHT EMERGENCIES ARE DECLARED. SHOULDN'T ANOTHER AGENCY BE REQUIRED TO DETERMINE WHEN A DROUGHT EMERGENCY OCCURS?

HAS ANY RESEARCH BEEN CONDUCTED AS TO DETERMINE A SAFE AND ECOLOGICALLY SUSTAINABLE LEVEL OF WITHDRAW? IF SO, IT SHOULD BE REQUIRED IN THE PERMIT APPLICATION. AND, IF NO RESEARCH HAS BEEN CONDUCTED, IT SHOULD BE COMPLETED BEFORE THE PERMIT IS GRANTED.

BASED ON EXISTING WATER USAGE/AVAILABILITY, IT SEEMS LUDICROUS FOR THE COUNTY TO ASK FOR THIS ADDITIONAL AMOUNT OF WATER CAPACITY.

I THINK THAT THE PLANNED USE OF THIS NEW WATER SUPPLY BEING PARTIALLY TO SUPPLY DATA CENTERS IS A VERY POOR USE OF RAPPAHANNOCK RIVER PUBLIC WATER.

I DON'T THINK THAT THE MATTAPONI CAN HANDLE ALL OF THAT DISCHARGE FROM TWO WATERWATER TREATMENT PLANTS - THAT AMOUNT OF INFLOW WATER FROM THE TREATMENT PLANTS WILL LIKELY OVERWHELM THE EXISTING STREAM, AND WILL LIKELY CAUSE A MUCH INCREASED EROSION PROBLEM IN THE MATTAPONI. THE EFFLUENT FROM THE TREATMENT PLANTS WILL NEED TO BE ALMOST DRINKING WATER QUALITY MINUS THE CHLORINE SO AS NOT TO WREAK HAVOC ON THE MATTAPONI ECOLOGY.

I DIDN'T REALIZE THAT THIS PERMIT WAS FOR A RESERVOIR? " THE REQUESTED AND CALCULATED WATER DEMAND VOLUMES FOR THE INTAKE ON THE PROPOSED RESERVOIR ARE SUMMARIZED IN THE BELOW TABLE:"

THIS MODELLING "DURING THE LOW FLOW SCENARIO, A MAXIMUM OF 0.572% OF SIMULATED PARTICLES ENCOUNTERED THE INTAKE, AS COMPARED TO A MAXIMUM OF 0.21% UNDER THE HIGH FLOW SCENARIO." SEEMS EXTREME TO BE DETERMINED TO BE ACCEPTABLE, THIS IS ALMOST 3 TIMES INCREASE IN THE MORTALITY OF FISH OR OTHER SMALL POTENTIAL EGG PARTICLES.

IN REGARDS TO THE COUNTY'S COMMENTS " IN A LETTER DATED AND SENT VIA EMAIL JULY 10, 2020 CAROLINE COUNTY RESPONDED TO DCR&™S COMMENTS. THE COUNTY STATES THEY WILL ADHERE TO APPLICABLE STATE AND LOCATION EROSION AND SEDIMENT CONTROL/STORM WATER MANAGEMENT LAWS AND REGULATIONS, INCLUDING, AS PRACTICABLE, REPLANTING RIPARIAN BUFFER AREAS AS DISTURBED AS PART OF THIS PROJECT WITH NATIVE PLANT SPECIES AND MAINTAINING NATURAL STREAM FLOW. IN ADDITION, THE COUNTY STATED THEY WILL UNDERTAKE EFFORTS TO RETAIN NATURAL CORRIDORS THAT ALLOW MOVEMENT BETWEEN FRAGMENTS INCLUDING IMPLEMENTING LANDSCAPE

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DESIGN WITH NATIVE PLANT SPECIES THAT PRIORITIZES NATURAL COVER OVER LAWN TO SOFTEN AND REDUCE THE LENGTH OF EDGE, WHERE PRACTICABLE." THE USE OF WHERE PRACTICABLE FOR REPLANTING RIPARIAN BUFFER AREAS IS UNACCEPTABLE - WHERE PRACTICABLE IS NOT EASILY DEFINED, AND COULD EASILY BE INTERPRETED AS AS TO REQUIRE NO REPLANTING OF RIPARIAN BUFFERS.

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Number	Name	Received	Position
22	MARGARET GALLAGHER	06/13/2024 19:15:49 PM	OPPOSE

AS A LAND OWNER IN ESSEX COUNTY BORDERING THE RAPPAHANNOCK RIVER, THIS WATER REMOVAL WILL HAVE DETRIMENTAL AFFECTS TO OUR LAND. WE OWN FAMILY FARMS AND Iâ€™M CONCERNED ABOUT THE POTENTIAL IMPACTS OF THIS PROJECT TO THE OVER ALL HEALTH OF THE RIVER. THE PERMIT PROPOSES TO ALLOW THE TRANSFER OF WATER BETWEEN TWO MAJOR RIVER BASINS AND NOT SINGLE DROP WILL BE RETURNED TO THE RAPPAHANNOCK.

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Number	Name	Received	Position
23	ANN GRAZIANO	06/11/2024 13:09:05 PM	OPPOSE

THIS PROJECT HAS THE POSSIBILITY OF SERIOUSLY ERODING TWO MAJOR WATERSHEDS, THE RAPPAHANNOCK AND THE MATTAPONI. BY TAKING LARGE AMOUNTS OF WATER FROM THE RAPPAHANNOCK, MARINE RESOURCES THAT RELY ON SPECIFIC SALINITY LEVELS WILL BE JEOPARDIZED. THIS WILL ALSO AFFECT THE MATTAPONI AS WATER IS ADDED TO THAT BODY. THERE SHOULD BE MORE STUDIES DONE ON THIS ISSUE BEFORE IT EVER REACHES THE LEVEL OF ISSUING A PERMIT. ALSO, AT THE VERY LEAST THERE SHOULD BE A PERIOD SET FOR PUBLIC COMMENTS SO THAT THAT THE LOCAL POPULATION AND THE EXPERTS CAN WEIGH IN ON THIS IMPORTANT ISSUE.

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Number	Name	Received	Position
24	ADAM M LYNCH	06/11/2024 16:01:00 PM	OPPOSE

I OPPOSE THE CAROLINE COUNTY WATER WITHDRAWAL PROPOSAL. ANY WATER THAT IS WITHDRAWN FROM THE RAPPAHANNOCK RIVER SHOULD BE RETURNED, TREATED, TO THE RAPPAHANNOCK NOT DIVERTED TO ANOTHER WATERSHED . WITHDRAWING FROM THE RAPPAHANNOCK WILL INTERFERE WITH THE RIVER SALINITY AND HARM WILDLIFE HABITAT. THIS WILL HARM RECREATIONAL ASSETS AND THE RIVER ECONOMY.

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Number	Name	Received	Position
25	JOHN P TIPPETT	06/11/2024 16:17:09 PM	OPPOSE

I OPPOSE THE PROJECT *AS CURRENTLY WRITTEN*.

1. THE PROPOSED RETURN FLOWS ARE TO THE YORK RIVER BASIN, BUT THE EXTRACTION IS FROM THE RAPPAHANNOCK RIVER BASIN. INTERBASIN TRANSFER OF LARGE WATER VOLUMES CAN CAUSE NEGATIVE EFFECTS, PARTICULARLY CUMULATIVE EFFECTS ON THE EXTRACTED WATER BODY. IN PARTICULAR, THIS COULD SHIFT THE SALINITY REGIME DOWNSTREAM OF THE INTAKE.
2. THE PROPOSED INTAKE AREA IS A POTENTIAL SPAWNING GROUND FOR THE ENDANGERED ATLANTIC STURGEON. THERE IS NO EVIDENCE THAT FEDERAL AGENCIES RESPONSIBLE FOR PROTECTING THIS SPECIES HAVE BEEN CONSULTED ON THE PERMIT APPLICATION.
3. NEARLY 3 MGD OF PROPOSED INTAKE IS BEING ROUTED TO "INDUSTRIAL FACILITIES", WHICH APPEAR TO BE LARGELY PLANNED DATA CENTER DEVELOPMENT. WE SHOULD NOT BE EXTRACTING A CRITICAL PUBLIC FRESHWATER RESOURCE FROM THE RAPPAHANNOCK TO PROVIDE PRIVATE INDUSTRY COOLING WATER. I WANT TO SEE AN ALTERNATIVES ANALYSIS FOR OTHER COOLING WATER SOURCES, SUCH AS TREATED WASTEWATER.

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Number	Name	Received	Position
26	MARCIA M FAIRMAN	06/11/2024 17:59:16 PM	OPPOSE

I SHARE THE CONCERNS EXPRESSED PUBLICLY BY THE RAPPAHANNOCK TRIBE, FRIENDS OF THE RAPPAHANNOCK, AND OTHERS ABOUT THE POTENTIAL IMPACT THE PROPOSED WATER WITHDRAWAL WOULD HAVE ON SPECIES THAT RELY ON ADEQUATE WATER FLOWS THROUGHOUT THE YEAR. SPECIES OF CONCERN INCLUDE ATLANTIC STURGEON, RIVER HERRING, AMERICAN SHAD, AND STRIPED BASS. POPULATIONS OF EACH OF THESE SPECIES ARE DEPRESSED, AND THE ATLANTIC STURGEON IS LISTED AS ENDANGERED. THERE IS CURRENTLY INSUFFICIENT INFORMATION TO UNDERSTAND THE IMPACT THE PROPOSED WATER WITHDRAWAL WOULD HAVE ON THESE IMPERILED SPECIES. IT WOULD BE IRRESPONSIBLE AND NOT IN THE BEST INTERESTS OF THE CITIZENS OF THE COMMONWEALTH TO GRANT THE PROPOSED PERMIT WITHOUT UNDERSTANDING THE IMPACT IT WILL HAVE.

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Number	Name	Received	Position
27	ROY COMBS	06/11/2024 17:48:26 PM	OPPOSE

1. MAJOR INTERBASIN TRANSFER OF WATER.

THE PROJECT INVOLVES TRANSFERRING WATER ACROSS TWO MAJOR RIVER BASINS. AFTER TREATMENT, THE WATER WILL NOT BE RETURNED TO THE RAPPAHANNOCK RIVER BUT DISCHARGED TO A DIFFERENT RIVER.

2. THREAT TO ATLANTIC STURGEON

THE PROPOSED INTAKE AREA IS A POTENTIAL SPAWNING GROUND FOR THE ENDANGERED ATLANTIC STURGEON. THERE IS NO EVIDENCE THAT FEDERAL AGENCIES RESPONSIBLE FOR PROTECTING THIS SPECIES HAVE BEEN CONSULTED ON THE PERMIT APPLICATION.

3. WATER DEMAND.

EACH DAY, 7.9 MILLION GALLONS TO BE WITHDRAWN FROM THE RAPPAHANNOCK RIVER. THIS IS A BIG NUMBER. HOW WILL THIS WITHDRAWAL AND A SUMMER DROUGHT AFFECT THE RAPPAHANNOCK RIVER?

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Number	Name	Received	Position
28	JESSICA F OBERLIES	06/11/2024 18:13:05 PM	OPPOSE

THIS PROJECT INVOLVES TRANSFERRING WATER ACROSS TWO MAJOR RIVER BASINS, WHICH WILL CAHNGE THE CURRENT STATUS OF WATER DISTRIBUTION, AND NEGATIVELY IMPACT ECOSYSTEMS DOWNSTREAM. IT IS ALSO A THREAT TO THE ATLANTIC STURGEON, AS THE AREA THAT THEY PROPOSE TAKING WATER FROM IS A POTENTIAL SPAWNING GROUND FOR THIS ENDANGERED SPECIES. THERE IS NO EVIDENCE THAT FEDERAL AGENCIES RESPONSIBLE FOR PROTECTING THIS SPECIES HAVE BEEN CONSULTED ON THE PERMIT APPLICATION. LASTLY AND MOST ALARMINGLY , A PORTION OF THE WATER PROPOSED TO BE WITHDRAWN WILL BE DIRECTED TO THREE MAJOR DATA CENTERS FOR COOLING PURPOSES. ESSENTIALLY, THIS PROJECT IS AN EXCUSE TO REMOVE WATER FROM THE RIVER IN ORDER TO COOL DATA CENTERS FAR FROM THE SOURCE OF THE RIVER. THIS IS BOTH MORALLY AND ECOLOGICALLY NOT A GOOD USE OF THE WATER, AND THEREFORE, I AND THE STUDENTS OF THE UNIVERSITY OF MARY WASHINGTON FIRMLY OPPOSE THIS PROJECT.

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Number	Name	Received	Position
29	POLLY S FOOTE	06/11/2024 20:00:27 PM	OPPOSE

AS A RESIDENT OF THE LOWER RAPPAHANNOCK WATERSHED WHO LIVES ON THE RIVER, I OPPOSE THE REMOVAL OF WATER FROM THE RAPPAHANNOCK TO OFFSET WELLS THAT ARE DRYING UP, AND THEN SENDING THE WASTEWATER INTO THE MATTAPONI. WE KNOW FROM MANY PAST MISTAKES THAT WE SHOULD BE CONSERVING OUR EXISTING WATERSHEDS, OUR SHORELINES AND CARING FOR THE NATIVE FLORA AND FAUNA TRYING TO SURVIVE THERE. WE ALREADY HAVE DEVASTATING DECLINES IN SO MANY SPECIES IN THE RAPPAHANNOCK AND CHESAPEAKE BAY, ALREADY CHALLENGED BY MANY PERMITS THAT STILL EXIST. PLEASE CONSIDER OTHER METHODS OF SOLVING THESE PROBLEMS BESIDES DISRUPTING THE FLOW OF THE WATER TO THE BAY. WE WILL BE BETTER SERVED TO RECOGNIZE WHEN THE LAND CANNOT SUPPORT OUR CHOICES FROM THE PAST OF WHERE TO LIVE, STOP FORCING NATURAL RESOURCES TO BEND TO OUR WILL AND START RESPECTING THE LIMITS OF NATURE. THIS REQUEST IS SIMILAR TO THOSE WHO CONTINUED TO BUILD AND BUY HOUSES ON THE EVER-ERODING SANDS OF THE OUTER BANKS, ONLY TO WATCH THEM FALLING IN NOW. PLEASE LEARN FROM THOSE MISTAKES AND LEAVE THE RAPPAHANNOCK RIVER WATER WHERE IT BELONGS.

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Number	Name	Received	Position
30	CHRISTOPHER CUSTALOW	06/17/2024 23:54:16 PM	OPPOSE

AS A REPRESENTATIVE OF EASTERN WOODLAND REVITALIZATION AN INDIGENOUS, OWNED AND OPERATED NONPROFIT THAT SUPPORTS OUR COMMUNITY I SPEAK WITH THE VOICE OF COMMUNITY OPINION IN VIRGINIA, AND AT LARGE OR ABROAD. WHEN I SAY, WE ARE NOT INTERESTED, NOR ENTERTAINED BY THE IDEA OF ANYONE DAMAGING OUR WATERWAYS FOR THEIR PROFIT. THE EFFECTS OF COLONIZATION AND ECO GENOCIDE HAVE ALREADY DONE ENOUGH DAMAGE, AND IN SOME CASES IRREVERSIBLE DAMAGE. WE WORK WITH MANY ORGANIZATIONS, AND ARE ALREADY TRYING TO TAKE CARE OF THESE WATERWAYS AND MEND THE HEALTH OF OUR RIVERS. THE LAST THING WE WANT TO SEE IS THE RAPPAHANNOCK AND THE MATTAPONI RIVER BECOME SOME DEVELOPERS PLAYGROUND AT THE EXPENSE OF OUR WATER, FISH, PLANT LIFE, AND OTHER WILDLIFE. WE HAVE ONE JOB AND THAT IS TO LEAVE THIS PLACE BETTER THAN WE FOUND IT FOR OUR NEXT 7 GENERATIONS. IT'S TIME TO STOP PUTTING PROFIT OVER MORALS AND THE WELL BEING OF OUR PLANET.

Attachments:

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Number	Name	Received	Position
31	CYANNE P YATES	06/11/2024 21:31:26 PM	OPPOSE

I OPPOSE FOR THE FOLLOWING REASONS:

1. MAJOR INTERBASIN TRANSFER OF WATER

THE PROJECT INVOLVES TRANSFERRING WATER ACROSS TWO MAJOR RIVER BASINS. AFTER TREATMENT, THE WATER WILL BE DISCHARGED INTO THE MATTAPONI RIVER AND POLECAT CREEK, NOT RETURNING TO THE RAPPAHANNOCK RIVER.

2. THREAT TO ATLANTIC STURGEON

THE PROPOSED INTAKE AREA IS A POTENTIAL SPAWNING GROUND FOR THE ENDANGERED ATLANTIC STURGEON. THERE IS NO EVIDENCE THAT FEDERAL AGENCIES RESPONSIBLE FOR PROTECTING THIS SPECIES HAVE BEEN CONSULTED ON THE PERMIT APPLICATION.

3. WATER DEMAND

EACH DAY, 7.9 MILLION GALLONS PER DAY TO BE WITHDRAWN WITH 2.9 MILLION GALLONS ARE ALLOCATED TO INDUSTRIAL FACILITIES, SPECIFICALLY 3 DATA CENTER CAMPUSES. ESSENTIALLY THEY ARE USING A MUNICIPAL DRINKING WATER PROJECT AS COVER FOR A COOLING WATER SUPPLY TO DATA CENTER PROJECTS.

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Number	Name	Received	Position
32	CASSANDRA MORRIS	06/12/2024 14:25:09 PM	OPPOSE

OUR RIVERS AND THE WILDLIFE THEY SUPPORT NEED TO BE PROTECTED. THIS IS A SHORT TERM SOLUTION WITH LONG TERM, DIRE CONSEQUENCES.

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Number	Name	Received	Position
33	SHIRL MAMMARELLA	06/12/2024 06:20:54 AM	OPPOSE

THE ENVIRONMENTAL IMPACT IS GREATLY NEGATIVE AND CONTINUES TO GROW AS THE NUMBER OF DATA CENTERS EXPANDS IN THE ENTIRE STATE. PLEASE SCHEDULE A PUBLIC HEARING ON THIS MATTER.

ADDITIONALLY, I GREATLY OPPOSE CLASSIFYING THE USE OF THE RAPPAHANNOCK WATERS AS NECESSARY FOR THE RESIDENTS' MUNICIPAL WATER SUPPLY. IT IS APPARENT FROM READING THE DRAFT PERMIT DOCUMENTS THAT THE DATA CENTERS INDUSTRIAL NEED WILL FAR EXCEED RESIDENTIAL NEEDS IN THE FUTURE. AND WE KNOW THE DATA CENTERS ARE USED TO DRIVE INTERNATIONAL CORPORATIONS, NOT LOCAL INDUSTRY.

PLEASE STOP AND FIND ALTERNATIVE METHODS TO COOL THESE FACILITIES BEFORE WE LOSE ALL OF THE BEAUTIFUL NATURAL RESOURCES IN OUR GREAT STATE OF VIRGINIA.

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Number	Name	Received	Position
34	THOM Y SAVAGE	06/12/2024 06:59:50 AM	OPPOSE

Iâ€™M NOT SURE THE INTER BASIN TRANSFER OF WATER HAS EVER BEEN APPROVED FOR A PROJECT OF THIS MAGNITUDE BUT IT IS A BAD IDEAâ€”HEADING IN THE WRONG DIRECTION. ONE WATERSHED SHOULD NOT BENEFIT BY RAIDING ANOTHER WATERSHED. WE ARE NOT IN THE WEST WHERE WATER IS SCARCEâ€”BUT WE SHOULD MAINTAIN THE INTEGRITY OF OUR VIRGINIAN WATERSHEDS. DO NOT OUTGROW YOUR CAPACITY TO GROW IN EACH OF OUR WATERSHEDS.

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Number	Name	Received	Position
35	DAVID LATANE	06/12/2024 07:08:13 AM	OPPOSE

I AM CONCERNED ABOUT THE SIZE OF THE DRAW FROM THE RIVER, AND POSSIBLE ENVIRONMENTAL IMPACTS ON A RIVER THAT HAS BEEN A SUCCESS STORY. THE WATER WILL BE USED IN PART FOR ENERGY HOG DATA CENTERS, THE GROWTH OF WHICH HAS BEEN FUELED BY BITCOIN MINING AND THE AI FAD. I DON'T THINK CAROLINE SHOULD FAST-TRACK THE PROJECT WITHOUT FURTHER STUDY.

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Number	Name	Received	Position
36	KAREN VIVERETTE	06/12/2024 09:43:50 AM	OPPOSE

I HAVE BEEN ADVISED THAT CAROLINE COUNTY HAS RECEIVED TENTATIVE APPROVAL FROM THE DEA TO BUILD AND OPERATE A WATER INTAKE STRUCTURE UTILIZING THE RAPPAHANNOCK RIVER. I AM REQUESTING A PUBLIC HEARING SO THAT CITIZEN'S CONCERNS CAN BE HEARD.

MY PERSONAL CONCERNS INCLUDE DISTURBING NEGATIVELY THE PROTECTED WETLANDS, DIMINISHED QUALITY OF LIFE FOR WILDLIFE, ALREADY DECREASING WATER LEVELS, INCREASED WATER TEMPERATURES IMPACTING WILDLIFE AND CONTRIBUTING TO HIGHER LEVELS OF BACTERIA, HIGH NOISE LEVELS, AND GENERAL NEGATIVE AESTHETICS. THIS IS CONCERNING THAT THE DEQ HAS BLATANTLY DISREGARDED OTHER CONSIDERATIONS AND PRECEDENTED DECISIONS REGARDING OTHER PROPOSED INTAKE STRUCTURES.

AT A TIME WHEN OUR ENVIRONMENT IS SO THREATENED, NOW IS NOT THE TIME TO SUPPORT FURTHER ENCROACHMENTS OF LAND WHERE THE RIVER WILDLIFE THRIVE.

KAREN VIVERETTE

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Number	Name	Received	Position
37	ELLIS B CALLIS JR.	06/12/2024 14:49:41 PM	OPPOSE

WHILE I FULLY UNDERSTAND THE NEED, I BELIEVE THAT THIS PROJECT WOULD HURT THE RAPPAHANNOCK RIVER. ONE HUGE CONCERN IS THAT THE WATER, ONCE USED, WILL BE PUT INTO ANOTHER WATER SYSTEM THE POTOMAC RIVER ESSENTIALLY AND NOT BACK INTO THE RAPPAHANNOCK RIVER. WE ARE LOOKING AT A TOTAL FAILURE OF TAKING CARE OF WHAT WE HAVE. I ADDITION, BY REMOVING THIS MUCH WATER, AN ALREADY ECOSYSTEM MAY FACE TOO MANY HARDSHIPS. AND WHAT WILL THIS DAILY INTAKE DO TO THE RIVER DURING THE SUMMER MONTHS AND DROUGHTS? PLEASE DO NOT APPROVE THIS PERMIT WITH ALL DEPARTMENTS REVIEWING IT, INCLUDING MARYLAND, SINCE WE WILL PUTTING THE WASTE INTO THEIR SYSTEM.

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Number	Name	Received	Position
38	DEVON BORKOWSKI	06/12/2024 14:49:39 PM	OPPOSE

THIS PROJECT WILL HAVE A SEVERE NEGATIVE IMPACT ON THE FISH AND WILDLIFE OF THE RAPPAHANNOCK RIVER. THE PROJECT INVOLVES A SIGNIFICANT INTER-BASIN TRANSFER OF WATER THAT WON'T RETURN TO THE RAPPAHANNOCK, WHICH IS ESPECIALLY CONCERNING GIVEN THAT THE INTAKE AREA ENCOMPASSES POTENTIAL SPAWNING GROUNDS FOR THE ENDANGERED ATLANTIC STURGEON. Iâ€™M STRONGLY OPPOSED TO A PROJECT THAT RISKS SEVER IMPACT TO THE HEALTH OF THE RAPPAHANNOCK RIVERâ€™S ECOSYSTEM FOR FINANCIAL GAIN.

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Number	Name	Received	Position
39	KIANA WILKERSON	06/12/2024 13:19:18 PM	OPPOSE

THIS PROJECT WILL BE DISASTROUS FOR THE LOCAL ECOSYSTEM AND WILDLIFE. WHILE IT IS GOING TO BE USED FOR DRINKING WATER FOR THE LOCAL COMMUNITY, IT WILL BE USED FOR DATA CENTERS WHICH WILL ALSO NEGATIVELY IMPACT THE ENVIRONMENT. THIS PROJECT HAS MORE CONS THAN PROS.

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Number	Name	Received	Position
40	HECTOR CAMPOS	06/12/2024 13:29:21 PM	OPPOSE

AS A CERTIFIED VIRGINIA MASTER NATURALIST, COMMUNITY ORGANIZER, LOVER OF THE RAPPAHANNOCK, PARENT WHOSE CHILDREN WILL SWIM AND FISH AND PADDLE AND LEARN ON THE RIVER, AND AS A SURVIVAL SCHOOL TEACHER- I OPPOSE THIS PROJECT- THE DEVELOPERS NEED TO FIND A NEW SOLUTION. WE HAVE POLLUTED AND ALTERED TOO MANY OF OUR WATERSHEDS AND NEED TO CONSIDER WHAT KIND OF ECOSYSTEM WE ARE LEAVING OUR GRANDCHILDREN.

THE WATER CANNOT LEAVE THE RAPPAHANNOCK AND ITS WASTER WATER BE TRANSFERRED TO A DIFFERENT WATERSHED, THIS IS NOT HOW NATURE HAS DESIGNED OUR ENVIRONMENT AND THE ENDLESS USAGE WILL BE WANTED BY DEVELOPERS MORE AND MORE EVERY YEAR UNTIL WE PROTECT IT, SAY NO- AND FORCE THEM TO THINK OUTSIDE OF THE BOX WITH THEIR SOLUTIONS TO BUILD SUSTAINABLY AND -LOCALLY- IN HARMONY WITH THE FORESTS AND WATERSHEDS WE HAVE LEFT.

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Number	Name	Received	Position
41	KATHLEEN HURNEY	06/12/2024 14:30:17 PM	OPPOSE

THIS PROJECT WILL WREAK HAVOC ON OUR ALREADY FRAGILE ENVIRONMENT. A RESPONSIBLE PROJECT WOULD FORMULATE A SOLUTION TO ITS OPERATING REQUIREMENTS. DESTROYING A RESOURCE IS NOT EXERCISING RESPONSIBILITY.

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Number	Name	Received	Position
42	EMILY L DAVIS	06/12/2024 15:40:39 PM	OPPOSE

I OPPOSE THIS PROJECT BECAUSE IT WILL CHANGE THE SALINITY OF THE WATER AND DISRUPT THE FRAGILE ECOSYSTEM OF THE RIVER.

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Number	Name	Received	Position
43	SANDRA A TAYLO	06/12/2024 17:54:00 PM	OPPOSE

TAKING WATER FROM ONE AREA OF THE COUNTY TO ANOTHER AREA ACCOMPLISHES NOTHING AT GREAT EXPENSE. ALL AREAS NEED WATER. TO TAKE FARM LAND AWAY FROM SOMEONE WHO DOES NOT WANT IT TAKEN IS WRONG. WHY MUST FARMERS AND OTHER TAXPAYERS PAY FOR BUSINESSES AND DEVELOPERS TO DESTROY THE LAND FOR PROFIT? THE ONLY THING CAROLINE COUNTY WILL GAIN BY TAKING LAND FROM A TAXPAYER SO OTHERS WILL PROFIT IS DISDAIN FROM ITS CITIZENS. WHEN THAT FARMER AND OTHERS ALONG THE RAPPAHANNOCK NEED WATER TO IRRIGATE THEIR CROPS, WILL THERE BE ENOUGH WATER LEFT TO DO SO? IT SEEMS LIKE CAROLINE COUNTY IS TRYING TO JOIN MANY OTHER AREAS AROUND US BY OVERDEVELOPING--COMMITTING RESOURCES THAT IT DOES NOT HAVE. WATER IS A VALUABLE RESOURCE THAT IS BECOMING SCARCER. MANY LOCALITIES DRAW WATER FROM THE RAPPAHANNOCK. WHAT HAPPENS, I WONDER, WHEN THE RIVER RUNS DRY.

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Number	Name	Received	Position
44	BENJAMIN F MAHONE	06/12/2024 17:37:34 PM	OPPOSE

THERE IS CURRENTLY
INSUFFICIENT INFORMATION TO UNDERSTAND THE IMPACT THE PROPOSED WATER WITHDRAWAL WOULD
HAVE ON
THE RIVER AND ITS WILDLIFE. IT WOULD BE IRRESPONSIBLE AND NOT IN THE BEST INTERESTS OF THE
CITIZENS OF
THE COMMONWEALTH TO GRANT THE PROPOSED PERMIT WITHOUT UNDERSTANDING THE IMPACT IT WILL
HAVE.

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Number	Name	Received	Position
45	JOSHUA J DUGGAN	06/12/2024 20:21:58 PM	OPPOSE

I OPPOSE THIS PROJECT IN ITS CURRENT FORM BECAUSE OF THE LACK OF CONSIDERATION GIVEN TO THE EFFECT IT WILL HAVE ON THE RAPPAHANNOCK AND YORK WATERSHEDS. DRAINING 7.9 MILLION GALLONS OF WATER PER DAY FROM THE RAPPAHANNOCK, ONLY TO DISCHARGE THE OUTFLOW INTO THE YORK VIA THE POLECAT CREEK/MATTAPONI RIVER , WILL BE A MAJOR CHANGE IN BOTH WATERSHEDS, IMPACTING NOT ONLY RIPARIAN AREAS BUT ESTUARINE. THIS KIND OF CHANGE WILL AFFECT RECREATIONAL ACTIVITIES LIKE FISHING AND KAYAKING/CANOEING. IT WILL AFFECT THE AMOUNT OF SEDIMENT BEING TRANSPORTED BY BOTH RIVERS, WHICH COULD HAVE A CASCADING EFFECT ON RIVERSIDE PROPERTIES LIKE MANY FARMS , AS WELL AS FISH AND AQUATIC MACROINVERTEBRATES. IT WILL AFFECT THE DAMAGE CAUSED BY NATURAL DISASTERS, SPECIFICALLY FLOODING AND FLASH FLOODING. THESE FLOODS COULD END UP BEING EXCEPTIONALLY DANGEROUS. AS AN ENVIRONMENTAL SPECIALIST WHO WORKS TO TRY AND MITIGATE THE DAMAGE WE CAUSE TO THE ENVIRONMENT AND OURSELVES, THIS PROJECT IN ITS CURRENT FORM IS NOT SOMETHING I CAN SUPPORT. IF WE CHOOSE TO PROCEED WITH THIS PROJECT, WE WILL BE RISKING OUR OWN FUTURE, ALL FOR THE SAKE OF HELPING CORPORATE GROWTH. I CANNOT ABIDE LETTING THIS HAPPEN IDLY.

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Number	Name	Received	Position
46	WRIGHT H ANDREWS	06/13/2024 07:58:10 AM	OPPOSE

AS I SIT HERE BEGINNING TO WRITE THIS LETTER, I AM LOOKING OUT MY WINDOW AT OUR SCENIC RIVER, THE RAPPAHANNOCK, WITH FONES CLIFFS UPRIVER, TWO PAIR OF OSPREY NESTING ON THE NESTS NEAR MY SHORE THAT I ERECTED, AND OSPREY ATTACKING EAGLES TO PROTECT THEIR NESTS AND EAGLES LANDING IN MY TALL PINES SEEKING SHELTER FROM THE OSPREY. WE IN ESSEX COUNTY ARE BLESSED TO HAVE SUCH A SCENIC RIVER, HOME TO COUNTLESS SPECIES OF BIRDS AND OTHER WILDLIFE, INCLUDING CRABS, MUSSELS, OYSTERS AND A VARIETY OF FISH.

NOW, AS I LOOK DOWN AT MY COMPUTER TO WRITE THIS COMMENT LETTER OBJECTION TO THIS ILL-CONCEIVED CAROLINE COUNTY MASSIVE DAILY WATER WITHDRAWAL, I AM FRANKLY DISMAYED AND A BIT ANGRY THAT DEQ HAS ALREADY GIVEN TENTATIVE APPROVAL TO THIS REQUESTED PERMIT. HOWEVER, LOOKING AT IT NOT ONLY AS A CONCERNED LANDOWNER ON THE RAPPAHANNOCK, BUT ALSO AS AN ATTORNEY, IT APPEARS TO ME THAT YOU WILL BE HEADING STRAIGHT TO MAJOR LITIGATION IF THIS PERMIT IS GRANTED. THE RAPPAHANNOCK IS A WONDERFUL NATURAL RESOURCE THAT MUST NOT BE EXPLOITED FOR BUSINESS DEVELOPMENT AS PROPOSED BY CAROLINE COUNTY OFFICIALS.

1. THIS PERMIT IS NOT SEEKING A NORMAL MUNICIPAL PUBLIC WATER SUPPLY AUTHORIZED BY VIRGINIA LAW. IT CLEARLY IS NOT BASED ON NORMAL WATER NEEDS OF CAROLINE COUNTY RESIDENTS OR OTHER NORMAL PUBLIC SERVICE NEEDS. THE REQUEST IS GROUNDED ON AN EFFORT TO SUPPLY THE MASSIVE WATER NEEDS OF A NUMBER OF OUT-OF-STATE OWNED MASSIVE COMPUTER DATA CENTERS THAT WOULD BE BUILT IN CAROLINE IF THIS OUR WATER CAN BE TAKEN AWAY. TAKING MILLIONS OF GALLONS OF WATER FROM THE RAPPAHANNOCK IS NOT PROVIDING WHAT LAW CONSIDERS A "MUNICIPAL WATER SUPPLY" BY ANY REASONABLE INTERPRETATION. DEQ SHOULD RESCIND ITS DRAFT APPROVAL.
2. THIS PROJECT WOULD UNDOUBTEDLY KILL MILLIONS OF FISH EGGS, UPEND THE SPAWNING OF MILLIONS OF FISH AND CAUSE GREAT HARM TO THE VARIOUS FISH THAT NOW THRIVE IN THE RAPPAHANNOCK.
3. DEQ HAS FAILED TO CONSIDER THE CUMULATIVE IMPACT OF THIS PROPOSED PROJECT AND OTHER OPERATIONS OR PROPOSED OPERATIONS THAT MAY BE USING OUR RIVER'S WATER.
4. DEQ HAS FAILED TO IMPOSE NEEDED TIME-OF-YEAR RESTRICTIONS DURING CRITICAL SPAWNING PERIODS.
5. WE ARE ALREADY EXPERIENCING AN INCREASE IN SALINITY IN OUR BRACKISH WATER AREAS, PRESENTING PROBLEMS FOR FARMERS AND OTHERS, DUE TO GLOBAL WARMING. THE PROPOSED CAROLINE PROJECT WOULD CLEARLY INCREASE SALINITY LEVELS FURTHER AND SHOULD NOT BE ALLOWED.
6. DEQ'S PERMIT AS PROPOSED WOULD ALLOW RAPPAHANNOCK WATER TO BE USED AND TREATED IN CAROLINE AND THEN BE DISCHARGED INTO THE MATTAPONI, APPARENTLY TO REDUCE THE COMPUTER CENTERS' COST. THERE DOES NOT APPEAR TO BE ANY LEGAL BASIS FOR DOING SO, AND IT SHOULD NOT BE DONE.
7. DEQ SEEMS TO BE TOTALLY CLUELESS AS TO THE WATER RIGHTS OF OTHER COUNTIES AND RESIDENTS WHO LIVE ON THE RAPPAHANNOCK. REGIONAL WATER PLANNING IS REQUIRED TO BE DONE BY VIRGINIA LAW. DEQ HAS DISREGARDED THIS REQUIREMENT.
8. ALLOWING THE CAROLINE PERMIT TO BE GRANTED WOULD BE A TERRIBLE PRECEDENT THAT COULD BE

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APPLIED ELSEWHERE IN VIRGINIA. VIRGINIA'S WATERS ARE SUPPOSED TO BE MANAGED---NOT MISMANAGED---AND PROTECTED BY DEQ, VMRC AND OTHER STATE AGENCIES. DEQ IS FAILING TO PROTECT THE RAPPAHANNOCK AND THIS PERMIT SHOULD NOT BE GRANTED.

I REQUEST FOR THE ABOVE AND OTHER REASONS THAT DEQ WITHDRAW ITS INAPPROPRIATE INITIAL APPROVAL OF THIS CAROLINE PERMIT TO MEET THE NEEDS OF MASSIVE COMPUTER DATA CENTERS.

I ALSO REQUEST THE VMRC/DEQ HAVE A PUBLIC HEARING ON THIS CASE BEFORE ISSUING A FINAL PERMIT.

SINCERELY,
WRIGHT H. ANDREWS

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47	GLEN D SCHMIDT	06/13/2024 08:05:32 AM	OPPOSE

WE BELIEVE THAT THE USE OF THIS WATER WILL ADVERSELY AFFECT THE FRAGILE ECOSYSTEM THAT IS ALREADY DECLINING. USE OF THIS WATER WILL ALLOW EVEN MORE SALTWATER TO WORK EVEN FURTHER UPSTREAM. WE BELIEVE THIS PROJECT WILL LOWER LOW TIDE LEVELS OF FRESH WATER AFFECTING MARSH AND STREAMS ALL ALONG THE RIVER. PLEASE CONSIDER SOLAR OR WIND PLANT SOLUTIONS.

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48	JONATHAN T AYRES	06/13/2024 08:31:10 AM	OPPOSE

1. DEQS DRAFT PERMIT FOR CAROLINES WITHDRAWAL OF WATER FROM THE RAPPAHANNOCK IS NOT FOR A NORMAL "MUNICIPAL PUBLIC WATER SUPPLY" USE AUTHORIZED BY VIRGINIA LAW.
2. VIMS ASSESSMENT OF MORTALITY TO THE FISH EGGS AND LARVAE CAUSED BY CAROLINE INTAKE CONFIRMS CONTINUOUS MORTALITY BUT DOES NOT QUANTIFY THE RISK.
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.
4. THE STATUS OF KING GEORGE DATA CENTER PROPOSED AT THE SITE OF THE OLD BIRCHWOOD POWER PLANT AND ITS WATER INTAKE STRUCTURE WAS NOT CONSIDERED.
5. TIME OF YEAR RESTRICTIONS ON WITHDRAWAL OF WATER FROM THE RAPPAHANNOCK ARE REQUIRED.
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.
7. THERE SHOULD BE NO INTER BASIN TRANSFER OF WATER WITHDRAWN FROM THE RAPPAHANNOCK INTO ANOTHER WATER BASIN.
8. DEQ FAILED TO CONSIDER THE IMPACT OF ITS DECISION ON THE WATER RIGHTS OF OTHER COUNTIES THAT BORDER THE RAPPAHANNOCK.
9. DEQS APPROVAL OF THE WATER WITHDRAWAL PERMIT REQUESTED BY CAROLINE WOULD CREATE A DANGEROUS AND FAR-REACHING PRECEDENT.

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Number	Name	Received	Position
49	CAITY ROGOWSKI	06/13/2024 09:30:09 AM	OPPOSE

WHILE THE NEED FOR WATER IN THE AREA IS IMPORTANT AND NOT TO BE IGNORED, I DO WISH TO VOICE CONCERNS ABOUT THE POTENTIAL IMPACTS OF THIS INTAKE TO THE HEALTH OF THE RAPPAHANNOCK RIVER AND ITS AQUATIC FAUNA FOR THE FOLLOWING REASONS: 1 IT ALLOWS A MAJOR INTERBASIN TRANSFER OF WATER THAT WILL NOT BE REPLENISHED BACK INTO THE RAPPAHANNOCK HOW QUICKLY WILL THAT DRY UP THE RESOURCE OR HAVE OTHER NEGATIVE EFFECTS ON THE ECO AND BIOSYSTEMS RELYING ON THIS WATERWAY? DO WE KNOW? IS THERE A PLAN FOR SOLVING FOR THAT DEPLETION? 2 THE AREA WHERE THE INTAKE IS PROPOSED IS KNOWN TO BE POTENTIAL SPAWNING GROUNDS FOR THE ATLANTIC STURGEON, WHICH IS FEDERALLY DESIGNATED AS AN ENDANGERED SPECIES HAVE GROUPS AND GOVERNMENT AGENCIES RESPONSIBLE FOR PROTECTING THIS SPECIES BEEN CONSULTED ON THE PERMIT APPLICATION AND IMPACTS? FINALLY 3 THERE IS A HIGH PROPOSED VOLUME OF WATER TO BE WITHDRAWN FROM THE RIVER, WITH MORE THAN 1/3 OF THE AMOUNT BEING ALLOCATED TO INDUSTRIAL FACILITIES LIKE DATA CENTERS WHY ARE WE USING MUNICIPAL DRINKING WATER AS A COVER FOR SUPPLYING FOR THE NEEDS OF INDUSTRIAL DEVELOPMENT THAT DON'T ACTUALLY DO ANYTHING TO SERVE OR BENEFIT THE SURROUNDING LOCAL COMMUNITY . DATA CENTERS THEMSELVES ARE KNOWN TO BE A RUSHED, BACKDOOR POLITICS JOB THAT WILL HAVE A VARIETY OF RIPPLE EFFECTS THROUGH OUR LIVES IN THE YEARS TO COME BECAUSE OF HOW MANY OF THEM ARE BEING APPROVED AND BUILT WITHOUT PROPER RESEARCH, PLANNING, AND REGULATION. LET'S MAKE SURE WE AREN'T GETTING CAUGHT UP IN THEIR WHIRLWIND OF HARM. PLEASE HAVE A HEARING ON THIS PERMIT ISSUE SO THAT THE RAPPAHANNOCK AND SURROUNDING WATERWAYS AND RIVERS ARE BEST TAKEN CARE OF SO THE NORTHERN NECK REGION MAY CONTINUE TO BE A THRIVING AND BEAUTIFUL ENVIRONMENT. THANK YOU!

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Number	Name	Received	Position
50	SARA GALLOWAY	06/13/2024 09:45:17 AM	OPPOSE

I DO NOT THINK WATER THAT HAS THE POTENTIAL TO BE POTABLE SHOULD BE USED FOR INDUSTRIAL PURPOSES. I ALSO DO NOT THINK THAT ENOUGH EVALUATION HAS BEEN DONE TO DETERMINE THE POTENTIAL IMPACT ON ATLANTIC STURGEON AND OTHER WILDLIFE IN BOTH THE RAPPAHANNOCK AND THE WATER’S ULTIMATE DESTINATION .

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Number	Name	Received	Position
51	ELIZABETH S SPRAGINS	06/13/2024 10:37:30 AM	OPPOSE

ROBBING WATER FROM THE RAPPAHANNOCK AND DEPLETING A MUNICIPAL WATER PROJECT FOR THE SAKE OF A DATA CENTER WOULD BE A SHORT-SIGHTED ACTION WITH DEVASTATING REPERCUSSIONS. THIS WOULD THIS ENDANGER THE ATLANTIC STURGEON SPAWNING AREA. GIVEN THAT THE RAPPAHANNOCK HAS RECENTLY EXPERIENCED RECORD LOW LEVELS, THE PROPOSED PROJECT CANNOT BE JUSTIFIED UNDER ANY CIRCUMSTANCES.

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Number	Name	Received	Position
52	GLENN M BIRCH	06/13/2024 14:46:41 PM	OPPOSE

I JOIN MANY OTHER VIRGINIANS, AS WELL AS ENVIRONMENTAL, CULTURAL AND HISTORIC ORGANIZATIONS, IN EXPRESSING MY OPPOSITION TO THE PROPOSAL TO WITHDRAW LARGE QUANTITIES OF WATER FROM THE RAPPAHANNOCK RIVER EVERY DAY FOR INDUSTRIAL USES IN CAROLINE COUNTY. I DON'T BELIEVE THE PLAN AS PRESENTED IS ENVIRONMENTALLY SOUND NOR CULTURALLY WISE. IT WOULD CREATE NEGATIVE EFFECTS TO THE ENVIRONMENT, CULTURE AND HISTORICAL SITES ALONG THE RAPPAHANNOCK RIVER AS WELL AS THOSE ALONG THE MATTAPONI. AS A SOCIETY, WE WOULD BE FAR BETTER OFF TO CONSIDER WISER ALTERNATIVES TO THE USE OF OUR LAND AND WATER THAN THE CONTINUED EXPLOSIVE GROWTH THAT WE SEE IN MUCH OF NORTHERN AND EASTERN VIRGINIA.

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Number	Name	Received	Position
53	LAURA LAWLER	06/13/2024 18:17:59 PM	OPPOSE

AS A PROFESSIONAL ENVIRONMENTALISM SCIENTIST AND GEOGRAPHER WHO RESIDES IN NEIGHBORING WESTMORELAND COUNTY BUT FREQUENTLY VISIT CAROLINE COUNTY, I AM VERY CONCERNED WITH THIS QUANTITY OF WATER BEING EXTRACTED FOR INDUSTRIAL PURPOSES. THE WATERWAYS AND FISHERIES ARE THE BACKBONE OF OUR COMMUNITY. NOT ENOUGH IS KNOWN ABOUT THE IMPACT TO FISH AND WILDLIFE. THERE IS EVIDENCE IT COULD IMPACT THE SALINITY OF THE WATER WHICH COULD CAUSE CASCADING PROBLEMS FOR THE FISHERIES.

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Number	Name	Received	Position
54	PHILLIP W PARKER	06/14/2024 06:12:41 AM	OPPOSE

THE RAPPAHANNOCK RIVER IS A SACRED LIFELINE FOR MY TRIBE. THE ECOLOGICAL DAMAGE EXPERIENCED IS IRREVERSIBLE. HARM TO NATURE, WILDLIFE AND HUMANS WOULD BE DEVASTATING. OUR TRIBE HAVE FISHED AND HUNTED ALONG AND IN THE RAPPAHANNOCK RIVER FOR THOUSANDS OF YEARS. THIS PROJECT WILL BE THE BEGINNING OF THE END OF THE VIABILITY OF OUR BEAUTIFUL RIVER.

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Number	Name	Received	Position
55	ANNE S BEAMER	06/14/2024 08:30:36 AM	OPPOSE

THERE IS A PREVARICATION INVOLVED IN CAROLINE COUNTY'S APPLICATION. THIS IS CLEARLY NOT FOR THE MUNICIPAL WATER SUPPLY AS I DEFINE IT! AT THE MAXIMUM, AS STATED, THIS EQUATES TO 5 BILLION, 110MILLION GALLONS OF WATER ANNUALLY DRAWN FROM OUR STATE, NATIONAL, AND HISTORIC TREASURE. THE RAPPAHANNOCK RIVER. IF ALLOWED WE SHOULD NOT BE FUNDING THESE DATA CENTERS AND THEY SHOULD TREAT THE WATER AND RETURN IT.

I ALSO AGREE THIS IS A CLEAR VIOLATION OF VIRGINIA'S PUBLIC TRUST DOCTRINE. IT COULDN'T BE A WORSE VIOLATION!

FURTHER, STEALING LAND TO FURTHER THIS ENDEAVOR IS JUST MORALLY WRONG.
I BELIEVE WE SHOULD HAVE A PUBLIC HEARING IN A LOCATION SUITABLE TO US!
THANK YOU FOR YOUR CONSIDERATION.

ANNE STRATON BEAMER AND FAMILY

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Number	Name	Received	Position
56	HAYLEY R BANCE	06/14/2024 09:29:27 AM	OPPOSE

I AM WRITING TO EXPRESS MY DEEP CONCERN AND STRONG OPPOSITION TO CAROLINE COUNTY'S APPLICATION TO WITHDRAW UP TO 13.90 MILLION GALLONS OF WATER PER DAY FROM THE RAPPAHANNOCK RIVER. THIS PROPOSAL POSES A SERIOUS THREAT TO OUR COMMUNITY AND OUR TREASURED NATURAL RESOURCES.

THE RAPPAHANNOCK RIVER IS NOT JUST A BODY OF WATER IT IS A LIFELINE FOR OUR COMMUNITIES, SUPPORTING LOCAL AGRICULTURE, PROVIDING RECREATIONAL OPPORTUNITIES, AND SUSTAINING DIVERSE WILDLIFE. THE RIVER'S HEALTH IS CRUCIAL TO THE WELL-BEING OF OUR REGION. ALLOWING SUCH A MASSIVE WITHDRAWAL OF WATER TO SUPPORT AMAZON'S DATA CENTERS, WHICH USE EXCESSIVE AMOUNTS OF WATER FOR COOLING, IS A GROSS MISUSE OF THIS VITAL RESOURCE.

THIS PLAN DOES NOT REFLECT THE TYPICAL WATER NEEDS OF CAROLINE COUNTY RESIDENTS. INSTEAD, IT PRIORITIZES THE INDUSTRIAL DEMANDS OF A PRIVATE CORPORATION OVER THE PUBLIC GOOD. THIS WITHDRAWAL WOULD NOT SERVE MUNICIPAL NEEDS BUT WOULD RATHER FACILITATE THE EXPANSION OF DATA CENTERS, BRINGING NO DIRECT BENEFIT TO OUR LOCAL COMMUNITIES. IT IS DEEPLY TROUBLING THAT SUCH A DECISION COULD BE MADE WITHOUT PROPER CONSULTATION WITH ALL COUNTIES THAT SHARE AND RELY ON THE RAPPAHANNOCK RIVER.

MOREOVER, THE ENVIRONMENTAL IMPACT OF THIS PROPOSAL CANNOT BE OVERSTATED. THE VIRGINIA INSTITUTE OF MARINE SCIENCE HAS CONFIRMED THAT THE PROPOSED WATER INTAKE STRUCTURE WOULD CAUSE CONTINUOUS AND TOTAL MORTALITY OF FISH EGGS AND LARVAE. THIS WOULD HAVE DEVASTATING EFFECTS ON THE RIVER'S ECOSYSTEM, WHICH SUPPORTS SPECIES LIKE STRIPED BASS, HERRING, AND STURGEON. THE POTENTIAL FOR SALTWATER INTRUSION, EXACERBATED BY CLIMATE CHANGE, FURTHER THREATENS OUR LOCAL AGRICULTURE AND THE OVERALL HEALTH OF THE RIVER.

THE INTER-BASIN TRANSFER OF WATER FROM THE RAPPAHANNOCK TO THE MADAPONI, PROPOSED AS A COST-SAVING MEASURE, LACKS LEGAL JUSTIFICATION AND SETS A DANGEROUS PRECEDENT. WATER FROM THE RAPPAHANNOCK SHOULD REMAIN WITHIN ITS BASIN TO PRESERVE THE RIVER'S ECOLOGICAL BALANCE AND ENSURE ITS FUTURE SUSTAINABILITY.

AS STEWARDS OF THIS PRECIOUS RESOURCE, WE MUST PRIORITIZE THE LONG-TERM HEALTH OF THE RAPPAHANNOCK RIVER OVER SHORT-TERM INDUSTRIAL GAINS. THE DECISIONS WE MAKE TODAY CANNOT BE REVERSED.

LET US ENSURE THE RAPPAHANNOCK REMAINS A THRIVING, VIBRANT PART OF OUR ENVIRONMENT AND COMMUNITY FOR GENERATIONS TO COME. PROTECT OUR RIVER AND COMMUNITY BY OPPOSING CAROLINE COUNTY'S WATER WITHDRAWAL APPLICATION.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
57	ELIZABETH HUNSINGER	06/14/2024 11:54:36 AM	OPPOSE

MY NAME IS ELIZABETH HUNSINGER AND I LIVE AT 10715 HAMILTON'S CROSSING DR., FREDERICKSBURG, VA 22408, IN SPOTSYLVANIA COUNTY. MOST IMPORTANTLY, I AM A RESIDENT OF THE RAPPAHANNOCK RIVER WATERSHED AND LIVE JUST ONE COUNTY OVER FROM CAROLINE. I OPPOSE THIS PROJECT BECAUSE I AM CONCERNED ABOUT ITS IMPACT ON THE HEALTH OF THE RIVER AND ITS AQUATIC LIFE. I ALSO OPPOSE THIS PROJECT BECAUSE CAROLINE COUNTY PLANS TO USE A SIGNIFICANT PORTION OF THE WATER TAKEN FROM THE RIVER TO COOL DATA CENTERS. A COUNTY WITH A GROWING POPULATION AND INCREASING WATER NEEDS, WITH DECREASING GROUNDWATER DUE TO EXCESSIVE USE, SHOULD NOT BE TAKING YET MORE WATER TO COOL DATA CENTERS. THE FACT THAT THE WATER TAKEN FROM THE RAPPAHANNOCK WILL NOT BE RETURNED TO THE RAPPAHANNOCK IS ANOTHER REASON I OPPOSE THIS PROJECT. I DO NOT SUPPORT THE PUMPING OF WATER ACROSS THE COUNTY TO THE MATTAPONI.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
58	KURT ENGLEMAN	06/14/2024 14:04:53 PM	OPPOSE

I AM A RESIDENT OF THE CITY OF RICHMOND, VA WHO PERIODICALLY VISITS THE NORTHERN NECK AREA OF VIRGINIA FOR RECREATIONAL PURPOSES. WHEN VISITING THE NORTHERN NECK, I SPEND TIME AT MENOKIN, WHICH IS A NATIONAL HISTORIC LANDMARK BECAUSE ITâ€™S THE HOME OF FRANCIS LIGHTFOOT LEE, A SIGNER OF THE DECLARATION OF INDEPENDENCE. THE SITE IS LOCATED ON THE TIDAL CAT POINT CREEK JUST INLAND FROM THE RAPPAHANNOCK RIVER. I AM A SUPPORTER OF AND DONOR TO THE MENOKIN FOUNDATION, WHICH IS THE ORGANIZATION THAT OWNS AND MAINTAINS THE SITE AND PROTECTS THE HISTORIC WATERWAYS OF THE 320 ACRES IN PERMANENT CONSERVATION EASEMENT WITH U.S. FISH AND WILDLIFE REFUGE ALONG THE BANKS OF CAT POINT CREEK. I PARTICULARLY APPRECIATE THE MENOKIN FOUNDATIONâ€™S PUBLIC KAYAK LAUNCH BECAUSE IT HAS ALLOWED ME TO PADDLE CAT POINT CREEK, WHICH HAS A WIDE ARRAY OF WILDLIFE AND PROVIDES A SERENE PLACE FOR ME TO RECREATE AND RECHARGE.

I AM WRITING TO YOU ALL WITH CONCERNS ABOUT CAROLINE COUNTYâ€™S PROPOSAL FOR A WATER INTAKE STRUCTURE VRMC JPA 2020-0514 AND DEQ VWP 20-0514 . THE COUNTY PROPOSES TO BUILD A WATER INTAKE FACILITY APPROXIMATELY EIGHT MILES NORTH OF PORT ROYAL THAT COULD WITHDRAW UP TO 14 MILLION GALLONS OF WATER OUT OF THE RAPPAHANNOCK RIVER EVERY DAY FOR BOTH MUNICIPAL AND INDUSTRIAL USES. THIS PROPOSAL WOULD HAVE A DIRECT IMPACT ON THE RAPPAHANNOCK RIVER AND ITS CREEKS, LIKE CAT POINT CREEK AT MENOKIN.

MY CONCERNS ABOUT THE PROPOSAL ARE TWO-FOLD:

â€¢ VIRGINIAâ€™S PUBLIC TRUST DOCTRINE REQUIRES THAT THE COMMONWEALTHâ€™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 PUBLICâ€™S BENEFIT. IF A PERMIT INCLUDES INDUSTRIAL USES, IT WILL GREATLY BENEFIT A SMALL SLICE OF THE PUBLIC E.G., DATA CENTER OPERATORS AT THE EXPENSE OF A LARGE SWATH OF THE PUBLIC E.G., FISHING INDUSTRY, PADDLERS, CONSERVATIONISTS .

â€¢ REMOVING UP TO 14 MILLION GALLONS OF WATER PER DAY WILL HAVE A NEGATIVE ENVIRONMENTAL IMPACT, INCLUDING REDUCED TIDAL LEVELS, THE KILLING OF FISH EGGS AND LARVAE, AND POTENTIAL SALTWATER INTRUSION FURTHER INTO THE RAPPAHANNOCK RIVER AND TIDAL CREEKS.

GIVEN MY CONCERNS, WHICH ARE SHARED BY OTHERS, I URGE THE STATE AGENCIES TO SCHEDULE A PUBLIC HEARING SO THAT THE CONCERNS OF CITIZENS CAN BE VOICED AND CONSIDERED AS A PART OF THE PERMIT ISSUANCE PROCESS.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
59	DEBI SARANDREA	06/14/2024 14:34:29 PM	OPPOSE

MENOKIN IS AN HISTORIC SITE SITUATED ON CAT POINT CREEK, A TIDAL CREEK JUST INLAND FROM THE RAPPAHANNOCK RIVER. CHANGES TO THE RAPPAHANNOCK RIVER WOULD IMPACT THE MENOKIN FOUNDATION. MENOKIN FOUNDATION IS A NATIONAL HISTORIC LANDMARK SITE, HOME OF FRANCIS LIGHTFOOT LEE, A SIGNER OF THE DECLARATION OF INDEPENDENCE. IT'S SITE INCLUDES 320 ACRES IN A PERMANENT CONSERVATION EASEMENT WITH U.S. FISH AND WILDLIFE REFUGE ALONG THE BANKS OF CAT POINT CREEK. THEIR PRESERVATION WORK INCLUDES PROTECTING THE HISTORIC WATERWAYS ALONG THEIR LANDSCAPE. ADDITIONALLY, THE RAPPAHANNOCK WILDLIFE FRIENDS, THE RAPPAHANNOCK TRIBE, FRIENDS OF THE RAPPAHANNOCK, THE ESSEX COUNTY CONSERVATION ALLIANCE AND OTHER CONSERVATION GROUPS HAVE ALL EXPRESSED CONCERNS OVER THE IMPACT THIS LOSS OF WATER WILL HAVE ON PROTECTED AQUATIC SPECIES IN THE RAPPAHANNOCK SUCH AS STRIPED BASS, SHAD, HERRING, AND STURGEON.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
60	KATIE BOLTZ	06/14/2024 16:10:49 PM	OPPOSE

I OPPOSE THIS PROJECT BECAUSE OF THE FOLLOWING CONCERNS:

1. THE PROJECT INVOLVES TRANSFERRING WATER ACROSS 2 MAJOR RIVER BASINS. AFTER IT IS TAKEN FROM THE RAPPAHANNOCK RIVER, WATER WILL BE DISCHARGED INTO THE MATTAPONI AND POLECAT CREEK NOT BACK INTO THE RAPPAHANNOCK RIVER BASIN.
2. THE AREA THAT THE WATER IS TAKEN FROM IS A SPAWNING GROUND FOR THE ENDANGERED ATLANTIC STURGEON, STUDIES NEED TO BE DONE TO SEE WHAT THE POSSIBLE IMPACT TO THIS SPECIES MIGHT BE.
3. WHAT IS THE REAL INTENTION OF USE FOR THIS WATER? IT APPEARS THAT THE REAL USE IS FOR DATA CENTER COOLING NOT FOR RESIDENTIAL USE.

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
61	ELIZABETH A DONOGHUE	06/14/2024 21:20:41 PM	OPPOSE

TAKING MILLIONS OF GALLONS OF WATER FROM THE RAPPAHANNOCK RIVER, THEN DUMPING IT BACK INTO THE MATTAPONI RIVER WILL UPSET THE DELICATE BALANCE OF THESE PRISTINE RIVERS. FLOODING OCCURS OFTEN IN THE MATTAPONI RIVER WHEN A LARGE QUANTITY OF WATER IS PUT INTO THE RIVER. THUS, SEDIMENT FROM THE BANKS OF THE RIVER WILL POLLUTE THE RIVER, AND THERE IS A DANGER THAT FERTILIZER FROM FARMLANDS WILL ALSO POLLUTE THE RIVER.

PLEASE SCHEDULE A PUBLIC HEARING ON THIS MATTER SO THAT THE CITIZENS AND LANDOWNERS CAN DISCUSS THEIR CONCERNS.

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
62	EDWARD W HAILE	06/15/2024 09:31:17 AM	OPPOSE

I COULD NOT BE MORE OPPOSED TO THE GRANTING OF A PERMIT TO TAKE MILLIONS AND MILLIONS OF GALLONS OF WATER OUT OF THE RAPPAHANNOCK. THIS IS AN ABSOLUTE OUTRAGE.

1 CAUSES SALINATION OF THE RIVER'S FRESHES, VITAL TO FARMING ETC

2 IS AN INTERBASIN TRANSFER

3 THE AMOUNT FAR EXCEEDS THE RESIDENTIAL NEEDS OF CAROLINE, HENCE

4 IS A WELCOME MAT FOR DATA CENTERS

5 MOST OF ALL INVOLVES EMINENT DOMAIN EXERCISED TO SERVE COMMERCIAL INTERESTS, THE SLIPPERIEST SLOPE IMAGINABLE.

6 PUMP TAKEOUT AT MILE 84? BLUFF IS POSSIBLY ON THE SITE OF THE ANCIENT INDIAN VILLAGE ACCOQUECK

7 VIRGINIA HAS UNLIMITED COOLANT WATER ELSEWHERE: THE ATLANTIC OCEAN

WE DON'T WANT IT, CAROLINE DOESN'T NEED IT.

IN REGARD,

I AM A RESIDENT OF ESSEX COUNTY WHO LIVES ON THE RAPPAHANNOCK AT MILE 45.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
63	GWENDOLYN J COKER	06/15/2024 10:37:48 AM	OPPOSE

THERE ARE MANY, MANY REASONS I OPPOSE THIS PROJECT. EVEN BEGINNING TO CONSIDER THE NEGATIVE EFFECTS THIS WILL HAVE ON THIS BEAUTIFUL AREA WE LIVE IN TRULY BREAKS MY HEART. I HAVE LIVED ON ROBINSON CREEK FOR MY ENTIRE LIFE. I AM AN AVID BIRDER AND LOVER OF WATERFOWL. WHEN I WAS YOUNGER WE FISHED, WORKED CRAB POTS, AND GREW OUR OWN OYSTERS. THE RAPPAHANNOCK RIVER IS MY HOME, AND I DEEPLY CARE ABOUT EVERY BIRD, MAMMAL, AND FISH SPECIES THAT MAKES THIS BOUNTIFUL RIVER THEIR HOME. THE RAPPAHANNOCK RIVER SUPPORTS THE VAST FRESH WATER TIDAL MARSHES OF UPPER ESSEX AND CAROLINE COUNTIES. I AM SURE YOU ARE WELL AWARE THESE ARE SOME OF THE LAST AND MOST INTACT REMAINING OCCURRENCES OF THIS TYPE OF HEALTHY HABITAT IN EASTERN AMERICA. TENS OF THOUSANDS OF WINTERING WATERFOWL RELY ON THIS HABITAT TO MAKE IT THRU THE WINTER MONTHS. AND OUR FAVORITE ROCKFISH USE THESE MARSHES AS A NURSERY FOR THEIR YOUNG. THE CONCERNING AMOUNT OF THE PROPOSED EXTRACTION WOULD DISRUPT THE DELICATE BALANCE OF FRESH AND SALT WATER THESE FRESH WATER TIDAL MARSHES RELY ON FOR THEIR EXISTENCE. CONSIDERING THE NEGATIVE IMPACT OF AQUATIC LIFE OF RAPPAHANNOCK RIVER AND THE IMPACT ON THE HEALTH OF RAPPAHANNOCK RIVER IS VERY ALARMING. AS SOMEONE WHO HAS LIVED THEIR ENTIRE LIFE ALONG THE SHORES OF THE RAPPAHANNOCK, I OPPOSE APPROVAL OF THIS PERMIT, AND I STRONGLY REQUEST A PUBLIC HEARING ON THIS PROJECT. PLEASE CONTACT ME IF YOU HAVE ANY QUESTIONS. THANK YOU.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
64	BEVERLY S SENG	06/15/2024 12:09:53 PM	OPPOSE

I WANT TO REGISTER MY STRONG DISAPPROVAL OF THE DEQ'S DRAFT PROPOSAL TO WITHDRAW UP TO 13.9 MILLION GALLONS OF WATER DAILY FROM THE RAPPAHANNOCK.

THE DEQ HAS FAILED TO CALCULATE THE POTENTIAL EFFECTS ON FISH EGGS AND LARVAE, AS WELL AS FAILING TO CALCULATE TO THE CUMULATIVE EFFECTS ON FISH FROM OTHER SIMILAR PROJECTS IN OTHER LOCATIONS ON THE RIVER. THE DEQ HAS ALSO FAILED TO CONSIDER THE EFFECTS OF INCREASED SALINITY ON AQUATIC RESOURCES, ALTHOUGH INCREASED SALINITY IS TO BE EXPECTED WITH SUCH A SIGNIFICANT WITHDRAWAL OF FRESHWATER. THE PERMIT DOES NOT EVEN ENVISION A RETURN OF THE CLEANSSED WATER TO THE RAPPAHANNOCK!

ABOVE ALL, THE PROPOSED PERMIT IS NOT INTENDED FOR THE BENEFIT OF THE GENERAL PUBLIC, BUT FOR THE BENEFIT OF UNSPECIFIED INDUSTRIAL PROJECTS THAT NEED COOLING. THE REAL NAME AND SPONSOR OF THESE PROJECTS HAVE NOT BEEN IDENTIFIED. NOR HAVE THEIR SPECIFIC NEEDS EVEN BEEN CALCULATED. ESTIMATIONS OF THEIR WATER NEEDS HAVE BEEN MADE ONLY ON THE BASIS OF INDUSTRY-WIDE ESTIMATES. THE PERMIT EVEN INCLUDES THE POSSIBILITY OF INCREASED WITHDRAWAL OF WATER DURING THE 15-YEAR PERMIT PERIOD.

THE DEQ'S VAGUE, UNSPECIFIED ANALYSIS OF THE NEED FOR THIS WATER AMOUNTS TO A WHOLESALE SURRENDER OF A PRECIOUS SCENIC RIVER TO INDUSTRIAL USES.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
65	BETSY HAILE	06/15/2024 20:52:59 PM	OPPOSE

AS A RESIDENT OF ESSEX COUNTY, I AM DEEPLY OPPOSED TO THE GRANTING OF A PERMIT TO TAKE MILLIONS AND MILLIONS OF GALLONS OF WATER OUT OF THE RAPPAHANNOCK RIVER. I FEEL GRANTING THIS KIND OF WATER USE FOR ONE COMMUNITY'S HOPE-FILLED ECONOMIC PLANS IS A GREAT OVERSTEP BY A LOCAL GOVERNMENT. THE RIVERS DO NOT BELONG TO A SINGLE COUNTY. THEY HAVE NO RIGHT TO ALTER THE RIVER'S ECOLOGY FOR ANY REASON SAVE KEEPING PEOPLE ALIVE WITH FRESH WATER.

MY SPECIFIC REASONS INCLUDE THE FOLLOWING POINTS:

1. THIS MUCH REMOVAL WILL RAISE THE SALINITY OF A FRESHWATER RIVER, ALTERING ALL LIFE ON THE RIVER, HUMAN, ANIMAL AND PLANT LIFE.
2. IT FAVORS POTENTIAL ECONOMIC DEVELOPMENT WATER-GREEDY DATA CENTERS AT THE EXPENSE OF FARMING
3. THE PROPOSED QUANTITY OF WATER REMOVAL FAR EXCEEDS THE EXISTING AND PROPOSED RESIDENTIAL NEEDS OF CAROLINE
4. I BELIEVE THE USE OF EMINENT DOMAIN, EXERCISED TO SERVE COMMERCIAL INTERESTS, PUTS ALL FORMS OF LAND OWNERSHIP AT RISK TO THE WHIMS, EVEN THE GREED, OF OFFICIALS WHO THINK THEY CAN PROFIT BY LURING DEVELOPMENT THAT WILL GIVE THEM MORE TAX MONEY TO SPEND.
5. IF CAROLINE COUNTY IS SO BENT UPON PIPING WATER IN FOR DATA CENTERS, THEY SHOULD SPEND THE EXTRA MONEY TO PIPE IT IN FROM THE ATLANTIC OCEAN, WHERE THERE IS UNLIMITED COOL WATER - AND LET THEM DEAL WITH THE SALINATION ISSUE ON THEIR OWN LAND

PLEASE DO NOT SUPPORT THIS PROPOSAL. PLEASE LEAVE FRESH WATER IN THE RAPPAHANNOCK RIVER AND DON'T SQUANDER IT ON COMMERCIAL PROJECTS.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
66	ALICE S WELLFORD	06/15/2024 21:41:25 PM	OPPOSE

PLEASE READ DOCUMENT

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=940

1909 Kendalls Road
Chance, VA 22438
June 14, 2024

Randy Owen
Habitat Manager
Virginia Marine Resources Commission
Building 96
380 Fenwick Road
Ft Monroe, VA 23651
Randy.Owen@mrc.virginia.gov

RE: VMRC case #2020-0514 and DEQ case #20-0514
DEQ Draft Permit for Caroline County Water Intake

Dear Mr. Owen,

I am strongly opposed to the draft permit issued by DEQ for Caroline County to withdraw water from the Rappahannock.

I am requesting that you hold a public hearing to hear and address my concerns:

- about the proposed use of the massive amount of our freshwater Caroline wants to withdraw for the benefit of a private business entity,
- about the misleading labeling of a private industrial use as a municipal public water need,
- about the failure to consider the cumulative impact of other water intake structures already existing and others that may be planned in the same water body,
- about the need for time of year restrictions on withdrawal and volume of water
- about the failure to require treated discharge water to be returned to the Rappahannock,
- about the failure to require any ongoing independent analysis of fish and larvae mortality,
- about the impact of the massive withdrawal of freshwater on the salt content of water downstream from the intake,
- about the impact on freshwater marshes due to the increase in saltwater,
- about the impact on riparian and municipal users of Rappahannock water downstream of the proposed intake,
- about the absence of any mitigation penalty.

I am co-owner of a farm with ecologically important marshes on the Rappahannock about 13 miles south of Port Royal. These marshes are the bullseye for Bald Eagle territory and winter waterfowl habitat. They are low-salinity marshes which means they are filled with wild rice, arrow arum, tearthumb, bur marigold, mallows, and smartweed, all of which provide food for waterfowl and shelter for spawning fish. In turn, Osprey and Bald Eagles are top of the food chain here. We have 12 active Bald Eagle nests and multiple osprey nests on our farm because of the natural resources available in this area of the Rappahannock. This area is also designated an Important Bird Area because it provides the sustaining habitat for migrating songbirds.

I am concerned about all the issues noted above, but particularly about how massive amounts of freshwater withdrawals at Caroline's proposed site and at a King George site across the river but not mentioned by DEQ will increase the salinity of the waters downstream in our stretch of the river. State biologists have already noted how global warming and sea-level rise are increasing the salinity of the waters in front of our property. The DEQ permit to withdraw millions of gallons of freshwater upstream of us will increase the salinity of the water in our stretch of the river. This will kill our marsh plants and impact the availability of food for waterfowl and other migrating and resident birds including Eagles and Osprey. It will also hurt our farm and other farm families who should be able to use their riparian rights to draw reasonable quantities of freshwater from the river to irrigate crops, gardens, wildlife habitat and for other uses. The Constitution of Virginia says that the waters of the Commonwealth belong to the people. The people need to be able to voice concerns at public hearings before DEQ and VMRC.

This is a matter that requires the immediate attention and thoughtful consideration not only of VMRC, DCR, DWR, VIMS and of DEQ, but by all the state and federal conservation organizations and agencies, that for many years have worked so diligently to protect the Rappahannock and the fauna and flora that are sustained by the delicate ecological conditions in the freshwater stretches of this pristine Scenic River of Virginia. A copy of my letter is being sent to those agencies and organizations with whom I am in direct contact that should be made aware of the draft permit DEQ has issued and its precedent setting consequences. The draft permit should be rescinded by DEQ and rejected by VMRC. A public hearing by DEQ and VMRC is requested.

Sincerely,

Alice S Wellford

cc:

Eric Seavey, VWP#20-0514

Eric.seavey@deq.virginia.gov

Chief Anne Richardson, The Rappahannock Tribe

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
67	JESSICA MOORE	06/16/2024 12:04:37 PM	OPPOSE

I AM OPPOSED TO THIS PROJECT BECAUSE OF THE DETRIMENTAL AFFECTS IT WILL HAVE ON BOTH THE RAPPAHANNOCK RIVER WITH ITS FRAGILE ECOSYSTEM AND MY RURAL COMMUNITY OF CAROLINE COUNTY. I PREFER TO KEEP THE RIVER AS CLOSE TO ITS NATURAL EBB AND FLOW AS POSSIBLE AND FOR MY COUNTY TO RETAIN IT'S MOSTLY RURAL NATURE. CARMEL CHURCH IS ALREADY OVER DEVELOPED WITH ALL THE ISSUES THAT BRINGS. NOT ALL DEVELOPMENT EQUALS PROGRESS.

**Virginia Marine Resources Commission
Habitat Management Public Comments
Application Number 20200514**

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
68	DIXIE F BUBB	06/16/2024 09:09:47 AM	OPPOSE

I HAVE SEEN HOW LOW THE RIVER WAS LAST SUMMER. ORANGE COUNTY IS TAKING WATER FROM SPOTSYLVANIA TO MEET THEIR NEEDS TO SUPPLY WATER TO A NEW DEVELOPMENT THEY OKAYED. NOW CAROLINE COUNTY WANTS TO SUPPORT NEW PROJECTS THEY OKAYED FOR DEVELOPMENT.

AS STATED IN THE FREE LANCE STAR ON JUNE 16,2024 “CAROLINE WOULD MORE WATER FOR INDUSTRIAL NEEDS THAN RESIDENTIAL USES.” DID YOU GET THAT? WE ARE RUNNING OUT OF WATER.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
69	SUSAN N SARGEANT	06/16/2024 09:32:50 AM	OPPOSE

CONCERN ABOUT THE POTENTIAL IMPACTS OF THIS INTAKE TO THE HEALTH OF THE RAPPAHANNOCK RIVER AND ITS AQUATIC FAUNA FOR THE FOLLOWING REASONS:

MAJOR INTERBASIN TRANSFER OF WATER

NOT A SINGLE DROP OF WATER REMOVED FROM THE RAPPAHANNOCK RIVER WOULD COME BACK TO THE RAPPAHANNOCK RIVER.

ATLANTIC STURGEON

NO EVIDENCE THAT THE FEDERAL AGENCIES WHO ARE RESPONSIBLE FOR PROTECTING ATLANTIC STURGEON HAVE BEEN CONSULTED ON THE PERMIT APPLICATION.

WATER DEMAND

OF THE PROPOSED AVERAGE OF 7.9 MILLION GALLONS A DAY TO BE WITHDRAWN FROM THE RIVER 2.9 MILLION GALLONS WOULD BE ALLOCATED TO INDUSTRIAL FACILITIES, SPECIFICALLY THREE 3 DATA CENTER CAMPUSES. ESSENTIALLY THEY ARE USING A MUNICIPAL DRINKING WATER PROJECT AS COVER FOR A COOLING WATER SUPPLY TO DATA CENTER PROJECTS.

