## Eastern Shore of Virginia Ground Water Committee November 19, 2024 10:00 a.m.

ESVA Chamber of Commerce 19056 Parkway; Melfa, Virginia 23410



The committee's mandate is to "assist local government and residents of the Eastern Shore in understanding, protecting, and managing groundwater resources, to maintain a groundwater resources protection and management plan, to serve as an educational and informational resource to local governments and residents of the Eastern Shore, and to initiate special studies concerning the protection and management of the Eastern Shore groundwater resource."

## Virtual Attendance:

#### For Joining via Computer:

- 1. Click this link: https://zoom.us/j/7577872936?pwd=QTNJdmhCc3pWdVNUZ0ZWYnVJdWpWUT09
  - 2. If prompted, enter the Meeting ID: 757 787 2936
    - 3. If prompted, enter the Passcode: 7577872936

## For joining via Phone (calling in): 1. Dial 1-646-558-8656

- 2. When prompted for meeting code enter 7577872936#
- 3. When prompted to identify as host or participant, enter #
  - 4. When prompted for password, enter 7577872936#

Translation services available: Call 1-718-838-9317... #6980900. Press 1 for Spanish. Press 2 for Haitian Creole.

Servicios de traducción disponibles: Llame al 1-718-838-9317... #6980900. Presione 1 para español.

Sèvis Tradiksyon Disponib: Rele 1-718-838-9317... #6980900. Prese 2 pou krevàl avisuen.



## Eastern Shore of Virginia Ground Water Committee November 19, 2024 Meeting Agenda

- 1. Call to Order
- 2. Public Participation
- 3. Notes from the October 15, 2024 Meeting & Committee Attendance Record
- 4. Consent Agenda
- 5. October Financial Status Report
- 6. November 19, 2024 Staff Report
- 7. Eastern Shore of Virginia Groundwater Resource Protection and Preservation Plan <a href="https://www.esvaplan.org/wp-content/uploads/2024/05/ESVA-Groundwater-Resource-Protection-And-Preservation-Plan-2013-Full-Plan.pdf">https://www.esvaplan.org/wp-content/uploads/2024/05/ESVA-Groundwater-Resource-Protection-And-Preservation-Plan-2013-Full-Plan.pdf</a>
- 8. November 19, 2024 Ground Water Consultant Report
- 9. Attachments, as needed
- 10. Scheduled Next Meeting for January 21, 2025 at 10:00 a.m. Eastern Shore Chamber of Commerce / Board Room
- 11. Adjournment

TO:

Eastern Shore of Virginia Ground Water Committee

FROM:

Elaine Meil

Executive Director, A-NPDC

DATE:

November 19, 2024

SUBJECT:

Notes of the October 15, 2024 Meeting & Committee Attendance Record

Notes of the October 15, 2024, Eastern Shore of Virginia Ground Water Committee Meeting and the Committee Attendance Record are attached.

Committee approval of the Committee Attendance Record is requested.

## Notes of the October 15, 2024 Meeting Eastern Shore of Virginia Ground Water Committee

The meeting of the Eastern Shore of Virginia Ground Water Committee was held at 10:00 A.M. on Tuesday, October 15, 2024. It was held in person at the Eastern Shore Chamber of Commerce's board room in Melfa, Virginia. Virtual was available for members of the public.

Members Present	Members Absent	Others Present
Sue Mastyl	John Coker, Chairman	Britt McMillan / ARCADIS*
	Mike Mason	Curtis Consolvo / Geo Resources *
	Steve Sturgis	Calvin Washington Sr. / Vice Chairman *
	Grayson Chesser	Eric Luchansky / A-NPDC
	Ann Hayward Walker	Faith Lewis / A-NPDC
	Charles Kolakowski	Mr. Bill / CCGYC *
	Daniel Hershey	Caitlin Kelly *
	Elaine Meil	
	Paul Grossman	

\*Signifies Zoom participation

#### 1. Call to Order

Vice Chairman Washington called the meeting to order at 10:12 a.m. No physical quorum was present. Items for consideration and approval will be considered next month.

## 2. Public Participation

There was no public participation.

## 3. Minutes of the September 17, 2024 Meeting and Committee Attendance Record

Approval of the minutes for September 17, 2024 and the Committee Attendance Record, were tabled until the next meeting.

## 4. September Financial Status Report

The September Financial Status Report was tabled.

## 5. October 15, 2024 Staff Report

#### **Environmental Reviews and Permits:**

None at this time.

### **Groundwater Withdrawal Permits:**

None at this time.

For details please see:

https://www.deg.virginia.gov/permits/public-notices/water/water-withdrawal

## VA Pollutant Discharge Elimination System Program:

- Domestic Sewage Discharges of Less than or Equal to 1,000 Gallons per Day (VAG40)
- Seafood Processing Facilities (VAG52)
- Remediation of Contaminated Sites and Hydrostatic Tests (VAG83)
- Discharges of Stormwater Associated with Industrial Activity (VAR05)
- Non-Metallic Mineral Mining (VAG84)
- Concentrated Animal Feeding Operations (VAG01)
- Concrete Products Facilities (VAG11)
- Vehicle Wash and Laundry Facilities (VAG75)
- Non-Contact Cooling Water Discharges (VAG25)
- Pesticides Discharges (VAG87)

- Watershed Permit for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed (VAN00)
- Potable Water Treatment Plants (VAG64)
- Municipal Separate Storm Sewer Systems (MS4) (VAR04)
- Fundraising Car Wash Guidelines

For details please see:

https://www.deq.virginia.gov/permits/water/surface-waters-vpdes

## **Consent/Enforcement Orders:**

None at this time.

