



Eastern Shore of Virginia Ground Water Committee

August 21, 2018

10:00 a.m.

Enterprise Building, Accomac

MEETING AGENDA

1. Call to Order
2. Public Participation
3. Minutes of the May 15, 2018 Meeting..... 3
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9. Other Matters
10. Schedule Next Meeting & Adjourn

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Minutes of the May 15, 2018 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, May 15, 2018 in the A-NPDC Conference Room of the Enterprise Building in Accomac, Virginia.

Members Present:

Charles Kolakowski
Daniel Hershey
Grayson Chesser
John Salm
John Coker, Vice Chairman
Michael Mason
Paul Muhly, Chairman
Robert Meyers

Members Absent:

Elaine Meil
Eugene R. Hampton

Others Present:

Anne Violi, Eastern Shore COG
Britt McMillan, ARCADIS
Cole Charnock, ESSWCD
Curt Smith, A-NPDC
Curtis Consolvo, GeoResources, Inc.
Dirk Lynch, MSA P.C.
Janet Sturgis, Northampton Citizen
Jeff Poulterer, Eastern Shore Locavores
Jim West, Town of Chincoteague
Jon Richardson, ESHD
Joseph Betit, Accomack Citizen
Ken Dufty, Eastern Shore COG
Linda Cicoira, Eastern Shore Post
Mathew Link, VDEQ-OWS
Meriwether Payne, Accomack Citizen
Rich Morrison, Accomack County
Shannon Alexander, A-NPDC
Sue Mastyl, CBES



Call to Order

Chairman Muhly called the meeting to order at 10:01 AM.

2. Review of the April 17, 2018 Minutes

The draft minutes of the April 17, 2018 meeting were amended. The last two words on page 6, “Mr. Dufty,” were removed. The name of the public participant at the top of page 7 was changed from “Sandra Beerends” to “Ann Violi”.

Committee Member Salm moved to approve the Minutes of the April 17, 2018 meeting as amended. The motion, seconded by Committee Member Meyers, carried unanimously.

3. 2018 Financial Status Report

The FY 2018 Financial Status Report was presented. Brief discussion ensued with regards to the HHWC costs and with regards to staff support funding needs.

Committee Member Meyers moved to approve the FY2018 financial status report. The motion, seconded by Committee Member Hershey, carried unanimously.

4. Staff Update

In order to allow time for the consultant presentation and other items, staff limited reporting. The following staff updates were presented:

Committee Attendance Record

The FY2018 Committee Attendance Record was presented.

Public Comment Policy and Agenda Order

Draft By-laws including the amendments proposed by members during the April 17, 2018 meeting were presented. These changes include moving the Public Participation portion of the meeting from item 7 to item 2 on the meeting agenda.

Committee Member Meyers moved to adopt the Committee By-laws as amended. The motion, seconded by Committee Member Chessner, carried unanimously.

No action was taken to adopt a public participation policy.

Environmental Reviews and Permits

Staff reported that there were no current public notices from VDEQ for the Eastern Shore. VDEQ staff Matthew Link confirmed.

Other Items

Recharge Area Discussion

The consultant reported that updating and improving the certainty of the boundaries of the recharge area is an ongoing research need, and one that cannot be met until the overall groundwater model is improved as well. Staff reported that there were two pieces of legislation developed as a result



of the rural coastal Virginia stormwater workgroup that were signed by the Governor in March that would be relevant to the discussion of stormwater management reforms for the Eastern Shore. Staff is to request that VIMS produce an impervious percentage map for two HUCS for each County, one on the coast and one on the spine.

Household Hazardous Waste Collection

Staff presented the updated HHWC Historic Summary and the success of the May 5th event. Discussion concerning the lack of appropriate asbestos disposal options on the Eastern Shore ensued. Staff is to include a plan for the region for asbestos waste in the VDH Wellhead Protection Implementation grant application. Committee Member Belote indicated the importance of cleaning up the Shore for the success of the region. Committee Member Hershey indicated the need for a large storage capacity to safely hold asbestos waste prior to collection.

VDEQ Update

Mr. Matthew Link presented that VDEQ plans to have all of the groundwater withdrawal applications administratively complete by July 1, 2018.

Upcoming Events

June 2 – Annual Clean the Bay Day; Guard Shore Beach and Road

June 2 – 10 Chesapeake Bay Awareness Week

5. Consultant Report:

The consultant provided information about legislation in the current General Assembly, including HB211, HB358, & SB520. HB885, 887, & 888.

The consultant gave a draft (approximately 80% complete) new presentation, *Metrics used to Evaluate Sustainable Groundwater Use*, which was prepared in response to questions raised following previous presentations.

6. Other Matters:

Chairman Muhly pointed fellow Members and all meeting attendees to the website as an excellent source of information and presented that there is a new resource, the groundwater dictionary.

7. Public Participation:

Mrs. Sue Mastyl raised a question about recharge and use, referring to the Perdue wells referenced in the consultant's new draft presentation.



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Mr. Granville Hogg raised several issues:

1. Underground Storage Tank tracking and inclusion in the GW plan;
2. Northampton County Comprehensive Plan was not included in the packet, only Accomack County documents;
3. Options for using existing wells on private property as observation wells;
4. Consider former facilities near Perdue when assessing historic trends. Byrd Foods and the Town of Parksley are within a proximity to the Perdue plant as well.

Mrs. Sue Mastyl mentioned the natural gas pipeline from Maryland, and questioned potential risk to the groundwater resources. In reply, it was stated that the only potential groundwater issues are at compressor stations, not along the pipeline, and that technology and standards for the compressor stations are much improved and considered low risk.

