Eastern Shore of Virginia Ground Water Committee September 17, 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 #
 - 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.

Sèxis Tradiksyon Disponih; Rele 1-718-838-9317 ... # 6980900. Peze 2 pou krevòl avisyen.

Eastern Shore of Virginia Ground Water Committee September 17, 2024 Meeting Agenda

- 1. Call to Order
- 2. Public Participation
- 3. Minutes of the August 20, 2024 Meeting & Committee Attendance Record
- 4. August Financial Status Report
- 5. September 17, 2024 Staff Report
- 6. Residential Well Testing Program
- 7. Eastern Shore of Virginia Groundwater Resource Protection and Preservation Plan https://www.esvaplan.org/wp-content/uploads/2024/05/ESVA-Groundwater-Resource-Protection-And-Preservation-Plan-2013-Full-Plan.pdf
- 8. September 17, 2024 Ground Water Consultant Report
- 9. Attachments, as needed
- 10. Schedule Next Meeting for October 15, 2024 at 10:00 a.m. Eastern Shore Chamber of Commerce / Board Room
- 11. Adjournment

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee

FROM: Elaine Meil

Executive Director, A-NPDC

DATE: September 17, 2024

SUBJECT: August 20, 2024 Meeting Minutes

Minutes of the August 20, 2024, Eastern Shore of Virginia Ground Water Committee Meeting and the Committee Attendance Record are attached.

Committee approval of the August 20, 2024, minutes is requested.

Minutes of the August 20, 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, August 20, 2024. It was held in the hybrid format - virtually on the ZOOM Platform and in person at the Eastern Shore Chamber of Commerce's board room in Melfa, Virginia.

Member's Present	Member's Absent	Others Present
Calvin Washington Sr. / Vice Chairman	John Coker, Chairman	Britt McMillan / ARCADIS*
Steve Sturgis	Mike Mason	Curtis Consolvo / Geo Resources *
Paul Grossman	Charles Kolakowski	Joseph Betit
Daniel Hershey		Jason Pope / USGS*
Sue Mastyl		Faith Lewis / A-NPDC
Grayson Chesser		Sam Caldwell / USGS *
Ann Hayward Walker		
Elaine Meil		

*Signifies Zoom participation

1. Call to Order

Vice Chairman Washington called the meeting to order at 10:00 a.m.

2. **Public Participation**

Joseph Betit, Earth Systems Management, updated the committee on the drones which performed mapping in shallow water.

3. Minutes of the June 18, 2024 Meeting and Committee Attendance Record

Approval of the minutes for June 18, 2024 and the Committee Attendance Record, were requested.

Member Grossman moved to approve the minutes from the June 18, 2024 meeting and the Committee Attendance Record. It was seconded by Member Walker, the motion was carried by unanimous vote.

4. **FY2025 Budget**

The Proposed FY2025 Budget was presented to the committee.

Member Grossman moved to adopt the FY2025 Budget. It was seconded by Member Hershey. The motion was carried by unanimous vote.

5. July Financial Status Report

The July Financial Status Report was presented.

Member Grossman moved to approve the July Financial Status Report as presented. It was seconded by Member Walker. The motion was carried by unanimous vote.

6. August 20, 2024 Staff Report

Environmental Reviews and Permits:

Public Comment Period: 07/31/2024 - 09/01/2024

Name, Address, and Permit Number of Application: Hampton Roads Sanitation District; 1434 Air Rail Avenue, Virginia Beach, VA 23455, Permit No. VA0091049

Name and Address of Facility: Hampton Roads Sanitation District - Island Utilities; 3855 South Main Street, Chincoteague, VA 23336

Project Description: The purpose of this notice is to seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater into a waterbody in Chincoteague, Virginia.