THIS PROJECT IS ON THE WRONG SIDE OF PROTECTING THE ENVIRONMENT.. VIRGINIA POLITICIANS, BOTH PARTIES, ARE COWARDS IN NOT PASSING THE 2024 GENERAL ASSEMBLY LEGISLATION TO REGULATE DATA CENTERS.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
70	ROBERTO FLORES	06/16/2024 09:49:02 AM	OPPOSE

I WOULD LIKE TO EXPRESS MY DISAGREEMENT IN SUPPORT OF THE CAROLINE COUNTY WATER PROJECT PULLING WATER FROM THE RAPPAHANNOCK RIVER. I HAVE CONCERNS ABOUT THE EFFECTS ON WATER TEMPERATURE DISCARD INTO THE MATTAPONI RIVER. I HAVE CONCERNS ABOUT THE IMPROPER INFLUENCE OF THE AMAZON DATA CENTER, ON THIS PROJECT. I ALSO HAVE CONCERNS ABOUT THE LEGITIMACY OF STUDIES IN SUCH A SHORT AMOUNT OF TIME THEY WERE PERFORMED. ADDITIONALLY I HAVE CONCERNS WITH THE SHORT AMOUNT OF REVIEW TIME TO READ THE RESULTS OF THOSE STUDIES AND PROVIDE COMMENTS.

I USED TO WORK IN THE POWER PLANT INDUSTRY. I WAS A THERMAL PERFORMANCE ENGINEER. PART OF MY JOB WAS TO EVALUATE THE POWER PLANT'S HEAT EXCHANGER. I LOOKED AT THE NUMBER OF TUBES, THE DIAMETER OF TUBES, AND VARIOUS OTHER ENGINEERING PARAMETERS. TO MY UNDERSTANDING, UNDER TENNESSEE STATE LAW, AND POSSIBLY FEDERAL LAW, THE RIVER WATER TEMPERATURE COULD NOT BE INCREASED BY MORE THAN 3 DEGREES CELSIUS AS I RECALL TO THE BEST OF MY MEMORY . DOING SO WOULD AFFECT THE REPRODUCTION RATE OF THE FISH AND THE FISH EGGS IN THE RIVER. DOES THE AMAZON DATA CENTER ALREADY KNOW AT THIS POINT: HOW MANY TUBES, THE DIAMETERS, AND OTHER DESIGN PARAMETERS ABOUT THEIR HEAT EXCHANGERS? IF NOT, HOW DOES ANYONE POSSIBLY KNOW IF THE RIVER WATER TEMPERATURE WILL INCREASE TO THE MATTAPONI RIVER WITHIN ACCEPTABLE LIMITS? IF CAROLINE COUNTY STATES THAT THERE IS NO ENVIRONMENTAL IMPACT TO THE RIVER WATER TEMPERATURE WITHOUT KNOWING ANY OF THESE DESIGN PARAMETERS ABOUT THE AMAZON DATA CENTER, AS AN ENGINEER AND NOT A POLITICIAN - SOMEONE IS JUST MAKING UP THE TRUTH.

SOME PEOPLE HAVE ALSO TRIED TO STATE THAT THE NEW HEAT EXCHANGERS FOR THE NEW DATA CENTERS DON'T NEED WATER. IF AMAZON IS TELLING THE TRUTH, WHY IS THERE SUCH A BIG PUSH TO PROVIDE WATER TO THE UPCOMING DATA CENTERS? SOMETHING ABOUT THIS STORY IS NOT ADDING UP.

FURTHERMORE, I WANT TO ADDRESS THE INFLUENCE OF AMAZON ON OUR ELECTED COUNTY OFFICIALS. FIRST, LET'S DISCUSS SPOTSYLVANIA. ONE OF THE SPOTSY COUNTY SUPERVISORS WHO CURRENTLY SERVES ON THE COUNTY BOARD, USED TO BE AN AMAZON EMPLOYEE. I BELIEVE THE NEWSPAPER STATED THE EMPLOYEE USED TO HAVE A JOB WITHIN THE AMAZON IT DEPARTMENT. YET THERE THEY ARE VOTING ON WHETHER OR NOT SPOTSYVALNLIA SHOULD APPROVE AN AMAZON DATA CENTER. HOW IS THAT NOT A CONFLICT OF INTEREST?

NOW BACK TO CAROLINE COUNTY, BASED ON THE EXTREME EFFORT TO RUSH THIS PROJECT, I AM SEEING A STRONG INFLUENCE FROM AMAZON WITH MY OWN EYES. THIS PROJECT SEEMS TO BE MOVING WAY TOO FAST. WHEN DID CAROLINE COUNTY RELEASE THE ENVIRONMENTAL IMPACT REPORT? WHICH I STILL QUESTION FOR THE PREVIOUSLY STATED REASONS . HOW MUCH TIME DID CAROLINE COUNTY GIVE THE PEOPLE TO REVIEW THAT REPORT IN ORDER FOR THE PEOPLE TO PROVIDE COMMENTS? IF THESE QUESTIONS CANNOT BE ANSWERED, THEN THAT SHOULD INDICATE THE HAST AND MUCH OPPORTUNITY FOR MISTAKES TO BE MADE.

**Virginia Marine Resources Commission
Habitat Management Public Comments
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I HOPE YOU ALL AGREE THAT WHATEVER DECISION SHOULD BE MADE ABOUT CAROLINE COUNTY, WILL BE THE RIGHT AND ETHICAL DECISION TO BE MADE. I HAVE SO MANY QUESTIONS ABOUT THE LEGITIMACY OF THIS WHOLE PROJECT. PLEASE PROVIDE THE CORRECT AMOUNT OF TIME, SO THAT ALL THE INFORMATION CAN BE PROPERLY REVIEWED AND DECIDED UPON.

THANK YOU,

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
71	JULIET W SANFORD	06/16/2024 11:08:58 AM	OPPOSE

REMOVING HUGE QUANTITIES OF WATER FROM THE RAPPAHANNOCK RIVER DAILY FOR THE DATA CENTERS CAROLINE COUNTY HOPES TO ACQUIRE WOULD BE CATASTROPHIC FOR THE WILDLIFE LIKE OSPREYS, HERONS, AND EAGLES REMEMBER DDT AND THE EAGLES? . THE COUNTY OFFICIALS' CLAIMS THAT THE DATA CENTERS' NEEDS ARE SECONDARY TO THE NEEDS OF THE CITIZENS IS SIMPLY UNTRUE. ONE ONLY NEEDS TO SEE THE EFFECTS OF OVERFISHING BY OMEGA PROTEIN AT THE MOUTH OF THE BAY TO UNDERSTAND THE NOTION OF UPSETTING THE BALANCE OF NATURE BY REMOVING NEARLY 1 MILLION GALLONS OF WATER FROM THE FISHING GROUNDS OF THESE CREATURES. IN ADDITION, THE EFFECT IT WOULD HAVE ON THE WATERMEN WHOSE JOBS AND FAMILIES DEPEND ON THE CRABS, FISH AND OYSTERS THEY HARVEST NEEDS TO BE CONSIDERED. COUNTY RESIDENTS ON BOTH SIDES OF THE RIVER DOWNSTREAM, INCLUDING ALL IN THE NORTHERN NECK AND MIDDLE PENINSULA HAVE STANDING IN THE EGREGIOUS PLAN TO ENRICH CAROLINE COUNTY. IN ESSEX COUNTY, I HAVE YET TO SPEAK TO SOMEONE WHO SUPPORTS THIS SCHEME.

THE OFFICIALS SAY THE WATER WILL BE RETURNED TO THE LAND VIA THE MATTAPONI RIVER. WILL THE WATER BE POLLUTED BY PULLING IT FROM THE RAPPAHANNOCK AND RUN THROUGH THE ENERGY-GOBBLING DATA CENTERS? WE NEED MORE STUDIES ON THE WATER QUALITY, THE EFFECTS ON THE WILDLIFE, AND THE EFFECTS ON THOSE WHO MAKE THEIR LIVING ON THE WATER AS WELL AS ON THE FARMERS WHO CURRENTLY DEPEND ON THE RIVER TO RAISE THEIR CROPS--NO FARMS, NO FOOD. PERHAPS YOU CAN TALK TO FOLKS WHO LIVE IN PRINCE WILLIAM COUNTY ABOUT THE DATA CENTERS THAT HAVE DEGRADED THEIR QUALITY OF LIFE.

I DON'T NEED LIGHTNING FAST INTERNET SPEED AT THE EXPENSE OF THE ENVIRONMENT, THANK YOU.

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Number	Name	Received	Position
72	ALBERT POLLARD JR.	06/16/2024 11:04:57 AM	OPPOSE

I AM WRITING THESE COMMENTS TO THE VMRC ABOUT PERMIT APPLICATION VMRC 2020-0514. SINCE DEQ IS ALSO GUIDED BY THE PUBLIC TRUST DOCTRINE AS 28.2-1205 OF THE CODE OF VIRGINIA CLEARLY STATES IT IS FOR ALL NATURAL RESOURCE AGENCIES, THEN ALSO PLEASE MAKE THESE COMMENTS APPLICABLE TO DEQ'S VWP 20-0514 PERMIT APPLICATION.

SPECIFICALLY, OBJECTING TO THE BOTTOMLAND PERMIT FOR CAROLINE COUNTY TO WITHDRAW FROM THE RAPPAHANNOCK RIVER. VIRGINIA CODE 28.2-1205 MAKES CLEAR THAT WHEN CONSIDERING THE GRANTING OF A BOTTOMLAND PERMIT "THE COMMISSION SHALL ALSO CONSIDER THE PUBLIC AND PRIVATE BENEFITS OF THE PROPOSED PROJECT AND SHALL EXERCISE ITS AUTHORITY UNDER THIS SECTION CONSISTENT WITH THE PUBLIC TRUST DOCTRINE". EMPHASIS ADDED AS AN ASIDE, 28.2-1205 IS THE MOST EXTRAORDINARY AND DELIBERATE SECTION OF CODE I HAVE EVER COME ACROSS IN MY 30 YEARS OF READING THE LAWS OF VIRGINIA AND SHOULD BE READ CAREFULLY AND IN ITS ENTIRETY. AS SOMEONE WHO SERVED IN THE LEGISLATURE AND AS AIDE TO THE LEGISLATOR WHO WROTE THIS LAW, I CAN SAY WITH CONFIDENCE THAT VERY FEW LAWS ARE WRITTEN WITH SUCH THOUGHT AND INTENTIONALITY. IT WAS CLEARLY WRITTEN AND GAVE BROAD POWERS AS A DELIBERATE ACT. THE USE OF THE TERM OF ART THAT THE VMRC "SHALL EXERCISE ITS AUTHORITY" THAT IS IN 28.2-1205 IS UNIQUE IN THAT IT APPEARS NOWHERE ELSE IN THE CODE OF VIRGINIA. WITH THAT TERM COMES AN EXTRAORDINARILY HIGH DUTY TO ACT IN THE PUBLIC INTEREST VIA THE PUBLIC TRUST DOCTRINE.

CLEARLY, THIS LANGUAGE MEANS THE LEGISLATURE, IN ITS CONVEYANCE OF THE TRUSTEE AUTHORITY UNDER THE PUBLIC TRUST DOCTRINE TO THE EXECUTIVE BRANCH, WANTS THE EXECUTIVE BRANCH TO TAKE ALL PERMIT APPLICATIONS SERIOUSLY. THE LARGER THE PERMIT, THE HIGHER THE DUTY TO ACT SERIOUSLY.

FURTHER READING OF THE STATUTE IN SECTION F MAKES CLEAR "ANY DECISION MADE BY THE COMMISSION HEREUNDER CONSISTENT WITH THE PUBLIC TRUST DOCTRINE AS DEFINED BY THE COMMON LAW OF THE COMMONWEALTH ADOPTED PURSUANT TO Â§ 1-200 SHALL NOT BE DEEMED TO HAVE BEEN MADE PURSUANT TO THE POLICE POWER."

AGAIN, THIS IS DELIBERATE LANGUAGE, THAT THE GENERAL ASSEMBLY MAKES CLEAR, PROSPECTIVELY, THAT DENIAL OF A PERMIT IS NOT MADE PURSUANT TO POLICE POWERS BUT INSTEAD TRUSTS THE VMRC TO USE ITS GOOD JUDGMENT AS TRUSTEE AS TO THE SOUNDNESS OF AN INTAKE PIPE UTILIZING STATE OWNED BOTTOM LANDS. THIS MEANS THAT THE VMRC CAN WEIGH ANY VARIETY OF FACTORS THAT IT WISHES TO WEIGH, INCLUDING AND BEYOND THE 6 FACTORS LISTED:

"THE COMMISSION SHALL ALSO CONSIDER THE PROJECT'S EFFECT ON THE FOLLOWING:

1. OTHER REASONABLE AND PERMISSIBLE USES OF STATE WATERS AND STATE-OWNED BOTTOMLANDS
2. MARINE AND FISHERIES RESOURCES OF THE COMMONWEALTH
3. TIDAL WETLANDS, EXCEPT WHEN THIS HAS OR WILL BE DETERMINED UNDER THE PROVISIONS OF CHAPTER 13 OF THIS TITLE
4. ADJACENT OR NEARBY PROPERTIES
5. WATER QUALITY AND
6. SUBMERGED AQUATIC VEGETATION SAV."

THE INTRODUCTORY LANGUAGE OF "THE COMMISSION SHALL ALSO CONSIDER" MEANS THAT THE VMRC CAN, IN THE MOST LEGALLY DEFENSIBLE WAY, REJECT THE PERMIT BECAUSE OF, SAY, THE INTER

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BASIN TRANSFER OR BECAUSE THE WATER INTAKE PIPE WILL DISPROPORTIONATELY BENEFIT THREE PRIVATE DATA CENTERS.

TO QUOTE LAW PROFESSOR DAVID L. CALLIES : "BROADLY STATED, THE PUBLIC TRUST DOCTRINE PROVIDES THAT GOVERNMENT HOLDS CERTAIN SUBMERGED AND ADJACENT LANDS, WATERS, AND INCREASINGLY OTHER RESOURCES IN TRUST FOR THE BENEFIT OF ITS CITIZENS, ESTABLISHING THE RIGHT OF THE PUBLIC TO FULLY ENJOY THEM FOR A VARIETY OF PUBLIC USES AND PURPOSES. IMPLIED IN THIS DEFINITION ARE LIMITATIONS ON THE PRIVATE USE OF SUCH WATER, LAND OR OTHER RESOURCES AS WELL AS LIMITATIONS ON GOVERNMENT TO TRANSFER INTERESTS IN THEM TO PRIVATE PARTIES, PARTICULARLY IF SUCH TRANSFER WILL PREVENT OR HAMPER USE BY THE PUBLIC." AGAIN, EMPHASIS ADDED . THE VMRC CAN NO MORE ALLOW THE TRANSFER OF THIS WATER TO BE USED BY DATA CENTERS THAN IN CAN TO SELL A WETLAND FOR A CASINO TO BE BUILT.

THE USE OF THIS BOTOMLAND FOR THE WITHDRAWAL PERMIT CLEARLY VIOLATES THE ROLE OF A GOOD TRUSTEE THE USE OF THE WATER IS NOT FOR THE "PUBLIC RIGHT TO THE ENJOYMENT OF THE SUBAQUEOUS LANDS" FOR THE BENEFIT OF THE PEOPLE" BUT INSTEAD IS DIRECTLY BECAUSE OF PRIVATE GAIN SOUGHT BY THE THREE LARGE DATA CENTERS. OF THE 7.9 MILLION GALLONS PER DAY TO BE WITHDRAWN, 2.9 MILLION GALLONS ARE ALLOCATED TO INDUSTRIAL FACILITIES, SPECIFICALLY 3 DATA CENTER CAMPUSES. ESSENTIALLY, THE APPLICANT IS USING PUBLIC MUNICIPAL DRINKING WATER PROJECT AS COVER FOR A COOLING WATER SUPPLY TO DATA CENTER PROJECTS. A PLAIN READING OF THIS APPLICATION IS THAT ALLOWING IT WOULD BE A DERELICTION OF THE TRUSTEE'S DUTY. SINCE A SIGNIFICANT MINORITY OF THE PROJECT IS NOT OF A "PUBLIC BENEFIT" AND IT MUST BE 100% DENIED UNTIL THE APPLICANT ADJUSTS THE USE OF THE WATER TO BENEFIT THE PUBLIC.

SIMILARLY, THE PROJECT INVOLVES TRANSFERRING WATER ACROSS TWO MAJOR RIVER BASINS. AFTER TREATMENT, THE WATER WILL BE DISCHARGED INTO THE MATTAPONI RIVER AND POLECAT CREEK AND NOT RETURN TO THE RAPPAHANNOCK RIVER. AGAIN, ALLOWING INTER BASIN TRANSFER MEANS THAT THE PUBLIC IN AND ALONG THE RAPPAHANNOCK CANNOT ENJOY THE WATER NOR CAN THE PUBLICLY OWNED WILDLIFE RESOURCES. IT WOULD BE, AGAIN, A VIOLATION OF THE TRUSTEES ROLE TO ALLOW AN INTER BASIN TRANSFER FOR PRIVATE OR PUBLIC GAIN. IT IS NOT THE INTERBASIN TRANSFER THAT IS INHERENTLY WRONG ALTHOUGH IT OFTEN IS , IT IS THE INTERBASIN TRANSFER FOR AN INTAKE THAT WILL BE FOR PRIVATE GAIN THAT MAKES THIS APPLICATION PARTICULARLY EGREGIOUS.

FINALLY, THE PROPOSED INTAKE AREA IS A POTENTIAL SPAWNING GROUND FOR THE ENDANGERED ATLANTIC STURGEON. THERE IS NO EVIDENCE THAT FEDERAL AGENCIES RESPONSIBLE FOR PROTECTING THIS SPECIES HAVE BEEN CONSULTED ON THE PERMIT APPLICATION. TO NOT REQUIRE SUCH A STUDY BEFORE THE PERMIT APPLICATION IS APPROVED IS A CLEAR VIOLATION OF THE TRUSTEE DUTIES ENDOWED UPON VMRC.

LASTLY, I WAS DEEPLY INVOLVED IN MATTAPONI RESERVOIR FIGHTS OF THE 90'S AND 2000'S. IN ALL OF THESE DELIBERATIONS, WE FOUND THAT NEWPORT NEWS WAS "PUFFING THE GOODS" AND INFLATING PROJECTED WATER DEMAND. 28.2-1205 PUTS THE DUTY ON THE DESIGNATED TRUSTEE AGENCY TO CLOSELY EXAMINE AND EVALUATE THE PROPOSED USAGE NUMBERS, INCLUDING HIRING AN OUTSIDE EXPERT AS NEEDED.

FOR ALL THESE REASONS AND MORE, I ASK THAT VMRC REQUIRE A HEARING AND, WHEN THE EVIDENCE IS HEARD, DENY THE PERMIT.

RESPECTFULLY SUBMITTED,

ALBERT C. POLLARD, JR

IRVINGTON VA 22480

FOOTNOTES ON THE UPLOADED VERSION

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Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=941

I am writing these comments to the VMRC about permit application VMRC #2020-0514. Since DEQ is also guided by the Public Trust Doctrine as 28.2-1205 of the Code of Virginia clearly states it is for all natural resource agencies, then also please make these comments applicable to DEQ's VWP #20-0514 permit application.

Specifically, objecting to the bottomland permit for Caroline County to withdraw from the Rappahannock River. Virginia Code [28.2-1205](#) makes clear that when considering the granting of a bottomland permit "Commission shall also consider the public and private benefits of the proposed project and ***shall exercise its authority*** under this section consistent with the public trust doctrine..." (emphasis added) As an aside, 28.2-1205 is the most extraordinary and deliberate section of Code I have ever come across in my 30 years of reading the laws of Virginia and should be read carefully and in its entirety. As someone who served in the legislature and as aide to the legislator who wrote this law, I can say with confidence that very few laws are written with such thought and intentionality. It was clearly written and gave broad powers as a deliberate act.

The use of the term of art that the VMRC "***shall exercise its authority***" that is in 28.2-1205 is unique in that it appears nowhere else in the Code of Virginia. With that term comes an extraordinarily high duty to act in the public interest via the Public Trust Doctrine.

Clearly, this language means the legislature, in its conveyance of the trustee authority under the public trust doctrine to the executive branch, wants the executive branch to take all permit applications seriously. The larger the permit, the higher the duty to act seriously.

Further reading of the statute in Section F makes clear "any decision made by the Commission hereunder consistent with the public trust doctrine as defined by the common law of the Commonwealth adopted pursuant to § [1-200](#) shall not be deemed to have been made pursuant to the police power."¹

Again, this is deliberate language, that the General Assembly makes clear, prospectively, that denial of a permit is not made pursuant to police powers but instead trusts the VMRC to use its good judgment as trustee as to the soundness of an intake pipe utilizing state owned bottom lands. This means that the VMRC can weigh any variety of factors that it wishes to weigh, including and beyond the 6 factors listed:

"The Commission shall also consider the project's effect on the following:

- 1. Other reasonable and permissible uses of state waters and state-owned bottomlands;*
- 2. Marine and fisheries resources of the Commonwealth;*
- 3. Tidal wetlands, except when this has or will be determined under the provisions of Chapter 13 of this title;*
- 4. Adjacent or nearby properties;*
- 5. Water quality; and*
- 6. Submerged aquatic vegetation (SAV)."*

The introductory language of "The Commission shall also consider" means that the VMRC can, in the most legally defensible way, reject the permit because of, say, the inter basin transfer or because the water intake pipe will disproportionately benefit three private data centers.

¹ In this use, the term "police powers" is, essentially, a regulatory power and clearly, denial of a permit under regulatory powers must be because the permit does not fit the regulatory scheme. This language gives much, much broader authority to the VMRC.

To quote Law Professor David L. Callies²: “Broadly stated, the public trust doctrine provides that government holds certain submerged and adjacent lands, waters, and (increasingly) other resources in trust for the benefit of its citizens, establishing the right of the public to fully enjoy them for a variety of public uses and purposes. Implied in this definition are limitations on the private use of such water, land or other resources as well as limitations on government to transfer interests in them to private parties, particularly if such transfer will prevent or hamper use by the public.”³ (again, emphasis added). The VMRC can no more allow the transfer of this water to be used by data centers than in can to sell a wetland for a casino to be built.

The use of this bottomland for the withdrawal permit clearly violates the role of a good trustee the use of the water is not for the “public right to the enjoyment of the subaqueous lands... for the benefit of the people” but instead is directly because of private gain sought by the three large data centers. Of the 7.9 million gallons per day to be withdrawn, 2.9 million gallons are allocated to industrial facilities, specifically 3 data center campuses. Essentially, the applicant is using public municipal drinking water project as cover for a cooling water supply to data center projects. A plain reading of this application is that allowing it would be a dereliction of the trustee’s duty. Since a significant minority of the project is not of a “public benefit” and it must be 100% denied until the applicant adjusts the use of the water to benefit the public.

Similarly, the project involves transferring water across two major river basins. After treatment, the water will be discharged into the Mattaponi River and Polecat Creek and not return to the Rappahannock River. Again, allowing inter basin transfer means that the public in and along the Rappahannock cannot enjoy the water nor can the publicly owned wildlife resources. It would be, again, a violation of the trustees role to allow an inter basin transfer for private (or public) gain. It is not the interbasin transfer that is inherently wrong (although it often is), it is the interbasin transfer for an intake that will be for private gain that makes this application particularly egregious.

Finally, the proposed intake area is a potential spawning ground for the endangered Atlantic Sturgeon. There is no evidence that federal agencies responsible for protecting this species have been consulted on the permit application. To not require such a study before the permit application is approved is a clear violation of the trustee duties endowed upon VMRC.

Lastly, I was deeply involved in Mattaponi Reservoir fights of the 90’s and 2000’s. In all of these deliberations, we found that Newport News was “puffing the goods” and inflating projected water demand.⁴ 28.2-1205 puts the duty on the designated Trustee agency to closely examine and evaluate the proposed usage numbers, including hiring an outside expert as needed.

For all these reasons and more, I ask that VMRC require a hearing and, when the evidence is heard, deny the permit.

Respectfully submitted,

Albert C. Pollard, Jr

Irvington VA 22480

² Benjamin A. Kudo Professor of Law, William S. Richardson School of Law

³Abstract, found on William and Mary’s site, [here](#).

⁴ If my recollection is correct, Newport News Water Works said the region would run out of water by 2020. They haven’t.

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Number	Name	Received	Position
73	DOUGLA W SANFORD	06/16/2024 11:47:36 AM	OPPOSE

CAROLINE COUNTY'S PUBLIC OFFICIALS ALREADY HAVE DEMONSTRATED THEIR WILLINGNESS TO ABUSE ONE PRIMARY, NATURAL RESOURCE OF THE COUNTY, ITS GROUNDWATER. NOW THEY ARE PREPARING TO DO THE SAME WITH ANOTHER, THE RAPPAHANNOCK RIVER. THEY DESCRIBE THE EFFECT OF WITHDRAWING AT LEAST 9 MILLION GALLONS OF RIVER WATER PER DAY AS HAVING "LITTLE EFFECT." YET THIS WITHDRAWAL PLAN AMOUNTS TO 270 MILLION GALLONS PER MONTH AND AT LEAST 3.2 BILLION GALLONS PER YEAR. SOMEHOW, MAGICALLY, THAT WOULD RESULT WOULD BE NEGLIGIBLE. HOW MANY BILLIONS OF MICROORGANISMS NEEDED BY FISH, OTHER CREATURES, AND FOR THE RIVER'S HEALTH WOULD BE REMOVED? WHAT ARE CAROLINE COUNTY'S BOARD OF SUPERVISORS SAYING TO THE PEOPLE AND COUNTIES DOWNRIVER MOST AFFECTED BY THE PUMPING OF BILLIONS OF GALLONS IN THE YEARS TO COME? IN EFFECT, "WE DON'T CARE."

THE SAME SUPERVISORS CLAIM TO RESPECT PRIVATE PROPERTY RIGHTS, THE COUNTY'S FARMERS, AND ITS LONG AGRICULTURAL TRADITIONS. THEY ALSO CLAIM TO RESPECT PUBLIC OPINION AND THE VIEWS OF THE CITIZENS THEY SUPPOSEDLY REPRESENT. YET WHEN THE MORE MONIED INTERESTS OF DEVELOPMENT COME INTO PLAY, THEY PUSH THOSE PRINCIPLES AND PEOPLE ASIDE. CAROLINE COUNTY'S SUPERVISORS SHOULD SAVE US THE PAT AND COY POLITICAL RESPONSES TO QUESTIONS ABOUT WHAT MAY OR MAY NOT BE DONE WITH THE WATER REMOVED FROM THE RAPPAHANNOCK RIVER. VIRGINIANS IN OTHER RURAL COUNTIES FACING INCREASED DEVELOPMENT HAVE HEARD THESE SAME COMMENTS FROM OTHER COUNTY SUPERVISORS MANY TIMES BEFORE, MANY OF WHOM EITHER DIRECTLY OR INDIRECTLY BENEFITTED FROM THE BUSINESSES AND CORPORATIONS PROMOTING DEVELOPMENT. CAROLINE COUNTY'S SUPERVISORS SHOULD BE WILLING TO SPEAK THE TRUTH TO THE PEOPLE THEY SAY THEY REPRESENT. THEY ALSO SHOULD BE WILLING TO PROTECT THE RAPPAHANNOCK RIVER FROM FURTHER ABUSE AND DECLINE, FOR GENERATIONS TO COME.

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Number	Name	Received	Position
74	SUSAN GRABB	06/16/2024 12:12:28 PM	OPPOSE

I AM OPPOSED TO PERMIT 20200514. A PUBLIC HEARING SHOULD ADDRESS THE MANY QUESTIONS CITIZENS HAVE CONCERNING THE HEALTH OF THE RAPPAHANNOCK RIVER. IN MANAGING NATURAL RESOURCES FOR THE PUBLIC'S BENEFIT, WILL THE ATLANTIC STURGEON BE PROTECTED? CAN THE CHANGE IN WATER FLOW CAUSED BY THIS MASSIVE WATER WITHDRAWAL BE DETRIMENTAL TO DEPRESSED SPECIES IN THE RIVER? WHY CAN'T THE WITHDRAWN WATER BE RETURNED TO THE RAPPAHANNOCK RIVER AND WOULD IT BE THE SAME QUALITY? WILL THE ANSWER BE "IT'S COST PROHIBITIVE"? WHAT ARE THE REAL ENVIRONMENTAL COSTS WITH THIS PROJECT TO THE MATTAPONI AND RAPPAHANNOCK RIVERS? ARE THERE ANY POSITIVE ENVIRONMENTAL EFFECTS FROM DIVERTING MILLIONS OF GALLONS OF WATER FROM THE RAPPAHANNOCK RIVER? YOUR DECISION ON THIS PERMIT COULD POTENTIALLY CAUSE IRREVERSIBLE CONSEQUENCES TO THE RIVER AND ITS PRECIOUS SPECIES. I HOPE THE PUBLIC CAN TRUST THAT YOU ARE COMMITTED TO ENVIRONMENTAL STEWARDSHIP OF OUR WATERWAYS.

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Number	Name	Received	Position
75	CARLA L SMITH	06/16/2024 12:14:38 PM	OPPOSE

CAUSES SALINIZATION OF THE RIVER'S FRESHNESS, VITAL TO FARMING.

IS AN INTER-BASIN TRANSFER.

THE AMOUNT FAR EXCEEDS RESIDENTIAL NEEDS OF CAROLINE COUNTY, HENCE IS A WELCOME MAT FOR DATA CENTERS.

UNLIMITED COOL WATER IS AVAILABLE FROM THE OCEAN AND THE COUNTY COULD CONSIDER A LARGER PIPELINE THAT WOULD NOT DRAW FROM THE UPPER REACHES OF THE RAPPAHANNOCK.

MOST IMPORTANTLY, IT INVOLVES EMINENT DOMAIN EXERCISED TO SERVE COMMERCIAL INTERESTS. THE SLIPPERY SLOPE IMAGINABLE!!!

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Number	Name	Received	Position
76	CHRISTOPHER STEC	06/16/2024 14:50:11 PM	OPPOSE

THIS PROJECT SHOULD NOT MOVE FORWARD UNTIL A COMPREHENSIVE STUDY HAS BEEN CONDUCTED ON HOW MANY GALLONS OF WATER THE RAPPAHANNOCK RIVER CAN LOSE PER DAY TO ALL THE VARIOUS PROJECTS THAT HAVE PERMITS TO PULL WATER FROM THE RIVER. UNTIL THERE IS SOUND SCIENCE THAT SAYS THE RAPPAHANNOCK RIVER CAN LOSE X GALLONS PER DAY, THIS PERMIT SHOULD NOT BE APPROVED.

OTHER ISSUES OF CONCERN:
MAJOR INTERBASIN TRANSFER OF WATER

THE PROJECT INVOLVES TRANSFERRING WATER ACROSS TWO MAJOR RIVER BASINS. AFTER TREATMENT, THE WATER WILL BE DISCHARGED INTO THE MATTAPONI RIVER AND POLECAT CREEK, NOT RETURNING TO THE RAPPAHANNOCK RIVER.

THREAT TO ATLANTIC STURGEON

THE PROPOSED INTAKE AREA IS A POTENTIAL SPAWNING GROUND FOR THE ENDANGERED ATLANTIC STURGEON. THERE IS NO EVIDENCE THAT FEDERAL AGENCIES RESPONSIBLE FOR PROTECTING THIS SPECIES HAVE BEEN CONSULTED ON THE PERMIT APPLICATION.

WATER DEMAND

EACH DAY, 7.9 MILLION GALLONS PER DAY TO BE WITHDRAWN WITH 2.9 MILLION GALLONS ARE ALLOCATED TO INDUSTRIAL FACILITIES, SPECIFICALLY 3 DATA CENTER CAMPUSES. ESSENTIALLY THEY ARE USING A MUNICIPAL DRINKING WATER PROJECT AS COVER FOR A COOLING WATER SUPPLY TO DATA CENTER PROJECTS.

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Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
77	MARY H GRAY	06/16/2024 15:13:02 PM	OPPOSE

PLEASE SEE UPLOADED DOCUMENT

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=942

Fifty years ago, Kings Dominion applied to build in Caroline County. The Board of Supervisors turned them down, KD built across the river in Hanover. Dennis Spiegel, the park's 26-year-old builder, coined his famous phrase, "We work in a great industry. We don't pollute the skies and we don't contaminate the streams. At the end of the day, what we really do is put smiles on people's faces."

About the same time, almost everyone knew the tag line,

"I could've had a V-8!"

"The time to think of having a V-8 is before you've had something else!"

Would a V-8 have been a better choice than the popular snack—a soft drink and a bag of Fritos? If so, it would take a little advance thinking!

A lot of time and money has gone into preparing Caroline's plan and the permit draft. Sometimes, there is a runaway bride in a \$10,000 gown. Life goes on—for the better.

In 2001, the *Bay Journal* reported that, after years of spending, planning, and heated discussion, the U.S. Army Corps of Engineers' Norfolk District had recommended denying a permit for construction of the Cohoke Reservoir in King William County. They added, "Col. Allan Carroll...concluded that the project, sought by the city of Newport News, would degrade wetlands, adversely impact forests and wildlife, and harm the way of life of Native Americans...**Newport News overstated its future water needs... 'It is not reasonable to build such an environmentally damaging project to satisfy a need that may never materialize...**' The project would result in...irreversible and irretrievable loss,' Carroll said in a letter outlining his decision...He noted that many **efforts to recreate** wetlands—especially forested wetlands like many of those that would be destroyed—have 'proven less than fully successful.'"

The Code of Virginia clarifies:

§ 62.1-44.2. Short title; purpose.

The short title of this chapter is the State Water Control Law. It is the policy of the Commonwealth of Virginia and the purpose of this law to: (1) **protect existing high quality state waters** and restore all other state waters to such condition of quality that any such waters will permit all reasonable public uses and will support the propagation and growth of all aquatic life, including game fish, which might reasonably be expected to inhabit them; (2) safeguard the clean waters of the Commonwealth from pollution; (3) prevent any increase in pollution; (4) reduce existing pollution; (5) promote and encourage the reclamation and reuse of wastewater in a manner protective of the environment and public health; and (6) promote water resource conservation, management and distribution, and encourage water consumption reduction in order to provide for the health, safety, and welfare of the present and future citizens of the Commonwealth."

Nebulous words and words of caution are peppered throughout the permit draft. They include:

- mortality is expected
- do not provide complete information
- unlikely
- potential considerable risk to the human and natural environment
- consequences of which are difficult to predict
- substantial controversy
- potential for salinity issues
- potential impacts
- risks posed by transferring water from one watershed to another
- the County's analysis inaccurately assesses estimated population losses of aquatic organisms
- absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources

The Permit Decision Rationale for granting Caroline County's go-ahead with the Rappahannock River Water Supply Project explains, "Without access to reliable water resources for domestic, commercial, and industrial use, **the County would be unable to achieve the goal of future economic development and growth.** Therefore, the No Action Alternative was not considered a viable strategy for the County."

Why seek growth? There is one person in Caroline whose job it is to catalyze growth—the Economic Development Director. He would not be earning his pay if he did not try.

Loudoun County tried it, and they are not happy. Thirty years ago, Loudoun was very much like Caroline. Unbridled growth there has led to traffic snarls, frustration, wasted time, and **crushing taxes.**

Growth that is engineered to create more tax money leads to more taxes. The *Rappahannock Times* reported, "The estimated cost of the project is \$16 million, without considering construction of the water treatment facility." Fredericksburg's *Free Lance-Star* added, "As of today, the project would cost about **\$200 million** and take at least seven years to complete." Taxpayers will pay for it—and the total cost will most certainly run higher.



Gregg Broaddus of Sparta

Rodney Atkins hit #1 on the US Hot Country Songs billboard with "the perfect song to listen to when feeling like escaping" in 2011. Loudoun's people hear it and feel regret. Caroline's people can still find comfort in the words.

Take a Back Road

Sittin' in six-lane backed up traffic
Horns a-honkin', I've about had it
I'm looking for an exit sign
Gotta get out of here,
get it all off my mind
And like a memory
from your grandpa's attic
A song comes slippin'
through the radio static
Changin' my mood
A little George Strait 1982

I've been cooped up, tied down...
'bout forgotten what a field looks like
full of corn and cotton
If I'm goanna hit a traffic jam
Well, it better be a tractor, Man
So sick and tired of this
interstate system
I need a curve and windin' twistin'
Dusty path to nowhere
With the wind blowing
through my baby's hair

And it makes me wanna
take a back road
Makes me wanna
take the long way home
Put a little gravel in my travel
Unwind, unravel all night long
Makes me wanna grab my honey
Tear down some two-lane country
Who knows
Get lost and get right with my soul
Makes me wanna
take a back road

Maybe it's the feeling
Maybe it's the freedom
Maybe it's that shady spot
Where we park the truck when the
things get hot

Someone is producing so much data that it has to be secured in fancy water guzzling storage units. Caroline's people are not the ones doing it. **Caroline's people do not owe anyone their space or water.**

Right now, **Caroline's people are being good stewards** of their water. The Additional Water Conservation section in the Rationale indicates, "The Caroline County water system is comprised of three primary systems (Central, High School, and Milford) with a total population of approximately 7,000. Total water deliveries across these three systems equaled 554,400 gallons in 2014. Per capita deliveries were 79 gallons per capita per day (gpcd), which is **below the national average** of 83 gpcd. Caroline County's **per capita demand is also less than the residential usage rate of 100 gpcd required for system planning** in the VDH Waterworks Regulation."

"Virginia & Climate Change," a white paper by Michaels, Wrightstone, Ferguson, Christy, and Happer, provides a hopeful outlook on Virginia's water supply, "Heat Waves & Droughts: Both have declined in recent decades. The most frequent and severe heat waves occurred in the 1920s and 1930s. A full 68% of Virginia's record highs were set between 1922-41, with none being recorded in the last 20 years. The number of days in a heat wave have declined over the last 70 years.

"The extreme droughts of the 1930s are evident in data for Virginia, but what is more interesting is the propensity for moisture surplus beginning in the late 1960s and continuing until today...**The warming of the Virginia record correlates with an improvement in moisture status statewide.**

"This is especially beneficial for Virginia's heavily forested landscapes and large agricultural industry...A benefit of more carbon dioxide is that **plants require less water to thrive and survive...Plants' transpiration process is reduced, leading to less water loss. Since more water stays in the ground, aridity of the soil is reduced.** Our persistent tendency towards moisture surplus remains a propitious feature of Virginia's recent climate."

This could be good news for those who rely on the surficial aquifer, as described in the Additional Groundwater Withdrawal section of the Rationale, "The surficial aquifer of the Coastal Plain is exposed at the land surface and receives recharge directly from precipitation. Hydrogeologic processes such as evaporation, **transpiration to plants**, and base flow to streams occur within the surficial aquifer."

The Drought Management Plan mentioned in the permit draft will be an interesting thing to read. Worry about future drought is at least part of the reason for the proposed withdrawal. If there were no drought, would there be a real or overly ambitious need for so much water? If there were a drought, removing millions of gallons would be bad for the Rappahannock River. But...maybe the only time the water might be needed is during a drought? Also, fish with spawning periods during dry summer months may be most impacted.

If the pipeline is going through Port Royal and up Rte. 207 through Bowling Green, why don't they have valves for those Towns to obtain their water right away rather than waiting for the water to come back?

Beginning economists learn on day one: "Information is a Scarce Good."

In these days following the demise of *The Caroline Progress*, it is sometimes difficult for people to learn things. Caroline's people had depended on that newspaper for 99 years.

Many in Caroline and in counties downstream of the proposed withdrawal from the Rappahannock River were not aware of the plan until those pesky people from Tappahannock began sharing a *Rappahannock Times* article.

People downriver are right to be concerned. Salt may be coming up the river; silt will be coming down the river. Farming, irrigation, forestry, restaurants, distilleries, breweries, wineries, golf courses, car washes, marinas, watermen, fish, oysters, and blue crabs will be affected.

The Alternative Location Assessment Based on Salinity Model in the Rationale states, "While surface water elevations are not expected to be affected by the new intake, withdrawals will decrease freshwater flows downstream, allowing the tide to push more brackish water from the Chesapeake Bay further upstream in the river."

After a few hurricanes, silt that had been trapped behind Fredericksburg's Embury Dam will be migrating past Port Royal on its 60-mile journey to the Chesapeake Bay.

In 2015, the *Free Lance-Star* reported in "Silt Forces Riverboat to Leave Fredericksburg for Richmond" that "25 years ago Tommy Pearson cruised upstream to Fredericksburg to make a living with his Fredericksburg Riverboat, which served food and hosted events while cruising along the Rappahannock.

"But the river giveth and the river taketh away. This season, the Rappahannock in Fredericksburg was too shallow for him to navigate the boat and he could not reach the City Dock due to silt buildup. The 'City of Fredericksburg,' which has a paddle wheel...is now operating out of Richmond's Rocketts Landing on the James River.

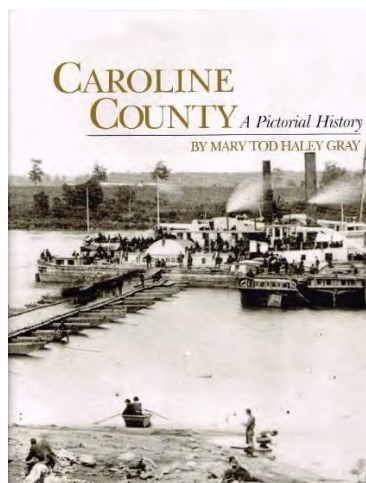
"Pearson, who lives in Stafford County, now commutes to Richmond every day and said he has spent thousands moving his business. 'I've been having problems...ever since they blew up the dam,' he said. 'All the silt is coming down the river. There are islands where there were never islands before.'

"The problems escalated in October when he picked up a party but couldn't get out of the dock. He had to cancel all scheduled events this year, even weddings, reunions and school trips. 'It was horrendous, really devastating.'"

The Town's website explains that Dumfries, in Prince William County, "was the second leading port in Colonial America, receiving tobacco from the upland. It rivaled New York, Philadelphia, and Boston and was a thriving port for more than 15 years. Due to numerous factors, Dumfries peaked in size and importance in 1763." What happened to Dumfries? Rapid and expanding tobacco planting resulted in **so much silt that the port disappeared.**

The Rationale reports under Riparian Landowner Notification, "The Department notified riparian landowners identified by the applicant located adjacent to the impact area and within one-quarter mile downstream of each distinct impact area by letter dated April 21, 2020. **The Department received nine (9) letters returned by the U.S. Postal Service that were marked undeliverable.**"

How did Caroline County identify the adjacent landowners and find their mailing addresses? Maybe their tax roll? Do the landowners' tax bills make it to them every year? Did Caroline make any effort to re-send the letters or to deliver the information in an alternate way? **There is no mention of what happened after the letters were returned.**



Yankee gunboats on the Rappahannock River at Port Royal

In 1984, 100-year-old Richard Pratt sat in his orangery at Camden on the beautiful Rappahannock River in Port Royal and remembered the older brother he had never met, who had died as a baby. As Yankee gunboats passed by on the river, they shot at the turrets of his young parents' home and their baby boy was struck in his crib.

Today, shots are coming from across the county.

Caroline has the ultimate right now, but once it is gone there is no going back. Caroline's people do not want to ruin what they have and then undertake costly restoration, as in the American Shad Restoration Program that involved more than a decade of work and blowing up a dam. They want to keep it nice.

A savvy entrepreneur might design a great place to live that looked just like Caroline, and then market it with beautiful pamphlets and videos featuring boating, fishing, swimming, tomatoes, watermelon, and corn on the cob.

Caroline's people live here because they love the country life. If they fancy a trip to Applebees, Big Lots, or Captain D's, they have the freedom to drive there in 20 minutes—without being trapped at endless traffic lights. So many stores, like Bed Bath & Beyond, are closing and leaving empty brick and mortar. Malls are facing the wrecking ball.

The *Rappahannock Times* reported, "Since 2011, Caroline County has grown 11.6 percent. For reference, **Essex County's population has dropped 4.6 percent** leaving it with one third of Caroline County's population." The book *Supercontinent* adds, "Ambassador Edmund DeJarnette has compared King & Queen County's original census, taken in the 1700s, to today's. **There are 30 percent fewer people in King & Queen today.**"

The permit draft includes these thoughts, "VMRC remains concerned about the recent increase in requests for intakes in the tidal reaches of the Commonwealth. These areas provide critical habitat for spawning anadromous and resident fishes. Anadromous finfish species have been and continue to experience depleted stocks. Coupled with the existing 'grandfathered' intakes, **VMRC is growing increasingly concerned about the collective impacts of these intakes** to tidal freshwater reaches."

In light of the VMRC's comments, the following seemingly innocuous statement under Alternatives in the Rationale appears **quite shocking**, "**The river's location at the border of Caroline and King George Counties is beneficial for cooperative development of the resource for both jurisdictions.**"

Caroline has decided that Cory Garrett's farmland is the right spot to withdraw millions of gallons of water. **The things that make it a good spot for the withdrawal also make it the perfect spot for his farming operation!** His family has worked, treasured, and kept the land and water in pristine condition.

Caroline borders a 25-mile stretch of the Rappahannock River. Are there really no other places where they could take the water?

In the permit draft, the VDCR shares some weighty concerns, "This stream reach also holds a '**Healthy**' stream designation per the VCU Interactive Stream Assessment Resource Virtual Stream Assessment score.

"This score assesses the similarity of this stream to **ideal stream conditions** of biology and habitat for this region. • Lastly, this stream contributes to **high biological integrity** at the watershed level (6th order) based on the number of **native/non-native, pollution tolerant/intolerant and rare, threatened, or endangered fish and macroinvertebrate species present**. • Threats to the significant Aquatic Natural Community and the surrounding watershed include water quality degradation related to point and non-point pollution, water withdrawal and introduction of non-native species.

“The proposed water treatment plant **will fragment an Ecological Core C4...** unfragmented natural cover with at least 100 acres of interior that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune, and beach habitat. Cores also provide benefits in terms of open space, recreation, water quality (including drinking water protection), air quality (including carbon sequestration and oxygen production), along with the many associated **economic benefits** of these functions.”

Why disturb the Garrett farm? If Caroline’s operation is deemed benign, then why not have the County **purchase a lot downriver** at Four Winds Campground and place the intake there? Four Winds has a golf course. Will they have enough water to irrigate?

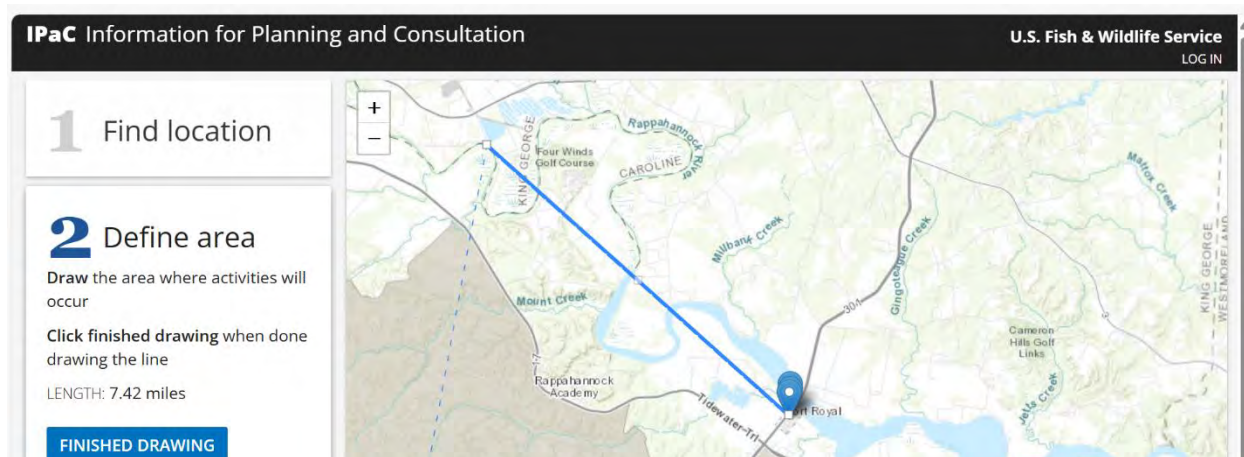
Why not place the pump under the US Rte. 301/James Madison Highway bridge and make it a big deal? Be proud, name it for the Father of the Constitution, and have a parade. *Caroline Magazine* in April 2017 wrote, “President James Madison took his first breath of fresh spring air at Belle Grove on March 16, 1751. It is said that he was born in a small house that lies **beneath the bridge** between Port Conway and Port Royal. Why not in the mansion? In those days, during the shad run everyone went down to the river and stayed as close as possible in what waterman Louis Harley called ‘shad shanties.’ Women, children, fishermen, farmers, doctors, lawyers, merchants, millers, carpenters, coopers, and ministers shared the great once-a-year tradition. Babies were born in the little river houses, so why not ‘The Great Little Madison’?” **If the pipeline is going to go up US Rte. 301, anyway, under the bridge seems like a perfect spot for it to start.**

The distance from the Garrett land to the bridge is not as far as it might seem. In VIMS’s contribution to the permit draft, they write, “The proposed intake location is approximately 30 km upstream of the Route 301 bridge over the Rappahannock River near Port Royal.” That would be **18.6411 miles**.

Also in the permit draft, VDH notes, “Location 3 is located **approximately 19 miles** upstream of the Route 301 bridge crossing the Rappahannock River and is approximately 25 acres.”

However, Draper Aden Associates writes, “The nearest U.S. Geological Survey (USGS) flow gauge (#01668000) is located approximately **15 miles** upstream at the City of Fredericksburg,” **which is farther than the Garrett site**. Google measures the distance from Port Royal all the way to Bowling Green as **12.5 miles**.

The U.S. Fish & Wildlife Service’s IPaC system measures it as about **7.5 miles** from the bridge to Garrett’s farm. So, **as the crow flies**, the Rappahannock River Valley National Wildlife Refuge, Port Royal Unit, would be within eight miles of the Garrett location. If the intake’s effects on the environment are negligible, why not place the intake there? Would any of these birds that frequent the Refuge mind? Northern Bobwhite, Chimney Swift, Turkey Vulture, Osprey, Bald Eagle, Red-bellied Woodpecker, Hairy Woodpecker, Woody the Woodpecker, Eastern Wood-Pewee, Great Crested Flycatcher, and White-eyed Vireo? **They are just as likely to visit the Garrett farm on any given day.**



U.S. Fish & Wildlife IPac Map

In the permit draft, DWR recommends that “all tree removal and ground clearing adhere to a time of year restriction protective of resident and migratory songbird nesting from March 15th through August 15th of any year.”

Caroline Magazine added, “Biologists, watermen, students, and volunteers are working to restore American Shad to historic numbers in the **Rappahannock River**. By March 15 each year, they are watching water temperatures and working to give millions of shad fry their start. Scientists have found that **Bald Eagles hatch at exactly the right time to feed on fat anadromous baby shad** as they head toward the ocean.

“We’ve turned the corner...**Now we’re helping Virginia restock the Rappahannock River**. You know what I dream of? The Potomac so full of shad that Congress has to shut down one day because everybody on Capitol Hill has gone fishing,” says “The Shad Protector” Jim Cummins.

The *Free Lance-Star’s* editorial page honored the American Shad in 2021, “We were praying and hoping that if we opened up access to the shad’s traditional spawning areas that perhaps we could bolster its numbers...Let’s put it simply. **We must save these fish. We owe it to them. As a state and as a nation...**

“How can you have a debt of gratitude to a fish? It’s easy enough if we take a moment to consider the role the shad has played in the American experience. Shad sustained our **Native American** populations for centuries. They were abundant, nutritious, and often began their run upstream just as winter food stocks were becoming depleted...

“The shad sustained the early settlers in the **Virginia colony**. They were smoked, salted, and helped the early arrivals survive the harsh winters...

“They also probably saved the American Revolution. In the late winter of 1777–78, as George Washington’s Army at Valley Forge was nearing starvation, the shad made their annual run up the nearby Schuylkill River several weeks earlier than normal. The Continental Army was saved. The soldiers at last had a continuous source of food...

“Now, after all this species did for us, with typical human recklessness, we let it down. The population of this noble creature was overfished in the 19th century and then assaulted by industrial pollution in the 20th...

“What’s needed, and **Virginia needs to lead the way,** is a concerted conservation effort that attacks the challenges faced by this beloved fish, and other aquatic creatures, on a broad front...

“If we don’t, if we let population after population of these remarkable fish collapse, we will be abandoning a creature that literally made our nation possible.”

What will we tell our children if we fail? What does the whole scheme to seize and transfer wealth and health—even life itself— from some humans and creatures to give to others teach our children?

QuailForever.Org visited Albert Wachtmeister’s Black Marsh Farm and wrote, “Albert’s river frontage rolls along the Rappahannock, a **Virginia Scenic River** that empties into the Chesapeake Bay and is a prime location for **Bald Eagle** sightings...Everything Albert is doing for wildlife and conservation is positively impacting the Bay. He has teamed up with the Hanover-Caroline Soil and Water Conservation District and Friends of the Rappahannock to restore some river frontage via the Living Shoreline practice available through the Virginia Conservation Assistance Program.”

The **Virginia Scenic Rivers Program** exists to “identify, designate and help protect rivers and streams that possess outstanding scenic, recreational, historic and natural characteristics of statewide significance for **future generations...**One of the program’s strengths is the partnership forged between citizens, local governments and the state...**The rivers that comprise Virginia's Scenic River System are among the most outstanding in the state...**These rivers help define Virginia's iconic landscapes and communities...Each was designated through a legislative process that began at the local level and ended with a signature by the Governor. The first...was in 1972.”

The Code of Virginia continues, “‘Scenic river’ means a river or section or portion of a river that has been designated a ‘scenic river’ by an act of the General Assembly and that **possesses superior natural and scenic beauty, fish and wildlife, and historic, recreational, geologic, cultural, and other assets.**”

Some Virginians eat frog legs, others find a frog with a broken leg and take it to a wildlife rehab center.

Some people were angry with Wachtmeister for working with Vulcan Materials Company to gain approval to mine sand and gravel on his farm. Some thought he was an enemy of the environment, but they were wrong. The **Atlantic Sturgeon** is of prime concern in the permit draft. Vulcan is already on it. The VCU News in 2011 reported, "Vulcan Materials Co. has generously donated more than \$52,000 of crushed stone used to construct an underwater reef in the James River that will **increase the opportunity for spawning success of Atlantic Sturgeon**. Vulcan Materials Co. also provided marine transportation resources and placement of the rock at the reef site, a value of \$12,000...**The Atlantic sturgeon is the largest and longest-lived aquatic organism in the Atlantic rivers of North America, historically growing up to 14 feet long.**"

Vulcan and other sand and gravel operations in Caroline might hold a solution for Caroline's water needs. **Caroline's famous *Eobalaenoptera* whale was found in a Martin Marietta quarry in Carmel Church.** Millard Smith also mined sand and gravel on the western side of Caroline. On the beach, people delight in seashells and sand. In quarries, they are there in the form of limestone and quartz.

Other Virginia counties have adopted **old quarries as water storage sites**. VirginiaPlaces.Org documented "Sources of Northern Virginia Drinking Water." The site says, "Different quarries were studied as potential storage sites for Loudoun County's new drinking water system...**Luck Stone quarry on Goose Creek was finally chosen.** Once rock removal is ended there around the year 2020, the hole in the ground will be repurposed to store **one billion gallons** of Potomac River water. Reutilizing a second quarry may allow greater storage at a later date.

"Fairfax Water planned to harvest 'excess' Occoquan River water during periods of high flow, storing it in the Vulcan Materials Company quarry at Lorton. Fairfax will allow Vulcan to expand its quarry to remove rock from 150 acres owned by the county, and Vulcan will allow Fairfax to use an already-exhausted portion of its quarry to store **1.8 billion gallons** by 2035.

"By 2085, Vulcan will have mined out the economically-recoverable rock. It will return the 150 acres to Fairfax and transfer its quarry, too. Fairfax Water plans to store **15 billion gallons** in the hole excavated for Vulcan's old quarry.

"The City of Manassas could use a different quarry owned by Vulcan near Manassas Mall/Unity Reed High School to expand its water storage capacity."

Luck Stone also has an active quarry mid-Caroline County.

In the land of the lakes, why not just use a lake you already have or make another lake?

In early June, the Coastal Virginia representative from the Virginia Tourism Corporation hosted an informational meeting in Bowling Green. She wants to see **Recreational Tourism increase in Caroline.**

In 1985, my fourth graders in elite Fairfax County, that has everything there is to have worth having, were studying about Virginia's **natural vs man-made lakes**. So, one boy was up at the front searching on the pull-down map of Virginia, trying to find Lake Anna. The other kids were giving him directions, "Go east a bit." "Go south a bit." "Go west a bit." "Go north a bit." Well, where was that darned lake??? All of a sudden, I started to laugh. Then, I started to laugh so hard I almost cried. Our map was older than the lake! **Louisa was just a beautiful homogeneous green expanse with no lake at all**. That really illustrated the concept of natural vs man-made! Who has a map older than a lake?!?

Speaking of Lake Anna—why was it not considered as a water source for Caroline? The pipeline would be much shorter. I mentioned this idea to someone and they answered, "That water is radioactive!" That might surprise the **thousands of people who swim, boat, kayak, paddleboat, and fish there and the creatures who make their homes in and around it**.

Dominion Power Company's website explains, "**Lake Anna is a 9,600-acre impoundment** located in Louisa, Orange, and Spotsylvania counties, owned by the Dominion Power Company. The impoundment was completed in 1972 and serves as cooling water for the North Anna Nuclear Power Station."

The Rationale includes this information on **Spotsylvania County** under Purchase of Finished Water, "Spotsylvania County operates the Ni River Reservoir, the Hunting Run Reservoir, and the Motts Run Reservoir...Given that currently available supply is limited and the potential long-term availability of water supplies for purchase from Spotsylvania County is questionable, this option was not considered feasible."

Spotsylvania found enough water, however, to approve Kalahari Resorts and Conventions' new paradise in Thornburg. Kalahari's website describes it as "**Virginia's Largest Indoor Waterpark Resort...**making waves in the Mid-Atlantic...in Spotsylvania County, Virginia, expected to open in 2026. Our fifth resort will feature over 175,000 square feet of indoor waterpark fun, **900 family-friendly suites**, and a massive convention center."

Lake Caroline, Lake Land 'Or...Caroline is missing the boat. Literally! My idea would be for Caroline to develop a **reservoir/lake/Olympic caliber rowing venue** on the western side of the county and let people enjoy the water while it is waiting to supply homes and businesses. There are a couple of sand and gravel pits waiting!

Caroline's people love their water. **Please allow them a Public Hearing on this proposal.**

Thank you,

Mary Tod Gray

PO Box 1549
Bowling Green, VA 22427
703 593 2296
VWPP Permit No. 20-0514

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
78	WOODIE L WALKER	06/16/2024 16:49:19 PM	OPPOSE

A PUBLIC HEARING IS REQUESTED FOR BETTER UNDERSTANDING OF THE PURPOSE OF THIS PROJECT, AND HOW IT WILL AFFECT THE RIVER AND WILDLIFE. SPECIFIC REFERENCES, WHERE POSSIBLE, TO TERMS AND CONDITIONS OF THE PERMIT WITH SUGGESTED REVISIONS. THIS IS TOO IMPORTANT TO MOVE WITHOUT MORE PUBLIC INPUT AND UNDERSTANDING. IT SEEMS LIKE THIS IS MOVING TOO QUICKLY.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
79	CASEY BOETTCHER	06/16/2024 17:03:37 PM	OPPOSE

THIS IS WHY I OBJECT TO THIS PROJECT:

1. IT ROBS THE SIX OTHER COUNTIES THAT SHARE THE RAPPAHANNOCK OF PRECIOUS RIVER WATER
2. IT'S POORLY PLANNED, WITH ESTIMATES OF CONSUMPTION THAT VARY AS MUCH AS 6 MILLION GALLONS PER DAY 75% OF THE SUPPOSED MINIMUM OF 7.9 MILLION GALLONS
3. IT'S A RUSE THAT IS ACTUALLY INTENDED TO FURTHER CAROLINE COUNTY'S INDUSTRIALIZATION, RATHER THAN PROVIDE ITS RESIDENTS WITH MUNICIPAL DRINKING WATER 2.9 MILLION GALLONS PER DAY ARE TO BE MADE AVAILABLE TO INDUSTRIAL FACILITIES
4. NO FEDERAL AGENCY HAS BEEN CONSULTED WITH REGARD TO THE ENVIRONMENTAL IMPACT OF THIS PROJECT

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
80	KAREN BOUSHIE	06/16/2024 20:50:49 PM	OPPOSE

HELLO: I AM A MEMBER OF FRIENDS OF THE RAPPAHANNOCK AND AS SUCH AM CONCERNED ABOUT PROTECTING THE HEALTH OF THE RAPPAHANNOCK RIVER AND ITS WATERSHED. AS I UNDERSTAND IT, THE INTENT IS TO WITHDRAW WATER TO SUPPORT 3 DATA CENTER CAMPUSES, WHICH IS CONCERNING GIVEN THE GROWTH AND DEMANDS OF THIS INDUSTRY IN VA. WHAT IS THE UPRIVER IMPACT OF THAT WITHDRAWAL, ESPECIALLY IF OTHER DATA CENTER DEMANDS IN THE WATERSHED ARE ADDED - FOR INSTANCE, THE DATA CENTER THAT HAS BEEN APPROVED ON THE BANKS OF THE RAPIDAN IN ORANGE COUNTY. HAS THE POTENTIAL IMPACT TO AQUATIC SPECIES AND THEIR HABITAT BEEN FULLY REVIEWED? MY REQUEST IS THAT A PUBLIC HEARING BE SCHEDULED SO THAT ALL ASPECTS OF THIS PROPOSAL CAN BE CONSIDERED BY ANYONE INTERESTED IN DOING SO.

THANK YOU,
KAREN BOUSHIE

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
81	LESLEY NEWMAN	06/16/2024 20:59:31 PM	OPPOSE

I AM WRITING TO EXPRESS DEEP CONCERN OVER THE PERMIT REQUEST BY CAROLINE COUNTY TO WITHDRAW UP TO 13.9 MILLION GALLONS OF WATER DAILY FROM THE RAPPAHANNOCK RIVER VWPP 2020-0514 FROM A NEW WITHDRAWAL SITE NORTH OF PORT ROYAL. I REQUEST THAT THIS PERMIT BE DENIED..

AS AN ENVIRONMENTAL EDUCATOR WHO GREW UP IN THE NORTHERN NECK, I HAVE BEEN SO HEARTENED BY MEASURES IN RECENT YEARS BEING TAKEN BY FORWARD-THINKING ENTITIES TO PRESERVE & PROTECT THE RAPPAHANNOCK, ONE OF VIRGINIA’S FOUR LARGEST CHESAPEAKE BAY TRIBUTARIES. FROM THE LANDBACK GESTURE MADE TO THE RAPPAHANNOCK TRIBE TO THE PRESERVATION OF HISTORIC AMOUNTS OF ACREAGE ON THE WILDLIFE REFUGE & IN CONSERVATION EASEMENTS TO THE EFFORTS TO DESIGNATE THE STRETCH OF THE RIVER RUNNING THROUGH CAROLINE AS A NATIONAL WILD & SCENIC RIVER, THERE IS A LOT TO BE PROUD OF. I MADE SURE THAT STUDENTS I WORKED WITH IN ESSEX, KING GEORGE, LANCASTER, MIDDLESEX, NORTHUMBERLAND, RICHMOND, & WESTMORELAND COUNTIES KNEW ABOUT THE LEADERSHIP ON THE PART OF FEDERAL, STATE, & LOCAL GOVERNMENTS, IN PARTNERSHIP WITH NONPROFITS, SCHOOLS, & BUSINESSES, LEADERSHIP ACTIONS THAT WOULD UNDOUBTEDLY SHAPE THEIR FUTURES IN THIS AREA.

THE EASIEST WAY TO CONNECT WITH THOSE YOUNG PEOPLE WAS OFTEN THROUGH WILDLIFE, & THEY BECAME ACQUAINTED WITH SOME OF THE RIVER’S KEYSTONE SPECIES & SPECIES OF CONCERN IN OUR LESSONS. SPECIES OF CONCERN INCLUDE ATLANTIC STURGEON, RIVER HERRING, AMERICAN SHAD, AND STRIPED BASS. POPULATIONS OF EACH OF THESE SPECIES ARE DEPRESSED, AND THE ATLANTIC STURGEON IS LISTED AS ENDANGERED. THERE IS CURRENTLY INSUFFICIENT INFORMATION TO UNDERSTAND THE IMPACT THE PROPOSED WATER WITHDRAWAL WOULD HAVE ON THESE IMPERILED SPECIES.

NOT ONLY ARE THE ABOVE SPECIES ECOLOGICALLY IMPORTANT, THEY ARE ALSO ECONOMICALLY & CULTURALLY IMPORTANT TO MANY OF THESE STUDENTS & THEIR FAMILIES BECAUSE OF RECREATIONAL TRADITIONS IN FISHING, JOBS IN THE INDUSTRY, & JOBS IN TOURISM THAT RELY ON A HEALTHY & SCENIC RIVER.

WITH THE REMOVAL OF THE OBSCENE AMOUNT OF WATER IN QUESTION, WE ALL KNOW THE RIVER’S HEALTH WOULD BE IMPERILED. I COULD NOT TEACH STUDENTS TO MEASURE SALINITY & TURBIDITY THEN ASK THEM TO RUN THE NUMBERS ON HOW THE PERCENTAGES OF EACH WOULD CHANGE UNDER THIS PROPOSAL. WE WOULD ALL BE UNABLE TO ANSWER THE QUESTION, WHY? WHY WOULD OUR LOCAL LEADERSHIP MAKE SUCH A DECISION?

I RECOGNIZE THAT LOCAL ADMINISTRATORS ARE PRESSURED TO MAKE THESE DECISIONS WITH A LACK OF LEADERSHIP AT THE STATE-LEVEL TO GUIDE LAND & WATER USE DECISIONS IN THE ERA OF DATA CENTER PROLIFERATION. HOWEVER, SCIENTISTS & PEOPLE-OF-CONSCIENCE DO NOT FACE SUCH PRESSURES: I URGE YOU TO OPPOSE THIS PROJECT AS I JOIN MY VOICE WITH SO MANY OTHERS AT THE FRIENDS OF THE RAPPAHANNOCK RIVER WILDLIFE REFUGE, FRIENDS OF THE RAPPAHANNOCK, THE

**Virginia Marine Resources Commission
Habitat Management Public Comments
Application Number 20200514**

Print Date: Monday May 18 2026 10:03

RAPPAHANNOCK TRIBE, & MENOKIN FOUNDATION AS WELL AS WITH STUDENTS IN THE AFOREMENTIONED SCHOOL DIVISION WHO MAY OR MAY NOT KNOW ABOUT THIS PUBLIC COMMENT PERIOD OR HAVE THE ABILITY TO SUBMIT THEIR OWN CONCERNS BUT WHOSE FUTURES WOULD BE IRREPARABLY IMPACTED IN A NEGATIVE WAY.

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
82	LINDA B CHANEY	06/16/2024 21:03:31 PM	OPPOSE

HOW COWARDLY AND BACKHANDED TO TRY TO STEAL THE GARRETT'S SMALL FARM TO GET WATER TO ENTICE DATA CENTERS TO BUILD IN CAROLINE COUNTY. THAT'S WHAT IT'S ALL ABOUT, PAYOFFS TO BRING IN THOSE MONSTROUS DATA CENTERS. SHAME ON YOU. WHAT'S WRONG WITH TRYING TO KEEP THE RURAL FLAVOR OF THE AREA WITH HARD WORKING, VESTED LAND OWNERS??

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
83	ANNETTE BAREFORD	06/16/2024 21:42:18 PM	OPPOSE

THIS PROJECT WILL HAVE A NEGATIVE IMPACT ON THE HEALTH OF RAPPAHANNOCK RIVER INCLUDING THE SPAWNING GROUNDS OF ATLANTIC STURGEON. AQUATIC PLANTS WILL ALSO BE IMPACTED ESPECIALLY AS SALINITY LEVELS CHANGE. THERE CAN BE NO WIN FOR THE RAPPAHANNOCK RIVER IS THIS PASSES!

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
84	CYNTHIA J NELSON	06/16/2024 22:23:29 PM	OPPOSE

THE RAPPAHANNOCK RIVER IS NOT FOR ANYONE TO EMPTY IT'S NOT FOR SALE EITHER!
IT'S AN ECOSYSTEM, AND DRAINING MILLIONS OF GALLONS OF WATER DAILY, OR EVEN A MONTH, IS TOO MUCH. LEAVE THE RAPPAHANNOCK RIVER ALONE AND LET NATURE TAKE ITS COURSE.

Virginia Marine Resources Commission
Habitat Management Public Comments
Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
85	MARK E CHAMBERLIN	06/17/2024 07:18:57 AM	OPPOSE

YOU ARE DISRUPTING FRAGILE ECOSYSTEMS WITH LITTLE FORETHOUGHT AND CONSIDERATION. HAVE WE NOT BEEN HERE BEFORE, REPEATEDLY?

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Number	Name	Received	Position
86	SUSAN C MCFADDEN	06/17/2024 08:57:10 AM	OPPOSE

I OPPOSE THE DRAFT PERMIT IN ITS CURRENT FORM. I AM CONCERNED ABOUT THE POTENTIAL IMPACTS OF THIS INTAKE TO THE HEALTH OF THE RAPPAHANNOCK RIVER AND ITS AQUATIC FAUNA FOR THE FOLLOWING REASONS:

MAJOR INTERBASIN TRANSFER OF WATER

THIS PERMIT PROPOSES TO ALLOW A MAJOR INTERBASIN TRANSFER OF WATER BETWEEN TWO MAJOR RIVER BASINS. THE WATER WOULD BE PUMPED APPROXIMATELY 35 MILES ACROSS THE COUNTY TO CARMEL CHURCH AREA IN THE I-95 CORRIDOR WHERE IT WILL BE TREATED AT A WATER TREATMENT PLANT, USED FOR ONE OF THREE SECTORS RESIDENTIAL, COMMERCIAL, INDUSTRIAL COOLING , AND DISCHARGED AFTER TREATMENT AT A WASTEWATER TREATMENT PLANT INTO THE MATTAPONI RIVER AND POLECAT CREEK A TRIBUTARY OF THE MATTAPONI RIVER . NOT A SINGLE DROP OF WATER REMOVED FROM THE RAPPAHANNOCK RIVER WOULD COME BACK TO THE RAPPAHANNOCK RIVER.

ATLANTIC STURGEON

THE AREA WHERE THE INTAKE IS PROPOSED IS KNOWN TO BE POTENTIAL SPAWNING GROUNDS FOR THE FEDERALLY DESIGNATED AS AN ENDANGERED SPECIES ATLANTIC STURGEON. NOWHERE CAN THERE BE FOUND EVIDENCE THAT THE FEDERAL AGENCIES WHO ARE RESPONSIBLE FOR PROTECTING ATLANTIC STURGEON HAVE BEEN CONSULTED ON THE PERMIT APPLICATION.

WATER DEMAND

OF THE PROPOSED AVERAGE OF 7.9 MILLION GALLONS A DAY TO BE WITHDRAWN FROM THE RIVER 2.9 MILLION GALLONS WOULD BE ALLOCATED TO INDUSTRIAL FACILITIES, SPECIFICALLY THREE 3 DATA CENTER CAMPUSES. ESSENTIALLY THEY ARE USING A MUNICIPAL DRINKING WATER PROJECT AS COVER FOR A COOLING WATER SUPPLY TO DATA CENTER PROJECTS.

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Number	Name	Received	Position
87	JAMES A PAYNE	06/17/2024 10:41:44 AM	OPPOSE

GOOD MORNING/AFTERNOON:

MY NAME IS JAMES PAYNE, I WAS BORN AND RAISED HERE IN FREDERICKSBURG, VA & CURRENTLY OWN A HOME IN THE CITY, ALONG WITH MY WIFE AND 2 CHILDREN. WE CHOSE TO PURCHASE A HOME IN FREDERICKSBURG, PRIMARILY BECAUSE OF ITS PROXIMITY TO EXTENDED FAMILY, HEALTHCARE, AND OUR CHURCH. BOTH MY WIFE AND I GREW UP FISHING AND SWIMMING IN THE RAPPAHANNOCK RIVER, WATCHING THE 4TH OF JULY RAFT RACES IN THE SUMMER AS WELL AS SEEING THE RIVER FREEZE UP IN THE WINTER. ON A RELATED NOTE, WE ALSO BOTH GREW UP WITH WELL WATER & CAN REMEMBER HAVING TO GO OUT AND MEASURE THE WATER LEVELS OF THOSE WELLS, ESPECIALLY DURING DRY SUMMER WEEKS/MONTHS. THAT WAS IN THE 1970S-80S, SO 40 TO 50 YEARS AGO.

ATTENDING MARY WASHINGTON COLLEGE, I HAD A HISTORY PROFESSOR DR. OTHO CAMPBELL WHO STATED IN 1994, THAT ROUGHLY MUCH OF THE RAPPAHANNOCK ABOVE THE CITY DAMN NOW REMOVED IS VERY MUCH THE SAME AS IT WAS JUST AFTER THE CIVIL WAR. WELL, AS MANY KNOW WHO ARE LOCATED IN THE CENTRAL AND NORTHERN VIRGINIA REGIONS, THAT IS NO LONGER THE CASE. WE LIVE IN AN AREA, WHICH THE FREDERICKSBURG CHAMBER OF COMMERCE HAS STATED, NOW HAS A POPULATION OF OVER 400, 000 PEOPLE. IF YOU OR YOUR FAMILY HAVE BEEN OUT ON THE ROADS, OR IN OUR SCHOOLS, OR IN ANY MAJOR GROCERY STORE OR RETAILER RECENTLY, YOU CAN ATTEST THAT OUR REGION HAS GROWN TREMENDOUSLY.

THE CITY OF FREDERICKSBURG AND THE COUNTIES OF STAFFORD AND SPOTSYLVANIA HAVE WORKED OVER THE LAST FEW DECADES, ON PLANNING AND BUILDING A NUMBER OF RESERVOIRS AS POPULATIONS AND WATER DEMANDS HAVE GROWN. CURTIS LAKE, ROCKY PEN, NI RIVER, MOTTS RUN, AND HUNTING RUN RESERVOIRS ARE EXAMPLES OF THESE SOLUTIONS IN REGARDS TO WATER NEEDS. ON A RELATED NOTE, WE NOW HAVE THE CONCERNS OF DATA CENTERS COMING INTO OUR REGION. LOUISA, STAFFORD, KING GEORGE, SPOTSYLVANIA, AND CAROLINE COUNTIES HAVE ALL BEEN IN CONTACT WITH AMAZON/MICROSOFT OVER THE LAST FEW MONTHS/YEARS TO HAVE FACILITIES BUILT.