## **Upcoming Events/Meetings:**

Date and 1	<u>lime</u>	<u>Meeting Title</u>	<u>Organization</u>	
Oct-15 2024 (Tue)	9:00 am	Waterbar and Utility Access Road Advisory Committee Meeting #2 Agenda	State Water Control Board	G
Nov-14 2024 (Thu)	9:30 am	Information session and public hearing- Rulemaking to adopt site specific selenium aquatic life criteria for four streams which are tributaries to Knox Creek in Buchanan County	State Water Control Board	Н

For details please see:

https://townhall.virginia.gov/L/meetings.cfm

## **Old Business:**

## Residential Well Testing

An update on the Residential Well Testing Program was given. The committee has received residential water well testing permission slips for approximately 90 some applicants between Accomack County and Northampton County.

The timeframe for collecting the samples will be the last week in October. There will be a minimum of three teams, (2 to a team), going out in the field to collect the samples. If anyone is interested in volunteering with this project, it would be greatly appreciated.

DEQ Response to Town of Cape Charles Permit, GWI000185

Eastern Shore of Virginia Ground Water Committee had suggested a potential tiered permit in our response. The facility was proposing a potential increase in the withdrawal amounts and considering the current trends in chloride monitoring results, the draft permit allows the facility to contact DEQ to discuss the possibility of submitting a major modification when and if the increase occurs. This would put the responsibility on the permit holder.

#### **New Business:**

Remote Policy

The draft remote policy was tabled until the next meeting for possible adoption.

## Water Supply Planning

The final regulations for Local & Regional Water Supply Planning were published in the Virginia Register of Regulations. The link is listed below.

#### https://register.dls.virginia.gov/details.aspx?id=11272

Previously, Accomack County, Northampton County, and the Town of Chincoteague each had their own water supply plan. The addendum to the regulations consolidates all three localities to a region. The region is now known as the Eastern Shore region. GWC Advisor stated he did not notice any changes to the regulations and the contents of the plan. We can bring forward the relevant information from the original plans into the new plan and just make any updates necessary.

Accomack County has designated Jeremy W. Shifflett as the county representative with Stewart Hall the alternate. We have not been informed presently who has been designated for Northampton County. The Town of Chincoteague has designated Mike Tolbert as the town representative and Wes Parks as the alternate.

On December 8, 2024, the region needs to provide DEQ the name of the Regional Planning Area Representative. Previously it was A-NPDC who represented the three localities. This would have to be agreed on by all involved.

Other important dates to be noted are April 7, 2025, for the Regional Planning Area kickoff meeting with DEQ and October 9, 2029, to submit the Regional Water Supply Plan to DEQ.

## 6. Eastern Shore of VA Ground Water Resource Protection & Preservation Plan

The Eastern Shore of VA Ground Water Resource Protection & Preservation Plan needs to be updated. The current plan is in the link below.

https://www.esvaplan.org/wp-content/uploads/2024/05/ESVA-Groundwater-Resource-Protection-And-Preservation-Plan-2013-Full-Plan.pdf

Previously, the Staff had begun a tentative prioritized Scope of Work for discussion purposes. The discussion was tabled until the next Ground Water meeting. Guidance from the Committee was requested.

#### 7. Perdue PFAS Lawsuit

Member Mastyl wanted to bring everyone's attention to a lawsuit against Perdue for their facility (grain storage, feed mill, soybean extraction plant, oilseeds refinery, hatcheries, & marigold greenhouses) in Salisbury, MD, where they discovered PFAS levels that exceeded EPA standards 340-fold. The wastewater from the site (which has the high PFAS levels) is spray-irrigated and directly discharged to Peggy's Branch. Perdue has offered to test homeowners' wells in the area.

Not sure what the source would be for these high PFAS levels, but page 28 of the lawsuit states "Defendants knew or should have known that PFAS contained in materials used in the manufacturing process at Defendants' Agribusiness Facility would result in the release of PFAS into the environment, the contamination of the groundwater, ingestion of the groundwater by the surrounding communities, accumulation of PFAS in the bodies of members of those communities, including Plaintiffs and class members, and adverse health effects to those people, including Plaintiffs and class members." Something we should keep an eye on, since it might be relevant for sites here on the Shore.

The news article is here:

https://www.wboc.com/news/perdue-agribusiness-hit-with-lawsuit-over-forever-chemicals-in-wic omico-county/article 5fe6cd70-8a41-11ef-b60d-ef751923f735.html

The pdf of the lawsuit is here:

https://bloximages.newyork1.vip.townnews.com/wboc.com/content/tncms/assets/v3/editorial/e/bc/ebc2383c-8a57-11ef-b87e-77e900e096fe/670d5f45d5885.pdf.pdf

Everyone agreed it was something to keep informed on this matter.