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:

N/A

Groundwater Withdrawal Permits:

Groundwater Withdrawal in Northampton County, Virginia - GWI000167

Public Comment Period: August 02, 2024 - September 03, 2024

Applicant name, address and permit number: Coastal Precast Systems III LLC; 1316 Yacht

Drive, Suite 307, Chesapeake, VA 23320; GWI000167

Name and Location of Water Withdrawal: Coastal Precast Systems - Cape Charles; 1134

Bayshore Lane, Cape Charles, VA 23310

For details please see:

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

Date and 1	<u>ime</u>	Meeting Title	<u>Organization</u>
Aug-08 2024 (Thu)	9:00 am	Technical Advisory Committee Meeting for 9VAC25-110 Virginia Pollutant Discharge Elimination System (VPDES) General Permit Regulation for Seafood Processing Facilities Agenda	State Water Control Board

For details please see: https://townhall.virginia.gov/L/meetings.cfm

Old Business:

None

New Business:

Britt McMillan, from Arcadis, will be doing a presentation on Monday, August 26, 2024, at 7:00 P.M. for the Onancock Town Council Meeting. This will be a presentation on the Technical Evaluation for the Proposed Groundwater Withdrawal regarding the new housing development, known as Coastal Square, located on Fairgrounds Road in Accomack County. Arcadis assisted the town with their Technical Evaluation and will be presenting via zoom.

Technical Evaluation available on the Onancock website.

https://onancock.com/wp-content/uploads/2024/07/GW0049201_Town-of-Onancock_Technical_Analysis.pdf

The Town of Onancock provided the following update via their Manager's Minutes (July 30, 2024 edition).

This is a housing project on Fairgrounds Rd, approved by the County (as it is not in town). The developer has applied to the town to provide water service, which would significantly increase the town's water volume after the phased project is complete.

Can the town's equipment and infrastructure handle this increased volume?

- Yes, but we are confirming. The system was initially constructed to process 219m gallons per year. The town currently withdraws 80+ m gallons per year, and this project (after all 12 phases) has aggressive estimates of using 40 m gallons per year.
- The Town is contracting with an engineering firm to inspect and verify our existing equipment to ensure it can produce this additional volume.

Will this affect the water quality or the condition of the aquifer?

- DEQ is the state agency that manages groundwater withdrawal. A technical report is required that thoroughly answers all these questions. It is available on our website.
- The author of this report is presenting at the 8/26/24 Town Council meeting and will address these questions.

How much will this cost the town and how will it affect my water rate?

- The developer is responsible to connect to our current water distribution system at their expense.
- Adding volume to our distribution will reduce your water rates. More people will be paying the costs and debt for the system.

The Town Council has much to consider, and you will be informed throughout the process."

7. Residential Well Testing Program

The committee has 140 residential water well tests to be spread between both counties. Accomack County (90) and Northampton County (50). A-NPDC sent letters to residents from a previous report. It was advertised in the Eastern Shore Post as well as a paid advertisement was placed on Facebook to gain more exposure and interest. Fliers were placed in all Post Offices in Accomack and Northampton County. We currently have acquired 50 in Accomack County and 35 in Northampton County. The committee was asked to spread the word to the public to increase the numbers. A map was supplied to the committee to visualize the areas to concentrate further efforts. Permission slips were available for the committee to take. We are looking for a total number of 90 for Accomack County and 50 for Northampton County.

The agreement is between Arcadis U.S. Inc. (Arcadis) and Accomack-Northampton Planning District Commission (Client). Arcadis will provide a field sampler for seven days. Staffing is of great importance and need. It will require staff from the Ground Water committee as well as the A-NPDC. A minimum of four teams is necessary but more would be better. Volunteers were asked to participate in this event. This would be held in the month of October 2024. The teams will consist of two people.

Those interested can return the permission slips to the office by mail or put in the drop box. The permission slip can be scanned and emailed to Faith Lewis. The advertisement will be added to A-NPDC's website with a link specific to the permission slip.

Staff from Arcadis and A-NPDC discussed what would happen if the amount of tests ended up being lower than 140 tests. The extra funds would automatically go into the analysis of the results of the tested samples. The courier picking up the samples will be provided by the lab.

8. Article on Water Harvesting

Member Mastyl mentioned to the Committee for those interested an article on Water Harvesting.

The link is listed below: https://www.whro.org/environment/2024-06-28/newport-news-auto-shop-owner-helped-change-virginia-law-on-rainwater-harvesting

9. June 18, 2024 Groundwater Consultant Report

GWC Advisor McMillan referred to two draft permits which were submitted for public comment. Coastal Precast Systems III LLC, (GWI000167) and Town of Cape Charles, (GWI000185). Both are renewals of current valid existing groundwater withdrawal permits.

The Coastal Precast Systems III LLC permit is requesting 27,000,000 gallons per year and 3,000,000 gallons a month. The water is supplied from seven wells, screened in the Upper And Middle Yorktown Eastover Aquifers. The majority will be from the Middle Yorktown-Eastover Aquifer.