NOW, ALTHOUGH MANY MIGHT NOT BE FAMILIAR, THESE FACILITIES REQUIRE A LARGE AMOUNT OF LAND, ELECTRICITY, AND OF COURSE, WATER. HOW ARE THESE BILLION-DOLLAR COMPANIES, GOING TO REPLENISH THE WATER THAT THEY USE? HOW ARE THESE COMPANIES, GOING TO "GIVE BACK" TO THE COMMUNITY DRINKING WATER NEEDS AS KING GEORGE IS TRYING TO DETERMINE RIGHT NOW ? OUR REGION WENT THROUGH LAST JULY/AUGUST/SEPTEMBER HERE WITH A LACK OF RAIN AFTER SUFFICIENT PRECIPITATION IN MAY 2023. OUR REGION IS CURRENTLY SEEING THE SAME SITUATION AS LAST YEAR, AS WE HAD PLENTY OF RAIN IN MAY, AND NOW, WE'VE GONE WEEKS WITHOUT ANY PRECIPITATION. HAS ANYONE LOOKED AT THE RAPPAHANNOCK WATER LEVELS OVER THE LAST WEEK OR TWO?

WITH THE QUESTION OF CLIMATE CHANGE, THIS LACK OF PRECIPITATION IS VERY CONCERNING TO SAY THE LEAST. HOW ARE WE GOING TO SUPPLY ALL THE CITIZENS OF THE COUNTIES SURROUNDING THE RAPPAHANNOCK WITH ENOUGH DRINKING WATER, IF WE GO THROUGH CONTINUED PERIODS OF DROUGHT? ESPECIALLY, IF THE GROUNDWATER LEVELS ARE ALREADY LOW & THESE COUNTIES HAVE PROMISED WATER TO AMAZON OR MICROSOFT FOR THEIR NEW DATA CENTERS? I AM NOT SURE THAT THE RIVER WILL HAVE ENOUGH WATER IN IT, TO PROVIDE FOR THE WATER INTAKE PLANNED DOWN IN CAROLINE COUNTY, AFTER EVERY "THING" AND EVERY "ONE", REQUIRING WATER ABOVE CAROLINE GETS THEIR SHARE.

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HAS ANYONE SEEN WHAT HAS TAKEN PLACE IN THE SOUTHWEST AND ITS RELIANCE ON THE COLORADO RIVER WATERSHED OVER THE LAST 2 DECADES? THE GROWTH THAT TOOK PLACE AFTER WWII TO CITIES LIKE PHOENIX & LAS VEGAS, EVEN WITH CAREFUL PLANNING, HAS NOT BEEN NEAR ENOUGH FOR THE WATER NEEDED BY PEOPLE AND BUSINESSES. BUT I HAVE NOT EVEN MENTIONED, THERE IS STILL ANOTHER SOURCE BOTH OUT WEST AND HERE IN VA THAT NEEDS OUR WATER: AGRICULTURE. HOW IS THE US SUPPOSED TO GROW THE NECESSARY CROPS, USED TO SUPPLY OUR CITIZENS AS WELL AS OTHERS AROUND THE WORLD, WITHOUT WATER?

WE HAVE SOME OF THE BEST FARMS, IN THE STATE, ALONG THE RAPPAHANNOCK RIVER. WHY DOES CAROLINE HAVE TO USE "EMINENT DOMAIN" TO CONDEMN THE GARRETT FARM PROPERTY SO QUICKLY? IT'S MY UNDERSTANDING, THAT MR. GARRETT WAS NOTIFIED AND TOLD TO RESPOND WITHIN ONE WEEK, CONCERNING THE COUNTY'S OFFER ON THIS LAND. . WHY DID NO ONE FROM CAROLINE COUNTY, RESPOND TO THE FREE LANCE-STAR'S QUESTIONS ABOUT THE OFFER AND PUBLIC HEARING TO CONDEMN THE LAND?

THAT DOES NOT SOUND FAIR AND REASONABLE, IF IN FACT, THE COUNTY HAS BEEN TRYING FOR 20 YEARS TO IDENTIFY A LONG TERM SOURCE OF WATER. WHAT IS THE REASON THAT CAROLINE COUNTY, HASN'T GIVEN MORE INFORMATION ON ATTEMPTING TO BUILD A RESERVOIR LIKE STAFFORD OR SPOTSYLVANIA? THE CONCERNS THAT I'VE SHARED IN THIS LETTER, ARE NOT MEANT AS DISRESPECTFUL. I JUST BELIEVE WE HAVE A SERIOUS CONCERN FOR WATER, AND THIS PLAN OF TAKING WATER FROM THE RAPPAHANNOCK AND PIPELINING IT OVER 30 MILES TO THE CARMEL CHURCH REGION, COULD LEAD TO MORE AND MORE ISSUES.

THE KALAHARI WATER PARK APPROVED BY SPOTSYLVANIA AND CURRENTLY UNDER CONSTRUCTION, ARE A MAJOR CONCERN ON WATER USAGE WELL. WITH CONTINUED DEVELOPMENT & MORE FOLKS COMING TO THE REGION, THIS IS A PROBLEM THAT I DON'T SEE GOING AWAY ANY TIME SOON. WE NEED TO DO OUR HOMEWORK AND MAKE SURE WE DO NOT ACT HASTILY. THANK YOU FOR YOUR TIME.

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Number	Name	Received	Position
88	DIANE WARREN	06/17/2024 09:39:57 AM	OPPOSE

AS A RESIDENT OF CAROLINE COUNTY, I OPPOSE THIS PROJECT BECAUSE OF THE ENVIRONMENTAL IMPACT IT WILL HAVE ON THE ECOSYSTEM THAT IS ATTACHED TO THE RIVER AS WELL AS ANY RECREATIONAL ACTIVITIES THAT COULD BE AFFECTED.

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Number	Name	Received	Position
89	MICHAEL L SMITH	06/17/2024 11:11:53 AM	OPPOSE

ON BEHALF OF THE VIRGINIA CHAPTER OF NATIVE FISH COALITION, A 501 C 3 CONSERVATION ORGANIZATION WITH CHAPTERS IN 19 STATES, WE WISH TO REGISTER OUR DEEP CONCERN REGARDING THE OUT-OF-BASIN WATER WITHDRAWAL FROM THE RAPPAHANNOCK RIVER TO CAROLINE COUNTY, VA, AS PROPOSED BY THE CAROLINE COUNTY DEPARTMENT OF PUBLIC UTILITIES VMRC 2020-0514/DEQ VWP 20-0514 .

THE CONTINUOUS REMOVAL OF SUCH LARGE QUANTITIES OF WATER AS PRESENTLY PROPOSED WILL LIKELY NEGATIVELY IMPACT NATIVE ANADROMOUS FISH SPECIES IN THE RAPPAHANNOCK RIVER STRIPED BASS, AMERICAN AND HICKORY SHAD, MENHADEN AND BLUEBACK HERRING AND RARE/VULNERABLE SPECIES SUCH AS THE AMERICAN EEL AND ATLANTIC STURGEON. THE PROPOSED WITHDRAWALS COULD ALSO INITIATE UNFORESEEN AND UNACCOUNTED LOCALIZED DECLINES IN NATIVE FISH SPECIES IN ORDER I AND II STREAM COMMUNITIES WITHIN THE REGION ADJACENT TO THE WITHDRAWAL SITE.

COMMERCIAL AND RESIDENTIAL WATER WITHDRAWALS, WHETHER FROM SURFACE OR GROUNDWATER RESOURCES, REPRESENT A GROWING BUT LITTLE RECOGNIZED ENVIRONMENTAL ISSUE IN THE COMMONWEALTH. BASED ON RECENT TRENDS, SUMMER DROUGHTS WILL LIKELY WORSEN IN THE FUTURE. THE SMALLEST WATERSHEDS WILL LIKELY BEAR THE BRUNT. PROJECTS SUCH AS THE CAROLINE COUNTY PROPOSAL MAY JEOPARDIZE SPECIES AND WATERSHEDS THAT THE PLANNERS HAD NOT CONSIDERED OR FORESEEN. WE WOULD URGE THAT PERMITS BE WITHHELD PENDING IN-DEPTH FIELD RESEARCH, INCLUDING SMALL STREAM FISH INVENTORIES, NOT ONLY AT THE WITHDRAWAL SITE ON THE RAPPAHANNOCK, BUT IN TRIBUTARY WATERS FOR SEVERAL MILES WITHIN THE PROJECT’S RADIUS.

ADDITIONALLY, WE QUESTION THE EFFICACY OF DUMPING OUT-OF-BASIN WATER INTO STREAM SYSTEMS THAT MAY NOT BE ABLE TO SUSTAIN ANY ADDED FLOW OR NUTRIENT ENRICHMENT ON A SUSTAINED BASIS. WE THEREFORE URGE FURTHER RESEARCH BEFORE A PROPOSAL SUCH AS THIS MOVE FORWARD.

THANK YOU FOR YOUR CONSIDERATION OF OUR COMMENTS.

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Number	Name	Received	Position
90	ANTHONY L DEMARCO	06/17/2024 12:27:45 PM	OPPOSE

14 JUNE, 2024

RANDY OWEN
CHIEF, HABITAT MANAGEMENT COMMISSION
VA MARINE RESOURCES COMMISSION

ERIC SEAVEY
MANAGER
WATER WITHDRAWAL PERMITTING
VA DEPARTMENT OF ENVIRONMENTAL QUALITY

RE: CAROLINE COUNTY WATER INTAKE APPLICATION,
VMRC JPA 2020-0514/DEQ VWP 20-0514

DEAR MR. OWEN AND MR. SEAVEY,

I AM WRITING IN STRONG OPPOSITION TO THE PROPOSED CAROLINE COUNTY WATER INTAKE APPLICATION, AS I BELIEVE THIS PROJECT WILL HAVE SIGNIFICANT NEGATIVE IMPACT ON THE RAPPAHANNOCK RIVER ECOSYSTEM.

THE RAPPAHANNOCK RIVER IS ONE OF VIRGINIA'S, AND IN FACT THE WHOLE EASTERN SEABOARD'S, MOST PRISTINE AND VALUABLE ECOSPHERES. THE PROPOSED WATER WITHDRAWAL PUTS THIS UNIQUE AND NON-REPLACEABLE ESTUARY SYSTEM IN GREAT JEOPARDY OF IRREVERSIBLE DAMAGE.

THIS PROPOSAL CALLS FOR WATER TO BE EXTRACTED FOR INDUSTRIAL PURPOSES AND NOT FOR MUNICIPAL PUBLIC WATER SUPPLY FOR THE COUNTY. UNDOUBTEDLY, THIS WATER DEMAND WILL LIKELY FACILITATE CREATION OF MORE DATA CENTERS IN THE AREA WHICH HAVE MASSIVE THIRST FOR COOLING WATER. IRONIC THAT IN SUPPORTING THE INFRASTRUCTURE TO FACILITATE EXTENSIVE DATA CENTERS THAT GENERATE ARTIFICIAL INTELLIGENCE WE WOULD DESTROY THE BALANCE OF AN UNPARALLELED NATURAL ECOLOGICAL COMMUNITY THAT SUSTAINS SO MANY CITIZENS NOT TO MENTION A HUGE ARRAY OF BIODIVERSITY.

THE LOSS OF THIS MACRO-BIOME WOULD HAVE SWEEPING NEGATIVE ECONOMIC EFFECTS BY DIMINISHING WATER QUANTITY AND QUALITY, EFFECTING THE WELL-BEING AND LIVELIHOOD OF COMMUNITIES DOWNRIVER. THIS WOULD BE A TRAGEDY FOR VIRGINIA.

FINALLY, I URGE YOU TO DENY APPROVAL OF THIS REQUEST BY CAROLINE COUNTY. THE POTENTIAL RISKS AND NEGATIVE IMPACTS FAR OUTWEIGH CONTEMPLATED BENEFITS.

SINCERELY,

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ANTHONY DEMARCO
327 HILL STREET
ATHENS, GA. 30601
ADEMARCO@ATHENSEYEDOCTORS.COM

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Number	Name	Received	Position
91	MELISA TURNER	06/17/2024 12:42:26 PM	OPPOSE

THESE EFFECTS CAN HARM AQUATIC AND RIPARIAN PLANTS AND ANIMALS THAT DEPEND ON REGULAR SURFACE FLOWS. LAND SUBSIDENCE AND SINKHOLE FORMATION IN AREAS OF HEAVY WITHDRAWAL.. CITY OFFICIALS SHOULD BE ASHAMED OF THEMSELVES FOR EVEN HAVING THIS BROUGHT TO THE TABLE.

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Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
92	DANIELLE MORRISON	06/18/2024 06:28:57 AM	OPPOSE

CAROLINE COUNTY IS FACING A GROWING NEED FOR WATER DUE TO ANTICIPATED GROWTH IN THE AREA. THE EXCESSIVE USE OF GROUNDWATER EAST OF INTERSTATE 95 HAS LED THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY DEQ TO REQUIRE LOCALITIES TO EXPLORE ALTERNATIVE WATER SOURCES.

IN RESPONSE TO THIS, CAROLINE COUNTY PUBLIC UTILITIES HAS APPLIED FOR A PERMIT TO INSTALL A NEW WATER WITHDRAWAL INTAKE STRUCTURE ON THE SOUTH BANK OF THE RAPPAHANNOCK RIVER. THIS PROJECT ALSO INCLUDES THE CONSTRUCTION OF A RAW WATER PUMP STATION AND THE INSTALLATION OF APPROXIMATELY 35 MILES OF WATER LINES, WHICH WILL TRANSFER THE RAW WATER TO A PROPOSED WATER TREATMENT PLANT NEAR CARMEL CHURCH, VA. THE INTENDED AVERAGE DAILY WITHDRAWAL FROM THE RIVER IS 7.90 MILLION GALLONS, WITH A MAXIMUM OF 13.90 MILLION GALLONS PER DAY.

WHILE ACKNOWLEDGING THE NECESSITY OF SECURING WATER FOR OUR COUNTY, I MUST EXPRESS MY CONCERNS ABOUT THE CURRENT FORM OF THE DRAFT PERMIT. THE FRIENDS OF THE RAPPAHANNOCK FOR ORGANIZATION SHARES SIMILAR WORRIES REGARDING THE POTENTIAL IMPACT OF THIS PROJECT ON THE HEALTH OF THE RAPPAHANNOCK RIVER AND ITS AQUATIC FAUNA. ONE PARTICULAR CONCERN IS THE PROPOSED MAJOR INTERBASIN TRANSFER OF WATER, WHERE WATER WILL BE PUMPED ACROSS THE COUNTY TO THE I-95 CORRIDOR, TREATED AT A WATER TREATMENT PLANT, AND EVENTUALLY DISCHARGED INTO THE MATTAPONI RIVER AND POLECAT CREEK, WITHOUT ANY RETURNING TO THE RAPPAHANNOCK RIVER.

ANOTHER CRITICAL ISSUE IS THE POTENTIAL IMPACT ON THE ATLANTIC STURGEON, AN ENDANGERED SPECIES, AS THE PROPOSED INTAKE AREA IS KNOWN TO BE POTENTIAL SPAWNING GROUNDS FOR THESE FISH. WHILE THE VIRGINIA DEPARTMENT OF WILDLIFE RESOURCES HAS PROVIDED VALUABLE INPUT, THERE IS NO EVIDENCE THAT FEDERAL AGENCIES RESPONSIBLE FOR PROTECTING THE ATLANTIC STURGEON HAVE BEEN CONSULTED IN THE PERMIT APPLICATION PROCESS.

LASTLY, IT HAS COME TO MY ATTENTION THAT A SIGNIFICANT PORTION OF THE WITHDRAWN WATER, APPROXIMATELY 2.9 MILLION GALLONS PER DAY, WOULD BE ALLOCATED TO INDUSTRIAL FACILITIES, SPECIFICALLY DATA CENTER CAMPUSES. THIS RAISES CONCERNS ABOUT WHETHER THIS PROJECT IS BEING JUSTIFIED AS A MUNICIPAL DRINKING WATER INITIATIVE WHILE ACTUALLY SERVING AS A COOLING WATER SUPPLY FOR THESE DATA CENTER PROJECTS.

THEREFORE, I KINDLY REQUEST YOUR SUPPORT IN OPPOSING THE CURRENT FORM OF THE DRAFT PERMIT AND SUBMITTING COMMENTS. VOICE MY CONCERNS AND ENSURE THAT THE POTENTIAL IMPACTS OF THIS PROJECT ARE THOROUGHLY EVALUATED AND ADDRESSED.

THANK YOU FOR YOUR TIME AND CONSIDERATION.

SINCERELY,
DANIELLE MORRISON

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Number	Name	Received	Position
93	SAMANTHA VAN SAUN	06/17/2024 13:24:14 PM	OPPOSE

I LIVE IN IRVINGTON, VA WHERE THE RAPPAHANNOCK RIVER IS 2 MILES ACROSS. THE HEALTH OF THE RIVER IS ESSENTIAL TO LIFE AND WORK IN OUR COMMUNITY AS WELL AS OUR LOCAL ECONOMY. THIS PROJECT WOULD HAVE DETRIMENTAL EFFECTS FOR THE ENTIRE RIVER AND ALL THE COMMUNITIES ON IT. STUDIES MUST BE DONE TO EXPLORE THE VERY FAR REACHING EFFECTS OF THE PROPOSED PROJECT BEFORE IT SHOULD BE CONSIDERED SERIOUSLY. WITHOUT THAT INFORMATION, HOW CAN A RESPONSIBLE DECISION BE MADE?

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Number	Name	Received	Position
94	MELISSA D GROSS	06/17/2024 14:44:00 PM	OPPOSE

NOT ENOUGH TIME FOR THE PUBLIC TO BECOME EDUCATED AND RESPOND, AND NO TIMELY NOTICE FOR PUBLIC COMMENT.
NO MITIGATION FOR THE REMOVAL OF THE WATER
ENVIRONMENTAL IMPACT STATEMENTS: HAVE ANY BEEN DONE?
THE RIVER SUSTAINS WATERMEN - CHANGE IN SALINITY LEVELS DOWNSTREAM WILL AFFECT THE AQUATIC HABITAT/WILDLIFE
IF THIS WATER IS INDEED FOR DATA CENTERS - NO!!!!!!
STOP TAKING OUR WATER, OUR MENHADEN, OUR ROCKFISH, OUR CRABS BY GIVING OUR WATER AND MENHADEN TO INDUSTRY, CORPORATIONS AND RICH ENTITIES.

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Number	Name	Received	Position
95	CHAD KELLY	06/17/2024 15:07:46 PM	OPPOSE

AS A FORMER LONG-TERM RESIDENT OF THE DESERT SOUTHWEST ALONG THE COLORADO RIVER, I HAVE PERSONAL EXPERIENCE WITNESSING HOW THIS PLAYS OUT. THE COLORADO RIVER WAS ONCE A ROARING RIVER THAT CUT THROUGH ROCK AND CREATED THE GRAND CANYON. TODAY, AS IT CROSSES THROUGH YUMA COUNTY AT THE BORDER, ITâ€™S A MUD PUDDLE. DEVELOPERS SEEM TO ALWAYS LEVERAGE LOCAL GOVERNMENTS WITH ENTICING OFFERS LIKE â€œGROWTHâ€ AND INCREASED â€œTAX REVENUEâ€ PROMISES. THE PROBLEM IS, THE PROMISES NEVER ARRIVE BEFORE ELECTED OFFICIALS MOVE ON AND PROMISES ARE FORGOTTEN. THE WELL-DOCUMENTED HISTORY BOOK ON THIS ISSUE HAS BEEN PLAYING OUT IN SLOW MOTION IN PLAIN VIEW AND IGNORING IT, OR PRETENDING LIKE ACCESS TO FRESH WATER IS ONLY A â€œDESERT PROBLEMâ€ IS NAIVE AND IRRESPONSIBLE. ONCE THESE AGREEMENTS ARE MADE, IT IS ALMOST IMPOSSIBLE TO GO BACK. IF WE HAVE NOT LEARNED ANYTHING ELSE FROM OUR RECENT DISCOVERIES, WE SHOULD AT LEAST BE AWARE THAT ARTIFICIALLY ADDRESSING ACCESS TO WATER AND RELIANCE UPON INFRASTRUCTURE TO SUPPORT ENTIRE AREAS OF DEVELOPED AREAS IS FRAGILE, DANGEROUS, AND IGNORANT. OPENING THIS DOOR IS A PANDORAâ€™S BOX, NOT TO MENTION A PRECEDENT IS BEING CREATED FOR FUTURE MODIFICATIONS OF THE NATURAL FLOW OF WATER THAT WHEN MULTIPLIED, WILL ADVERSELY AFFECT ALL ASPECTS OF OUR NATURAL HABITAT. THIS IS 100% CERTAIN.

MAYBE PEOPLE SHOULD LISTEN TO THIS VERY RECENT PIECE:

[HTTPS://APPLE.NEWS/NOWPLAYING/AL8_-ZDVHRB6H9FXDS_2BLG](https://apple.news/nowplaying/AL8_-ZDVHRB6H9FXDS_2BLG)

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Number	Name	Received	Position
96	BROWNIE T WATKINS	06/17/2024 15:33:26 PM	OPPOSE

BECAUSE OF ITS FAR-REACHING AND NEGATIVE EFFECTS UPON THE WILDLIFE OF THE RAPPAHANNOCK RIVER AND THE CHESAPEAKE BAY, I OPPOSE THIS PROJECT.

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Number	Name	Received	Position
97	BYRON BIRTMAN	06/17/2024 16:03:19 PM	OPPOSE

THE PROPOSED CONTINUING REMOVAL OF LARGE QUANTITIES OF WATER FROM OUR TIDEWATER RIVERS TO THE BENEFIT OF ALREADY HIGH-PROFIT INDUSTRIES WITHOUT CONSIDERATION OR ESTIMATES OF THE COST TO THE HUMAN AND WILDLIFE RESIDENTS AND BENEFICIARIES OF THE ESTUARIES IS INEXCUSABLE.

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Number	Name	Received	Position
98	ROBERT NEWMAN	06/17/2024 16:38:01 PM	OPPOSE

1 THE INTAKE COULD DISTURB THE ATLANTIC STURGEON SPAWNING GROUNDS AND ADVERSELY AFFECT THIS FISHERY. THIS IMPACT NEEDS TO BE STUDIED FURTHER.

2 MY MAIN OPPOSITION IS THE EXTRACTION OF LARGE QUANTITIES OF WATER FROM THE RAPPAHANNOCK RIVER WITHOUT REPLACEMENT MOSTLY TO ALLOW FOR COOLING COMPUTERS AT THREE LARGE DATA CENTERS. THE DATA CENTERS ARE APPARENTLY NOT PAYING ANY MONEY FOR THIS SERVICE. THE IMPACT OF REMOVING THIS AMOUNT OF WATER DAILY FROM THE RAPPAHANNOCK NEEDS TO BE STUDIED FURTHER IN DETAIL, SINCE IT IS A VERY FRAGILE ECOSYSTEM AND UNINTENDED CONSEQUENCES FROM THIS EXTRACTION ARE LIKELY TO OCCUR WITH RESULTING HARM TO THE ENVIRONMENT.

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Number	Name	Received	Position
99	LISA C ROSE	06/17/2024 18:15:29 PM	OPPOSE

PROTECT OUR WATERSHED!

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Number	Name	Received	Position
100	ANDREA CLAYTON	06/17/2024 18:20:47 PM	OPPOSE

NEGATIVE IMPACTS ON RIVER ECOSYSTEM, WATER RETURN NOT TO THE RAPPAHANNOCK

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Number	Name	Received	Position
101	NATHAN E MOORE	06/17/2024 18:39:52 PM	OPPOSE

MORE RESEARCH AND PUBLIC INFORMATION NEEDS TO BE PROVIDED. INAPPROPRIATE ACTIONS TAKEN AGAINST LANDOWNER.

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Number	Name	Received	Position
102	TIMOTHY C TOBIN	06/17/2024 19:24:47 PM	OPPOSE

I AM CONCERNED ABOUT THE SIGNIFICANT NEGATIVE IMPACTS THE PROPOSED WATER INTAKE FACILITY WILL LIKELY HAVE ON 1 THE RAPPAHANNOCK RIVER AND ITS ECOLOGY, 2 THE RESIDENTS OF THE COUNTY, AND 3 AGRICULTURE IN THE REGION.

THE RAPPAHANNOCK RIVER IS USED FOR DRINKING WATER, IRRIGATION, AND HYDROELECTRIC POWER. THE RIVER IS ALSO POPULAR FOR RECREATIONAL ACTIVITIES SUCH AS FISHING, BOATING, AND SWIMMING, AND SUPPORTS A DIVERSE RANGE OF AQUATIC LIFE. THE RAPPAHANNOCK RIVER IS A VITAL PART OF VIRGINIA'S HISTORY, ECONOMY, AND NATURAL ENVIRONMENT.

1. IMPACT ON THE RIVER AND ITS ECOLOGY:

THE AMOUNT OF WATER TO BE WITHDRAWN FROM THE RAPPAHANNOCK RIVER IS SIGNIFICANT AND WILL LIKELY IMPACT THE WELLBEING OF AQUATIC LIFE AND TERRESTRIAL WILDLIFE DOWN RIVER FROM THE INTAKE LOCATION. MANY PLANTS AND ANIMALS DEPEND ON THE WATER IN THE RAPPAHANNOCK RIVER FOR THEIR WELLBEING. THE TABLE BELOW SHOWS THE SIGNIFICANCE OF THE AMOUNT OF WATER TO BE REMOVED FROM THE RIVER EACH DAY AT CURRENT RIVER LEVELS. UNDERSTAND THAT THE CURRENT RIVER LEVELS ARE LOW BUT WE ARE NOT CURRENTLY IN A DROUGHT. AS WATER DEMAND INCREASES DUE TO FUTURE INDUSTRIAL DEVELOPMENT, THE COUNTY WOULD NATURALLY EXPECT TO INCREASE ITS INTAKE VOLUME WHICH WOULD HAVE FURTHER DETRIMENTAL EFFECTS ON LIFE WITHIN AND ALONG THE RIVER.

THE AREA WHERE THE INTAKE IS PROPOSED IS KNOWN TO BE POTENTIAL SPAWNING GROUNDS FOR THE FEDERALLY DESIGNATED AS AN ENDANGERED SPECIES ATLANTIC STURGEON. THANKFULLY THE VIRGINIA DEPARTMENT OF WILDLIFE RESOURCES HAS PROVIDED INPUT BUT THERE IS NO EVIDENCE THAT THE FEDERAL AGENCIES WHO ARE RESPONSIBLE FOR PROTECTING ATLANTIC STURGEON HAVE BEEN CONSULTED ON THE PERMIT APPLICATION.

RIVER FLOW AT FREDERICKSBURG 6/14/24 * 316 CFS
 PROPOSED MAXIMUM DRAW: 21.51 CFS 13,900,000 GAL PER DAY
 REMAINING FLOW 294.49 CFS
 % OF CURRENT FLOW -6.8%

FEET INCHES
 GAUGE LEVEL AT FREDERICKSBURG 6/14/24 * 2.07 24.84
 IMPACT OF A 6.8% REDUCTION IN WATER -.14 -1.68
 GAUGE LEVEL AFTER WITHDRAWAL 1.93 22.80

*THE GAUGE AT FREDERICKSBURG IS THE CLOSEST AVAILABLE GAUGE USED TO ESTIMATE THE FLOW AT THE PROPOSED WITHDRAWAL SITE.

2. IMPACT ON THE RESIDENTS OF THE COUNTY:

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Application Number 20200514**

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AS WATER LEVELS DECLINE, SO WOULD THE FISHING, BOATING AND SWIMMING CONDITIONS ALONG THE RIVER. THE RECREATIONAL OPPORTUNITIES AND QUALITY OF LIFE ENABLED BY THE RIVER WILL BE NEGATIVELY IMPACTED AS MORE WATER IS WITHDRAWN.

THE PROPOSED PROJECT ALSO INVOLVES THE CONSTRUCTION OF A WATER INTAKE FACILITY AND 35 MILES OF WATER LINE WHICH WILL NO DOUBT NEGATIVELY IMPACT RESIDENTS THROUGH INCREASED TAXES AND PROPERTY DISRUPTIONS. THIS 7 YEAR \$200 MILLION PROJECT WILL LIKELY RESULT IN AN INCREASE IN TAXES ON ALL RESIDENTS OF THE COUNTY AND WILL WITHDRAW SIGNIFICANT AMOUNTS OF WATER FROM OUR RIVER RESOURCES.

3. IMPACT ON AGRICULTURE:

THE PROPOSED PROJECT INTENDS TO SEIZE PRIME AGRICULTURAL PROPERTY WHICH WILL NEGATIVELY IMPACT THAT FARM.

CAROLINE COUNTY IS A RURAL PRESERVATION ZONE AND SHOULD NOT BE DEVELOPING PROJECTS WHICH SIGNIFICANTLY CHANGE THE COMPLEXION OF OUR RURAL NATURE. I UNDERSTAND THE DEMAND FOR MORE HOUSING AND MORE INDUSTRY BUT I AM AS CONCERNED AS OTHERS ABOUT THE HARM THAT WOULD BE INFLICTED ON OUR COUNTY AS A RESULT OF SUCH AS PROJECT AND THE GROWING INDUSTRIALIZATION WHICH WILL BE THEREBY ENABLED.

LOCATION:

ALTHOUGH I UNDERSTAND THAT THE PROJECT HAS BEEN DESIGNED AND A PERMIT FILED FOR THE PROPOSED LOCATION, I WONDER WHY A LOCATION JUST OVER A MILE TO THE NORTHWEST WOULDNÂ€™T BE BETTER SUITED. ALTHOUGH MANY OF THE NEGATIVES MENTIONED ABOVE WOULDNÂ€™T BE AVOIDED ALTOGETHER, THE INTAKE FACILITY COULD BE CONSTRUCTED ON LAND THAT HAS ALREADY BEEN COMPROMISED BY GRAVEL MINING AND MAYBE THE GRAVEL PITS COULD BE ENLARGED AND USED AS WATER RESERVOIRS TO BUFFER THE DEMAND DURING PERIODS OF LOW RIVER FLOW. SUCH A LOCATION CHANGE WOULD ALSO AVOID THE IMPACT OF PLACING SUCH A FACILITY ON CURRENTLY UNSPOILED, PRIME AGRICULTURAL LAND.

SINCERELY,

TIM TOBIN
14148 STONEWALL JACKSON RD
WOODFORD, VA 22580

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Number	Name	Received	Position
103	DOROTHY MILLER	06/17/2024 19:55:35 PM	OPPOSE

THE WITHDRAWAL PROCESS WOULD AFFECT THE SALINITY OF THE RAPPAHANNOCK CAUSING THE BRACKISH WATER TO BE FURTHER UPSTREAM IMPACTING THE FLORA AND FAUNA. ALSO, THE SMALL FISH AND THEIR EGGS WOULD BE DESTROYED.

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Number	Name	Received	Position
104	MARY E CHAMBERLIN	06/17/2024 20:06:12 PM	OPPOSE

I AM EXTREMELY CONCERNED ABOUT THE POTENTIAL IMPACTS OF THIS INTAKE TO THE HEALTH OF THE RAPPAHANNOCK RIVER AND ITS AQUATIC FAUNA.

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Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
105	ELIZABETH C LAWRENCE-COUTURE	05/17/2024 20:21:00 PM	OPPOSE

WE STRONGLY OPPOSE TO APPROVAL OF THIS APPLICATION. THE GREATEST RESOURCE OF THE
TIDEWATER REGION AND CHESAPEAKE BAY IS OUR WATER.
TO REMOVE AND RECYCLE A HUGE AMOUNT OF WATER WILL ADVERSELY EFFECT THE NATURAL AND
ECONOMIC LIVELIHOOD OF THIS REGION. THE LONG
TERM EFFECTS WILL BE DAMAGING TO ALMOST EVERY ASPECT OF LIFE IN THIS REGION.

THERE MUST BE ANOTHER WAY TO COOL DATA CENTERS WITHOUT DESTROYING OR HARMING OUR
GREATEST RESOURCE: WATER
WE STAND OPPOSED

SINCERELY - LIZ AND DENNIS COUTURE

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Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
106	NANCY ARMOUR	06/17/2024 20:58:14 PM	OPPOSE

I AM WRITING TO REQUEST A PUBLIC HEARING TO ADDRESS THE VARIOUS CONCERNS THAT HAVE BEEN RAISED REGARDING CAROLINE COUNTY WATER WITHDRAWAL APPLICATION. THE PERMIT REQUESTS APPROVAL TO PUMP WATER FROM THE RAPPAHANNOCK RIVER FOR "PUBLIC USE". I UNDERSTAND IT IS PROJECTED THAT THE GROWTH IN THE COUNTY, BOTH RESIDENTIAL AND COMMERCIAL, WILL REQUIRE ADDITIONAL WATER SOURCES. MY REQUEST FOR A HEARING STEM FROM THE FOLLOWING CONCERNS:

1. WHAT IS THE IMPACT OF REMOVING THE WATER FROM ONE SOURCE THE RAPPAHANNOCK RIVER AND DISCHARGING IT INTO THE MATTAPONI RIVER AND POLECAT CREEK? WHAT STUDIES HAVE BEEN DONE TO UNDERSTAND THE IMPACTS OF THIS ACTION? WHAT DOES THE WITHDRAWAL DO THE LEVEL OF THE RAPPAHANNOCK SINCE THE WATER WILL NOT BE DISCHARGED BACK INTO THIS ORIGINATING SOURCE?
2. WHAT CONTROLS WILL BE IN PLACE TO ENSURE THE ESTIMATED USE OF THE DAILY WATER WITHDRAWAL IS AS FORECASTED? THE FORECAST WAS COMPLETED IN 2020 AND IT IS WELL KNOWN, AND ACKNOWLEDGED IN THE PERMIT, THAT ACTUAL WATER USAGE OF A DATA CENTER IS UNKNOWN. SO, WHAT HAPPENS IF THE DATA CENTERS, OR OTHER HEAVY INDUSTRIES THAT MAY BEGIN TO OPERATE IN THE COUNTY, REQUIRE MORE OF THE WATER THAN WHAT HAS BEEN FORECASTED? HOW WILL THE RESIDENTS BE IMPACTED? WILL THE RESIDENTS BE REQUIRED TO LIMIT THEIR WATER? WILL THE DATA CENTER BE LIMITED ON THEIR WATER? WHAT CONTROLS WILL THE COUNTY PLACE ON THE DATA CENTERS TO USE TECHNOLOGIES SUCH AS CLOSED LOOP COOLING SYSTEMS TO GUARANTEE THEY WILL IDEALLY REQUIRE LESS WATER THAN CURRENTLY FORECASTED? WILL THE COUNTY LIMIT THE DATA CENTERS TO THE THREE THAT HAVE BEEN SITED IN THIS PERMIT?
3. CURRENTLY, ANOTHER DATA CENTER COMPLEX IS IN THE PLANNING STAGES IN KING GEORGE COUNTY. THAT DATA CENTER COMPLEX ALSO PLANS TO DRAW WATER DAILY FROM THE RAPPAHANNOCK RIVER. KING GEORGE COUNTY IS ALSO EXPECTED TO REQUIRE ADDITIONAL WATER SOURCES FOR THEIR RESIDENT NEEDS. WHAT HOLISTIC STUDY HAS BEEN CONDUCTED TO UNDERSTAND THE TOTAL DRAIN ON THE RAPPAHANNOCK RIVER TO DETERMINE THE ENVIRONMENTAL IMPACT OF ALL THESE DEMANDS ON THIS LIMITED RESOURCE?
4. IN THE SUMMER OF 2023, THE RAPPAHANNOCK RIVER IN FREDERICKSBURG WAS DRY DUE TO THE LACK OF RAIN AND EXTREME HEAT. WHAT LONG RANGE STUDIES HAVE BEEN DONE TO UNDERSTAND THE IMPACT OF CLIMATE CHANGE AND THE TOTAL VOLUME OF THE RIVER?
5. OTHER CONCERNS ARE RELATED TO THE ATLANTIC STURGEON, THE VISUAL IMPACT OF PROJECT AND THE OTHER ISSUES RAISED BY THE RAPPAHANNOCK TRIBE.

PLEASE DELAY THE ISSUANCE OF THE PERMIT UNTIL SOME OF THESE CONCERNS, AS WELL AS THE OTHERS THAT HAVE BEEN RAISED BY INDIVIDUALS FAR MORE KNOWLEDGEABLE THAN ME, ARE MORE ADEQUATELY ADDRESSED.

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Number	Name	Received	Position
107	LAKEISHA WILLIS	06/18/2024 07:38:19 AM	OPPOSE

I OPPOSE BECAUSE WE WOULD LIKE TO CONSERVE THE RAPPAHANNOCK RIVER AND THE HEALTHY BENEFITS IT PROVIDES. NOT DRAIN IT AND TO EVENTUALLY HARM THE WILDLIFE.

Virginia Marine Resources Commission

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Number	Name	Received	Position
108	SABINA D WEITZMAN	06/18/2024 13:50:37 PM	OPPOSE

THANK YOU FOR ALLOWING ME TO COMMENT.

IN THE 30 YEARS I'VE LIVED IN FREDERICKSBURG, I'VE BEEN AN ADVOCATE FOR THE HEALTH OF THE RAPPAHANNOCK RIVER, FIRST GETTING SERIOUSLY INVOLVED WITH THE REMOVAL OF THE EMBREY DAM HERE IN THE CITY. I AM A LONGTIME SUPPORTER OF FRIENDS OF THE RAPPAHANNOCK, AN OUTSTANDING STEWARDSHIP ORGANIZATION WHICH LED THAT DAM REMOVAL EFFORT. OVER THE YEARS, FOR HAS MADE HUGE IMPACTS THROUGH THEIR EFFORTS TO EDUCATE THE PUBLIC, MANAGE RUNOFF, RESTORE BUFFERS AND, IN RECENT YEARS, REESTABLISH PRODUCTIVE OYSTER BEDS IN THE TIDAL RAPPAHANNOCK. THE PROPOSED PROJECT SEEMS LIKE IT WOULD NEGATIVELY IMPACT THE HEALTH OF THE RIVER, PARTICULARLY DOWNSTREAM OF THE INTAKE, AND THE CHESAPEAKE BAY BEYOND.

I UNDERSTAND THE DESIRE/NEED FOR THE FOLKS IN CAROLINE COUNTY TO HAVE A MORE RELIABLE DRINKING WATER SOURCE, AND DATA CENTERS WILL NEED TO GO SOMEWHERE. HOWEVER, AS CURRENTLY CONCEIVED THIS PROJECT SEEMS ILL-ADVISED ON TWO MAIN FRONTS. FIRST - AND FRONT OF MIND AS WE FACE RECORD HEAT WITH NO RAIN FORECAST FOR AT LEAST WEEK - IS THE DEMAND FOR WATER, PARTICULARLY FOR INDUSTRIAL CUSTOMERS WHO CAN'T BE ASKED TO CONSERVE WATER IN TIMES OF DROUGHT.

SECOND, THE FACT THAT THE WATER TAKEN UP BY THE PROPOSED PIPELINE WILL NEVER RETURN TO THE RIVER IS A REAL HEAD SCRATCHER. HOW CAN THIS NOT BE CATASTROPHIC TO THE RIVER HABITATS DOWNSTREAM OF BOTH THE RAPPAHANNOCK AND THE MATTAPONI, TO SAY NOTHING OF THE PEOPLE WHOSE LIVELIHOODS DEPEND ON THEM?

I READ IN TODAY'S PAPER THAT LAND ACQUISITION BY CAROLINE COUNTY IS PROCEEDING QUICKLY AND THIS IS ALL SHAPING UP TO BE A "DONE DEAL", BUT I IMPORE THE DEQ TO PUT THE BRAKES ON. THIS PROJECT WILL HAVE SUBSTANTIAL IMPACTS AND SUBSTANTIAL COSTS TO THE ENVIRONMENT, AND WE NEED TO BE HONEST ABOUT WHAT THEY ARE. WE NEED TO TRULY UNDERSTAND AND DISSEMINATE THE IMPACTS SO AN INFORMED CHOICE IS POSSIBLE.

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Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
109	HILL B WELLFORD JR.	06/17/2024 21:12:07 PM	OPPOSE

PLEASE READ THE LETTER OF OPPOSITION I WANT TO SUBMIT

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=944

Hill B. Wellford, Jr.
1909 Kendalls Road
Chance, Virginia 224348
June 17, 22438

June 17, 2024

Mr. Eric Seavey
Manager – Water Withdrawal Permitting
Virginia Department of Environmental Quality
PO Box 1105
Richmond, VA 23218
Via email

Mr. Randy Owen
Manager – Habitat Division
Virginia Marine Resources Commission
Building 96
380 Fenwick Road, Ft. Monroe, VA23651
Via mail and submission to website link

Re: DEQ Case # 20-0514 and VMRC Case # 2020-0514. Caroline County's Proposed Permit to Take Millions of Gallons of Water on a daily basis from the Rappahannock River

Dear Mr. Seavey and Mr. Owens:

I am writing to express my strong opposition to the permit tentatively approved by DEQ in the above reference matter: DEQ Case #20-0514 and VMRC Case #2020-0514.

The Rappahannock is saltwater at its mouth, turning brackish as it nears Tappahannock, and is classified as freshwater after it passes under the Downing bridge. Large freshwater marshes line its shores as the river proceeds north. The ecological importance of the freshwater stretches of the Rappahannock are well documented by DCR, DWR, VIMS and the Center for Conservation Biology. Many species of waterfowl and other fauna, both migratory and native, depend on the freshwater plants that only grow in the marshes of this delicate brackish-freshwater environment. These plants, such as wild rice, bur marigold, arrow arum, arrowhead, smartweed, and many others produce seeds and tubers that are critical food sources for waterfowl and other aquatic species. The unspoiled waters of the Rappahannock, its freshwater marshes and the habitat and food sources the marshes provide are the reasons we have such an abundance of wildlife in the lower Rappahannock.

The Rappahannock is one of Virginia's most pristine rivers, a river that supports one of the highest concentrations of Bald Eagles in Northern America, a winter migration area for Tundra Swans, Canada Geese, and many species of ducks, and a spring and summer migration area for Osprey, hawks, and so many species of shore birds and songbirds that it has been described as one of the important bird areas on the East Coast. It is also a river of great historical significance,

explored by Captain John Smith in 1608, and where the Rappahannock Tribe lived for hundreds of years before the first English settlers arrived. It is a river that has played a role in every phase of our nation's history including Bacon's rebellion in 1676, the Leedstown Resolves 1766, the American Revolution in 1775, the War of 1812, the Civil War 1861-1865, and the Steamboat Era from 1813 to 1937 in which steamboat wharfs were located at Port Royal and Haymont in Caroline and at Port Conway and Hopyard in King George.

The upper reaches of the Rappahannock above Fredericksburg were designated a "Scenic River" of the Commonwealth several years ago. In 2021, the General Assembly followed DCR's determination that the lower reaches of the river from Fredericksburg to the downriver borders of Essex and Richmond counties be included in that designation because of its scenic and pristine qualities, its ecological importance, and historical significance. The action was signed into law on July 1, 2021. "Scenic River" certification of this stretch of the lower Rappahannock by the Commonwealth, which was long overdue, was applauded and celebrated by the counties of the lower Rappahannock and the many conservation organizations, both regional and national, that have a significant presence in our tidewater area. This includes the U.S. Fish & Wildlife Service, Chesapeake Conservancy, Chesapeake Bay Foundation, Scenic Virginia, the Nature Conservancy, Friends of the Rappahannock, and the Rappahannock Tribe.

Conservation organizations and members of the public in Virginia rely on environmental laws and regulations of our state and federal government and the agencies that are duty bound to enforce them to protect our rivers and the many species of aquatic life our rivers sustain. In recent years, we have faced many assaults on our natural resources, and we have watched abuses take place that have not been adequately addressed for economic and political reasons. The latest threat is the unprecedented expansion of data centers, which are private business entities, that require millions of gallons of water daily to cool their sensors. With the blessing and encouragement of Virginia's Governor, these data centers are rapidly expanding from the counties of Northern Virginia to other areas of our state, where they are now targeting the freshwater areas of our tidal rivers. Data centers are now being proposed on the Rappahannock, the Pamunkey, the North Anna, and elsewhere. The environmental agencies of our state and federal government, that are supposed to be the public's watchdogs, until now have done little to address the environmental damage data centers are causing.

The Caroline County water intake proposal is a test case for our state which, if allowed, will set a **dangerous precedent** that is far reaching. The public needs to be clearly informed as to what is happening.

In this case, the language of the draft permit itself is clear, but buried in the application documents appended to it is the real intention of DEQ. The Permit states that the "**permitted withdrawal will be used to provide a municipal public water supply**" and that "**Other uses are not authorized by this permit.**" The Special Conditions of the draft permit are equally clear. Part I A (Authorized Activities) and D (Surface Water Withdrawal) state that "**surface water withdrawals from the Rappahannock River**" are "**authorized under this permit to be used for public water supply.**" Nowhere in the Permit provisions or in the Project Summary DEQ has issued is there any disclosure of Caroline's intention to earmark millions of gallons of water for the industrial use of data centers. In fact, **there is no mention of data centers at all** in

the Permit and Project Summary documents or even in the Public Notices DEQ and VMRC have issued in this case. Yet that is the use of our public waters that DEQ has authorized. This is clearly an improper use of the water which should not be allowed.

It is important to be absolutely clear why DEQ's and VMRC's failure to disclose this is so disturbing to me and other members of the public. Data centers are clearly not public service entities, and they offer no public services to the residents of Caroline County or to any other municipality, and certainly not to the members of the public who are concerned about the environmental damage data centers are causing to our beloved Commonwealth. Amazon is an out-of-state corporate enterprise existing for the benefit of its executives and shareholders. It clearly does not perform any "**municipal public water supply**" need. It is seeking to withdraw massive amounts of freshwater from the Rappahannock for its own industrial manufacturing use because that is the cheapest way to cool its sensors so it can reduce its operating expenses. I consider it to be disingenuous for Caroline and DEQ to classify this use of the Rappahannock's water as a **municipal public water supply use**. Yet that is what DEQ has done in this case.

Until DEQ issued its draft permit to Caroline and DEQ's "Rationale" documents were discovered, Caroline's intended use of freshwater from the Rappahannock for the industrial purpose of cooling the sensors of data centers was kept under the radar. To this day, the three data centers have only been identified by fictitious place holder names, "Project Tract, Project Clean Arc, and Project Tricycle", with the water requirements of the three based on "estimations" by Caroline derived from its review of general "industry literature and published research". (Permit Decision Rationale, pages 9-10). According to news reports, Amazon does not reveal its water use requirements. Notwithstanding the vagueness and obvious unreliability of the information Caroline submitted, DEQ appears to have deviated from its requirement that hard "justification" data be submitted to support the actual need for the volume of surface water requested. Even now DEQ has not disclosed the real names of the data centers and their actual water projections. The volume of water they require may not even be known by DEQ.

I have watched the expansion of data centers in Northern Virginia and am aware of the huge volume of water they consume and have observed the environmental damage they are causing. Now they have moved south down the 95 corridor and are clearly targeting areas near or adjacent to the freshwater stretches of our tidal rivers. Data centers make no secret of the fact that they want freshwater from our rivers to cool their data sensors because it is the cheapest way to accomplish this. A single mid-sized data center may use well over 500,000 gallons of water a day and a large data center can require much more. If data centers must use some other means to cool their sensors, their operating costs are greater, and their profit is less. I don't think it is hard to understand what is happening here. A recent article in the Fredericksburg Free Lance Star on March 13, 2024 described a meeting where Governor Youngkin and Amazon Web Services met with representatives from Caroline, Spotsylvania, Stafford, and Louisa to announce that Amazon will invest billions of dollars in Virginia as part of its expansion of data centers. The article went on to say that the Governor's announcement "positions the Fredericksburg region as the new epicenter of data centers statewide." The article also quoted Jeff Black, chairman of Caroline's Board of Supervisors, as saying that Amazon would be investing \$6 billion in Caroline which Black said was "huge news" and a "game changer."

<https://www.fredericksburgfreepress.com/2024/03/13/youngkin-aws-announce-data-center-investment-in-fredericksburg-region>. This announcement obviously predates by several weeks DEQ's decision and Notice in this case pertaining to the Caroline water intake permit DEQ has tentatively approved. Unfortunately, the timing of the Governor's announcement and Jeff Black's comments infuse the DEQ decision process with the appearance of a conflict of interest.

I have set forth the factual chronology that I think is necessary to understand the objections I and many others are making to DEQ's tentative approval of the water intake application of Caroline County. My objections go not only to the deficiency of the Notice to the Public that DEQ and VMRC have issued and the failure to disclose the real use of the millions of gallons Caroline is proposing to withdraw, but also to DEQ's failure to adequately address the impact of its decision on the Rappahannock, the aquatic species of life that live in and use its pristine waters, and on the residents in the counties that border the Rappahannock and other members of the public who are users of its water. I won't burden you with repeating the objections filed by the Essex County Conservation Alliance or by my wife, Alice S. Wellford, except to say that I have read and fully endorse the opposition statements and each of the objections they have raised and ask that you incorporate them into the objections I am submitting.

In this letter, however, I believe it is important to emphasize several critical impact concerns that I think are particularly important. The first is that the impact of water intakes on a tidal river can never be adequately measured by looking at a single impact. The **Cumulative Impact of all water intakes existing, planned, or that can be reasonably anticipated**, has to be addressed. This is clearly true at a time when data centers are targeting our tidal rivers and Virginia's Governor has applauded their expansion. In this case, DEQ did not consider the cumulative impact on the Rappahannock notwithstanding the recommendation to do so by VIMS and the fact that Amazon plans to withdraw water from another intake in the same freshwater stretch of the river.

I also wish to express my concern over DEQ's failure to adequately address the **increasing salinity** change that is taking place due to **climate change** which has already resulted in significant sea-level rise and increases in the salinity in the freshwater stretches of the river downstream of the Caroline's water intake site. Projections of how the salinity will increase during the period for which the intake is licensed are obviously necessary. Here, **DEQ has approved a 15-year permit allowing continuous withdrawal** with the opportunity for Caroline to seek an increase in the volume based on its projected need. In the climate change conditions that our Chesapeake region is experiencing, a continuous withdrawal permit of freshwater for an extended period is irresponsible. DEQ's priority should be on the impact on the river and the users of freshwater that will be affected by withdrawals upstream. DEQ needs to read the report entitled "the Impact of Climate Change on Virginia's Coastal Areas" by the Virginia Academy of Science, Engineering and Medicine which was commissioned by Virginia's General Assembly.

Another concern that I think should be emphasized is that the draft report places **no time of year restrictions** to protect spawning fish during the actual operation of the proposed intake. The permit recognizes that time of year restrictions are needed during the construction of the permit but ignores this need during the period it is operating. There should be hiatus periods required

during spawning seasons and during drought periods. There should also be a requirement for **storage of water** from other sources by Caroline to meet its needs and a prohibition on inter-basin transfer of Rappahannock water. In addition, there should be a requirement for **mitigation** of harm to all users of the river for damages caused by the operation of the water intake structure.

I have previously mentioned my concern over the **precedent** that DEQ's decision in this case may set and the message it sends to data centers and other business who now will view the waters of our states as assets they can exploit to serve their economic objectives. If Caroline County is allowed to draw water to cool the servers of a data center, what would stop other counties bordering the freshwater stretches of our rivers from seeking permits to do the same thing?

My message to DEQ and VMRC is straightforward. **Do your job, Protect the Rappahannock, Protect the fish and other species of aquatic life the Rappahannock supports. Protect all waters of the Commonwealth.** This requires that water intakes, particularly those in our tidal waters where anadromous fish and other protected species of aquatic life are present, not be used to supply water for an industrial manufacturing use as proposed by Caroline County. It is time that DEQ and VMRC do something to stop the depletion of the shad, herring, striped bass, and sturgeon that spawn in our tidal waters. Until now, the Commonwealth has turned a blind eye to the fact that water intakes "grandfathered" years ago from existing regulations are allowed to continue to operate causing massive mortality to the fish eggs and larvae of protected species of anadromous fish. As a consequence, the number of shad, herring, striped bass, and sturgeon that spawn in our tidal rivers have been dangerously depleted. Aquatic species of life in our rivers have no state advocate if DEQ and VMRC do not protect them. The Commonwealth should not let data centers or any other manufacturing facility add to the burden these protected species are already under by targeting the freshwater sections of the state's tidal rivers.

It is important to add an additional reason why the draft permit should not have been issued by DEQ. On December 11, 2023, the **Joint Legislative Audit and Review Commission (JLARC)**, authorized a study of the impact data centers are having on the Commonwealth. The JLARC study, prompted by growing public concerns, specifically includes the "impacts of the data center industry on Virginia's natural resources." Given the pendency of the JLARC study, and the volume of letters from the public opposing Caroline's draft permit which both DEQ and VMRC have acknowledged they have received, the appropriate action DEQ should take is to rescind the draft permit issued to Caroline. If DEQ is unwilling to take that action, at a minimum it should establish a moratorium on the processing of the Caroline intake and any other water intake application that involves supplying water to a data center until such time as the JLARC study can be issued and fully evaluated by the General Assembly.

For the reasons stated in this letter, I respectfully request that the draft permit issued to Caroline be rescinded, and that a public hearing be held by DEQ in case #20-0514. If the draft permit is not rescinded and the case is forwarded for further consideration by VMRC in case #2020-0514, I request that a public hearing also be scheduled by VMRC and that the notice of that hearing by VMRC be posted in newspapers that include the local papers of the lower Rappahannock.

I close this letter with a final reference to a legal doctrine that applies to all decisions your agencies make. It is the Public Trust Doctrine. It serves as a reminder that the tidal waters, tidelands, and wildlife resources of the Commonwealth are held in trust by the State for the benefit of the public. They are not assets that can be marketed to serve Caroline County's business goals or for any other purpose.

Thank you for your consideration of the issues and concerns I have expressed.

Sincerely,

Hill Wellford, Jr.
(804) 347-3166
Hbw2@mac.com

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
110	JANE R KIZER	06/17/2024 21:41:44 PM	OPPOSE

DEAR SIRS,

I OWN 2 PROPERTIES ON THE RAPPAHANNOCK RIVER BELOW THE PROPOSED WITHDRAWAL SITE ON THE GARRETT FARM. I'M CONCERNED THAT THIS PROPOSED LARGE WITHDRAWAL OF WATER WILL NEGATIVELY IMPACT ME AND MY PROPERTY DIRECTLY. MY FARM'S MARSHES AND THE IRRIGATION WATER FOR CROPS WILL BE NEGATIVELY IMPACTED BY RISING SALINITY LEVELS. THE RIVER WATER IN FRONT OF MY HOME WILL BECOME MORE SALTY AND ALLOW CHANGES IN HABITAT TO CERTAIN SPECIES. WHEREAS WE RARELY HAVE JELLYFISH, A CHANGE IN THE SALINITY LEVELS WILL ALLOW THEM TO MOVE UP RIVER IMPACTING MY AND MY NEIGHBORS' ENJOYMENT OF THE WATER AND HURTING OUR TOWN'S ECONOMY. MY HOME IS NEAR TAPPAHANNOCK.

I OPPOSE THE DRAFT PERMIT IN ITS CURRENT FORM. THIS HUGE INTAKE COULD ALSO NEGATIVELY IMPACT THE ATLANTIC STURGEON. THERE IS NO INDICATION THIS IMPACT IS BEING CONSIDERED. TRANSFERRING WATER FROM ONE RIVER BASIN TO ANOTHER WILL DAMAGE ECOSYSTEMS ALSO. THIS NEED FOR WATER IS BEING DRIVEN BY THE DESIRE OF CAROLINE CO. OFFICIALS TO ATTRACT MORE DEVELOPMENT AND INDUSTRY. RESIDENTIAL NEEDS ARE NOT NEARLY AS GREAT.

I'M AWARE THAT OTHER NEARBY COUNTIES ARE CONSIDERING ACTION ALSO. THE STATE OF VA NEEDS TO REAFFIRM ITS SUPPORT OF THE FARMERS, FORESTERS, AND WATERMEN OF THE STATE AND NOT BE SO GREEDY FOR THE REVENUE OF TOO MUCH DEVELOPMENT AND INDUSTRY. MORE BALANCE IS NEEDED.

THE NEXT STEP SHOULD BE A PUBLIC HEARING FOR ALL INTERESTED CITIZENS.

SINCERELY,
JANE KIZER
20037 TIDEWATER TRAIL
TAPPAHANNOCK, VA 22560
JKIZER1130@GMAIL.COM
804-314-0687

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
111	NICKETTI HENSBY	06/17/2024 22:17:05 PM	OPPOSE

THIS A VERY POOR SOLUTION TO A PROBLEM THAT SOUNDS VERY SUSPECT AND COULD DO TO THE MARINE LIFE. IT'S ALARMING THAT IT'S EVEN A CONSIDERATION.

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Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
112	ANN MILLER	06/17/2024 22:22:53 PM	OPPOSE

WETLANDS DISRUPTION.

FARMLAND DAMAGE.

WILDLIFE HABITAT DISTURBANCE.

UNFAIR WEIGHT BEING AWARDED TO ONE COUNTY'S COMMERCIAL NEEDS OVER THE HEALTH AND LIFESTYLE OF ANOTHER.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
113	EDWIN T UPSHAW IV	06/18/2024 01:49:14 AM	OPPOSE

I OPPOSE THIS PROJECT BECAUSE YOU WILL BE SLOWLY THE FLOW OF THE RAPPAHANNOCK RIVER AND INCREASING THE FLOW IN THE MATTAPONI RIVER. I OPPOSE THIS PROPOSED PROJECT BECAUSE YOU ARE NOT PUTTING THE WATER BACK IN THE RAPPAHANNOCK, WHERE IT CAME FROM. I OPPOSE THE PROJECT BECAUSE CAROLINE COUNTY IS TRYING TO TAKE THE LAND NEED FOR THE PUMPING STATION BY EMINENT DOMAIN WHILE IT IS STILL IN PUBLIC COMMENT PERIOD AND IS ONLY A PROPOSED PERMIT. I OPPOSE THIS PROJECT BECAUSE THE WATER IS REALLY NEEDED TO ACCOMMODATE DATA CENTERS. IF THE WEST SIDE OF THE COUNTY DOESNâ€™T HAVE ENOUGH WATER THEN GROW AND DEVELOPMENT SHOULD BE LIMITED FOR BOTH BUSINESSES AND NEW RESIDENTIAL HOMES. I AM ALSO CONCERNED ABOUT SALT WATER MOVING INLAND DURING A DROUGHT. I AM CONCERNED THAT DURING A DROUGHT WHEN WATER IS LOW, MORE WATER WILL BE NEEDED WHICH WILL AMPLIFY SALT WATER MOVEMENT AND INTERRUPT AND SLOW RAPPAHANNOCK RIVERâ€™S FLOW MORE. I AM ALSO CONCERNED ABOUT IRRIGATION ON FARMLAND WITH SALT WATER. WHO PROPOSED THIS PROJECT? WHO STANDS TO MAKE A BUNCH OF MONEY ON THIS PROJECT? WHO WILL DO CONSTRUCTION? WHY CANâ€™T YOU BUILD A LAKE OR RESERVOIR? OR SEVERAL SMALL LAKES? OR PULL WATER FROM AN OLD QUARRY. I OPPOSE THIS PROJECT BECAUSE I BELIEVE IT WILL CAUSE PROBLEMS IN BOTH RIVERS. WHAT ABOUT ENDANGERED SPECIES NEAR THE WATER INTAKE? PLEASE DO NOT ISSUE THIS PERMIT. I THINK IT SHOULD HAVE A PUBLIC HEARING ALSO.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
114	CORY GARRETT	06/18/2024 01:29:25 AM	OPPOSE

THIS PROJECT CAUSES CONCERN ON MANY DIFFERENT LEVELS. THE GREATEST ONE BEING THE POTENTIAL NEGATIVE IMPACT TO THE FRESHWATER TIDAL AREA OF THE RAPPAHANNOCK RIVER. CAROLINE OFFICIALS KEEP PROMOTING THE FACT THAT THIS WITHDRAWAL IS LESS THAN 1% OF TOTAL RIVER FLOW. WHILE THIS FACT IS TRUE I DO NOT BELIEVE IT PAINTS THE WHOLE PICTURE. THE ONE PERCENT OF FLOW FIGURE IS ARRIVED AT USING HISTORICAL ANNUAL FLOWS. THIS ANNUAL AVERAGE FLOW INCLUDES TIMES WHEN THE RIVER FLOODS AS WELL AS TIMES OF DROUGHT. WE COULD HAVE ABUNDANT INFLOW IN ONE SEASON OF THE YEAR FOLLOWED BY EXTREMELY LOW FLOW LEVELS ONLY MONTHS LATER. WHILE A TIME OF HIGH FLOW WILL HELP TO KEEP SALT WATER INTRUSION AT BAY, A LARGE PORTION OF THE FRESH WATER INFLOW AT HIGH FLOW TIMES OF THE YEAR SIMPLY GOES OUT TO THE CHESAPEAKE BAY AND MIXES WITH ALREADY BRACKISH WATER. THIS LOWERS THE SALINITY LEVEL IN THE LOWER RAPPAHANNOCK AND CHESAPEAKE BAY, BUT DOESN'T KEEP THIS SLIGHTLY LESS BRACKISH WATER FROM PUSHING ITS WAY BACK UPRIVER AS SOON AS THE TIDE CHANGES AND FLOWS DECREASE. THE 13.9 MGD MAX WITHDRAWAL AMOUNT IN THIS DRAFT PERMIT EQUATES TO 21.5 CUBIC FEET PER SECOND. AS I'M WRITING THIS, THE FRESHWATER INFLOW MEASURED AT THE FALL LINE IN FREDERICKSBURG INTO THE TIDAL RAPPAHANNOCK IS LESS THAN 300 CUBIC FEET PER SECOND. CURRENTLY A MAX WITHDRAWAL DAY WOULD BE SLIGHTLY OVER 7% OF THE FRESHWATER INFLOW MEASURED AT THE FALL LINE. LAST YEAR THE RAPPAHANNOCK SPENT SIGNIFICANT TIME WITH FRESHWATER INFLOWS BELOW 100 CUBIC FEET PER SECOND. EVEN DROPPING TO HALF THAT AMOUNT FOR A STRETCH. AT THOSE INFLOW RATES A MAX WITHDRAWAL DAY WOULD REPRESENT 21.5% AND AN ASTOUNDING 43% RESPECTIVELY. WHILE THERE ARE OTHER INTAKES ON THE RAPPAHANNOCK THAT ALSO PROVIDE TREATED WATER DISCHARGES BACK TO THE RIVER TO HELP MITIGATE THEIR IMPACT, THIS PROJECT WOULD NOT DO SO. THESE FACTS LEAD ME TO THE FOLLOWING QUESTIONS:

1. WHAT ARE THE ANNUAL WITHDRAWAL TOTALS FOR THE FRESHWATER SECTION OF THE TIDAL RAPPAHANNOCK CURRENTLY?
2. WHAT ARE THE TOTAL WITHDRAWAL AMOUNTS CURRENTLY PERMITTED, BUT NOT OPERATIONAL ABOVE THE FALL LINE? THESE FIGURES SHOULD BE CONSIDERED AS THEY WOULD FURTHER DECREASE CURRENT INFLOWS.
3. UNDER VIRGINIA LAW RIPARIAN OWNERS IN THE TIDAL AREA CAN CURRENTLY DRAW UP TO 60 MILLION GALLONS PER MONTH WITHOUT APPLYING FOR A PERMIT. WOULD THIS WITHDRAWAL HAVE ANY FUTURE NEGATIVE IMPACT ON THOSE WHO HAVE A BY LAW RIGHT TO USE WATER CURRENTLY? IS THE AMOUNT OF WATER THAT RIPARIAN OWNERS BY LAW COULD DRAW OUT WITHOUT A PERMIT, BUT AREN'T CURRENTLY TAKEN INTO CONSIDERATION? COULD THIS WITHDRAWAL HAVE A NEGATIVE IMPACT ON CURRENT RIPARIAN RIGHTS AND WITHDRAWALS? IF NO, WHAT ASSURANCE CAN WE HAVE OF THIS ANSWER? WHAT WILL THE IMPACT BE FOR THOSE IRRIGATING DOWNSTREAM THAT ALREADY WRESTLE WITH HIGH SALINITY LEVELS IN LOW FLOW TIMES WHEN THEY HAVE TO STOP IRRIGATING SOONER THAN PREVIOUSLY? THERE SHOULD BE SOME METRIC IN PLACE TO ACCURATELY QUANTIFY THE NEGATIVE IMPACT THIS WITHDRAWAL WILL HAVE, HOWEVER BIG OR SMALL, DEPENDING ON THE YEAR AND MITIGATE ACCORDINGLY.

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THERE IS A PUSH CURRENTLY TO MOVE AWAY FROM RELIANCE ON GROUND WATER DUE TO SHRINKING AQUIFER LEVELS. WHILE THIS PUSH TO NOT FURTHER DETERIORATE OUR GROUNDWATER LEVELS IS ADMIRABLE, I FEAR OUR RIVERS BEING HELD UP AS THE SOLUTION TO THIS PROBLEM OF OVERBURDENING ON ONE NATURAL RESOURCE WILL NOT FIX THE PROBLEM OF OVERBURDENING NATURAL RESOURCES, JUST SIMPLY MOVE THE ISSUE FROM THE GROUNDWATER TO THE RIVERS. WHAT HAPPENS WHEN WE OVERBURDEN THEM TOO? WHILE CAROLINE OFFICIALS TOUT THE LESS THAN 1% OF ANNUAL FLOW FIGURE, THEY ALSO QUICKLY SAY TIME IS OF THE ESSENCE. THAT WE MUST "GET OUR STRAW IN THE WATER WHILE WE CAN."

THE CURRENT DRAFT PERMIT STIPULATES THAT A CONDITION OF THIS PERMIT IS FOR CAROLINE TO HAVE A DROUGHT MITIGATION PLAN IN PLACE WITH 180 DAYS OF THE PERMIT BEING ISSUED. I SINCERELY HOPE FOR ALL THE ABOVE REASONS MENTIONED AND QUESTIONS ASKED THAT THIS PERMIT IS NOT ISSUED, BUT IN THE EVENT THAT IT IS, FOR THE SAFETY OF OUR WATERSHED THIS DROUGHT MITIGATION PLAN MUST BE REVIEWED CRITICALLY BEFORE ANY PERMIT IS ISSUED. THERE IS CURRENTLY NO REQUIREMENT FOR A RESERVOIR THAT I'M AWARE OF. AT THE VERY LEAST THIS SHOULD BE REQUIRED TO ALLOW FOR PUMPING WATER ONLY DURING TIMES WHEN RIVER FLOW RATES ARE SUCH THAT THEY CAN SUPPORT THE REMOVAL WITH NO NEGATIVE IMPACTS TO THOSE CURRENTLY USING THIS RESOURCE, THOSE CURRENTLY PROTECTED BY LAW TO USE IT IN THE FUTURE, AND THE WILDLIFE UNIQUE TO OUR FRESHWATER MARSHES.

AGAIN, FOR ALL THE ISSUES LISTED ABOVE ALONG WITH THE FACT THAT THIS WOULD BE AN INTER BASIN TRANSFER OF WATER, I DO NOT SUPPORT PROPOSED INTAKE.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
115	JOSHUA RELICK	06/18/2024 03:14:18 AM	OPPOSE

DEAR SIR OR MADAM,

I AM WRITING TO OPPOSE THE WITHDRAWAL OF UP TO 13.9 MILLION GALLONS PER DAY FROM THE RAPPAHANNOCK RIVER VWPP 20-0514 . I BELIEVE THAT THE IMPACT ON THE SALINITY AND REDUCED WATER FLOW DESERVES MORE STUDY BEFORE THE PERMIT APPLICATION CAN BE PROPERLY ANALYZED. SPECIES SUCH AS THE ATLANTIC STURGEON, RIVER HERRING, AMERICAN SHAD, AND STRIPED BASS RELY ON THE RAPPAHANNOCK RIVER FOR THEIR SURVIVAL AND MAY BE NEGATIVELY IMPACTED BY THIS PROJECT. FURTHERMORE, THE IMPACT OF PUTTING UP TO 13.9 MILLION GALLONS PER DAY BACK INTO THE MATTAPONI RIVER HAS RECEIVED EVEN LESS STUDY AND DESERVES MORE RESEARCH BEFORE A PERMIT FOR WITHDRAWAL OF THE WATER FROM THE RAPPAHANNOCK IS GRANTED.

I REQUEST THAT A PUBLIC HEARING BE HELD REGARDING THE MATTER.

SINCERELY,
JOSHUA RELICK

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
116	BEN D SHIRIAK	06/18/2024 04:32:45 AM	OPPOSE

OPPOSE

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=945

BEN D. SHIRIAK
P. O. Box 862
TAPPAHANNOCK, VA 22560
804.443.4165
BENSHIR@AOL.COM

June 12, 2024

Randy Owen, Habitat Manager
VA Marine Resources Commission
Building 96
380 Fenwick Road
Ft. Monroe, VA 23651
Eric.Seavey@deq.virginia.gov

Eric Seavey, Manager
Water Withdrawal Permitting
VA Department of Environmental Quality
P. O. Box 1105
Richmond, VA 23218
Randy.Owen@mrs.virginia.gov

Re: JPA #2020-0514
VWP #20-0514
Caroline County: Application to Withdraw Water from Rappahannock River

Dear Sirs:

Caroline County seeks your approval to remove as much as 14 million gallons of water daily from the Rappahannock River. You should deny approval because:

1. There is a gross mismatch between actual consumption (600,000 to 700,000 gallons per day (GPD) and anticipated drawdown (up to 14,000,000 GPD). This gross mismatch means that the County has something else in mind besides serving its existing customers. Data centers? Crypto-mining?

2. The County has done a poor job of obtaining water from other sources:

a. Lake Caroline stores over one billion gallons of water and is fed by numerous sources. Sending 2,000,000 GPD to Caroline County would not be a burden.

b. Ft. Walker has 3,000,000 GPD available. In the early days of World War 2, the Federal government took 77,000 acres of Caroline County farmland and paid its owners extremely low prices. The Federal government has a moral duty to give something back to Caroline County.

c. To the south, Essex, King and Queen, and King William Counties border

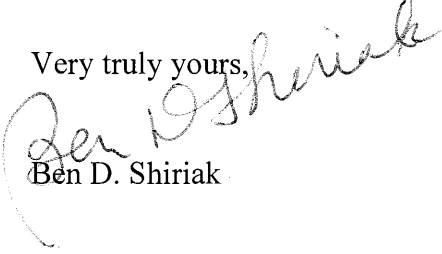
BEN D. SHIRIAK
P. O. BOX 862
TAPPAHANNOCK, VA 22560
804.443.4165
BENSHIR@AOL.COM

Caroline, **which has made no attempt to obtain water from them.** For example, the northwest section of Essex County is a crazy quilt of rivers, streams, marshes, swamps, and ponds. Brindle Mill Pond consists of 27 acres. Baylor's Pond, 44. Surely, Essex could contribute a substantial amount of water to Caroline.

3. Removing 14 million GPD from the Rappahannock will increase the size of the brackish area, thereby increasing the likelihood of vibrio bacteria, which can, to put it simply, kill infected victims. Do you want to see a headline: "Vibrio Kills Baby?"

4. Just as the Federal government land-grabbed Caroline County in the 1940s, major world corporations will land-grab and river-grab it if approval is granted. Do you really want to be complicit?

Very truly yours,


Ben D. Shiriak

BDS/kk
By email and regular mail

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
117	BETSY B WASHINGTON	06/18/2024 04:34:26 AM	OPPOSE

OPPOSE

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=946

Randal D. Owen
Chief, Habitat Management Division
380 Fenwick Road, Bld. 96
Fort Monroe, VA 23651
757-504-6993

June 11, 2024

Dear Mr. Owen:

Subject: Re: Opposition to VDEQ'S PERMIT AUTHORIZING CAROLINE COUNTY'S WATER INTAKE APPLICATION VMRC JPA #2020-0514/DEQ VWP #20-0514

I am writing to express my strong opposition to VDEQ's permit authorizing Caroline County's Water Intake Application to remove millions of gallons from the Rappahannock River each day. I have retired to Northern Neck and now spend my retirement advocating and volunteering for the protection of the Bay and its tributaries, especially the Rappahannock River. I also worked professionally in positions as a fisheries biologist and later training Sustainable Landscape Designers and communities to protect the shoreline and health of the Chesapeake Bay Rivers. For many years I worked with larval fishes studying the mortality rates and impacts of these fish in water intake sites in nearby states. It was very difficult to see the extreme decline in so many iconic fishes such as striped bass, shad, herring, and sturgeon. After years of abuse, threatened anadromous fishes are finally making a return and are documented to be spawning in the Rappahannock River, a testament to its health and the hard work of many advocacy groups. This recovery is a huge victory for our state and the health of our watershed and yet VDEQ has tentatively issued a permit that puts all of this in extreme jeopardy.

The Rappahannock River has long been recognized as a SCENIC River and a pristine river with natural marshes and freshwater tidal marshes that sustain a productive fishery, waterfowl, and healthy watershed. It draws thousands of tourists and retirees like me that devote their time to protecting these precious natural resources. It is even more infuriating to know that the water is not being used for public drinking water as stated in the permit, but that millions of gallons will be used for data centers that are already decimating many thousands of acres of rural land across Virginia. And how can VDEQ and potential VMRC propose discharging this water in the Mattaponi, and entirely different watershed, counties away. This is an insult to every Virginian and is a tragically short-sighted and a huge mistake. It is an outrage to every Virginian.

It is inconceivable to me that VDEQ and VMRC which are mandated under Virginia's Public Trust Doctrine to manage the natural resources of Virginia 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 would even consider a proposal like this much less issue a permit. They are violating that public trust for the sake of commercial interests, not those of Virginians. The value of the waters of the Rappahannock, healthy fisheries, plentiful freshwater

would be severely harmed by the withdrawal of millions of gallons of water from Caroline County.

And what about the Counties downstream which will be dramatically and negatively affected by this disastrous proposal? Where are our rights, the rights of our fishing industry, recreational fisheries, farmers, and the flora in tidal and freshwater marshes that are safeguarding our shorelines, preventing erosion and sedimentation and protecting properties from rising water levels, rising salinity, and increased flooding?

Please reject this devastating proposed permit and deny this egregious violation of the Public Trust. Virginians like me rely on agencies like VDEQ and VMRC to protect our natural resources and magnificent rivers like the Rappahannock. Please, reject this permit, protect our river, natural resources and our tourism, and Virginia citizens that depends on a vibrant, healthy and scenic river.

We are counting on you to do the right thing for Virginians and for our future. Please schedule a public hearing so citizens like me can have input and a voice in protecting our irreplaceable and precious watershed.