Committee Member Belote suggested that staff provide a second sign in sheet at the beginning of the meeting for public that would like to provide comments.

8. Schedule Next Meeting & Adjournment

The next Committee meeting was scheduled for June 19th, 2018 at 10:00 AM in the A-NPDC Conference Room of the Enterprise Building in Accomac.

Chairman Muhly adjourned the meeting at 12:08 p.m.

Copy test:

Paul Muhly, Chairman

Elaine K. N. Meil, Secretary



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MEMORANDUM

TO: Eastern Shore of Virginia Groundwater Committee

FROM: Shannon Alexander
Coastal Resources Program Manager
Accomack-Northampton Planning District Commission

DATE: August 21, 2018

SUBJECT: Election of FY 2019 Committee Officers

Election of FY 2019 Committee Officers

According to Article IV of the Ground Water Committee By-Laws, nomination of Committee officers shall be made at the July meeting, with election immediately following. Please note that, *“The members filling the positions of Chairman and Vice-Chairman shall alternate between Accomack County and Northampton County annually, with neither position representing the same county at the same time and with a two (2) consecutive term limit.”* The current Committee Chairman is from Accomack County and was elected unanimously in August of 2017. The current Vice Chairman from Northampton and was elected unanimously in January of 2018 to replace Mr. Hogg, who had been elected unanimously in August of 2017. The Secretary is Elaine Meil.

Staff requests nominations for FY2019 Committee Officers.



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MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee
FROM: Shannon Alexander
Coastal Resources Program Manager
Accomack-Northampton Planning District Commission
DATE: August 21, 2018
SUBJECT: Financial Status Report and Annual Budget

Financial Status Report

The FY 2018 Financial Status Report is attached.

Bills Payable:

USGS	\$14,000.00
A-NPDC	\$1,985.00
A-NPDC	\$3,971.65
Arcadis	\$5,250.00
TOTAL BILLS PAYABLE	\$25,206.65

Staff requests the Committee review and consider approving the FY2018 Financial Status Report.

Proposed FY2019 Annual Budget

The proposed FY 2019 Annual Budget is attached. The budget is based on the work plan which is summarized in the Groundwater Consultant's memo.

Staff requests the Committee review and consider approving the FY2019 Annual Budget.

EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE

Financial Statement--June 2018

Fiscal Year 2018

REVENUES:	<u>Annual Budget</u>	<u>Current Period Activity</u>	<u>YTD Activity</u>	<u>Balance</u>	<u>% of Budget</u>
Ground Water Consultant Appropriations:					
Accomack County	\$ 14,251.00	\$ 3,562.75	\$ 14,251.00	\$ 0.00	100.00%
Northampton County	7,415.00	1,853.75	7,415.00	0.00	100.00%
FY 2017 Remaining Balances	1,332.00	0.00	1,332.00	0.00	
Subtotal	<u>\$ 22,998.00</u>	<u>\$ 5,416.50</u>	<u>\$ 22,998.00</u>	<u>\$ 0.00</u>	100.00%
Ground Water Modeling Run Appropriations:					
Accomack County	\$ 1,500.00	\$ 375.00	\$ 1,500.00	0.00	100.00%
Northampton County	1,500.00	375.00	1,500.00	0.00	100.00%
FY 2017 Remaining Balances	6,975.00	0.00	6,975.00	0.00	100.00%
Subtotal	<u>\$ 9,975.00</u>	<u>\$ 750.00</u>	<u>\$ 9,975.00</u>	<u>\$ 0.00</u>	100.00%
Ground Water Committee Staff Support:					
Accomack County	\$ 3,970.00	\$ 992.50	\$ 3,970.00	0.00	100.00%
Northampton County	3,970.00	992.50	3,970.00	0.00	100.00%
Subtotal	<u>\$ 7,940.00</u>	<u>\$ 1,985.00</u>	<u>\$ 7,940.00</u>	<u>\$ 0.00</u>	100.00%
USGS Ground Water Model:					
Accomack County	\$ 7,500.00	\$ 1,875.00	\$ 7,500.00	0.00	0.00%
Northampton County	7,500.00	1,875.00	7,500.00	0.00	0.00%
FY 2017 Remaining Balances	0.00	0.00	0.00	0.00	0.00%
Subtotal	<u>\$ 15,000.00</u>	<u>\$ 3,750.00</u>	<u>\$ 15,000.00</u>	<u>\$ 0.00</u>	100.00%
Water Clinic					
SERCAP	\$ 11,000.00	\$ 7,445.00	\$ 7,445.00	3,555.00	67.68%
Household Hazardous Waste Collection:					
Accomack County-appropriated to Public Works	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	
Northampton County	0.00	0.00	0.00	0.00	#DIV/0!
Residents paid	0.00	63.00	63.00	-63.00	
FY 2017 Remaining Balances	7,850.00	0.00	7,850.00	0.00	
Subtotal	<u>\$ 7,850.00</u>	<u>\$ 63.00</u>	<u>\$ 7,913.00</u>	<u>-\$ 63.00</u>	100.80%
Total Revenues	<u><u>\$ 74,763.00</u></u>	<u><u>\$ 11,964.50</u></u>	<u><u>\$ 63,826.00</u></u>	<u><u>-\$ 63.00</u></u>	<u>85.37%</u>
EXPENDITURES:					
Ground Water Consultant	\$ 22,998.00	\$ 5,250.00	\$ 21,000.00	\$ 1,998.00	91.31%
Ground Water Modeling Run	9,975.00	0.00	0.00	9,975.00	0.00%
Ground Water Committee Staff Support	7,940.00	1,985.00	7,940.00	0.00	100.00%
USGS Ground Water Model	15,000.00	14,000.00	14,000.00	1,000.00	93.33%
Water Clinic (Sponsored by SERCAP)	11,000.00	0.00	7,445.00	3,555.00	67.68%
Household Hazardous Waste Collection	7,850.00	9,381.56	9,381.56	-1,531.56	119.51%
Total Expenditures	<u><u>\$ 74,763.00</u></u>	<u><u>\$ 30,616.56</u></u>	<u><u>\$ 59,766.56</u></u>	<u><u>\$ 14,996.44</u></u>	<u>79.94%</u>
NET SURPLUS OR (DEFICIT) OF REVENUES LESS EXPENDITURES	<u><u>\$ 0.00</u></u>	<u><u>-\$ 18,652.06</u></u>	<u><u>\$ 4,059.44</u></u>		