The groundwater is used to manufacture structural concrete components such as elevated bridging girders and beams, cylindrical piles, and deck slabs. Secondary groundwater uses include facility cleaning and equipment washing, concrete curing, dust control, and domestic water for employee use.

Coastal Precast is located in an area where the freshwater lens is naturally thin which results in the groundwater being brackish and the chloride concentrations are higher. Discussion ensued regarding the reasons for these findings.

The Town of Cape Charles' current permit will expire on 08/31/2026. The Municipal Corporation of Cape Charles applied for an early reissuance due to "withdrawal volumes approaching the permitted limits". Public comments are due on 9/16/2024.

The water is currently supplied from two wells, East Well 3 and Tower Well 1. The draft permit allows for withdrawal from four wells. The two additional wells are the "Kech" wells. The Kech wells have better water quality and will be pumped to their maximum. East Well 3 and Tower Well 1 will supply the remaining capacity.

The amount requested in the permit application was for 107,100,000 gallons a year and 14,000,000 gallons a month. DEQ tentatively concurred with the original requested demand of 107,100,000 gallons a year, pending a technical evaluation review. Following the technical evaluation and predicted chloride concentration increase, DEQ did not approve the requested increase. The draft withdrawal amount of 63,200,000 gallons a year is the same as the current permit. Current annual groundwater use exceeds 60,000,000 gallons. Monthly use recently exceeded the monthly

maximum with 8,400,000 gallons withdrawn in July 2023. DEQ recommended maintaining withdrawals to the current permit limit, with a portion of the withdrawal reapportioned to the two new Kech wells. More discussion ensued regarding information found on the Fact Sheet but not incorporated in the draft Permit and the special conditions given from DEQ.

10. Attachments

11. Scheduled Next Meeting

The next scheduled meeting for the Ground Water Committee will be held on Tuesday, September 17, 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.

12. Adjournment

Member Grossman made the motion to adjourn. It was seconded by Member Hershey, the motion was carried by unanimous vote.

The meeting was adjor	urned at 11:56 a.m.
	Calvin Washington Vice Chairman
	Calvin Washington, Vice Chairman
	Elaine K. N. Meil, Secretary/Treasurer

EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE FY 2025 ATTENDANCE RECORD

ACCOMACK-NORTHAMPTON PLANNING DISTRICT COMMISSION P.O. BOX 417 • 23372 FRONT STREET • ACCOMAC, VIRGINIA 23301 (757) 787-2936 • TOLL FREE (866) 787-3001 • FAX: (757) 787-4221 WEBSITE: www.a-npdc.org

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Member	Exp.	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
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Calvin Washington Sr.	Vice Chair, July 2025	*	х										
Paul Muhly	Vice Chair; Next vote: July2025		-										
Dan Hershey	June 2025	*	Х										
Grayson Chesser	June 2023	*	Х										
Sue Mastyl	April 2025	*	Х										
			•	NOR	THAMP	том со	UNTY	<u>'</u>	_		_		_
John Coker	Chair; Next Vote: July2025	*	7										
Paul Grossman	March 2024	*	x										
Steve Sturgis	July 2024	*	х										
Ann Hayward Walker	December 2024	*.	Х										
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Charles Kolakowski	NA	*	7										
Mike Mason	NA	*	1										
Elaine Meil	NA	*	x										
-	Not a Me	mber		Х		Memb Preser			0		Alterna Presen		
*	No Meetir	ng Held		NA		Not Appli	cable			/	Absent	t	











MEMORANDUM

TO:

Eastern Shore of Virginia Ground Water Committee

FROM:

Sandy Taylor

Director of Administration, A-NPDC

DATE:

September 17, 2024

SUBJECT:

August 2024 Financial Statement

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

Committee approval of the August 2024 Financial Statement is requested.