## 8. October 15, 2024 Groundwater Consultant Report

GWC Advisor McMillan stated for the first time in a long time there were no draft permits. There were 24 draft permits submitted for FY2024, October 2023 thru September 2024. Seven of these permits used the surficial aquifer for at least a portion of their supply. Five of these seven permits were used for agriculture. Two of the seven permits used were used for their public water supply.

The permitted amounts don't directly translate to what is actually used. For industrial and public use, it's usually 80% or more of what is permitted. For agriculture it's much less because the permit is based on the assumption of it being used during a dryer, drought period. It was noted for the first time in FY2024 an exceedance of the 80% drawdown criteria. The drawdown criteria prevents new or expanded groundwater withdrawals from occurring in an area that extends into what DEQ refers to as a critical cell. DEQ monitors the excessive drawdowns which could result in permanent reduction in aquifer productivity by dewatering an aquifer. The two areas where it exceeded were near Tyson which was in the Upper Yorktown-Eastover Aquifer and near Perdue in the Middle Yorktown-Eastover Aquifer. The Perdue Farms' 80% drawdown resulted in a tiered reduction on the permitted withdrawal amount. First time this has occurred on the Eastern Shore. We are pushing the use of the surficial aquifer because the 80% drawdown criteria does not apply to the surficial aquifer.

The annual Virginia Water Resources Report for the Commonwealth was released in October 2024 for the 2023 calendar year. The report is available at the link below: <a href="https://rga.lis.virginia.gov/Published/2024/RD512/PDF">https://rga.lis.virginia.gov/Published/2024/RD512/PDF</a>

A new Eastern Shore model is nearing completion. The new model will include the updated hydrogeologic information and the results of a detailed review of water use, including better characterization of surficial aquifer use. The new model will also incorporate the new framework and water use data including domestic use estimates.

DEQ had a mandate to greatly reduce the backlog of ground water withdrawal and surface water withdrawal permit applications. Vacancy rates within the permit program remain a consistent challenge. They are continuing to work to fill these vacancies through continuous recruitment strategies.

The report also provided ground water and surface water withdrawals for Accomack and Northampton County for calendar year 2023. This reflects all ground water use except for domestic wells. All of the surface water withdrawals on the Eastern Shore were used for non potable uses (agricultural and non-agricultural irrigation, cooling water, etc.).

Reported Water Use Summary for Calendar Year 2023

Locality	Groundwater (MGD)	Surface Water (MGD)	GW+SW (MGD)
Accomack County	5.23	5.61	10.84
Northampton County	1.01	0.93	1,95
Total	6.24	6.54	12.79

Note: The Groundwater withdrawal amounts include only reported withdrawals (> 300,000 gal/month) and does not include use by individual domestic wells.

#### 9. Attachments

## 10. Scheduled Next Meeting

The next scheduled meeting for the Ground Water Committee will be held on Tuesday, November 19, 2024, at 10:00 a.m. - 12:00 p.m. The meeting will be held at the Eastern Shore Chamber of Commerce's Board Room in Melfa, Virginia.

## 11. Adjournment

Vice Chairman Washington made the motion to adjourn. It was seconded by Member Mastyl, the motion was carried by unanimous vote.

The meeting was adjourned at 10:58 a.m.

Calvin Washington, Vice Chairman

Elaine K. N. Meil, Secretary/Treasurer



## EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE FY 2025 ATTENDANCE RECORD

	Term												
Member	Ехр.	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
				AC	COMA	CK COU	VTY		_	1		т	1
Calvin Washington Sr.	Vice Chair, July 2025	*	х	x	х								
Paul Muhly	Vice Chair; Next vote: July2025	*	-	_	_								
Dan Hershey	June 2025	*	х	x	1						:		
Grayson Chesser	June 2023	*	х	1	1								
Sue Mastyl	April 2025	*	х	х	х								
				NOR	ТНАМР	TON CO	צדאט						
John Coker	Chair; Next Vote: July2025	*	1	,	1				***************************************				
Paul Grossman	March 2024	*	х	x	1								
Steve Sturgis	July 2024	*	х	1	}								
Ann Hayward Walker	December 2024	*.	х	1	1								
					т	Λ	ION-VC	TING EX	-OFFICI	) MEMI	BERS		
Charles Kolakowski	NA	*	1	x	1				***************************************				
Mike Mason	NA	*	1	1	1								
Elaine Meil	NA	*	x	х	1								
•	Not a <u>M</u> e		Poster Andrews	Х		Memb Preser		-	0		Alterna Presen	ıt	
*	No Meeti	ng Held	1	NA		Not Appli	cable	***************************************		/	Absen	t	ļ











TO:

Eastern Shore of Virginia Ground Water Committee

FROM:

Elaine Meil

Executive Director, A-NPDC

DATE:

November 19, 2024

SUBJECT:

Consent Agenda For The October 15, 2024 Meeting

The following items are presented for consideration and approval:

A. Adoption of the Meeting Minutes - September 17, 2024 Committee adoption of the September 17, 2024 minutes was requested.