*** Deposits for the period include:**

As Summarized	\$ 11,964.50
	<u>\$ 11,964.50</u>

**** Expenditures for the period include:**

Payables (previous month)	\$ 5,409.91
FY 2018 payables listed	25,206.65
Total Expenditures	<u>\$ 30,616.56</u>

BILLS PAYABLE DETAIL:

8/13/2018

<u>DUE TO</u>	<u>DESCRIPTION</u>	<u>DATE</u>	<u>AMOUNT</u>
USGS	Professional Services	June 30, 2018	\$ 14,000.00
A-NPDC	Fourth Qtr. Staff Support	June 30, 2018	\$ 1,985.00
A-NPDC	Reimb. For HHW other costs	June 30, 2018	\$ 3,971.65
Arcadis	Fourth Qtr. Professional	June 30, 2018	\$ 5,250.00

TOTAL BILLS PAYABLE

\$ 25,206.65



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EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE

PROPOSED ANNUAL BUDGET

August 13, 2018

FY 19

Annual

REVENUES:

Budget

Ground Water Consultant Appropriations:

Accomack County	\$ 14,251.00
Northampton County	7,415.00
FY 2018 Remaining Balances (2/3 and 1/3)	1,998.00
Subtotal	<u>\$ 23,664.00</u>

Ground Water Modeling Run Appropriations:

Accomack County	\$ 1,500.00
Northampton County	1,500.00
FY 2018 Remaining Balances (2/3 and 1/3)	9,975.00
Subtotal	<u>\$ 12,975.00</u>

Ground Water Committee Staff Support:

Accomack County	\$ 3,970.00
Northampton County	3,970.00
Subtotal	<u>\$ 7,940.00</u>

USGS Ground Water Model

Accomack County	\$ 7,500.00
Northampton County	\$ 7,500.00
FY 2018 Remaining Balances	1,000.00
Subtotal	<u>\$ 16,000.00</u>

Household Hazardous Waste Collection:

Accomack County	\$ 0.00
Northampton County	0.00
VDH Regional HHW Collection Grant (pending)	0.00
Subtotal	<u>\$ 0.00</u>

Total Revenues

\$ 60,579.00

EXPENDITURES:

Ground Water Consultant	\$ 23,664.00
Ground Water Modeling Run	12,975.00
Ground Water Committee Staff Support	7,940.00
USGS Ground Water Model	16,000.00
Household Hazardous Waste Collection	0.00
Total Expenditures	<u>\$ 60,579.00</u>

NET SURPLUS OR (DEFICIT)

\$ 0.00

OF REVENUES LESS EXPENDITURES



MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee
FROM: Shannon Alexander
Coastal Resources Program Manager
Accomack-Northampton Planning District Commission
DATE: August 21, 2018
SUBJECT: Staff Update

Committee Attendance Record

The FY2018 Committee Attendance Records are [attached](#).

Environmental Reviews and Permits

VA Pollutant Discharge Elimination System Program, VA Pollution Abatement Program, Total Maximum Daily Load/Implementation Plans, Public Notice – Environmental Project – None. Consent Orders – Groundwater Withdrawals, see [attached](#).

Quote from Lee Crowell, VDEQ: "Consent Orders are being proposed for 58 (*correction: 57*) existing and newly constructed poultry facilities on the Eastern Shore currently withdrawing 300,000 gallons or more of groundwater a month within a [Designated Groundwater Management Area](#) without a permit in violation of the [Groundwater Management Act of 1992](#) and the [Groundwater Withdrawal Regulations](#). The consent orders authorize groundwater withdrawals pending application submittal and Department review. The Consent Orders require the submittal of a complete groundwater withdrawal permit application by October 1, 2018 and establishes groundwater withdrawal limits. Public comment period for these Consent Orders will run from June 25th through July 25th. The Consent Orders for the facilities involved are similar in nature except for the appendices which establishes the withdrawal limits for each farm."

Public Informational Briefing on the Eastern Shore – August 22, 2018 6:30pm-8:30pm Arcadia High School, see [attached](#).

Other Items

Household Hazardous Waste Collection

The Virginia Department of Health offered a partial award for our application. Details are being finalized with VDH, potential partners, and the localities. Implementation to begin immediately, project to be completed by August 2019. Since 2004, the HHWC event has kept over 40,000 pounds (over 20 tons) of hazardous materials from polluting the local system.

News Articles

NASA, Chincoteague work on pollution tied to Wallops; Richmond Times-Dispatch, see [attached](#).