Eastern Shore of Virginia Ground Water Committee

Financial Statement

August 2024

		Cu	rrent Period	Υe	ar to Date	П	
	<u>BUDGET</u>		<u>Activity</u>		Activity		<u>Balance</u>
Ground Water Consultant	\$ 21,666.00	\$	÷	\$	-	\$	21,666.00
Ground Water Modeling Run	\$ 16,000.00	\$	-	\$	-	\$	16,000.00
Ground Water Committee Staff Support	\$ 20,000.00	\$	228.57	\$	3,834.45	\$	16,165.55
Ground Water Committee Member Fees	\$ 5,000.00	\$	-	\$	-	\$	5,000.00
USGS Ground Water Model	\$ 15,000.00	\$	-	\$	-	\$	15,000.00
Ground Water Plan Project Implementation #1 Well Testing	\$ 73,000.00	\$	2,592.91	\$	2,592.91	\$	70,407.09
Ground Water Plan Project Implementation #2 TBD	\$ 57,489.00	\$	ī_	\$	-	\$	57,489.00
TOTAL	\$ 208,155.00	\$	2,821.48	\$	6,427.36	\$	201,727.64

Bills Payable as of August 30, 2024

<u>DUE TO</u>	<u>DATE</u>	DESCRIPTION	A	MOUNT
A-NPDC	8/1/2024	08/01 - 08/30/2024	\$	2,821.48

Total Bills Payable \$ 2,821.48

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee

FROM: Elaine Meil

Executive Director, A-NPDC

DATE: September 17, 2024

SUBJECT: September 2024 Staff Report

Old Business:

Residential Well Testing Update:

The committee has 140 residential water well tests to be spread between both counties. Accomack County (90) and Northampton County (50). A-NPDC has sent letters to residents from a previous report. It was advertised in the Eastern Shore Post as well as a paid advertisement was placed on Facebook to gain more exposure and interest. Fliers were placed in all Post Offices in Accomack and Northampton County. We currently have acquired 45 in Accomack County and 42 in Northampton County. We are looking for a total number of 90 for Accomack County and 50 for Northampton County.

August 26, 2024 Onancock Town Council Meeting - The meeting can be reviewed with the groundwater subject starting at 20 minutes into the video and the developer presentation at 55 minutes at https://www.youtube.com/watch?v=qVxZnqYLOdA&t=7779s

The accompanying packet is available at this link. https://onancock.com/wp-content/uploads/2024/07/PC-Agenda-080524.docx

New Business:

Remote Policy

As requested, staff has brought back a report on the remote policy options for the Committee. There are some decision points to be made by the Committee, if they choose to adopt a policy. The 2022 A-NPDC policy is presented below.

Code of Virginia Amendments in 2024 have increased the number of potential individual or all-virtual meetings to 50%, so in the case of the Committee, five. Additional rules have also been added such as the requirement to adopt the policy every year, prohibiting the policy from stopping members from voting

during a virtual meeting and restrictions on not holding them with another meeting. The caregiver option has also been expanded.

Discussion is requested.

Effective September 1, 2022

Accomack-Northampton Planning District Commission Policy for Remote Participation

Pursuant to § 2.2-3708.3 of the Code of Virginia, the following policy is established for remote electronic participation and all-virtual public meetings of the Board of commissioners meetings.

A. A Commissioner 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 Accomack-Northampton Planning District Commission (the "Commission") 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 Commission 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 Board of Commissioners shall record in the Commission'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
- a. The member shall notify the Chair of the Commission that the member is unable to attend the meeting due to a temporary or permanent disability or medical condition that prevents his or her physical presence.
- b. A quorum of the Commission must be physically assembled at the primary or central meeting location.

- c. The Secretary of the Commission shall record in the Commission's minutes the fact of the disability or other condition and the remote location from which the absent member participated
- 3. A medical condition of a family member that prevents physical attendance.
- a. The member shall notify the Chair of the Commission that the member is unable to attend the meeting due to the need to provide care to a family member.
- b. A quorum of the Commission must be physically assembled at the primary or central meeting location.
- c. The Secretary of the Commission shall record in the Commission's minutes the family member's medical condition that required the member to provide care and the remote location from which the absent member participated.
- 4. If the absent member's remote participation is disapproved because such participation would violate this policy, such disapproval shall be recorded in the Commission'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 Commission. The Member's inability to participate remotely shall be recorded as an excused absence from the point of interruption.

B. All-Virtual Public Meeting

No electronic communication means will be provided to the public for in person public meetings. Commission meetings will only be all-virtual only as follows:

- 1. The Chairman 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.
- 2. A monitored phone number must be publicly provided so the Commission can be alerted if the transmission of the meeting provided by the Commission fails. Failure of the Commission transmission requires the Commission 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. Commission transmission to the public resumes before the public body votes to certify any closed session.
- 2. All-virtual meetings can only be held three (3) times per calendar year.

