A-NPDC
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

Eastern Shore of Virginia Ground Water Committee
November 15, 2022 10:00a.m.
ESVA Chamber of Commerce
19056 Parkway, Melfa VA

The committee's mandate is to "assist local governments and residents of the Eastern Shore in understanding, protecting and managing ground water resources, to maintain a ground water 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 ground water 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. Peze 2 pou kreyòl ayisyen.

A-NPDC
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

Meeting Agenda

1. Call to Order
2. Public Participation

3. Minutes of the September 20, 2022 Meeting……. **3**
4. FY 2023 Proposed Annual Budget ……... **7**
5. September and October 2022 Financial Status Reports……. **11**
6. November 15, 2022 Staff Report……... **13**
7. Chloride Monitoring on the Eastern Shore of Virginia ……..……... **15**
8. November 15, 2022 Ground Water Consultant Report ……. **16**
9. Captain's Cove 2022 Ground Water Report …… **19**
10. November 15, 2022 Committee Attendance Record…….. **20**

11. Schedule Next Meeting (January 18, 2022 @ 10am; Board Room, Eastern Shore COC)
12. Adjourn

A-NPDC
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

Minutes of the September 20, 2022 Meeting
Eastern Shore of Virginia Ground Water Committee

The meeting of the Eastern Shore of Virginia Ground Water Committee was held at 10:00 AM on Tuesday, September 20, 2022 in the hybrid format – virtually on the Zoom Platform and in person – in the conference room of the Eastern Shore Chamber of Commerce in Melfa, VA

Members Present	**Members Absent**	**Others Present**
Paul Muhly, Chairman	Mike Mason	Kellen Singleton, A-NPDC
Elaine Meil, Secretary *	Charles Kolakowski	Britt McMillan, ARCADIS*
Grayson Chesser	John Coker, Vice Chairman	Bill Leslie, Captains Cove*
Daniel Hershey		John Richardson
Sue Mastyl		Joseph Betit, Earth Systems Management, LLC *
Paul Grossman		Joe Grist, VDEQ*
Roberta Kellam*		Jason Pope, USGS*
		Randy McFarland, USGS (ret.)*
		Charles Bott, HRSD*
		Curtis Consolvo, GeoResources*
		Sam Caldwell, USGS*
		Brean Powers, USGS*
		Cathy Plant, VDH

signifies Zoom participant

1. Call to Order

Chairman Muhly called the meeting to order at 10:05 AM.

2. Public Participation

None.

3. Minutes of June 21, 2022 Meeting

The draft minutes of the August 16, 2022 Meeting were presented.

In reference to the June 21, 2022 minutes, Mr. Bott elucidated HRSD position noting that HRSD intends to clean up and decommission the Nassawadox Wastewater Treatment Plant as soon as possible, estimating a 2023-24 project date.
In addition, Mr. Bott clarified that Phase 2 to New Church was not part of the current HRSD extension plan with an intention to serve nothing north of Accomac and, pending study, the island of Chincoteague. Mr. Bott maintained that there was no discussion of a Parksley service or to acquire the Cape Charles Plant. Sec. Meil noted that funding has been allocated by the General Assembly to Parksley. Mr. Bott explained that service is

only extended up to two miles of the line, when requested.

Mem. Grossman moved to approve the minutes with footnotes and clarification, addressing Mr. Bott's comments, of the August 16, 2022 Meeting. Seconded by Mem. Kellam, the motion carried by unanimous vote.

4. Financial Report

The FY 2022 Financial Status Report for August 2022 was presented.

Total Bills Payable equaled $0.00; total revenues received equaled $0.00.

Commission approval of the Bills Payable and current Financial Statements was requested.

Mem. Grossman moved to approve the financial status report as presented. Seconded by Mem. Chesser, the motion carried.

The Eastern Shore of Virginia Ground Water Committee Proposed FY2023 Annual Budget was presented.

Commission approval of the Proposed FY2023 Annual Budget was requested.