Sincerely,

Betsy B. Washington
379 Waterbury Rd.
Kilmarnock, VA 22482

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
118	ANN C EICHENMULLER	06/18/2024 07:59:04 AM	OPPOSE

THIS PROJECT PROPOSES PERMANENTLY REMOVING 13.9 MILLION GALLONS OF WATER PER DAY FROM THE RAPPAHANNOCK RIVER. FOR A LITTLE VISUAL PERSPECTIVE, THE AVERAGE INGROUND POOL HOLDS 20,000 GALLONS OF WATER. THE AVERAGE LARGE MUNICIPAL WATER TOWER HOLDS ABOUT A MILLION GALLONS OF WATER. THIS PROJECT WILL TAKE THE EQUIVALENT WATER OF NEARLY 700 INGROUND POOLS OR 14 MUNICIPAL WATER TOWERS FROM THE RIVER EVERY SINGLE DAY. HOW CAN WE CONSIDER SUCH A PROJECT WITHOUT A COMPREHENSIVE STUDY OF ITS POTENTIAL EFFECTS? YET THE PROPOSED PROJECT HAS PROVIDED NONE OF THE NECESSARY RESEARCH TO ESTABLISH ITS EFFECTS ON THE RAPPAHANNOCK RIVER, INCLUDING BUT NOT LIMITED TO:

- 1 CHANGES IN WATER SALINITY CAUSED BY THE REMOVAL OF MORE THAN 13 MILLION GALLONS OF FRESHWATER PER DAY
- 2 POTENTIAL IMPACTS ON SPAWNING GROUNDS OF ATLANTIC STURGEON
- 3 POTENTIAL IMPACTS ON OTHER WILDLIFE, INCLUDING BALD EAGLES
- 4 POTENTIAL IMPACTS ON DOWNSTREAM FISHERIES AND MARINE HABITATS SUCH AS OYSTER BEDS
- 5 DAMAGES TO HOUSING VALUES, LOCAL ECONOMIES, LOCAL INDUSTRY, AND TOURISM THROUGHOUT THE NORTHERN NECK THAT MAY RESULT FROM THIS PROJECT
- 6 HOW A PROJECT LIKE THIS WILL BE AFFECTED BY WARMING WATER TEMPERATURES, DOCUMENTED SEA LEVEL RISE, OR PROLONGED DROUGHT IN THE WATERSHED, AND HOW FRESHWATER REMOVAL ON THIS SCALE COULD EXACERBATE ANY RIPPLE EFFECTS THESE CONDITIONS MIGHT HAVE ON SALTWATER INTRUSION INTO GROUNDWATER AQUIFERS

IN ADDITION TO THESE CONCERNS, THERE HAS BEEN WHAT APPEARS AS A LACK OF TRANSPARENCY ABOUT THE PURPOSE BEHIND THIS PROJECT, NAMELY A DATA CENTER. THE ENERGY AND WATER NEEDS FOR SUCH A FACILITY ARE IMMENSE. NUMEROUS ARTICLES HAVE BEEN PUBLISHED ABOUT DATA CENTERS'™ STRAIN ON THE POWER SUPPLY IN NORTHERN VIRGINIA. IS THIS WHAT WE WILL FACE? WHAT ADDITIONAL INFRASTRUCTURE WILL NEED TO BE PROVIDED OR UPGRADED FOR THE CAROLINE COUNTY DATA CENTER, AND WHERE IS THE RESEARCH AND ANALYSIS OF THOSE IMPACTS ON OUR ELECTRIC GRID? BEFORE SUCH A PROJECT IS APPROVED, IMPACT STUDIES MUST BE DONE, AND A CLEAR ACCOUNTING OF ALL THE POTENTIAL COSTS TO THE COMMUNITY SHOULD BE MADE PUBLIC.

IT IS IMPORTANT TO NOTE THAT IN 2023 VIRGINIA PROVIDED TAX BREAKS TO THE DATA CENTER INDUSTRY WORTH \$750 BILLION DOLLARS ACCORDING TO OUR STATE'S 2023 COMPREHENSIVE FINANCIAL REPORT. YET IN A STUDY COMMISSIONED BY THE INDUSTRY ITSELF, IT FOUND THAT BETWEEN 2017 AND 2021 IT ONLY CONTRIBUTED \$54.2 BILLION TO THE STATE'S GROSS DOMESTIC PRODUCT. WE NEED TO BE CAREFUL THAT WE ARE NOT SELLING THE FUTURE OF THE RAPPAHANNOCK RIVER FOR AN EMPTY PROMISE OF GROWTH AND PROSPERITY.

I LIVE IN RICHMOND COUNTY. MY QUALITY OF LIFE, THE VALUE OF MY HOME, AND THE ECONOMIC HEALTH AND THE FUTURE OF MY COMMUNITY ARE ALL DEPENDENT UPON A THRIVING RAPPAHANNOCK RIVER. THIS PROJECT HAS A FAR GREATER REACH THAN CAROLINE COUNTY. A PUBLIC HEARING IS ESSENTIAL, AND I BELIEVE A SERIES OF SUCH HEARINGS SHOULD BE HELD THROUGHOUT THE NORTHERN NECK AND MIDDLE PENINSULA SO THAT ALL RESIDENTS WHO COULD POTENTIALLY FACE DAMAGES AS A RESULT OF THIS PROJECT HAVE AN OPPORTUNITY TO BE ADEQUATELY INFORMED AND VOICE THEIR CONCERNS. VMRC SHOULD NOT EVEN CONSIDER SUCH A PROPOSAL WITHOUT MAKING A CONCERTED EFFORT TO GET ALL PARTIES INVOLVED AT THE TABLE.

Virginia Marine Resources Commission

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Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
119	ERIC TORRES	06/18/2024 07:43:02 AM	OPPOSE

THIS PROJECT POTENTIALLY ENDANGERS THE SPAWNING GROUNDS OF THE ATLANTIC STURGEON, A FEDERALLY ENDANGERED SPECIES. ADDITIONALLY, THE LARGE QUANTITIES OF WATER BEING REMOVED FROM THE RAPPAHANNOCK COULD HAVE CONSIDERABKE ENVIRONMENTAL IMPACT AS THE WATER WILL NOT BE RECYCLED BACK TO THE RAPPAHANNOCK.

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
120	RICHARD D BRADLEY JR.	06/18/2024 08:41:54 AM	OPPOSE

I DISAGREE THAT THIS PRIVATE FOR PROFIT CORPORATE PROJECT IS WORTH THE DETRIMENTAL ENVIRONMENTAL IMPACT IT WILL HAVE ON THE RAPPAHANOCK RIVER.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
121	PATRICIA G FINESTONE	06/18/2024 18:43:34 PM	OPPOSE

I AM FORTUNATE TO HAVE A HOME ON THE RAPPAHANNOCK RIVER IN RICHMOND COUNTY FOR THE LAST 20 YEARS. I HAVE WITNESSED IMPROVEMENTS IN THE RIVERS AND TRIBUTARIES THAT MAKE UP THE CHESAPEAKE BAY WATERSHED WHILE LIVING HERE. THE IMPROVEMENTS HAVE TAKEN MANY YEARS WITH THE OVERSIGHT FROM THE CHESAPEAKE BAY FOUNDATION. I AM CONCERNED THIS PROJECT WILL NEGATIVELY IMPACT THE ECOLOGICAL BALANCE IT HAS TAKEN MANY YEARS TO IMPROVE.

I FEEL THIS PROJECT NEEDS TO BE ADDRESSED IN A PUBLIC FORUM TO PROVIDE DETAILS TO THE RESIDENTS WHO WOULD IMPACTED INCLUDING ALL COUNTIES ON THE RAPPAHANNOCK RIVER EAST OF CAROLINE COUNTY.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
122	VIRGINIA W SHELOR	06/18/2024 09:12:38 AM	OPPOSE

AS A NATIVE OF KING AND QUEEN COUNTY WHO HAS LIVED ON THE MATTAPONI RIVER MUCH OF HER LIFE, AND FOR 35+ YEARS ON THE BANKS OF THE UPPER REACHES OF THE MATTAPONI RIVER NON-TIDAL , I EMPHATICALLY REQUEST A PUBLIC HEARING TO BECOME INFORMED OF THE USE CAROLINE COUNTY IS REQUESTING OF THE MATTAPONI - MORE SPECIFICALLY, THE PUMPING OF TREATED WASTE WATER INTO A CREEK THAT FLOWS INTO THE MATTAPONI AS A RESULT OF PUMPING WATER FROM THE RAPPAHANNOCK FOR DEVELOPMENT WITHIN THE COUNTY.

THE WHOLE PERMITTING PROCESS AND PLAN IS VERY VAGUE AND IT IS HARD TO UNDERSTAND ANY POTENTIAL IMPACTS AND RISKS WITHOUT MORE INFORMATION. THERE CERTAINLY DOES NOT APPEAR TO BE ANY BENEFIT TO ANY AREA EXCEPT CAROLINE CO. IT WOULD SEEM THAT IT IS AT THE EXPENSE OF OTHERS. THE PUBLIC NOTICE ON THE DEQ WEBSITE FOR PERMIT NUMBER VWPP 20-0514 SURFACE WITHDRAWAL IN CAROLINE COUNTY DOES NOT EVEN MENTION THE MATTAPONI RIVER YET THE COMMENT PERIOD IS FROM MAY 18, 2024-JUNE 18, 2024. MORE DETAILS/MAPS NEED TO BE PUBLISHED REGARDING PLANS FOR THE MATTAPONI.

THERE IS NO QUESTION THAT PUMPING WATER INTO THE UPPER REACHES OF THE MATTAPONI WILL CHANGE THE DYNAMICS OF THE RIVER AND THE LAND THROUGH WHICH IT FLOWS. THE FLOOD PLAIN OF THE RIVER WILL CHANGE, IMPACTING HOMES AND PASTURES ALONG ITS BANKS, PHYSICALLY AND FINANCIALLY. I CAN TELL YOU FIRST HAND THAT OVER MY 35+ YEARS OF LIVING AND BOATING/PADDLING ON THE UPPER REACHES OF THE MATTAPONI, THE FLOODING THAT OCCURS NATURALLY TODAY HAS BECOME MORE DESTRUCTIVE AS THE WATER AT FLOOD IS HIGHER AND STAYS LONGER, KILLING HUGE HARDWOODS, CAUSING EROSION, AND LEAVING A DEPOSIT OF FINE SAND WHERE NONE WAS BEFORE EVEN UP THE TRUNKS OF TREES . MORE WATER VOLUME IN THE RIVER WILL ONLY EXACERBATE THE SITUATION.

I AM CONCERNED ABOUT THE HEALTH OF THE MATTAPONI. IT HAS NO LARGE CITIES AND INDUSTRIES â€œDUMPINGâ€• TREATED WASTE WATER OR URBAN/SUBURBAN RUNOFF IN IT. IN MARCH 2020 DEQ PUBLISHED A REPORT â€œMATTAPONI RIVER WATERSHED TMDL IMPLEMENTATION PLAN" THAT EXPRESSED CONCERN ABOUT THE BACTERIA IN THE MATTAPONI AND PRESENTED A PLAN TO IMPROVE ITS QUALITY. DID ANYTHING BECOME OF IT? HAS THERE BEEN ANY ANALYSIS AND REPORT ON THE HEALTH OF THE WILDLIFE AND HABITAT ALONG THE RIVER AND THE ESTIMATED IMPACT ON THEM OF CHANGING THE WATER CHEMISTRY? WHAT IS THE MATTAPONI'S CURRENT STATE OF HEALTH AND WHAT IMPACT WILL THIS CHANGE HAVE? CAN ANYONE TRULY SAY WITH ANY CERTAINTY? WHAT IS THE RISK OF THE PROPOSED CHANGE?

IT IS INCONCEIVABLE THAT ONE COUNTY CAN PUMP WATER OUT OF ONE RIVER THE RAPPAHANNOCK AND PUMP TREATED WASTE WATER INTO ANOTHER THE MATTAPONI WITH APPROVAL BY THE COMMONWEALTH WITHOUT CONSULTING ALL THE MUNICIPALITIES AND COUNTIES AND THEIR CITIZENS THAT WILL BE AFFECTED. THE WATER IS NOT OWNED SOLELY BY CAROLINE COUNTY. OTHERS SHOULD NOT BE HARMED AS A RESULT OF ITS ACTIONS.

**Virginia Marine Resources Commission
Habitat Management Public Comments
Application Number 20200514**

Print Date: Monday May 18 2026 10:03

VIRGINIA SHELOR
4962 SPRING COTTAGE RD.
NEWTOWN, VA 23126
804 769-1103

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
123	JEFFREY W WRIGHT	06/18/2024 09:35:13 AM	OPPOSE

RE: VMRC CASE 2020-0514 AND DEQ CASE 20-0514
DEQ DRAFT PERMIT FOR CAROLINE COUNTY WATER INTAKE
GENTLEMEN:

WE ARE OPPOSED TO THE DRAFT PERMIT ISSUED BY DEQ FOR CAROLINE COUNTY TO WITHDRAW WATER FROM THE RAPPAHANNOCK.

WE ARE REQUESTING THAT YOU HOLD A PUBLIC HEARING TO HEAR AND ADDRESS OUR CONCERNS:

- ABOUT THE PROPOSED USE OF THE MASSIVE AMOUNT OF OUR FRESHWATER CAROLINE WANTS TO WITHDRAW FOR THE BENEFIT OF A PRIVATE BUSINESS ENTITY,
- ABOUT THE MISLABELING OF A PRIVATE INDUSTRIAL USE AS A MUNICIPAL PUBLIC WATER NEED,
- ABOUT THE FAILURE TO CONSIDER THE CUMULATIVE IMPACT OF OTHER WATER INTAKE STRUCTURES,
- ABOUT THE NEED FOR TIME OF YEAR RESTRICTIONS ON WITHDRAWAL AND VOLUME OF WATER
- ABOUT THE FAILURE TO REQUIRE TREATED DISCHARGE WATER TO BE RETURNED TO THE RAPPAHANNOCK,
- ABOUT THE FAILURE TO REQUIRE ANY ONGOING INDEPENDENT ANALYSIS OF FISH AND LARVAE MORTALITY,
- ABOUT THE IMPACT OF THE MASSIVE WITHDRAWAL OF FRESHWATER ON THE SALT CONTENT OF WATER DOWNSTREAM FROM THE INTAKE,
- ABOUT THE IMPACT ON FRESHWATER MARSHES DUE TO THE INCREASE IN SALTWATER,
- ABOUT THE IMPACT ON RIPARIAN AND MUNICIPAL USERS OF RAPPAHANNOCK WATER DOWNSTREAM OF THE PROPOSED INTAKE,
- ABOUT THE ABSENCE OF ANY MITIGATION PENALTY.

ALL THE POINTS LISTED ABOVE ARE POINTS OF SERIOUS CONCERN. DEQ HAS PLACED NO ABSOLUTE LIMIT ON FRESHWATER WITHDRAWALS AND HAS NOT PROHIBITED FUTURE INCREASES OF FRESHWATER WITHDRAWALS BY CAROLINE OR ANY OTHER COUNTY THAT MIGHT WANT TO DO WHAT CAROLINE HAS PROPOSED. THE CUMULATIVE EFFECT OF FRESHWATER WITHDRAWALS CURRENTLY PROPOSED, OR WHICH MAY BE PROPOSED IN THE SAME RIVER, CLEARLY MUST BE ASSESSED. WHY, FOR EXAMPLE, HAS DEQ NOT MENTIONED THE KING GEORGE SITE ACROSS THE RAPPAHANNOCK NEAR THE CAROLINE INTAKE SITE THAT WAS RECENTLY ACQUIRED BY AMAZON. NEWS ACCOUNTS STATE THAT AMAZON HAS PLANS TO USE THAT LOCATION TO WITHDRAW MILLIONS OF GALLONS OF FRESHWATER TO COOL THE SENSORS OF A MASSIVE DATA CENTER IT PLANS TO BUILD AT THAT LOCATION. HAS DEQ APPROVED A PERMIT FOR AMAZON BUT HASN'T DISCLOSED IT TO THE PUBLIC?

STATE BIOLOGISTS HAVE ALREADY NOTED HOW GLOBAL WARMING AND SEA-LEVEL RISE ARE INCREASING THE SALINITY OF THE FRESHWATER ABOVE TAPPAHANNOCK. WITHDRAWING MILLIONS OF GALLONS OF FRESHWATER CREATES AN UNACCEPTABLE RISK OF UPSETTING THE DELICATE ECOLOGICAL BALANCE IN THE DOWNSTREAM MARSHES WHERE FRESHWATER PLANTS GROW THAT ARE THE ESSENTIAL FOOD SOURCE FOR COUNTLESS SPECIES OF WATERFOWL AND OTHER MIGRATING AND RESIDENT BIRDS INCLUDING EAGLES AND OSPREY. SALTWATER INTRUSION ALSO HURTS FARM FAMILIES AND OTHER

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PROPERTY OWNERS WHO SHOULD BE ABLE TO USE THEIR RIPARIAN RIGHTS TO DRAW REASONABLE QUANTITIES OF FRESHWATER FOR MULTIPLE USES.

THE WATERS OF VIRGINIA BELONG TO THE PEOPLE, NOT TO AMAZON OR ANY OTHER DATA CENTER. THE PEOPLE NEED TO BE ABLE TO VOICE THEIR CONCERNS AT PUBLIC HEARINGS BEFORE DEQ AND VMRC.

WE URGE DEQ TO RESCIND ITS DRAFT PERMIT TO CAROLINE, AND THAT BOTH DEQ AND VMRC HOLD PUBLIC HEARINGS TO HEAR THE GROWING CONCERNS OF THE PUBLIC.

SINCERELY,

JEFFREY W. WRIGHT
PRESIDENT FRIENDS OF DRAGON RUN, INC
WWW.DRAGONRUN.ORG

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124	WESTON M SLAUGHTER	06/18/2024 09:51:39 AM	OPPOSE

WESTON SLAUGHTER
JUNE 18TH 2024

COMMENT ON SURFACE WATER WITHDRAWAL IN CAROLINE COUNTY, VIRGINIA WATER PROTECTION PERMIT VWPP 20-0514 AND VIRGINIA MARINE RESOURCES COMMISSION VRMC JPA 2020-0514

TO THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE VIRGINIA MARINE RESOURCES COMMISSION,

THIS COMMENT DETAILS CONCERNS REGARDING THE PROPOSAL TO BUILD A FACILITY IN CAROLINE COUNTY, VIRGINIA FOR WATER WITHDRAWAL FROM THE RAPPAHANNOCK RIVER AT THE APPROXIMATE VICINITY OF OLNEY CORNER, VA, AS DETAILED IN THIS DRAFT PROPOSAL FROM THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY VADEQ. THE PERMIT REQUESTS APPROVAL FOR WITHDRAWAL OF UP TO 13.9 MILLION GALLONS PER DAY GPD, WITH A BASELINE WITHDRAWAL OF 7.9 MILLION GALLONS PER DAY, OR AN AVERAGE INTAKE FLOW OF 21.5 AND 12.2 CUBIC FEET PER SECOND CFS OVER A 24 HOUR PERIOD RESPECTIVELY.

COMMENTS WILL BE DETAILED BELOW WITH THE EXPECTATION THAT VADEQ WILL ADDRESS ALL POINTS IN SUFFICIENT TECHNICAL DETAIL, OR CONCEDE THE NEED FOR FURTHER STUDY. THIS LETTER ALSO REQUESTS THAT A PUBLIC HEARING BE HELD BEFORE THIS PERMIT IS ISSUED. THIS LETTER EXPRESSES OPPOSITION TO THE PERMISSION OF THIS PROJECT WITHOUT FURTHER INVESTIGATION AND PUBLIC HEARING. I WOULD OF COURSE RECONSIDER THIS STANCE SHOULD MORE THOROUGH PLANNING AND INVESTIGATION SUFFICIENTLY ADDRESS ALL THESE AND OTHER PUBLIC CONCERNS.

WATER WITHDRAWAL AND DISCHARGE IN CONTEXT OF FRESHWATER INFLOW AND SEASONAL DIMENSIONS

THE PROPOSED INTAKE LOCATION IS APPROXIMATELY 13 MILES DOWNSTREAM OF THE LOCATION WHERE THE RAPPAHANNOCK RIVER BECOMES TIDAL, AND IS LOCATED IN THE TIDAL FRESH PORTION OF THE RAPPAHANNOCK RIVER, WHERE SALINITY GENERALLY RANGES FROM 0-0.5 PARTS PER THOUSAND PPT RAPPAHANNOCK TRIBUTARY SUMMARY, CHESAPEAKE BAY PROGRAM 2021. THE PROPOSED INTAKE IS APPROXIMATELY 17.5 MILES DOWNSTREAM OF A USGS GAGE ON THE RAPPAHANNOCK RIVER USGS-01668000 NEAR FREDERICKSBURG, VA. THIS GAGE PROVIDES 15 MINUTE RESOLUTION MEASUREMENTS USED TO PRODUCE HIGH-RESOLUTION RECORDS OF DISCHARGE, SPECIFIC CONDUCTIVITY, AND WATER TEMPERATURE AMONG OTHERS. THIS GAGE IS OF PARTICULAR SIGNIFICANCE AS IT IS PART OF THE USGS CHESAPEAKE BAY RIVER INPUT MONITORING PROGRAM USGS-RIM, AN EFFORT TO COLLECT ROBUST DATA ON MAJOR CHESAPEAKE BAY TRIBUTARIES JUST BEFORE THE NON-TIDAL TO TIDAL TRANSITION. DATA FROM THIS GAGE WILL BE USED IN THIS COMMENT, AND WILL BE REFERRED TO AS THE RAPPAHANNOCK RIM STATION.

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IN 2023 THE MONTHLY MEAN DISCHARGE AT THE RAPPAHANNOCK RIM STATION WAS LESS THAN 150 CUBIC FEET PER SECOND CFS AUGUST-OCTOBER. IN OCTOBER 2023, WHEN MEAN MONTHLY DISCHARGE WAS 93.9 CUBIC FEET PER SECOND, THE BASELINE AND MAXIMUM WITHDRAWAL REQUESTED FROM THIS PERMIT WOULD COMPRISE APPROXIMATELY 23 AND 13% OF TOTAL FRESHWATER DISCHARGE INTO THE TIDAL RAPPAHANNOCK RIVER. THE POSSIBILITY OF EVEN MORE DRAMATIC EFFECTS EXIST WHEN CONSIDERING FINER TIMESCALES. FOR EXAMPLE, BETWEEN SEPTEMBER 2ND AND SEPTEMBER 11TH 2024 THE RAPPAHANNOCK RIM STATION MEAN FLOW WAS 34.1 CFS, AND RANGED FROM A MINIMUM OF 31 TO A MAXIMUM OF 38 CFS. DURING THIS PERIOD, MAXIMUM AND BASELINE WITHDRAWAL WOULD HAVE COMPRISED APPROXIMATELY 63% AND 36% OF TOTAL FRESHWATER FLOW RESPECTIVELY.

IT IS WORTH HIGHLIGHTING THAT THE SEASONAL PERIOD OF PEAK WITHDRAWAL OF WATER INTENDED FOR COOLING USE OVERLAPS WITH THE SEASONAL PERIOD OF LOWEST FLOW IN THE RAPPAHANNOCK RIVER, THE LATE SUMMER AND EARLY FALL, AND THEREFORE THE MAXIMUM WITHDRAWAL SCENARIOS OUTLINED ABOVE ARE RELATIVELY MORE LIKELY TO OCCUR IN TYPICAL LOW-FLOW MONTHS THAN IN OTHER PARTS OF THE YEAR.

FOR A SINGLE WITHDRAWAL PERMIT, THE MAGNITUDE OF WITHDRAWAL - POSSIBLY GREATER THAN HALF OF THE TOTAL FRESHWATER INFLOW TO THE TIDAL RAPPAHANNOCK RIVER DURING PERIODS OF VERY LOW FLOW - MUST BE ACKNOWLEDGED. THIS LEVEL OF WITHDRAWAL COULD HAVE EFFECTS ON NOT JUST THE BIOLOGICAL AND ECOLOGICAL HEALTH OF THE RAPPAHANNOCK RIVER, BUT COULD ALTER BASIC PHYSICAL BOUNDARIES - ESPECIALLY REGARDING THE LONGITUDINAL EXTENT AND CONCENTRATION OF SALINE WATER IN THE TIDAL RAPPAHANNOCK RIVER.

FURTHERMORE, THE WATERSHED IN WHICH THE WATER WITHDRAWN FROM THE RAPPAHANNOCK IS PROPOSED TO BE RELEASED " POLECAT CREEK, TRIBUTARY TO THE MATTAPONI " IS NOT ONLY IN A DIFFERENT MAJOR WATERSHED THE YORK RIVER , BUT IS ALSO A SIGNIFICANTLY SMALLER SYSTEM. THE MEAN FLOW FOR THE MONTH OF AUGUST 2023 AT THE USGS GAGE ON THE MATTAPONI NEAR BOWLING GREEN, VA A GAGE ON THE MATTAPONI NEAR THE PROPOSED RETURN FLOW LOCATION WAS 7.8 CFS. THIS MEANS THAT, WERE ALL WATER WITHDRAWN FROM THE RAPPAHANNOCK RIVER TO BE DISCHARGED AT AN EQUAL RATE AS INTAKE INTO THE MATTAPONI AT THAT POINT THE DIVERTED WATER WOULD HAVE BEEN 2.75 AND 1.5 TIMES THE TOTAL FLOW OF THE MATTAPONI AT THAT TIME. FURTHERMORE, IT IS NECESSARY THAT THE LIKELY INCREASED TEMPERATURE OF THIS DISCHARGED WATER BE TAKEN INTO ACCOUNT IN ANY ASSESSMENT OF THE PHYSICAL AND ECOLOGICAL IMPACTS OF RELEASE.

OF COURSE, THE LOCATIONS OF THESE GAGES ARE IN THE VICINITY OF BUT NOT AT THE EXACT LOCATION OF WHERE INTAKE AND DISCHARGE WOULD OCCUR, HOWEVER THE SIMILARITY IN MAGNITUDE OF RECENTLY OBSERVED LOW-FLOW MONTHLY AND DAILY AVERAGES AT THE RAPPAHANNOCK RIM STATION AND MATTAPONI USGS GAGE NEAR BOWLING GREEN, VA TO THE PROPOSED WATER WITHDRAWAL AND RETURN FLOW DESCRIBED IN THIS PERMIT ILLUSTRATE THE CLEAR NEED FOR A THOROUGH INVESTIGATION OF POSSIBLE HYDROLOGIC IMPACTS IN BOTH SYSTEMS, PARTICULARLY IN LOW-FLOW SCENARIOS. IT IS CRUCIAL THAT VADEQ ASSESS THE IMPACT OF WATER DIVERSION FROM THE RAPPAHANNOCK RIVER IN SCENARIOS OF DROUGHT AND EXTENDED LOW-FLOW AS WELL AS SHORTER TERM LOW FLOW CONDITIONS. IT IS ALSO NECESSARY THAT VADEQ ADDRESS THE POTENTIAL IMPACTS OF THE PROPOSED FLOW RELEASE INTO A MUCH SMALLER SYSTEM.

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SALTWATER INTRUSION FROM DECREASED FRESHWATER INFLOW

FRESHWATER INPUT IS A CONTROLLING FACTOR IN THE LONGITUDINAL DISTRIBUTION OF SALINITY IN TIDAL RIVERS, WITH HIGH RUNOFF EVENTS CAPABLE OF EXTENDING THE TIDAL FRESH ZONE DOWNSTREAM, AND PERIODS OF DROUGHT ALLOWING HIGHER SALINITY WATERS TO CREEP UPSTREAM SAVENIJE 1993, DESANTIS ET AL. 2007 . THIS HAS BEEN FOUND TO BE TRUE IN STUDIES IN TIDAL RIVERS IN THE CHESAPEAKE BAY WATERSHED, WHERE THE DEGREE OF SALTWATER INTRUSION WAS FOUND TO BE, AMONG OTHER DRIVERS, INFLUENCED BY FRESHWATER INPUT TIAN 2019 . SALTWATER INTRUSION, EXACERBATED BY SEA LEVEL RISE, POSES CONSIDERABLE RISKS TO CRUCIAL RESOURCES AND INDUSTRIES IN THE CHESAPEAKE BAY REGION, AS INCREASED WATER SALINITY CAN, AMONG MANY POSSIBLE EFFECTS, REDUCE CROP YIELDS, HARM PUBLIC AND PRIVATE INFRASTRUCTURE, THREATEN PROTECTED PUBLIC LANDS, AND IMPACT DRINKING WATER FAGHERAZZI ET AL. 2020 .

AGRICULTURAL YIELDS

THE SALINITY OF IRRIGATION WATER HAS BASIC EFFECTS ON PHYSIOLOGY OF PLANTS, AND ULTIMATELY ON OVERALL CROP QUALITY AND YIELD DE LA REGUERA ET AL. 2020 . SALTWATER INTRUSION IS AN INCREASINGLY PRESSING ISSUE FOR AGRICULTURE IN THE CHESAPEAKE BAY TIDEWATER REGION. RECENT STUDIES FOUND THAT “SALT PATCHES,” VISIBLE FROM SPACE, DOUBLED IN DELAWARE AND MARYLAND BETWEEN 2011 AND 2017 “ AND, UNDER AN ASSUMPTION OF 100% LOSS IN CROP YIELD, ESTIMATED ECONOMIC DAMAGES RANGED BETWEEN \$39.4 AND \$107.5 MILLION USD ANNUALLY MONDAL ET AL. 2023 . SHOULD WATER INTAKE FROM THE UPPER TIDAL FRESH REGION OF THE RAPPAHANNOCK RIVER FACILITATE UPSTREAM MOVEMENT OF SALINE WATER, IT WOULD HAVE AN IMPACT ON THE SALINITY OF WATER WITHDRAWALS ALREADY APPROVED FOR AGRICULTURAL USE. IT IS NECESSARY THAT THESE IMPACTS BE TAKEN INTO CONSIDERATION.

DRINKING WATER, INFRASTRUCTURE, AND IMPACT ON TIDEWATER COMMUNITIES

SALINIZATION OF GROUNDWATER IS AN ASPECT OF SALTWATER INTRUSION WHICH MUST ALSO BE CONSIDERED. IN ADDITION TO MANY OTHER EFFECTS, GROUNDWATER SALINIZATION POSES A PARTICULAR RISK TO BELOWGROUND INFRASTRUCTURE MCGRANAHAN ET AL. 2007 . IN THE LARGELY RURAL AREAS OF THE RAPPAHANNOCK RIVER TIDEWATER A FEW KEY ELEMENTS WHICH MAY BE THREATENED ARE DRINKING WATER WELLS, SEPTIC SYSTEMS, AND BUILDING FOUNDATIONS. RECENT WORK HAS EXPLORED INTERACTIONS BETWEEN FRESHWATER SALINIZATION AND INCREASED CORROSION OF DRINKING WATER INFRASTRUCTURE - WITH A PARTICULAR EMPHASIS ON POSSIBLE MOBILIZATION OF HEAVY METALS SUCH AS LEAD STETS ET AL. 2018, PIEPER ET AL. 2018, KAUSHAL 2016 . SALTWATER CAN CORRODE CONCRETE AND OTHER COMMON BUILDING MATERIALS AT HIGHER RATES THAN FRESHWATER, AND COULD POSE A BROADSCALE AND COSTLY ISSUE FOR COMMUNITIES FACING SALTWATER INTRUSION YOSHIDA 2010, ABDELHAFEZ 2022 . IT IS CRUCIAL THAT THESE DIRECT LOGISTICAL AND FINANCIAL IMPACTS TO TIDEWATER COMMUNITIES, AND IN PARTICULAR THOSE COMMUNITIES AND LANDS WHICH SURROUND THE CURRENT TIDAL FRESH TO OLIGOHALINE TRANSITION AREA. ON THE RAPPAHANNOCK THIS INCLUDES THE TOWN OF TAPPAHANNOCK, AS WELL AS PISSACOACK, ALSO KNOWN AS FONES CLIFFS -- A PART OF THE ANCESTRAL LANDS OF THE RAPPAHANNOCK TRIBE AND RE-ACQUIRED BY THE RAPPAHANNOCK TRIBE IN 2022. FURTHERMORE, MUCH OF THE LAND IN THIS SENSITIVE REGION IS PART OF THE RAPPAHANNOCK RIVER VALLEY NATIONAL WILDLIFE REFUGE, AND MAJOR ALTERATIONS TO SALINITY PATTERNS COULD DISRUPT THESE ECOSYSTEMS WHICH CURRENTLY PROVIDES HUNDREDS OF

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ACRES OF PROTECTED HABITAT AND RECREATIONAL USE. IT IS NECESSARY TO EVALUATE THE POSSIBLE IMPACTS OF SALINIZATION ON THE INFRASTRUCTURE AND PEOPLE OF THE RAPPAHANNOCK TIDEWATER.

THANK YOU FOR YOUR TIME AND CONSIDERATION OF THESE POINTS. I APPRECIATE THE EFFORT TO REVIEW PUBLIC COMMENT, AND LOOK FORWARD TO HEARING THE RESPONSE TO PUBLIC COMMENT, AND HOPEFULLY FURTHER DISCUSSION IN A PUBLIC HEARING.

THANK YOU,
WESTON SLAUGHTER
WESTONSLAUGHTER@GMAIL.COM

REFERENCES

ABDELHAFEZ, M. A., ELLINGWOOD, B. & MAHMOUD, H. HIDDEN COSTS TO BUILDING FOUNDATIONS DUE TO SEA LEVEL RISE IN A CHANGING CLIMATE. SCI REP 12, 14020 2022 .

DE LA REGUERA, E., VEATCH, J., GEDAN, K. & TULLY, K. L. THE EFFECTS OF SALTWATER INTRUSION ON GERMINATION SUCCESS OF STANDARD AND ALTERNATIVE CROPS. ENVIRONMENTAL AND EXPERIMENTAL BOTANY 180, 104254 2020 .

DESANTIS, L. R. G., BHOTIKA, S., WILLIAMS, K. & PUTZ, F. E. SEA-LEVEL RISE AND DROUGHT INTERACTIONS ACCELERATE FOREST DECLINE ON THE GULF COAST OF FLORIDA, USA. GLOBAL CHANGE BIOLOGY 13, 2349-2360 2007 .

FAGHERAZZI, S. ET AL. SALT MARSH DYNAMICS IN A PERIOD OF ACCELERATED SEA LEVEL RISE. JGR EARTH SURFACE 125, E2019JF005200 2020 .

KAUSHAL, S. S. INCREASED SALINIZATION DECREASES SAFE DRINKING WATER. ENVIRON. SCI. TECHNOL. 50, 2765-2766 2016 .

MCGRANAHAN, G., BALK, D. & ANDERSON, B. THE RISING TIDE: ASSESSING THE RISKS OF CLIMATE CHANGE AND HUMAN SETTLEMENTS IN LOW ELEVATION COASTAL ZONES. ENVIRONMENT AND URBANIZATION 19, 17-37 2007 .

MONDAL, P. ET AL. THE SPREAD AND COST OF SALTWATER INTRUSION IN THE US MID-ATLANTIC. NAT SUSTAIN 6, 1352-1362 2023 .

PIEPER, K. J. ET AL. IMPACT OF ROAD SALT ON DRINKING WATER QUALITY AND INFRASTRUCTURE CORROSION IN PRIVATE WELLS. ENVIRON. SCI. TECHNOL. 52, 14078-14087 2018 .

SAVENIJE, H. H. G. COMPOSITION AND DRIVING MECHANISMS OF LONGITUDINAL TIDAL AVERAGE SALINITY DISPERSION IN ESTUARIES. JOURNAL OF HYDROLOGY 144, 127-141 1993 .

STETS, E. G., LEE, C. J., LYTLE, D. A. & SCHOCK, M. R. INCREASING CHLORIDE IN RIVERS OF THE CONTERMINOUS U.S. AND LINKAGES TO POTENTIAL CORROSIVITY AND LEAD ACTION LEVEL EXCEEDANCES IN DRINKING WATER. SCIENCE OF THE TOTAL ENVIRONMENT 613-614, 1498-1509 2018 .

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TIAN, R. FACTORS CONTROLLING SALTWATER INTRUSION ACROSS MULTI-TIME SCALES IN ESTUARIES, CHESTER RIVER, CHESAPEAKE BAY. ESTUARINE, COASTAL AND SHELF SCIENCE 223, 61â€“73 2019 .

YOSHIDA, N., MATSUNAMI, Y., NAGAYAMA, M. & SAKAI, E. SALT WEATHERING IN RESIDENTIAL CONCRETE FOUNDATIONS EXPOSED TO SULFATE-BEARING GROUND. ACT 8, 121â€“134 2010 .

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125	THOMAS INNES	06/18/2024 11:13:09 AM	OPPOSE

MY WIFE AND I OWN A HOME ON THE WATER AT THE JUNCTION OF MOUNT LANDING CREEK AND THE RAPPAHANNOCK RIVER IN MARYFIELD, JUST A FEW MILES UP ROUTE 17 FROM TAPPAHANNOCK, VA. I WAS BOTH ALARMED AND CONCERNED WHEN I READ A MEMO FROM THE FRIENDS OF THE RAPPAHANNOCK OVER THIS PAST WEEKEND NOTIFYING ME OF THE PROPOSED WITHDRAWAL OF WATER FROM THE RIVER IN FRONT OF MY HOUSE. I SHARED THIS INFORMATION WITH ALL OF MY NEIGHBORS OVER THE WEEKEND AND THEY TOO WERE TOTALLY UNAWARE OF THIS PROPOSAL. MY SENSE IS THAT THE OVERWHELMING MAJORITY OF PEOPLE, LITERALLY THOUSANDS OF PEOPLE, IMPACTED BY THIS PROPOSAL HAVE NO IDEA WHAT IS CONTEMPLATED AND THE POTENTIAL FOR IRREVERSIBLE NEGATIVE CONSEQUENCES GOING FORWARD. WHAT ALARMED US MOST WAS NOT ONLY THE LACK OF NOTICE OR A FORUM TO ASK WHAT OTHERS THINK, BUT THE PURPOSE OF THE INTENDED USE OF THE WATER, A PRECIOUS RESOURCE THAT BELONGS TO THE PUBLIC.

AS I UNDERSTAND THE LOGIC BEHIND THE DEQ, ONE OF THE FOUNDING Pillars IS THE PRESERVATION, PROTECTION AND ENHANCEMENT OF THE COMMONWEALTH'S NATURAL RESOURCES. RESOURCES THAT BELONG TO THE PUBLIC AND THAT SHOULD BE JUDICIOUSLY ALLOCATED FOR THE BENEFIT OF THE PUBLIC. IT SEEMS THAT WHEN WEIGHING THE DECISION, YOU MUST HONESTLY CONSIDER ALL THE FACTS AND ESPECIALLY THE LONG TERM IMPACTS ON THE ENVIRONMENT AND ALL THE RELATED AREAS. THINKING AHEAD FOR WHAT TODAY'S DECISION DOES FIVE, TEN, TWENTY OR FIFTY YEARS IN THE FUTURE.

IN REVIEWING WHAT INFORMATION IS AVAILABLE, WHICH IS BOTH LIMITED AND HARD TO FIND, I SEE THE YET TO BE NAMED USER OF THE INDUSTRIAL SITE MUST HAVE BROUGHT THE PROMISES OF MONEY TO THE TAX COFFERS OF CAROLINE COUNTY WITH WHAT APPEARS AS LIMITED DEMANDS ON THE COUNTY'S RESOURCES, SUCH AS SCHOOLS, EMERGENCY SERVICES, SOCIAL SERVICES, ETC. WHILE THAT MAY OR MAY NOT BE GOOD FOR CAROLINE COUNTY IN THE LONG RUN, IT CERTAINLY DOES NOT ALLOW ANYONE ELSE IMPACTED BY THIS PERMIT TO WEIGH IN ON WHETHER THE PUBLIC AS A WHOLE BENEFITS FROM THE APPROVAL OF THE PERMIT.

WHILE IT IS HARD TO FIND A REASON TO SUPPORT THE PERMIT, THERE ARE SO MANY REASONS UNDER THE PURVIEW OF THE DEQ TO DENY THE PERMIT THAT ONLY A BRIEF OVERVIEW ON MY PART IS NEEDED. I ASSUME OTHERS WITH MORE KNOWLEDGE, CONTACT AND INTERACTION WITH THE RAPPAHANNOCK RIVER AND THE RELATED NATURAL RESOURCES WILL HOPEFULLY VOICE THEIR OPINIONS IN TIME TO CAUSE A PUBLIC HEARING. THE ONLY ISSUE TIME SENSITIVE IS THE DEQ'S RESPONSE TO REQUESTS FOR AN OPEN PROCESS BEFORE THE DECISION IS IRREVERSIBLE AND NOT THE PERMIT APPROVAL, THE INVESTORS CAN WAIT.

FIRST, THE IMPACT ON A WIDE RANGE OF SPECIES OF FISH AND WILDLIFE, ESPECIALLY AT A CRITICAL TIME IN THEIR RESPECTIVE LIFE CYCLES, SEEMS COUNTER INTUITIVE AS OTHER GROUPS ARE STRUGGLING TO REPLENISH THE DECIMATED STOCK OF HEALTHY INHABITANTS, RANGING FROM THE ATLANTIC STURGEON TO THE AMERICAN SHAD AND EVEN FRESH WATER MUSSELS, IN VIRGINIA'S RIVERS.

SECOND, NOT ONLY IS THE WATER BEING TAKEN FROM THE RAPPAHANNOCK RIVER, AFTER BEING USED

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BY THE INDUSTRIAL CUSTOMER, IT GETS DISCHARGED INTO OTHER RIVERS, SO NOT EVEN RETURNED. THIS IS A NET LOSS TO THE WATERSHED AND SOMETHING USUALLY NOT DONE BY COMPARABLE PROJECTS.

THIRD, THE COMBINATION OF SIMILAR AND CONTEMPLATED PROJECTS COMPOUNDS THE IMPACT. WHILE I AM NOT SURE OF THE STATUS OF THE BIRCHWOOD POWER PLANT SITE, IF THIS IS APPROVED THERE IS A PRECEDENT ESTABLISHED FOR SIMILAR SITES EITHER ALONG THE RAPPAHANNOCK RIVER OR SIMILAR RIVERS WHERE PROXIMITY TO INTERNET DISTRIBUTION HUBS AND LINES MAKE THE DATA CENTER INVESTORS ANXIOUS TO GET THEIR HANDS ON SPECIFIC TRACTS OF PROPERTY. MY SENSE IS WHATEVER ANALYSIS THAT HAS BEEN COMPLETED MAY BE IN A VACUUM AND NOT IN CONJUNCTION WITH OTHER COMPETING BULK CONSUMERS OF THE WATER. I WOULD EXPECT THE DEQ HAS A PLAN IN PLACE AS LEGITIMATE CIRCUMSTANCES ARISE FOR HOW RESOURCES ARE ALLOCATED, FOR EXAMPLE RESIDENTIAL POPULATION GROWTH ALONG THE RAPPAHANNOCK RIVER OR POTENTIAL COMMERCIAL USERS WHERE THE PUBLIC REALLY WOULD BENEFIT.

FOURTH, SINCE EVERYONE LIVES DOWN RIVER FROM SOMEBODY, WHAT ABOUT THE OTHER COUNTIES AND MUNICIPALITIES DOWN RIVER FROM CAROLINE COUNTY? WHAT IMPACT DOES THIS HAVE ON THEM AND TO WHAT EXTENT HAVE THEY BEEN SOLICITED FOR COMMENT? WHAT PLANS DO THEY HAVE IN PLACE THAT MAY NEED TO BE ALTERED?

TRANSPARENCY AND OPERATING IN DAYLIGHT ARE THE HALLMARKS OF WHAT TODAY'S PUBLIC EXPECTS IN THEIR AGENCIES, NOT OPERATING UNDER THE CLOAK OF DARKNESS, WHICH IS THE MODUS OPERANDI OF THE PAST. THE ONLY BENEFICIARY OF WHAT SEEMS TO BE A COMPRESSED TIME FRAME IS SOME ENTITY THAT IS YET TO BE IDENTIFIED, WHILE THOUSANDS OF CITIZENS OF THE COMMONWEALTH MAY BE IMPACTED. AN OPEN FORUM, AN OPPORTUNITY TO COMMENT AND TO LEARN MORE AND CONFIRMATION THAT THE DEQ IS LOOKING OUT FOR THE PUBLIC ARE REASONABLE REQUESTS. THE DEQ IS THE PUBLIC WATCHDOG AND WE NEED YOUR HELP TO UNDERSTAND THE INFORMATION AND THE DECISION PROCESS.

I RESPECTFULLY ASK THAT NOT ONLY THE ISSUANCE OF THE PERMIT BE RECONSIDERED, BUT THAT ANY FURTHER ACTION INCLUDE THE INPUT OF A BROAD SECTION OF THE PUBLIC.

THANK YOU IN ADVANCE FOR YOUR CONSIDERATION OF MY OPINION.

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Number	Name	Received	Position
126	PAMELA G MURRAY	06/18/2024 16:00:49 PM	OPPOSE

I EXPRESS MY STRONG OPPOSITION TO THE DRAFT PERMIT ISSUED BY DEQ FOR CAROLINE COUNTY TO TAKE WATER FROM THE RAPPAHANNOCK RIVER. I FEEL A PUBLIC HEARING BE HELD TO ADDRESS MY CONCERNS AND THOSE OF MANY OF MY NEIGHBORS AND ALL THOSE IMPACTED. THERE ARE MANY CONCERNS REGARDING THIS PROJECT. THIS SEEMS TO BE A MASSIVE AMOUNT OF WATER TO BE TAKEN FROM THE RIVER ON A DAILY BASIS FOR SUPPOSED "MUNICIPAL" USES. THE DRAFT PERMIT INDICATES 2.9 MILLION GALLONS WILL BE USED FOR INDUSTRIAL PURPOSES. HOW DOES THIS FALL WITHIN THE DEFINITION OF MUNICIPAL USE? IT INDICATES THAT THE MAXIMUM WATER WITHDRAWAL PER DAY WILL BE 13.9 MILLION GALLONS. THIS SEEMS TO BE A MASSIVE AMOUNT OF WATER WITHDRAWAL THAT WILL NEGATIVELY IMPACT THOSE DOWNSTREAM IN A MYRIAD OF WAYS.

WHAT IS IMPACT OF THE LOSS OF THIS AMOUNT OF WATER DURING DRAUGHT CONDITIONS?
WHAT ENVIRONMENTAL STUDIES HAVE BEEN COMPLETED REGARDING THE IMPACT TO FISHERIES AND FAUNA?
WHAT IS THE IMPACT TO WILDLIFE?
WHAT ARE THE IMPACTS OF RETURNING THE DISCHARGE WATER TO THE MATTAPONI AND RETURNING 0 WATER TO THE RAPPAHANNOCK?
WILL THE WATER TABLE BE NEGATIVELY IMPACTED BELOW THIS INTAKE DUE TO THE LOSS OF UP TO 13.9 MILLION GALLONS OF WATER PER DAY?
IS THIS A FIRST-COME, FIRST-SERVED SITUATION FOR COUNTIES NEEDING WATER FOR MUNICIPAL USES? OR IS SOMEONE LOOKING AT THE BIG PICTURE FOR THE FUTURE NEEDS OF ALL COUNTIES ALONG THE RAPPAHANNOCK?
WHAT IS THE IMPACT ON THE SALT WATER/BRACKISH WATER LINE DOWNSTREAM?
WHAT IS THE IMPACT TO FARMS?
PROCESS
I FEEL STATE AND FEDERAL CONSERVATION ENTITIES SHOULD BE INCLUDED IN THIS PROCESS. PUBLIC HEARINGS NEED TO BE HELD IN MULTIPLE LOCATIONS SO THAT ALL THAT ARE IMPACTED BY THIS PERMITTING PROCESS CAN BE INCLUDED AND VOICE THEIR CONCERNS.
THANK YOU FOR THE OPPORTUNITY TO COMMENT.

PAMELA G. MURRAY
1837 HALES POINT ROAD
FARNHAM, VA 22460
JUNE 18, 2024

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Number	Name	Received	Position
127	ANNA V DEMARCO	06/18/2024 11:39:58 AM	OPPOSE

I AM WRITING IN OPPOSITION TO THE CAROLINE COUNTY WATER INTAKE APPLICATION. THE RAPPAHANNOCK IS A VERY IMPORTANT AND VALUABLE PART OF THE STATE OF VIRGINIA AND REMOVING THAT AMOUNT OF WATER WOULD OFFSET THE ECOSYSTEM. NOT ONLY IS THE RIVER HOME TO MANY DIFFERENT ORGANISMS BUT IT ALSO HELPS FEED AND SUSTAIN SURROUNDING LAND AND ANIMALS LIKE THE BALD EAGLE . I AND MANY OTHERS WOULD VERY MUCH APPRECIATE IT IF YOU CONSIDERED THESE AND OTHER FACTORS AND DENIED THE APPROVAL OF THIS REQUEST. THANK YOU FOR YOUR TIME AND CONSIDERATION.
SINCERELY,

ANNA VIRGINIA DEMARCO
1329 SOUTH MAIN STREET APT. B
HARRISONBURG, VA 22801

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Number	Name	Received	Position
128	ELIZABETH S KOSTELNY	06/18/2024 12:19:41 PM	OPPOSE

PRESERVATION VIRGINIA OPPOSES THIS PROPOSAL BECAUSE OF THE HARM IT WILL CAUSE TO THE NEARLY PRISTINE THIS SECTION OF RIVER AND THE ASSOCIATED HISTORIC AND CULTURAL RESOURCES INCLUDING THOSE ASSOCIATED WITH THE BATTLE OF THE NORTH ANNA RIVER IN MAY 1864. WE ENCOURAGE PUBLIC MEETINGS ON THE PROPOSAL TO ENSURE THAT ALL IMPACTS ARE THOUGHTFULLY CONSIDERED.

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Number	Name	Received	Position
129	ELIZABETH DEMARCO	06/18/2024 12:37:26 PM	OPPOSE

I AM WRITING IN STRONG OPPOSITION OF CAROLINE COUNTY WATER INTAKE APPLICATION VMRC JPA 2020-0514/DEQ VWP 20-0514.

THE NEGATIVE IMPACT OF SUCH A "WATER INTAKE" PROJECT ON THE RAPPAHANNOCK RIVER IS CLEAR, BUT SPECIFICALLY THIS PROPOSAL IMPROPERLY CATEGORIZES ITS WATER REQUIREMENTS AS A "MUNICIPAL PUBLIC WATER SUPPLY". ALSO, IT SEEMS PROPER ASSESSMENT OF SUCH A PROJECT HAS NOT BEEN EVALUATED, FOR ONE EXAMPLE, IGNORING THE CUMULATIVE IMPACT OF MULTIPLE WATER INTAKE STRUCTURES IN RAPPAHANNOCK RIVER FISH SPAWNING AREAS.

I LIVE MAINLY IN GEORGIA BUT ALSO SPEND A GREAT DEAL OF MY TIME ON THE RAPPAHANNOCK RIVER A FEW MILES UPRIVER FROM TAPPAHANNOCK, VA. IT IS THE MOST PEACEFUL PLACE ON EARTH TO ME AND MY PLACE TO RECHARGE, AND I AM SURE THAT I AM NOT ALONE. MORE IMPORTANTLY, PROTECTION OF THE NATURAL ECOSYSTEM RAPPAHANNOCK RIVER IS PARAMOUNT FOR ENVIRONMENTAL IMPACT ON VIRGINIA.

THANK YOU FOR YOUR TIME AND CONSIDERATION AND DENIAL OF THIS APPLICATION.

SINCERELY YOURS,
ELIZABETH DEMARCO
327 HILL STREET
ATHENS, GA 30601
706-224-1662 CELL

Attachments:

Submitted photos for this comment will begin on next page.

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1718728883.jpg



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Number	Name	Received	Position
130	FREDERICK D ATWOOD	06/18/2024 13:01:56 PM	OPPOSE

I VEHEMENTLY OPPOSE THIS PROJECT. AS WATER IS DRAWN FROM THE RAPPAHANNOCK, ESPECIALLY IN THE DRIER SUMMER MONTHS, THE SALINITY WILL EXTEND FURTHER UPRIVER DAMAGING TIDAL FRESHWATER ECOSYSTEMS OF THE RAPPAHANNOCK. THERE HAVE BEEN INSUFFICIENT STUDIES TO DOCUMENT THE POTENTIAL IMPACTS OF THIS POORLY-DESIGNED PLAN ON RIVERINE ECOSYSTEMS, AND THE FISH, BIRDS, PLANTS, AMPHIBIANS, AND INVERTEBRATES THAT LIVE IN THEM. FARMERS WHO USE WATER FROM THE RIVER FOR IRRIGATION WILL NO LONGER BE ABLE TO DO SO IF IT IS SALTY. IN ADDITION, THE PLAN TO PUMP THIS WATER INTO THE MATTAPONI INSTEAD OF BACK INTO THE RAPPAHANNOCK IS LUDICROUS. I OWN PROPERTY ON THE UPPER MATTAPONI IN UPPER KING WILLIAM COUNTY, NEAR BEULAHVILLE. HALF OF MY 78 ACRES ARE FREQUENTLY FLOODED NOW. I FEAR THAT THE ADDITIONAL VOLUME, ESPECIALLY IN THE WET SEASONS, WILL FURTHER FLOOD AND DAMAGE MY PROPERTY AND THE WILDLIFE THAT LIVE THERE. WHY TAKE WATER OUT OF ONE RIVER, CREATING PROBLEMS THERE, AND THEN PUT IT INTO ANOTHER RIVER, CREATING PROBLEMS THERE ALSO? AT LEAST PUT THE WATER BACK INTO THE RAPPAHANNOCK TO REDUCE THE IMPACT THERE. ALSO, THIS WATER IS USED FOR COOLING, RIGHT? HAVE PLANS BEEN INCLUDED TO PREVENT THE NEGATIVE IMPACTS OF ADDING WARMED WATER BACK INTO THE RIVER? PLEASE DO NOT APPROVE THIS PROJECT.

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Number	Name	Received	Position
131	KATHLEEN A WRIGHT	06/18/2024 13:42:09 PM	OPPOSE

RANDY OWEN
HABITAT MANAGER
VIRGINIA MARINE RESOURCES COMMISSION
BUILDING 96
380 FENWICK ROAD
FT MONROE, VA 23651
RANDY.OWEN@MRC.VIRGINIA.GOV

RE: VMRC CASE 2020-0514 AND DEQ CASE 20-0514
DEQ DRAFT PERMIT FOR CAROLINE COUNTY WATER INTAKE
GENTLEMEN:

I AM OPPOSED TO THE DRAFT PERMIT ISSUED BY DEQ FOR CAROLINE COUNTY TO WITHDRAW WATER FROM THE RAPPAHANNOCK.

I AM REQUESTING THAT YOU HOLD A PUBLIC HEARING TO HEAR AND ADDRESS MY CONCERNS:

- ABOUT THE PROPOSED USE OF THE MASSIVE AMOUNT OF OUR FRESHWATER CAROLINE WANTS TO WITHDRAW FOR THE BENEFIT OF A PRIVATE BUSINESS ENTITY,
- ABOUT THE MISLABELING OF A PRIVATE INDUSTRIAL USE AS A MUNICIPAL PUBLIC WATER NEED,
- ABOUT THE FAILURE TO CONSIDER THE CUMULATIVE IMPACT OF OTHER WATER INTAKE STRUCTURES,
- ABOUT THE NEED FOR TIME OF YEAR RESTRICTIONS ON WITHDRAWAL AND VOLUME OF WATER
- ABOUT THE FAILURE TO REQUIRE TREATED DISCHARGE WATER TO BE RETURNED TO THE RAPPAHANNOCK,
- ABOUT THE FAILURE TO REQUIRE ANY ONGOING INDEPENDENT ANALYSIS OF FISH AND LARVAE MORTALITY,
- ABOUT THE IMPACT OF THE MASSIVE WITHDRAWAL OF FRESHWATER ON THE SALT CONTENT OF WATER DOWNSTREAM FROM THE INTAKE,
- ABOUT THE IMPACT ON FRESHWATER MARSHES DUE TO THE INCREASE IN SALTWATER,
- ABOUT THE IMPACT ON RIPARIAN AND MUNICIPAL USERS OF RAPPAHANNOCK WATER DOWNSTREAM OF THE PROPOSED INTAKE,
- ABOUT THE ABSENCE OF ANY MITIGATION PENALTY.

ALL THE POINTS LISTED ABOVE ARE POINTS OF SERIOUS CONCERN. DEQ HAS PLACED NO ABSOLUTE LIMIT ON FRESHWATER WITHDRAWALS AND HAS NOT PROHIBITED FUTURE INCREASES OF FRESHWATER WITHDRAWALS BY CAROLINE OR ANY OTHER COUNTY THAT MIGHT WANT TO DO WHAT CAROLINE HAS PROPOSED. THE CUMULATIVE EFFECT OF FRESHWATER WITHDRAWALS CURRENTLY PROPOSED, OR WHICH MAY BE PROPOSED IN THE SAME RIVER, CLEARLY MUST BE ASSESSED. WHY, FOR EXAMPLE, HAS DEQ NOT MENTIONED THE KING GEORGE SITE ACROSS THE RAPPAHANNOCK NEAR THE CAROLINE INTAKE SITE THAT WAS RECENTLY ACQUIRED BY AMAZON. NEWS ACCOUNTS STATE THAT AMAZON HAS PLANS TO USE THAT LOCATION TO WITHDRAW MILLIONS OF GALLONS OF FRESHWATER TO COOL THE SENSORS OF A MASSIVE DATA CENTER IT PLANS TO BUILD AT THAT LOCATION. HAS DEQ APPROVED A PERMIT FOR

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AMAZON BUT HASN'T DISCLOSED IT TO THE PUBLIC?

STATE BIOLOGISTS HAVE ALREADY NOTED HOW GLOBAL WARMING AND SEA-LEVEL RISE ARE INCREASING THE SALINITY OF THE FRESHWATER ABOVE TAPPAHANNOCK. WITHDRAWING MILLIONS OF GALLONS OF FRESHWATER CREATES AN UNACCEPTABLE RISK OF UPSETTING THE DELICATE ECOLOGICAL BALANCE IN THE DOWNSTREAM MARSHES WHERE FRESHWATER PLANTS GROW THAT ARE THE ESSENTIAL FOOD SOURCE FOR COUNTLESS SPECIES OF WATERFOWL AND OTHER MIGRATING AND RESIDENT BIRDS INCLUDING EAGLES AND OSPREY. SALTWATER INTRUSION ALSO HURTS FARM FAMILIES AND OTHER PROPERTY OWNERS WHO SHOULD BE ABLE TO USE THEIR RIPARIAN RIGHTS TO DRAW REASONABLE QUANTITIES OF FRESHWATER FOR MULTIPLE USES.

THE WATERS OF VIRGINIA BELONG TO THE PEOPLE, NOT TO AMAZON OR ANY OTHER DATA CENTER. THE PEOPLE NEED TO BE ABLE TO VOICE THEIR CONCERNS AT PUBLIC HEARINGS BEFORE DEQ AND VMRC. I AM URGING DEQ TO RESCIND ITS DRAFT PERMIT TO CAROLINE, AND THAT BOTH DEQ AND VMRC HOLD PUBLIC HEARINGS TO HEAR THE GROWING CONCERNS OF THE PUBLIC.

??????SINCERELY,

KATHY

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Number	Name	Received	Position
132	HEATHER STROTHER STROTHER	05/18/2024 14:06:36 PM	OPPOSE

YORK RIVER STEWARD, MATTAPONI AND PAMUNKEY RIVERS ASSOCIATION MPRA , AND THE YORK RIVER GROUP SIERRA CLUB ARE ORGANIZATIONS FOCUSED ON THE PROTECTION AND PROMOTION OF VIRGINIA'S WATERWAYS, SPECIFICALLY IN THE YORK RIVER WATERSHED. WE HAVE CAUSE FOR CONCERN REGARDING CAROLINE COUNTY'S COUNTY REQUEST FOR APPLICATION NO. 20200514 WHICH WOULD PROVIDE AN INTAKE OF 7.9-13.9 MILLION GALLONS OF WATER A DAY MG/D FROM THE RAPPAHANNOCK RIVER WITH TENTATIVE PLANS TO BE DISCHARGED INTO THE MATTAPONI WATERSHED. WE STAND IN OPPOSITION TO THE TENTATIVE APPROVAL OF THIS PERMIT AND RESPECTFULLY REQUEST A PUBLIC HEARING TO ADDRESS OUR CONCERNS. ADDITIONALLY, THE WATER QUALITY COMMITTEE OF THE LAKE ANNA CIVIC ASSOCIATION LACA AND WATERKEEPERS CHESAPEAKE SUPPORTS OUR ORGANIZATION'S STAND ON THIS DECISION.

WE ARE AWARE THAT CAROLINE COUNTY GEOGRAPHICALLY SITS IN A CRITICAL CELL AREA ABOVE THE POTOMAC AQUIFER WHICH COUNTY RESIDENTS DRAW WATER FROM HOWEVER, THE SHEER SIZE OF THE PERMITTED REQUEST IS SUBSTANTIAL IN COMPARISON TO THE CURRENT AND PROJECTED POPULATION GROWTH. IN JANUARY 2024, CAROLINE PUBLIC UTILITIES HELD A TOWN HALL MEETING SHOWCASING THE CURRENT NEEDS OF ONE MILLION GALLONS A DAY FOR THEIR 30,000 RESIDENTS. PROJECTED RESIDENTIAL GROWTH FOLLOWING THE COUNTY'S DEVELOPMENT PLAN IN CARMEL CHURCH IS ESTIMATED TO INCREASE BY 50% TO 45,000 PEOPLE 1 . THIS LEAVES ROUGHLY 6-12 MG/D OF WATER FOR COMMERCIAL, INDUSTRIAL OR OTHER USE WHICH IS NOT NECESSARY TO KEEP UP WITH THE NEEDS OF THEIR RESIDENTS OR BUSINESSES. CAROLINE'S DEVELOPMENT PLAN EXPLICITLY SHOWCASES THEIR INTEREST TO INVEST IN THREE DATA CENTERS PROJECTS. DATA CENTERS ARE WATER AND ENERGY TAXING, NEEDING ROUGHLY 300,000 GALLONS OF WATER AND 15KW OF ENERGY DAILY 2 . THIS REQUEST IS BASED EXPRESSLY ON FINANCIAL GAIN FOR THE COUNTY AND PUTS THE COMMONWEALTH'S NATURAL RESOURCES AT RISK IN BOTH WATERSHEDS.

INDUSTRIAL WATER USE IS REPRESENTED IN HAZEN'S RESPONSE TO DEQ ON JANUARY 17 WITH AN ESTIMATE OF 0.4-4.2 MG/DAY FROM 2025-2038 FOR INDUSTRIAL USE WHICH INCLUDES THREE PROPOSED DATA CENTER PROJECTS. THIS INFORMATION WAS NOT PUBLICLY REPRESENTED AT THE TOWN HALL MEETING DEMONSTRATING A LACK OF TRANSPARENCY TO CAROLINE'S CONSTITUENTS WHO WILL BE FINANCIALLY CONTRIBUTING TO THE INTERBASIN PROJECT THROUGH TAX REVENUE. MPRA'S PRESIDENT, AUDREY MITCHELL, A FOUNDING MEMBER OF THE ORGANIZATION, FOUGHT A SIMILAR INTERBASIN PROJECT IN NEWPORT NEWS. "THE PROPOSED NEWPORT NEWS RESERVOIR TOOK OVER TWO DECADES AND COST THE CITY OF NEWPORT NEWS \$51.2 MILLION. IN THE END, IT HAD NOTHING TO SHOW FOR IT. CAROLINE COUNTY RESIDENTS NEED TO BE AWARE OF THE FINANCIAL IMPACT AS WELL AS THE ENVIRONMENTAL IMPACT" SAYS MITCHELL.

THE SALINITY MODEL INCLUDED IN THE REPORT PROVIDED BY THE COUNTY ASSUMES MINIMAL IMPACT TO THE RAPPAHANNOCK RIVER HOWEVER, THIS MODEL DID NOT ACCOUNT FOR ALL DROUGHT YEARS REPRESENTED IN THE NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM NIDIS . DUE TO OUR CHANGING CLIMATE, VIRGINIA HAS EXPERIENCED FLUCTUATING WEATHER PATTERNS AND INCREASED INTENSE STORMS IN RECENT DECADES. THE EASTERN PORTION OF VIRGINIA HAS BEEN PUT UNDER A

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DROUGHT ADVISORY IN 1999-2002, 2007-2008, 2010-2012 AND 2023. THE CHESAPEAKE BAY SALINITY DATASET WAS NOT INCLUDED IN THE MODELING SCENARIO DUE TO A LACK OF DATA FROM ALL DROUGHT YEARS IN VIRGINIA. THE PROPOSED INTAKE AND DISCHARGE ZONES LAY IN THE DROUGHT ADVISORY AREAS EAST OF I-95 DURING THE YEARS LISTED. DURING DROUGHT YEARS, SALINITY LEVELS INCREASE IN TYPICAL FRESHWATER ZONES DUE TO THE LACK OF CONSISTENT FRESHWATER FLOWS DOWNSTREAM PUSHING SALTWATER FROM THE BAY FURTHER UPRIVER. RIVERS IN VIRGINIA EXPERIENCED THIS PHENOMENON VERY RECENTLY IN THE AUTUMN OF 2023. ADDITIONAL MODELING ON THIS IMPACT IS IMPERATIVE TO DETERMINE REALISTIC IMPACTS TO PLANT AND ANIMAL POPULATIONS, AS WELL AS FARMERS THAT USE THE RIVER TO IRRIGATE THEIR CROPS. THE PERMIT ALSO LACKS CRITICAL DATA ON SALINITY LEVELS LOCATED AT THE INTAKE ZONE AND DISCHARGE ZONE. THE INTAKE PIPE SITS IN A SENSITIVE FRESHWATER TIDAL ZONE WHEREAS POLECAT CREEK SITS IN A NON-TIDAL FRESHWATER ZONE ROUGHLY 35 MILES ABOVE THE FALL LINE IN AYLETT, VA.

IF THIS PROJECT MOVES FORWARD IT MAY POSE HARM TO THE CREEK IN WHICH THE TREATED RAPPAHANNOCK WATER DISCHARGES INTO. THE OUTFLOW OF WATER FROM THE COUNTY'S WASTEWATER TREATMENT PLANT HAS THE POSSIBILITY TO INCREASE VELOCITY FLOW OF POLECAT CREEK UP TO 22% WHICH IS STATED IN HAZEN'S REPORT TO DEQ. POLECAT CREEK FLOWS INTO THE MATTAPONI RIVER WHICH IS CURRENTLY DEEMED IMPAIRED BY THE STATE DUE TO E. COLI CONTAMINATION. WHILE A LARGE INFLUX OF TREATED WATER IS NOT EXPECTED TO INCREASE E. COLI, IT MAY BE HARMFUL BY INCREASING EROSION AND INTRODUCING A NEW POLLUTANT SEDIMENT. LARGE QUANTITIES OF SEDIMENT POSE RISK TO VEGETATION, AQUATIC SPECIES, AND HUMAN HEALTH. HIGH TURBIDITY DECREASES PENETRATING SUNLIGHT WHICH HARMS THE PHOTOSYNTHETIC PROCESS REQUIRED BY PLANTS. THESE PLANTS PROVIDE HABITAT AND OXYGEN TO AQUATIC SPECIES. FISH SPECIES LIKE THE ENDANGERED ATLANTIC STURGEON LIVE WITHIN THE YORK WATERSHED AS WELL AS CRITICAL SPECIES SUCH AS SHAD AND STRIPED BASS. THIS RIVER, INCLUDING THE HEADWATERS, IS IMPORTANT FOR ANADROMOUS SPAWNING HABITAT. FLUCTUATION IN PH, SALINITY, TEMPERATURE, AND TURBIDITY MAY HAVE ADVERSE EFFECTS ON ADULT POPULATIONS AND DECREASE SEVERAL SPECIES' FECUNDITY. DEQ WAS ADVISED TO INCLUDE RESTRICTION OF WATER INTAKE DURING TIMES OF FISH SPAWNING AND DROUGHT, HOWEVER, THIS WAS NOT INCLUDED IN THE DRAFT PERMIT. THE GREATER IMPACT OF THIS TRANSFER COULD BE DETRIMENTAL TO THE RAPPAHANNOCK, MATTAPONI, UPPER MATTAPONI, AND PAMUNKEY TRIBAL CITIZENS THAT SUBSISTENCE FISH IN THIS WATERSHED. PER HB1157 WHICH WILL BE LAW IN THE COMMONWEALTH COME JULY 1, 2024, THESE TRIBES NEED TO BE CONSULTED DURING THE PERMITTING PROCESS AS IT HAS THE POTENTIAL TO IMPACT CULTURAL, ENVIRONMENTAL, AND HISTORIC ASPECTS OF BOTH RIVERS. THE COUNTIES BELOW THE PROPOSED INTAKE AND DISCHARGE PIPES WERE ALSO NOT CONSIDERED DURING THE PERMITTING PROCESS.

IN CONCLUSION, WE BELIEVE THIS INTERBASIN TRANSFER IS NOT BENEFICIAL TO THE RESIDENTS OF CAROLINE COUNTY, BUT TO INDUSTRY. ADDITIONAL THIRD PARTY ASSESSMENTS ARE NEEDED TO FULLY COMPREHEND THE IMPACT TO BOTH RIVERS WHILE APPROPRIATELY ADDRESSING THE IMPACTS OF CLIMATE CHANGE DURING THE MODELING PROCESS. VIRGINIA IS STILL MAKING EFFORTS TO MEET THE PHASE III WATERSHED IMPLEMENTATION PLAN WIP GOALS, AND IT IS NECESSARY UNDER THE FEDERAL CLEAN WATER ACT CWA THAT ALL WATER SHOULD BE DRINKABLE, FISHABLE AND SWIMMABLE TO ALL. THIS PERMIT DOES NOT ALIGN WITH THE GOALS SET BY EITHER OF THOSE DOCUMENTS AND PUTS THOSE THAT RELY ON THESE RIVERS AT RISK. IF THIS PERMIT IS APPROVED, IT WOULD BE A HARMFUL PRECEDENT ADVANCING INDUSTRY INTERESTS OVER THE PROTECTION OF OUR VITAL NATURAL RESOURCES AND THOSE WHO ENJOY AND DEPEND ON THEM.

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ADDITIONALLY, WE RESPECTFULLY REQUEST AN EXTENSION OF THE COMMENT PERIOD. THIS WOULD ALLOW OTHERS TO COMMENT WHO HAVE ONLY RECENTLY BECOME AWARE OF THIS PROJECT.

THANK YOU FOR YOUR CONSIDERATION OF OUR COMMENTS.

1. MICHAEL BAKER JR., 2008 CAROLINE TOD STUDY, BUBBLE PLAN
2. GILLIN, P. 2021, JANUARY 8 . TACKLING DATA CENTER WATER USAGE CHALLENGES AMID HISTORIC DROUGHTS, WILDFIRES. DATA CENTER FRONTIER, [HTTPS://WWW.DATACENTERFRONTIER.COM/SPECIAL-REPORTS/ARTICLE/11428474/TACKLING-DATA-CENTER-WATER-USAGE-CHALLENGES-AMID-HISTORIC-DROUGHTS-WILDFIRES](https://www.datacenterfrontier.com/special-reports/article/11428474/tackling-data-center-water-usage-challenges-amid-historic-droughts-wildfires)
3. NOAA NIDIS. 2024 . DROUGHT IN VIRGINIA. DROUGHT.GOV.
[HTTPS://WWW.DROUGHT.GOV/STATES/VIRGINIA](https://www.drought.gov/states/virginia)
4. KAHN, J., HAGER C., WATERSON C., HARTMAN K., 2014 GENETICALLY UNIQUE STOCK OF ATLANTIC STURGEON FOUND IN THE YORK RIVER, NAVY MARINE SPECIES MONITORING PROGRAM,
[HTTPS://NAVYMARINESPECIESMONITORING.US/FILES/9813/9576/5255/HAGER_STURGEON.PDF](https://navymarinespeciesmonitoring.us/files/9813/9576/5255/HAGER_STURGEON.PDF)

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Number	Name	Received	Position
133	JEFFREY W WRIGHT	06/18/2024 13:49:57 PM	OPPOSE

JUNE 18, 2024

ERIC SEAVEY
MANAGER -WATER WITHDRAWAL PERMITTING
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O. BOX 1105
RICHMOND, VIRGINIA 23218
ERIC.SEAVEY@DEQ.VIRGINIA.GOV

RANDY OWEN
HABITAT MANAGER
VIRGINIA MARINE RESOURCES COMMISSION
BUILDING 96
380 FENWICK ROAD
FT MONROE, VA 23651
RANDY.OWEN@MRC.VIRGINIA.GOV

RE: VMRC CASE 2020-0514 AND DEQ CASE 20-0514
DEQ DRAFT PERMIT FOR CAROLINE COUNTY WATER INTAKE
GENTLEMEN:

I AM OPPOSED TO THE DRAFT PERMIT ISSUED BY DEQ FOR CAROLINE COUNTY TO WITHDRAW WATER FROM THE RAPPAHANNOCK.

I AM REQUESTING THAT YOU HOLD A PUBLIC HEARING TO HEAR AND ADDRESS MY CONCERNS:
-ABOUT THE PROPOSED USE OF THE MASSIVE AMOUNT OF OUR FRESHWATER CAROLINE WANTS TO WITHDRAW FOR THE BENEFIT OF A PRIVATE BUSINESS ENTITY,
-ABOUT THE MISLABELING OF A PRIVATE INDUSTRIAL USE AS A MUNICIPAL PUBLIC WATER NEED,
-ABOUT THE FAILURE TO CONSIDER THE CUMULATIVE IMPACT OF OTHER WATER INTAKE STRUCTURES,
-ABOUT THE NEED FOR TIME OF YEAR RESTRICTIONS ON WITHDRAWAL AND VOLUME OF WATER
-ABOUT THE FAILURE TO REQUIRE TREATED DISCHARGE WATER TO BE RETURNED TO THE RAPPAHANNOCK,
-ABOUT THE FAILURE TO REQUIRE ANY ONGOING INDEPENDENT ANALYSIS OF FISH AND LARVAE MORTALITY,
-ABOUT THE IMPACT OF THE MASSIVE WITHDRAWAL OF FRESHWATER ON THE SALT CONTENT OF WATER DOWNSTREAM FROM THE INTAKE,
-ABOUT THE IMPACT ON FRESHWATER MARSHES DUE TO THE INCREASE IN SALTWATER,
-ABOUT THE IMPACT ON RIPARIAN AND MUNICIPAL USERS OF RAPPAHANNOCK WATER DOWNSTREAM OF THE PROPOSED INTAKE,
-ABOUT THE ABSENCE OF ANY MITIGATION PENALTY.

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ALL THE POINTS LISTED ABOVE ARE POINTS OF SERIOUS CONCERN. DEQ HAS PLACED NO ABSOLUTE LIMIT ON FRESHWATER WITHDRAWALS AND HAS NOT PROHIBITED FUTURE INCREASES OF FRESHWATER WITHDRAWALS BY CAROLINE OR ANY OTHER COUNTY THAT MIGHT WANT TO DO WHAT CAROLINE HAS PROPOSED. THE CUMULATIVE EFFECT OF FRESHWATER WITHDRAWALS CURRENTLY PROPOSED, OR WHICH MAY BE PROPOSED IN THE SAME RIVER, CLEARLY MUST BE ASSESSED. WHY, FOR EXAMPLE, HAS DEQ NOT MENTIONED THE KING GEORGE SITE ACROSS THE RAPPAHANNOCK NEAR THE CAROLINE INTAKE SITE THAT WAS RECENTLY ACQUIRED BY AMAZON. NEWS ACCOUNTS STATE THAT AMAZON HAS PLANS TO USE THAT LOCATION TO WITHDRAW MILLIONS OF GALLONS OF FRESHWATER TO COOL THE SENSORS OF A MASSIVE DATA CENTER IT PLANS TO BUILD AT THAT LOCATION. HAS DEQ APPROVED A PERMIT FOR AMAZON BUT HASN'T DISCLOSED IT TO THE PUBLIC?