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

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 Virginia Register of Regulations. The link is listed below.

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

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

Groundwater Withdrawal Permits:

Public Comment Period: August 30, 2024 to September 30, 2024

Permit Number: GWI000358

Applicant Name & Address: Charles D. Tankard; 26103 Lankford Highway; P. O. Box 119; Capeville,

VA 23313

Name & Location of Water Withdrawal: Tankard Farm; 26103 Lankford Highway; P. O. Box 119;

Capeville, VA 23313

Purpose of Notice: To seek public comment on a draft permit from the Department of Environmental

Quality (DEQ) for the withdrawal of ground water in Northampton, Virginia.

Public Comment Period: August 16, 2024 to September 16, 2024

Permit Number: GWI000185

Applicant Name & Address: Virginia-American Water Company; 2223 Duke Street; Alexandria, VA

22314

Name & Location of Water Withdrawal: Cape Charles Water; 2140 Stone Road; Cape Charles, VA

23310

Purpose of Notice: To seek public comment on a draft permit from the Department of Environmental

Quality (DEQ) for the withdrawal of ground water in Northampton County, Virginia.

For details please see:

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

Environmental Reviews and Permits:

Hampton Roads Sanitation District - Island Utilities; 3855 South Main Street, Chincoteague, VA 23336

Public Comment Period: 07/31/2024 - 09/01/2024

Permit No. VA0091049

The purpose of this notice is to seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater into a waterbody in Chincoteague, Virginia.

Upcoming Events/Meetings:

Date and Tin	ne 🛨	Meeting Title	<u>Board</u>	
Sep-16 2024 (Mon)	10:00 am	State Water Control Board Meeting Agenda	State Water Control Board	R
Sep-18 2024 (Wed)	9:00 am	Technical Advisory Committee Meeting for 9VAC25-115 Virginia Pollutant Discharge Elimination System (VPDES) General Permit Regulation for Seafood Processing Facilities Agenda	State Water Control Board	R
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

TO:

Eastern Shore of Virginia Ground Water Committee

FROM:

Elaine Meil

Executive Director, A-NPDC

DATE:

September 17, 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.

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

Staff has begun a tentative prioritized Scope of Work for discussion purposes.

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. 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. Develop new recommendations
 - a.
- 6. Other

MEMORANDUM

TO:

Eastern Shore of Virginia Ground Water Committee

FROM:

Britt McMillan

Principal Hydrogeologist

Arcadis

DATE:

September 17, 2024

SUBJECT:

September 17, 2024 Ground Water Consultant Report

Technical/Regulatory/Educational Items

1. One draft permit was submitted for public comment on or after August 20, 2024: Tankard Farm (GWI000358). This draft permit is a renewals of a current valid permit. DEQ is accepting public comment on the draft Tankard Farm permit through September 30, 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				Aqu	ifers			Draft Permit (Gal)				Public			
racility		Туре		YTEO		YTEO		YTEO New						Perce n-tile	Comment
Permit No	Name		s	U	М	L		Monthly	Annual	Annual Increase		Deadline			
GW0080100	Cherrystone Campground	Р					N	3,340,000	11,800,000	6%	52%	Oct 2			
GW0053901	Perdue Farms	1					N	78,000,000	700,000,000 to 650,000,000	-7%	100%	Oct 30			
GW0080000	Afshan Farm	Α			UN	K	Υ	1,216,860	4,725,900	NA	13%	Nov 6			
GW0060601	Midwood Farm	Α					N	3,000,000	10,000,000	-56%	50%	Nov 13			
GW0037302	Shore Health and Rehab	Р					N	810,000	6,600,000	28%	26%	Jan 22			
GW0070301	Shelley Farm	Α					N	6,550,000	16,600,000	0%	69%	Jan 29			
GW0070501	Jones 3 Farm	Α					N	9,629,000	11,974,000	0%	55%	Jan 29			
GW0079000	Eastern Shore Nursery	Α	UN	к				6,300,000	36,890,000	NA	81%	Feb 12			
GW0044201	Town of Chincoteague	Р					N	34,100,000	219,400,000	0%	98%	Feb 12			
GW0070001	Walker Farm	Α					N	7,500,000	13,100,000	0%	61%	Mar 4			
GW0049201	Town of Onancock	Р					N	10,597,000	120,000,000	49%	98%	April 8			
GW0069101	Melfa Farm						N	20,200,000	46,250,000	-26%	82%	April 15			
GW0069901	Tipton Farm						N	22,400,000	38,000,000	-46%	80%	April 15			
GW0053801	KMC Camp	Р					N	572,000	2,300,000	0%	2%	April 22			