B. Approval of the September Financial Statement
The Financial Statement was presented. Board approval of the financial statement was requested.

Board approval of the Consent Agenda is requested.

TO:

Eastern Shore of Virginia Ground Water Committee

FROM:

Sandy Taylor

Director of Administration, A-NPDC

DATE:

November 19, 2024

SUBJECT:

October 2024 Financial Statement

Attached is the October 2024 Eastern Shore of Virginia Ground Water Financial Statement.

Committee approval of the October 2024 Financial Statement is requested.

# **Eastern Shore of Virginia Ground Water Committee**

## **Financial Statement**

October 2024

	<u>BUDGET</u>		Current Period Activity		Year to Date Activity		<u>Balance</u>
Ground Water Consultant	\$	21,666.00	\$	5,416.50	\$	10,833.00	\$ 10,833.00
Ground Water Modeling Run	\$	16,000.00	\$		\$	_	\$ 16,000.00
Ground Water Committee Staff Support	\$	20,000.00	\$	2,372.89	\$	6,531.73	\$ 13,468.27
Ground Water Committee Member Fees	\$	5,000.00	\$	694,60	\$	1,338.48	\$ 3,661.52
USGS Ground Water Model	\$	15,000.00	\$	-	\$	-	\$ 15,000.00
Ground Water Plan Project Implementation #1 Well Testing	\$	73,000.00	\$	2,469.10	\$	7,384.07	\$ 65,615.93
Ground Water Plan Project Implementation #2 TBD	\$	57,489.00	\$	-	\$	-	\$ 57,489.00
TOTAL	\$	208,155.00	\$	10,953.09	\$	26,087.28	\$ 182,067.72

# Bills Payable as of October 31, 2024

<u>DUE TO</u>	DATE	DESCRIPTION		<u>AMOUNT</u>
Arcadis A-NPDC A-NPDC	10/30/2024 Oct 2024 Oct 2024	Staff Support-GW Staff Support-WT	\$ \$ \$	5,416.50 2,372.89 2,469.10
Members	10/17/2024  Total Bills Payable	Comm Member Fees	\$	694.60 <b>10,953.09</b>

TO:

Eastern Shore of Virginia Ground Water Committee

FROM:

Elaine Meil

Executive Director, A-NPDC

DATE:

November 19, 2024

SUBJECT:

November 2024 Staff Report

## **Old Business:**

## Residential Well Testing Update:

The residential well testing collection was a success. Samples were collected between October 28 through October 31. Britt McMillan will be presenting on the testing results in his report.

## **New Business:**

#### **Budget Call**

Staff recommends the Committee request level funding for the FY26 Budget Call for Accomack (\$65,021) and Northampton (\$42,606).

## Permission to submit the budget call with level funding is requested.

## Remote Policy

As discussed, a draft policy is presented below.

## Adoption of the policy is requested.

Policy Expires xxxxxxxxxxxx

## Eastern Shore of Virginia Ground Water Committee Policy for Remote Participation

Pursuant to § 2.2-3708.3 of the Code of Virginia, as amended, the following policy is established for remote electronic participation in Committee meetings.

- A. A Committee Member may participate in a meeting through electronic communication means from a remote location that is not open to the public only as follows:
- 1. A personal matter.

- a. Prior to a meeting, the member shall notify the Chair of the Eastern Shore of Virginia Ground Water Committee (the "Committee") that the member is unable to attend the meeting due to a personal matter. The member must identify with specificity the nature of the personal matter. The Chair determines whether or not to permit remote participation.
- b. A quorum of the Committee must be physically assembled at the primary or central meeting location. The decision to permit remote participation shall be based solely on the criteria in this resolution, without regard to the identity of the member or matters that will be considered or voted on during the meeting.
- c. The Secretary of the Committee shall record in the Committee's minutes the specific nature of the personal matter and the remote location from which the absent member participated.
- d. Participation by the absent member due to a personal matter shall be limited in each calendar year to three (3) meetings. Remote participation shall be counted against the member's limit even if an all-virtual meeting is subsequently called due to lack of a quorum in the primary meeting location.
- 2. A temporary or permanent disability. The member shall notify the Chair of the Committee that the member is unable to attend the meeting due to a temporary or permanent disability or medical condition, as defined by § 51.5-40.1, as amended, that prevents his or her physical presence. A member who uses the temporary or permanent disability remote participation counts toward the quorum as if the individual was physically present. The Secretary of the Committee shall record the location from which the member participated and the general reason for remote participation; temporary or permanent disability.
- 3. Medical condition of family member or caregiver. The member shall notify the Chair of the Committee that the member is unable to attend the meeting due to a medical condition of a family member that prevents physical attendance or the member is a caregiver who must provide care for a person with a disability at the time of the public meeting. A member who uses the medical condition of a family member or caregiver remote participation counts toward the quorum as if the individual was physically present. The Secretary of the Committee shall record the location from which the member participated and the general reason for remote participation; medical condition of family member or caregiver.
- 4. If the absent member's remote participation is disapproved because such participation would violate this policy, such disapproval shall be recorded in the Committee's minutes with specificity.
- 5. For any remote participation, the Commission shall make arrangements for the voice of the absent member or members to be heard by all persons in attendance at the meeting location.
- 6. Should technological problems occurring during a meeting interrupt a Member's remote participation, when the problem becomes known, the Chair, at his discretion, may briefly call a recess to address the problem. If the problem cannot be resolved at the end of a brief recess, the meeting will continue from the

point of recess so as to complete the business of the Committee. The Member's inability to participate remotely shall be recorded as an excused absence from the point of interruption.