Research & Publications

With Alaurah Moss of Dewberry, we are submitting an application to NFWF Small Watershed Grant Planning and Technical Assistance: *Adapting to Groundwater Inundation and Saltwater on Virginia's Eastern Shore.*



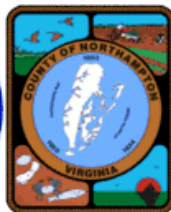
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EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE FY 2018 ATTENDANCE RECORD

Members	Term Exp.	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
<u>Accomack Co.</u>													
Jim Belote	NA	*	X	X	X	X	*	X	X	X		X	
Grayson Chesser		*		X	X	X	*	X	X	X	X	X	
Daniel Hershey	June 30, 2019	*	X	X	X	X	*	X		X	X	X	
Paul Muhly		*	X	X	X	X	*	X	X	X	X	X	
<u>Northampton Co.</u>													
Eugene Hampton	October, 2019	*	X	X		X	*	X	X	X	X		
Granville Hogg		*	X	X		X	*	-	-	-	-	-	-
John Coker		-	-	-	-	-	*	X	X	X	X	X	
Robert Meyers	January, 2019	*	X	X	X	X	*	X	X	X	X	X	
John Salm	May, 2018	*	X		X		*	X			X	X	
<u>Non-Voting Ex-Officio Members</u>													
Mike Mason	NA	*					*		X	X	X	X	
Charles Kolakowski	NA	*	X			X	*		X	X	X	X	
Elaine Meil	NA	*	X	X	X	X	*	X	X	X	X		

- Indicates not a member. X Indicates member present.
 * Indicates no monthly meeting held. NA Not Applicable
 () Indicates an alternate present





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VDEQ Eastern Shore Poultry – Table supplied with the Consent Order

Facility Name	Applicant	Application Number	Monthly Withdrawal amounts	Yearly Withdrawal Amounts
Ish Farm, Muhammad A. Parvez	Ish Farm, LLC	GW0072500	2,700,000	11,500,000
Brady Farm	Ryan Brady	GW0072600	2,700,000	9,900,000
Morey Farm	Andrew Morey	GW0072700	2,300,000	8,800,000
Ed, Pat, & Brandy Sue Farm	Edward Thornton	GW0072800	1,800,000	8,000,000
Trader Farms	Jan and ET Trader	GW0072900	1,600,000	9,500,000
Old Mill Farm	William Davis & Therese (Tracy) Lovell	GW0073000	3,100,000	12,000,000
Chattha Poultry Farm	Mohammad Chattha	GW0073100	2,600,000	9,400,000
Contrell Brown & Son Farm	Contrell Brown	GW0073200	700,000	2,600,000
Davis Farm	Thomas A Davis	GW0073300	2,100,000	7,600,000
Eagle Birdie Par Farm	Terry White, Sr.	GW0073400	1,500,000	5,600,000
Eddie Kelly Farm	Horace E Kelley	GW0073500	3,000,000	11,900,000
Elahi, LLC	Iqbal Mohammad	GW0073600	1,600,000	6,700,000
Tanner Farm	Goodman Poultry Farms, LLC	GW0073700	2,100,000	7,300,000
Hai Tran Farm	Hai Tran	GW0073800	2,000,000	7,500,000
Holland Farm	Tull, LLC	GW0073900	1,500,000	5,600,000
K & D Farm	Jessica L. Thomas	GW0074000	1,100,000	4,600,000
Frank Mukhtar	FPNA Farms, Inc.	GW0074100	1,000,000	3,900,000
Last Hurrah Farm	Last Hurrah LLC	GW0074200	3,100,000	11,300,000
Levi's Farm	Levi's Farm LLC	GW0074300	2,000,000	7,500,000
Luu Farm: Spring farm & Phoenix Farm	Dan V Luu	GW0074400	3,300,000	10,600,000
McChicken Farms	McChicken Farms, LLC	GW0074500	2,500,000	10,000,000
Miller Time Farm	Miller Time LLC	GW0074600	2,100,000	7,600,000
Sanns of the Shore	Sanns Farm, LLC	GW0074700	3,300,000	14,500,000



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Seaside Farm	Le Ung, Mark McCready	GW0074900	2,500,000	10,000,000
Shore Livestock	Ali Razwan	GW0075000	2,200,000	9,000,000
Spuddog Farm	Spuddog Farm Property, LLC	GW0075200	1,300,000	5,200,000
Thomas Farm	Thomas Family Farms, LLC	GW0075300	1,100,000	4,100,000
Van Tran Farm	Van T. Tran	GW0075400	4,400,000	19,400,000
Vision Quest Farm	Vision Quest Enterprises, LLC	GW0075500	2,100,000	7,600,000
Wisharts Point Farm	Nicholas J. Thomas, LLC	GW0075600	1,000,000	3,900,000
Dennis Farm, LLC	Dennis Farm, LLC	GW0075700	3,900,000	16,800,000
Giuse Farm	Hoai An Tran and Kevin Vu	GW0075800	3,000,000	11,300,000
Shore Time Poultry	Ronnie Watkins	GW0075900	3,800,000	15,000,000
Tai Dat Farm	Danny P. Huynh	GW0076000	2,500,000	9,400,000
Peter & Mary Farm	Hop Van Nguyen	GW0076300	900,000	3,300,000
Nguyen & Emily Poultry Farm	Hop Van Nguyen	GW0076400	800,000	3,200,000
Phillip L. Greene	Greene's Poultry Farm, LLC	GW0076600	2,100,000	7,600,000
Excel Farm	Tri M Tran	GW0076700	900,000	3,700,000
Elite Farm	Tri M Tran	GW0076800	1,100,000	4,500,000
TP Tarm	Tri M Tran	GW0073400	1,500,000	5,600,000
R W Farms	Ronnie Matthews	GW0076900	700,000	3,000,000
Justice Poultry Farm	Justice Poultry Farm, Inc.	GW0077000	600,000	2,400,000
Calabria Poultry Farm	Cole Bundick	GW0077100	400,000	1,300,000
Against the Wind Farm	Payne Poultry Farm LLC	GW0077200	1,100,000	5,000,000
Fulushou Farm	Hien Tran	GW0077300	3,800,000	9,100,000
Rogers Poultry Farm	Antonio Rogers	GW0077400	800,000	2,800,000
Turlington Poultry Farm	Mary Turlington	GW0077500	600,000	2,500,000
Three Blairs Farm	Ken Blair	GW0077600	1,000,000	4,500,000