GW0069501	Seybolt Farm	Α			N	5,664,000	10,014,000	-69%	42%	May 6
GW0055701	Dreamland Acres	Р			N	1,100,000	12,000,000	0%	55%	
GW0059900	Ish Farms (Breeder Farm)	Α			Υ	700,000	4,100,000	NA	10%	May 20
GWI000313	Broadleaf Farms	Α			N	626,000	3,700,000	0%	10%	May 27
GWI000343	Hermitage Farms				N	15,420,000	57,230,000	0%	87%	May 27
GWI000223	Virginia Landing	Р			N	1,580,000	6,000,000	0%	15%	July 15
GWI000231	Wyatt Farm	Α			N	4,800,000	16,000,000	5%	68%	
GWI000167	Coastal Precast	1			N	3,000,000	27,000,000	0%	76%	Sep 3
GWI000185	Cape Charles	Р			N	7,900,000	63,200,000	0%	90%	Sep 16
GWI000358	Tankard Farm	Α			N	6,438,240	8,029,200	-57%	30%	Sep 30

Notes:

Type: A = Agriculture

CA = CAFO (Confined Animal Feeding Operation)

I = industrial

P = Public Water Supply

Aquifers:

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

 ${\tt YTEO = Yorktown-East over \ aquifer \ system}$

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	al Cond	itions
Permit No	Name	wq	Alt	Other
GW008010 0	Cherrystone Campground	0		Chloride monitoring. Well video logging, survey, and pump reset.
GW005390 1	Perdue Farms	0		Tiered (decreasing) withdrawals, Alt Source Development Plan, Well Abandonment
GW008000 0	Afshan Farm			Pump intake, geophy logs, video logging
GW006060 1	Midwood Farm			Pump intake, geophysical logs, well abandon, pond controls
GW003730 2	Shore Health and Rehab			Well abandon
GW007030 1	Shelly Farm			None
GW007050 1	Jones 3 Farm			None
GW007900 0	Eastern Shore Nursery			Flow meters, geophysical logs, pump intake, pond level control
GW004420 1	Town of Chincoteague	0		Well abandon, alternative source evaluation
GW007000 1	Walker Farm			Pond level control
GW004920 1	Town of Onancock			None

GW006910 1	Melfa Farm		Pond level control. Well abandonment.
GW006990 1	Tipton Farm		None
GW005380 1	KMC Camp		None
GW006950 1	Seybolt Farm		None
GW005570 1	Dreamland Acres		
GW005990 0	Ish Farms (Breeder Farm)		Pump intake
GWI000313	Broadleaf Farms		None
GWI000343	Hermitage Farms		Pond level Control
GWI000223	Virginia Landing	0	Chloride monitoring, geophysical logs, pump intake, well abandonment
GWI000231	Wyatt Farm		Alternate source evaluation within 10-years of permit issuance
GWI000167	Coastal Precast		Geophysical logs, pump intake, well abandon,
GWI000185	Cape Charles	0	Pump intake, well abandonment, observation well installation and water level monitoring
GWI000358	Tankard Farm		None

Draft Tankard Farm

(GWI000358) is for a renewed permit for an existing groundwater withdrawal with a requested amount of 8,029,200 gallons/year and a maximum month amount of 6,438,240 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 GW0070700) was to withdrawal 18,600,000 gallons per year and 7,800,000 gallons per month. The draft permit is requesting a lower amount that represents a 57% reduction.

Groundwater use is for grain and vegetable crops, including potatoes and green beans. An on-site pond provides irrigation water with groundwater from two production wells supplementing the pond supply.

Water is supplied from two wells, both screened in the Upper Yorktown-Eastover aguifer.