## B. All-Virtual Public Meeting

Committee meetings will only be all-virtual only as follows:

- 1. The Chair determines there exists a condition where an all-virtual meeting serves the public interest and calls an all-virtual meeting that meets the following requirements.
  - a. Electronic access must be provided to the public.
- A monitored phone number must be publicly provided so the Committee can be alerted if the
  transmission of the meeting provided by the Committee fails. Failure of the Committee
  transmission requires the Committee to take a recess until public access is restored.
- 3. The agenda and agenda packet, unless exempt, must be provided to the public at the same time as the members.
- 4. The public is afforded the opportunity to comment virtually, including by way of written comments, when comments are customarily received.
- 5. No more than two members are together in any one remote location unless that location is open to the public.
- 6. Committee transmission to the public resumes before the public body votes to certify any closed session.
- 2. All-virtual meetings can only be held five (5) times per calendar year.

C. Committees, subcommittees or other entities designated by the Committee that perform delegated functions of the Committee or advise the Committee can hold all-virtual meetings determined by the Chair or members so long as they meet the requirements of B.1 through B.6.

## Water Supply Planning

## Virginia Register of Regulations for Local & Regional Water Supply Planning

The final regulations for Local and Regional Water Supply Planning were published in today's <u>Virginia Register of Regulations</u>. The link is below.

https://register.dls.virginia.gov/details.aspx?id=11272

Accomack County has designated Jeremy W. Shifflett as the county representative with Stewart Hall the alternate.

The Town of Chincoteague has designated Mike Tolbert as the town representative and Wes Parks as the alternate.

Northampton County will consider the matter at the November 12th Board meeting.

## **Environmental Reviews and Permits:**

None at this time.

## **Groundwater Withdrawal Permits:**

Groundwater Withdrawal in Accomack County, Virginia - GWI000206

Public Comment period: October 18, 2024 - November 18, 2024

Applicant name, address and permit number: ESYCC, Inc.; 14221 Country Club Road, Melfa, VA

23410; GWI000206

Name and Location of Water Withdrawal: Eastern Shore Yacht & Country Club; 14221 Country Club

Road, Melfa, VA 23410

For details please see:

https://www.deg.virginia.gov/permits/public-notices/water/water-withdrawal

#### VA Pollutant Discharge Elimination System Program:

- Domestic Sewage Discharges of Less than or Equal to 1,000 Gallons per Day (VAG40)
- Seafood Processing Facilities (VAG52)
- Remediation of Contaminated Sites and Hydrostatic Tests (VAG83)
- Discharges of Stormwater Associated with Industrial Activity (VAR05)
- Non-Metallic Mineral Mining (VAG84)
- Concentrated Animal Feeding Operations (VAG01)
- Concrete Products Facilities (VAG11)
- Vehicle Wash and Laundry Facilities (VAG75)
- Non-Contact Cooling Water Discharges (VAG25)
- Pesticides Discharges (VAG87)
- Watershed Permit for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed (VAN00)
- Potable Water Treatment Plants (VAG64)
- Municipal Separate Storm Sewer Systems (MS4) (VAR04)

For details please see:

https://www.deq.virginia.gov/permits/water/surface-waters-vpdes

## **Consent / Enforcement Orders:**

N/A

## **Upcoming Events/Meetings:**

<u>Date and Illin</u>	<u>e_</u> ∜	<u>Meeting Title</u>	<u> Board</u>	
Nov-14 2024 (Thurs)	9:30 am	Information session and public hearing- Rulemaking to adopt site specific selenium aquatic life criteria for four streams which are tributaries to Knox Creek in Buchanan County	State Water Control Board	Н
Nov-19 2024 (Tues)	9:00 am	Waterbar and Utility Access Road Advisory Committee Meeting #3	State Water Control Board	G
Dec-20 2024 (Fri)	10:00 am	Technical Advisory Committee for General Virginia Pollutant Discharge Elimination System Watershed Permit Regulation for Total Nitrogen and Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia (9 VAC 25 - 820)	State Water Control Board	R

For details please see:

https://townhall.virginia.gov/L/meetings.cfm

TO:

Eastern Shore of Virginia Ground Water Committee

FROM:

Elaine Meil

Executive Director, A-NPDC

DATE:

November 19, 2024

SUBJECT:

Ground Water Plan Update

The Eastern Shore Ground Water Resource Protection and Preservation Plan needs to be updated. The plan was shared with the Committee in July. The plan's direct link is also below. Staff has begun a tentative prioritized Scope of Work for discussion purposes.