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Bethel Poultry Farm	Chi Kim	GW0077700	2,300,000	480,000
Brittany Farm	Kevin Vu	GW0077800	1,600,000	5,700,000
Turkey Run Farm	Son Nguyen	GW0077900	2,800,000	9,700,000
Log Cabin Farm	Claude G Linton	GW0078000	400,000	1,300,000
Pixies Poultry Farm	Burke Palmer Booth	GW0078100	700,000	2,700,000
CEC Farm	Claude G Linton	GW0078200	500,000	1,800,000
Lavelle Poultry Farm	John E Lavelle	GW0078300	400,000	1,300,000
Summer's Rest Farm	Summers Rest LLC	GW0078400	2,500,000	10,000,000
Teresa Farm	Teresa Farm LLC not KimViet Ngo	GW0078500	2,900,000	12,900,000
		<u>TOTALS</u>	<u>104,000,000</u>	<u>409,980,000</u>
			<u>AVERAGE DAILY</u>	<u>1,123,233 GPD</u>



**STATE WATER CONTROL BOARD
ENFORCEMENT ACTION - ORDER BY CONSENT
ISSUED TO
CERTAIN GROUNDWATER WITHDRAWAL APPLICANTS
LOCATED IN
ACCOMACK AND NORTHAMPTON COUNTIES
FOR
UNPERMITTED GROUNDWATER WITHDRAWAL**

SECTION A: Purpose

This is a Consent Order issued under the authority of Va. Code § 62.1-268, between the State Water Control Board and certain groundwater withdrawal applicants located in Accomack and Northampton counties, for the purpose of resolving certain violations of the Virginia Ground Water Management Act of 1992 (Va. Code § 62.1-254 *et seq.*) and its supporting regulations (9 VAC 25-610-10, *et seq.*).

SECTION B: Definitions:

Unless the context clearly indicates otherwise, the following words and terms have the meaning assigned to them below:

1. "Act" means the Ground Water Management Act of 1992, Va. Code §§ 62.1-254, *et seq.*
2. "Adverse impact" means reductions in groundwater levels or changes in groundwater quality that limit the ability of any existing groundwater user lawfully withdrawing or authorized to withdraw groundwater at the time of permit or special exception issuance to continue to withdraw the quantity and quality of groundwater required by the existing use. Existing groundwater users include all those persons who have been granted a groundwater withdrawal permit subject to this chapter and all other persons who are excluded from permit requirements by 9VAC25-610-50.
3. "Agricultural use" means utilizing groundwater for the purpose of agricultural, silvicultural, horticultural, or aquacultural operations.
4. "Applicant" means a person filing an application to initiate or enlarge a groundwater withdrawal in a groundwater management area.



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5. "Beneficial use" includes, but is not limited to domestic (including public water supply), agricultural, commercial, and industrial uses.
6. "Board" means the State Water Control Board, a permanent citizens' board of the Commonwealth of Virginia as described in Va. Code §§ 10.1-1184 and 62.1-44.7.
7. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia as described in Va. Code § 10.1-1183.
8. "Director" means the Director of the Department of Environmental Quality.
9. "Facility" means the specific agricultural operation as identified in the appendices of this Order.
10. "Ground water" means any water, except capillary moisture, beneath the land surface in the zone of saturation or beneath the bed of any stream, lake, reservoir, or other body of surface water wholly or partially within the boundaries of the Commonwealth of Virginia, whatever the subsurface geologic structure in which such water stands, flows, percolates, or otherwise occurs. 9 VAC 25-610-10.
11. "Ground Water Management Area" means any area declared by the Board to have met any of the conditions in 9 VAC 25-610-70 and the Board determines that the public welfare, safety and health require that regulatory efforts be initiated.
12. "Order" means this document, also known as a "Consent Order" or an "Order by Consent," a type of Special Order under the State Water Control Law.
13. "Permit" means Ground Water Withdrawal Permit and means a certificate issued by the Board permitting the withdrawal of a specified quantity of ground water in a ground water management area.
14. "Person" means any and all persons, including individuals, firms, partnerships, associations, public or private institutions, municipalities or political subdivisions, governmental agencies, or private or public corporations organized under the laws of this Commonwealth or any other state or country. 9 VAC 25-610-10.
15. "Regulations" means the Ground Water Withdrawal Regulations, 9 VAC 25-610-10 et seq.
16. "Salt water intrusion" means the encroachment of saline waters in any aquifer that creates adverse impacts to existing groundwater users or is counter to the public interest.



17. "Well" means any artificial opening or artificially altered natural opening, however made, by which groundwater is sought or through which groundwater flows under natural pressure or is intended to be withdrawn.
18. "Withdrawal system" means (i) one or more wells or withdrawal points located on the same or contiguous properties under common ownership for which the withdrawal is applied to the same beneficial use or (ii) two or more connected wells or withdrawal points which are under common ownership but are not necessarily located on contiguous properties.