Mem. Grossman moved to approve the FY2023 Annual Budget as presented. Seconded by Mem. Hershey, the motion carried.

5. August 16, 2022 Staff Report

Staff had no updates to the Committee on new Environmental Reviews and Permits of the VA Pollutant Discharge Elimination System Program.

Mem. Grossman informed the GWC that the Cape Charles received another set of violations and is reaching out to an outside consultant to address the issue.

Mr. Leslie brought to the attention of the GWC items of concern regarding AQUA Virginia's withdrawal permit status and changes and it's potential to exhaust ground water resources. Mr. McMillan updated the GWC on permit status and changes.

Mem. Mastyl inquired on DEQ pushback in technical evaluation and raised concerns with reuse of language.

Members Chesser and Hershey requested a report on historical PFAS contamination in the Chincoteague Bay area. Mr. McMillan informed the GWC that NASA would be good source of information on the subject.

Chmn. Muhly noted that the Chincoteague PFAS issue has been discussed in the past and abated by NASA.

Mem. Kellam requested a NASA representative to speak on the subject and retain it as a standing issue.

Mem. Mastyl inquired as to whether the facts have been reviewed in the Captain's Cove withdrawal application.

A review is expected by Fall.

Chmn. Muhly questioned if NASA had ever updated the GWC as assured since last present. Mem. Chesser noted that NASA past information on superficial deep well contamination has been inaccurate in the past.

Mr. McMillan advised that the last NASA update was pre-pandemic and NASA should have better, updated information on the subject.

The GWC requests that staff contact NASA's Captain's Cove EPA representative.

6. Historical Salinity (Chloride) Monitoring

Randy McFarland (USGS) presented an assessment of historical salinity (chloride) monitoring in Eastern Shore groundwater followed with comments and questions about chloride sampling and monitoring.

Mem. Grossman noted that Cape Charles intends to develop two wells closer to Hwy 13 at a higher aquifer level. Blending will decrease chloride levels.

Mr. McMillan noted that there is currently a lack of active monitoring programs near wells affected by salt water intrusion and anticipated the DEQ to initiate more robust monitoring in affected clusters e.g., Cape Charles, Chincoteague, Purdue operations.

Chmn. Muhly inquired about the location and depth of new Cape Charles wells.

McFarland added that salt water intrusion is also a function of demand as well as depth.

Mr. Bott inquired about leakage (leak-ins), flow between units. Role of leak-ins unclear answered McMillan.

7. Electromagnetic Borehole Logging

Sam Caldwell (USGS) summarized the results of his work on the use of electromagnetic induction logging to improve understanding of the saltwater transition zone in the Eastern Shore aquifer system followed by Committee comments and questions.

The GWC requests cost estimate from the USGS (Sam Caldwell) for the groundwater sampling.

Schedule Next Meeting & Adjournment

The next Committee meeting was scheduled for October 11, 2022 from 10AM-12PM at the ESVA Chamber of Commerce, Melfa, VA.

Chairman Muhly adjourned the meeting at 12:12 PM.

_____

John Coker, Vice Chairman
Copy test:

_____

Elaine K. N. Meil, Secretary

A-NPDC
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

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee

FROM: Kellen J. Singleton
Interdisciplinary Planner
Accomack-Northampton Planning District Commission

DATE: November 15, 2022

SUBJECT: **FY 2023 Proposed Annual Budget**

Discrepancies have been found in the FY2023 Annual Budget passed September 20, 2022 (shown).

Charted below are Revenue and Expenditure Changes and Adjustments between the Proposed FY23 Budget and the FY23 Budget passed September 20, 2022.