 $\underline{https://www.esvaplan.org/wp-content/uploads/2024/05/ESVA-Groundwater-Resource-Protection-And-Preservation-Plan-2013-Full-Plan.pdf}$ 

## Guidance is requested.

Staff has reviewed the plan and noted several items that need particular attention.

 Create a short chapter that summarizes all existing recommendations in one table, update recommendations status. Include any new recommendations with a call out noting year of addition.

In the form of a memo update.

- 2. Update Research Needs
  - a. Update existing needs with research that has been completed.
    - i. Incorporate discussion of Saltwater Intrusion
    - ii. USGS-DEQ Groundwater Framework
    - iii. PFAS at Wallops Flight Facility
    - iv. USGS new groundwater model
    - v. Other?
- 3. Discussion with USGS on coordinating research priorities
- 4. Create narrative addition to a chapter that updates the plan to include the poultry house expansion.
  - a. Address the answer to why DEQ had to reduce Perdue's GW permit and define the flaw in the current system and determine potential options to fix that flaw.
- 5. Create narrative addition to a chapter that discusses climate impacts.
- 6. Update 5.4 Columbia Aquifer to include well testing results.
- 7. Develop new recommendations

a.

8. Other

TO:

Eastern Shore of Virginia Ground Water Committee

FROM:

Britt McMillan

Principal Hydrogeologist, Arcadis

DATE:

November 19, 2024

SUBJECT:

November 19, 2024 Ground Water Consultant Report

Please see the attached November 19, 2024 Ground Water Consultant Report.

TO:

Eastern Shore of Virginia Ground Water Committee

FROM:

Britt McMillan

Principal Hydrogeologist

Arcadis

DATE:

November 19, 2024

SUBJECT:

November 19, 2024 Ground Water Consultant Report

## Technical/Regulatory/Educational Items

1. One draft permit was submitted for public comment on or after October 15, 2024: Eastern Shore Yacht and Country Club (GWI000206). This draft permit is a renewal of a current valid permit. DEQ is accepting public comment on the draft Eastern Shore Yacht and County Club permit through November 18, 2024. Copies of 1) the draft Permit, 2) associated Fact Sheets that provide information on the basis for the permit conditions, and 3) instruction on providing public comment are available on the DEQ website under the heading "Contact for public comments, document requests and additional information":

https://www.deq.virginia.gov/permits/public-notices/water/water-withdrawal

Facility		Type		Aqu	ifers YTEO		New		Praft Permit (Gal)		Perce n-tile	Public Comment
Permit No	Name	N. S.	S	U	Μ	L	N. S.	Monthly	Annual	Increase		Deadline
GWI000206	Eastern Shore Yacht and County Club	ı	<b>√</b>	<b>√</b>			N	5,000,000	14,660,000	-19%	39%	Nov 18

Notes:

Type:

A = Agriculture

CA = CAFO (Confined Animal Feeding Operation)

I = Industrial

P = Public Water Supply

Aquifers:

S = Surficial aguifer (the % indicates the percent of the total withdrawal from the surficial aquifer)

YTEO = Yorktown-Eastover aquifer system

U, M, L = Upper, Middle, Lower YTEO

New:

Y = New Permit

N = Re-issued Permit

Percentile: Compares annual amount to other permitted withdrawals on the Eastern Shore. For a percentile of 75%, 75% of the permits are less than the draft permit and 25% are greater. Large withdrawals (> 75-percentile) are presented in orange.

Facility		Specia	Special Conditions				
Permit No	Name	WQ	Alt	Other			
GWI000206	Eastern Shore Yacht and County Club	✓		Chioride monitoring. Well video logging, pump reset, pond water level control, well abandonment.			

Draft Eastern Shore Yacht and County Club (GWI000206) is for a renewed permit for an existing groundwater withdrawal with a requested amount of 14,660,000 gallons/year and a maximum month amount of 5,000,000 gallons. The current permit was issued September 1, 2013 and expired August 31,2023 and has been administratively continued. The current permit issued (issued as GW0043702) was to withdrawal 18,000,000 gallons per year and 6,000,000 gallons per month. The draft permit is requesting a lower amount that represents a 19% reduction.

Groundwater use is for golf course irrigation, swimming pool filling, facility maintenance and potable supply (restrooms and clubhouse restaurant). Irrigation water is used to supplement water in ponds for irrigation.

Water is supplied from six wells, for are screened in the Upper Yorktown-Eastover aquifer one in the Surficial aquifer and one is believed to be shallow and screened in the Surficial aquifer.

DEQ No.	Well No.	Screen Interval (ft bgs)	Estimated Aquifer	Use	Apportioned Withdrawal (%)
100-00856	N17	160-180	Upper Yorktown-Eastover Aquifer	Irrigation	62
100-00857	<b>12</b> S	160-180	Upper Yorktown-Eastover Aquifer	Irrigation	0.2
100-00858	2	165-185	Upper Yorktown-Eastover Aquifer	Potable	1.3
100-00950	6	160-180	Upper Yorktown-Eastover Aguifer	Pool	17.7
100-00860	3	40-50	Surficial	Maintenance	1,2
100-00882	4	UNK	Surficial	Restrooms	17.6

<u>Withdrawal Amounts</u>: The requested withdrawal amount of 14,660,000 gal/year is a 19% reduction from the current permit. The amount requested is for a moderate amount, 61% of the permitted withdrawals on the Shore are greater. From the Fact Sheet: "Since 2016, there has been a steady increase of withdrawals from approximately 2,000,000 gal/year to approximately 12,000,000 gal/year. This increase is a direct result of the irrigation system being upgraded in order to water more acres of turf." The draft withdrawal amount was established as a 20% buffer above the peak (2021) use.