SECTION C: Findings of Fact and Conclusions of Law

1. Each Applicant identified in the appendices of this Order is a person, who owns and operates a Facility in Accomack and/or Northampton County, Virginia. Accomack and Northampton County is located in the Eastern Shore ground water management area as declared in 9 VAC 25-600-20.
2. The Applicants identified herein are currently withdrawing 300,000 gallons or more of groundwater a month from a withdrawal system for agricultural use, and no exclusions from the permitting requirements are applicable to the groundwater withdrawal.
3. 9VAC25-610-90(4) states that, "[a]ny person withdrawing groundwater for agricultural or livestock watering purposes on or before July 1, 1992, shall file an application for a groundwater withdrawal permit on or before December 31, 1993."
4. 9VAC25-610-94 states that, "[p]ersons wishing to initiate a new withdrawal, expand an existing withdrawal, or reapply for a current permitted withdrawal in any groundwater management area and not excluded from requirements of this chapter by 9VAC25-610-50 shall apply for a permit."
5. Va. Code § 62.1-258 and 9 VAC 25-610-40(A) of the Regulations prohibit the withdrawal of 300,000 gallons of groundwater a month within a groundwater management area without a permit.
6. In order to avoid an adverse impact and/or salt water intrusion, and to ensure that no more than the smallest amount of withdrawal necessary to support the proposed beneficial use is withdrawn, the DEQ has requested information and worked with the Applicants to complete or address inaccuracies in their groundwater withdrawal applications.



7. Based on the results of information provided by the Applicants and an extensive review by DEQ staff, the Board concludes that Applicants have violated Va. Code § 62.1-258 and 9 VAC 25-610-40(A).
8. In order for the Applicants to return to compliance, DEQ staff and the Applicants have agreed to a Schedule of Compliance, which is incorporated as Appendices of this Order.

SECTION D: Agreement and Order

Accordingly, by virtue of the authority granted it in Va. Code §§ 62.1-44.15, the Board orders the Applicants, and Applicants agree to:

1. Perform the actions described in the Appendices of this Order; and

If the Department has to refer violations of this Order to the Department of Law, the Applicants shall be liable for all costs and reasonable attorney's fees.

SECTION E: Administrative Provisions

1. The Board may modify, rewrite, or amend this Order with the consent of Applicants for good cause shown by Applicants, or on its own motion pursuant to the Administrative Process Act, Va. Code § 2.2-4000 *et seq.*, after notice and opportunity to be heard.
2. This Order addresses and resolves only those violations specifically identified in Section C of this Order. This Order shall not preclude the Board or the Director from taking any action authorized by law, including but not limited to: (1) taking any action authorized by law regarding any additional, subsequent, or subsequently discovered violations; (2) seeking subsequent remediation of the facility; or (3) taking subsequent action to enforce the Order.
3. For purposes of this Order and subsequent actions with respect to this Order only, the Applicants admit the jurisdictional allegations, findings of fact, and conclusions of law contained herein.
4. The Applicants consent to venue in the Circuit Court of the City of Richmond for any civil action taken to enforce the terms of this Order
5. The Applicants declare they have received fair and due process under the Administrative Process Act and the Ground Water Management Act of 1992 and they waives the right to any hearing or other administrative proceeding authorized or required by law or regulation, and to



any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as a waiver of the right to any administrative proceeding for, or to judicial review of, any action taken by the Board to modify, rewrite, amend, or enforce this Order.

6. Failure by the Applicants to comply with any of the terms of this Order shall constitute a violation of an order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional Orders as appropriate by the Board or the Director as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
7. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.
8. The Applicants shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or such other unforeseeable circumstances beyond its control and not due to a lack of good faith or diligence on their part. The Applicants shall demonstrate that such circumstances were beyond their control and not due to a lack of good faith or diligence on their part. The Applicants shall notify the Water Withdrawal Permitting & Compliance Manager verbally within 24 hours and in writing within three business days when circumstances are anticipated to occur, are occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth:
 - a. the reasons for the delay or noncompliance;
 - b. the projected duration of any such delay or noncompliance;
 - c. the measures taken and to be taken to prevent or minimize such delay or noncompliance; and
 - d. the timetable by which such measures will be implemented and the date full compliance will be achieved.

Failure to so notify the Water Withdrawal Permitting & Compliance Manager verbally within 24 hours and in writing within three business days, of learning of any condition above, which the parties intend to assert will result in the impossibility of compliance, shall constitute a waiver of any claim to inability to comply with a requirement of this Order.

9. This Order is binding on the parties hereto and any successors in interest, designees and assigns, jointly and severally.



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10. This Order shall become effective upon execution by both the Director or his designee and the Applicants. Nevertheless, the Applicants agree to be bound by any compliance date which precedes the effective date of this Order.
11. This Order shall continue in effect until:
 - a. The Director or his designee terminates the Order after has completed all of the requirements of the Order;
 - b. The Applicant petitions the Director or his designee to terminate the Order after it has completed all of the requirements of the Order and the Director or his designee approves the termination of the Order; or
 - c. the Director or Board terminates the Order in his or its sole discretion upon 30 days' written notice to the Applicant;
 - d. In no case shall this Order extend beyond July 1, 2019 or until a final groundwater withdrawal permit is issued, whichever is later.

Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve the Applicant from its obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

12. Any plans, reports, schedules or specifications attached hereto or submitted by the Applicant and approved by the Department pursuant to this Order are incorporated into this Order. Any non-compliance with such approved documents shall be considered a violation of this Order.
13. The signatory of this Order certifies that he or she is a responsible official authorized to enter into the terms and conditions of this Order and to execute and legally bind the Applicant to this Order. Any documents to be submitted pursuant to this Order shall also be submitted by a responsible official of the Applicant.
14. This Order constitutes the entire agreement and understanding of the parties concerning settlement of the violations identified in Section C of this Order, and there are no representations, warranties, covenants, terms or conditions agreed upon between the parties other than those expressed in this Order.