Staff requests the Committee rescind the FY2023 Budget presented at the September 20, 2022 GWC meeting and review and consider approving the amended FY 2023 Proposed Annual Budget (also shown)

Revenue Changes and Adjustments			
	New Proposed FY23 Budget	Passed FY23 Budget	Difference
GWC Staff Support			
Accomack County	12276.00	10970.00	+1306.00
Northampton County	7724.00	7470.00	+254.00
Subtotal	20000.00	18440.00	+1560.00
GWC Member Fees			
Accomack County	2640.00	2640.00	+2640.00
Northampton County	2640.00	2640.00	+2640.00
Subtotal	5280.00	5280.00	+5280.00
Comprehensive Well Testing			
Accomack County	26854.00	28000.00	-1146.00
Northampton County	15827.00	16500.00	-673.00
Subtotal	42861.00	44500.00	-1819.00
Total Revenues	**119627.00**	**114606.00**	**+5021.00**

A-NPDC
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

Expenditure Changes and Adjustments			
	New Proposed FY23 Budget	Passed FY23 Budget	Difference
Ground Water Consultant	23500.00	22000.00	+1500.00
GWC Staff Support	20000.00	18440.00	+1560.00
Committee Member Fees	5280.00	5400.00	-120.00
Comprehensive Well Testing	44847.00	42766.00	+2081.00
Total Expenditures	**119627.00**	**114606.00**	**+5021.00**

.

A-NPDC
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

EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE

CURRENT ANNUAL BUDGET (passed 9/20/21)	FY23 Annual Budget
REVENUES:	
Ground Water Consultant Appropriations:	
Accomack County	$14,251.00
Northampton County	7,415.00
Subtotal	$21,666.00
Ground Water Modeling Run Appropriations:	
Accomack County	$ 1,500.00
Northampton County	1,500.00
Remaining Balance	12,000.00
Subtotal	$15,000.00
Ground Water Committee Staff Support:	
Accomack County	$10,970.00
Northampton County	7,470.00
Subtotal	$18,440.00
USGS Ground Water Model	
Accomack County	$ 7,500.00
Northampton County	$ 7,500.00
Subtotal	$15,000.00
Comprehensive Well Testing Program	
Accomack County	$28,000.00
Northampton County	16,500.00
Subtotal	$44,500.00
Total Revenues	$ 114,606.00
EXPENDITURES:	
Ground Water Consultant	$22,000.00
Ground Water Modeling Run	12,000.00
Ground Water Committee Staff Support	18,440.00
USGS Ground Water Model	14,000.00
Committee Member Fees	5,400.00
Comprehensive Well Testing	42,766.00
Total Expenditures	$ 114,606.00
NET SURPLUS OR (DEFICIT) OF REVENUES LESS EXPENDITURES	$ 0.00

A-NPDC
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

EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE

PROPOSED ANNUAL BUDGET	FY 2023 Annual Budget
REVENUES:	
Ground Water Consultant Appropriations:	
Accomack County	$ 14,251.00
Northampton County	7,415.00
Subtotal	$ 21,666.00
Ground Water Modeling Run Appropriations:	
Accomack County	$ 1,500.00
Northampton County	1,500.00
Remaining Balance	12,000.00
Subtotal	$ 15,000.00
Ground Water Committee Staff Support:	
Accomack County	$ 12,276.00
Northampton County	7,724.00
Subtotal	$ 20,000.00
Ground Water Committee Member Fees:	
Accomack County	$ 2,640.00
Northampton County	2,640.00
Subtotal	$ 5,280.00
USGS Ground Water Model	
Accomack County	$ 7,500.00
Northampton County	$ 7,500.00
Subtotal	$ 15,000.00
Comprehensive Well Testing Program	
Accomack County	$ 26,854.00
Northampton County	15,827.00
Subtotal	$ 42,681.00
Total Revenues	$ 119,627.00
EXPENDITURES:	
Ground Water Consultant	$ 23,500.00
Ground Water Modeling Run	12,000.00
Ground Water Committee Staff Support	20,000.00
USGS Ground Water Model	14,000.00
Committee Member Fees	5,280.00
Comprehensive Well Testing	44,847.00
Total Expenditures	$ 119,627.00
NET SURPLUS OR (DEFICIT) OF REVENUES LESS EXPENDITURES	$ 0.00