Note: while the draft permit amount represents a 19% decrease from the current amount, actual use over the past permit period increased 500% (from 2,000,000 gal/year to 12,000,000 gal/year).

Alternative Sources (Surficial aquifer): The Fact Sheet States: The "Site specific investigations of the Surficial aquifer have been required for Poultry Farms and new or expanded facilities on the Eastern Shore. Since the permitted withdrawals are not an increase to an existing permitted facility, a site-specific investigation of the Surficial aquifer is recommended but not required during this permit term."

Potential for Saltwater Intrusion: As part of the technical analysis the potential for saltwater intrusion to occur is evaluated through the VAHydroGW-ES model based on the 1) simulated change in chloride levels and 2) simulated change in vertical flow between the Yorktown aquifers. Based on the model result DEQ found that the "Modeling results indicate a potential for reduced water quality as a result of the proposed withdrawal. The results indicate that one model cell in the Upper Yorktown-Eastover aquifers simulates an increase in chloride concentration greater than 250 mg/L due to the proposed withdrawal." And "Chloride monitoring in the South Irrigation Well (12S) (DEQ Well #100-00857) screened in the Upper Yorktown-Eastover aquifer shows a gradual increase in chloride concentrations from 2003 to 2012 followed by a drop in 2013 and 2014 and then another gradual increase to the most recent concentrations between 50 mg/L and 70 mg/L. Continued chloride monitoring of this well is required in the GWI000206 permit.

## **Special Conditions:**

- 1) Geophysical Logging at two locations: near Golf Course Restroom Well (4) and Maintenance Shed Well (3) and the other near the Clubhouse Well (2) and Pool Well (6).
- 2) Pump intake determination and reset if needed based on the geophysical log information.
- 3) Camera survey of the Golf Course Restroom Well (4) to determine well depth, casing size(s) and type(s), and screen interval(s).
- 4) Water Quality Monitoring for chlorides from South Irrigation Well (12S)

## **Additional Remarks:**

Note that legislation was passed in 2020 to prohibit nonagricultural irrigation wells except in the surficial aquifer. The exception is "wells constructed prior to the effective date of the regulations". The following is the text of the legislation:

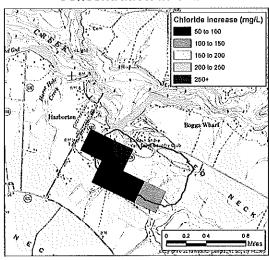
§ 62.1-258.1. Irrigation wells for nonagricultural use prohibited; exceptions. (2020). Unless the Department of Environmental Quality has determined that the quantity or quality of the ground water in the surficial aquifer is not adequate to supply the proposed beneficial use, it shall be unlawful in a ground water management area for any person to construct a well for nonagricultural irrigation purposes except in the surficial aquifer. The provisions of this section shall not apply to wells constructed prior to the effective date of regulations adopted pursuant to subsection H of § 62.1-266.

The Eastern Shore Yacht and Country Club wells were all constructed prior to the effective date of the regulations and therefore are <u>exempt</u> from the regulations.

Regarding the potential for saltwater intrusion, Eastern Shore Yacht and Country Club is located near the mouth of Taylor Creek (a tributary of Pungoteague Creek) in an area where the freshwater lens naturally thins as it approaches the Bay. Fresh groundwater is expected to be naturally limited in this area. The model predicted increase exceeding 250 mg/L in the "Upper Yorktown-Eastover aquifer" in an area that underlies the Country Club. The model is predicting either brackish surface water from Taylor Creek will seep through the clay confining unit or brackish water from the underlying Middle Yorktown-Eastover aquifer will migrate upward. This is reasonable and is consistent with measured water quality changes observed in one of the irrigation wells (12S).

The water quality monitoring from 12S confirms that saltwater intrusion, has occurred in the Upper Yorktown-Eastover aquifer and the increase likely occurred as a result of the withdrawal.

# Eastern Shore Yacht and Country Club Upper Yorktown-Eastover Aquifer Simulated VESM Chloride Concentration Increase



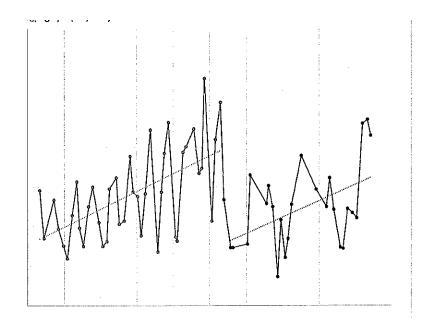
Upper Yorktown-Eastover Aquifer AOI

Technical Evaluation performed by Aquaveo, LLC for the Virginia DEQ, Office of Water Supply September 6, 2024

Simulated chloride concentration increase in the Upper Yorktown-Eastover aquifer resulting from a 50 year simulation of 9,400,000 gallons per year from the Columbia and Upper Yorktown-Eastover aquifers.