STATE BIOLOGISTS HAVE ALREADY NOTED HOW GLOBAL WARMING AND SEA-LEVEL RISE ARE INCREASING THE SALINITY OF THE FRESHWATER ABOVE TAPPAHANNOCK. WITHDRAWING MILLIONS OF GALLONS OF FRESHWATER CREATES AN UNACCEPTABLE RISK OF UPSETTING THE DELICATE ECOLOGICAL BALANCE IN THE DOWNSTREAM MARSHES WHERE FRESHWATER PLANTS GROW THAT ARE THE ESSENTIAL FOOD SOURCE FOR COUNTLESS SPECIES OF WATERFOWL AND OTHER MIGRATING AND RESIDENT BIRDS INCLUDING EAGLES AND OSPREY. SALTWATER INTRUSION ALSO HURTS FARM FAMILIES AND OTHER PROPERTY OWNERS WHO SHOULD BE ABLE TO USE THEIR RIPARIAN RIGHTS TO DRAW REASONABLE QUANTITIES OF FRESHWATER FOR MULTIPLE USES.

THE WATERS OF VIRGINIA BELONG TO THE PEOPLE, NOT TO AMAZON OR ANY OTHER DATA CENTER. THE PEOPLE NEED TO BE ABLE TO VOICE THEIR CONCERNS AT PUBLIC HEARINGS BEFORE DEQ AND VMRC.

I AM URGING DEQ TO RESCIND ITS DRAFT PERMIT TO CAROLINE, AND THAT BOTH DEQ AND VMRC HOLD PUBLIC HEARINGS TO HEAR THE GROWING CONCERNS OF THE PUBLIC.

SINCERELY,

JEFF
JEFF WRIGHT

Virginia Marine Resources Commission

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Number	Name	Received	Position
134	LISA S ANDREWS	06/18/2024 14:49:10 PM	OPPOSE

ON BEHALF OF THE ESSEX COUNTY ECONOMIC DEVELOPMENT AUTHORITY, I EXPRESS OUR OPPOSITION TO CAROLINE COUNTY'S APPLICATION FOR A WATER PUMP STATION TO WITHDRAW MILLIONS OF GALLONS OF WATER FROM THE RAPPAHANNOCK RIVER. WE OPPOSE DUE TO THE REDUCTION IN FRESH WATER FLOW TO THE RAPPAHANNOCK RIVER THAT WILL ADVERSELY IMPACT AQUATIC LIFE AND MARINE HABITAT IN ESSEX COUNTY AND THE LOWER RAPPAHANNOCK, AND WILL NECESSARILY RESULT IN HIGHER SALINE LEVELS IN THE RIVER AND IN THE COASTAL AQUIFER THAT IS ALREADY OVERALLOCATED. PLEASE REVIEW OUR LETTER TO THE DEPARTMENT OF ENVIRONMENTAL QUALITY WHICH DETAILS OUR OPPOSITION.

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=949

June 17, 2024

Mr. Eric Seavey
Manager – Water Withdrawal Permitting
Virginia Department of Environmental Quality
PO Box 1105
Richmond, VA 23218

Via Email: Eric.Seavey@deq.virginia.gov

Re: DEQ Case # 20-0514 – Caroline County Proposed Permit to Take Millions of Gallons Daily of Water From the Rappahannock River to Enable Massive Computer Data Centers to Locate in Caroline County.

Dear Mr. Seavey:

I am writing on behalf of Essex County Economic Development Authority (EDA) to strongly object to DEQ's granting a permit to withdraw millions of gallons of water daily from the Rappahannock River to enable massive computer data centers (CDCs) to locate in Caroline County.

The Rappahannock is a Virginia State Scenic River that runs along the entire length of Essex County's eastern boundary. It provides habitat for hundreds of species of wildlife including fish, crabs, oysters, numerous species of migratory birds, including bald eagles, osprey, geese, ducks, shorebirds, etc., and other wildlife. It is a saltwater river at its mouth, brackish at Tappahannock, and considered to be freshwater by the Commonwealth as it passes under the Downing bridge at Tappahannock. It is highly recognized for its ecological and natural resource importance by environmental agencies of the federal government and our Commonwealth. While it is recognized as an excellent place to fish, hunt and observe wildlife, its importance to the counties of the lower Rappahannock far exceeds the outdoor recreational activities it offers. Understand that it is our primary economic engine that supports our watermen, our farmers, plant and greenhouse nurseries, our growing tourism industry, and many of the ancillary businesses of our area.

We are currently working with the National Park Service, the large refuge units of USFWS that exist upriver from Tappahannock, and the Rappahannock Tribe in a coordinated tourism effort

that will promote the remarkable history and ecological importance of the Rappahannock. That includes river tours, visitation to historical properties, wildlife observation, and viewing the cliffs described in John Smith's diary where Rappahannock Tribal villages once existed, the habitat area on the river which supports the largest concentration of Bald Eagles on the East Coast, and the steamboat wharfs of a bygone era. We take pride in promoting the pristine quality of the Rappahannock, the natural resources of our region, and the remarkable history of our area which are among the qualifying criteria for scenic river designation recognized in Virginia's enactment of legislation in 2021 that proclaimed the lower Rappahannock to be a State Scenic River.

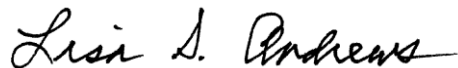
The Rappahannock is a treasured resource of the Commonwealth. While this may not be a concern of the executives of a data center corporation, the responsibility to protect this precious natural resource should be a priority concern and obligation of DEQ, VMRC, and other state and federal environmental agencies that are charged with the duty to protect our tidal waters and the wildlife they sustain.

It is for these reasons, and others, that our EDA is strongly opposed to DEQ's draft permit to Caroline County for an extraordinary grant to draw MILLIONS of gallons of Rappahannock water to facilitate the expansion of data centers. The extracted water will never be returned to the Rappahannock's watershed. Moreover, DEQ is acting without proper regard to the effects of such withdrawals on the health of the Rappahannock, the Coastal aquifer, which is already overallocated, and how it is likely to adversely impact Essex and other counties in this watershed.

- The proposed withdrawal of hundreds of millions of gallons of Rappahannock will further increase its salinity in our brackish water above the Tappahannock bridge. Increasing salinity from global warming is already a growing problem here, and this project would make it worse.
- Caroline is not seeking this water to meet normal water needs for its residents or the normal municipal public water supply needs of the County authorized by state law. Massive Data Centers looking for cheap water will soon be popping up in counties across the State who do not want them if this bad precedent is set by DEQ. A data center is clearly not a normal "municipal public water supply" need of a county.
- DEQ has also failed to perform a comprehensive analysis of the mortality to aquatic species of life because it has not considered the cumulative impact of destruction of fish eggs and larvae of this and other water intake structures.
- DEQ has failed to include appropriate time of year restrictions on water withdrawals. When millions of fish are spawning, it is critical that any DEQ or VMRC permit must call for such restrictions.
- DEQ has failed to require that any water withdrawn and used by Caroline should be returned after any necessary treatment to the Rappahannock, not dumped into the Mattaponi, a separate river basin.
- DEQ has disregarded the adverse impacts Caroline's proposed withdrawal would have on other counties along the Rappahannock. Regional water supply planning involving all counties of the lower Rappahannock is required and is especially needed given the unexpectedly high impacts of climate change.

We request that the provisional permit be rescinded, and that a public hearing should be held on this case. These comments have also been sent to VMRC. We are concerned that the notification published of DEQ's draft permit was only published in the Richmond Times Dispatch and the Fredericksburg Free Lance Star. It did not appear in the local papers of any of the counties of the lower Rappahannock, including specifically the counties downstream of Caroline. We respectfully request that you republish the notice with clear instructions as to how comments can be made and submitted to both DEQ and VMRC.

Sincerely,



Lisa S. Andrews, Chairwoman
Essex County Economic Development Authority

CC:

Mr. Randy Owen (JPA#2020-0514)
Habitat Manager, VA Marine Resources Commission
Building 96, 380 Fenwick Road, Ft. Monroe, VA 23651
Randy.Owen@mrc.virginia.gov
VMRC file: JPA #2020-0514

Rob Akers, Chair, Essex County Board of Supervisors
Ronnie Gill, Member, Essex County Board of Supervisors
W.W. Hynson, Chair, Westmoreland County Board of Supervisors
F. Lee Sanders, Chair, Richmond County Board of Supervisors
Don R. Harris, Chair, Middlesex County Board of Supervisors
Christopher Hutson, Chair, Gloucester County Board of Supervisors
Ernest W. Palin, Jr., Chair, Lancaster County Board of Supervisors
Rappahannock Times

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
135	LISA D MOUNTCASTLE	06/18/2024 14:15:18 PM	OPPOSE

SEE MY LETTER ATTACHED.

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=948

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. 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. 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?

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
136	RAE LYNN BOYER	06/18/2024 14:48:57 PM	OPPOSE

WE CANNOT AFFORD TO PUT OUR WATER, FLORA AND FAUNA AT RISK FOR THIS.
SAID BEST BY THE FRIENDS OF THE RAPPAHANNOCK-

IT IS WELL DOCUMENTED THAT CAROLINE COUNTY NEEDS WATER TO MEET THE GROWTH THAT IS COMING TO THE COUNTY. GROUNDWATER LEVELS EAST OF INTERSTATE 95 ARE DECLINING DUE TO EXCESSIVE USE AND THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY DEQ IS REQUIRING LOCALITIES TO SEEK ALTERNATIVE SOURCES OF WATER. IN THIS CASE CAROLINE COUNTY IDENTIFIED SURFACE WATER WITHDRAWALS FROM THE RAPPAHANNOCK RIVER AS THE BEST SOURCE.

ACCORDINGLY, CAROLINE COUNTY PUBLIC UTILITIES HAS APPLIED TO INSTALL A NEW WATER WITHDRAWAL INTAKE STRUCTURE LOCATED ON THE SOUTH BANK OF RAPPAHANNOCK RIVER, A RAW WATER PUMP STATION, THE INSTALLATION OF APPROXIMATELY 35 MILES OF WATER LINE FOR THE TRANSFER OF RAW WATER FOR THE INTAKE TO THE PROPOSED WATER TREATMENT PLANT WTP LOCATED IN THE VICINITY OF CARMEL CHURCH, VA. THE INTAKE WOULD TAKE AN AVERAGE OF 7.90 MILLION GALLONS OF WATER A DAY OR A MAXIMUM OF 13.90 MILLION GALLONS PER DAY MGD . DEQ'S TENTATIVE DECISION IS TO ISSUE THE PERMIT.

WHILE FRIENDS OF THE RAPPAHANNOCK FOR ACKNOWLEDGES CAROLINE COUNTY'S NEED FOR WATER, WE OPPOSE THE DRAFT PERMIT IN ITS CURRENT FORM. WE REMAIN CONCERNED ABOUT THE POTENTIAL IMPACTS OF THIS INTAKE TO THE HEALTH OF THE RAPPAHANNOCK RIVER AND ITS AQUATIC FAUNA FOR THE FOLLOWING REASONS:

MAJOR INTERBASIN TRANSFER OF WATER

THIS PERMIT PROPOSES TO ALLOW A MAJOR INTERBASIN TRANSFER OF WATER BETWEEN TWO MAJOR RIVER BASINS. THE WATER WOULD BE PUMPED APPROXIMATELY 35 MILES ACROSS THE COUNTY TO CARMEL CHURCH AREA IN THE I-95 CORRIDOR WHERE IT WILL BE TREATED AT A WATER TREATMENT PLANT, USED FOR ONE OF THREE SECTORS RESIDENTIAL, COMMERCIAL, INDUSTRIAL COOLING , AND DISCHARGED AFTER TREATMENT AT A WASTEWATER TREATMENT PLANT INTO THE MATTAPONI RIVER AND POLECAT CREEK A TRIBUTARY OF THE MATTAPONI RIVER . NOT A SINGLE DROP OF WATER REMOVED FROM THE RAPPAHANNOCK RIVER WOULD COME BACK TO THE RAPPAHANNOCK RIVER.

ATLANTIC STURGEON

THE AREA WHERE THE INTAKE IS PROPOSED IS KNOWN TO BE POTENTIAL SPAWNING GROUNDS FOR THE FEDERALLY DESIGNATED AS AN ENDANGERED SPECIES ATLANTIC STURGEON. THANKFULLY THE VIRGINIA DEPARTMENT OF WILDLIFE RESOURCES HAS PROVIDED VALUABLE INPUT BUT NOWHERE CAN THERE BE FOUND EVIDENCE THAT THE FEDERAL AGENCIES WHO ARE RESPONSIBLE FOR PROTECTING ATLANTIC STURGEON HAVE BEEN CONSULTED ON THE PERMIT APPLICATION.

WATER DEMAND

OF THE PROPOSED AVERAGE OF 7.9 MILLION GALLONS A DAY TO BE WITHDRAWN FROM THE RIVER 2.9 MILLION GALLONS WOULD BE ALLOCATED TO INDUSTRIAL FACILITIES, SPECIFICALLY THREE 3 DATA

**Virginia Marine Resources Commission
Habitat Management Public Comments
Application Number 20200514**

Print Date: Monday May 18 2026 10:03

CENTER CAMPUSES. ESSENTIALLY THEY ARE USING A MUNICIPAL DRINKING WATER PROJECT AS COVER FOR A COOLING WATER SUPPLY TO DATA CENTER PROJECTS.

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
137	MARTHA H GILBERT	06/18/2024 15:13:26 PM	OPPOSE

THIS PLAN WILL HAVE HUGE NEGATIVE EFFECTS ON THE RIVER, ADJOINING HABITATS AND COMMUNITIES. MY COMMUNITY, THE NORTHERN NECK, RELIES ON THE RIVER FOR RECREATION, AND THE RAPPAHANNOCK IS A BIG PART OF OUR APPEAL, AND HENCE OUR ECONOMY.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
138	KRISHNA PATEL MD	06/18/2024 15:53:35 PM	OPPOSE

RE: CAROLINE COUNTY'S WATER INTAKE APPLICATION
VMRC JPA 2020-0514/DEQ VWP 20-0514

I AM WRITING IN STRONG OPPOSITION TO CAROLINE COUNTY'S APPLICATION TO BUILD AND OPERATE A WATER INTAKE STRUCTURE THAT WILL WITHDRAWAL MILLIONS OF GALLONS OF WATER FROM THE RAPPAHANNOCK RIVER.

I UNDERSTAND THE NEED TO SUPPORT DEVELOPMENT AND GROWTH OF THE AREA, BUT THERE SHOULD BE AN EQUAL, IF NOT HIGHER REGARD FOR HOW THIS WILL IMPACT THE ENVIRONMENT AND ECOSYSTEM ALONG THE RAPPAHANNOCK RIVER. THIS WOULD BE IN EFFECT FOR 15 YEARS, WHICH MEANS SIGNIFICANT SHIFTS FOR WILDLIFE WITHIN THE WATERWAYS THAT MAY BE IRREVERSIBLE. THIS WOULD BE ABUSIVE TO THE NATURAL RESOURCE AND DOES NOT ACCOUNT FOR THE EXPECTED INCREASE OF MUNICIPAL PUBLIC WATER SUPPLY DEMAND. I HOPE YOU WILL EMPLOY ENVIRONMENTAL EXPERTS TO DETERMINE THE TRUE IMPACT OF THIS BEFORE CONSIDERING SUCH APPLICATION.

THUS, PLEASE DENY THIS APPLICATION REQUEST BY CAROLINE COUNTY FOR THE SAKE OF VIRGINIA'S ECOSYSTEM. THANK YOU FOR YOUR TIME AND CONSIDERATION.

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
139	BRENT HUNSINGER	06/18/2024 16:05:06 PM	OPPOSE

FRIENDS OF THE RAPPAHANNOCK OPPOSES THIS DRAFT PERMIT AS WRITTEN FOR REASONS MENTIONED IN THE ATTACHED DOCUMENTS.

PLEASE SEE ATTACHED DOCUMENTS FOR RATIONALE.

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=950



Assessment of salinity intrusion in the James and Chickahominy Rivers as a result of simulated sea-level rise in Chesapeake Bay, East Coast, USA

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ABSTRACT

Global sea level is rising, and the relative rate in the Chesapeake Bay region of the East Coast of the United States is greater than the worldwide rate. Sea-level rise can cause saline water to migrate upstream in estuaries and rivers, threatening freshwater habitat and drinking-water supplies. The effects of future sea-level rise on two tributaries of Chesapeake Bay, the James and Chickahominy (CHK) Rivers, were evaluated in order to quantify the salinity change with respect to the magnitude of sea-level rise. Such changes are critical to: 1) local floral and faunal habitats that have limited tolerance ranges to salinity; and 2) a drinking-water supply for the City of Newport News, Virginia. By using the three-dimensional Hydrodynamic-Eutrophication Model (HEM-3D), sea-level rise scenarios of 30, 50, and 100 cm, based on the U.S. Climate Change Science Program for the mid-Atlantic region for the 21st century, were evaluated. The model results indicate that salinity increases in the entire river as sea level rises and that the salinity increase in a dry year is greater than that in a typical year. In the James River, the salinity increase in the middle-to-upper river (from 25 to 50 km upstream of the mouth) is larger than that in the lower and upper parts of the river. The maximum mean salinity increase would be 2 and 4 ppt for a sea-level rise of 50 and 100 cm, respectively. The upstream movement of the 10 ppt isohaline is much larger than the 5 and 20 ppt isohalines. The volume of water with salinity between 10 and 20 ppt would increase greatly if sea level rises 100 cm. In the CHK River, with a sea-level rise of 100 cm, the mean salinity at the drinking-water intake 34 km upstream of the mouth would be about 3 ppt in a typical year and greater than 5 ppt in a dry year, both far in excess of the U.S. Environmental Protection Agency's secondary standard for total dissolved solids for drinking water. At the drinking-water intake, the number of days of salinity greater than 0.1 ppt increases with increasing sea-level rise; during a dry year, 0.1 ppt would be exceeded for more than 100 days with as small a rise as 30 cm.

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1. Introduction

The threat of climate change to the environment has become a prominent focus for both government and industry. Observational records and climate projections provide abundant evidence that freshwater resources are vulnerable and have the potential to be strongly affected by sea-level rise, with wide-ranging consequences for human societies and ecosystems (IPCC, 2007). Sea-level rise can cause saline water to migrate upstream to points where freshwater existed previously (e.g., National Research Council, 1987; Grabemann et al., 2001; Poff et al., 2002). Several studies indicate that sea-level rise will increase the salinity in estuaries (e.g., Hull and Tortorelli, 1979; Hilton et al., 2008; Bhuiyan and Dutta, 2011), which will result in changes in stratification and estuarine

circulation (Hong and Shen, 2012). Such salinity migration could cause shifts in salt-sensitive habitats, thereby affecting the distribution of flora and fauna, and affect water availability for municipal supply, irrigation, and industrial uses.

Analyses of long-term tide-gauge data indicate that the relative sea level in the Chesapeake Bay, on the East Coast of the USA, has been rising for decades (Barbosa and Silva, 2009). The linear trend in relative sea level of the lower Chesapeake Bay is 4.4501 ± 0.1850 mm/year (Boon et al., 2010). Based on data from 1949 to 2006, Hilton et al. (2008) conclude that sea-level rise largely has been responsible for salinity increases in most parts of the Bay. Hong and Shen (2012) demonstrate that average salinity, salt intrusion distance, and stratification in Chesapeake Bay will increase as sea level rises. All of these studies focus on the main channel of Chesapeake Bay. To date, no studies have addressed salinity change in the Bay's tributaries and how such changes may affect floral and faunal habitats or municipal water supply.

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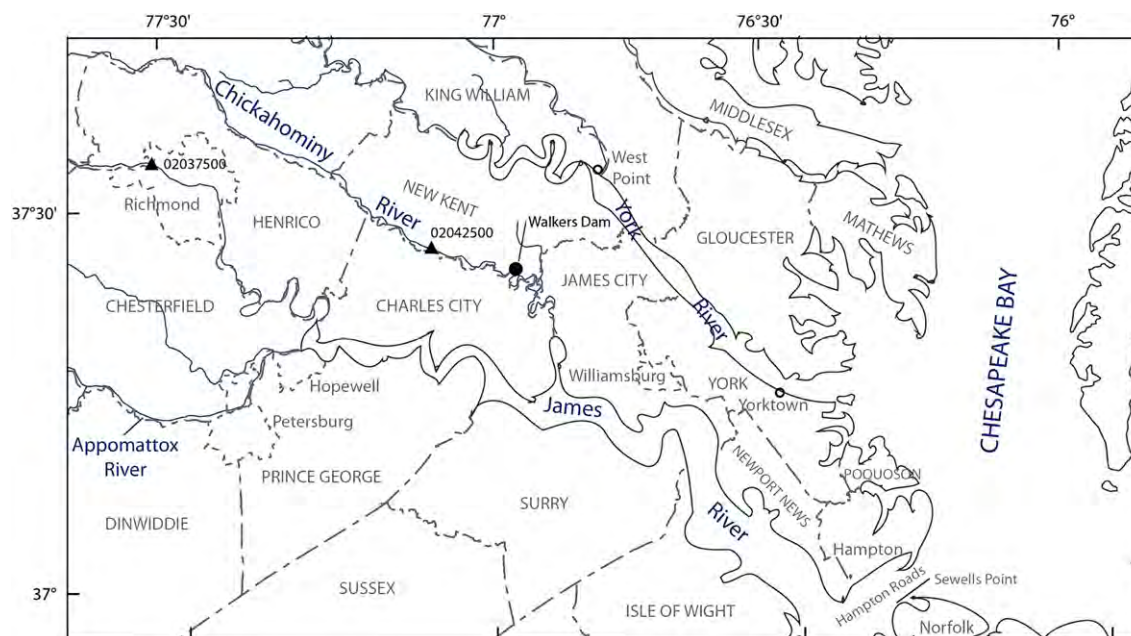


Fig. 1. Location map of the James River and the Chickahominy River.

The James River is the southernmost tributary of Chesapeake Bay (Fig. 1). Salinity in the estuarine part of the James River varies seasonally, which is a common characteristic of estuaries in the mid-latitudes. Near the river mouth, the channel is more than 15 m deep, and salinity typically is around 25 parts per thousand (ppt). The horizontal salinity gradients are usually larger near the head of the river where the freshwater and saltwater converge, referred to, in this paper, as the salinity front. The denser, saline, bottom water enters the James River from Chesapeake Bay and flows upstream, while the less dense surface waters, dominated by freshwater inflow, flow downstream toward the Bay (Pritchard, 1956; Shen and Lin, 2006).

The Chickahominy (CHK) River is one of the main tributaries of the James River near the coast (Fig. 1) and enters the James River approximately 73 km upstream of its mouth. A lake formed by Walkers Dam on the CHK serves as a drinking-water supply for the City of Newport News, Virginia (Fig. 1). Newport News Waterworks is a regional drinking-water utility located on the Virginia Lower Peninsula and serves about 415,000 people, including eight Federal installations. The drinking-water supply intake at Walkers Dam supplies anywhere from 30 to 70 percent of the region's drinking water, depending on the availability of other sources. When freshwater discharge is low, saline water from the James River can

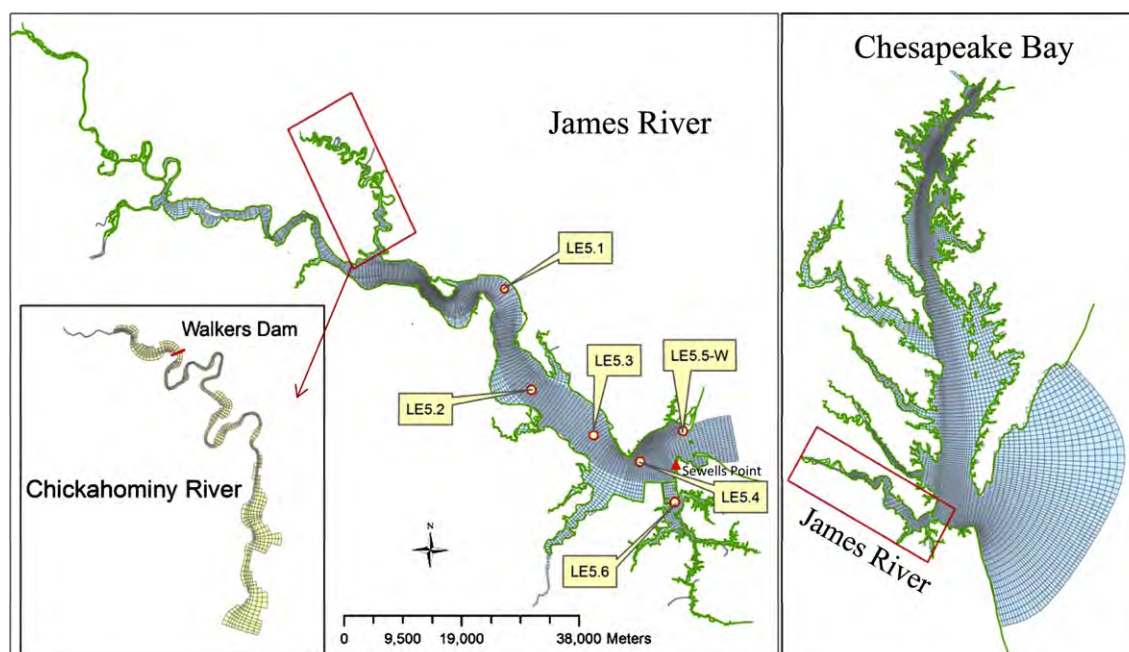


Fig. 2. Diagram of the numerical model grids. Salinity and water level monitoring stations in the James River also are shown.

enter the lower CHK River, increasing its salinity to around 7 ppt. When freshwater discharge is high, saline water seldom reaches the middle CHK River. Evaluating the sea-level rise effect on salinity intrusion in the CHK River is critical to the sustainability of the drinking-water supply.

Tidal freshwater wetlands (TFW) are located at the upper end of estuaries and fill an important ecological niche, because they have high floral and faunal diversities. TFW are sensitive to a wide range of environmental changes and are especially vulnerable to inundation from sea-level rise and salinity intrusion (Rheinhardt and Hershner, 1992), which can cause dramatic state changes by converting tree-dominated swamps to herbaceous-dominated wetlands (Neubauer and Craft, 2009). TFW in the Chesapeake Bay region contain endemic flora, some of which are globally rare, and

the James and CHK Rivers hold more than 200 ha of TFW (Odum et al., 1984). Quantifying the salinity change in tributaries to the Bay as a result of sea-level rise is important because flora and fauna that occupy TFW have limited tolerance ranges to salinity, and habitats may shift or be eliminated.

Although salinity monitoring data in the James and CHK Rivers exist, the measurements are too infrequent to quantify the effect of sea-level rise. One way to evaluate potential effects of future sea-level rise in these Chesapeake Bay tributaries is to develop accurate science-based models of present-day environmental system behavior. Once present-day processes can be simulated, the models can be used to investigate a plausible range of future changes. In this study, a calibrated three-dimensional model was used to simulate salinity changes on the James and CHK Rivers caused by

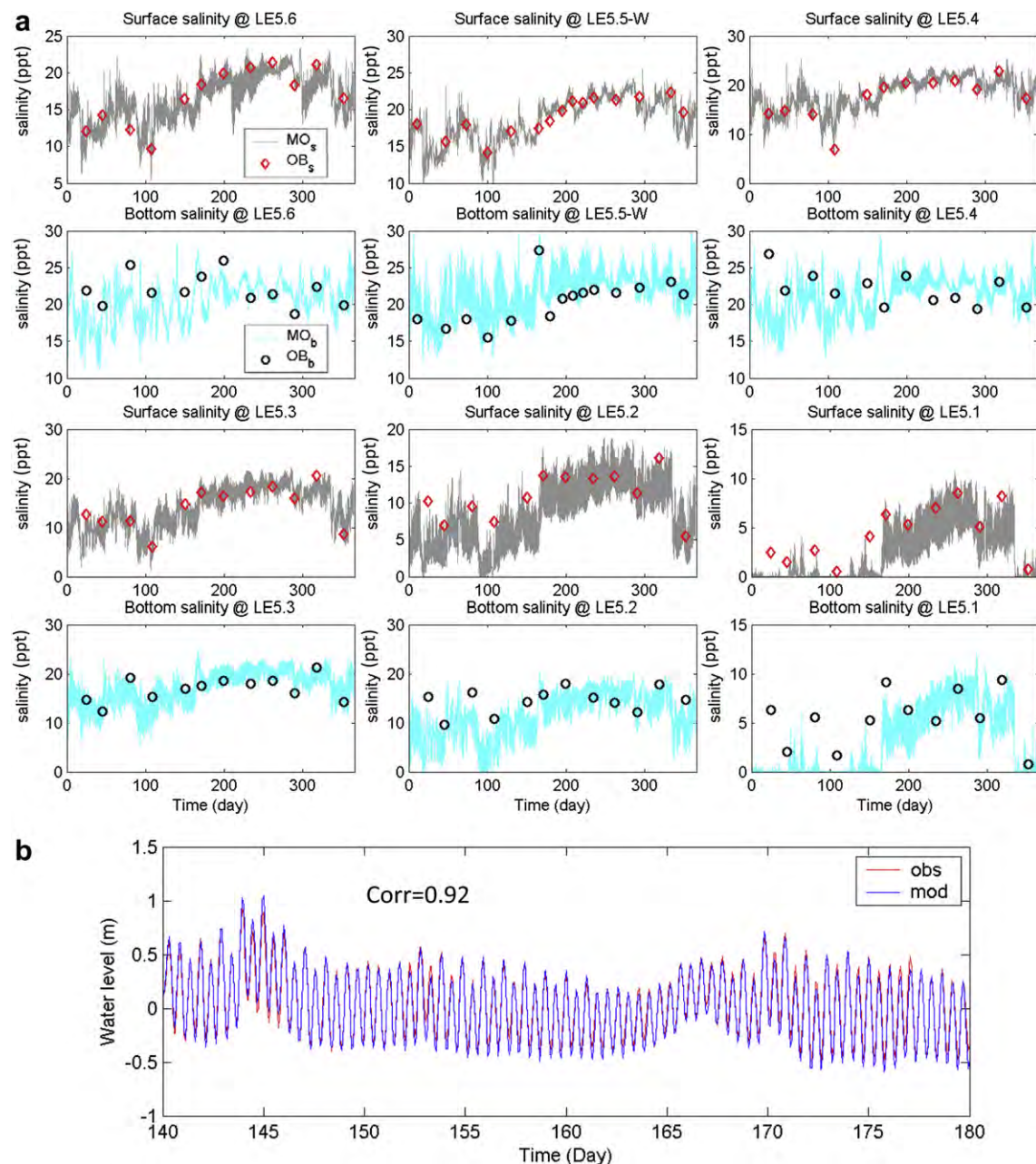


Fig. 3. Model-data comparisons for 2005 for (a) salinity, and (b) water level. The model was run with the actual forcing condition in 2005. The modeled surface and bottom salinities were compared to measured salinities at stations LE5.6, LE5.5-W, LE5.4, LE5.3, LE5.2, and LE5.1. The modeled water level was compared to the observations at the Sewells Point station; the correlation coefficient is 0.92, at the 95% confidence level. Locations of the stations are shown in Fig. 2.

sea-level rise. The effects of sea-level rise on the TFW of the James River tributaries and on the drinking-water intake on the CHK River were assessed. Such information can be useful as decision makers and water managers are forced to adapt to changing conditions.

1.1. Sea-level rise scenarios

The U.S. Climate Change Science Program (2009) synthesized an enormous amount of climatic and oceanic modeling and proposed three future sea-level rise scenarios for the 21st century for the mid-Atlantic region of the USA. The scenarios were developed from a combination of the 20th century relative sea-level rise rate in the mid-Atlantic region and either a 2 or 7 mm per year increase in global sea level:

Scenario 1: the 20th century rate, which is generally 3–4 mm per year (30–40 cm total by the year 2100);

Scenario 2: the 20th century rate plus 2 mm per year acceleration (up to 50 cm total by 2100);

Scenario 3: the 20th century rate plus 7 mm per year acceleration (up to 100 cm total by 2100).

Scenario 1 assesses the effects if future sea-level rise occurs at the same rate as was observed over the 20th century at a particular location. Scenarios 1 and 2 are within the range of those reported by the IPCC (2007). Scenario 3 exceeds the IPCC scenario range by up to 40 cm by 2100; such higher estimates have been suggested (e.g., Najjar et al., 2010), although there currently is no consensus on the probable upper bound of global sea-level rise. These three sea-level rise scenarios were selected for use in the numerical model simulations in this study and are referred to as the 30-, 50-, and 100-cm sea-level rise scenarios, respectively. The sea-level values are considered mean values and do not take into account any intertidal effects.

The scenarios do not consider any future changes in freshwater flows in the James and CHK Rivers. Generally it is estimated that the eastern USA will receive more precipitation because of climate change (e.g., Brekke et al., 2009) and that individual storms in the Chesapeake Bay area may become more intense (Najjar et al., 2010). In addition, these scenarios do not consider any future increase in the salinity at the mouth of Chesapeake Bay, which is expected to occur with continued sea-level rise (Hilton et al., 2008).

2. Material and methods

The Three-Dimensional Hydrodynamic-Eutrophication Model (HEM-3D) (Hamrick, 1992), developed by the Virginia Institute of

Marine Science, was applied in this study. This model has been used in a wide range of environmental studies (e.g., Park et al., 1995, 2005; Sisson et al., 1997; Shen and Kuo, 1999; Shen et al., 1999; Shen and Lin, 2006; Morse et al., 2011). The hydrodynamic portion of the HEM-3D model resembles the widely used Princeton Ocean Model (Blumberg and Mellor, 1987) in both the physics and the computational scheme utilized. The model uses stretched (or sigma) vertical coordinates and Cartesian (or curvilinear), orthogonal horizontal coordinates. The vertical eddy viscosity/diffusivity coefficient was calculated by the Mellor and Yamada level 2.5 turbulence closure scheme (Mellor and Yamada, 1982; Galperin et al., 1988). The model solves the three-dimensional continuity and free-surface equations of motion. It is capable of simulating density and topographically induced circulation; tidal and wind-driven flows; and spatial and temporal distributions of salinity and temperature.

To obtain salinity boundary conditions due to sea-level rise and reduce the influence of the boundary conditions on the interior-model domain, a large-domain model that encompasses the entire Chesapeake Bay and adjacent shelf area was used (Fig. 2). Because this model has relatively low resolution in the tributaries, the high-resolution small-domain model for the James River was nested in the Chesapeake Bay model, and the high-resolution CHK River model was nested in the James River model. The open boundary of the small-domain models was placed in the main channel of Chesapeake Bay and the James River, respectively, where the bathymetry is identical to the large-domain models. This ensures the resulting open boundary information is capable of modeling accurate flow and salinity in the small-domain models.

The Chesapeake Bay model has 20 vertical layers, while the James and CHK River models have 8 vertical layers. The configuration and forcing fields of the Chesapeake Bay model are described in detail by Hong and Shen (2012). The surface forcing fields for the small-domain models are identical to those used in the large-domain model. The hourly outputs of the large-domain model were used as the boundary conditions for the nested models in the Baseline (present sea level) and each sea-level rise scenario. An 11-year period of simulation (1998–2008) for the Baseline and three sea-level rise scenarios (30, 50, and 100 cm) was conducted for each model.

The salt intrusion distance was calculated as the distance from the river mouth to the location upstream with a cross-section mean salinity of 0.1 ppt. Analysis of the freshwater discharge record (from 1990 to 2009) for the James River near Richmond (USGS gage 02037500) indicates that 2002 was a dry year and 2005 was a typical year (Rice et al., 2011); model results for these years are presented to illustrate the sea-level rise effect in a dry and a typical year. The record also indicates that October has the lowest monthly

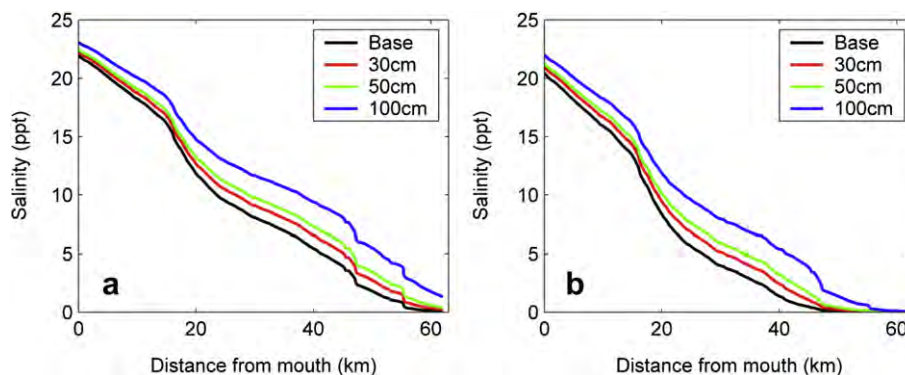


Fig. 4. Effect of simulated sea-level rise scenarios on 31-day mean salinity along the James River during October for (a) 2002 (dry year); and (b) 2005 (typical year). Results from the Baseline and each sea-level rise case are presented.

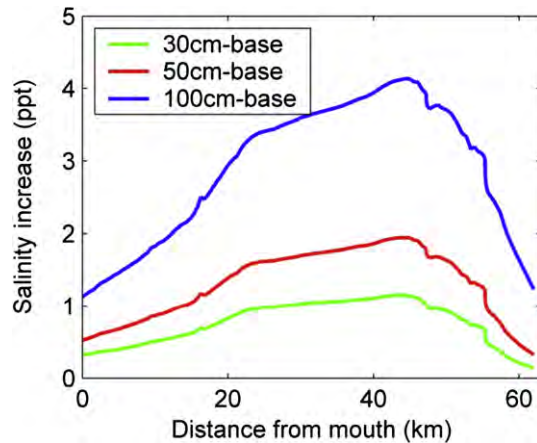


Fig. 5. The increase of mean salinity along the James River for each sea-level rise scenario relative to the Baseline, i.e., the sea-level rise value minus the Baseline value. The results are averaged in October during the dry year, 2002.

mean freshwater discharge of the year, during which the saline water can intrude farther upstream than during other months. Thus, the monthly mean results in October were used to present the effect of sea-level rise on the salinity field.

3. Model calibration

Detailed calibrations of the Chesapeake Bay and the CHK River models can be found in Hong and Shen (2012) and Rice et al. (2011), respectively. For the James River model, model outputs were compared with observed salinity data obtained from the Chesapeake Bay Water Quality Monitoring Program (http://www.chesapeakebay.net/data_waterquality.aspx) (Fig. 3).

The modeled salinity field matched the observed seasonal variations very well (Fig. 3a). The stratification–destratification processes also were properly reproduced by the model. Water elevation data at Sewells Point were obtained from NOAA's Center for Operational Oceanographic Products and Services (NOAA, 2010). The correlation coefficient between the modeled and observed water level is 0.92 (at the 95% confidence level), which indicates good performance of the model in simulating the water elevation (Fig. 3b). The model-data comparisons for other years (data not shown) indicated similar model performance. The calibration results indicate that the nested-grid strategy has good performance and is suitable to assess the sea-level rise effect on the salinity field in the James and CHK Rivers.

4. Results

All modeled salinity results were averaged in both the vertical (depth) and the horizontal (cross-sectional) directions.

4.1. James River

Model results for October 2002 (dry) and 2005 (typical) indicate that salinity increases along the entire James River as sea level rises (Fig. 4). The salinity increase in a dry year (Fig. 4a) is greater in magnitude and spatial extent than that in a typical year (Fig. 4b). For example, for a 50-cm sea-level rise, the location of 10 ppt mean salinity moves 8 km upstream in a dry year (Fig. 4a) but moves only 3 km upstream in a typical year (Fig. 4b). With a sea-level rise of 100 cm, the location of 10 ppt mean salinity moves 18 km upstream in a dry year but moves only 9 km upstream in a typical year. Near the head of the river, during a typical year (Fig. 4b), with a 100-cm

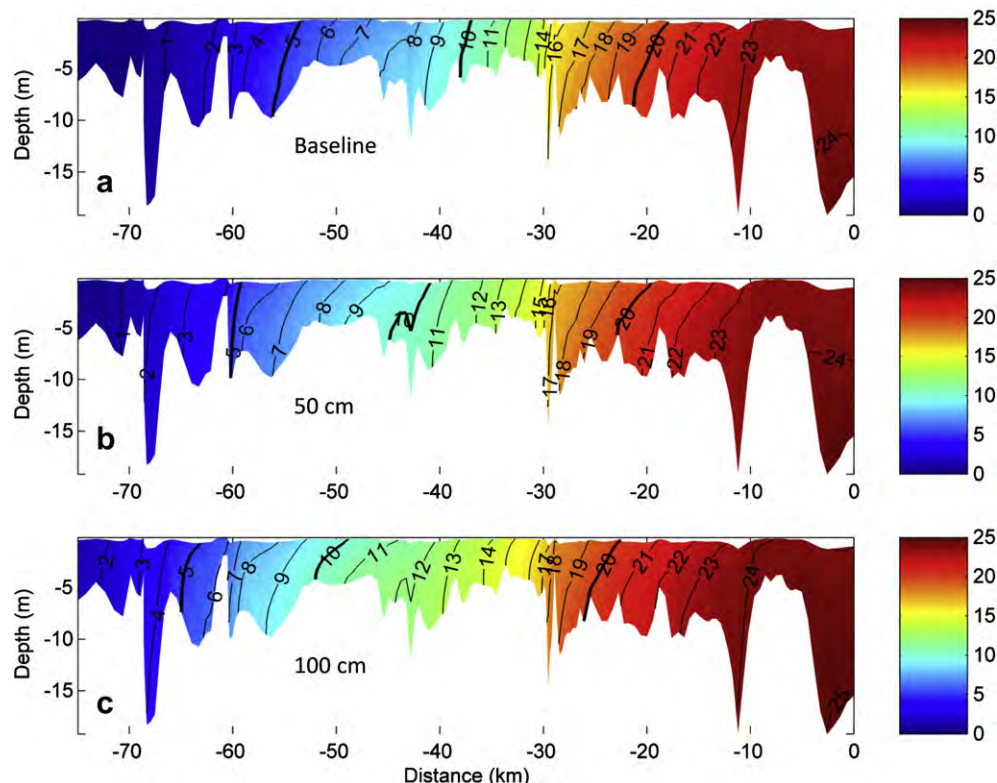


Fig. 6. Distribution of salinity vertical profile along the James River for (a) Baseline; (b) sea-level rise 50 cm; and (c) sea-level rise 100 cm. Isohaline units are ppt.

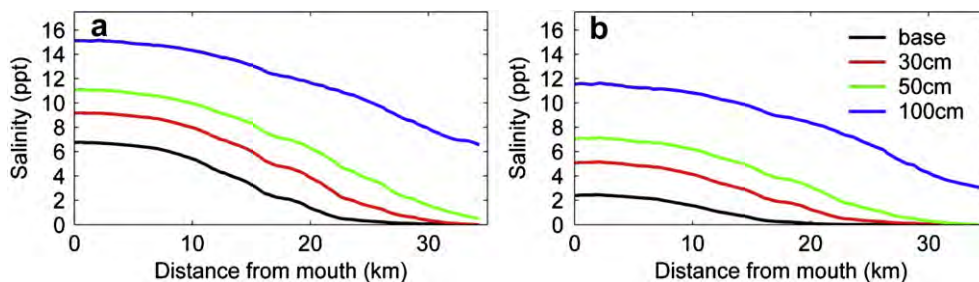


Fig. 7. Effect of simulated sea-level rise scenarios on 31-day mean salinity along the Chickahominy River (from the river mouth to Walkers Dam) during October for (a) 2002 (dry year); and (b) 2005 (typical year). Results from the Baseline and each sea-level rise case are presented.

rise, freshwater still occupies this area, whereas in a dry year, mean salinity at this location is greater than 1 ppt.

In order to quantify the spatial variations in salinity along the river (Fig. 4), the salinity difference between the Baseline and each sea-level rise scenario was calculated (Fig. 5). The monthly mean results for October 2002 indicate that the salinity increase in the middle-to-upper river (from 25 km to 50 km) is greater than that in the lower and upper parts of the river (Fig. 5). For a sea-level rise of 50 cm, the maximum mean salinity increase would be 2 ppt. Should sea-level rise double to 100 cm, the maximum mean salinity increase also would double to 4 ppt.

The vertical salinity profile along the James River shows the detailed change in salinity structure with sea-level rise (Fig. 6). Salinity change can be observed in the entire river. Comparing reference isohalines of 5, 10, and 20 ppt, the upstream movement of the 10 ppt isohaline is much larger than the 5 and 20 ppt isohalines as sea level rises (Fig. 6). The volume of water with salinity between 10 and 20 ppt would increase greatly if sea level rises 100 cm.

4.2. Chickahominy River

Salinity in the CHK River from the mouth to Walkers Dam (34 km from the river mouth) also increases as sea level rises (Fig. 7). The effect of sea-level rise at Walkers Dam is greater in a dry year (Fig. 7a) than a typical year (Fig. 7b). For example, for a 100-cm sea-level rise, the mean salinity at Walkers Dam would be about 3 ppt in a typical year vs. 6 ppt in a dry year. The mean salinity increase at Walkers Dam is relatively small for the 30- and 50-cm rises, compared to the 100-cm rise. Salinity at the CHK River mouth is 4 ppt higher in a dry year than in a typical year for the Baseline case and the three sea-level rise scenarios, because of the difference in freshwater discharge. If sea level rises 50 cm, a mean salinity of 5 ppt could reach 23 km upstream of the river mouth in a dry year, whereas 5 ppt would extend only 14 km upstream in a typical year.

Table 1

Number of days that salinity is predicted to exceed 0.1 psu at Walkers Dam and number of days that water is predicted to overtop Walkers Dam in the Chickahominy River from June 1 through December 31 (total 214 days) of a typical year (2005) and a dry year (2002) for the Base case and three sea-level rise scenarios.

Model scenario	Typical year 2005	Dry year 2002
<i>Number of days salinity exceeds 0.1 psu</i>		
Base case	2	69
30-cm rise	11	106
50-cm rise	20	131
100-cm rise	71	194
<i>Number of days water overtops Walkers Dam</i>		
Base case	17	1
30-cm rise	120	44
50-cm rise	195	138
100-cm rise	214	214

From a drinking-water perspective, it is useful to predict the number of days that salinity at Walkers Dam would exceed 0.1 ppt (100 mg/L total dissolved solids). The results from June 1 through December 31 (214 days) were used for this analysis, because this is usually when river discharge is the lowest and when upstream salinity migration is most likely. During a typical year, salinity may exceed 0.1 ppt for two days in the Baseline and for fewer than 100 days in all the sea-level rise scenarios (Table 1). In contrast, during a dry year when river discharge is low, salinity would exceed 0.1 ppt for 69 days in the Baseline and for more than 100 days in all the sea-level rise scenarios. The number of days when salinity would exceed 0.1 ppt increases with increasing sea-level rise. Overtopping of the dam, which has a height of 1.6 feet (NAVD88), by increased tide level also is a water-supply concern as sea level rises. The likelihood of water overtopping the dam also increases with sea-level rise and is more likely to occur in a typical year than in a dry year for the 30- and 50-cm rise scenarios (Table 1). Should sea level rise 100 cm, water would overtop the dam every day from June 1–December 31, whether it is a typical or a dry year (Table 1).

5. Discussion

With sea-level rise, salinity in the James River would increase almost linearly from the river mouth to 28 km upstream, remain nearly constant from 28 to 50 km, then decrease farther upstream (Fig. 5). Such variation in the magnitude of salinity increase over distance is caused by changes in the stratification of the estuary. As sea level rises, the channel depth increases and the horizontal gradient of salinity changes, resulting in increased estuarine circulation. The stratification increase between 28 and 50 km could have a profound effect on TFW in the tributaries. The model

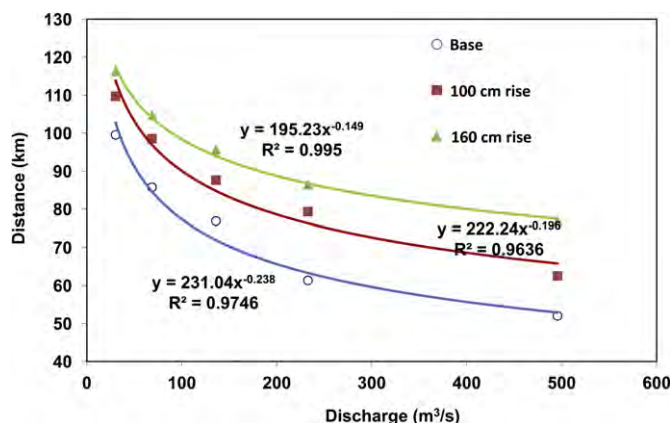


Fig. 8. Relations between salt intrusion distance and discharge on the James River for Baseline (circles), 100-cm sea-level rise (squares), and 160-cm sea-level rise (triangles). Lines are drawn by regression for each case.

simulations indicate that the location of 10 ppt salinity would migrate up to 10 km upstream if sea level rises 100 cm, affecting the current distribution of TFW.

A consequence of reduced river discharge is increased salinity in the estuary. Historical data confirm that when river discharge is diminished in the James and CHK Rivers, saline water moves upstream to Walkers Dam (Ron Harris, Newport News Waterworks, personal commun., 2010). Any increase in the occurrence or duration of salinity at the location of the intake could affect the safe yield and sustainability of the drinking-water supply. The model simulations conducted here indicate that the water-supply intake would be affected (Table 1). For example, for a 100-cm sea-level rise during a dry year, salinity at Walkers Dam would be greater than 5 ppt, an order of magnitude in excess of the U.S. Environmental Protection Agency's secondary standard for drinking water for total dissolved solids of 500 mg/L (equivalent to 0.5 ppt) (<http://water.epa.gov/drink/contaminants/index.cfm>; accessed 7/21/2011).

5.1. Relation of discharge and salinity intrusion

To examine the effect of discharge on salinity migration in the James River, model simulations of sea-level rise in excess of those indicated by the U.S. Climate Change Science Program (2009) with varying discharges were conducted. Najjar et al. (2010) indicate that 160 cm is the upper bound of sea-level rise in Chesapeake Bay. The salt intrusion distance was calculated for present sea level and for sea-level rises of 100 cm and 160 cm (Fig. 8). For a given discharge, any sea-level rise causes salinity to migrate farther upstream (Fig. 8). With increasing sea level, the exponent in the regression relation decreases, indicating that salinity decreases with flow but migrates farther upstream. As freshwater discharge increases from 50 to 500 m³/s with present sea level, the salt intrusion distance decreases by 50 km (from river km 100 to river km 50). For a typical mean annual flow of the James River, 200 m³/s, a 100-cm and 160-cm rise in sea level would cause the salt intrusion distance to

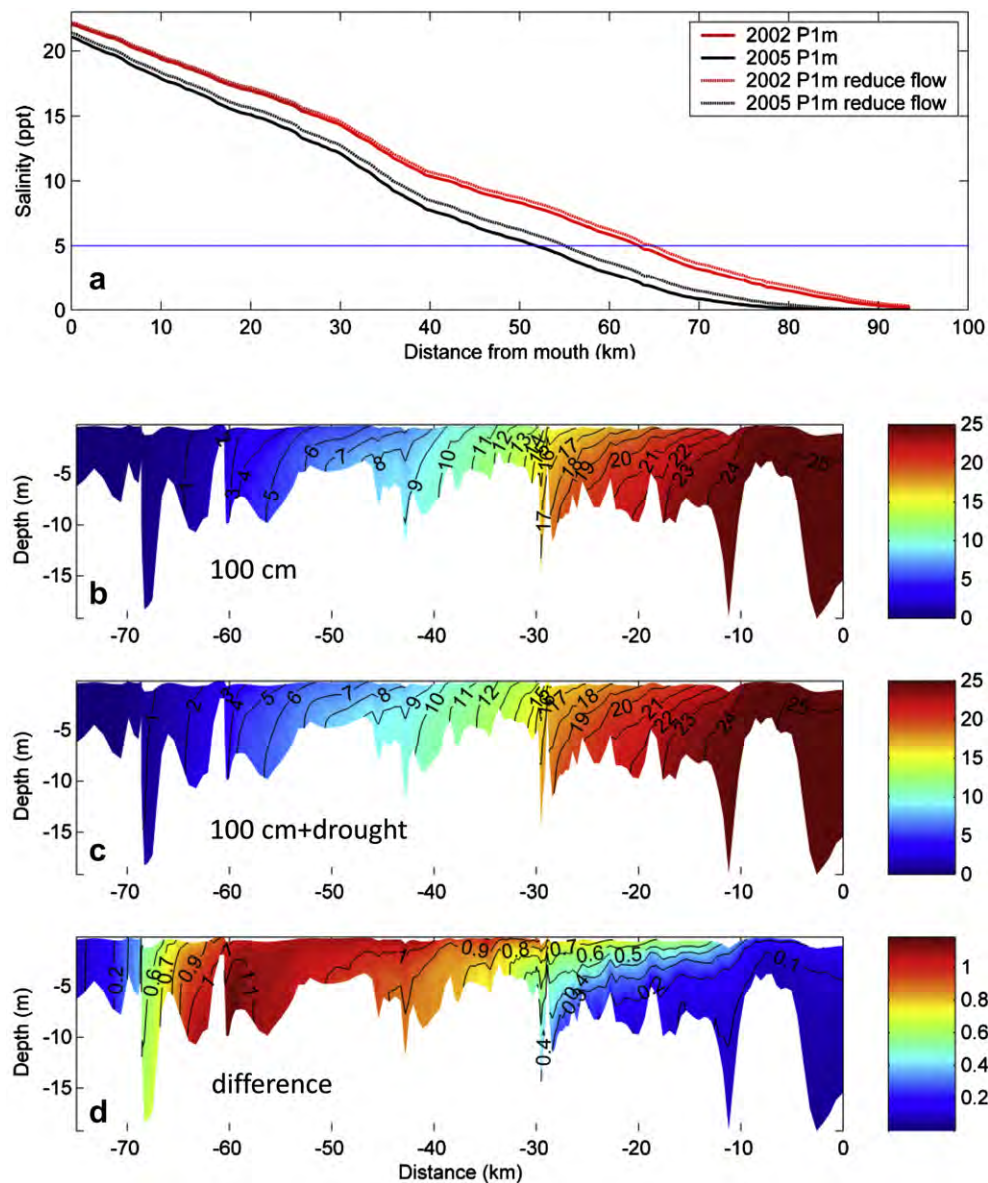


Fig. 9. (a) Change of mean salinity distribution in August 2002 and 2005 with and without flow reduction in the James River for the 100-cm sea-level rise case; salinity vertical profile along the James River for (b) 100-cm sea-level rise with typical flow; (c) 100-cm sea-level rise with 30% reduction of flow in summer; and (d) the salinity difference between (b) and (c), indicating the change of salinity with the extreme conditions. Isohaline units are ppt.

increase about 15 km and 25 km, respectively, relative to the current condition. The salt intrusion distance is a power function of the freshwater discharge, which explains at least 96% of the variance of the salinity intrusion (Fig. 8). Based on the Hansen and Rattray (1965) steady-state estuarine model, the salt intrusion distance is proportional to river flow with an exponent of about -0.33 (Monismith et al., 2002). The exponent varies for different estuaries depending on the localized bathymetry and hydrology (Gong and Shen, 2011; Gibson and Najjar, 2000). The exponent for the James River ranges from -0.149 to -0.238 , which is lower than the theoretical value of -0.33 , suggesting that salinity can migrate farther upstream for a given discharge of the James River. The model results indicate that the salinity increase in the James River from sea-level rise would be larger than the maximum 3.2 ppt estimated for Chesapeake Bay by Hilton et al. (2008).

5.2. Synergistic effect of drought and sea-level rise

Studies in the Chesapeake Bay region suggest that freshwater discharge may be altered as a result of climate change, including an increase in short-term droughts. Model simulations of an extreme condition were conducted by reducing summer (June through August) freshwater discharge by 30% to mimic a short-term drought, combined with a 100-cm sea-level rise. Cross-sectional averaged salinity distributions along the James River in August for a 100-cm sea-level rise with and without summer flow reduction are shown (Fig. 9a). A summer drought would allow salinity to migrate farther upstream during August of a typical year (2005; 3.2 km) than of a dry year (2002; 1.6 km). Because the discharge during August 2002 was very low, any reduction of flow during this period has less effect on salinity migration than during a typical year. The monthly mean vertical salinity profiles along the James River in August 2005 for a 100-cm sea-level rise without (Fig. 9b) and with (Fig. 9c) a summer drought are shown. A marked change of salinity would occur in the upstream area, where the zone with salinity change greater than 1 ppt could be as long as 15 river km (Fig. 9d). The maximum salinity change would occur around river km 60.

The model simulations indicate that extreme conditions (sea-level rise combined with a summer drought) would result in a large change of salinity in the mesohaline region of the James River. Such a change in the main channel would greatly strengthen the gravitational circulation in its tributaries, including the CHK, which would affect TFW and limit the availability of water of suitable quality for municipal and industrial uses.

6. Conclusions

Model simulations of sea-level rise indicate that effects on the salinity field of the James and CHK Rivers would affect floral and faunal habitats and a drinking-water supply. On the basis of model simulations, if sea level continues to rise, salinity structure of the James River would be changed, which could alter the distribution of tidal freshwater wetlands. The part of the James River that would be most affected by an increase in salinity is from 25 to 50 km upstream of the river mouth. If sea level rises by 100 cm, a salinity of 10 ppt would migrate as much as 10 km upstream. With a river discharge of $200 \text{ m}^3/\text{s}$ in the James River, the salt intrusion distance would increase about 20 km if sea level rises 160 cm compared to the Baseline condition. If a short-term drought occurs during the summer low flow period, a salinity increase would be observed, especially in a typical year.

Increases in mean salinity will greatly alter the existing water-quality gradients between saltwater and freshwater, affecting tidal freshwater wetlands along the tributaries of the James River.

An increase in mean salinity is particularly important for the CHK River, where extensive tidal freshwater wetlands occur and a drinking-water-supply intake for the City of Newport News is located. For a 100-cm rise in sea level during a dry year, salinity at the drinking-water intake would be greater than 5 ppt, far in excess of the U.S. Environmental Protection Agency's secondary standard for drinking water.

Acknowledgments

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References

- Barbosa, S.M., Silva, M.E., 2009. Low-frequency sea-level change in Chesapeake Bay: changing seasonality and long-term trends. *Estuarine, Coastal and Shelf Science* 83, 30–38.
- Bhuiyan, M.J.A.N., Dutta, D., 2011. Assessing impacts of sea level rise on river salinity in the Gorai River network, Bangladesh. *Estuarine, Coastal and Shelf Science*. <http://dx.doi.org/10.1016/j.ecss.2011.11.005>.
- Blumberg, A.F., Mellor, G.M., 1987. A description of a three-dimensional coastal ocean circulation model. In: Heaps, N.S. (Ed.), *Three-Dimensional Coastal Ocean Models*, Coastal and Estuarine Science, vol. 4. American Geophysical Union, pp. 1–19.
- Boon, J., Brubaker, J., Forrest, D., 2010. Chesapeake Bay Land Subsidence and Sea Level Change: an Evaluation of Past and Present Trends and Future Outlook. Special Report No. 425 in *Applied Marine Science and Ocean Engineering*.
- Brekke, L.D., Kiang, J.E., Olsen, J.R., Pulwarty, R.S., Raff, D.A., Turnipseed, D.P., Webb, R.S., White, K.D., 2009. Climate Change and Water Resources Management—a Federal Perspective. U.S. Geological Survey Circular 1331, 65 p. Available on-line at: <http://pubs.usgs.gov/circ/1331/>.
- Galperin, B., Kantha, L.H., Hassis, S., Rosati, A., 1988. A quasi-equilibrium turbulent energy model for geophysical flows. *Journal of Atmospheric Sciences* 45, 55–62.
- Gibson, J.R., Najjar, R.G., 2000. The response of Chesapeake Bay salinity to climate-induced changes in streamflow. *Limnology and Oceanography* 45, 1764–1772.
- Gong, W., Shen, J., 2011. The response of salt intrusion to changes in river discharge and tidal mixing during the dry season in the Modaomen Estuary, China. *Continental Shelf Research*. <http://dx.doi.org/10.1016/j.csr.2011.01.011>.
- Grabemann, H., Grabemann, I., Herbers, D., Muller, A., 2001. Effects of a specific climate scenario on the hydrography and transport of conservative substances in the Weser estuary, Germany: a case study. *Climate Research* 18, 77–87.
- Hamrick, J.M., 1992. A Three-dimensional Environmental Fluid Dynamics Computer Code: Theoretical and Computational Aspects. Special Report in Applied Marine Science and Ocean Engineering. No. 317. The College of William and Mary, VIMS, 63 pp.
- Hansen, D.V., Rattray Jr., M., 1965. Gravitational circulation in straits and estuaries. *Journal of Marine Research* 23, 104–122.
- Hilton, T.W., Najjar, R.G., Zhong, L., Li, M., 2008. Is there a signal of sea-level rise in Chesapeake Bay salinity? *Journal of Geophysical Research* 113, C09002. <http://dx.doi.org/10.1029/2007JC004247>.
- Hong, B., Shen, J., 2012. Responses of estuarine salinity and transport processes to potential future sea-level rise in the Chesapeake Bay. *Estuarine, Coastal and Shelf Science*. <http://dx.doi.org/10.1016/j.ecss.2012.03.014>.
- Hull, C.H.J., Tortoriello, R., 1979. Sea-level Trend and Salinity in the Delaware Estuary. Staff Report. Delaware Basin Commission, West Trenton, N.J.
- Intergovernmental Panel on Climate Change, 2007. *Climate Change 2007—the physical science basis*. In: Solomon, S., Qin, D., Manning, M., Chen, Z., Marquis, M., Averyt, K.B., Tignor, M., Miller, H.L. (Eds.), *Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, United Kingdom. Available on-line at: <http://www.ipcc.ch/ipccreports/ar4-wg1.htm>.
- Mellor, G.L., Yamada, T., 1982. Development of a turbulence closure model for geophysical fluid problems. *Reviews of Geophysics and Space Physics* 20, 851–875.
- Monismith, S.G., Kimmerer, W., Burau, J.R., Stacey, M.T., 2002. Structure and flow induced variability of the subtidal salinity field in northern San Francisco Bay. *Journal of Physical Oceanography* 32, 3003–3019.

- Morse, R.E., Shen, J., Blanco-Garcia, J.L., Hunley, W.S., Fentress, S., Wiggins, M., Mulholland, M.R., 2011. Environmental and physical controls on the formation and transport of blooms of the dinoflagellate *Cochlodinium polykrikoides* Margalef in the lower Chesapeake Bay and its tributaries. *Estuaries and Coasts*. <http://dx.doi.org/10.1007/s12237-011-9398-2>.
- Najjar, R.G., Pyke, C.R., Adams, M.B., Breitburg, D., Hershner, C., Kemp, M., Howarth, R., Mulholland, M.R., Paolisso, M., Secor, D., Sellner, K., Wardrop, D., Wood, R., 2010. Potential climate-change impacts on the Chesapeake Bay. *Estuarine, Coastal and Shelf Science* 86, 1–20.
- National Research Council, 1987. Responding to Changes in Sea Level: Engineering Implications. Committee on Engineering Implications of Changes in Relative Mean Sea Level, Marine Board. National Research Council. 160 p. Available on-line at: http://www.nap.edu/catalog.php?record_id=1006.
- Neubauer, S.C., Craft, C.B., 2009. Global change and tidal freshwater wetlands: scenarios and impacts. In: Barendregt, A., Whigham, D.F., Baldwin, A.H. (Eds.), *Tidal Freshwater Wetlands*. Backhuys, pp. 253–266. 320 p.
- NOAA, 2010. On-line at: http://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?stnid=8638610.
- Odum, W.E., Smith, T.J., Hoover, J.K., McIvor, C.C., 1984. Ecology of Tidal Freshwater Marshes of the United States East Coast: a Community Profile. U.S. Fish and Wildlife Service OBS-83, 185 p.
- Park, K., Jung, H.-S., Kim, H.-S., Ahn, S., 2005. Three-dimensional hydrodynamic-eutrophication model (HEM-3D): application to Kwang-Yang Bay, Korea. *Marine Environmental Research* 60, 171–193.
- Park, K., Kuo, A.Y., Shen, J., Hamrick, J.M., 1995. A Three-dimensional Hydrodynamic Eutrophication Model (HEM-3D): Description of Water Quality and Sediment Process Submodels. Special Report in Applied Marine Science and Ocean Engineering No. 327. Virginia Institute of Marine Science, Gloucester Point, VA, 102 pp.
- Poff, N.L., Brinson, M.M., Day Jr., J.W., 2002. Aquatic Ecosystems and Global Climate Change: Pew Center on Global Climate Change, 45 pp. Available on-line at: [http://rydberg.biology.colostate.edu/~poff/Public/poffpubs/Poff2002\(PEW_AquaticEcosys\).pdf](http://rydberg.biology.colostate.edu/~poff/Public/poffpubs/Poff2002(PEW_AquaticEcosys).pdf).
- Pritchard, D.W., 1956. The dynamic structure of a coastal plain estuary. *Journal of Marine Research* 15 (1), 33–42.
- Rheinhardt, R.D., Hershner, C., 1992. The relationship of below-ground hydrology to canopy composition in five tidal freshwater swamps. *Wetlands* 12, 208–216.
- Rice, K.C., Bennett, M.R., Shen, J., 2011. Simulated Changes in Salinity in the York and Chickahominy Rivers from Projected Sea-level Rise in Chesapeake Bay. USGS Open-File Report 2011–1191, 31 p.
- Shen, J., Boon, J.D., Kuo, A.Y., 1999. A modeling study of a tidal intrusion front and its impact on larval dispersion in the James River Estuary, Virginia. *Estuaries* 22 (3A), 681–692.
- Shen, J., Kuo, A.Y., 1999. Numerical investigation of an estuarine front and its associated topographic eddy. *ASCE, Journal of Waterways, Ports, Coastal and Ocean Engineering* 125 (3), 127–135.
- Shen, J., Lin, J., 2006. Modeling study of the influences of tide and stratification on age of water in the tidal James River. *Estuarine, Coastal and Shelf Science* 68 (1–2), 101–112.
- Sisson, G.M., Shen, J., Kim, S.C., Kuo, A.Y., Boon, J.D., 1997. VIMS Three-dimensional Hydrodynamic-eutrophication Model (HEM-3D): Application of the Hydrodynamic Model to the York River System. Special Report in Applied Marine Science and Ocean Engineering, No. 341. Virginia Institute of Marine Science, Gloucester Point, VA.
- U.S. Climate Change Science Program, 2009. Coastal Sensitivity to Sea-level Rise: a Focus on the Mid-Atlantic Region. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. [James G. Titus (Coordinating Lead Author), K. Eric Anderson, Donald R. Cahoon, Dean B. Gesch, Stephen K. Gill, Benjamin T. Gutierrez, E. Robert Theiler, and S. Jeffress Williams (Lead Authors)]. U.S. Environmental Protection Agency, Washington, D.C., USA, 320 pp. Available on-line at: <http://www.epa.gov/climatechange/effects/coastal/sap4-1.html>.

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
140	BRENT HUNSINGER	06/18/2024 16:11:14 PM	OPPOSE

FRIENDS OF THE RAPPAHANNOCK OPPOSES THIS DRAFT PERMIT AS CURRENTLY WRITTEN.

SEE ATTACHED DOCUMENTS FOR RATIONALE.

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=951

Mr. Eric Seavey
Manager – Water Withdrawal Permitting
Virginia Department of Environmental Quality
PO Box 1105
Richmond, VA 23218
Via email

Mr. Randy Owen
Manager – Habitat Division
Virginia Marine Resources Commission
Building 96
380 Fenwick Road, Ft. Monroe, VA23651
Via submission to website portal link

Dear Mr. Seavey and Mr. Owens,

On behalf of the Friends of the Rappahannock (FOR) please accept these comments regarding VMRC #2020-0514/DEQ VWP #20-0514.

FOR OPPOSES the issuance of this draft permit as currently written.

FOR is a 501c3 non-profit organization whose mission is to be the voice of and an active force for a healthy and scenic Rappahannock River. Through the three pillars of our organization (Education, Restoration, Advocacy) we work with partners and stakeholders to ensure a healthy river and watershed from the River's origins at Chester Gap to its confluence with the Chesapeake Bay. With over 1000 members we represent a broad array of interests including recreational, commercial and agricultural beneficial users of the Rappahannock River. FOR believes that this project as permitted would have negative impacts to the interests of its members and to its ability to carry out its mission. As we will discuss below, this draft permit will impact our efforts to maintain a healthy Rappahannock River, protect healthy fish populations and ensure balanced water supply planning where all beneficial uses are taken into account.¹

It is well documented that Caroline County needs water to meet the growth that is coming to the county. Groundwater levels east of Interstate 95 are declining due to excessive use and the Virginia Department of Environmental Quality (DEQ) is requiring localities to seek alternative sources of water. In this case Caroline County identified surface water withdrawals from the Rappahannock River as the best source.

¹ "Beneficial use" means both instream and offstream uses. Instream beneficial uses include the protection of fish and wildlife resources and habitat, maintenance of waste assimilation, recreation, navigation, and cultural and aesthetic values. The preservation of instream flows for purposes of the protection of navigation, maintenance of waste assimilation capacity, the protection of fish and wildlife resources and habitat, recreation, and cultural and aesthetic values is an instream beneficial use of Virginia's waters. Offstream beneficial uses include domestic uses (including public water supply), agricultural uses, electric power generation, commercial uses, and industrial uses. 9 VAC 25-210-10.

Accordingly, Caroline County Public Utilities has applied to install a new water withdrawal intake structure located on the south bank of Rappahannock River, a raw water pump station, the installation of approximately 35 miles of water line for the transfer of raw water for the intake to the proposed water treatment plant (WTP) located in the vicinity of Carmel Church, VA. The intake would take an average of 7.90 million gallons of water a day or a maximum of 13.90 million gallons per day (MGD).

While FOR acknowledges Caroline County's need for water, we oppose the draft permit in its current form. We do not believe the draft permit complies with applicable Virginia law and regulations. We remain concerned about the potential impacts of this intake to the health of the Rappahannock River and its aquatic fauna.

These concerns include:

- 1. The major interbasin transfer of water from the Rappahannock River to the Mattaponi River watershed**
- 2. Cumulative impacts to federally endangered Atlantic Sturgeon and other migratory fish species**
- 3. Inadequacy of the water demand justification**
- 4. Failure to adequately consider alternative water sources**
- 5. Subaqueous intrusion**

We request a public hearing be held so that our concerns and those of other stakeholders can be heard.

Major interbasin transfer of water

This permit proposes to allow a major interbasin transfer of water between two major river basins. The water would be pumped approximately 35 miles across the county to Carmel Church area in the I-95 corridor where it will be treated at a water treatment plant, used for one of three sectors (residential, commercial, industrial cooling), and discharged after treatment at a wastewater treatment plant into the Mattaponi River and Polecat Creek (a tributary of the Mattaponi River). Not a single drop of water removed from the Rappahannock River would come back to the Rappahannock River. This draft permit sets a precedent for allowing more interbasin transfers of water from the Rappahannock River which would have devastating effects.

The draft permit fails to consider an option to return water to the Rappahannock to avoid an interbasin transfer of water. Especially where the justification for the volume of water to be withdrawn is in question, we find this very troubling. Indeed, there is a distinct lack of discussion of returning the water to the Rappahannock River after use. After multiple meetings with Caroline County and Hazen Sawyer staff where this issue was raised as a primary concern of FOR, no attempt has been made to mitigate the loss of this water or return it to the Rappahannock River.

According to page 22 of the permit rationale document the failure to return this water to the river “will decrease freshwater flows downstream, allowing the tide to push more brackish water from the Chesapeake Bay further upstream in the river.”

While the salinity study accompanying the draft permit claims that there will be minimal impact to salinity in the river we know that decreased freshwater flows such as those experienced in 2023 will become more common due to changes wrought by climate change and sea level rise. Some models have predicted an increase in Chesapeake Bay average salinity of 1.2 to 1.8 parts per thousand (ppt) per meter of sea-level rise.² Significant variability exists in the Bay region, with projected increases in salinity of as much as 3-5 ppt per meter of sea-level rise in the Chickahominy River, with higher sensitivity to saline increases during lower streamflow.³ One study found the largest increases in salinity would occur in the middle reaches of Chesapeake Bay tributaries.⁴

A more in depth analysis should be performed that takes into account the impacts of climate change and sea level rise over the life of the permit or beyond. Such a study performed by the Virginia Institute of Marine Science (VIMS) should account for reduced streamflow due to

² See Cai, X., Shen, J., Zhang, Y.J., Qin, Q., Wang, Z. and Wang, H., 2021. Impacts of Sea-Level Rise on Hypoxia and Phytoplankton Production in Chesapeake Bay: Model Prediction and Assessment. JAWRA Journal of the American Water Resources Association; Hong, B. and Shen, J., 2012. Responses of estuarine salinity and transport processes to potential future sea-level rise in the Chesapeake Bay. Estuarine, Coastal and Shelf Science, 104-105: 33-45.

³ Rice, K.C., Hong, B. and Shen, J., 2012. Assessment of salinity intrusion in the James and Chickahominy Rivers as a result of simulated sea-level rise in Chesapeake Bay, East Coast, USA. Journal of Environmental Management, 111: 61–69. (**attached**); see also Rice, K.C., Bennet, M.R. and Shen, J., 2011. Simulated Changes in Salinity in the York and Chickahominy Rivers from Projected Sea-Level Rise in Chesapeake Bay. U.S. Department of the Interior, U.S. Geological Survey, Open-File Report 2011-1191 (**attached**).

⁴ St-Laurent, P., Friedrichs, M.A.M., Li, M. and Ni, W., 2019. Impacts of sea level rise on hypoxia in the Chesapeake Bay: A model intercomparison. Virginia Institute of Marine Science, William & Mary, 34 pp.

warming (evapotranspiration), potential for decreased summer precipitation and sea-level rise pushing more salt farther upstream.

DEQ should also consider the depth of the intake, because denser saline bottom water flows upstream while less dense surface waters with freshwater inflow flow downstream. DEQ should work with VIMS to develop accurate, science-based models of present-day environmental system behavior in the Rappahannock River to use going forward to simulate present-day processes and investigate future changes (see Rice et al. 2012, attached).

DEQ should consider monitoring salinity to determine impacts of this project (if permit issued) and consider reopening the permit to add special conditions if salinity changes are observed that are unanticipated or problematic.

DEQ should also study and characterize potential impacts to tidal freshwater wetlands, and consider these impacts in assessing whether it is able to permit the project.

Atlantic Sturgeon and other Migratory Fish Species

The area where the intake is proposed is known to be potential spawning grounds for the federally designated endangered species Atlantic Sturgeon. The Virginia Department of Wildlife Resources (DWR) documents federal Endangered Atlantic Sturgeon in the project area. The stretch of the Rappahannock River has been designated a Threatened and Endangered Species Water due to the presence of this species. The Rappahannock River at this location has also been designated a confirmed Anadromous Fish Use Area. Atlantic sturgeon have been documented to be present within the vicinity of the proposed intake (see comments and photos submitted by Rappahannock Tribe)

DWR has provided valuable input but nowhere in the draft permit can there be found evidence that the federal agencies who are responsible for protecting Atlantic Sturgeon have been consulted on the permit application.