A-NPDC
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

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee

FROM: Kellen J. Singleton
Interdisciplinary Planner
Accomack-Northampton Planning District Commission

DATE: November 15, 2022

SUBJECT: **September and October 2022 Financial Expenditure Statement**

The September and October FY2023 Financial Expenditure Statement is attached

TOTAL BILLS PAYABLE		**$11, 261.31**
Revenues Received:	Accomack County	$0.00
	Northampton County	$0.00
TOTAL REVENUES RECIEVED		**$0.00**

Staff requests the Committee review and consider approving the September and October 2022 Financial Status Reports.

A-NPDC
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

Eastern Shore of Virginia Ground Water Committee

Expenditure Statement
September & October 2022

	BUDGET	Current Period Activity	Year to Date Activity	Balance
Expenditures				
Ground Water Consultant	$ 23,500.00	$ 5,250.00	$ 10,500.00	$ 13,000.00
Ground Water Modeling Run	$ 12,000.00	$ -	$ -	$ 12,000.00
Member Fees	$ 5,280.00	$ 310.92	$ 646.62	$ 4,633.38
Ground Water Committee Staff Support	$ 20,000.00	$ 5,700.39	$ 5,700.39	$ 14,299.61
Comprehensive Well Testing	$ 44,847.00	$ -	$ -	$ 44,847.00
USGS Ground Water Model	$ 14,000.00	$ -	$ -	$ 14,000.00
TOTAL	**$ 119,627.00**	**$ 11,261.31**	**$ 16,847.01**	**$ 102,779.99**

Bills Payable as of October 31, 2022

DUE TO	Date	Description	Amount
Arcadis	10/17/2022	Professional Serv	$ 5,250.00
A-NPDC	7/01-9/30/22	Staff Support	$ 5,700.39
Member Fees	9/20/2022	Membership Fees	$ 310.92
Total Bills Payable			**$ 11,261.31**

A-NPDC
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

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee

FROM: Kellen J. Singleton
Interdisciplinary Planner
Accomack-Northampton Planning District Commission

DATE: November 15, 2022

SUBJECT: **November 15, 2022 Staff Report**

Environmental Reviews and Permits

VA Pollutant Discharge Elimination System Program –
None.

VA Pollution Abatement Program –
None.

Consent Orders –
None.

Groundwater Withdrawal Permits –
None.

Upcoming Events/Meetings
REGULAR MEETINGS OF STATEWIDE AUTHORITIES, BOARDS, COMMISSIONS, AND COMMITTEES –

- 11/29/22 State Water Control Board Meeting
    - Meeting Agenda

      https://townhall.virginia.gov/l/GetFile.cfm?File=meeting\103\37246\Agenda_DEQ_37246_v1.pdf

- 12/1/2022 Technical Advisory Committee Meeting - VPDES General Permit for Discharges Associated with Industrial Activity 9VAC25-151
    - A meeting of the technical advisory committee established to assist the Department of Environmental Quality in the development of a proposal for the reissuance of and, if necessary, amendments to the General Permit for Storm Water Discharges Associated with Industrial Activity 9VAC25-151. The notice of intended regulatory action was published in the Virginia Register of Regulations on April 11, 2022.

.

- 1/11/2023 Public Hearing -Virginia Pollutant Discharge Elimination System (VPDES) General Permit for Discharges Resulting from the Application of Pesticides to Surface waters- 9VAC25-800
    - A public hearing to receive comments on proposed amendments to the Virginia Pollutant Discharge Elimination System (VPDES) General Permit for Discharges Resulting from the Application of Pesticides to Surface waters- 9VAC25-800. The public comment period begins on December 5, 2022 and ends on February 3, 2023.