An additional consideration is, groundwater has been used wells for greater than 10-years, and the amount that will be used will not increase over historical use. Any change in chloride levels would likely have already occurred (the model analysis is based on no-pumping compared to pumping, rather than pumping at 2023 rates compared to the next permit term).



What is uncertain, if pumping stabilizes at the current rate, if chloride levels will continue to increase. The draft permit by requiring continued monitoring of 12S will address this question.

Based on the DEQ Groundwater Withdrawal Regulations, it appears that the draft Eastern Shore Yacht and County Club permit complies with the regulations. Of specific note, because the irrigation wells were constructed before 2020, the withdrawal is exempt from the prohibition in the § 62.1-258.1 legislation.

While the permitted amount will be less than the current amount, with the decrease representing a 19% reduction, over the past permit term, actual irrigation use increased 500% from a new irrigation system that was installed at the Country Club. This increase is likely responsible for the increased chlorides observed in the Upper Yorktown-Eastover well 12S between 2014 and 2022.

As demonstrated by the two wells in the Surficial aquifer, it is evident the surface water is available to provide irrigation water to the ponds. Given the above circumstances, while this withdrawal may meet the letter of the regulations, it may conflict with the intent of the *Ground Water Supply Protection and Management Plan for the Eastern Shore of Virginia* and may have a detrimental effect on the ground water resource.

Additionally, DEQ has the discretion under the regulations to require more action based on:

- 1) Degradation of water quality as demonstrated by both the model results and measured chloride concentrations in well 12S. At a minimum, this action could be requiring an assessment of the surficial aquifer (which there are already two surficial aquifer wells installed).
- The requirement that "the lowest quality of water needed for the intended beneficial use".

Public Comments end November 18. A comment with the introduction using "#3" below along with a statement that, given the documented saltwater intrusion, and the documented availability of the surficial aquifer, the Groundwater Committee believes increased use of the surficial aquifer for irrigation water is warranted, and that a minimum, an assessment of the surficial aquifer should be required within the permit term.

**Public Comments:** Previously, the Groundwater Committee responded to all draft Permits as part of the public comment phase. These comments were provided at a time DEQ gave the Groundwater Committee a "courtesy copy" of the draft Permit prior to the 30-day comment period. After DEQ ceased

providing the courtesy copy and given the shorted time frame to address comments, this practice ceased. With the large

number of recent draft permits it would be beneficial to comment on draft permits as necessary. Given the shortened response period (compared to the past), it is helpful to have structured response options along with individualized comments. Four structured response options are provided below:

- 1. "The Committee believes that the proposed withdrawal is consistent with the intent of the Ground Water Supply Protection and Management Plan for the Eastern Shore of Virginia and the Virginia Ground Water Management Act, and that the draft permit provides adequate protection for the ground water resource. Therefore, the Eastern Shore of Virginia Groundwater Committee supports the proposed Ground Water Withdrawal Permit." {add qualifying text, such as citing beneficial uses or concerns regarding implementation}
- 2. "The Committee believes that the proposed withdrawal is substantially consistent with the intent of the *Ground Water Supply Protection and Management Plan for the Eastern Shore of Virginia* and the *Virginia Ground Water Management Act*, and that the draft permit provides protection for the ground water resource. Therefore, the Eastern Shore of Virginia Groundwater Committee does not object to the proposed Ground Water Withdrawal Permit." {add qualifying text, such as citing beneficial uses or concerns regarding implementation}
- 3. "Based on the information provided, the Committee believes that the proposed withdrawal may conflict with the intent of the *Ground Water Supply Protection and Management Plan for the Eastern Shore of Virginia* and the *Virginia Ground Water Management Act*, and may have a detrimental effect on the ground water resource. Therefore, the Eastern Shore of Virginia Groundwater Committee would like several issues clarified before the Ground Water Withdrawal Permit is issued." {add qualifying text that specifies the issues, such as definition of the impact area, water conservation requirements, or monitoring}
- 4. "Based on the information provided, the Ground Water Committee believes that the proposed withdrawal may conflict with the intent of the Ground Water Supply Protection and Management Plan for the Eastern Shore of Virginia and the Virginia Ground Water Management Act, and may have a detrimental effect on the ground water resource. Therefore, the Eastern Shore of Virginia Groundwater Committee has concerns about the Draft Ground Water Withdrawal Permit and believes that a Public Hearing is appropriate to resolve these concerns." {add qualifying text that specifies the issues, such as definition of the impact area, water conservation requirements, or monitoring}

**Eastern Shore of Virginia Residential Well Sampling:** Groundwater from eighty eight residences were sampled in October with samples delivered to a Virginia accredited laboratory for analysis. The samples are still being processed. Preliminary results available as of November 17, 2024 will be presented at the meeting.