And it is so ORDERED this _____ day of _____, 2018



APPENDIX A [APPLICANT] for [FACILITY]

[Applicant] shall, in accordance with the provisions of the State Water Control Law, the Ground Water Management Act of 1992, and the Ground Water Withdrawal Regulations, comply with the following regarding the withdrawal of groundwater at the [Facility]:

- 1 Within 60 days of the effective date of this Order, [Applicant] shall provide to DEQ the following information order to process [Applicant's] ground water withdrawal permit application:
 - a. Item 1
 - b. Item 2
 - c. Item 3

- 2 Should [Applicant] fail to provide the requested information within 60 days from the effective date of this Order, the groundwater withdrawal application may be suspended from processing. Once an application has been suspended from processing, the Applicant must submit a new complete application; however, no additional permit fee will be assessed. Further, where the Applicant becomes aware that one or more relevant facts from a permit application were omitted, or that incorrect information was submitted in a permit application or in any report, the Applicant shall immediately submit such facts or the correct information.

- 3 Until such time as a groundwater withdrawal permit has been issued to [Applicant] for the [Facility], [Applicant] may withdraw groundwater as follows:
 - a. [Applicant] shall withdraw no more than [XXX,XXX] gallons of ground water per month and no more than [XXX,XXX] gallons of groundwater year for the beneficial use of [beneficial use]. Other beneficial uses are not authorized by this Order.

 - b. The withdrawal of ground water shall only originate from the following wells:

Owner Well Name	DEQ Well#	Depth	Aquifer

- c. Withdrawal amounts authorized in this Order may reflect the amount requested in your groundwater withdrawal application, and any groundwater withdrawal



amounts authorized in any permit by the Department will be dependent upon the results of the technical evaluation and the availability of the resource.

- 4 Groundwater withdrawals from each well and shall be recorded monthly and reported on forms provided by DEQ to the Water Withdrawal Permitting & Compliance Manager by the tenth day of each January, April, July and October for the respective previous calendar quarter. Records of groundwater withdrawals shall be maintained by **[Applicant]** as required by the Ground Water Withdrawal Regulation.
 - a. Each well referenced in paragraph 3(b) above shall have in-line totalizing flow meters to read gallons, cubic feet, or cubic meters. Such meters shall produce volume determinations within plus or minus 10% of actual flows. A defective meter or other device must be repaired or replaced within 30 days. A defective meter is not grounds for not reporting withdrawals. During any period when a meter is defective generally accepted engineering methods shall be used to estimate withdrawals and the period during which the meter was defective must be clearly identified in ground water withdrawal reports.
 - b. Each well referenced in subparagraph 3(b) above shall be equipped in a manner such that water levels can be measured during pumping and nonpumping periods without dismantling any equipment. Any opening for tape measurement of water levels shall have an inside diameter of 0.5 inches and be sealed by a removable plug or cap. **[Applicant]** shall provide a tap for taking raw water samples from each well.
 - c. **[Applicant]** shall not place a pump or water intake device lower than the top of the uppermost confined aquifer that a well utilizes as a ground water source or lower than the bottom of an unconfined aquifer that a well utilizes as a ground water source when installing a replacement well for any of the wells referenced in subparagraph b above.
 - d. **[Applicant]** shall notify DEQ in writing and gain staff approval of any change in the status, construction, or pump setting of any well referenced in subparagraph b above. A revised water well completion report must be submitted to DEQ within 30 days of any change in the event that the physical construction of a well is altered or the pump setting in the well is changed.
 - e. **[Applicant]** shall notify DEQ five working days in advance of any scheduled well maintenance that results in the pump being pulled for wells with unknown screen locations. At the time of such notification, DEQ may take the opportunity to run geophysical logs to determine screen locations.



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5 Unless otherwise specified in this Order, **[Applicant]** shall submit all requirements of Appendix A of this Order to:

Water Withdrawal Permitting & Compliance Manager
P.O. Box 1105
Richmond, Virginia 23218

[Applicant] voluntarily agrees to the issuance of this Order.

_____ Date: _____
Print Name Signature

Commonwealth of Virginia

City/County of _____

The foregoing document was signed and acknowledged before me this _____ day of _____, 2018, by _____ who is

_____ of **[Applicant]**.
Title

Notary Public

Registration No.

My commission expires: _____

Notary seal:



DEQ Announces Public Informational Briefing on the Eastern Shore

DEQ recently released for public comment draft consent special orders (draft orders) for 57 poultry facilities on the Eastern Shore. The draft orders address each facility's withdrawal of groundwater. Due to the number of draft orders released for public comment, DEQ will hold an informational briefing on the Eastern Shore on August 22, 2018 from 6:30 pm to 8:30 pm at Arcadia High School (8210 Lankford Highway, Oak Hall, Virginia 23416).

DEQ will present information on proposed actions to address the groundwater withdrawals through the draft orders in the short term and through any future permitting activities for each of the withdrawals in the long term. DEQ staff will also discuss the different processes and opportunities for public comment for both the draft orders and any future permitting actions. After the presentation, attendees will have an opportunity to ask questions, however, questions and comments made during this informational briefing will not be part of the official public comment record.

Following the informational briefing, an additional public comment period for the draft orders will be offered to allow interested persons to submit new or additional comments on the draft orders. The public comment period will start on August 23, 2018 and will end on August 31, 2018 at 11:59 PM.

Comments or questions regarding the draft orders or the additional public comment period should be submitted to Mr. Lee Crowell, Enforcement Operations Manager, at Lee.Crowell@deq.virginia.gov or at P.O. Box 1105, Richmond, Virginia, 23218. Questions regarding the informational briefing should be directed to Mr. Ryan Green at Ryan.Green@deq.virginia.gov or at P.O. Box 1105, Richmond, Virginia, 23218.