There are also concerns regarding the cumulative impacts this intake and others (existing and future) might have on fish eggs and larvae mortality due to impingement and entrainment. VMRC and VIMS have both voiced concerns regarding this issue in letters to Caroline County and DEQ.

On page 26 of the permit decision rationale and in a letter to Caroline County dated June 5, 2020 the Virginia Marine Resources Commission “remains concerned about the recent increase in requests for intakes in the tidal reaches of the Commonwealth. These areas provide critical habitat for spawning anadromous and resident fishes. Anadromous finfish species have been and continue to experience depleted stocks. Coupled with the existing ‘grandfathered’ intakes, VMRC is growing increasingly concerned about the collective impacts of these intakes to tidal freshwater reaches.”

In a letter summarizing VIMS findings from the particle tracking model they state “mortalities of aquatic fauna due to surface water intakes occur throughout the Chesapeake Bay and neither data nor modeling exist that can provide a perspective on this intake’s added effect on total system mortality. Although presently unavailable, we consider it to be in the best interest of the Commonwealth to pursue a comprehensive assessment of cumulative surface water intake effects. These data would provide the foundation for balancing the societal needs for tidal freshwater with respect to overall Bay health and the Bay-based fisheries economy.”

Indeed as a result of legislation (HB1520) filed during the 2024 General Assembly VIMS has been tasked to review the feasibility of studying cumulative impacts of surface water intakes on aquatic fauna and water quality in Virginia's rivers and the Chesapeake Bay. A report outlining the VIMS review and recommendations will be submitted to the Secretary of Natural and Historic Resources, the Chair of the House Committee on Agriculture, Chesapeake and Natural Resources, and Delegate Hillary Pugh Kent by December 31, 2024.

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.” Without this analysis, we do not believe that DEQ can make the required findings to issue the permit with respect to impacts to fish and aquatic life and beneficial uses.

FOR concurs with other comments submitted that DEQ should require independent monitoring of mortality caused by the Caroline intake structure under the supervision of VIMS or VMRC and that 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.

Additionally, this draft permit should require compensatory fish mitigation funding. According to page 26 of the permit decision rationale, “Projects that adversely impact fishery resources was a subject of the 2020 General Assembly. The Assembly enacted legislation stipulating that any agency ‘that issues any permit that has an adverse impact on fish and wildlife or their habitat, may require compensatory mitigation for such adverse impacts as a condition of issuing the permit.’”

Water Demand

Of the proposed average of 7.9 million gallons a day (mgd) to be withdrawn from the river 2.47mgd is allocated for residential demand while 2.63mgd is allocated to industrial facilities, specifically three (3) data center campuses. Caroline County is using a legitimate need for municipal drinking water to also provide cooling water for data center projects.

This draft permit for surface water withdrawals is for public water supply. According to 9 VAC 25-210-300. Public water supply ‘Public water supply’ means “a withdrawal of surface water in Virginia or from the Potomac River for the production of drinking water, distributed to the general public for the purpose of, but not limited to, domestic use.”

FOR does not believe the best use of this “public water supply” project is to provide water to industrial users for cooling water which is expressly not a drinking water purpose or for the general public. This is driving the size of the water demand for this project and given the interbasin transfer of water, removing the demand for cooling water from the draft permit would significantly lessen the impact to the Rappahannock River.

Additionally, due to nondisclosure agreements there is a lack of transparency regarding the data center actual water usage. We do not know how much water the data centers will need or use. Page 10 of the permit decision rationale states “Demands for the three (3) data centers were based on water usage of existing data centers of comparable size and operation.” What cooling methods did those existing data centers use? The County has the ability and responsibility to require that any approved data center campus use less water intensive cooling methods. There are a broad variety of cooling methods available, and ongoing research and development promises to increase the water efficiency of data centers. DEQ and Caroline County do not appear to address this issue, or the County’s plans for minimizing the water impacts of data center development, especially as the shift from a depleted groundwater aquifer will increase the pressure on limited surface water supplies, with serious ramifications for Virginia’s rivers, including the Rappahannock. The stated amount of water needed for the industrial category is essentially unsupported. Data centers also do not have to use potable drinking water for their cooling water. Loudoun County has implemented a partially-treated wastewater system to supply cooling water to data centers.⁵ Can Caroline County facilitate the use of non-potable or recycled water for data center cooling water? This alternative, or other alternatives to using a new surface withdrawal for a public water supply to provide cooling water to data centers, do not appear to have been considered.

To further complicate matters in the original documents for projected water demands (Attachment H) from 2020 industrial water demands were .22 mgd, but when King George County’s 2.3 mgd was removed from the application (documents submitted by Hazen on September 12, 2023) the industrial use number jumped to 2.63 mgd. This change does not appear to be explained.

As localities increasingly turn away from ground water and look to surface water, close scrutiny of proposals like this one are required, especially where bona fide residential/commercial water needs may be used to shoehorn in water supply for industrial users.

Alternative Water Sources

The applicant is required to evaluate alternative water sources for the purpose of establishing the least environmentally damaging practicable alternative.

⁵ Geldert, Darrin. “Loudoun Water’s Reclaimed Water System in the Heart of Data Center Alley.” Presented at the Water Resources Impacts of Data Centers and Solar Fields and Tools to Mitigate Impacts, May 10, 2024. <https://www.youtube.com/watch?v=U9WfpBbW4nM>.

FOR believes Caroline County has failed to demonstrate why the City of Richmond option would not be feasible. There is a lack of information demonstrating a pipeline carrying finished water is inherently more expensive/complicated than a pipeline carrying raw water, with an associated new water treatment plant. There is a need to provide details to demonstrate this has been adequately studied and evaluated. The preferred alternative is already expensive and complex.

The City's safe yield for the James River was calculated to be 381 mgd and the current treatment capacity is 132 mgd. The City of Richmond has capacity to supply both projected residential and wholesale demands through 2070 with excess capacity remaining.

Subaqueous Intrusion

FOR objects to the bottomland permit for Caroline County to withdraw from the Rappahannock River. Virginia Code 28.2-1205 makes clear that when considering the granting of a bottomland permit the "Commission shall also consider the public and private benefits of the proposed project and shall exercise its authority under this section consistent with the public trust doctrine..." The Public Trust Doctrine gives the VMRC broad latitude to determine what is an appropriate use of the state owned resources and the General Assembly, in enacting this statute, makes clear that it authorizes the VMRC to exercise this authority as a trustee.

28.2-1205 further states that in Subsection F that "Any person aggrieved by a decision of the Commission under this section is entitled to judicial review in accordance with the provisions of the Administrative Process Act (§ 2.2-4000 et seq.). However, any decision made by the Commission hereunder consistent with the public trust doctrine as defined by the common law of the Commonwealth adopted pursuant to § 1-200 shall not be deemed to have been made pursuant to the police power." Since the General Assembly made clear, prospectively, that denial is not made pursuant to police powers this means that the General Assembly trusts the VMRC to use its good judgment as the trustee under the Public Trust Doctrine as to the soundness of an intake pipe utilizing state owned bottom lands.

In this regard, the use of this bottomland for the withdrawal permit clearly violates this principle as the use of the water is not for the "public right to the enjoyment of the subaqueous lands... for the benefit of the people" but instead it is in part directly for private gain sought by the three large data centers who will benefit from this intake on state owned bottomland.

Conclusion

For these reasons FOR does not believe the applicant has demonstrated that the project as proposed meets an established need for water (9 VAC 25-210-360). FOR also does not believe, based on the information contained in the draft permit and rationale, that DEQ can make the findings required by 9 VAC 25-210-370.D, including: 1) that the amount of water to be withdrawn is limited to the amount that can be put to beneficial use; 2) that the withdrawal is not likely to

have a detrimental impact on existing instream or offstream uses; and 3) that the withdrawal, individually or in combination with other existing or proposed projects, does not cause or contribute to, or may not be reasonably expected to cause or contribute to, impairment of state waters or fish and wildlife resources, adverse impacts to other existing beneficial uses, or a violation of state water quality standards.

Thank you for the opportunity to submit these comments. We respectfully request that a public hearing be held for VMRC #2020-0514 and DEQ VWP #20-0514.

Respectfully submitted on behalf of Friends of the Rappahannock,

Brent Hunsinger, Advocacy and Coastal Programs Director
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Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
141	VIRGINIA B PATEL	06/18/2024 16:37:17 PM	OPPOSE

I STRONGLY OPPOSE THE PROPOSED CAROLINE COUNTY WATER INTAKE APPLICATION. THE WITHDRAWAL OF MILLIONS OF GALLONS OF WATER PER DAY FROM THE RAPPAHANNOCK RIVER WOULD HAVE A NEGATIVE EFFECT ON THIS MAGNIFICENT NATURAL RIVER AND ITS ECOSYSTEM. THIS PROPOSAL CALLS FOR WATER TO BE EXTRACTED FOR INDUSTRIAL PURPOSES AND NOT FOR MUNICIPAL PUBLIC WATER SUPPLY FOR THE COUNTY. THE INDUSTRIAL DEVELOPMENT INVOLVES THE ESTABLISHMENT OF DATA CENTERS THAT REQUIRE THE USE OF HUNDREDS OF THOUSANDS OF GALLONS OF WATER EACH DAY TO COOL ELECTRONIC SENSORS. THESE DATA CENTERS SHOULD BE REQUIRED TO SUPPORT RESEARCH ON THE DEVELOPMENT OF COOLING SYSTEMS THAT DO NOT USE WATER! IT IS SHORT-SIGHTED AND IRONIC TO SUPPORT DATA CENTERS THAT GENERATE ARTIFICIAL INTELLIGENCE AI AND CONSEQUENTLY DESTROY THE MAJESTIC BEAUTY OF THE RAPPAHANNOCK RIVER, A NATURAL ECOLOGICAL COMMUNITY THAT SUSTAINS A HUGE ARRAY OF BIODIVERSITY. PLEASE CONSIDER HOW THE APPROVAL OF THIS APPLICATION WOULD AFFECT TOURISM AND THE SWEEPING NEGATIVE ECONOMIC EFFECTS BY DIMINISHING WATER QUANTITY AND QUALITY ON THE WELL-BEING AND LIVELIHOOD OF COMMUNITIES ALONG THE RIVER - A TRAGEDY FOR THE COMMONWEALTH OF VIRGINIA.

REGARDING AN UPDATE ON RESEARCH INVOLVED IN COOLING SYSTEMS, BILL GATES IS PUSHING CLEAN ENERGY OVER FOSSIL FUELS. HE IS BUILDING A TERRA POWER REACTOR USING LIQUID SODIUM RATHER THAN WATER FOR COOLING THE SYSTEM.

I URGE THE VA MARINE RESOURCES COMMISSION TO DENY APPROVAL OF THIS REQUEST BY CAROLINE COUNTY. I HANK YOU FOR CONSIDERING MY CONCERN ABOUT THE POTENTIAL RISKS AND NEGATIVE IMPACTS OF THIS REQUEST.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
142	KAY G WATSON	06/18/2024 16:44:30 PM	OPPOSE

I TOTALLY OPPOSE THIS PROJECT. I DO NOT THINK WE SHOULD BE PUMPING WATER OUT OF THE RAPPAHANNOCK RIVER TO ANOTHER WATERSHED, ESPECIALLY FOR DATA CENTERS OR BUSINESSES. AND I DO NOT WANT THE CITIZENS OF CAROLINE TO HAVE TO PAY FOR THAT RIDICULOUS AMOUNT OF MONEY TO TRANSPORT THE WATER ACROSS THE COUNTY. DOES THE COUNTY EVEN HAVE PERMISSION FROM ANYONE TO PUT IN THAT 35 MILES OF WATER PIPES?

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
143	MARIAN M HOWELL	06/18/2024 16:34:52 PM	OPPOSE

THE PERMIT TO THE DEQ TO REMOVE UP TO 13.9 MILLION GALLONS OF WATER FROM THE RAPPAHANNOCK RIVER FOR THE CAROLINE COUNTY MUNICIPAL PUBLIC WATER SUPPLY RAISES SIGNIFICANT CONCERNS AND I MUST OPPOSE IT WITHOUT FURTHER INFORMATION. I REQUEST A PUBLIC HEARING OR HEARINGS TO ADDRESS THE ISSUES AND CONCERNS THIS PERMIT RAISES. THIS PERMIT IMPACTS FAR MORE THAN JUST CAROLINE COUNTY SO HEARINGS TO MORE FULLY INFORM THE CITIZENS OF THE NORTHERN NECK AND THE MIDDLE PENINSULA ARE NEEDED. THE QUANTITY OF WATER BEING TAKEN FROM THE RAPPAHANNOCK AND RETURNED TO ANOTHER WATER BASIN IS A SIGNIFICANT CONCERN AND IMPACTS DOWNSTREAM ECOSYSTEMS AND THOSE LIVING ALONG OR NEAR THE RIVER. THE STATEMENT THAT THE WATER IS FOR MUNICIPAL USE DOES NOT APPEAR IN LINE WITH THE EXISTING POPULATION AND ANTICIPATED POPULATION GROWTH. IT APPEARS THAT COOLING OF PLANNED DATA CENTERS MAY BE A GREATER FACTOR FOR THIS PERMIT REQUEST. FROM THE INFORMATION PROVIDED, IT APPEARS ADDITIONAL ENVIRONMENTAL STUDIES ARE NECESSARY. IF SUCH STUDIES HAVE BEEN DONE, THEN THE RESULTS OF THE POTENTIAL IMPACTS MUST BE PROVIDED WITH SUFFICIENT DETAIL TO ANSWER CONCERNS. AS IT EXISTS, APPROVAL OF THE PERMIT FOR THIS TYPE OF WATER USE SETS A DANGEROUS PRECEDENT FOR WATER USE.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
144	ROBERT K SCHELL JR.	06/18/2024 16:58:58 PM	OPPOSE

AS A WATERFRONT PROPERTY OWNER FURTHER DOWNSTREAM, LIVING ON A TIDAL CREEK OF THE RAPPAHANNOCK, I HAVE EXTREME CONCERN REGARDING THIS PROPOSAL. ALMOST EVERY DAY FOR THE LAST 13 YEARS I HAVE SPENT TIME ON THAT BEAUTIFUL RAPPAHANNOCK RIVER AND EXPLORING HER TIDAL CREEKS. I HAVE WITNESSED WITH MY OWN EYES HOW THINGS HAVE CHANGED, THE DECLINE OF FISH POPULATIONS, INCREASED WEED GROWTH FROM FARMLAND RUNOFF, AND THE STRESS UPSTREAM DURING PERIODS OF DROUGHT. THE RAPPAHANNOCK IS ALREADY STRUGGLING TO STAY HEALTHY.

THIS PUBLIC MEETING IS HAPPENING WITH VERY LITTLE EXPOSURE OR NOTICE, AND IN THE DEAD OF SUMMER WHEN A LOT OF FOLKS MAY BE ON VACATION AND ENJOYING THE LONGER DAYS, COMPLETELY UNAWARE OF WHAT'S HAPPENING HERE. I WOULD MAKE A BET THAT IS INTENTIONAL. IF THIS PROPOSED PROJECT IS ALLOWED TO HAPPEN IT OPENS THE DOOR FOR MANY MORE MUNICIPALITIES AND BUSINESSES TO TRY AND DO THE SAME THING ALL ALONG THE RIVER. WHAT ARE THE RESULTS OF THE ENVIRONMENTAL STUDIES AND THE ANTICIPATED EFFECTS OF SUCH A PROJECT? DOES THE PUBLIC HAVE ACCESS TO THESE STUDIES? HAVE SUCH STUDIES EVEN BEEN PERFORMED? WHAT HAS BEEN DONE PREVIOUSLY IN AN ATTEMPT TO LESSEN WATER USAGE IN CAROLINE COUNTY? ARE THERE PRESENTLY ANY WATER USAGE RESTRICTIONS OR REGULATIONS THAT RESIDENTIAL, BUSINESS, AND INDUSTRIAL USERS MUST ADHERE TO? WHY SHOULD THE DELICATE ECOSYSTEM OF THE RAPPAHANNOCK RIVER WHICH IS ALREADY STRESSED BY CLIMATE CHANGES AND FARMLAND RUNOFF BE FURTHER ENDANGERED BECAUSE COMMERCIAL OR INDUSTRIAL ENTITIES DESIRE TO LOCATE NEARBY? DID THEY NOT PERFORM THEIR DUE DILIGENCE BEFOREHAND TO INSURE THAT ADEQUATE WATER REQUIRED FOR THEIR OPERATIONS IS AVAILABLE?

IT STARTS BY TAKING A FAMILY'S 11 ACRES THROUGH EMINENT DOMAIN. AND THEN THERE ARE 35 MILES OF PIPELINE IN THEIR PLAN THAT NEED TO BE BUILT? HOW MANY MORE FAMILIES ARE GOING TO BE STRIPPED OF THEIR HOMES AND LAND? I SUSPECT THERE WILL BE YEARS AND YEARS OF FUTURE COURT CASES, BANKRUPTING FAMILIES ALONG THE WAY, ROBBING THEM OF NOT ONLY THEIR HOMES BUT THEIR PEACE OF MIND AS WELL. MANY MILLIONS OF DOLLARS WILL HAVE TO BE SPENT TRYING TO SEIZE THE HOMES AND PROPERTIES OF THOSE RESIDENTS. AND IT WILL BE THE RESIDENTS' TAX DOLLARS THAT WILL BE SPENT TO FIGHT THEIR NEIGHBORS IN THESE COURT CASES.

ALL RELEVANT INFORMATION MUST BE MADE AVAILABLE FOR THE PUBLIC WITH AMPLE REVIEW TIME AND PUBLIC MEETINGS MUST BE HELD AT TIMES WHEN IT IS CONVENIENT FOR THE PUBLIC TO PARTICIPATE.

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Monday May 18 2026 10:03

Number	Name	Received	Position
145	ANNE TERHUNE	06/18/2024 17:20:49 PM	OPPOSE

I AM WRITING TO REQUEST A PUBLIC HEARING ON THE REFERENCED PERMIT APPLICATION BECAUSE THERE HAS NOT BEEN SUFFICIENT CONSIDERATION OF THE NEGATIVE EFFECTS OR ANY REMEDIAL ACTIONS THAT COULD BE TAKEN TO LESSEN THOSE EFFECTS OF THIS PROPOSAL ON THE RAPPAHANNOCK RIVER OR THE AQUATIC AND WILDLIFE INHABITANTS, NOR FOR THE EFFECTS ON THE WATERMEN AND WOMEN WHO COUNT ON THE RIVER TO MAKE THEIR LIVING. TAKING SUCH A LARGE AMOUNT OF WATER DAILY FROM THE RIVER ON AN INDEFINITE BASIS WILL HAVE MANY HARMFUL OUTCOMES TO THOSE STAKEHOLDERS AS WELL AS THOSE WHO USE THE RIVER RECREATIONALLY. THE PROPOSED USE IS DRAFTED AS A MUNICIPAL DRINKING WATER PROPOSAL, WHEN IN FACT, IT APPEARS A SUBSTANTIAL AMOUNT OF THE WATER WILL BE USED FOR INDUSTRIAL PURPOSES, SPECIFICALLY DATA CENTER CAMPUSES. THERE IS NO AMELIORATION OR COMPENSATION PROPOSED FOR THE DRAIN ON WATER RESOURCES THIS WILL CAUSE TO THE RAPPAHANNOCK RIVER BASIN NOR DO THERE APPEAR TO BE ANY MEASURES TO LIMIT ITS INDUSTRIAL USES. IT IS TROUBLING THAT WATER HAS TO BE TRANSPORTED THROUGH A NEW 35-MILE PIPELINE WHICH HAS ITS OWN ENVIRONMENTAL CONCERNS.

THIS PERMIT PROPOSES TO ALLOW A MAJOR INTERBASIN TRANSFER OF WATER BETWEEN TWO MAJOR RIVER BASINS. THE WATER WOULD BE PUMPED APPROXIMATELY 35 MILES ACROSS THE COUNTY TO CARMEL CHURCH AREA IN THE I-95 CORRIDOR. ONCE TREATED AND USED FOR COMMERCIAL, INDUSTRIAL COOLING AND RESIDENTIAL USE IT WILL BE TREATED AT A WASTEWATER TREATMENT PLANT AND DISCHARGED INTO THE MATTAPONI RIVER AND POLECAT CREEK A TRIBUTARY OF THE MATTAPONI RIVER . NONE OF THE WATER REMOVED FROM THE RAPPAHANNOCK RIVER WOULD COME BACK TO THE RAPPAHANNOCK RIVER.

THE AREA WHERE THE INTAKE IS PROPOSED IS KNOWN TO BE POTENTIAL SPAWNING GROUNDS FOR ATLANTIC STURGEON, A FEDERALLY DESIGNATED ENDANGERED SPECIES. WHILE THE VIRGINIA DEPARTMENT OF WILDLIFE RESOURCES HAS PROVIDED INPUT, THERE APPEARS TO BE NO EVIDENCE THAT THE FEDERAL AGENCIES WHO ARE RESPONSIBLE FOR PROTECTING ATLANTIC STURGEON HAVE BEEN CONSULTED ON THE PERMIT APPLICATION.

THE STAKEHOLDERS AFFECTED BY THE WITHDRAWAL OF THESE WATERS NEED TO UNDERSTAND THE IMPLICATIONS OF THIS SIZABLE AMOUNT OF WATER BEING WITHDRAWN FROM THE RIVER WITH RESPECT TO MANY ISSUES SUCH AS I THE RIVER ITSELF, MARINE LIFE, INCLUDING FISH, OYSTERS & CRABS, WATERFOWL, WILDLIFE THAT MAKES ITS HOME ALONG THE RIVER BANKS SUCH AS OTTERS, PLUS II THE INTERESTS OF WATERMEN AND FARMERS IN THE AREA, III SALINITY LEVELS, IV THE LEVEL OF THE RIVER ITSELF, V THE EFFECT ON GROUNDWATER AQUIFERS, VI THE EFFECT ON HOME VALUES OF RIVER FRONT & LOCAL HOMEOWNERS, AND MUCH MORE. THIS EVALUATION HAS NOT BEEN UNDERTAKEN IN ANY MEANINGFUL WAY.

IT IS MY STRONG BELIEF FOR ALL THE REASONS CITED ABOVE, THAT A PUBLIC HEARING AND FURTHER STUDY, IS WARRANTED WITH RESPECT TO THIS PROPOSAL.

Virginia Marine Resources Commission

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Application Number 20200514

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Number	Name	Received	Position
146	RONDA J NEWMAN	06/18/2024 17:46:51 PM	OPPOSE

I OPPOSE THIS PROJECT. AS A RESIDENT OF RICHMOND COUNTY, I AM CONCERNED ABOUT THE LONG-TERM IMPACTS OF HOW THE REMOVAL OF WATER FROM THE RAPPAHANNOCK RIVER COULD AFFECT THIS BEAUTIFUL RIVER AND ITS TRIBUTARIES. I CURRENTLY LIVE ON A BEAUTIFUL, SERENE CREEK AND OFTEN TAKE A SHORT KAYAK TRIP OR A RELAXING BOAT RIDE TO THE RAPPAHANNOCK RIVER. AT TIMES, MY HUSBAND AND I TAKE OUR BOAT TO THE CHESAPEAKE BAY TO GO FISHING OR OUR JET SKIS UP RIVER TO TAKE IN THE BEAUTY OF THE UPPER RAPPAHANNOCK AND FONES CLIFFS. AFTER HAVING LIVED HERE FOR A SHORT 13 YEARS, I HAVE FALLEN IN LOVE WITH THIS ENTIRE AREA AND DO NOT WANT TO SEE CHANGES THAT WILL IMPACT THE RIVER AND WILDLIFE IT ATTRACTS. I HAVE LIVED IN SEVERAL PLACES IN THE PAST THAT EXPERIENCED TREMENDOUS GROWTH WITH LITTLE PLANNING OF WHAT THE LONG-TERM EFFECTS OF RAPID GROWTH WOULD BE.

I AM ALSO A FORMER CERTIFIED PROJECT MANAGER AND SR. PROJECT EXECUTIVE AND I UNDERSTAND THE CRITICALITY OF PROJECT PLANNING, IMPACT ASSESSMENTS, RISK ASSESSMENTS, AND CONTINGENCY PLANNING, ALONG WITH TRANSPARENT COMMUNICATION AND DOCUMENTATION. IN MY EXPERIENCE MANAGING HUGE PROJECTS FOR FORTUNE 100 COMPANIES, I HAVE FOUND IT CAN BE VERY COSTLY AND TIME INTENSIVE TO CORRECT ISSUES THAT ARISE DUE TO POOR PLANNING AND NOT TAKING THE TIME TO PERFORM THE PROPER ASSESSMENTS AND PLANNING FOR A PROJECT OF THIS MAGNITUDE. I REQUEST FORMAL PUBLIC HEARINGS BE HELD TO ADDRESS THE CONCERNS OF NOT ONLY THE CITIZENS OF CAROLINE COUNTY, BUT ALSO THE CONCERNS OF CITIZENS WHO ARE DOWNSTREAM AND WILL LIKELY BE AFFECTED IN WAYS THAT ARE STILL UNKNOWN AT THIS TIME.

A FEW OF MY QUESTIONS ARE:

1. HAVE ALL THE APPROPRIATE FEDERAL, STATE, COUNTY, AND LOCAL GOVERNMENT OFFICES BEEN MADE AWARE OF THIS PROJECT?
2. HAS CAROLINE COUNTY DONE AN ASSESSMENT TO DETERMINE WHETHER THE INTAKE AREA IS A SPAWNING GROUND FOR ATLANTIC STURGEON, WHICH IS AN ENDANGERED SPECIES? HAVE THE APPROPRIATE FEDERAL AGENCIES THE U.S. FISH AND WILDLIFE SERVICE FWS AND THE NATIONAL MARINE FISHERIES SERVICE NMFS AWARE AND INVOLVED IN THIS PLANNING?
3. ARE THERE OTHER SPECIES OF FISH AND WILDLIFE THAT WILL OR COULD BE ENDANGERED BY THIS PROPOSAL?
4. HAS THE CHESAPEAKE BAY FOUNDATION BEEN MADE AWARE OF THIS PROPOSED PROJECT.
5. WHAT ARE THE RISKS OF NOT HAVING SUFFICIENT WATER IN THE FUTURE DUE TO DROUGHT, ETC. FOR THIS PROPOSED PROJECT?
6. HAS CAROLINE COUNTY DISCUSSED THIS PROJECT AND ANY POTENTIAL IMPACTS WITH ALL THE OTHER COUNTIES ALONG THESE RIVERS? IF SO, HAS CAROLINE COUNTY ADDRESSED THEIR CONCERNS?
7. ARE OTHER COUNTIES CURRENTLY PLANNING A SIMILAR PROJECT?

I HAVE OTHER QUESTIONS AND CONCERNS, BUT I KNOW THAT MANY OF THEM HAVE ALREADY BEEN ASKED OR WILL BE SO I WILL NOT TAKE THE TIME OR SPACE HERE.

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Number	Name	Received	Position
147	MEG E HODGES	06/18/2024 18:02:58 PM	OPPOSE

I HAVE RESEARCHED THIS PROJECT AND TALKED TO SEVERAL ENVIRONMENTALISTS, AND, FROM WHAT I HAVE LEARNED, IT SEEMS THAT TAKING UP TO 14 MILLION GALLONS OF WATER PER DAY FROM THE RAPPAHANNOCK RIVER AND THEN RETURNING THE UNUSED/WASTEWATER PORTION IN THE MATTAPONI RIVER WOULD HAVE NEGATIVE ENVIRONMENTAL IMPACTS ON BOTH RIVERS. ONE CERTAINTY IS THAT THE SALINITY OF THE RAPPAHANNOCK WOULD INCREASE UPSTREAM WHICH WOULD AFFECT THE MARINE LIFE AND MARSHES ALONG ITS BANKS. IT WOULD ALSO SEEM THAT RETURNING THE TREATED WATER TO THE MATTAPONI WOULD POSE CHALLENGES TO THE ALREADY CHALLENGED MATTAPONI RIVER.

I DO NOT FEEL THAT THE UNINTENDED CONSEQUENCES OF THIS PROJECT HAVE BEEN FULLY RESEARCHED. SINCE THE CHESAPEAKE BAY AND ITS WATERSHEDS HAVE SO MANY CHALLENGES ALREADY, IT MAKES NO SENSE TO CONTINUE TO ADD TO THEM. FURTHERMORE I AM AFRAID THAT THIS PROJECT COULD OPEN THE DOORS TO OTHER RIVERS THROUGHOUT VIRGINIA BEING ASKED FOR WATER TO BE TAKEN TO SUPPORT DEVELOPMENT THAT HAS NOT TAKEN THE HEALTH OF OUR ALREADY FRAGILE CHESAPEAKE BAY WATERSHED ECOSYSTEMS INTO CONSIDERATION.

I WOULD LIKE FOR THIS MESSAGE TO ALSO SERVE AS MY REQUEST FOR A PUBLIC HEARING PRIOR TO ANY PERMITS BEING APPROVED SO THAT THE CITIZENS WHO LIVE ON THESE RIVERS HAVE AN OPPORTUNITY TO SHARE THEIR THOUGHTS AND CONCERNS AS WELL AS GET QUESTIONS ADDRESSED.

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Number	Name	Received	Position
148	PAULA ALLEN	06/18/2024 20:02:09 PM	OPPOSE

LIVING DOWNSTREAM FROM THE PROJECT, I AM VERY CONCERNED ABOUT THE DAMAGING IMPACT ON THE RAPPAHANNOCK RIVER’S ENTIRE ECOSYSTEM. NO ONE COUNTY OWNS THE RIVER OR HAS THE RIGHT TO TAKE WHATEVER THEY WANT WITHOUT REGARD FOR THE CONSEQUENCES. AS I UNDERSTAND IT, THE WATER TAKEN FROM THE RAPPAHANNOCK WILL BE DUMPED INTO THE MATTAPONI AFTER USE, THEREBY IMPACTING THE NATURAL ECOSYSTEM OF NOT ONE BUT TWO RIVERS. SUCH DAMAGE CAN NEVER BE REPAIRED. I AM NOT WILLING TO SACRIFICE OUR NATURAL HERITAGE FOR THE SAKE OF COOLING DATA CENTERS IN NORTHERN VIRGINIA.

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Number	Name	Received	Position
149	MATT T BALAZIK	06/18/2024 19:25:19 PM	NO POSITION

NO POSITION HOWEVER, NOT INCORPORATING THE IMPACTS TO ATLANTIC STURGEON IS A MAJOR FLAW WITH THE CURRENT SUGGESTED IMPACTS. TELEMETERED ADULTS ARE WITHIN THIS AREA DURING THE FALL SPAWNING SEASON AND HISTORICALLY COMMERCIAL FISHERS CAUGHT ADULTS IN THE AREA DURING THE SPRING. I HEARD THAT THE REASONING STURGEON WERE NOT CONSIDERED IS THAT THE PUMPS ARE ABOVE THE BENTHIC HABITAT. IT WAS SHOWN THAT THIS DESIGN CAN STILL IMPINGE/ENTRAIN STURGEON EGGS ON THE JAMES RIVER. ESTIMATING IMPACTS BASED ON A PTM USING JUVENILE HAUL SEINE DATA IS NOT SUITABLE CONSIDERING THE POTENTIAL IMPACTS TO ANADROMOUS FISHES WHICH ARE TRENDING DOWN IN POPULATION. EVEN IF USING THE RESULTS FROM THE UNPROVEN PTM MODEL, THE IMPACTS ARE NOT NEGLIGIBLE. YES, EGG/LARVAE TAKE IS SMALL COMPARED TO NATURAL MORTALITY BUT OVER TIME OF EGG/LARVAE DRIFT TAKEN WILL LIKELY HAVE A NOTABLE NEGATIVE IMPACT. THE CONTINUED USE OF THE PTM WHICH IS A CONFLICT OF INTEREST CONSIDERING THE ORGANIZATION ADVISING THE REGULATORY AGENCY IS BEING PAID TO RUN THE UNPROVEN MODEL NEEDS TO BE PROVEN VIA FIELD DATA AND ALSO NEEDS TO BE CERTIFIED BY OUTSIDE GROUPS A COMMON PRACTICE IF NOT ALREADY.

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Number	Name	Received	Position
150	ANNIE S WILLIAMS	06/18/2024 19:44:52 PM	OPPOSE

THE PROPOSED DIVERSION OF 7.9MM-13.9MM GALLONS OF WATER DAILY FROM THE RAPPAHANNOCK RIVER FOR THE DUAL PURPOSE OF FACILITATING WATER FOR DATA CENTERS AND FOR USE IN A WATER TREATMENT PLANT IN CARMEL CHURCH, VA IS NOT WELL VETTED NOR A GOOD PROPOSAL FOR VIRGINIA

THE AMOUNT PROPOSED IS NOT INSIGNIFICANT GIVEN THE AMOUNT OF WATER FLOW OF THE RAPPAHANNOCK RIVER. THIS ENVIRONMENT IS NOT JUST A NATURAL HABITAT FOR FISH AND WATERFOWL, BUT A FEED FOR THE SIGNIFICANT ESTUARY OF THE CHESAPEAKE BAY. AS IT HAPPENS, OUR HOUSE IS ADJACENT TO THE HOME MY PARENTS OWNED IN THE SIXTIES AND SEVENTIES AND SUBSEQUENTLY SOLD , AND THE RESULT OF PRIOR EFFORTS TO CLEAN UP THE CHESAPEAKE BAY AND ITS MAJOR RIVERS HAS BEEN OBVIOUS TO ME SOME YEARS LATER. IT IS NOT COMPREHENSIBLE THAT WE WOULD REVERSE THAT PROGRESS. MOREOVER, THE THREAT TO THE LIVELIHOOD OF WATERMEN AND DOWNSTREAM COMMUNITIES ON THE RAPPAHANNOCK RIVER IS ALSO OF GRAVE CONCERN TO ME AND MY NEIGHBORS.

IT IS DIFFICULT TO UNDERSTAND HOW SUCH A PLAN COULD POSSIBLY SERVE THE INTERESTS OF VIRGINIA'S ENVIRONMENTAL QUALITY. THE CONSIDERATIONS INVOLVED SHOULD BE TRANSPARENT TO RESIDENTS AND TAXPAYERS.

SUCH A MOVE SHOULD NOT BE UNDERTAKEN WITHOUT A PUBLIC HEARING. WE NEED TO BETTER UNDERSTAND THE MONIES INVOLVED AND THE AMOUNT OF SUBSIDY CLEARLY BEING PROVIDED TO DEVELOPERS AND RESIDENTS OF CAROLINE COUNTY, AS WELL AS THE DATA CENTERS.

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Number	Name	Received	Position
151	JANE H BARNES	06/18/2024 19:55:26 PM	OPPOSE

AS A CITIZEN OF TAPPAHANNOCK AND ESSEX COUNTY, VA, IT IS WITH GREAT CONCERN THAT I WRITE TO YOU TODAY CONCERNING CAROLINE COUNTY, VA, THE RAPPAHANNOCK AND MATTAPONI RIVERS.

I AM RESPECTFULLY ASKING FOR A PUBLIC HEARING ON THE SUBJECT BEFORE ANY PERMITS ARE ISSUED BECAUSE, IN MY OPINION, THERE ARE TOO MANY UNANSWERED QUESTIONS.

SOME OF MY QUESTIONS ARE LISTED BELOW:

â€¢ IS THIS STANDARD PRACTICE FOR MUNICIPALITIES TO TAKE WATER FROM ONE PLACE AND THEN DUMP IN ANOTHER WITHOUT YEARS OF RESEARCH AND DATA COLLECTION?

â€¢ IF SO, WHAT OTHER STATES ARE CURRENTLY DOING THIS WITHOUT A MAJOR IMPACT TO THE RIVERSâ€™ ALREADY FRAGILE ECOSYSTEM AND DRINKING WATER IF USED AS A SOURCE FOR PUBLIC USE?

â€¢ WERE OTHER STATES CONSULTED THAT ARE DOING THIS? IS THE CAPE FEAR RIVER IN NC BEING USED THIS WAY? WHAT ABOUT THE PAMLICO, THE NEUSE, THE TAR RIVERS? WHAT ABOUT THE COLORADO RIVER, THE RIO GRANDE AND ROANOKE RIVERS?

â€¢ SOMEONE NEEDS TO TALK TO WILMINGTON, NC TO FIND OUT WHAT HAPPENED TO THE CAPE FEAR AFTER DUPONT DUMPED THEIR WASTEWATER INTO IT!

â€¢ WHAT IS IN THE WASTEWATER BEING DUMPED INTO THE MATTAPONI? IS IT TOXIC?

â€¢ WHAT IS THE DEFINITION OF TOXIC IN THIS SCENARIO AND WHO IS THE DEFINING BODY MAKING THE CALL?

â€¢ IS LEGISLATION/LAW CURRENTLY IN PLACE THAT WOULD ALLOW SIGNIFICANT FINES FOR VIOLATIONS AND IF SO, WHO IS POLICING IT?

â€¢ WHO IS POLICING THE AMOUNT OF WATER TAKEN FROM THE RAPPAHANNOCK?

â€¢ WHAT HAPPENS WHEN THERE ARE YEARS OF DROUGHT AND WATER LEVELS DROP IN THE RAPPAHANNOCK SO YOU CAN SEE THE DRIED UP RIVER BED?

â€¢ OUR JUSTICE SYSTEM IS NOT EQUIPPED TO SETTLE SCIENTIFIC DEBATES AND QUARRELS BETWEEN STATES, COUNTIES AND MUNICIPALITIES. JUST TAKE A LOOK AT THE MESS BETWEEN, GA, FL AND AL OVER GA ALLEGEDLY TAKING TOO MUCH WATER FROM THE CHATTAHOOCHEE, FLINT AND APALACHICOLA RIVERS THUS REDUCING OYSTER FISHERIES, MUSSEL FARMS, ETC DOWNSTREAM. IS EVERYONE PREPARED TO PAY ATTORNEYSâ€™ FEES WHEN THE FINGER POINTING STARTS?

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â€¢ SCIENTISTS ARE PREDICTING THAT IF THE WORLD CONTINUES TO USE UP WATER THE WAY WE ARE PRESENTLY, WE WILL NOT HAVE ANY WATER BY 2040.

â€¢ PROGRESS IS ONE THING DESTROYING OUR GOD-GIVEN RESOURCES IS ANOTHER.

PLEASE SCHEDULE A PUBLIC HEARING ON THE MATTER.

THANK YOU FOR YOUR CONSIDERATION.

RESPECTFULLY,

JANE BARNES

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Number	Name	Received	Position
152	LINDA A DUNCANSON	06/18/2024 21:22:08 PM	OPPOSE

I OPPOSE THIS PROJECT BECAUSE THIS IS ANOTHER EXAMPLE OF HOW WE TAKE AWAY MORE FROM OUR ENVIRONMENT THAN GIVE BACK. I KNOW THERE ARE DIFFERENT NEEDS FOR THE FUTURE BUT WE NEED TO FIND WAYS TO BE LESS HARMFUL AND MORE BENEFICIAL TO OUR PLANET IF WE WANT IT AND US TO SURVIVE. HOW MUCH CAN THE ENVIRONMENTAL ENDURE WHEN IT CONTINUES TO BE ABUSED! A PUBLIC HEARING FOR THIS PROJECT SHOULD BE SCHEDULED TO DISCUSS EVERYONE'S CONCERNS. I TOTALLY AGREE WITH MR. CHRISTOPHER CUSTALOW IN THAT WE NEED TO LEAVE THIS PLANET A BETTER PLACE FOR OUR FUTURE GENERATIONS. THANK YOU FOR THE OPPORTUNITY TO COMMENT.

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Number	Name	Received	Position
153	BARNEY H HARRIS	06/18/2024 21:48:43 PM	OPPOSE

THIS PROPOSED PROJECT HAS NO BENEFIT TO THE RESIDENTS ALONG THE RAPPAHANNOCK, ESPECIALLY THOSE SOUTH OF CAROLINE COUNTY.

A PRIVATE COMPANY APPARENTLY WANTS TO DRAIN OUR BEAUTIFUL RAPPAHANNOCK RIVER OF MILLIONS OF GALLONS OF WATER EVERY DAY FOR AN INDETERMINATE PERIOD OF TIME, AND DUMP THE ALTERED WATER INTO THE MATTAPONI, WITH NO ATTENTION TO THE POTENTIAL HARM TO THE ALREADY STRESSED CHESAPEAKE BAY AND ITS TRIBUTARIES. MANY OTHER CITIZENS HAVE WRITTEN COMMENTS CITING NEGATIVE IMPACTS FROM FURTHER HARMING OUR WILDLIFE INCLUDING THE ENDANGERED ATLANTIC STURGEON, TO THE LOOMING ISSUES OF CLIMATE CHANGE AND SHRINKING WATER SUPPLY. THE APPROVAL OF THIS PROJECT WOULD BE A SHORT-SIGHTED PRECEDENT THAT WOULD INEVITABLY LEAD TO IRREPARABLE DAMAGE TO OUR FRAGILE ECOSYSTEM. CAROLINE COUNTY, WAKE UP BEFORE YOU RUIN YOUR LOVELY COUNTRYSIDE AND WATERWAYS.

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Number	Name	Received	Position
154	CAROLINE B ROHNE	06/18/2024 21:40:46 PM	OPPOSE

IT CONCERNS ME GREATLY THAT THE QUANTITY OF WATER BEING REMOVED FROM THE RAPPAHANNOCK WATERSHED AND RETURNED TO THE MATTAPONI WILL ADVERSELY AFFECT AQUATIC LIFE AND SURROUNDING WETLANDS DUE TO INCREASED SALINITY. SPECIFICALLY, TWENTY FIVE SPECIES OF FISH INCLUDING THE FEDERALLY ENDANGERED ATLANTIC STURGEON AND THEIR NURSERIES DEPEND UPON THE CURRENT ECOSYSTEM. FEDERAL AGENCIES HAVE NOT BEEN AFFORDED THE OPPORTUNITY TO REVIEW THE IMPACT THIS PROPOSAL WILL HAVE UPON THESE NATURAL COMMUNITIES. THIS WATER IS THE LIFE SOURCE FOR NUMEROUS FOOD WEBS IN THE COASTAL PLAIN, AND THIS SHOULD BE THE PRIORITY IN THE DECISION MAKING PROCESS.

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Number	Name	Received	Position
155	DAVID S FRIDLEY	06/18/2024 21:43:45 PM	OPPOSE

THE ENVIRONMENTAL ASSESSMENTS OF THE IMPACT OF THIS PROPOSAL UPON THE AQUATIC LIFE OF THE RAPPAHANNOCK HAVE NOT BEEN ADEQUATELY CONDUCTED, IN PARTICULAR THE EFFECT UPON THE ATLANTIC STURGEON. THIS TRANSFER OF WATER ACROSS WATERSHEDS IS ILL ADVISED WITHOUT FURTHER STUDY AND A PUBLIC MEETING FOR WIDER COMMENT.

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Number	Name	Received	Position
156	DORI CHAPPELL	06/18/2024 23:56:53 PM	OPPOSE

I BELIEVE THAT INTERBASIN TRANSFER OF WATER SHOULD BE DISCOURAGED. THERE ARE ALTERNATIVES WHICH MAY BE COSTLY FOR A DEVELOPER, BUSINESS, INDUSTRY OR PUBLIC WATERWORKS. BUT NATURAL RESOURCES LIKE RIVERS TEEMING WITH LIFE AND DELICATE ECOSYSTEMS SHOULD NOT BE GIVEN SIMPLY TO THE DEEPEST POCKET NOR THE MORE POPULOUS LOCALE. I WAS INVOLVED WITH AN ATTEMPT TO PIPE WATER FROM ONE REGION TO ANOTHER AND EVENTUALLY THE RIGHT THING WAS DONE FOR THE MATTAPONI RIVER WATERSHED. WE ARE RIPARIAN LANDOWNERS LIVING AND WORKING ON THE MATTAPONI. AT THIS POINT NOT ENOUGH IS KNOWN FOR US TO SUPPORT THE IDEA OF RAPPAHANNOCK RIVER WATER TO BE PIPED, USED SOMEHOW, PERHAPS TREATED SOMEHOW, AND THEN GET DUMPED INTO THE 'HEADWATERS' OF THE MATTAPONI RIVER.

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Number	Name	Received	Position
157	TODD D MITCHELL	06/18/2024 23:05:13 PM	OPPOSE

I OPPOSE THE PROJECT AS IT IS CURRENTLY DESCRIBED IN THE DRAFT APPLICATION CAROLINE COUNTY DRAFT PERMIT FOR 2020-0514 . I AM STRONGLY IN SUPPORT OF A PUBLIC HEARING TO ALLOW MORE THOROUGH EXPLORATION OF THE MANY ISSUES THAT THIS PROJECT WILL IMPACT. THE CITIZENS OF CAROLINE, KING WILLIAM AND SURROUNDING COUNTIES THAT WILL BE MOST DIRECTLY IMPACTED BY THIS PROPOSED PROJECT STAND READY TO ASSIST IN IDENTIFYING AND DETAILING THE ISSUES, SOME OF WHICH ARE MENTIONED BRIEFLY BELOW. ORGANIZATIONS SUCH AS FRIENDS OF THE RAPPAHANNOCK AND MATTAPONI PAMUNKEY RIVERS ASSOCIATION ARE EXAMPLES WITH DEEP OUTREACH AND EXPERIENCE DETAILING THE IMPACTS OF THESE ISSUES.

MY PATERNAL LINEAGE HAS ITS ROOTS IN KING WILLIAM COUNTY FOR AT LEAST FOUR GENERATIONS, WITH SEVERAL FAMILIES OF DIRECT DESCENDANTS STILL LIVING, WORKING, LAND-OWNING, AND VOTING IN THE COUNTY. OTHER FAMILY MEMBERS HAVE BEEN PROPERTY OWNERS ON THE RAPPAHANNOCK BASIN. I NOW LIVE IN A DIFFERENT AREA OF VIRGINIA BUT HAVE RECENTLY EXPLORED THE IDEA OF PURCHASING PROPERTY ON THE MATTAPONI RIVER. I HAVE ENJOYED RECREATION ON BOTH THE RAPPAHANNOCK AND MATTAPONI RIVERS THROUGHOUT MY LIFETIME.

AS A SYSTEMS ENGINEER WITH FOUR DECADES OF EXPERIENCE PLANNING, ORGANIZING, MANAGING, LEADING AND PARTICIPATING IN MANY LARGE ENDEAVORS INCLUDING PUBLIC WORKS PROJECTS, THE DRAFT APPLICATION FAILS TO ADDRESS MANY ISSUES AND DOES NOT ADEQUATELY PROVIDE THE DATA AND ANALYSIS THAT MUST BE CONSIDERED BEFORE UNDERTAKING A PROJECT WITH SO MANY ECOSYSTEM IMPACTS. THIS PROJECT INVOLVES A VAST NUMBER OF STAKEHOLDERS, SOME OF WHICH ARE PLANT AND ANIMAL LIFE WHICH RELY UPON US FOR PROTECTION.

A FEW OF THE ISSUES NEEDING FURTHER DISCUSSION, REVIEW AND ANALYSIS BEFORE THIS APPLICATION SHOULD BE APPROVED INCLUDE:

â€¢ SALINITY AND FLOW IMPACT TO RAPPAHANNOCK RIVER ONE-WAY OUTFLOW

â€¢ SILT, SALINITY, TIDAL FLOW AND FLOODING IMPACT TO THE MATTAPONI RIVER ONE-WAY INFLOW

â€¢ MICROBIOLOGY IMPACTS TO THE MATTAPONI RIVER FROM INTRODUCTION OF WATER FROM A DIFFERENT SOURCE

â€¢ IMPACT TO FEDERALLY-PROTECTED ATLANTIC STURGEON, RIVER HERRING, AMERICAN SHAD, AND STRIPED BASS

â€¢ IMPACT OF ARTIFICIALLY CHANGING THE WATER LEVELS OF TWO RIVERS DURING A TIME OF INCREASING UNCERTAINTY FROM CLIMATE CHANGE ABOUT OCEAN RISE, DROUGHT, AND FLOODING FROM SEVERE WEATHER

MENTIONED IN THE DRAFT APPLICATION BUT NOT ADEQUATELY DETAILED IS THE USE OF THE WATER FOR INDUSTRIAL PURPOSES WHICH INCLUDES SEVERAL DATA CENTERS. IN THE AREA OF THE VIRGINIA WHERE I CURRENTLY RESIDE, MANY MANY DATA CENTERS NOW EXIST AND THEIR CONSTRUCTION MULTIPLIED RAPIDLY BEFORE RESIDENTS, LOCAL GOVERNMENTS WHICH FAST-TRACK APPROVED THE PROJECTS AND EVEN THE ELECTRIC UTILITY DOMINION ENERGY FULLY REALIZED THE IMPACT THAT THESE ENORMOUS FACILITIES CAN HAVE ON COMMUNITIES AND INFRASTRUCTURE. I STRONGLY ENCOURAGE ANY DATA CENTER PROPOSALS TO BE STUDIED VERY CAREFULLY WITH A SPECIAL EMPHASIS ON EFFICIENCY AND COOLING TECHNOLOGIES THAT OFFER ALTERNATIVES TO LARGE VOLUMES OF FRESH WATER FLOW. ALL FRESH WATER, AND ESPECIALLY VIRGINIAâ€™S, IS A RESOURCE THAT CONTINUES TO BE STRESSED BY POLLUTION AND MISMANAGEMENT. THE COMMERCIAL INDUSTRIES THAT NEED COOLING

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HAVE THE FINANCIAL RESOURCES TO DEVELOP AND BUILD NEW MORE EFFICIENT TECHNOLOGIES TO SOLVE THEIR COOLING NEEDS. INCREASED WATER CONSERVATION SHOULD ALSO BE INCLUDED IN PUBLIC EDUCATION AND STRESSED TO EXISTING AND FUTURE RESIDENTS OF ALL AREA COUNTIES TO REDUCE THE NEED FOR ADDITIONAL RIVER WATER TO BE DIVERTED TO MUNICIPAL WATER PROJECTS. PUBLIC HEARING S ON THIS PROJECT ARE DEFINITELY NEEDED IN ORDER TO FULLY UNDERSTAND THE PROJECT AND ITâ€™S POTENTIAL IMPACT ON THE REGIONâ€™S WATER AND WILDLIFE RESOURCES.

RESPECTFULLY, TODD MITCHELL

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Number	Name	Received	Position
158	J. ALEXANDER MEBANE REINHOLD	05/18/2024 23:28:17 PM	OPPOSE

I AM WRITING TO REQUEST THAT THE VIRGINIA MARINE RESOURCES COMMISSION HOLDS PUBLIC HEARING OR SEVERAL PUBLIC HEARINGS CONCERNING THE PROPOSED SUBAQUEOUS ENCROACHMENT PERMIT FROM THE VIRGINIA MARINE RESOURCES COMMISSION AND A VIRGINIA WATER PROTECTION PERMIT VWP FROM THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY DEQ , REFERENCED AS SURFACE WATER WITHDRAWAL IN CAROLINE COUNTY 20-0514, WHICH WOULD INCLUDE WITHDRAWAL OF WATER FROM THE RAPPAHANNOCK. WE AND MANY OTHERS HAVE CONCERNS AND QUESTIONS CONCERNING THIS PROPOSED PROJECT, ON BASIS OF HABITAT CONCERNS AND MULTIPLE OTHER FACETS OF THIS PROPOSED PROJECTS.

SINCERELY YOURS,

ALEX.

ATLANTIC HERITAGE
305-904-2558 CEL.

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Number	Name	Received	Position
159	ALEXIS S JOHNSTON	06/18/2024 23:58:59 PM	OPPOSE

AS AN ENVIRONMENTALIST CONCERNED WITH THE DETRIMENTAL IMPACTS OF CLIMATE CHANGE AND THE PROTECTION OF OUR STATE’S EXTENSIVE BIODIVERSITY, I AM WRITING IN OPPOSITION TO THE VIRGINIA WATER PROTECTION PERMIT ISSUED BY DEQ PURSUANT TO APPLICABLE WATER LAWS AND REGULATIONS, VWPP NO. 20-0514.

CLIMATE CHANGE HAS GREATLY INCREASED WEATHER VARIABILITY AND THE SEVERITY OF STORMS AND DROUGHTS. I’M CONCERNED ABOUT THE IMPACT OF WITHDRAWING WATER FROM THE RAPPAHANNOCK, A FRESHWATER TIDAL ZONE THAT HAS EXPERIENCED DROUGHT AND LOW WATER LEVELS, AND RETURNING IT TO THE MATTAPONI, WHICH HAS EXPERIENCED FLOODING THAT WILL ONLY INCREASE WITH RISING SEA LEVELS. ALSO, TRANSFER OF WATER FROM THE RAPPAHANNOCK TO THE MATTAPONI WOULD SIGNIFICANTLY ALTER THE AREA’S ECOLOGICAL BALANCE, INCLUDING WATER SALINITY AND SOIL EROSION, THEREBY AFFECTING EACH RIVER’S FLORA AND FAUNA.

I RESPECTFULLY REQUEST A PUBLIC HEARING ON THIS MATTER. THANK YOU.

ALEXIS SLOAN JOHNSTON

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Number	Name	Received	Position
160	TERRY M SKINNER	06/19/2024 07:11:16 AM	OPPOSE

THIS WITHDRAWAL WILL VERY NEGATIVELY IMPACT THE ANIMAL AND PLANT SPECIES IN THE RIVER AS WELL AS THE HUMANS WHO LIVE ALONG, RECREATE, AND MAKE THEIR LIVINGS FROM THE RIVER.

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Number	Name	Received	Position
161	CARL A STROCK	06/19/2024 09:25:39 AM	OPPOSE

I AM OPPOSED TO A DECISION AT THIS TIME IS BASED ON A NUMBER OF CONCERNS:
THE NEED OF A PUBLIC HEARING. THERE IS VERY MUCH UNCERTAINTY ASSOCIATED WITH A PROJECT THAT HAS POTENTIAL FOR FAR-REACHING IMPACT IN THE REGION. THERE IS AN URGENT NEED FOR TRANSPARENCY. IT HAS BEEN MY EXPERIENCE THAT PUBLIC HEARINGS GENERATE A BROADER UNDERSTANDING OF THE PUBLIC NEED AND GREATER TRUST IN GOVERNMENT.
CUMULATIVE IMPACT. THE PROJECT WILL CLEARLY IMPACT CAROLINE COUNTY IN A POSITIVE WAY, BUT NEGATIVES LIKE INCREASED POPULATION DENSITY WILL RESULT IN CHANGED LAND USE AND THE ASSOCIATED REQUIREMENTS FOR INCREASED ROADS, SCHOOLS, AND PUBLIC SERVICES MUST BE CONSIDERED. FURTHER, THE BROADER REGION WILL BE IMPACTED, ESPECIALLY DOWNSTREAM OF THE INTAKE. OF PARTICULAR CONCERN THE POTENTIAL FOR CHANGE IN THE SALINITY OF THE RAPPAHANNOCK THE RIVER . ANY CONTRIBUTION TO AN INCREASE IN SALINITY NOT ONLY IMPACTS THE AQUATIC ENVIRONMENT, IT ALSO INCREASES THE POTENTIAL FOR SALT WATER INTRUSION INTO THE GROUNDWATER AQUIFER. I UNDERSTAND THAT COMMONWEALTH OF VIRGINIA IS ENGAGED IN A STUDY OF THE ENVIRONMENTAL IMPACT OF DATE CENTERS THAT IS SCHEDULED FOR COMPLETION IN 2025. GIVEN THE COMPLEXITY OF POTENTIAL IMPACTS WHICH MAY BE UNINTENDED OR IRREVERSIBLE, IT WOULD BE PRUDENT TO DEFER A FINAL DECISION UNTIL THE STUDY IS COMPLETED.

FEDERAL ENGAGEMENT. I WOULD LIKE CONFIRMATION THAT THE APPROPRIATE AGENCIES HAVE BEEN ACTIVELY ENGAGED. UNDER THE CLEAN WATER ACT, THE ENDANGERED SPECIES ACT, AND NUMEROUS OTHER FEDERAL STATUTES, A NUMBER OF FEDERAL AGENCIES HAVE JURISDICTION ON THE RAPPAHANNOCK AND THE MATTAPONI, UNLESS THEIR AUTHORITIES HAVE BEEN DELEGATED THE STATE. AMONG THOSE AGENCIES ARE THE U.S. FISH AND WILDLIFE SERVICE FWS , GIVEN THE PRESENCE OF THE ATLANTIC STURGEON AND POTENTIAL FOR AN IMPACT IN THE AQUATIC ENVIRONMENT DOWNSTREAM OF THE INTAKE. THE NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION NOAA HAS OVER ANADROMOUS SPECIES SUCH AS THE AMERICAN SHAD. THE ENVIRONMENTAL PROTECTION AGENCY EPA AND THE U.S. ARMY CORPS OF ENGINEERS USACE HAVE OBVIOUS RESPONSIBILITIES FOR WATER QUALITY. THERE MAY BE OTHER AGENCIES.

INTERBASIN TRANSFER. THE IMPACT ON POLECAT CREEK AND THE MATTAPONI MUST BE CONSIDERED. ANY IMPACTS CAN BE AVOIDED BY RETURNING THE TREATED EFFLUENT TO THE RIVER. PIPELINES WORK BOTH WAYS.

AVOID, MINIMIZE, MITIGATE. I WOULD LIKE ASSURANCE THAT THIS PRINCIPLE HAS BEEN APPLIED. THE GENERAL APPROACH TO POTENTIAL IMPACTS IS TO AVOID THEM IF POSSIBLE, MINIMIZE THOSE THAT CANNOT BE AVOIDED AND MITIGATE THOSE THAT REMAIN. IF THERE ARE NO OTHER SOURCES FOR THE REQUIRED WATER THE IMPACT CAN BE MINIMIZED BY REQUIRING INDUSTRIAL USERS TO DESIGN CLOSED-LOOP SYSTEMS THAT CONSERVE WATER. RESIDUAL IMPACTS MUST BE MITIGATED.

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Number	Name	Received	Position
162	GREGG E HOLMES	06/19/2024 08:24:08 AM	OPPOSE

I DID THE MATH.

THE PROJECT WILL REMOVE 12.91688% OF THE RAPPAHANNOCK'S FLOW.
THIS WATER WILL THEN BE DISCHARGED INTO A DIFFERENT BODY.

THINK OF IT LIKE THIS:

IF A 200 POUND PERSON SUDDENLY LOST 12.9% OF THEIR WEIGHT, THEY WOULD DROP TO 175 POUNDS.
IF A 175 POUND PERSON GAINED THAT SAME 12.9%, THEY WOULD SUDDENLY WEIGH 201 POUNDS.
NEITHER OF THESE SUDDEN CHANGES WOULD BE HEALTHY.

DO NOT DO THIS TO THESE RIVERS. PLEASE.

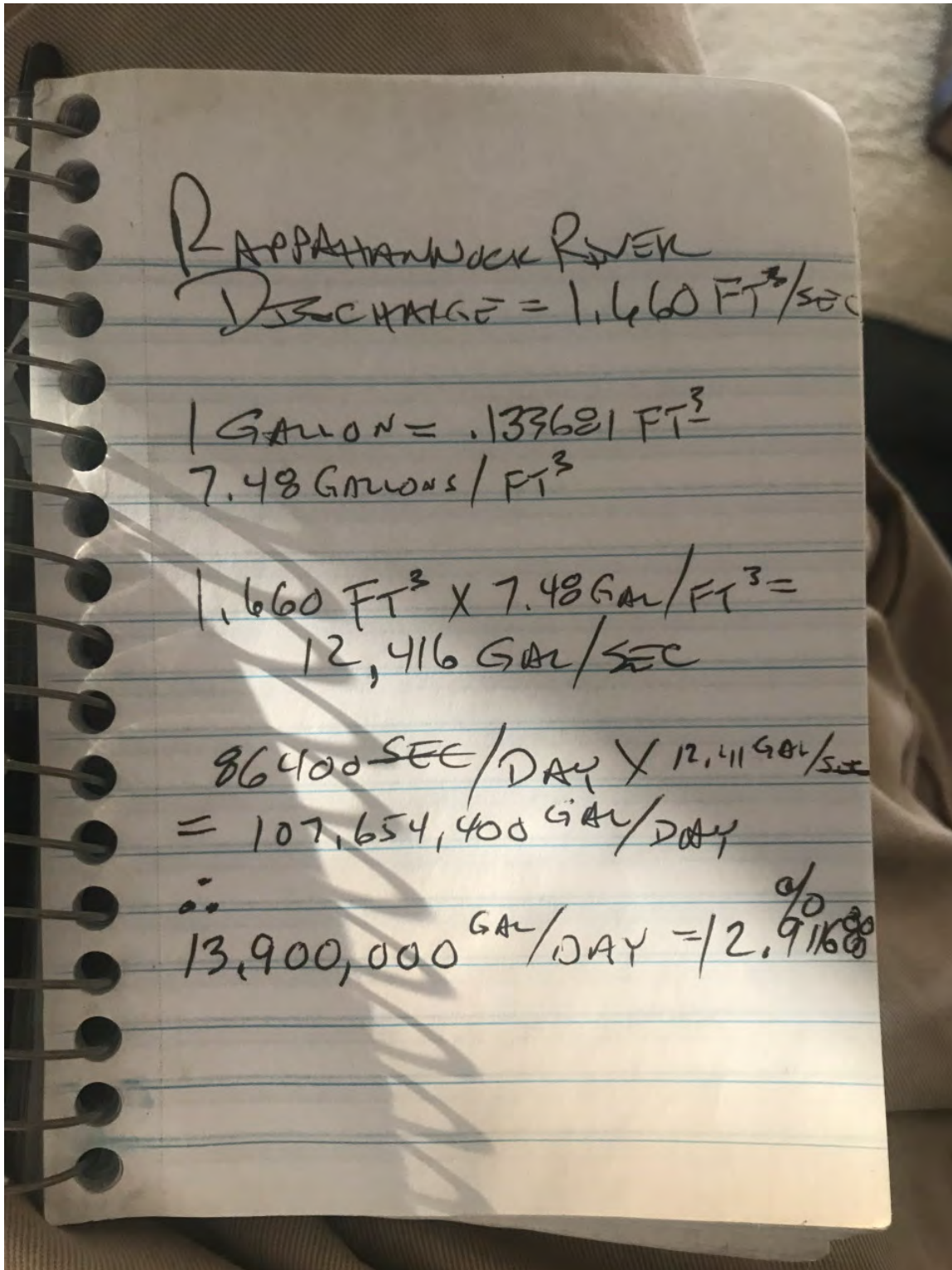
Attachments:

Submitted photos for this comment will begin on next page.

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1718799883.jpg



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Number	Name	Received	Position
163	SALLY K DICKINSON	06/19/2024 08:58:30 AM	OPPOSE

HELLO,
THANK YOU FOR YOUR TIME TO READ THIS EMAIL.
I WANTED TO BRING MY CONCERNS AS WELL AS THE CONCERNS OF MANY OTHERS TO YOUR ATTENTION,
AS I AM SURE YOU ARE WELL AWARE.

WITHDRAWING WATER FROM THE RAPPAHANNOCK RIVER IN CAROLINE COUNTY TO SERVE AS A COOLING SYSTEM FOR A DATA CENTER IS A DISPROPORTIONATE USE OF THE RIVER. IT IS JUST NOT FEASIBLE TO THINK THAT IT CAN SERVE THAT PURPOSE AND CONTINUE TO DO THE JOB IT ALREADY HAS. IT WILL HINDER THE LIVES OF MANY CAROLINE COUNTY RESIDENTS AS WELL AS THE SURROUNDING COUNTIES. THE RIVER SERVES AS A LIVELIHOOD FOR FAMILIES WHO HAVE RESIDED HERE FOR HUNDREDS OF YEARS. THERE ARE WATERMEN AND FARMERS WHO RELY ON THE RIVER TO PROVIDE FOR THEIR FAMILIES. THIS WATER WITHDRAWAL WILL NOT SERVE THE COMMUNITY OF CAROLINE COUNTY, RATHER IT WILL SERVE ECONOMIC AND POLITICAL GOALS.

THE FACT THAT YOU ARE NOT RETURNING ANY OF THE WATER IS CONCERNING. AS WE ARE CURRENTLY EXPERIENCING A TIME WITH NO RAIN FOR TWO SOLID WEEKS, IT SHOULD BRING UNEASINESS TO YOUR OWN SELVES THAT THAT WOULD BE A PROBLEM FOR YOUR PLANS. THE RIVER WILL CEASE TO EXIST IN NO TIME IF YOU ARE PULLING 7.9 MILLION GALLONS A DAY WITH ZERO RETURN.

I HOPE THAT YOU TAKE THESE FEW APPREHENSIONS OF MINE AND THOSE OF MANY OTHERS WHILE YOU ARE IN THE DECISION MAKING PROCESS.

AGAIN, THANK YOU FOR YOUR TIME IN READING THIS.
SALLY DICKINSON

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Number	Name	Received	Position
164	JEN T SHELOR	06/19/2024 09:10:42 AM	OPPOSE

THIS EMAIL IS IN OPPOSITION TO THE PLANNED WATER WITHDRAWAL PROJECT IN CAROLINE COUNTY VMRC 2020-0514/DEQ VWP 20-0514 WHICH WOULD DRAW MILLIONS OF GALLONS FROM THE RAPPAHANNOCK RIVER AND DUMP WASTEWATER INTO THE WATERSHED OF THE MATTAPONI RIVER. I LIVE ON THE MATTAPONI RIVER. MY FAMILY HAVE BEEN GOOD STEWARDS OF THE LAND AROUND THIS RIVER FOR 350 YEARS.

THE MATTAPONI RIVER IS ONE OF THE MOST REMARKABLY PRISTINE WATERWAYS LEFT IN THE EASTERN US. IT IS VERY CONCERNING THAT SHORTSIGHTED QUICK ECONOMIC GROWTH CAN BREAK DOWN MANY LASTING PROTECTIONS TO OUR ENVIRONMENT.

CONSIDER THESE WORKING RESOLUTIONS FOR OBTAINING WATER AND REUSING TREATED WASTE WATER:

RAINWATER HARVESTING SYSTEMS

INDUSTRIAL AND RESIDENTIAL COMMUNITIES CAN IMPLEMENT THESE ALTERNATIVE WATER TECHNOLOGIES FOR POTABLE AND NON-POTABLE USE. BY CONSERVING NATURAL FRESHWATER RESOURCES, DATA CENTER OPERATIONS CAN MINIMIZE ENVIRONMENTAL IMPACT. IT ALSO MAY EXTEND ITS OPERATION TERM BECAUSE OF A REDUCTION IN OPERATION COST AND NATURAL RESOURCE DEPLETION.

CAROLINE COUNTY, VIRGINIA GETS 43 INCHES OF RAIN, ON AVERAGE, PER YEAR. A 50,000 SQ'™ DATA CENTER COULD YIELD 1,558,425 GALLONS OF WATER A YEAR WITH A RAINWATER HARVESTING SYSTEM. JUST A LITTLE OVER THE 20% AMOUNT DESIGNATED IN THE 7 MILLION GALLONS EXTRACTED DAILY FROM RAPPAHANNOCK.

FEDERAL ENERGY MANAGEMENT PROGRAM

[HTTPS://WWW.ENERGY.GOV/FEMP/RAINWATER-HARVESTING-SYSTEMS-TECHNOLOGY-REVIEW](https://www.energy.gov/femp/rainwater-harvesting-systems-technology-review)

WATER REUSE CASE STUDY FROM MICROSOFT DATA CENTERS

THE QUINCY WATER REUSE UTILITY QWRU TREATMENT FACILITY, WHICH OPENED ON JUNE 30, 2021 IS THE FIRST OF ITS KIND IN WASHINGTON STATE AND OVER 10 YEARS IN THE MAKING. IT PROCESSES WATER FOR REUSE BY LOCAL INDUSTRIES, INCLUDING DATA CENTERS. QWRU CREATES A CLOSED LOOP SYSTEM, SO WASTEWATER ISN'T DISCHARGED TO THE ENVIRONMENT, AND DECREASES THE NEED FOR POTABLE WATER REQUIRED FOR DATACENTER COOLING.

"QWRU WILL SAVE AN ESTIMATED 380 MILLION GALLONS OF POTABLE WATER PER YEAR"ENOUGH FOR 5,450 PEOPLE."

[HTTPS://DATACENTERS.MICROSOFT.COM/WP-CONTENT/UPLOADS/2023/05/AZURE_WATER-CONSERVATION_INFOGRAPHIC.PDF](https://datacenters.microsoft.com/wp-content/uploads/2023/05/Azure_Water-Conservation_InfoGraphic.pdf)

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WITH THE MATTAPONI RIVER BEING ON THE "DOWNHILL" SIDE OF THIS WASTE WATER I AM CONCERNED ABOUT THE FOLLOWING:

- WAS THERE AN ENVIRONMENTAL IMPACT STATEMENT PREPARED FOR THE PROJECT? ANY DOWNSTREAM IMPAIRMENTS CITED?

- WATER VOLUME INCREASE AFFECTS ON HABITATS OF FLORA AND FAUNA. 20% DAILY INCREASE OF OUTFLOW CITED BY MPRA NEWSLETTER WINTER 2024 COULD PUSH SOME AREAS TO BE AT FLOOD STAGE MOST OF THE YEAR. BEULAHVILLE , VA USGS WATER GAUGE

- WHY NOT PUT WASTE WATER BACK IN THE RAPPAHANNOCK? ISN'T THIS IN CONFLICT TO INTERBASIN WATER TRANSFER?

THE MATTAPONI RIVER HAS MANAGED TO AVOID MAJOR INDUSTRIAL AND RESIDENTIAL CONTAMINATION THROUGH THE EXHAUSTIVE EFFORTS OF LOCAL GROUPS AND RESIDENTS. A PUBLIC HEARING IS NECESSARY TO INSURE PUBLIC AWARENESS AND DUE DILIGENCE OF ENVIRONMENTAL IMPACTS.

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Number	Name	Received	Position
165	MARTHA M HALL	06/19/2024 09:48:54 AM	OPPOSE

AS MANY OF MY NEIGHBORS HAVE COMMENTED, I AM CONCERNED THAT THE PROPOSED PROJECT LACKS APPROPRIATE ATTENTION TO THE IMPACT THIS PROJECT WILL HAVE ON MANY ASPECTS OF RIVER LIFE, INCLUDING HABITAT, USAGE, AND CLEANLINESS OF THE RAPPAHANNOCK RIVER, AS WELL AS PRECEDENT SETTING OF SUCH AN EFFORT. A THOROUGH ANALYSIS OF ALL ASPECTS OF THE PROPOSED PROJECT SEEMS TO BE ABSENT, AND SUCH SHORT-SIGHTEDNESS DOES NOT BODE WELL FOR CAROLINE COUNTY OR NEIGHBORING COUNTIES WHICH WILL BE AFFECTED. I THINK A PUBLIC HEARING IS DEFINITELY IN ORDER.

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Number	Name	Received	Position
166	MARY-JANE STARBUCK-HINKLEY	05/19/2024 10:21:13 AM	OPPOSE

I OPPOSE THIS PROJECT. THE SUMMARY DESCRIBES HOW THIS WILL AFFECT THE ATLANTIC SURGEON, BUT WHAT ABOUT THE CRABS, OYSTERS, OTHER FISH, OXYGEN IN THE WATER AND THE PLANT LIFE. THIS COULDS SERIOUSLY AFFECT THE LIFE STYLE OF ALL ALONG THE TRIBUTARIES AND RIVERS THAT THE RAPAHANNOCK FLOWS INTO. IT COULD SERIOUSLY AFFECT THE LIFESTYLES OF THOSE WHO LIVE ON OR NEAR OR WHO US THE WATERWAYS. I DO NOT SEE A TOTAL ENVIRONMENTAL IMPACT STUDY. I DO NOT SEE A CONCERN FOR THE PUBLIC WHO LIVE DOWN STREAM I ONLY SEE CONCERN FOR CAROLINE COUNTY AND THE DATA CENTER INDUSTRIES. THERE SHOULD BE A HEARING. OTHER COUNTIES SHOULD NOT HAVE TO SUFFER FOR OTHER COUNTIES DEISIRE TO HAVE SUCH AN INDUSTRIES IN THEIR JURSDICTION. NO ALLOWCATIONS HAVE BEEN MADE FOR LOW TIDE WATER, FOR WEATHER, NOR FOR DROUGHT CONDITIONS.

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Number	Name	Received	Position
167	STEVE MATHEWS	06/19/2024 10:20:05 AM	OPPOSE

I AM OPPOSED TO THE DRAFT PERMIT ISSUED BY DEQ FOR CAROLINE COUNTY TO WITHDRAW WATER FROM

THE RAPPAHANNOCK.

I REQUEST THAT PUBLIC HEARINGS BE HELD TO HEAR AND ADDRESS CONCERNS FROM ACROSS OUR COMMUNITIES. THE PROPOSED USE OF MASSIVE AMOUNTS OF OUR FRESHWATER THAT CAROLINE COUNTY WANTS TO WITHDRAW FOR THE BENEFIT OF A PRIVATE BUSINESS ENTITY MUST NOT BE MADE WITHOUT COMMUNITY AWARENESS AND INPUT.

INFORMATION THAT IS PUBLICLY AVAILABLE IS CONCERNING. LABELING PRIVATE INDUSTRIAL USE AS MUNICIPAL DRINKING WATER IS MISLEADING. MY UNDERSTANDING IS THAT THERE IS NOT SUFFICIENT DEMAND FOR DRINKING WATER BY THE RESIDENTS SERVED BY THE WATER TREATMENT FACILITY TO JUSTIFY THIS USAGE. THE PRIMARY BENEFICIARIES OF THE PROJECT WILL BE WEALTHY PRIVATE INDUSTRIES, SPECIFICALLY AMAZON. IF THIS IS NOT ACCURATE THEN A PUBLIC HEARING WILL PROVIDE A FORUM FOR THIS TO BE EXPLAINED.

THE IMPACT OF THE DEPLETION OF THE RAPPAHANNOCK RIVER&acircs FRESHWATER SUPPLY MUST BE UNDERSTOOD AND ADDRESSED PRIOR TO ANY REMOVAL. AS WRITTEN NONE OF THE WATER WITHDRAWN FROM THE RAPPAHANNOCK WILL BE RETURNED TO THE RAPPAHANNOCK. SALTWATER INCURSIONS UPSTREAM FROM TAPPAHANNOCK HAVE ALREADY BEGUN AND WILL ACCELERATE AS THE FLOW OF FRESH WATER IS DEPLETED. THIS IMPERILS FARMERS AND WATERMEN THAT RELY ON A HEALTHY ECOSYSTEM TO EARN THEIR LIVING AND PROVIDE THEIR VERY REAL SERVICES TO THE COMMUNITY. A FARMER WHO CAN NO LONGER RELY ON FRESH WATER TO IRRIGATE HIS FIELDS, ESPECIALLY IN DROUGHT CONDITIONS, CANNOT SURVIVE. WATERMEN THRIVE BY CATCHING SPECIES THAT SPAWN IN THE FRESH WATERS OF THE RAPPAHANNOCK. DISTURBING THE SALINITY OF FRESHWATER MARSHES, WHERE MANY SPECIES REPRODUCE, WILL HAVE DEVASTATING EFFECTS ON THOSE SPECIES AND THE OTHER SPECIES THAT DEPEND ON THEM.