A-NPDC
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

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee

FROM: Kellen J. Singleton
Interdisciplinary Planner
Accomack-Northampton Planning District Commission

DATE: November 15, 2022

SUBJECT: **Chloride Monitoring on the Eastern Shore of Virginia**

Sam Caldwell, USGS, has priced out a $40,000 groundwater-quality sampling effort:

- The funding can support a maximum of 8 samples.
- Costs do not include data analysis and interpretation, just standard QA/QC of the samples and data.
- The cost of sampling will increase year over year. $40,000 will not be able to support collecting 8 samples next year or any year after.
- The chloride sampling can be a multi-year effort, which will require increases in cost each year, or the budget can be revised so that it remains at $40,000 across all years of the study.

A-NPDC
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

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee
FROM: Britt McMillan
Principal Hydrogeologist
Arcadis
DATE: November 15, 2022
SUBJECT: November 15, 2022 Ground Water Consultant Report

Technical/Regulatory/Educational Items

1. Groundwater Resource Protection issues related to wastewater treatment and disposal to land versus surface water. With the possible expansion of wastewater discharge to surface water, and a possible reduction in land-based wastewater discharges (through septic fields, mass drain fields, and land application) the potential impacts to the groundwater resource on the Shore will be discussed. Two principal concerns that have been expressed are:
   a. Impacts from reduced groundwater recharge resulting from discharge of the treated wastewater to surface water and
   b. Increased groundwater use resulting from barriers removed to development

Benefits-and limitations of land applied wastewater discharge versus surface water discharge related to water balance and water quality specific to the Shore are outlined below:

a. Land Applied Wastewater Discharge on the Shore

ii. Benefits:
   1. Is a sustainable technology. Some/most of the groundwater that is withdrawn recharges the unconfined surficial (Columbia) aquifer.
   2. Depending on the design, can use the natural system to enhance treatment.

iii. Limitations:
   1. Most of the water that is withdrawn is from the confined Yorktown-Eastover aquifer is not returned to the aquifer. The water is returned to the unconfined surficial aquifer. Very little of the water replenishes the Yorktown-Eastover aquifer (where it was originally withdrawn). This lessens the sustainable benefit. (note: the cost of SWIFT type replenishment (direct injection) to the Yorktown-Eastover aquifer is not likely cost effective on the Shore)
   2. If the land-based systems are not properly designed, constructed, and maintained, they can contaminate the groundwater source.
   3. Land based systems are not well suited for all areas on the Shore, with significant limitations in areas where groundwater is shallow and infiltration is limited.
   4. Some of these systems can require large areas (such as land application systems).

c. Surface Water Discharge on the Shore:

i. Benefits:
    1. Generally able to treat larger volumes of wastewater.
    2. There is more control over a centralized system than most distributed land-based system, allowing for more consistent treatment.

ii. Limitations:
    1. Typically requires a higher level of treatment. Does not make use of the natural system for treatment.
    2. Must be designed and operated to avoid adverse effects on aquatic life and marine resources.

Regarding potential increased groundwater use, the capacity for an increased use on the Shore is principally regulated/restricted under the Virginia Groundwater Withdrawal Regulations (9VAC25-610) that regulate groundwater withdrawals exceeding 300,000 gal in a single month (approximately 10,000 gal/day avg) in the Eastern Shore of Virginia Groundwater Management Area (Accomack County and Northampton County).

The regulations are designed to protect existing "lawful" groundwater use by:

a. Restricting withdrawals to beneficial uses only
b. Requiring water conservation measures
c. Mitigation requirements for new users to protect existing users
d. Preventing aquifer "dewatering" (80% drawdown criterion) and excessive water quality impacts (saltwater intrusion)

New withdrawals that do not meet criteria in the regulations (in particular the 80% drawdown criterion) will not be issued a permit in order to protect current users.