DEQ No.	Well No.	Screen Interval (ft bgs)	Estimated Aquifer	Apportioned Withdrawal (%)
165-00434	1	110-150	Upper Yorktown-Eastover Aquifer	1
100-00435	2	113-153	Upper Yorktown-Eastover Aquifer	99

<u>Withdrawal Amounts</u>: The requested withdrawal amount of 8,029,200 gal/year is a 57% reduction from the current permit. The amount requested is for a small amount, 70% of the permitted withdrawals on the Shore are greater. Maximum historical use over the previous permit term (2013-2023) was 6,691,000 gal/year in 2023. This amount is approximately 83% of the requested amount.

Alternative Sources (Surficial aquifer):

All water use is from irrigation ponds supplemented by wells screened in the Upper Yorktown-Eastover 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

Tankard Farm
permitted facility, a site-specific investigation of the Surficial

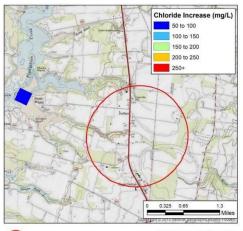
Upper Yorktown-Eastover Confining

permitted withdrawais 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 aguifers. Based on the model result DEQ found that the "...model results establish a very slight potential for adverse changes in water quality as a result of the proposed withdrawal. Simulated chloride concentration increase was below 50 mg/L in all aguifers" and based on potential upward vertical flow from the Middle Yorktown-Eastover aquifer to the Upper Yorktown-Eastover aquifer there is a "...potential for upconing of the potentially more brackish Middle Yorktown-Eastover waters into the overlying Upper Yorktown-Eastover source aquifer. Consequently, the model results do establish a potential for adverse changes to water quality due to an influx of more saline waters in the general vicinity of the withdrawal as a result of the proposed pumping."

Tankard Farm Upper Yorktown-Eastover Confining Unit Simulated VESM Chloride
Concentration Increase



Upper Yorktown-Eastover Aquifer AOI

Simulated chloride concentration increase in the Upper Yorktown-Eastover confining unit resulting from a 50 year simulation of 4,221,080 gallons per year from the Upper Yorktown-Eastover aguifer.

Technical Evaluation performed by Aquaveo, LLC for the Virginia DEQ, Office of Water Supply July 15, 2024



Special Conditions:

None

Additional Remarks:

DEQ has slightly changed the standard language in the Alternative Sources discussion to include "recommended" in the "...a site-specific investigation of the Surficial aquifer is recommended...". For this draft Permit, at site specific investigation is not included in the Special Conditions. This is a relatively small withdrawal (70% of the permitted withdrawals are greater) and the draft permit is 57% lower than the current permit amount.

Regarding the potential for saltwater intrusion, Tankard Farm is located south of the Town of Cape Charles in an area where the freshwater lens naturally thins as it approaches the southern tip of the Eastern Shore. Fresh groundwater is expected to be naturally limited in this area. Somewhat mitigating this, the location of the wells is close to the center of the "spine" near Route 13, where the freshwater lens is thickest.

The model predicted a slight increase in the "Upper Yorktown-Eastover Confining Unit" in an area that underlies Plantation Creek. The model is predicting brackish surface water from Plantation Creek will seep into the clay confining unit at a higher rate than currently occurring. The model predicted increase is for a slight amount (less than 50 mg/L increase). This is reasonable, however, this increase would not likely be observed in the underlying Upper Yorktown-Eastover. The second line of evidence cited in the Technical Evaluation was a potential reversal of vertical groundwater flow, with groundwater from the Middle Yorktown-Eastover aquifer flowing through the clay confining unit into the Upper Yorktown-Eastover aquifer. This reversal in flow direction in the immediate vicinity of the wells is likely to occur, however, for upconing to occur, the groundwater in the Middle Yorktown-Eastover aquifer would need to have significantly higher chloride levels. This water quality information is not available in this area so the potential for upconing is uncertain.

An additional consideration is, groundwater has been used from these irrigation 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).

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}

Surficial Aquifer Test Review Template: Surficial aquifer tests results are anticipated for at least 16 permitted withdrawals over the next 12 months. Ahead of these tests results from past surficial aquifer testing for Machipongo Farm (GW0065701), completed in April 2012 will be reviewed. The testing completed at Machipongo Farm largely complies with the requirements in the upcoming permits (with the exception that water quality samples were not required in the Machipongo Farm testing), and serve as a useful template for testing to be performed. A general format for summarizing the results will be presented with the intent to use as a template for future test results.