WATER IS A RESOURCE THAT MUST BE MANAGED FOR THE BENEFIT OF THE CITIZENS RATHER THAT CORPORATIONS. WE HAVE A LONG HISTORY ACROSS THE UNITED STATES WHERE IMPROPER USE OF OUR RESOURCES HAVE HAD DEVASTATING CONSEQUENCES. THE TIME FOR MITIGATION IS BEFORE IT BECOMES A PROBLEM. CLIMATE CHANGE, COUPLED WITH RESOURCE MISMANAGEMENT, WILL LEAD TO

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IRREPARABLE DAMAGE.

DATA CENTERS ARE HUGE RESOURCE CONSUMERS. THEY REQUIRE MASSIVE AMOUNTS OF ELECTRICITY SIMPLY TO RUN THEIR SYSTEMS. WITH SUFFICIENT ENERGY THEY CAN ALSO COOL THEIR SYSTEMS WITHOUT REQUIRING WATER FOR COOLING. BUT DOMINION ENERGY DOESN'T HAVE SUFFICIENT CLEAN ENERGY AVAILABLE FOR THE DATA CENTER'S NEEDS. THAT WILL REQUIRE MORE ENERGY FROM SOURCES THAT PRODUCE GREENHOUSE GAS EMISSIONS AND WILL EXACERBATE THE CLIMATE EMERGENCY WE ALL FACE.

APPROVAL FOR DATA CENTER OPERATIONS MUST INCLUDE MITIGATION FOR THESE FACTORS AS WELL. THE COSTS SHOULD BE THE BUSINESS'S RESPONSIBILITY, NOT THE CITIZEN'S. ANY APPROVAL MUST ALSO HAVE SUFFICIENT ENFORCEMENT MECHANISMS TO ENSURE COMPLIANCE IN A TIMELY MANNER AND AT THE VIOLATORS EXPENSE.

WHY DO I CARE?

I AM A RIPARIAN LANDOWNER IN MIDDLESEX COUNTY. IMPACTS FROM THE MASSIVE REMOVAL FROM THE RAPPAHANNOCK WILL FLOW DOWNSTREAM TO ME. THE HEALTH AND WELLBEING OF OUR ECOSYSTEM MUST BE PROTECTED.

I AM ALSO ON THE BOARD OF DIRECTORS OF FRIENDS OF DRAGON RUN. DRAGON RUN IS ONE OF THE MOST PRISTINE AND ENVIRONMENTALLY FRAGILE WATERWAYS IN VIRGINIA. WHILE THE DRAGON DOES NOT TOUCH THE RAPPAHANNOCK IT COULD BE IMPACTED BY ACTIONS OF LANDOWNERS AND BUSINESSES ALONG THE WATERWAY. THE EFFECTS COULD BE DEVASTATING TO ONE OF VIRGINIA'S TREASURES.

THE WATERS OF VIRGINIA BELONG TO THE PEOPLE, NOT TO AMAZON OR ANY OTHER DATA CENTER. THE PEOPLE NEED TO BE ABLE TO VOICE THEIR CONCERNS AT PUBLIC HEARINGS BEFORE DEQ AND VMRC. I AM URGING DEQ TO RESCIND ITS DRAFT PERMIT TO CAROLINE, AND THAT BOTH DEQ AND VMRC HOLD PUBLIC HEARINGS TO HEAR THE GROWING CONCERNS OF THE PUBLIC.

SINCERELY,

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STEVE MATHEWS

97 BOB WHITE LANE

LOCUST HILL, VA 23092

703-489-7904

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Number	Name	Received	Position
168	WILLIAM H HAILE	06/19/2024 12:15:55 PM	OPPOSE

AS A LANDOWNER FROM ESSEX COUNTY AND A CITIZEN OF VIRGINIA, I AM WRITING TO EXPRESS MY STRONG OPPOSITION TO THE WITHDRAWAL OF 14 MILLION PLUS GALLONS OF WATER PER DAY FROM THE RAPPAHANNOCK RIVER. THIS ACT WILL MOST DEFINITELY HAVE SIGNIFICANT IMPACT ON THE SALINITY OF THE UPPER RAPPAHANNOCK LIKELY ADVANCING BRACKISH WATER TO NEW AREAS. EXISTING IRRIGATION OF FARMLAND WILL HAVE TO BE ABANDONED AND SENSITIVE ENVIRONMENTAL RESOURCES WILL BE LOST. ALSO CONSIDER THAT FARMLAND IRRIGATION IS RECYCLED BACK TO THE RIVER, UNLIKE DATA CENTER COOLING, 75% OF WHICH IS LOST TO EVAPORATION.

PLEASE DISAPPROVE THIS PROJECT SO THAT IT CAN BE SITED IN A LOCATION NEAR A LARGE BODY OF WATER WITH UNLIMITED COOLING CAPACITY, AND MINIMAL ENVIRONMENTAL IMPACTS.

THANK YOU,

WILLIAM HAILE

Virginia Marine Resources Commission

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Number	Name	Received	Position
169	STEPHEN P MOSIER	06/20/2024 16:55:10 PM	OPPOSE

DRAWING THE PROPOSED AMOUNT OF WATER FROM THE RAPPAHANNOCK WITHOUT RETURNING AN EQUIVALENT FLOW OF FRESH WATER TO THE RAPPAHANNOCK WATERSHED WILL ALTER THE WATER LEVEL AND SALINITY OF THE RAPPAHANNOCK. THIS WILL HAVE A DISASTROUS IMPACT ON THE MARSHES AND WETLANDS ALONG THE RAPPAHANNOCK, RECREATIONAL USES OF THE RIVER DOWNSTREAM, AND IMPACT CURRENT AGRICULTURAL USERS OF THE FRESHWATER OF THE RAPPAHANNOCK. THIS PROJECT HAS NOT RECEIVED ADEQUATE PUBLICITY AND STUDY. A THOROUGH ENVIRONMENTAL IMPACT STUDY AND PUBLIC HEARINGS, IN MULTIPLE LOCATIONS ALONG BOTH SIDES OF THE RIVER, ARE NEEDED TO ALLOW SOUND SCIENTIFIC ANALYSIS AND INPUT FROM IMPACTED PROPERTY OWNERS AND RIVER USERS.

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Number	Name	Received	Position
170	WHITNEY ZAHAR	07/01/2024 14:46:59 PM	OPPOSE

I OPPOSE THE PROJECT BECAUSE IT WILL ADVERSELY AFFECT THE RAPPAHANNOCK RIVER WATERSHED, AS A HISTORIC WATERWAY PRESERVATION WHICH IS UNDER EASEMENT IN PERPETUITY FROM U.S. FISH AND WILDLIFE- MENOKIN , AS A RECREATIONAL LOCATION, AS AN IMPACT ON THE ENVIRONMENT, AND AS A WAY THAT WILL UNDERMINE THE NORTHERN NECK AS A LOCATION FOR TOURISM, ESPECIALLY AROUND THE 250TH ANNIVERSARY IN 2026.

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Number	Name	Received	Position
171	MATTHEW JOHNSTON	07/02/2024 10:43:35 AM	OPPOSE

NOT ONLY IS THIS PROJECT BAD FOR OUR ENVIRONMENT, BUT THE WAY THE PUBLIC IS BEING INTENTIONALLY MISLEAD BY USING A MUNICIPAL DRINKING WATER PROJECT AS COVER FOR A COOLING WATER SUPPLY TO DATA CENTERS. THE FACT THAT THIS APPLICATION IS EVEN BEING ENTERTAINED IS TROUBLING AND IS INDICATIVE OF CORRUPTION. WHY ELSE WOULD COUNTY OFFICIALS EVEN CONSIDER ALLOWING THIS TYPE OF BLATANT MANIPULATION?

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Number	Name	Received	Position
172	HELEN V SANDERS	07/03/2024 12:53:44 PM	OPPOSE

MY CONCERNS ARE NOT RETURNING THE DRAWN WATER BACK INTO THE RAPPAHANNOCK RIVER AND THE USE OF IT FOR BUSINESSES OVER CITIZENS . AS LONG-TIME RESIDENT OF THE FREDERICKSBURG AREA, I HAVE EXPERIENCED TIMES WHEN THE RIVER LEVEL HAS BEEN VERY LOW DUE TO DROUGHT. SO, IT IS VERY IMPORTANT NOT TO OVER DESIGNATE USE OF WATER TO AN ALREADY STRESSED RESOURCE.

SECOND, THERE IS A NEED TO LOOK FOR OTHER SOURCES OF WATER FOR BUSINESSES, ESPECIALLY ONES THAT NEED LOTS OF WATER. THE PRIORITY HAS TO BE FOR PEOPLE AND THE ENVIRONMENT.

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Number	Name	Received	Position
173	CHRIS W LANDRUM	09/12/2024 10:48:14 AM	OPPOSE

POTENTIAL HARM TO BOTH RAPPAHANNOCK AND MATTAPONI RIVERS UNREASONABLE TAKING OF FARMLAND BY USE OF IMMINENT DOMAIN WITH LARGE PERCENTAGE OF WATER TAKEN FOR COMMERCIAL USE . THE ONLY PEOPLE IN FAVOR OF THIS PROJECT AS PUT FORTH IS CAROLINE COUNTY OFFICIALS.PLEASE LISTEN TO THOSE OF US THAT HAVE PROPERTY ALONG THESE RIVERS AND PAY TAXES ON THEM.

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Print Date: Thursday June 11 2026 09:49

Number	Name	Received	Position
174	ELIZABETH T WALKER	05/18/2026 15:13:34 PM	OPPOSE

I AM AN ATTORNEY REPRESENTING THE PAMUNKEY INDIAN TRIBE, THEY OPPOSE THE WATER PROJECT. THE VA CODE REQUIRES APPLICANTS FOR SURFACE WATER WITHDRAWALS, TO DEMONSTRATE NEED. HERE THE PERMIT IS VAQUE ALLOWING A LARGE INCREASE IN WATER WITHDRAWAL PER DAY, WITHOUT REQUIREMENTS ON DEMONSTRATION OF NEED. IT ALSO ALLOWS WATER FROM THE RAPPAHANNOCK RIVER TO BE RELEASED INTO THE MATTAPONI RIVER WITH DIFFERENT SALINITY RATES. THIS TRANSFER OF WATER IMPACTS THE RESERVATION TRIBES IN THE STATE. PAMUNKEY OPPOSES THE STATE'S USE OF ITS 1677 TREATY, THE OLDEST IN THE COUNTRY, TO OPPOSE THE RAPPAHANNOCKS CLAIMS. RATHER THAN ADDRESS THE OVERREACHING OF THE DEQ PERMIT BY FAILING TO ADDRESS WATER USE NEEDS. THE PAMUNKEY'S RECOGNITION AS A FEDERAL TRIBE DEPENDED ON THE TREATY HISTORY. THIS USE OF THE TREATY BY THE STATE TO DEFEAT OBJECTIONS TO THE ENVIRONMENTAL IMPACTS OF THE PERMIT ARE OFFENSIVE AND DETRIMENTAL TO THE TRIBE'S RELATIONSHIP WITH THE STATE. THE TRIBE STANDS ON ITS TREATY AND TREATY HISTORY, AND BELIEVES THIS PERMIT ISSUE BEGS FOR A COMPROMISE.

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Print Date: Thursday June 11 2026 09:49

Number	Name	Received	Position
175	KELLY J HENGLER	05/21/2026 12:00:28 PM	OPPOSE

PUBLIC COMMENT AND REQUEST FOR CONTINUANCE CAROLINE COUNTY DEPARTMENT OF PUBLIC WORKS VMRC #2020-0514 / DEQ VWP #20-0514 / USACE NAO-2020-00566 PROPOSED RAPPAHANNOCK RIVER RAW WATER INTAKE TO THE VIRGINIA MARINE RESOURCES COMMISSION: I SUBMIT THIS PUBLIC COMMENT ON THE CAROLINE COUNTY DEPARTMENT OF PUBLIC WORKS REQUEST FOR AUTHORIZATION TO INSTALL A 9 MILLION GALLON PER DAY RAW WATER INTAKE STRUCTURE IN THE RAPPAHANNOCK RIVER, VMRC #2020-0514. I RESPECTFULLY REQUEST THAT THE COMMISSION CONTINUE THIS MATTER AND KEEP THE PUBLIC RECORD OPEN. I UNDERSTAND THAT VA. CODE Â§ 28.2-1205.1 ESTABLISHES A COORDINATED-REVIEW FRAMEWORK FOR WATER RESOURCES PROJECTS AND THAT VMRC STAFF HAS IDENTIFIED THE SIX-MONTH TIMING RELATIONSHIP TO DEQâ€™S ISSUANCE OF VWP PERMIT NO. 20-0514. I DO NOT RAISE THE TIMING ISSUE LIGHTLY. HOWEVER, THE COORDINATED-REVIEW DEADLINE SHOULD NOT BE CONSTRUED TO ELIMINATE OR REDUCE THE COMMISSIONâ€™S INDEPENDENT DUTY UNDER VA. CODE Â§ 28.2-1205 TO EVALUATE THE PROJECTâ€™S PUBLIC AND PRIVATE BENEFITS, PUBLIC TRUST IMPLICATIONS, AND EFFECTS ON STATE-OWNED SUBMERGED LANDS, STATE WATERS, MARINE AND FISHERIES RESOURCES, TIDAL WETLANDS, ADJACENT AND NEARBY PROPERTIES, WATER QUALITY, AND SUBMERGED AQUATIC VEGETATION. THE RECORD BEFORE VMRC IS NOT A STATIC 2020 JPA. IT IS AN EVOLVED 2019â€“2026 ADMINISTRATIVE RECORD. THE ORIGINAL JPA WAS FILED IN MARCH 2020, BUT THE RECORD NOW INCLUDES LATER VIMS COMMENTS AND MODELING, 2023 CORPS COORDINATION, 2024 CONDEMNATION AND OPEN-SPACE-EASEMENT MATERIALS, PLAN DRAWINGS RECEIVED BY VMRC AS 2025 REVISIONS, DEQâ€™S NOVEMBER 26, 2025 VWP PERMIT, PUBLIC COMMENTS THROUGH MAY 2026, AND LATE TECHNICAL MATERIAL TRANSMITTED SHORTLY BEFORE THIS HEARING. DURING THAT SAME PERIOD, THE APPLICABLE FEDERAL AND STATE REGULATORY NEXUS MATERIALLY CHANGED, INCLUDING FEDERAL WOTUS/SACKETT IMPLEMENTATION, CLEAN WATER ACT Â§ 401 REQUIREMENTS, VIRGINIA EROSION AND STORMWATER REGULATION UNDER 9VAC25-875, VIRGINIA SURFACE-WATER-WITHDRAWAL REQUIREMENTS, AND THE JPA CLEARINGHOUSE PROCESS. THIS MATTERS BECAUSE VMRC IS ACTING IN 2026. THE COMMISSION SHOULD NOT TREAT THE MARCH 2020 APPLICATION DATE, OR DEQâ€™S 2025 VWP PERMIT, AS DISPOSITIVE OF THE COMMISSIONâ€™S CURRENT PUBLIC-TRUST REVIEW. GROUNDS FOR CONTINUANCE 1. THE PUBLIC-NOTICE RECORD IS NOT APPARENT IN THE HEARING PACKET. THE STAFF EVALUATION STATES THAT A JOINT PUBLIC NOTICE WAS PUBLISHED IN THE FREE LANCE-STAR AND RICHMOND TIMES-DISPATCH ON MAY 18, 2024. HOWEVER, THE EVIDENCE PACKET DOES NOT APPEAR TO INCLUDE THE ACTUAL PUBLIC NOTICE, PROOF OF PUBLICATION, PUBLICATION AFFIDAVITS, OR THE FULL NOTICE LANGUAGE AS A SEPARATE EXHIBIT. THAT IS A MATERIAL RECORD ISSUE. THE COMMISSION SHOULD HAVE BEFORE IT THE EXACT NOTICE TEXT, PUBLICATION PROOF, WHERE THE NOTICE RAN, WHAT PROJECT PURPOSE AND WITHDRAWAL VOLUME WERE DESCRIBED, WHETHER INTERBASIN TRANSFER AND RECEIVING-WATER IMPLICATIONS WERE DISCLOSED, AND WHETHER THE NOTICE ACCURATELY DESCRIBED THE PROJECT AS IT NOW EXISTS IN 2026. PUBLIC COMMENT AND PUBLIC HEARING RIGHTS DEPEND ON NOTICE SUFFICIENT TO INFORM THE AFFECTED PUBLIC OF THE ACTUAL MATTER BEING DECIDED. A STAFF STATEMENT THAT NOTICE OCCURRED IS NOT THE SAME AS A COMPLETE NOTICE RECORD. 2. THE CORPS PERMIT REMAINS PENDING. THE STAFF EVALUATION

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STATES THAT THE U.S. ARMY CORPS OF ENGINEERS IS STILL EVALUATING THE PROPOSAL AND HAS NOT ISSUED ITS INDIVIDUAL PERMIT. CORPS CORRESPONDENCE ALSO REFLECTS CONTINUING COORDINATION UNDER NAO-2020-00566, INCLUDING REQUESTS FOR UPDATED IMPACT INFORMATION AND SPECIES-RELATED INFORMATION.

VMRC SHOULD NOT ISSUE AN UNCONDITIONAL AUTHORIZATION FOR STATE-OWNED SUBMERGED LANDS BEFORE THE FEDERAL RECORD IS CLOSED. THE CORPS RECORD MAY BEAR DIRECTLY ON CONSTRUCTION METHODS, IMPACT FOOTPRINT, ESA CONSULTATION, NHPA/SECTION 106, NEPA, SECTION 404, SECTION 10, AND PERMIT CONDITIONS. THOSE FEDERAL REQUIREMENTS ARE MATERIAL TO VMRC'S PUBLIC-TRUST REVIEW.

3. FEDERAL SPECIES COORDINATION IS NOT VISIBLY CLOSED IN THE RECORD.

THE CORPS RECORD REFLECTS UNRESOLVED OR AT LEAST NOT-YET-DOCUMENTED SPECIES ISSUES, INCLUDING BAT SURVEY STATUS, YELLOW LANCE SURVEY OR HABITAT ASSESSMENT, AND POSSIBLE NOAA/NMFS COORDINATION FOR THE INTAKE STRUCTURE. VMRC'S STATUTORY RESPONSIBILITY INCLUDES MARINE AND FISHERIES RESOURCES. THE FINAL FEDERAL SPECIES RECORD SHOULD BE INCLUDED BEFORE VMRC FINAL ACTION, OR ANY APPROVAL SHOULD BE EXPRESSLY CONDITIONED ON FINAL FEDERAL SPECIES CLOSURE AND RETURN TO VMRC IF THE PROJECT CHANGES.

4. DEQ'S PERMIT NARROWS THE AUTHORIZED USE, AND VMRC MUST LOCK ITS AUTHORIZATION TO THAT USE.

DEQ'S WVP PERMIT AUTHORIZES MUNICIPAL PUBLIC WATER SUPPLY AND STATES THAT OTHER USES ARE NOT AUTHORIZED. VMRC STAFF ALSO STATES THE APPLICANT REDUCED THE PROPOSED WITHDRAWAL FROM 13.9 MGD TO 9 MGD AND AGREED THE WATER WILL NOT BE USED FOR DATA CENTER COOLING.

THAT LIMITATION MUST BE CARRIED INTO THE VMRC PERMIT. IF VMRC APPROVES, THE PERMIT SHOULD EXPRESSLY STATE THAT VMRC AUTHORIZATION IS LIMITED TO MUNICIPAL PUBLIC WATER SUPPLY FOR CAROLINE COUNTY, PORT ROYAL, AND BOWLING GREEN, AND DOES NOT AUTHORIZE DATA-CENTER COOLING, INDUSTRIAL COOLING, MANUFACTURING, ELECTRIC-GENERATION, OR OTHER NON-AUTHORIZED USE. ANY CHANGED USE, CHANGED WITHDRAWAL PURPOSE, DEQ PERMIT MODIFICATION, OR MATERIAL CHANGE IN PROJECT DESIGN SHOULD REQUIRE RENEWED VMRC REVIEW.

5. THE INTERBASIN-TRANSFER ISSUE REMAINS UNRESOLVED.

DEQ'S PERMIT REQUIRES A FUTURE FEASIBILITY STUDY ADDRESSING REDUCTION OR ELIMINATION OF INTERBASIN TRANSFER AND RETURN OF WASTEWATER TO THE RAPPAHANNOCK RIVER BASIN. A FUTURE STUDY IS NOT A PRESENT PUBLIC-TRUST FINDING. THE COMMISSION SHOULD NOT TREAT THAT CONDITION AS RESOLVING THE CURRENT BOTTOMLANDS DECISION.

IF VMRC APPROVES, IT SHOULD REQUIRE THE FUTURE INTERBASIN-TRANSFER STUDY TO BE FILED WITH VMRC AND SHOULD RESERVE AUTHORITY TO REOPEN OR MODIFY THE PERMIT IF FEASIBLE RETURN-FLOW ALTERNATIVES OR MATERIALLY DIFFERENT IMPACTS ARE IDENTIFIED.

6. THE VIMS RECORD SUPPORTS CONDITIONS BUT DOES NOT ELIMINATE IMPACTS.

VIMS SUPPORTS USE OF ONE-MILLIMETER WEDGE-WIRE SCREENS AND A MAXIMUM 0.25 FEET-PER-SECOND INTAKE VELOCITY, BUT THE VIMS RECORD ALSO RECOGNIZES THAT CONTINUOUS WITHDRAWAL CREATES EXPECTED MORTALITY RISK TO EGGS AND LARVAE, EVEN IF MODELED LOSSES ARE LOW. VIMS ALSO IDENTIFIED THE ABSENCE OF A COMPREHENSIVE CUMULATIVE ASSESSMENT OF SURFACE-WATER-INTAKE EFFECTS.

IF VMRC RELIES ON VIMS, IT SHOULD ADDRESS THE ENTIRE VIMS RECORD, INCLUDING CONTINUOUS LOW-LEVEL MORTALITY, CUMULATIVE INTAKE EFFECTS, AND WHETHER COMPENSATORY MITIGATION OR ADAPTIVE MANAGEMENT IS APPROPRIATE.

7. THE SALINITY ANALYSIS IS LIMITED AND LATE IN THE VMRC RECORD.

THE VIMS SALINITY MATERIAL WAS TRANSMITTED INTO THE VMRC RECORD SHORTLY BEFORE THIS HEARING. IT MODELED A SPECIFIC 2011 SCENARIO, DID NOT APPLY A SPECIFIC REGULATORY OR ECOLOGICAL TARGET OR CRITERION, AND STATED THAT ADDITIONAL STUDIES MAY BE NEEDED IF CONDITIONS DIFFER.

VMRC SHOULD NOT

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TREAT SALINITY AS CONCLUSIVELY RESOLVED WITHOUT EXPRESS FINDINGS ON LOW-FLOW CONDITIONS, DROUGHT CONDITIONS, SURFACE AND BOTTOM SALINITY WHERE RELEVANT, SEA-LEVEL-RISE INTERACTION, TIDAL FRESHWATER HABITAT, FISHERIES, SAV, ADJACENT PROPERTIES, AND DOWNSTREAM PUBLIC-TRUST USES.

8. UPLAND PROPERTY, EMINENT DOMAIN, OPEN-SPACE EASEMENT, AND RPA ISSUES ARE PART OF THE ENABLING RECORD.

THE STAFF PACKAGE INCLUDES CAROLINE COUNTY'S CERTIFICATE OF TAKE AND RELATED MATERIALS FOR THE UPLAND PARCELS NECESSARY FOR THE INTAKE. THOSE MATERIALS STATE THE PUBLIC PURPOSE AS PROVIDING ESSENTIAL WATER SUPPLY TO COUNTY CITIZENS. THAT PUBLIC-USE RECORD SUPPORTS A MUNICIPAL WATER-SUPPLY PURPOSE, BUT IT ALSO CONFINES THE PURPOSE. VMRC SHOULD NOT AUTHORIZE A BROADER USE OF STATE-OWNED BOTTOMLANDS THAN THE PUBLIC USE ASSERTED IN THE CONDEMNATION RECORD AND DEQ PERMIT.

THE PROPERTY ALSO APPEARS TO BE ENCUMBERED BY A VIRGINIA OUTDOORS FOUNDATION OPEN-SPACE EASEMENT, AND THE PLAT MATERIALS REFERENCE CHESAPEAKE BAY PRESERVATION AREA / RPA CONSIDERATIONS. VMRC SHOULD REQUIRE CLARIFICATION OF VOF CONVERSION/DIVERSION STATUS, RPA STATUS, AND RELATED UPLAND ENABLING APPROVALS BEFORE UNCONDITIONAL AUTHORIZATION.

9. STAFF'S RECOMMENDED CONDITIONS ARE INSUFFICIENT FOR THE EVOLVED RECORD.

THE STAFF-RECOMMENDED CONDITIONS APPEAR LIMITED TO SCREEN MESH / INTAKE VELOCITY, COFFERDAMS, AND A TIME-OF-YEAR RESTRICTION FOR INSTREAM WORK. THOSE CONDITIONS DO NOT ADDRESS SEVERAL MAJOR RECORD ISSUES, INCLUDING:

- MUNICIPAL-USE-ONLY LIMITATION;
- PROHIBITION ON DATA-CENTER OR INDUSTRIAL COOLING USE;
- CHANGED-USE TRIGGER;
- CORPS PERMIT STILL PENDING;
- FINAL FEDERAL SPECIES COORDINATION;
- PUBLIC NOTICE PROOF;
- INTERBASIN-TRANSFER STUDY AND VMRC REOPENER;
- VOF OPEN-SPACE-EASEMENT STATUS;
- CHESAPEAKE BAY PRESERVATION AREA / RPA STATUS;
- CURRENT 9VAC25-875 STORMWATER AND EROSION COMPLIANCE;
- SALINITY-MONITORING LIMITATIONS;
- CUMULATIVE-INTAKE EFFECTS;
- DROUGHT-MANAGEMENT FILINGS;
- WATER-LOSS AUDITING AND LEAK-DETECTION FILINGS;
- OPERATIONAL MONITORING REPORTS TO VMRC.

REQUESTED ACTION

I RESPECTFULLY REQUEST THAT VMRC CONTINUE THIS MATTER AND HOLD THE RECORD OPEN TO ALLOW THE FOLLOWING TO BE ADDED AND REVIEWED:

1. THE ACTUAL PUBLIC NOTICE, PROOF OF PUBLICATION, AFFIDAVITS, PUBLICATION LOCATIONS, AND FULL NOTICE TEXT;
2. A CURRENT-LAW CONFORMANCE MEMORANDUM ADDRESSING THE PROJECT'S FEDERAL AND VIRGINIA REGULATORY NEXUS FROM 2020 TO 2026;
3. THE CORPS INDIVIDUAL PERMIT OR CURRENT CORPS STATUS RECORD FOR NAO-2020-00566;
4. FINAL USFWS / NOAA / NMFS SPECIES-COORDINATION DOCUMENTATION, INCLUDING YELLOW LANCE, BATS, AND INTAKE-RELATED AQUATIC SPECIES;
5. CLARIFICATION OF THE CONTROLLING ANNUAL WITHDRAWAL CAP UNDER DEQ VWP PERMIT NO. 20-0514;
6. DOCUMENTATION OF VOF OPEN-SPACE-EASEMENT STATUS AND ANY REQUIRED CONVERSION/DIVERSION APPROVAL;
7. DOCUMENTATION OF CHESAPEAKE BAY PRESERVATION AREA / RPA STATUS;
8. CONFIRMATION THAT THE CONSTRUCTION DRAWINGS AND EROSION/STORMWATER PLANS ARE CURRENT UNDER 9VAC25-875;
9. EXPRESS FINDINGS ON EACH VA. CODE Â§ 28.2-1205 PUBLIC-TRUST FACTOR.

IF THE COMMISSION DETERMINES THAT IT MUST ACT NOW BECAUSE OF THE COORDINATED-REVIEW TIMELINE, I RESPECTFULLY REQUEST THAT ANY APPROVAL BE NARROW, CONDITIONAL, AND NON-OPERATIVE FOR CONSTRUCTION UNTIL THESE RECORD GAPS ARE CURED.

AT MINIMUM, ANY PERMIT SHOULD:

- LIMIT AUTHORIZATION TO MUNICIPAL PUBLIC WATER SUPPLY ONLY;
- PROHIBIT DATA-CENTER COOLING, INDUSTRIAL COOLING, AND OTHER NON-AUTHORIZED USES;
- REQUIRE RENEWED

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VMRC REVIEW FOR ANY CHANGED USE, CHANGED WITHDRAWAL BASIS, DEQ MODIFICATION, CORPS MODIFICATION, OR MATERIAL PROJECT CHANGE;

 - PROHIBIT CONSTRUCTION UNTIL THE CORPS PERMIT AND FINAL FEDERAL SPECIES RECORD ARE COMPLETE;

 - REQUIRE THE INTERBASIN-TRANSFER FEASIBILITY STUDY TO BE FILED WITH VMRC;

 - RESERVE VMRC AUTHORITY TO REOPEN, MODIFY, SUSPEND, OR CONDITION THE PERMIT IF LATER STUDIES, FEDERAL REVIEW, SALINITY MONITORING, DROUGHT PLANNING, SPECIES REVIEW, OR CHANGED USE ALTERS THE PUBLIC-TRUST BALANCE.

 CONCLUSION

 THIS IS A 2026 VMRC PUBLIC-TRUST DECISION ON AN EVOLVED FEDERAL, STATE, AND LOCALITY RECORD. IT IS NOT A MINISTERIAL RATIFICATION OF A MARCH 2020 JPA OR DEQâ€™S 2025 VWP PERMIT. THE COORDINATED-REVIEW STATUTE MAY AFFECT TIMING, BUT IT DOES NOT ELIMINATE VMRCâ€™S SUBSTANTIVE DUTY TO PROTECT STATE-OWNED SUBMERGED LANDS AND THE PUBLIC TRUST.

 FOR THESE REASONS, I RESPECTFULLY REQUEST A CONTINUANCE AND A FULL RECORD CURE BEFORE FINAL ACTION.

 KELLY HENGLER

 9345 ECLIPDE DRIVE SUFFOLK VA 23433

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Number	Name	Received	Position
176	BRENDA L CUSTALOW	05/21/2026 17:13:39 PM	OPPOSE

I SUBMIT THIS COMMENT ON BEHALF OF THE MATTAPONI INDIAN TRIBE & RESERVATION BUT AS AN ALLY REGARDING THE CAROLINE COUNTY’S PROPOSED SURFACE WATER WITHDRAWAL AND INTERBASIN TRANSFER PERMIT. WHILE I MAY NOT BE A CITIZEN OF THEIR TRIBE, I UNDERSTAND THE IMPORTANCE OF PROTECTING THE NATURAL RESOURCES THAT HAVE SUSTAINED THIS TRIBAL COMMUNITY FOR 1000’S OF YEARS. THE MATTAPONI TRIBE HAS LIVED ALONG AND RELIED UPON THE MATTAPONI RIVER SINCE TIME IMMEMORIAL. THE RIVER IS NOT ONLY A NATURAL RESOURCE; IT IS A FOUNDATIONAL ELEMENT OF THEIR IDENTITY, CULTURE, SPIRITUALITY, AND EXISTENCE; SOMETHING THEY HAVE SO GRACIOUSLY SHARED WITH MANY OF US IN THIS ROOM. FOR GENERATIONS, THE WATERWAYS OF THE MATTAPONI RIVER HAVE SUPPORTED FISHING, CEREMONIAL PRACTICES, TRADITIONAL FOOD SYSTEMS, AND THE CONTINUATION OF LIFEWAYS THAT REMAIN ACTIVE AND VITAL TODAY.

AS SUCH, THE TRIBE HAS A SIGNIFICANT AND ENDURING INTEREST IN ANY DEVELOPMENT THAT COULD AFFECT THE MATTAPONI RIVER AND ITS TRIBUTARIES. AS AN ALLY, I ALSO COME TO YOU AS THE TRIBAL ADMINISTRATOR FOR THE TRIBE. MY JOB IS TO PROTECT THE OPERATIONS, SUPPORT PROGRAMS AND SERVICES, WHILE ALSO KEEPING THEIR GOVERNMENT AND CITIZENS INFORMED. FROM MY PERSPECTIVE, THE TRIBE’S PRIMARY CONCERN WITH THE CAROLINE COUNTY’S PROPOSED SURFACE WATER WITHDRAWAL AND INTERBASIN TRANSFER PERMIT IS THE POTENTIAL USE, ALTERATION, OR IMPACT UPON THE MATTAPONI RIVER AND ITS CONNECTED WATERWAYS, WHETHER DIRECTLY THROUGH WATER WITHDRAWAL, DISCHARGE, COOLING OPERATIONS, STORMWATER MANAGEMENT, OR INDIRECTLY THROUGH CHANGES IN HYDROLOGY, WATER TEMPERATURE, OR ECOSYSTEM HEALTH. WE WISH TO CLEARLY STATE THAT THE MATTAPONI RIVER MUST NOT BE UTILIZED AS PART OF THE PROJECT’S WATER SOURCING, COOLING, DISCHARGE, OR MITIGATION INFRASTRUCTURE. EVEN MINOR OR INDIRECT IMPACTS CAN DISRUPT AQUATIC LIFE, WATER QUALITY, AND ACCESS TO TRADITIONAL PRACTICES. WHAT MAY APPEAR MINIMAL FROM AN INDUSTRIAL OR ENGINEERING PERSPECTIVE CAN HAVE SERIOUS CULTURAL, ENVIRONMENTAL, AND SUBSISTENCE CONSEQUENCES FOR THE TRIBE.

THE MATTAPONI TRIBE REQUESTS THE FOLLOWING ASSURANCES AND ACTIONS:

1. EXPLICIT PROHIBITION OF RIVER USE
2. PROTECTION OF WATER QUALITY AND FLOW
3. FULL ENVIRONMENTAL TRANSPARENCY
4. GOVERNMENT TO GOVERNMENT CONSIDERATION

THE MATTAPONI INDIAN TRIBE IS A SOVEREIGN TRIBAL NATION. PROJECTS WITH THE POTENTIAL TO AFFECT OUR CULTURAL RESOURCES, LIFEWAYS, OR ENVIRONMENT WARRANT RESPECTFUL AND PROACTIVE ENGAGEMENT THAT RECOGNIZES THIS STATUS.

ECONOMIC DEVELOPMENT IS IMPORTANT, BUT IT MUST NOT COME AT THE COST OF IRREPLACEABLE CULTURAL AND NATURAL RESOURCES. ONCE DAMAGED, THE RIVER CANNOT SIMPLY BE RESTORED TO WHAT IT HAS BEEN FOR OUR PEOPLE FOR COUNTLESS GENERATIONS. PROTECTION OF THE MATTAPONI RIVER IS NOT ONLY AN ENVIRONMENTAL CONCERN—IT IS A MATTER OF CULTURAL SURVIVAL AND RESPONSIBILITY TO FUTURE GENERATIONS. AS SUCH, THE MATTAPONI TRIBE HAS WORKED CLOSELY

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WITH NUMEROUS ENVIRONMENTAL AGENCIES TO PROTECT, STRENGTHEN AND OR RESTORE, WHAT HAS BEEN LOST OR DAMAGED THROUGH NATURAL OCCURRENCES. WE HOPE TO NOT HAVE TO ALSO PUT ENERGY INTO THE DAMAGE DONE FROM IRRESPONSIBLE HUMAN NEGLECT.

 THE TRIBE APPRECIATES THE OPPORTUNITY TO PROVIDE COMMENT AND EXPECTS THAT OUR CONCERNS WILL BE TREATED WITH THE SERIOUSNESS THEY DESERVE. WE STAND READY TO ENGAGE CONSTRUCTIVELY TO ENSURE THAT DEVELOPMENT DECISIONS DO NOT COMPROMISE THE MATTAPONI RIVER OR THE LIFEWAYS THAT DEPEND UPON IT. AS WE SAY IN INDIAN COUNTRY, WHAT WE DO TODAY, IMPACTS THE NEXT SEVEN GENERATIONS.

 RESPECTFULLY SUBMITTED,

 BRENDA LOYITA CUSTALOW, CITIZEN OF THE CHICKAHOMINY INDIAN TRIBE

 TRIBAL ADMINISTRATOR FOR MATTAPONI INDIAN TRIBE & RESERVATION

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177	TAMMY HEATH	05/21/2026 18:11:39 PM	OPPOSE

MY NAME IS TAMMY HEATH, ENVIRONMENTAL DIRECTOR FOR THE MATTAPONI INDIAN TRIBE AND RESERVATION, AND I AM WRITING ON BEHALF OF THE TRIBE, TRIBAL COUNCIL, AND THE MATTAPONI ENVIRONMENTAL DEPARTMENT IN STRONG OPPOSITION TO CAROLINE COUNTY’S PROPOSED SURFACE WATER WITHDRAWAL AND INTERBASIN TRANSFER PERMIT. THE MATTAPONI INDIAN RESERVATION WAS CONFIRMED IN 1658, MAKING OUR RESERVATION ONE OF THE OLDEST NATIVE AMERICAN RESERVATIONS IN THE NATION. OUR NAME, MATTAPONI, MEANING “RIVER OF HIGH BANKS,” REFLECTS OUR DEEP CONNECTION TO THE RIVER, WHICH IS CENTRAL TO OUR IDENTITY AS “THE PEOPLE OF THE RIVER.” THIS RIVER IS VITAL FOR OUR CULTURE AND DAILY LIFE, MAKING THE PRESERVATION OF OUR NATURAL RESOURCES A TOP PRIORITY AND HAS BEEN VERY IMPORTANT TO US SINCE SETTLING MANY YEARS AGO. OUR RIVER IS MORE THAN JUST A BODY OF WATER, WE VIEW IT AS THE LIFELINE AND THE FOUNDATION OF OUR COMMUNITY. IT IS CENTRAL TO OUR CULTURAL IDENTITY AND WAY OF LIFE. FOR MANY GENERATIONS, WE HAVE DEPENDED ON THIS RIVER FOR OUR CULTURAL TRADITIONS, SPIRITUAL PRACTICES, AND TO PROVIDE SUSTENANCE FOR OUR FAMILIES WITH FOOD SUCH AS SHAD, CATFISH, ROCKFISH AND MORE, AND THIS RIVER HAS ALWAYS MADE UP A LARGE PART OF OUR TRADITIONAL DIET AND CULTURE. WE HAVE ALWAYS TREATED THE MATTAPONI RIVER WITH GREAT RESPECT AND ANY THREAT TO ITS WELL-BEING IS A DIRECT THREAT TO OUR CULTURAL HERITAGE. WE ARE COMMITTED TO ENSURING THAT OUR WATER REMAINS SAFE FOR ALL WHO RELY ON IT. OUR WAY OF LIFE AND OUR CONNECTION TO THE RIVER ARE INSEPARABLE, AND WE MUST ENSURE THAT THIS PROJECT DOES NOT COMPROMISE THEM. THE PROPOSED PROJECT WOULD REMOVE SUBSTANTIAL VOLUMES OF WATER FROM THE RAPPAHANNOCK RIVER FOR INDUSTRIAL AND RESIDENTIAL USE AND DISCHARGE TREATED WATER INTO THE MATTAPONI RIVER AS PART OF A REGIONAL DEVELOPMENT AND INDUSTRIAL WATER SUPPLY SYSTEM. THIS PROPOSAL PRESENTS SERIOUS AND UNRESOLVED CONCERNS REGARDING HYDROLOGIC ALTERATION, SALINITY IMPACTS, AQUATIC HABITAT DEGRADATION, CONTAMINANT TRANSPORT, CUMULATIVE ECOSYSTEM STRESS, TRIBAL CULTURAL RESOURCES, AND LONG-TERM THREATS TO TRIBAL SOVEREIGNTY AND RIVER-BASED LIFEWAYS. THE RAPPAHANNOCK RIVER ALREADY CONTAINS PCB CONTAMINATION THAT PERSISTS IN SEDIMENTS AND BIOACCUMULATES IN FISH, LEADING TO EXISTING “NO-EAT” FISH ADVISORIES NEAR THE PROPOSED WITHDRAWAL AREA. TRANSFERRING WATER BETWEEN TWO RIVER SYSTEMS CREATES SIGNIFICANT CUMULATIVE CONTAMINANT RISKS THAT HAVE NOT BEEN ADEQUATELY EVALUATED. EXISTING REGULATORY RESPONSES REFERENCING TREATMENT METHODS AND SEDIMENT BINDING DO NOT SUBSTITUTE FOR A COMPREHENSIVE CUMULATIVE CONTAMINANT ANALYSIS EVALUATING LONG-TERM BIOACCUMULATION, DOWNSTREAM REDISTRIBUTION, ECOLOGICAL EXPOSURE, AND IMPACTS TO SUBSISTENCE FISHERIES. INDUSTRIAL COOLING AND TREATMENT PROCESSES MAY ALSO INTRODUCE ADDITIONAL CONTAMINANTS, INCLUDING BIOCIDES, DIOXINS, MERCURY, AND PHTHALATES, WHICH EVEN ADVANCED FILTRATION SYSTEMS CANNOT FULLY ELIMINATE. THESE CONTAMINANTS POSE LONG-TERM RISKS TO FISH, WILDLIFE, WATER QUALITY, AND HUMAN HEALTH. THE MATTAPONI RIVER IS A PREDOMINANTLY FRESHWATER TIDAL SYSTEM, AND EVEN SLIGHT INCREASES IN SALINITY COULD ADVERSELY IMPACT SENSITIVE AQUATIC SPECIES, SUBMERGED AQUATIC VEGETATION, WETLANDS, SPAWNING HABITAT, ESTUARINE BALANCE, AND CULTURALLY SIGNIFICANT RESOURCES. SALINITY INTRUSION IS ALREADY INCREASING DUE TO CLIMATE CHANGE AND SEA LEVEL RISE, AND ADDITIONAL OPERATIONAL STRESS FROM INTERBASIN TRANSFER COULD ACCELERATE ECOLOGICAL DEGRADATION.

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FARMERS ALONG THE RAPPAHANNOCK RIVER ARE ALREADY EXPERIENCING AGRICULTURAL LOSSES ASSOCIATED WITH INCREASED SALINITY LEVELS, AND SIMILAR IMPACTS COULD OCCUR THROUGHOUT THE MATTAPONI WATERSHED. THE PROJECT ALSO RAISES SIGNIFICANT CONCERNS REGARDING THERMAL POLLUTION AND ALTERED FLOW REGIMES. DISCHARGED WATER IS OFTEN SEVERAL DEGREES WARMER THAN NATURAL RIVER CONDITIONS. EVEN MINOR INCREASES IN WATER TEMPERATURE REDUCE DISSOLVED OXYGEN LEVELS, DISRUPT FISH SPAWNING CYCLES, AND PLACE ADDITIONAL STRESS ON VULNERABLE SPECIES. THESE IMPACTS THREATEN ECOLOGICALLY AND CULTURALLY SIGNIFICANT FISHERIES RELIED UPON BY THE MATTAPONI PEOPLE, INCLUDING AMERICAN SHAD, RIVER HERRING, AND ONGOING STURGEON RESTORATION EFFORTS. THE PROPOSED WITHDRAWAL VOLUMES, PARTICULARLY DURING DROUGHT PERIODS, RAISE ADDITIONAL CONCERNS REGARDING IMPACTS TO INSTREAM FLOWS, SEASONAL FLOW VARIABILITY, AND OVERALL ECOLOGICAL INTEGRITY. THE RAPPAHANNOCK RIVER HAS ALREADY BEEN IDENTIFIED AS ONE OF AMERICA'S MOST ENDANGERED RIVERS AND EXPERIENCES RECURRING SEASONAL DROUGHT CONDITIONS. ADDITIONAL WITHDRAWALS WOULD FURTHER STRESS AN ALREADY VULNERABLE SYSTEM AND COULD IMPAIR COMPLIANCE WITH WATER QUALITY AND HABITAT PROTECTION GOALS. CURRENT REGULATORY REVIEW MATERIALS RELY HEAVILY ON LIMITED MODELING APPROACHES, SIMPLIFIED REGRESSION ANALYSES, PARTICLE TRACKING ASSESSMENTS, AND DEFERRED FUTURE ANALYSES RATHER THAN COMPREHENSIVE BASIN-SCALE EVALUATION PRIOR TO PERMIT ISSUANCE. THE EXISTING MODELING FRAMEWORK DOES NOT ADEQUATELY CHARACTERIZE THE COMPLEXITY OF TIDAL HYDRODYNAMICS WITHIN THE RAPPAHANNOCK AND MATTAPONI SYSTEMS, NOR DOES IT SUFFICIENTLY EVALUATE SALINITY MIGRATION, SEDIMENT TRANSPORT, LONG-TERM OPERATIONAL IMPACTS, HABITAT ALTERATION, OR CLIMATE-ADJUSTED HYDROLOGIC CONDITIONS. THE STUDIES SUPPORTING THIS PERMIT ALSO RELY SUBSTANTIALLY ON OUTDATED PLANNING DOCUMENTS AND DEMAND PROJECTIONS DEVELOPED PRIOR TO SIGNIFICANT CHANGES IN REGIONAL GROWTH PATTERNS, INDUSTRIAL DEVELOPMENT TRENDS, CLIMATE PROJECTIONS, AND POST-PANDEMIC INFRASTRUCTURE CONDITIONS. INDEPENDENT VERIFICATION OF PROJECTED WATER DEMAND, INDUSTRIAL ALLOCATION ASSUMPTIONS, CONSERVATION OFFSETS, AND LONG-TERM SUPPLY NECESSITY HAS NOT BEEN CLEARLY DEMONSTRATED WITHIN THE PUBLIC RECORD. FURTHER, THE PERMIT FRAMEWORK LACKS SUFFICIENTLY EXPLICIT RESTRICTIONS REGARDING FUTURE INDUSTRIAL WATER USE AND TRANSFER EXPANSION. REFERENCES TO REMOVAL OF SPECIFIC INDUSTRIAL COOLING USES FROM PORTIONS OF THE APPLICATION DO NOT PROVIDE ENFORCEABLE ASSURANCE THAT FUTURE INDUSTRIAL ALLOCATION OR PRIVATE TRANSFER ARRANGEMENTS WOULD NOT OCCUR THROUGH SUBSEQUENT OPERATIONAL MODIFICATIONS. THE PROPOSED DISCHARGE LOCATION AT POLE CAT CREEK ALSO RAISES CONCERNS REGARDING FLOODING AND SHORELINE EROSION. THE AREA ALREADY EXPERIENCES FLOODING DURING STORM EVENTS, AND ADDITIONAL DISCHARGE FLOWS MAY ACCELERATE SHORELINE EROSION, OVERWHELM EXISTING STABILIZATION PROJECTS, AND EXACERBATE FLOODING CONDITIONS THROUGHOUT PORTIONS OF THE MATTAPONI RIVER SYSTEM THAT ARE ALREADY EXPERIENCING ABOVE-AVERAGE EROSION RATES. EQUALLY CONCERNING IS THE LACK OF MEANINGFUL TRIBAL CONSULTATION THROUGHOUT THIS PROCESS. ALTHOUGH THE PERMIT MATERIALS ASSERT THAT CONSULTATION HAS OCCURRED, AFFECTED TRIBAL NATIONS REPORT THAT NO MEANINGFUL GOVERNMENT-TO-GOVERNMENT CONSULTATION TOOK PLACE. NOTIFICATION AND LIMITED ENGAGEMENT ACTIVITIES DO NOT SATISFY CONSULTATION OBLIGATIONS CONSISTENT WITH TRIBAL SOVEREIGNTY PRINCIPLES AND ENVIRONMENTAL JUSTICE STANDARDS. FEDERAL AND STATE AGENCIES HAVE A RESPONSIBILITY TO ENGAGE TRIBAL GOVERNMENTS IN SUBSTANTIVE CONSULTATION REGARDING IMPACTS TO CULTURALLY SIGNIFICANT WATERS, FISHERIES, SUBSISTENCE RESOURCES, SACRED SITES, AND TRADITIONAL ECOLOGICAL PRACTICES. THE MATTAPONI AND RAPPAHANNOCK RIVERS ARE CENTRAL TO THE CULTURAL IDENTITY,

Virginia Marine Resources Commission

Habitat Management Public Comments

Application Number 20200514

Print Date: Thursday June 11 2026 09:49

SUBSISTENCE TRADITIONS, ENVIRONMENTAL STEWARDSHIP, AND SPIRITUAL PRACTICES OF TRIBAL COMMUNITIES. FAILURE TO MEANINGFULLY CONSULT TRIBAL NATIONS UNDERMINES BOTH THE INTEGRITY OF THE PERMITTING PROCESS AND THE PROTECTION OF TRIBAL RIGHTS.

 EXISTING MITIGATION MEASURES FOCUSED PRIMARILY ON INTAKE DESIGN, CONSTRUCTION TIMING RESTRICTIONS, AND LIMITED HABITAT DISTURBANCE DO NOT ADEQUATELY ADDRESS THE LONG-TERM OPERATIONAL IMPACTS ASSOCIATED WITH ALTERED HYDROLOGY, CONTAMINANT TRANSFER, SALINITY INTRUSION, CLIMATE STRESSORS, AND ECOSYSTEM DEGRADATION.

 GIVEN THE SUBSTANTIAL UNCERTAINTIES AND UNRESOLVED ENVIRONMENTAL CONCERNS ASSOCIATED WITH THIS PROJECT, ADDITIONAL REVIEW IS NECESSARY BEFORE ANY PERMIT DECISION PROCEEDS. COMPREHENSIVE INDEPENDENT STUDIES EVALUATING CUMULATIVE ENVIRONMENTAL IMPACTS, CONTAMINANT TRANSPORT, CLIMATE-ADJUSTED HYDROLOGY, SALINITY RESPONSE, FISHERIES IMPACTS, DROUGHT-PERIOD PROTECTIONS, ALTERNATIVES ANALYSIS, AND LONG-TERM OPERATIONAL EFFECTS MUST BE COMPLETED PRIOR TO PERMIT CONSIDERATION.

 THE RISKS POSED BY THIS PERMIT TO WATER QUALITY, FISHERIES, AGRICULTURE, ECOSYSTEMS, TRIBAL TREATY RIGHTS, CULTURAL SURVIVAL, AND PUBLIC HEALTH ARE SEVERE AND POTENTIALLY IRREVERSIBLE. RIVERS CANNOT EASILY BE RESTORED ONCE DAMAGED, AND THE LONG-TERM ECOLOGICAL AND CULTURAL COSTS WILL FAR OUTWEIGH ANY SHORT-TERM DEVELOPMENT BENEFITS.

 THE CHIEF AND TRIBAL COUNCIL OF THE MATTAPONI INDIAN TRIBE AND RESERVATION FULLY SUPPORT THIS STATEMENT AND RESPECTFULLY URGE THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY TO DENY CAROLINE COUNTY’S PROPOSED WATER WITHDRAWAL AND INTERBASIN TRANSFER PERMIT.

 THANK YOU FOR YOUR TIME AND FOR THE OPPORTUNITY TO PROVIDE COMMENTS REGARDING THIS PROPOSED PERMIT.

 RESPECTFULLY.

 TAMMY HEATH

 MATTAPONI ENVIRONMENTAL DIRECTOR

 ON BEHALF OF THE MATTAPONI INDIAN TRIBE AND RESERVATION AND ENVIRONMENTAL DEPARTMENT

Thomas Kramer
#2025-1966

1. Habitat Management Evaluation dated June 23, 2026
(Pages 1-2)
2. Revised application drawings dated-received April 1, 2026
(Pages 3-7)
3. Letters of opposition dated-received May 4, 2026 and May 26, 2026
(Pages 8-11)
4. Virginia Beach Waterfront Operations permit dated-received May 18, 2026
(Pages 12-21)
5. Army Corps of Engineers permit dated-received May 27, 2026
(Pages 22-23)

All project drawings, plans and application information are available at
<https://webapps.mrc.virginia.gov/public/habitat/>

June 23, 2026

HABITAT MANAGEMENT DIVISION EVALUATION

THOMAS KRAMER, VMRC #25-1966, requests authorization to construct a 34-foot by 16-foot open-sided boathouse over an existing boat lift and construct timber access stairs adjacent to an existing statutorily authorized private pier serving 2749 West Landing Road, situated along the North Landing River in Virginia Beach. This project is protested.

Narrative

The applicant's property is situated in a small residential neighborhood along the North Landing River in the Princess Anne subdivision of Virginia Beach. Most properties within the subdivision are used agriculturally with few private residences positioned along the Intracoastal Waterway portion of the river. Of the ten (10) residential properties in this area, nine (9) have constructed piers or wharves.

Staff received the application on August 25, 2025, requesting authorization to expand the existing pier by adding new finger piers, an uncovered boat lift, timber access stairs, and a 544 square foot open-sided boathouse adjacent to the existing, statutorily authorized private pier (VMRC #2021-1057). The proposed finger piers and uncovered boat lift qualified for the statutory exemption outlined in §28.2-1203(A)5 of the Code of Virginia (Code). As required by Code, the adjacent riparian property owners were notified of the request to construct an open-sided roof structure and access stairs.

Issues

The project is protested by the adjoining property owner (APO) to the south, Mr. David Aamodt. Staff has spoken and met with Mr. Aamodt numerous times regarding his concerns. We received formal written objections on May 4, 2026, and May 26, 2026. No comments were received from the APO to the north.

Per the submitted protest correspondence and discussions with staff, Mr. Aamodt stated his predominant concern is related to the exempt finger pier proposed around the existing boat lift, and potential privacy concerns that may arise by its use. Additionally, Mr. Aamodt feels that the Commission should regulate the entire pier, including the existing and proposed portions authorized by statute, rather than only the proposed roof and stair components, which now require a permit. The protestant, Mr. Aamodt, has his own private pier equipped with a permitted dual-slip boat house (VMRC #2016-1537) and is currently the only nearby waterfront property with a pier roof structure.

The Virginia Beach Waterfront Operations office and the Army Corps of Engineers have both approved the proposal.

Summary/Recommendations

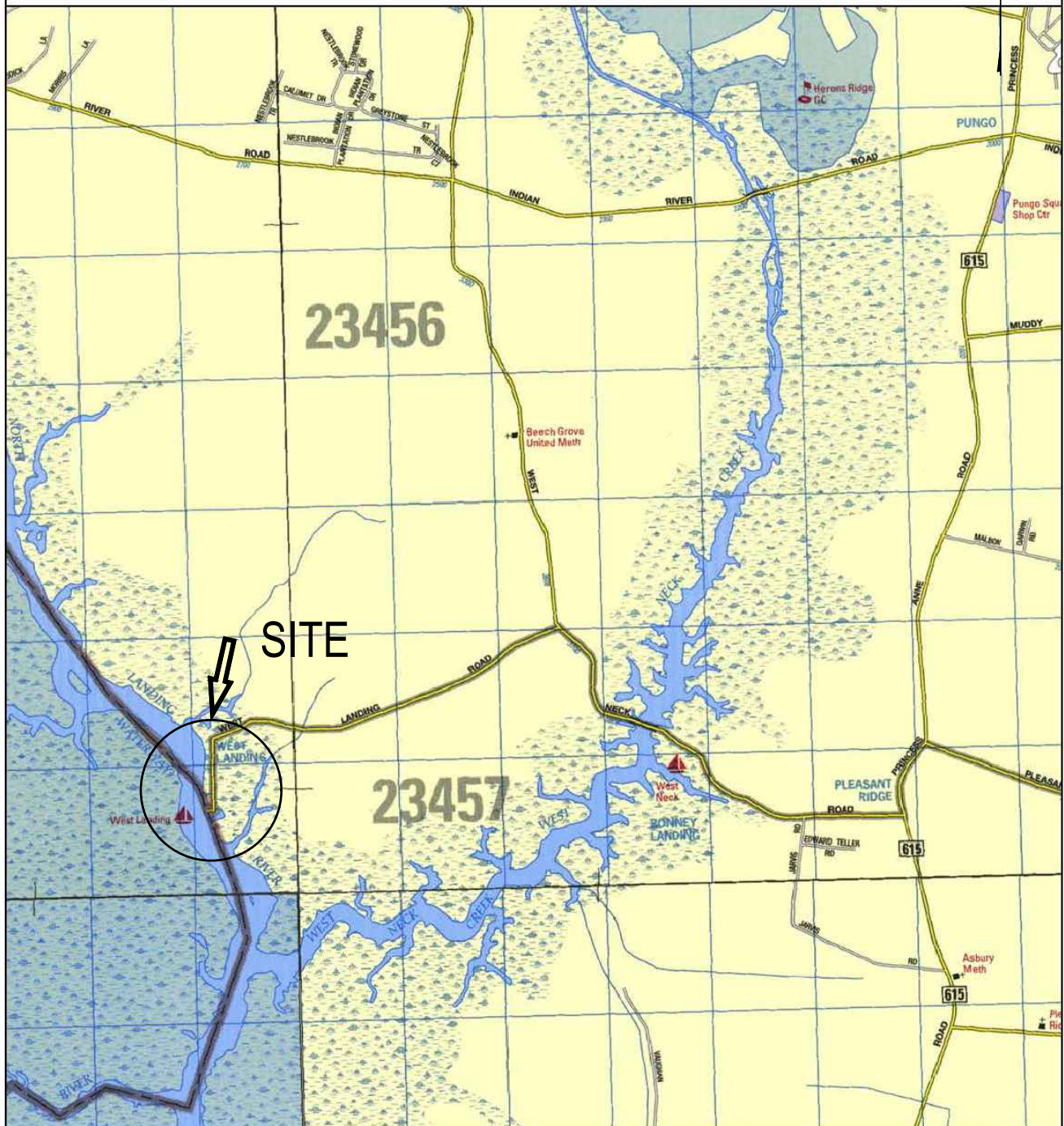
Mr. Kramer's proposed open-sided boathouse would have qualified for the statutory authorization provided for private piers and open-sided roof structures if it were not protested by the APO, Mr. Aamodt.

In this case, we believe the open-sided design of the roof structure only minimally adds to the visual obstruction already presented by the applicant's statutorily authorized private pier and boat lift. In addition, the proposed timber access stairs are a minimal and reasonable addition, in staff's opinion. The remaining portions of the proposed pier, including the finger piers, are exempt from permitting and have been authorized pursuant to §28.2-1203(A)5 of the Code.

Staff and this Commission have historically agreed that this type of private open-sided roof proposal is an appropriate use of a riparian property owner's rights to access state-owned submerged lands. Accordingly, after evaluating the project drawings and the merits of the project against the concerns expressed by the protestant, and after considering all factors contained in §28.2-1205 of the Code, staff recommends approval of the project as proposed.

AREA MAP OF WEST LANDING ROAD VIRGINIA BEACH, VA 23456

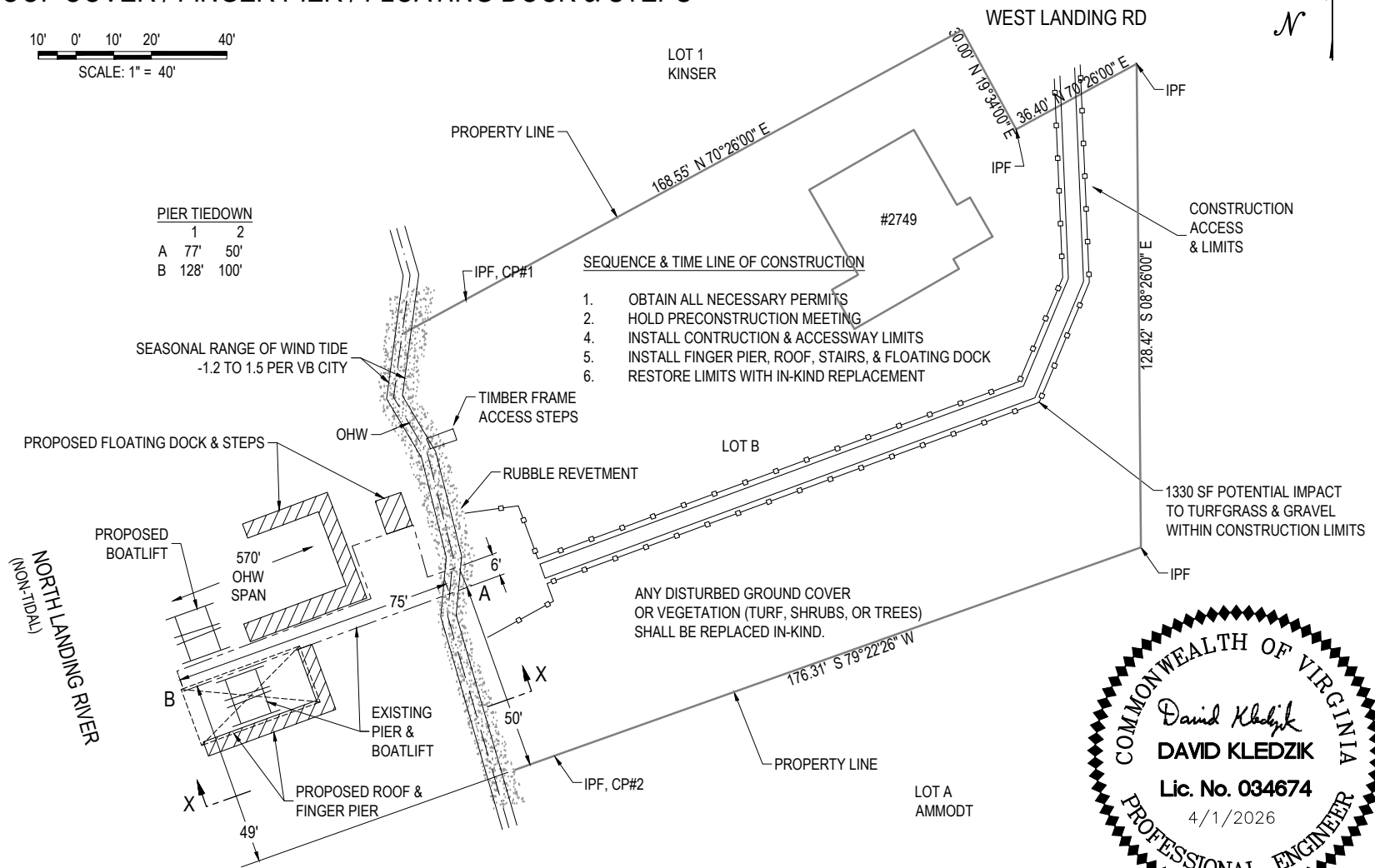
SCALE 1" : 2500'



SITE PLAN OF PROPOSED PROJECT ROOF COVER / FINGER PIER / FLOATING DOCK & STEPS

10' 0' 10' 20' 40'
SCALE: 1" = 40'

PIER TIEDOWN	
1	2
A 77' 50'	
B 128' 100'	



(C) 2026 MARINE ENGINEERING LLC - ALL RIGHTS RESERVED.

APPLICANT: THOMAS W KRAMER
2749 WEST LANDING ROAD
VIRGINIA BEACH, VA 23456
ADJACENT PROPERTY OWNERS
SHOWN ON SHEET ONE

MARINE ENGINEERING LLC
1932 CHARLA LEE LN
VIRGINIA BEACH, VA 23455
PH: (757) 477-4787

PROPOSED PROJECT FOR ACCESS WATERCRAFT MOORING
DATUM: OHW = 0.00'
SHEET 1 OF 1
DATE: JULY 26, 2025
REV 1: APRIL 1, 2026

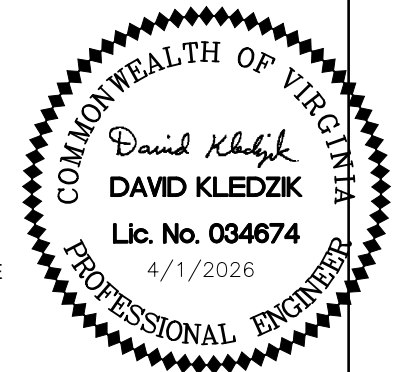
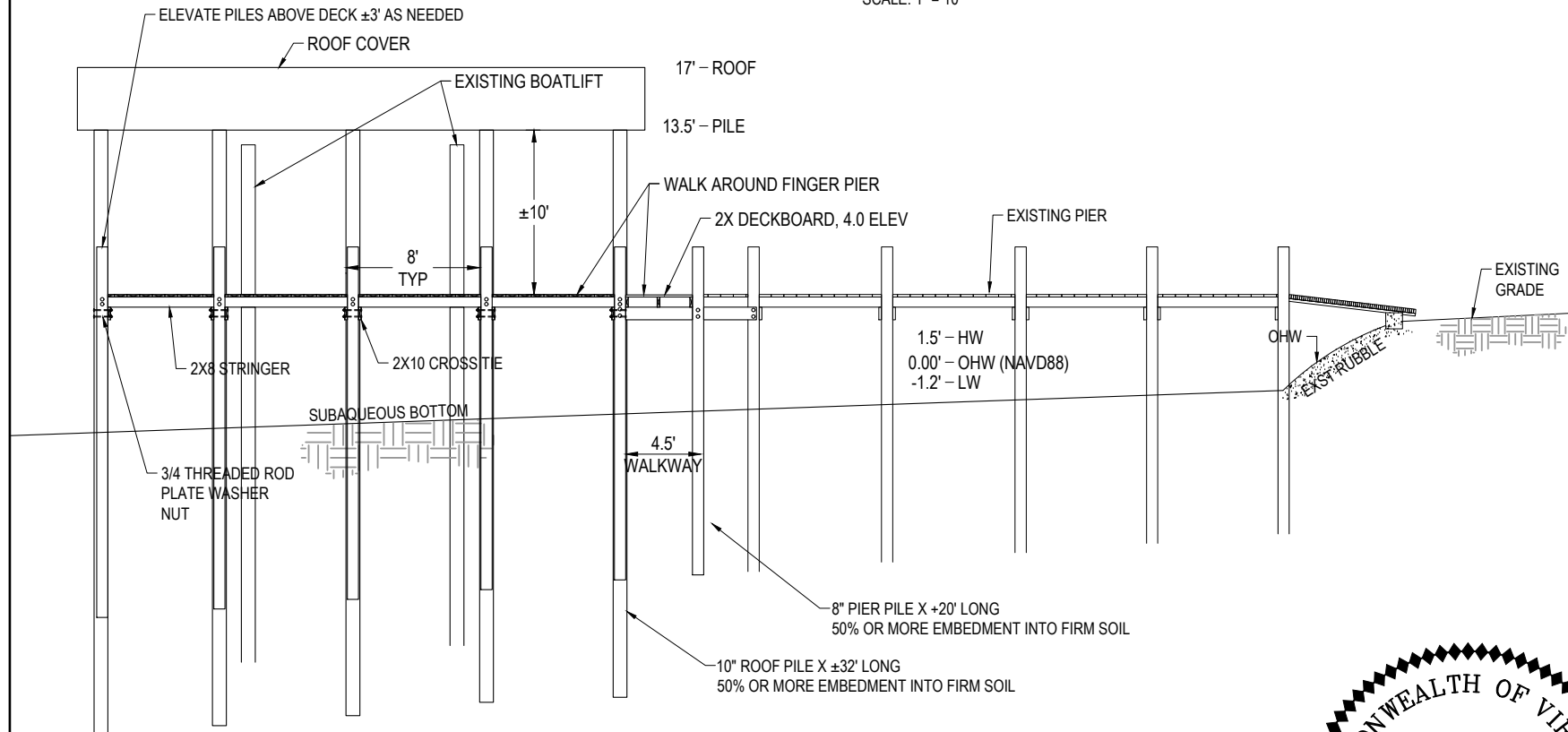
REV1 REDUCES SIZE OF FLOATING DOCK AND ADDS 2ND BOATLIFT

JOB NUMBER 20258

Additional Information/Revision Received by VMRC April 1, 2026 / Ira

SECTION X - X PIER & BOATLIFT DETAILS

SCALE: 1" = 10'



DESIGN BASED ON STANDARD PRACTICES WITHOUT THE BENEFIT OF SOILS TESTING. NO ALLOWANCES HAVE BEEN MADE FOR UNKNOWN SUBSOIL CONDITIONS. DEVELOPER SHALL MONITOR INSTALLATION AND PILE DRIVING RESISTANCE TO ASCERTAIN SUBSOIL CONDITIONS AND ADEQUATE PENETRATION AND CONTACT THE ENGINEER OF RECORD IF EITHER MINIMUM PENETRATION DEPTHS OF PILES CANNOT BE MET OR IF SOIL DISCOVERED NOT FIRM. ESTIMATED PILE LENGTHS SHOWN MAY REQUIRE GREATER LENGTH TO ACHIEVE 50% PENETRATION INTO FIRM SOIL. ALL DIMENSIONS AND MATERIAL SPECIFICATIONS ARE MINIMUMS UNLESS OTHERWISE SPECIFIED.

APPLICANT:
THOMAS W KRAMER
2749 WEST LANDING ROAD
VIRGINIA BEACH, VA 23456

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PROPOSED PROJECT FOR ACCESS WATERCRAFT MOORING

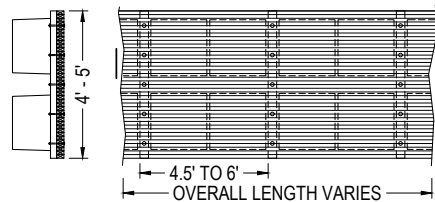
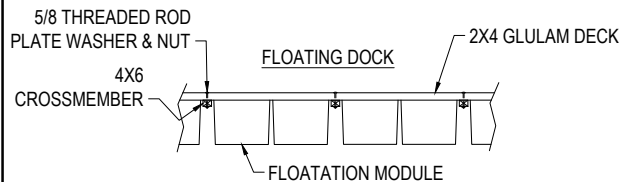
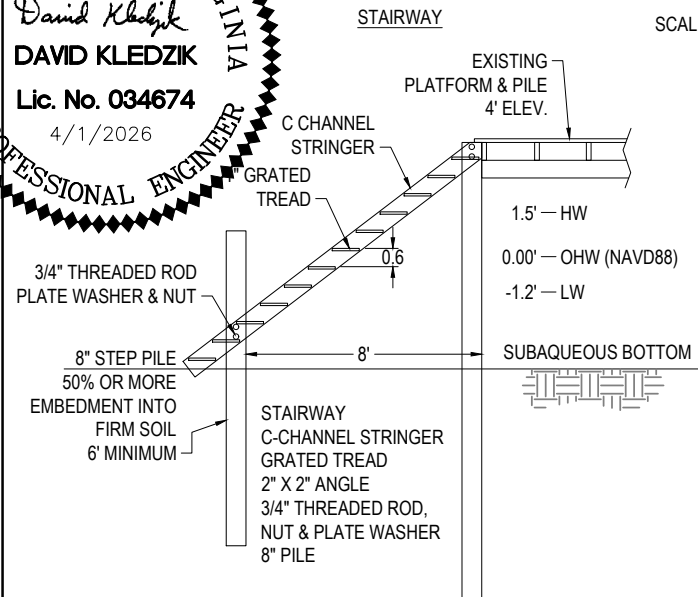
DATUM: OHW = 0.00'

SHEET 2 OF 3
DATE: JULY 26, 2025
REV 1: APRIL 1, 2026

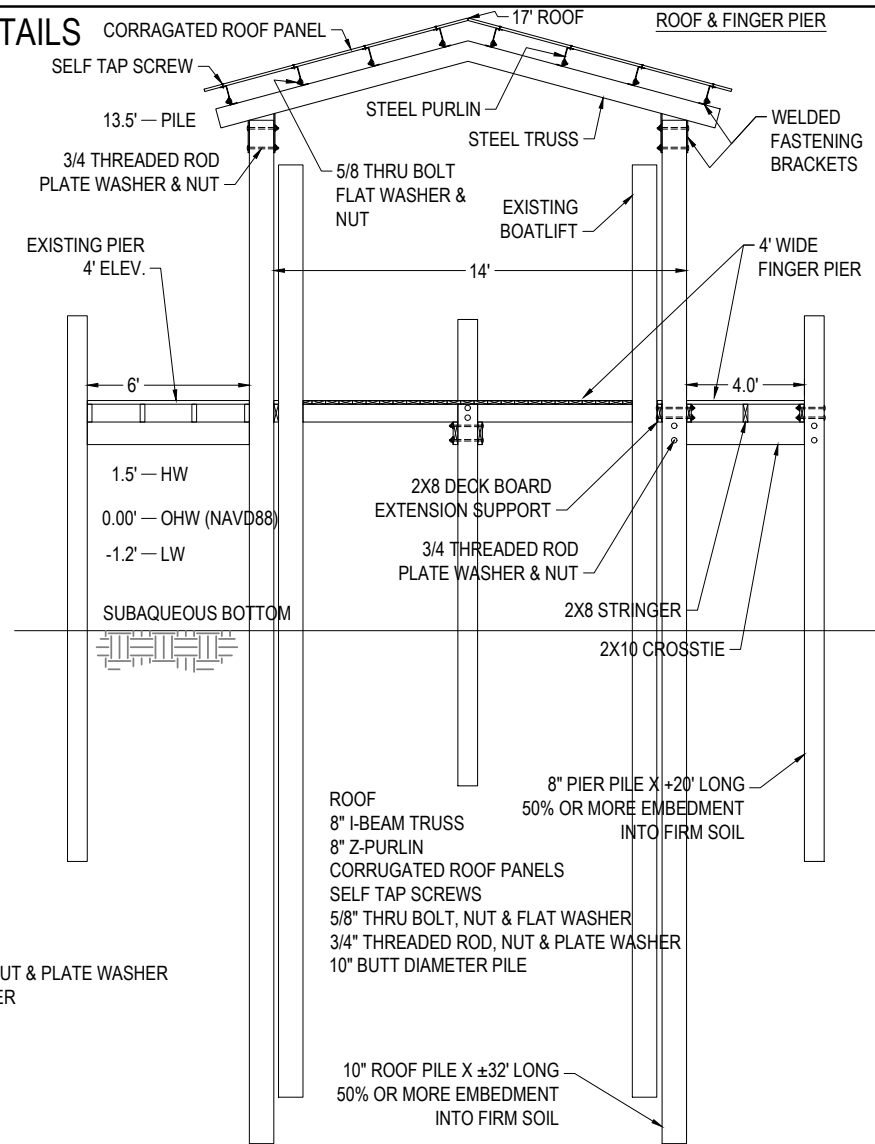


PROJECT DETAILS

SCALE: 1" = 6'



FLOATING DOCK
 2" X 4" GLULAM DECKING
 4" X 6" CROSSMEMBER
 FLOATATION MODULES
 5/8" & 3/4" THREADED ROD, NUT & PLATE WASHER
 3/8" LAG BOLT & FLAT WASHER
 HOOP GUIDE
 8" GUIDE PILE



APPLICANT:
 THOMAS W KRAMER
 2749 WEST LANDING ROAD
 VIRGINIA BEACH, VA 23456

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 PH: (757) 477-4787

PROPOSED PROJECT FOR ACCESS WATERCRAFT MOORING

DATUM: OHW = 0.00'

SHEET 3 OF 3
 DATE: JULY 26, 2025
 REV 1: APRIL 1, 2026

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20251966

Print Date: Wednesday June 17 2026 14:57

Number	Name	Received	Position
1	DAVID AAMODT	05/04/2026 11:25:12 AM	OPPOSE

SEE ATTACHED

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=1335

From: [Birge, Tiffany \(MRC\)](#)
To: [MRC - jpa Permits](#)
Subject: FW: VMRC 2025-1966 / APO protest
Date: Friday, May 1, 2026 12:52:12 PM

Please process the email as a protest for the above-referenced application.
Thanks!