A limitation of these regulations is they only apply to withdrawals that exceed 300,000 gallons in a single month. Some developments, such as single family residences, on individual water supplies, typically do not exceed this amount on a per-resident basis, but on aggregate can exceed 300,000 gal/month. These developments would not require a groundwater withdrawal permit but have the potential to adversely impact the groundwater resource. This potential issue is addressed in the regulations under 9VAC25-610-44 – Technical evaluation of withdrawals for subdivisions with 30 or more lots served by private wells 9VAC25-610-44

2. Captains Cove Utility System Summary. The Captains Cove Utility System was reviewed earlier in 2022 as part of an overall evaluation of a potential expansion of the utility service area to include an adjacent proposed 24.41 acre mixed use development. Status of the Captains Cove Utility, including past, current, and proposed future use was reviewed. As additional information has become available, the review has been periodically updated.

   Information recently obtained has been incorporated in the review includes water quality results from samples collected from individual homes in Captains Cove under the Virginia Household Water Quality Program. These results are compared to water quality collected as part of DEQ water quality sampling requirements associated with the current groundwater withdrawal permit.

The principal concerns that have been expressed with regard to the community water system are:

1) The ability to meet future demand and
2) Existing water quality and potential changes to future water quality resulting from additional demand

Water supply, changes to the system proposed by the Utility, and water quality based on available information is discussed in some detail in the attached *Captains Cove Utility Water Supply Summary 2022Oct Update*.

3. **USGS Circular 1486 – Nitrogen in the Chesapeake Bay Watershed – A Century of Change – 1950-2050 (December 2021)**:
   a. Available at: https://pubs.er.usgs.gov/publication/cir1486
   b. A compilation of research presented by various authors providing a comprehensive presentation of the state of the knowledge for nitrogen in the Chesapeake Bay Watershed. Of particular interest for groundwater resources on the Eastern Shore are:
      i. Chapter 2 – Nitrogen in Streams and Groundwater
      ii. Chapter 5 – Changes in Hydrology
      iii. Chapter 6 – Changes in Land Use
      iv. Chapter 7 – Changes in Agricultural Water Quality Management
      v. Chapter 9 – Modeling the Effect of Nitrogen Loads from Multiple Changes in the Watershed
   c. A summary presentation will be provided

Other Items:

i. Additional FY2021 Groundwater Committee activities. Continue update of the Eastern Shore Groundwater Protection Plan.

A-NPDC
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

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee

FROM: Kellen J. Singleton
Interdisciplinary Planner
Accomack-Northampton Planning District Commission

DATE: November 15, 2022

SUBJECT: **Captain's Cove 2022 Ground Water Report**

An initial 27-page draft of ***CAPTAINS COVE GROUND WATER AND RESIDENTIAL WATER SUPPLY REPORT OCTOBER 2022*** has been drafted.

Staff requests that the GWC review for subsequent issuing.

A-NPDC
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

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee

FROM: Kellen J. Singleton
Interdisciplinary Planner
Accomack-Northampton Planning District Commission

DATE: November 15, 2022

SUBJECT: **November 15, 2022 Committee Attendance Record**

Committee Attendance Record
The FY2023 Committee Attendance Records are attached.

A-NPDC
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

EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE
FY 2023 ATTENDANCE RECORD

Member	Term Exp.	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
ACCOMACK COUNTY													
Paul Muhly	*Chair; Next vote: July 2023*	*	X	X	*								
Dan Hershey	*June 2025*	*	X	X	*								
Grayson Chesser	*June 2023*	*	X	X	*								
Sue Mastyl	*April 2025*	*	X	X	*								
NORTHAMPTON COUNTY													
John Coker	*Vice Chair; Next Vote: July 2023*	*	X		*								
Paul Grossman	*March 2024*	*	X	X	*								
Roberta Kellam	*March 2024*	*	X	X	*								
Vacant		*			*								
NON-VOTING EX-OFFICIO MEMBERS													
Charles Kolakowski	*NA*	*			*								
Mike Mason	*NA*	*			*								
Elaine Meil	*NA*	*	X	X	*								

-	Not a Member		X	Member Present	
*	No Meeting Held		NA	Not Applicable	