Tiffany Birge
Environmental Specialist II, Habitat Management

Virginia Marine Resources Commission
Building 96, 380 Fenwick Road
Ft. Monroe, VA 23651
Tiffany.birge@mrc.virginia.gov, 757-247-2254

Effective September 1, 2025, the US Army Corps of Engineers (USACE) will become the central point of receipt of all requests in the Commonwealth of Virginia (instead of the Virginia Marine Resources Commission) as the result of a federal mandate. Regulatory Request System (RRS) will be the only way to submit your application and any revisions to all 3 of the permitting agencies (USACE, Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission) and to your local wetlands board. To access the RRS, visit this link: <https://rrs.usace.army.mil/rrs>

If you have questions regarding this permanent change, contact Barry Spence at barry.l.spence@usace.army.mil.

From: D A <dave.aamodt@gmail.com>
Sent: Friday, May 1, 2026 12:41 PM
To: Birge, Tiffany (MRC) <tiffany.birge@mrc.virginia.gov>
Subject: VMRC 2025-1966 / APO protest

Hello Tiffany, thanks for your letter dated 4/17/2026 and apologies for my delayed response.

I am protesting the applicant's plans and request the matter be considered at a Commission permit hearing. I presume that you'll be targeting 5/26/2026?

thanks,
David Aamodt

Virginia Marine Resources Commission Habitat Management Public Comments Application Number 20251966

Print Date: Wednesday June 17 2026 14:57

Number	Name	Received	Position
2	DAVID AAMODT	05/26/2026 13:06:33 PM	OPPOSE

SEE ATTACHED

Attachments:

https://webapps.mrc.virginia.gov/public/habitat/pc_pdfGet.php?id=1345

5/26/2026

Subject: REQUEST FOR EXPANDED HEARING SCOPE: JPA 25-1966 (Rev1)

Dear Commissioners,

I am an adjacent property owner currently scheduled to participate in the June 23, 2026, Commission hearing regarding my protest to the roofed structure in JPA 25-1966 (Rev1). Pursuant to § 28.2-216 of the Code of Virginia (Hearings Before the Commission), I am writing to formally request that the Commission expand the scope of this hearing to include the entirety of the proposed project.

For background: This project includes a roofed structure, 2 boat lifts, a fixed finger pier, and floating dockage for 2 boat slips. VMRC staff issued a "No Permit Needed" (NPN) letter for the majority of this project on 5/4/2026—citing § 28.2-1203(A.5)—and only excluded the roofed structure. I contend that this "a la carte" approach to permitting creates a procedural loophole. By segmenting the project, the Commission is effectively precluded from fulfilling its statutory duty under § 28.2-1205 to evaluate the **total impact** of the project upon adjacent properties as well as the public interest.

This fragmented review also appears to be inconsistent with other recent Commission actions. For example, JPA 25-2560 (Isle of Wight County, granted 2/17/2026) involved a project of similar complexity, including a boathouse, fixed piers, floating docks, and two lifts. In that instance, the permit was issued for the **entirety** of the project rather than being split into "NPN" and "permitted" components.

The full scope of JPA 25-1966 presents uncommon public and private detriments that require holistic consideration. I request that the Commission review the project in its entirety during the hearing currently scheduled for June 23, 2026.

Furthermore, I respectfully request that the NPN status for all elements of JPA 25-1966 be stayed and/or put on hold until the 6/23/2026 hearing.

Respectfully,



David Aamodt



May 18, 2026

Sent via email only:

Thomas Kramer
Tomk91112@gmail.com

David Kledzik
Marine Engineering LLC
David@MarineEngineeringLLC.com

Subject: Waterfront Construction Review Letter
Thomas Kramer, 2749 West Landing Rd.
Accela Record: 2025-WTRA-00157

Dear Mr. Kramer:

The Virginia Beach Department of Planning and Community Development staff has reviewed the Joint Permit Application (JPA) for the above referenced property regarding the following proposed improvements:

- Modify Existing Pier/Lift
- Construct Catwalk /Roof
- U-Shaped Floating Dock
- Approved for Waterfront construction drawings revised, received by VMRC, dated April 1, 2026. Pages 1-5

A building permit will be required to construct the proposed improvements. Building permits are issued by the Department of Planning and Community Development, Permits and Inspections Office. In addition to the requirements of the JPA the following conditions apply.

1. **An on-site pre-construction meeting will be required.** The contractor must contact Waterfront Operations at (757) 385-8246 to schedule the pre-construction meeting, 48 hours prior to mobilizing the site. Please be advised that no land disturbance or construction activities may commence until after the pre-construction meeting and required building permit has been obtained and appropriately displayed on site.
2. Land disturbance shall be limited to the area necessary to provide for the construction of the proposed improvements only.
3. Erosion & sediment (E&S) measures shall be properly installed prior to any land disturbance and shall remain in place until such time as vegetative cover is established for all areas de-nuded during construction. Land disturbance is inclusive of construction access ways, stockpile areas, and staging areas.

4. All disturbed or denuded areas shall be stabilized in accordance with the Virginia Erosion and Sediment Control Law and Regulations. Permanent or temporary soil stabilization measures shall be applied to all disturbed / denuded area(s) and vegetative cover established before submittal of the Engineer's Final Inspection Report.
5. Within 30 days from completion of the project, the contractor shall have the Engineer of Record complete and return the enclosed Engineer's Final Inspection Report to the Department of Planning and Community Development, Waterfront Operations Office. Please be advised that the building permit will not be closed until the report is submitted and reviewed.
6. This approval will expire two years from the date of this letter. If the project has not been completed by that time, it will be necessary to reapply to continue the project. Contact this office if this situation occurs.

Field changes are not permitted. Any revisions to the proposed improvements must first be shown on revised drawings, the drawings re-sealed by the Engineer of Record, and resubmitted to VMRC for review and approval.

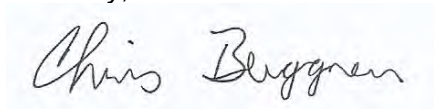
Make sure that you have received all necessary authorizations, or documentation that no permit is required, from each review agency associated with the JPA process prior to obtaining a building permit for this work with the city. To apply for a building permit, a record will need to be created through Accela Citizen Access at <https://aca-prod.accela.com/cvb/Default.aspx> under the Permits tab. During the record creation, please upload the following documents.

- A copy of this letter.
- The approval packet from Waterfront Operations contains the entire Joint Permit Application with the City of Virginia Beach Zoning stamp.
- All permits or approvals from the US Army Corps of Engineers (US ACOE) and VMRC.
- All necessary building permit forms to be processed and reviewed by City Staff.

Please be advised that Zoning and/or Permits and Inspections may require additional information that could affect the release of the building permit.

A building permit may also be obtained in person. All required documents must be provided if applying for a permit in person. The Permits and Inspections office is located at 2875 Sabre Street, Suite 500. You may contact the Permits and Inspections office at (757) 385-4211 concerning the cost of the building permit.

Sincerely,



Chris Berggren
Engineering Tech II

XXX/xxx

cc: Virginia Marine Resource Commission – Tiffany Birge

**ENGINEER/SURVEYOR'S FINAL INSPECTION REPORT
FOR
WATERFRONT CONSTRUCTION /
COASTAL PRIMARY SAND/DUNE PROJECTS**

REVISION 02-2012

BUILDING PERMIT NUMBER:

(If unknown contact Permits & Inspections at 757-385-4211)

CONTRACTOR:

WATERFRONT FILE NUMBER:

PROJECT LOCATION:

APPLICANT'S NAME:

APPLICANT'S ADDRESS:

ENGINEER/SURVEYOR OF RECORD:

THIS IS TO CERTIFY THAT I HAVE INSPECTED THE REFERENCED PROJECT AND TO THE BEST OF MY KNOWLEDGE, THIS PROJECT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS I PREPARED. *ANY DEVIATIONS IN CONSTRUCTION MUST BE SUBMITTED ON REVISED PLANS TO THE VMRC FOR CONSIDERATION. IF YOU HAVE ANY QUESTIONS CONTACT THE WATERFRONT OPERATIONS STAFF.

THIS FORM MUST BE COMPLETED AND SUBMITTED TO THE DEPARTMENT OF PLANNING, PERMITS AND INSPECTIONS DIVISION AFTER ALL INSPECTIONS ARE COMPLETE AND PRIOR TO THE FINAL INSPECTION BY CITY PERSONNEL.

SIGNATURE OF ENGINEER/SURVEYOR OF
RECORD CERTIFYING THE ABOVE

DATE

TYPE OR PRINT NAME OF ENGINEER/
SURVEYOR OF RECORD

ANY ALTERATION OF THIS FORM OR ITS ENDORSEMENTS WITHOUT EXPRESS CONSENT FROM THE ORIGINATOR SHALL
INVALIDATE THIS INSTRUMENT.

Zoning Approval

Use: _____

Zoning: _____

Standard Setbacks – Variance Setbacks: Zoning Inspection: BZA _____ CUP _____

_____ Front _____ FVR _____ CRZ _____

_____ Side _____ CBPA Inspection: YES _____ NO _____

_____ Side Corner _____ Flood Plain _____

_____ Rear _____ Watershed _____

_____ Height _____ AICUZ: _____ & _____

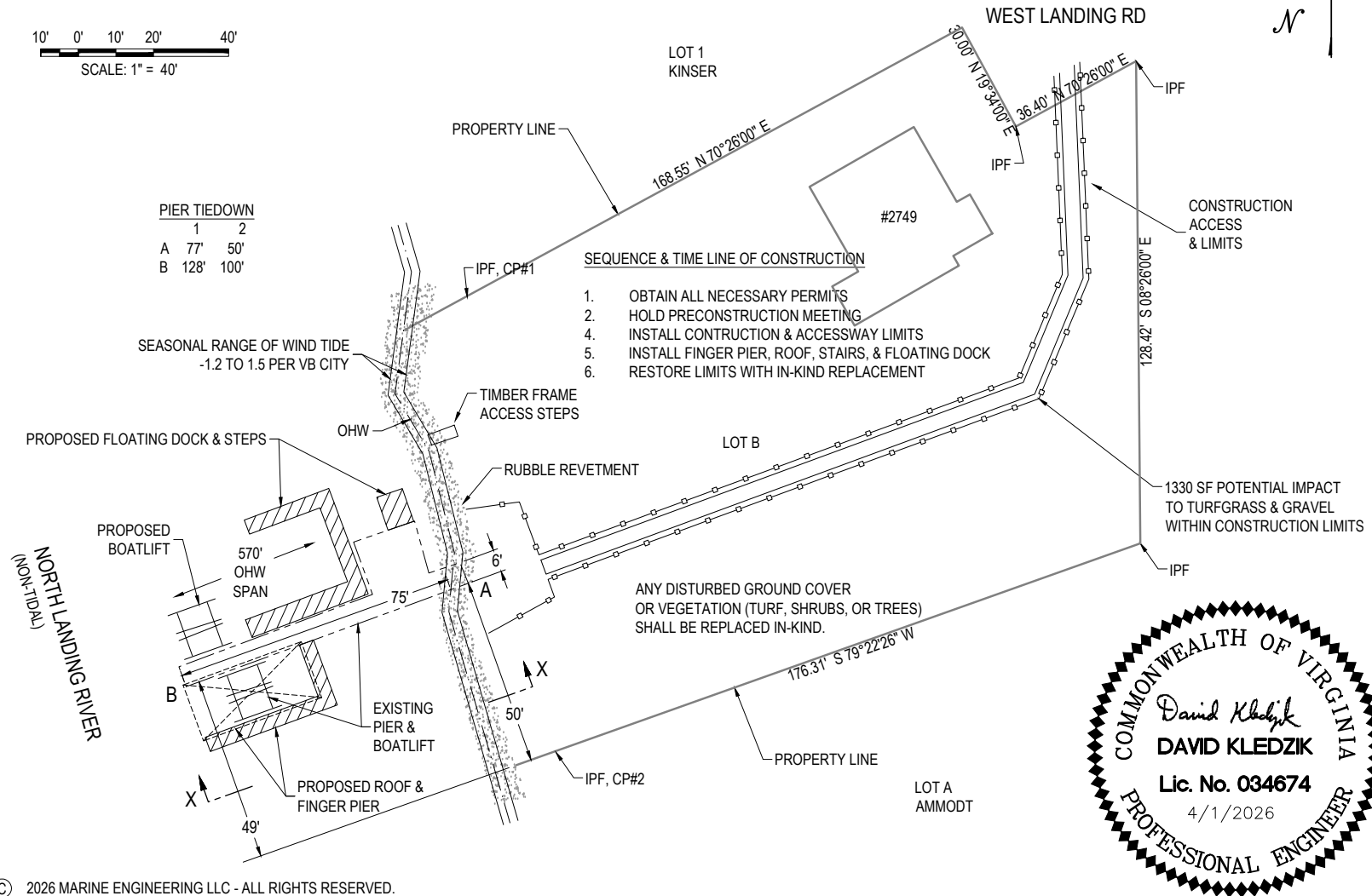
Remarks: _____

DSC File Number: _____ Date: _____

SITE PLAN OF PROPOSED PROJECT ROOF COVER / FINGER PIER / FLOATING DOCK & STEPS

10' 0' 10' 20' 40'
SCALE: 1" = 40'

PIER TIEDOWN	
1	2
A 77'	50'
B 128'	100'



APPLICANT: THOMAS W KRAMER
2749 WEST LANDING ROAD
VIRGINIA BEACH, VA 23456
ADJACENT PROPERTY OWNERS
SHOWN ON SHEET ONE

MARINE ENGINEERING LLC
1932 CHARLA LEE LN
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PH: (757) 477-4787

PROPOSED PROJECT FOR ACCESS WATERCRAFT MOORING
DATUM: OHW = 0.00'
SHEET 1 OF 1
DATE: JULY 26, 2025
REV 1: APRIL 1, 2026

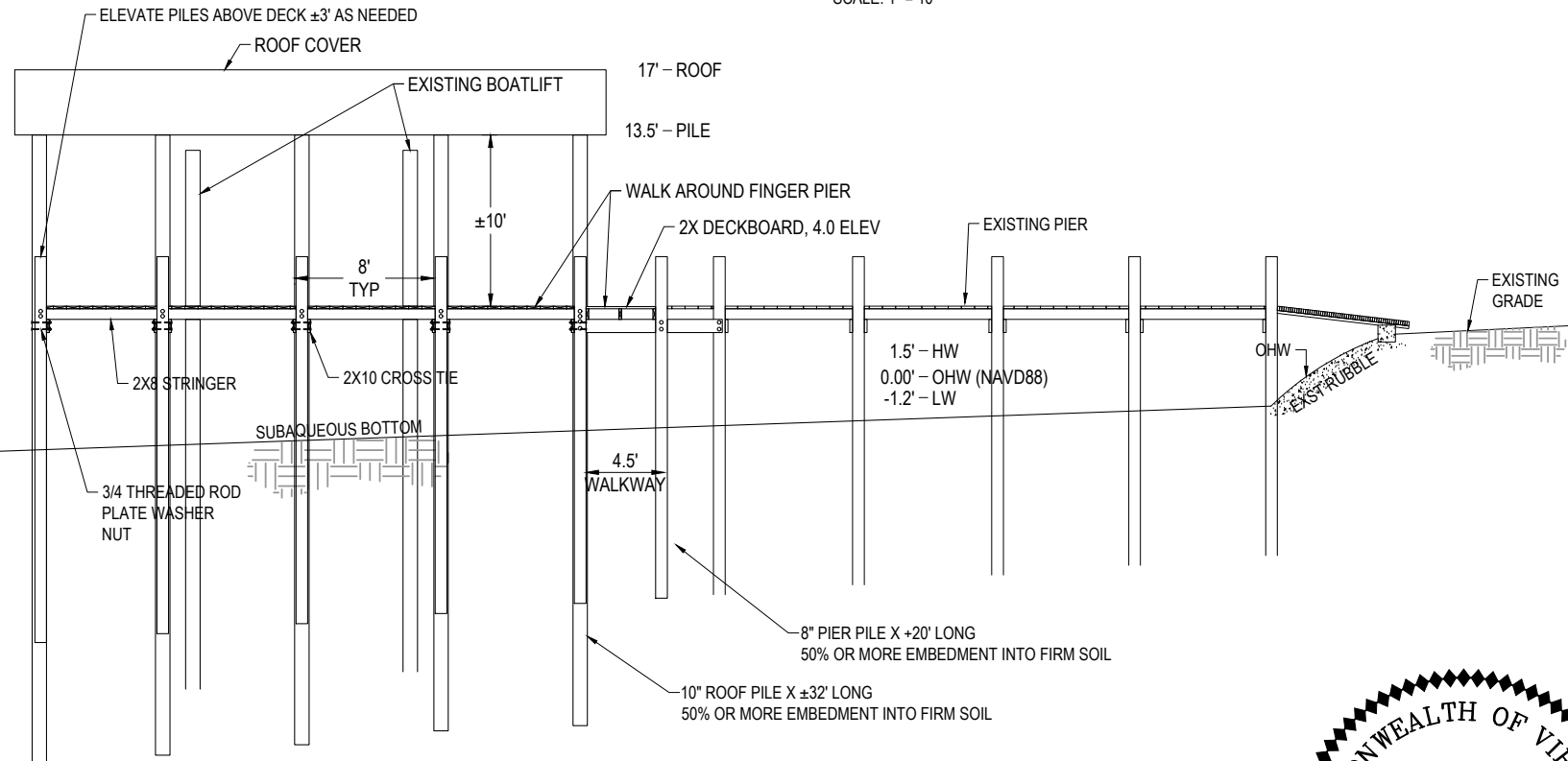
REV1 REDUCES SIZE OF FLOATING DOCK AND ADDS 2ND BOATLIFT

JOB NUMBER 20258

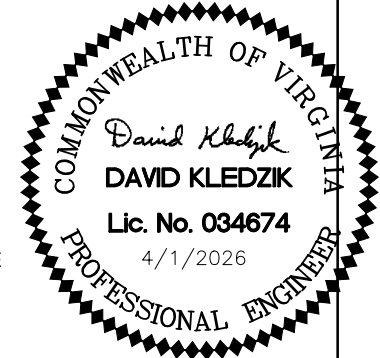
Additional Information/Revision Received by VMRC April 1, 2026 / Ira
Received by VMRC May 18, 2026 / Ira

SECTION X - X PIER & BOATLIFT DETAILS

SCALE: 1" = 10'



DESIGN BASED ON STANDARD PRACTICES WITHOUT THE BENEFIT OF SOILS TESTING. NO ALLOWANCES HAVE BEEN MADE FOR UNKNOWN SUBSOIL CONDITIONS. DEVELOPER SHALL MONITOR INSTALLATION AND PILE DRIVING RESISTANCE TO ASCERTAIN SUBSOIL CONDITIONS AND ADEQUATE PENETRATION AND CONTACT THE ENGINEER OF RECORD IF EITHER MINIMUM PENETRATION DEPTHS OF PILES CANNOT BE MET OR IF SOIL DISCOVERED NOT FIRM. ESTIMATED PILE LENGTHS SHOWN MAY REQUIRE GREATER LENGTH TO ACHIEVE 50% PENETRATION INTO FIRM SOIL. ALL DIMENSIONS AND MATERIAL SPECIFICATIONS ARE MINIMUMS UNLESS OTHERWISE SPECIFIED.



APPLICANT:
THOMAS W KRAMER
2749 WEST LANDING ROAD
VIRGINIA BEACH, VA 23456

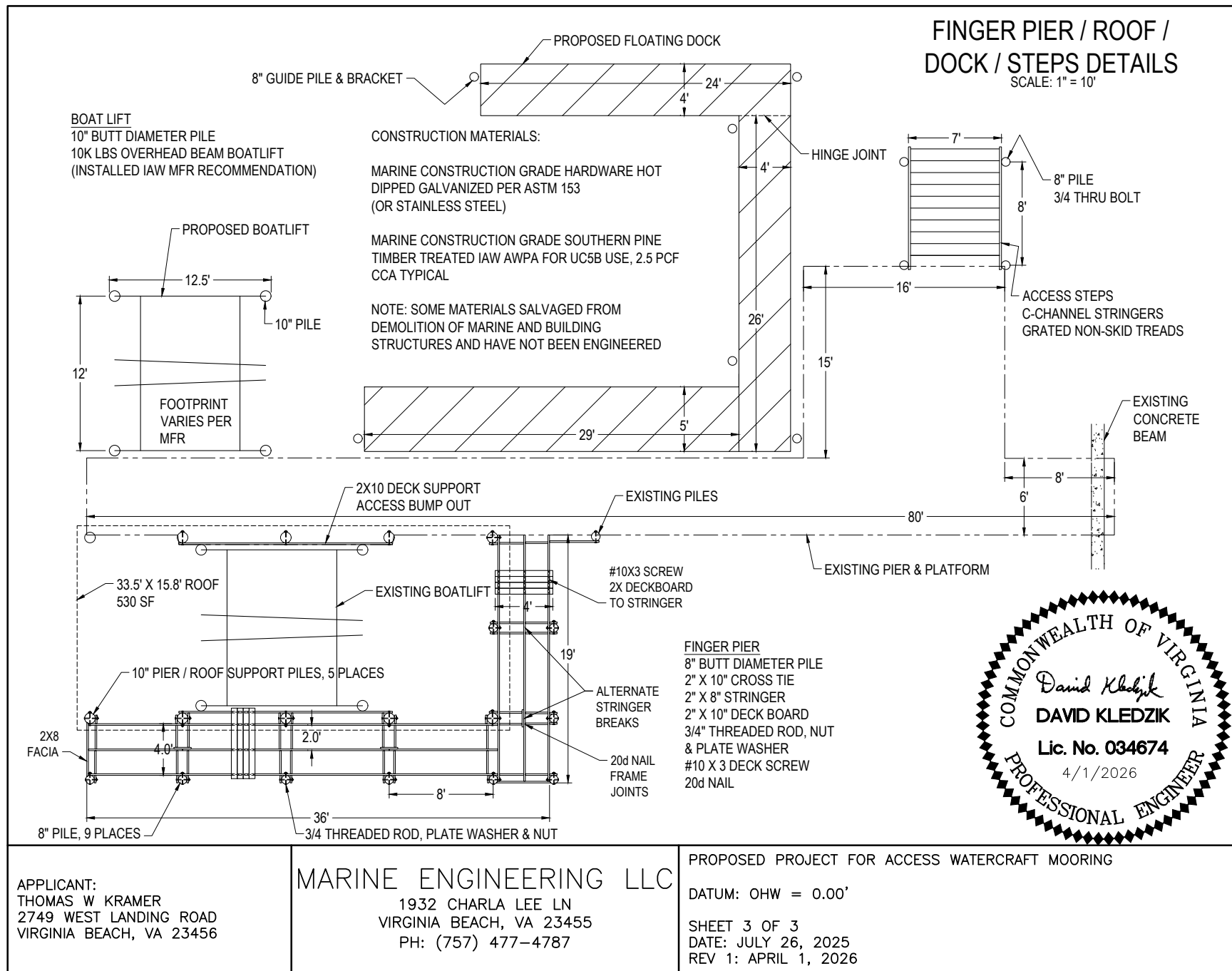
MARINE ENGINEERING LLC
1932 CHARLA LEE LN
VIRGINIA BEACH, VA 23455
PH: (757) 477-4787

PROPOSED PROJECT FOR ACCESS WATERCRAFT MOORING

DATUM: OHW = 0.00'

SHEET 2 OF 3
DATE: JULY 26, 2025
REV 1: APRIL 1, 2026

Additional Information/Revision Received by VMRC April 1, 2026 / Ira
Received by VMRC May 18, 2026 / Ira

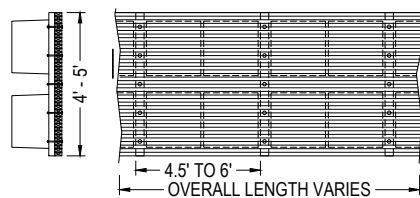
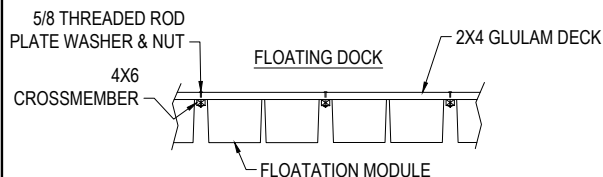
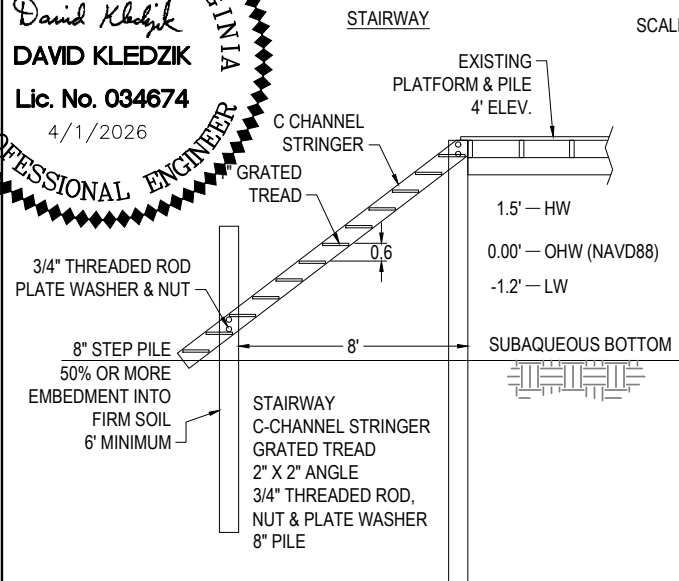


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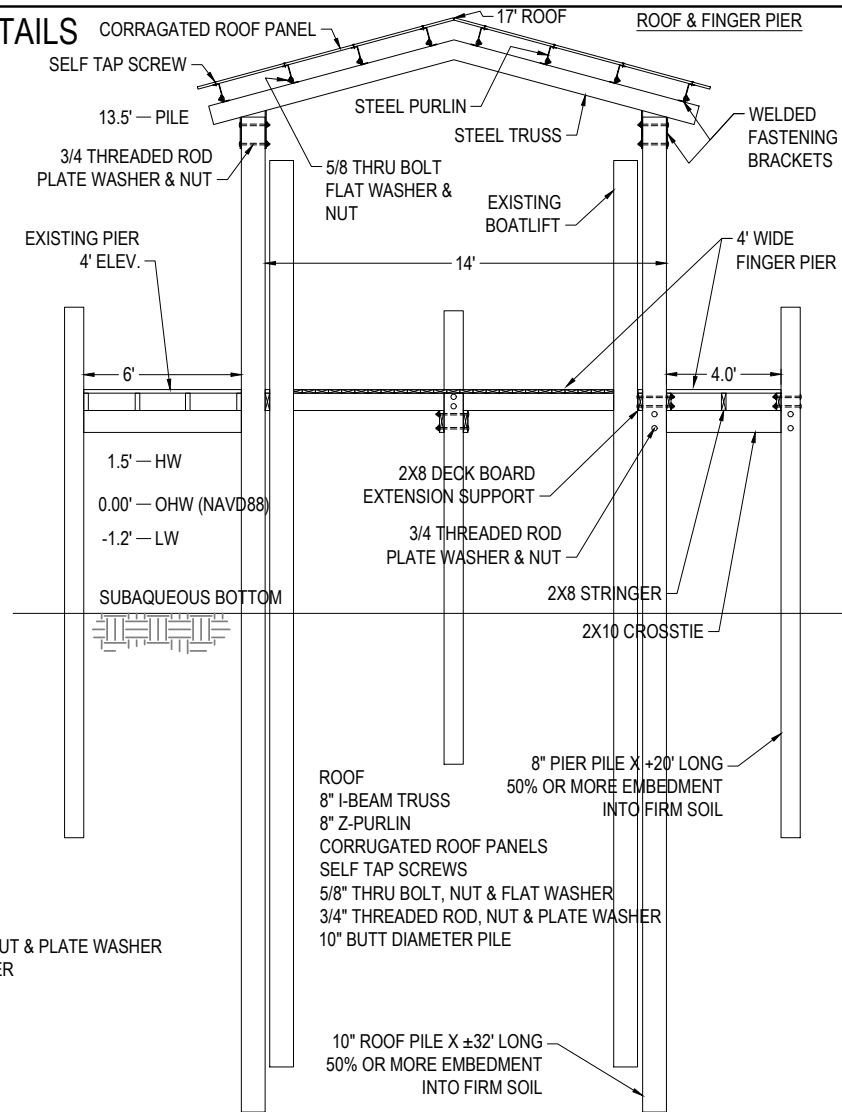


PROJECT DETAILS

SCALE: 1" = 6'



FLOATING DOCK
2" X 4" GLULAM DECKING
4" X 6" CROSSMEMBER
FLOATATION MODULES
5/8" & 3/4" THREADED ROD, NUT & PLATE WASHER
3/8" LAG BOLT & FLAT WASHER
HOOP GUIDE
8" GUIDE PILE



APPLICANT:
THOMAS W KRAMER
2749 WEST LANDING ROAD
VIRGINIA BEACH, VA 23456

MARINE ENGINEERING LLC
1932 CHARLA LEE LN
VIRGINIA BEACH, VA 23455
PH: (757) 477-4787

PROPOSED PROJECT FOR ACCESS WATERCRAFT MOORING

DATUM: OHW = 0.00'

SHEET 3 OF 3
DATE: JULY 26, 2025
REV 1: APRIL 1, 2026

AREA MAP OF WEST LANDING ROAD VIRGINIA BEACH, VA 23456

SCALE 1" : 2500'

N

23456

23457

SITE

West Landing

West Neck

Bonney Landing

Herons Ridge GC

Pungo Squ Shop Ctr

Beech Grove United Meths

West Neck

Pleasant Ridge

Asbury Meth

Indian River

West Neck Creek

West Landing Creek

West Neck Lake

Indian River Road

West Neck Road

West Landing Road

Pleasant Ridge Road

Asbury Road

Pungo Road

Muddy Road

Malabar Road

Edward Teller Road

Princess Road

21

From: [Gibson, Steven W CIV USARMY CENAO \(USA\)](#)
To: [David Kledzik](#)
Subject: PASDO Cat.B Thomas Kramer / Roof Cover, Finger Pier, Floating Dock & Steps/ 2749 WEST LANDING ROAD / VIRGINIA BEACH No Section 408 Permission Required NAO-2019-02082
Date: Tuesday, October 21, 2025 2:41:00 PM
Attachments: [initial dock improvement 2749 West Landing Road VB ICW N.L. Rec. 082525 25-V1966.pdf](#)
[PASDO SPGP enclosure.pdf](#)
[Eng Form 6285 2024Oct Certificate of Compliance \(004\) \(002\).pdf](#)

Mr. Kramer,

This is in reference to the Department of the Army application (NAO-2019-02082/ 25-V1966) you submitted to construct a Roof Cover/ Finger Pier/ Floating Dock & Steps at your existing pier location. (1) a 5' walkaround finger pier and (2) a 15' x 34' roof for existing boatlift (3) a 6' wide x 108' long U-shaped floating dock (4) a 7' x 8' access steps to water. The pier will use ~14 timber piles (8" & 10') also supporting the roof. The floating dock will use ~8 timber piles (8') and the steps will use ~2 timber piles (8"). Installation method anticipated to be via barge mounted drop hammer. All work will be performed at 2749 WEST LANDING ROAD in Virginia Beach, Virginia. Your proposed project as described above and depicted on attached drawings entitled "Roof Cover/ Finger Pier/ Floating Dock & Steps Sheets 1-5," submitted by Marine Engineering, LLC dated July 26, 2025 and received by our office on August 25, 2025 satisfies the terms and conditions of Norfolk District's State Programmatic General Permit for piers, aquaculture, shoreline, dredging, and other activities (23-SPGP-PASDO), Category B. For Category B, permittees must also obtain authorization from the Virginia Marine Resources Commission (VMRC), Virginia Department of Environmental Quality (VDEQ), and/or a Local Wetlands Board by permit, rule, or regulation prior to commencing work in Waters of the U.S. Provided that you follow the general and permit specific conditions of the 23-SPGP-PASDO, no further authorization will be required from the Corps.

The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

Enclosed is a "compliance certification" form, which must be signed and returned within 30 days of completion of the project. Your signature on this form certifies that you have completed the work in accordance with the regional permit terms and conditions.

Unless suspended or revoked, the 23-SPGP-PASDO will be in effect until September 4, 2028. Activities which have commenced (i.e., are under construction) or are under contract to commence construction in reliance upon 23-SPGP-PASDO will remain authorized provided

the activity is completed within 12 months of the date of this 23-SPGP-PASDO's expiration of September 4, 2028, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 325.7(a-e). Activities qualifying for this extension that are not complete by September 4, 2029, must apply for new general and/or individual Corps permit authorization. Activities which have NOT commenced and are NOT under contract to commence construction by the September 4, 2028, expiration require a new general and/or individual Corps permit authorization.

The State Water Control Board provided unconditional §401 Water Quality Certification (WQC) for this 23-SPGP-PASDO. Therefore, the activities that qualify for this 23-SPGP-PASDO meet the requirements of the VDEQ Virginia Water Protection Permit Regulation, provided that you abide by the conditions of this 23-SPGP-PASDO. You will not be required to obtain a separate §401 WQC from VDEQ. This authorization does not relieve your responsibility to comply with local requirements pursuant to the Chesapeake Bay Preservation Act (CBPA), nor does it supersede local government authority and responsibilities pursuant to the Act. You should contact your local government before you begin work to find out how the CBPA applies to your project.

Pursuant to the Coastal Zone Management Act (CZMA) of 1972, the VDEQ Virginia Coastal Zone Management Program (VCP) completed its review of the Federal Consistency Determination (FCD) for this SPGP-PASDO on June 6, 2023 and provided conditional concurrence that Category B authorizations under the 23-SPGP-PASDO are consistent with the VCP. Authorizations under this 23-SPGP-PASDO do not supersede State or local government authority or responsibilities pursuant to any State or local laws or regulations.

In granting an authorization pursuant to this permit, the Norfolk District has relied on the information and data provided by the permittee. If, subsequent to notification by the Corps that a project qualifies for this permit, such information and data prove to be materially false or materially incomplete, the authorization may be suspended or revoked, in whole or in part, and/or the Government may institute appropriate legal proceedings. Please note that you should obtain all required State and local authorizations before you proceed with the project.

Thank you,

Steve Gibson, Environmental Scientist
Eastern Virginia Regulatory Section

US Army Corps of Engineers - Norfolk District Regulatory Office
803 Front Street
Norfolk, Virginia 23510
Office: (757) 201-7418

FISHERIES MANAGEMENT DIVISION EVALUATION 6/23/2026

PUBLIC HEARING: Proposal to amend Chapter 4 VAC 20-270, “Pertaining to Blue Crab Fishery,” to establish season and bushel limits for the 2026-2027 commercial blue crab fisheries and to close the 2026-2027 winter commercial crab dredge fishing season.

ISSUES: Management of blue crabs is updated on an annual basis, where bushel limits are effective from July 5th of one year to July 4th of the next and an evaluation of the winter dredge season is conducted annually. This allows managers to respond, if necessary, to the most recent dredge survey results, which are usually released in May. Bushel limits and the winter dredge fishery closure must both be updated each year if they are to remain in effect.

BACKGROUND: The Bay-wide Winter Dredge Survey is the primary survey used to assess the Chesapeake Bay’s blue crab population. Since 1990, the survey has been conducted annually from mid-December through mid-March at 1,500 randomly chosen sites by the Virginia Institute of Marine Science (VIMS) and Maryland Department of Natural Resources (MD DNR). During winter’s cold temperatures, blue crabs bury into the muddy bottom and remain sedentary until spring. Sampling during this time allows scientists to capture crabs more efficiently and to reduce bias of crabs moving throughout the Bay to develop estimates of the number of crabs. The survey objectives are to describe the size and sex composition of the Bay-wide population, develop accurate estimates of Bay-wide blue crab abundance and harvest exploitation, and to evaluate the status of the stock on a yearly basis.

A media release announcing the results of the Winter Dredge Survey is attached to this evaluation.

Results of the 2026-2027 Bay-wide Winter Dredge Survey, as well as harvest results from the 2025 fisheries, indicate the Chesapeake Bay blue crab stock is currently not overfished and overfishing is not occurring. Total crab abundance increased to 349 million crabs—an increase of 46% from the 2025 abundance. The total abundance in 2026 ranks 21st out of the 37 years of the survey.

Of spawning age crabs, the survey estimated an abundance of 118 million crabs for 2026, a decrease of 15% from 2025. The survey further estimates the adult population by sex, as the fishery is managed by sex-specific reference points. The current estimate of spawning age (age-1+) female abundance (81 million) is 25% lower than the 2025

estimate and 30% below the long-term average of 116 million crabs. While above the minimum threshold of 72 million crabs, below which the population would be considered depleted, this still falls below the population target of 196 million. The adult female abundance in 2025 ranks 32nd out of the 37-year time series, with most of the lower abundances occurring in the period prior to 2008. Adult male crabs were estimated at 37 million, which is an increase of 43% from the 2025 value and below the long-term average of 61 million. Lower adult abundances were expected after a winter of high mortality, with the surveys catching higher rates of dead crabs and cold stun events reported in several finfish species like speckled trout and menhaden.

Preliminary Bay-wide commercial harvest (excluding seaside areas) for 2025 was 41 million pounds, a 4% decrease from 2024's Bay-wide harvest of 42.5 million pounds. Virginia's 2025 commercial harvest, including the seaside areas, is estimated at 15.9 million pounds, an increase of 4% from 2024. Both the Bay-wide and Virginia harvest in 2025 were below ten-year averages (50 and 22 million lbs, respectively). Crab harvest is monitored for overfishing each year by comparing the number of female crabs harvested in a year as a percentage of the total female crab population estimated in the previous winter's survey. Exploitation of female crabs was at 29% in 2025, which is below the overfishing threshold of 37% (meaning the stock is not being overfished) and slightly above the fishing target of 28%.

The Chesapeake Bay jurisdictions have for many years based annual management decisions on the results of the Winter Dredge Survey, based on the 2011 benchmark stock assessment which provided biological reference points (targets and thresholds) to contextualize the survey's results. At this time, however, a new benchmark stock assessment is being finalized which will provide new biological reference points. The 2026 benchmark assessment passed peer review in April 2026, meaning it will be considered best available science, and the assessment team is currently finalizing the report based on the peer review while also updating the stock assessment to use data through 2025. The benchmark assessment, which took several years to complete, only uses data through 2023. The stock assessment update, which will show managers the condition of the stock as of winter 2025/2026, is expected this summer.

Once the results are finalized and updated this summer, the Chesapeake jurisdictions will work together and with their respective advisory boards to address any necessary or recommended changes to the blue crab management framework. With that work expected to begin this summer and fall, staff recommend maintaining last year's crabbing measures for the coming year. Status quo measures for the Virginia commercial hard crab pot fishery include reduced bushel limits

beginning November 1, 2026; the season ending December 19, 2026; and the season re-opening March 17, 2027, with reduced bushel limits lasting through May 15, 2027. In 2025, the crab pot season ended December 20, but the Crab Management Advisory Committee (CMAC) has in the past requested the season end on a Saturday, which would be December 19 in 2026. All other commercial crab gears would have a season closing October 16, 2026, and re-opening April 15, 2027.

Since 2008, when Virginia effected a large decrease in harvest to conserve a consistently low blue crab population, the winter crab dredge fishery season has remained closed. The winter crab dredge fishery season, as described in the Code of Virginia, is from December 1 to the following March 31. During these months, most of the crabs available for harvest matured from the juvenile stage in the previous winter. The majority of the overwintering female crabs are pre-spawners, and studies have shown the dredge fishery harvested mostly (95%) female crabs. A winter dredge fishery season, especially when blue crab adult female abundance has not achieved the desired target, could negatively affect subsequent spawning events and crab pot harvest. At their August 20, 2024, meeting, CMAC voted to revisit opening the winter crab dredge fishery after the completion of the benchmark stock assessment for Chesapeake Bay blue crabs in 2026. For these reasons, staff recommend closing the upcoming 2026/2027 winter crab dredge fishery season.

These recommendations were discussed at the May 27, 2026, CMAC meeting. CMAC voted 7-1 to recommend the hard crab pot season open March 15 and all other measures remain status quo. Their rationale for an early opening included better prices in March and the oyster season, which many crabbers also participate in, will have ended earlier in the month. No public comments have been received at this time.

STAFF

RECOMMENDATION: Staff recommends the Commission amend Chapter 4 VAC 20-270, “Pertaining to Blue Crab Fishery,” to establish season and bushel limits for the 2026-2027 commercial blue crab fisheries and to close the 2026-2027 winter commercial crab dredge fishing season.



MEDIA RELEASE

VIRGINIA MARINE RESOURCES COMMISSION

380 Fenwick Road, Building 96, FT. Monroe VA 23651

CONTACT: Zach Widgeon
PIO
(757) 247-2200
Zachary.widgeon@mrc.virginia.gov

FOR IMMEDIATE RELEASE

5/18/2026

2026 Winter Dredge Survey Shows Improved Blue Crab Abundance in Chesapeake Bay

HAMPTON, VA – Results of the 2026 Bay-wide Blue Crab Winter Dredge Survey show a 46% increase in the abundance of blue crabs in Chesapeake Bay, for a total population of 349 million crabs. This increase comes despite another cold winter, which increased the overwintering mortality of crabs throughout the bay and caused cold-stun events in several finfish species throughout Virginia. Overall, the results suggest improved conditions for the 2026 fishery.

The Winter Dredge Survey found the total estimated population of blue crabs in Chesapeake Bay increased from 238 million crabs in the winter of 2024-2025 to 349 million crabs in the winter of 2025-2026. This was driven mainly by an increase of 120% in juvenile blue crabs, up to 228 million juveniles. Adult male crab abundance also increased, from 26 million to 37 million crabs. The adult female population, however, declined to 81 million. Similar conditions were observed following the severe winter conditions experienced in 2014. While overwintering mortality was also elevated during that period, the blue crab population demonstrated resilience and rebounded in subsequent years without long-term impacts to the stock.

Over the last 15 years, blue crab fishery managers in Virginia, Maryland, and the Potomac River Fisheries Commission have used the annual Winter Dredge Survey estimates to help inform management for the coming fishing season. Additional information on the blue crab population is also anticipated through the completion of a bay-wide benchmark stock assessment. Managers will review that information alongside other ongoing monitoring efforts as it becomes available.

The Chesapeake Bay Stock Assessment Committee (CBSAC), an advisory group under the Chesapeake Bay Program, met on May 13 to discuss the results from the 2025-26 Winter Dredge Survey and the upcoming release of the benchmark stock assessment. Their analysis of the Winter Dredge Survey will be published in the full CBSAC Annual Report this June. The results of the Winter Dredge Survey will also be presented to the Crab Management Advisory Committee in a public meeting on May 27, 2026, at 4 PM.

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COMMONWEALTH of VIRGINIA

*Marine Resources Commission
Building 96
380 Fenwick Road
Fort Monroe, VA 23651*

David L. Bulova
Secretary of Natural
and Historic Resources

Joseph D. Grist
Commissioner

NOTICE

The Virginia Marine Resources Commission invites public comments on proposed amendments to regulations, as shown below. By June 4, 2026, the proposed draft regulations may be viewed on the VMRC web calendar at <https://mrc.virginia.gov/calendar.shtm>.

In accordance with Section 28.2-209 of the Code of Virginia, a public hearing on the proposed amendments to these regulations will be held on Tuesday, June 23, 2026, at the Virginia Marine Resources Commission, 380 Fenwick Road, Bldg. 96, Fort Monroe, Virginia.

Written public comments on the proposals below or on items not on the agenda must be provided by 12:00 Noon, Thursday, June 18, 2026. Comments should be made at the following link: https://webapps.mrc.virginia.gov/public/fisheries/search_publiccomments.php or addressed to Public Comments, 380 Fenwick Road, Bldg. 96, Fort Monroe, Virginia 23651.

The Commission may review Fisheries Management Division items as early as 9:30 a.m.

I. Chapter 4VAC20-270, "Pertaining to Blue Crab Fishery"

The Commission proposes to amend Chapter 4VAC20-270, "Pertaining to Blue Crab Fishery," to establish season and bushel limits for the 2026-2027 commercial blue crab fisheries and to close the 2026-2027 winter commercial crab dredge fishing season.

The purpose of these amendments is to promote the blue crab fishery and conserve the blue crab resource.

VMRC DOES NOT DISCRIMINATE AGAINST INDIVIDUALS WITH DISABILITIES; THEREFORE, IF YOU ARE IN NEED OF REASONABLE ACCOMMODATIONS BECAUSE OF DISABILITY, PLEASE ADVISE MICHELE GUILFORD (757-247-2206) NO LATER THAN FIVE WORKDAYS PRIOR TO THE MEETING DATE AND IDENTIFY YOUR NEEDS.

An Agency of the Natural and Historic Resources Secretariat

www.mrc.virginia.gov

Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD

MEMORANDUM

TO: Joseph Grist
Commissioner
Virginia Marine Resources Commission

FROM: Kelci A. Block
Assistant Attorney General



DATE: June 4, 2026

RE: Proposed Regulation Amendments

It is my opinion that the Virginia Marine Resources Commission has authority to promulgate the proposed amendments to the following regulations under Va. Code § 28.2-201:

- 4VAC20-270

It is further my opinion that the regulations are exempt from the provisions of the Virginia Administrative Process Act pursuant to §2.2-4006(A)(11) of the Code of Virginia.

The foregoing conclusion is my own. It does not constitute an opinion, formal or informal, of the Attorney General. If I may be of further assistance, please do not hesitate to contact me.

"PERTAINING TO BLUE CRAB FISHERY"**CHAPTER 4 VAC 20-270-10 ET SEQ.****PREAMBLE**

This chapter establishes daily individual, vessel and harvest and possession limits, time limits, season limits, peeler pot limits, and peeler and softshell crab minimum size limits for the commercial blue crab fishery in Virginia and the daily recreational blue crab harvest and possession limit. This chapter is promulgated pursuant to authority contained in §§ 28.2-101, 28.2-201 and 28.2-700 et seq. of the Code of Virginia. This chapter repeals any other chapters that pertain to crab pot bushel limits. This chapter amends and re-adopts, as amended, previous Chapter 4VAC 20-270-10 et seq., which was promulgated, ~~October 28, 2024~~ June 24, 2025, and made effective on ~~November 1, 2024~~ July 5, 2025. -The effective date of this chapter, as amended, is July 5, ~~2025~~ 2026.

4 VAC 20-270-10. Purpose.

The purpose of this chapter is to allow for the conservation and rebuilding of the crab resource and to improve the enforceability of other laws pertaining to crabbing.

4 VAC 20-270-15. Definitions.

The following word or term when used in this chapter shall have the following meaning unless the context indicates otherwise:

"Crab" as described in this chapter refers solely to the crustacean *Callinectes sapidus*.

4 VAC 20-270-20. Sunday prohibition and limited exception for possession of male hard crabs.

It shall be unlawful to take or harvest crabs for commercial purposes on Sunday. This section shall not apply to baiting and setting any hard crab pot or peeler pot, the harvest of peeler crabs by crab traps or peeler pots, or to the working of floats, pens, or onshore facilities for soft crab shedding operations. Any person licensed to harvest peeler crabs by peeler pot may harvest one bushel of male crabs from his peeler

"PERTAINING TO BLUE CRAB FISHERY"**CHAPTER 4 VAC 20-270-10 ET SEQ.**

pots on Sunday strictly for the purpose of baiting his peeler pots, and such crabs may not be sold.

4 VAC 20-270-25. Lawful commercial harvest gears.

It shall be unlawful to possess or sell crabs harvested for commercial purposes by any means other than by hard crab pot, peeler pot, dip net, ordinary or patent trotline, crab dredge, crab scrape, or crab trap or pound.

4 VAC 20-270-30. Daily time limits for commercial harvest.

A. It shall be unlawful for any person licensed to catch and sell crabs taken by hard crab pot or peeler pot to take and harvest crabs from any hard crab pot or peeler pot, or to retrieve, bait, or set any hard crab pot or peeler pot, except between 3 a.m. to 5 p.m. during the lawful season, as described in 4VAC20-270-40 A.

B. The lawful daily time periods for the commercial harvest of crabs by hard crab pot or peeler pot may be rescinded by the Commissioner of Marine Resources when the commissioner determines that a pending weather event is sufficient cause for the removal of hard crab pots from the tidal waters of the Commonwealth.

4 VAC 20-270-40. Season limits.

A. In ~~2025~~ 2026, the lawful season for the commercial harvest of crabs by hard crab pot shall be March 17 through December ~~20~~ 19. In ~~2026~~ 2027, the lawful season for the commercial harvest of crabs by hard crab pot shall be March 17 through November 30. For all other lawful commercial gear used to harvest crabs, as described in 4 VAC 20-1040, the lawful seasons for the harvest of crabs shall be April 15 through October 15.

B. It shall be unlawful for any person to harvest crabs or to possess crabs on board a vessel, except during the lawful season, as described in subsection A of this section.

C. It shall be unlawful for any person knowingly to place, set, fish or leave any hard crab pot in any tidal waters of Virginia from December ~~21, 2025~~ 20, 2026, through March 16, ~~2026~~ 2027. It shall be unlawful for any person to knowingly place, set, fish, or leave any lawful commercial gear used to harvest

"PERTAINING TO BLUE CRAB FISHERY"**CHAPTER 4 VAC 20-270-10 ET SEQ.**

crabs, except any hard crab pot or any gear as described in 4 VAC 20-460-25, in any tidal waters of Virginia from October 16, ~~2025~~ 2026, through April 14, ~~2026~~ 2027.

D. It shall be unlawful for any person to place, set, or fish any number of fish pots in excess of 10% of the amount allowed by the gear license limit, up to a maximum of 30 fish pots per vessel, when any person on that vessel has set any crab pots.

1. This subsection shall not apply to fish pots set in those Virginia waters located upriver of the following boundary lines:
 - a. In the James River the boundary shall be a line connecting Hog Point and the downstream point at the mouth of College Creek.
 - b. In the York River the boundary lines shall be the Route 33 bridges at West Point.
 - c. In the Rappahannock River the boundary line shall be the Route 360 bridge at Tappahannock.
2. This subsection shall not apply to legally licensed eel pots as described in 4VAC20-500.
3. This subsection shall not apply to fish pots constructed of a mesh less than one-inch square or hexagonal mesh.

4 VAC 20-270-50. Peeler crab pot and hard crab pot limits.

A. It shall be unlawful for any person to place, set or fish or attempt to place, set or fish more than 210 peeler crab pots in Virginia tidal waters.

B. The lawful hard crab pot license categories and hard crab pot limits are as follows:

1. up to 85 crab pots.
2. up to 127 crab pots.
3. up to 170 crab pots.
4. up to 255 crab pots.
5. up to 425 crab pots.

C. It shall be unlawful for any person to knowingly place, set or fish any amount of crab pots that exceeds that person's crab pot limit, as described in subsection B of this section.

"PERTAINING TO BLUE CRAB FISHERY"**CHAPTER 4 VAC 20-270-10 ET SEQ.****4 VAC 20-270-51. Daily commercial harvester, vessel, and harvest and possession limits.**

A. Any barrel used by a harvester to contain or possess any amount of crabs will be equivalent in volume to no more than three bushels of crabs.

B. From July 5, ~~2025~~ 2026, through October 31, ~~2025~~ 2026, and May 16, ~~2026~~ 2027, through July 4, ~~2026~~ 2027, any commercial fisherman registration licensee legally licensed for any hard crab pot license, as described in 4VAC20-270-50 B, shall be limited to the following maximum daily harvest and possession limits for any of the following hard crab pot license categories:

1. 10 bushels, or three barrels and one bushel, of crabs, if licensed for up to 85 crab pots.
2. 14 bushels, or four barrels and two bushels, of crabs, if licensed for up to 127 crab pots.
3. 18 bushels, or six barrels, of crabs, if licensed for up to 170 crab pots.
4. 29 bushels, or nine barrels and two bushels, of crabs, if licensed for up to 255 crab pots.
5. 47 bushels, or 15 barrels and two bushels, of crabs, if licensed for up to 425 crab pots.

C. From November 1, ~~2025~~ 2026, through December ~~20, 2025~~ 19, 2026, and March 17, ~~2026~~ 2027, through May 15, ~~2026~~ 2027, any commercial fisherman registration licensee legally licensed for any hard crab pot license, as described in 4VAC20-270-50 B, shall be limited to the following maximum daily harvest and possession limits, for any of the following crab pot license categories:

1. Eight bushels, or two barrels and two bushels, of crabs, if licensed for up to 85 crab pots.
2. 11 bushels, or three barrels and two bushels, of crabs, if licensed for up to 127 crab pots.
3. 14 bushels, or four barrels and two bushels, of crabs, if licensed for up to 170 crab pots.
4. 22 bushels, or seven barrels and one bushel of crabs, if licensed for up to 255 crab pots.
5. 36 bushels, or 12 barrels of crabs, if licensed for up to 425 crab pots.

D. When a single harvester or multiple harvesters are on board any vessel, that vessel's daily harvest and possession limit shall be equal to only one daily harvest and possession limit, as described in subsections B and C of this section, and that daily limit shall correspond to the highest harvest and possession limit of only one licensee on board that vessel.

E. When transporting or selling one or more legal crab pot licensee's crab harvest in bushels or barrels, any agent shall possess either the crab pot license of that one or more crab pot licensees or a bill of lading indicating each crab pot licensee's name, address, commercial fisherman registration license number, date, and amount of bushels or barrels of crabs to be sold.

F. If any police officer finds crabs in excess of any lawful daily bushel, barrel, or vessel limit, as

"PERTAINING TO BLUE CRAB FISHERY"**CHAPTER 4 VAC 20-270-10 ET SEQ.**

described in this section, that excess quantity of crabs shall be returned immediately to the water by the licensee who possess that excess over lawful daily harvest or possession limit. The refusal to return crabs, in excess of any lawful daily harvest or possession limit, to the water shall constitute a separate violation of this chapter.

G. When any person on board any boat or vessel possesses a crab pot license, it shall be unlawful for that person or any other person aboard that boat or vessel to possess a Seafood Buyers Boat License and buy any crabs on any day.

4 VAC 20-270-52. Area Restriction.

A. It shall be unlawful for any person to use any gear, except hard crab pots or peeler pots, to harvest crabs from the waters of Back Bay and North Landing River or within the jurisdiction of the Albemarle and Currituck watersheds as described in § 28.2-101 of the Code of Virginia.

B. It shall be unlawful to possess, sell, or offer for sale crabs taken by any means other than hard crab pot or peeler pot from the waters described in this section.

4 VAC 20-270-55. Minimum size limits.

A. From the beginning of the season as described in 4VAC20-270-40 through July 15, it shall be unlawful for any person to harvest, possess, sell or offer for sale more than 10 peeler crabs, per United States standard bushel, or 5.0% of peeler crabs in any other container, that measure less than 3-¼ inches across the shell from tip to tip of the longest spikes. From July 16 through the end of the season as described in 4VAC20-270-40, it shall be unlawful for any person to harvest, possess, sell or offer for sale more than 10 peeler crabs, per United States standard bushel, or 5.0% of peeler crabs in any other container, that measure less than 3-½ inches across the shell from tip to tip of the longest spikes, except as described in subsections B and C of this section.

B. From July 16 through the end of the season as described in 4VAC20-270-40, it shall be unlawful for any person to harvest, possess, sell or offer for sale more than 10 peeler crabs, per United States standard bushel, or 5.0% of peeler crabs in any other container, that are harvested from waters on the ocean side of Accomack and Northampton counties and measure less than 3-¼ inches across the shell from tip to tip of the longest spikes, except as described in subsection C of this section.

C. In the enforcement of these peeler crab minimum size limits aboard a vessel, the marine police officer shall select a single container of peeler crabs of his choosing to determine if the contents of that container violate the minimum size and tolerance described in this section. If the officer determines the contents of the container are in violation, then the officer shall return all peeler crabs on board the vessel to the water alive.

"PERTAINING TO BLUE CRAB FISHERY"

CHAPTER 4 VAC 20-270-10 ET SEQ.

D. It shall be unlawful for any person to take, catch, harvest, possess, sell or offer for sale, or to destroy in any manner, any soft crab that measures less than 3-½ inches across the shell from tip to tip of the longest spikes.

4 VAC 20-270-56. Daily Recreational harvest and possession limit.

It shall be unlawful to take by using an unlicensed dip net or hand line, or two crab pots, or to harvest or possess for personal use aboard any vessel, more than one bushel of hard crabs or two dozen peeler crabs per day.

4 VAC 20-270-57. Crab dredge fishery.

In accordance with the provisions of Section 28.2-707 of the Code of Virginia, the crab dredging season of December 1, ~~2025~~ 2026, through March 31, ~~2026~~ 2027, is closed, and it shall be unlawful to use a dredge for catching crabs from the waters of the Commonwealth during that season.

4 VAC 20-270-58. Repealed.

4 VAC 20-270-60. Penalty.

As set forth in § 28.2-903 of the Code of Virginia, any person violating any provision of this chapter shall be guilty of a Class 3 misdemeanor, and a second or subsequent violation of any provision of this chapter committed by the same person within 12 months of a prior violation is a Class 1 misdemeanor.

* * * * *

This is to certify that the foregoing is a true and accurate copy of the chapter passed by the Marine Resources Commission, pursuant to authority vested in the Commission by § 28.2-201 of the Code of Virginia, duly advertised according to statute, and recorded in the Commission's minute book, at meeting held in Hampton, Virginia on June 23, 2026.

**COMMONWEALTH OF VIRGINIA
MARINE RESOURCES COMMISSION**

By: _____
Joseph D. Grist

"PERTAINING TO BLUE CRAB FISHERY"

CHAPTER 4 VAC 20-270-10-ET-SEQ.

Commissioner

Subscribed and sworn to before me this ____ day of ____ 2026.

Notary Public

From: Jessica Robinson <JRobinson@cbf.org>

Sent: Thursday, June 18, 2026 10:07 AM

To: Grist, Joseph (MRC) <joseph.grist@mrc.virginia.gov>

Subject: CBF Comments on the 2026-2027 Commercial Blue Crab Fishery Regulations

June 18, 2026

Joe Grist

Commissioner

Virginia Marine Resources Commission

380 Fenwick Road

Fort Monroe, VA 23651

*Submitted via email only to: joseph.grist@mrc.virginia.gov and
Alexa.Galvan@mrc.virginia.gov*

Subject: CBF Comments on the 2026-2027 Commercial Blue Crab Fishery Regulations

Dear Commissioner Grist

On behalf of the Chesapeake Bay Foundation, I am writing to express my support for maintaining the current blue crab fishing regulations in Virginia. My support is based on the findings of the most recent Chesapeake Bay Winter Dredge Survey and forthcoming completion of the new Chesapeake Bay blue crab stock assessment.

The 2025–2026 Winter Dredge Survey, conducted by the Virginia Institute of Marine Science (VIMS) and the Maryland Department of Natural Resources, provides important insight into the status of the blue crab population. The survey estimated a total population of approximately 349 million blue crabs, representing a 46% increase from the previous year's estimate of 238 million which is good news, but significant concerns remain.

This increase was driven largely by strong juvenile recruitment, with juvenile crabs increasing by 228 million, signaling encouraging conditions for an increased abundance of

mature crabs this fall. In addition, the number of adult male crabs rose to 37 million, which is also a positive for the Bay's blue crab population.

However, despite these gains, the survey reminds us of the need for precautionary management. The adult female population declined for the third straight year to approximately 81 million crabs, a 25% decrease from the previous year. While this level remains above the management threshold of 72.5 million, it is still significantly below the target level of 196 million, which is necessary to ensure long-term sustainability of the spawning stock.

While the increased numbers of juveniles and males are encouraging, the downward trend in the Bay's adult female blue crab population is still concerning. Because females can bear millions of eggs, they are key to increasing the overall population.

CBF is encouraged that scientists are currently finalizing the eagerly anticipated multi-year Chesapeake Bay blue crab stock assessment. This long-awaited effort will help guide Chesapeake Bay blue crab management for years to come. Unfortunately, preliminary results indicate a troubling decline in the Bay's blue crab population since 2011. While the assessment hasn't determined one clear culprit for blue crabs' decline, it will equip Maryland and Virginia with more data to make informed decisions on blue crab harvest moving forward.

Given the somewhat conflicting data from the winter dredge survey and the soon to be finished stock assessment, CBF strongly recommends the Commonwealth maintain its current suite of blue crab regulations including bushel limits and seasonal measures. Maintaining current stability in management will help ensure both the ecological sustainability of Chesapeake Bay and the long-term viability of Virginia's blue crab fishery. CBF staff look forward to working with the Virginia Marine Resources Commission (VMRC) and other stakeholders later this fall to fully analyze the results of the winter dredge survey and stock assessment to craft an updated set of regulations for Virginia's blue crab fishery.

Thank you for your consideration and for your continued commitment to responsible fisheries management.

Sincerely,



Chris Moore
Virginia Executive Director

cc:

Alison Prost, Vice President EPR, CBF
Allison Colden, Maryland Executive Director, CBF
VMRC Associate Commissioners

Jessica Robinson

Hampton Roads Administrative Assistant

[Chesapeake Bay Foundation](#)

[Brock Environmental Center](#)

757-644-4111 / Jrobinson@cbf.org



CHESAPEAKE BAY
FOUNDATION

Saving a National Treasure

FISHERIES MANAGEMENT DIVISION EVALUATION, 6/23/26

RECOMMENDATION: Recommendations on applications to the Recreational and Commercial Fishing Advisory Boards.

BACKGROUND AND ISSUES:

Recreational Fishing Advisory Board (RFAB)

The Recreational license fund, the Virginia Saltwater Recreational Fishing Development (VSRFDF), is comprised of sales of Virginia saltwater fishing licenses. The Recreational Fishing Advisory Board (RFAB) advises the Commission on expenditures from the VSRFDF in accordance with §28.2-302.3.

The RFAB met on June 8th 2026 and reviewed applications for the 2026 cycle and unanimously recommended seven proposals including requests to fund fishing events and agency programs.

A-1. 0426-02 2027 ESVAC Children's Fishing and Conservation Educational Outings (4 events). Robert Mucha, Eastern Shore of Virginia Anglers Club. **\$4,000.**

B-1. 0426-03 2027 Kiwanis Club Children's Fishing Clinic and Kiwanis Fishing Clinic. Wesley Brown, Capital District Kiwanis Club. **\$11,000.**

C-1. 0426-05 2027 Virginia Beach Anglers Club/Seton Youth Shelter Children's Fishing Trip. Rich Califf, Virginia Beach Anglers Club. **\$3,000.**

D-1. 0426-10 Virginia Saltwater Tournament – Program Sustainability Request. Matt Hargis, VMRC. **\$140,000.**

E-1. 0426-11 Youth Angler Citation Program. Matt Hargis, VMRC. **\$15,500.**

F-1. 0426-12 Artificial Reef Upcoming Program and Outreach Requests. Alicia Nelson, VMRC. **\$600,000.**

G-1. 0426-13 Federal Assistance (Sportfish Restoration) Matching Funds, Federal FY 2027 E. Simpson. **\$10,043.**

Commercial Fishing Advisory Board (CFAB)

The Commercial license fund, the Marine Fishing Improvement Fund (MFIF), is made up of sales of Virginia commercial fishing licenses. The

Commercial Fishing Advisory Board (CFAB) advises the Commission on expenditures from the MFIF in accordance with §28.2-208.

The CFAB met in person on March 31st, 2026 and virtually on June 1st 2026. On March 31st, one research project was presented and reviewed but not voted on due to a lack of quorum; however, all the board members in attendance individually recommended funding the project. On June 1st, three projects were presented and recommended for funding with a quorum present. All four projects are listed below.

A-2. Biological monitoring of river herring. Eric Hilton. VIMS. **\$40,000.**

B-2. 2026 Waterman's Internship Program Support. Alicia Nelson. VMRC. **\$119,663.**

C-2. Estimating relative abundance of young-of-year American eel, *Anguilla rostrata*, in the Virginia tributaries of Chesapeake Bay 2026. M. Fabrizio. VIMS. **\$35,370.**

D-2. Beyond the Dock: A Virtual Reality Journey into Virginia's Seafood Industry. T. Wood. Virginia Tech. **\$25,000.**

RECOMMENDATION:

The Recreational Fishing Advisory Board recommended funding seven proposed projects, totaling \$781,543 from the Virginia Saltwater Recreational Fishing Development Fund.

The Commercial Fishing Advisory Board recommended funding by consent (March 2026 - no quorum present) and by quorum (June 2026) four proposed projects, totaling \$220,033 from the Marine Fishing Improvement Fund.

Meeting Minutes

Virginia Commercial Fishing Advisory Board Meeting

Virginia Marine Resources Commission

380 Fenwick Road, Ft. Monroe, VA 23651
Tuesday March 31, 2026

Members in Attendance:

JJ Minor, Ross Kellum, Revel Walker

Members not in attendance:

Rich Harding, Ben Johnson, Nate Reynolds, Jason Smith, Lynn Kellum.

Others Present: Sheri Crocker, Eric Hilton (virtually), Adam Tomlin, Alicia Nelson

Agenda:

I. Introduction, announcements, comments

Alicia Nelson provided an overview of meeting expectations and noted that one board member had stepped down recently, but the board still needs 5 members in attendance for a meeting. She explained the procedure for recommendations from board members if no quorum was present and noted that it had been reviewed by council.

II. Review of the meeting minutes from the December 2025 meeting

No errors were noted; however, the minutes were deferred to a future meeting due to lack of quorum.

III. Budget review

Sheri Crocker reviewed the budget and noted that \$1,499,611 are currently available for new projects. There were no questions about the budget.

IV. Waterman's Apprentice Program Update

Alicia Nelson noted that she was acting director of the program at this time and introduced Adam Tomlin as the program manager. She noted that there were a record number of new applicants during the last cycle. She explained that new apprentices were capped at 21 based on capacity of staff, and existing apprentices.

She noted that a guidance document was being developed, and invited comments and questions about the program at any time. The next application period is expected in the fall of 2026.

The board asked if they could reapply every year, and Ms. Nelson noted that they did have to reapply; however it will be a simpler process. She noted that there will be a small final report required as well. There was also questions about the age requirements for the program, and it was clarified that applicants must be at least 12 years of age, and there was no maximum age.

Adam Tomlin updated the board on training opportunities and plans for the future. He also explained details of the application process.

V. Applications for review

A. Biological monitoring of river herring. Eric Hilton. VIMS. \$40,000

Dr. Hilton provided a presentation about the annual river herring request to the CFAB. He noted the requirements of the fisheries management plan for river herring and the addition of hickory shad in this year's survey. He described this specific effort and how it fits in with the larger program for River Herring (clarified that it is also part of the larger suite of sportfish restoration programs).

Board members asked about the time series needed for management. Dr. Hilton explained that when the moratorium was first enacted in 2012, it was estimated that at least 10 years of data would be needed to demonstrate the current levels and the characteristics of the existing and projected fishery. He noted that the ASMFC typically considered three year running averages. He said that at this time, we are just getting enough three-year averages to determine a trend. However, there is still concern about how to justify a fishery and how to maintain required levels – which would require consistent sampling.

Because there was no in-person quorum, each board member individually commented on the project, and all board members were in favor of funding the project.

VI. Additional Business

Ms. Nelson noted that the next meeting would be virtual and is tentatively scheduled for Monday, June 1st.

MEETING MINUTES

Virginia Commercial Fishing Advisory Board
Virtual Meeting, Virginia Marine Resources Commission
June 1, 2026; 2:00 pm

Members

James Minor
Richard Harding
Jason Smith
Ross Kellum
Ben Johnson
Lynn Kellum

Board Members Absent

Nathan Reynolds
Revel Walker

Staff Present

Sheri Crocker
Joseph Grist
Gloria Hatcher
Alicia Nelson

Others Present

Rachael Peabody
Owen Hinson
Ron Larson
Tiffany Wood

The meeting minutes were recorded by Alicia Nelson; a full recording is available.

Agenda:

I. Introduction, announcements, comments.

Alicia Nelson welcomed everyone and noted that the meeting would be recorded. She also noted that there were three projects and two sets of meeting minutes that require a vote at this time, in addition, a federal aid match is not requested from the commercial fund this year.

II. Review of the meeting minutes from the December 2025 and March 2026 meetings.

Ross Kellum motioned to approve the minutes from December 2025 and March 2026. The motion was seconded by Jason Smith. The motion passed with five in favor and Ms. Abstaining.

III. Budget update

Ms. Crocker reviewed the financial report, noting that there was over \$1.1 million available for projects.

IV. Waterman's Apprentice Program Update

Alicia Nelson gave an update on the Waterman's Apprentice Program and explained that the name would be shifting to the Waterman's Internship Program to better align with Virginia Works definitions. Ms. Nelson described the program's increasing number of applicants in the last review cycle, current year training opportunities, and plans for the future. Her presentation is part of the record. She requested additional funding for program support for

2026 that included staff funding (10% for 5 years) and funds to return the program funds to the original level requested. Revel Walker motioned to recommend funding the \$119,663 request, and Ms. Kellum seconded the motion. The motion passed unanimously.

V. Applications for review

- A. Estimating relative abundance of young-of-year American eel, *Anguilla rostrata*, in the Virginia tributaries of Chesapeake Bay 2026. M. Fabrizio. VIMS. \$35,370.

Because the applicant was unavailable, Ms. Nelson described the project to the board. The young-of-year American eel survey fulfills the ASMFC mandates for the fisheries management plan for American eel. Ross Kellum motioned to recommend funding the item, and Rick Harding seconded the motion. The motion passed unanimously.

- B. Beyond the Dock: A Virtual Reality Journey into Virginia's Seafood Industry. T. Wood. Virginia Tech. \$25,000.

Ms. Wood presented the project, and her presentation is available. She noted that the proposed project would provide an immersive virtual reality program to help promote the seafood industry. Mr. Minor asked about budget details and Mr. Kellum asked if Virginia Tech had produced a tool like this before. Ms. Wood answered that they had seen a similar product promoting soy bean farms at an agricultural expo and wanted to mirror that with a fisheries example. Ms. Kellum asked if it would be available for other outreach uses, and Ms. Wood explained that it would .

Ross Kellum motioned to recommend funding the item, and Mr. Harding seconded the motion. The motion passed unanimously.

VI. Virginia Marine Products Board Presentation

Rachael Peabody gave a brief introduction and presentation about the Virginia Marine Products Board is its new executive director. Her presentation is available. She introduced herself and her role and described the initiatives and goals of the products board.

VII. Additional Business

Mr. Minor congratulated Joe Grist for his recent appointment to Commissioner. Lynn Kellum motioned to adjourn the meeting, and Mr. Kellum seconded the motion. The motion passed unanimously, and the meeting concluded at 2:44 pm.

LICENSE STATUS REQUEST, 6/23/2026

Discussion:

Mr. Christopher Akers (010719) requests the Commission grant exception to the two-year delay to obtain his Commercial Fisherman Registration License. Mr. Akers obtained his CFRL for the first time in November 2025 and missed the April 30 deadline to renew his license. Mr. Akers submitted a two-year exception form and was denied exception.

Issues:

Mr. Akers does not meet any of the requirements for exception to the two-year delay as stated in regulation 610.

4VAC20-610-30. Commercial Fisherman Registration License; exceptions and requirements of authorized agents.

G. Exceptions to the two-year delay described in 4 VAC 20-610-30 F may be granted by the commissioner or his designee, if any of the following criteria are met:

- 1. The applicant is purchasing another fisherman's Commercial Fisherman Registration License, and the seller holds a valid, current Commercial Fisherman Registration License and surrenders that license to the commission at the time the license is sold.*
- 2. An immediate member of the applicant's family, who holds a current Commercial Fisherman Registration License, has died or is retiring from the commercial fishery and the applicant intends to participate in the fishery.*

3. The applicant purchased a valid Commercial Fisherman Registration License during the preceding year, did not transfer that Commercial Fisherman Registration License, and can demonstrate a significant hardship, on the basis of health or active military duty, as described in 4 VAC 20-610-30 G.4.

4. Any exceptions based on a health condition shall only be granted by the Commissioner or his designee only after receipt of an attending physician's description of the medical condition. Any exception based on active military duty shall only be granted by the Commissioner or his designee after receipt of those military orders.

Background:

- License history – Attachment 1
- Exception Form – Attachment 2
- Summons History – No Summons History

Attachment 1
Christopher Akers
License History

Virginia Marine Resources Commission
License History Report



CHRISTOPHER AKERS
1359 HOSKINS DR
TAPPAHANNOCK, VA 22560-9357
MRC ID: 010719

Phone: 804-447-7284
Eyes: BROWN
Hair: BROWN
Weight: 270
Birth: 7/13/90

License	Tag No.	Gear	Description	Date Sold	Year	Agent	Status
OL926967-001	16224	352	SB BAY TAG TRANSFER	2026-01-13	2025	JRAMS	SOLD
OL920489-001		331	COMM HOOK & LINE STRIPED BA	2025-12-11	2025	09A01	SOLD
OL926655-001		352	SB BAY TAG TRANSFER	2025-12-03	2025	AKENY	SOLD
OL633888-001		500	COMMERCIAL REGISTRATION	2025-11-07	2025	KGUIL	SOLD

Attachment 2
Christopher Akers
Exception Form

VIRGINIA MARINE RESOURCES COMMISSION
FISHERIES MANAGEMENT DIVISION
380 FENWICK ROAD, BUILDING 96
FORT MONROE, VA 23651
EXCEPTION TO DELAYED COMMERCIAL REGISTRATION FORM
(REGULATION 4 VAC 20-610-10 SECTION 30, G)

FAILURE TO PROVIDE ALL INFORMATION WILL DELAY YOUR APPLICATION

FULL NAME: Christopher M. Akers
DMV ID (customer) NUMBER: TL67028138
MAILING ADDRESS: 1359 Hoskins Dr. Tappahannock VA 22560
PHYSICAL ADDRESS: Same as above
DATE OF BIRTH: 7-13-1990 TELEPHONE: (804) 443-7284
HEIGHT: 6ft WEIGHT: 265 EYE COLOR: Brown HAIR COLOR: Brown

REASON FOR CONSIDERATION OF AN EXCEPTION OF THE 2 YEAR DELAY: (SEE ATTACHED EXCERPT FROM
REGULATION 4 VAC 20-610-10)

When I received my License Melanie was not
in the office and I got them from a gentleman
and by mistake I thought it was per calendar
year not every April. This is my first time
having a watermans License my apologies

PLEASE ATTACH ANY ADDITIONAL DOCUMENTS

5-29-26
DATE

Clin Akers
SIGNATURE OF APPLICANT

OFFICE USE ONLY

APPROVED

DENIED

VIRGINIA MARINE RESOURCES COMMISSIONER OR DEPUTY

DATE