A12 SUNDAY, JULY 22, 2018 RICHMOND TIMES-DISPATCH

NASA, Chincoteague work on pollution tied to Wallops

BY SARAH RANKIN
The Associated Press

Understanding the extent of contamination at NASA's Wallops Flight Facility from dangerous industrial chemicals that also made their way into the drinking water for the nearby island town of Chincoteague will take years, officials said last week.

Meanwhile, the popular tourist town on Virginia's Eastern Shore is moving ahead with plans to find a new supply for its drinking water, which has to be piped in from the mainland. It recently spent a sizable amount of its relatively small budget to buy land for new wells it feels confident will be free of contamination from the chemicals, perfluoroalkyl and polyfluoroalkyl substances, which are emerging as a problem nationwide.

Although NASA has been providing supplemental drinking water since the chemicals were first detected over a year ago, Town Manager Jim West said he sees it as a risk for NASA and Chincoteague not to make a change.

"If there's contaminants, isn't the wiser thing to get out of the field of contaminants? We want to relocate somewhere we think we will be safe," he said.

The man-made chemicals referred to as PFAS were once used in a wide variety of products, including protective coatings like Teflon. NASA used firefighting foam containing PFAS at Wallops. PFAS, which were persistent in the environment and the human body, are increasingly turning up in water systems across the country. Scott Pruitt called the issue a "national priority" before resigning as Environmental Protection Agency administrator recently.

Once PFAS were de-

NASA is moving onto a long-term strategy to understand the full extent of the problem and clean it up.

tected on Wallops property, where Chincoteague has seven wells, NASA began collaborating with the town on public outreach and further testing.

The town's wells where PFAS were detected were taken offline, and Wallops began providing extra water. PFAS levels in the town's finished drinking water never exceeded health advisory limits set by the EPA, and NASA says the water has been PFAS-free for more than a year.

Now NASA is moving onto a long-term strategy to understand the full extent of the problem and clean it up. The agency recently submitted a site investigation plan for review by federal and state officials, officials said last week. A NASA spokesman declined to make a copy of the work plan available, saying it was still in draft form and under review.

The plan calls for sampling soil and groundwater and using monitoring wells to try to understand exactly where the PFAS are and how they're moving in those areas, said TJ Meyer, associate chief of the medical and environmental management division at NASA Wallops.

After the data are available, NASA will conduct a risk assessment and evaluate remedial options, Meyer said.

"This is going to be a multiyear effort," Meyer said.

NASA has installed perimeter wells, and testing so far has shown the PFAS are not leaving Wallops' property, Meyer said.

David Liu, restoration program manager at Wallops, said the eventual management of the waste products will be "a challenge" because the chemicals were designed to repel water, resist heat and not break down in the environment.

As for Chincoteague, West said there had been no hiccups so far in using Wallops' water supply as a supplement, even during a second busy summer season under the arrangement. The town is nationally known for an annual crossing of wild ponies from Assateague Island memorialized in Marguerite Henry's children's novel "Misty of Chincoteague."

NASA is not charging the town for the extra water or the testing. But Chincoteague did pay about \$350,000 to buy the property for new wells and to drill two test wells — money West hopes NASA eventually will reimburse along with the millions more it's expected to cost to develop the new wells.

The town, which has a population of about 3,000 and an annual budget of around \$8 million, wouldn't be facing the expense if not for the PFAS, he said.

NASA supports the town's efforts to relocate its wells and "is currently evaluating the possibility and process for obtaining the necessary legal authority to provide funds to the town for this specific purpose," Wallops spokesman Jeremy Eggers said.

The Wallops facility, established in 1945, is used as a launch site for aircraft, scientific balloons and rockets. It's also a test site for unmanned aircraft and has a research airport. Firefighters at Wallops used a common foam containing PFAS compounds for training and to extinguish fires from aircraft crashes, according to NASA.



MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee
FROM: Britt McMillan
Principal Hydrogeologist
Arcadis-Malcolm Pirnie
DATE: August 21, 2018
SUBJECT: August 21, 2018 Ground Water Consultant Report

Technical/Regulatory/Educational Items

1. *Draft Poultry House Groundwater Withdrawal Applications:* The Groundwater Committee received 41 draft Groundwater Withdrawal Applications from poultry houses that were submitted to DEQ Between December 2017 and July 30, 2018. These applications represent the majority (72%) of the unpermitted poultry houses that DEQ believes require a Groundwater Withdrawal Permit. These applications provide information on location, targeted aquifers, and requested withdrawal amounts. The applications do not provide information on impacts to the groundwater resource (as determined by the DEQ Eastern Shore Model) or water quality in the targeted aquifers. The following information from the applications will be reviewed:
 - a. *Poultry house locations and other existing permitted groundwater users*
 - b. *Proposed withdrawal amounts*
 - c. *Amount used for cooling and livestock consumption*
 - d. *Targeted aquifers*
 - e. *Potential availability of Columbia aquifer*
 - f. *Sustainability considerations for the groundwater resource*
 - g. *Water quality considerations*
2. *Consent Order for Unpermitted Poultry House Withdrawals:* DEQ has prepared a Draft Consent Order (CO) to address 57 unpermitted poultry houses on the Shore that DEQ believes require permits. A copy of the draft COs is attached. At the time the Draft CO was developed, some but not all of the poultry houses were withdrawing groundwater. The consent order would allow the poultry houses to withdrawal groundwater while the permit applications are reviewed and processed. Requirements of the CO will be reviewed and
3. *DEQ Public Briefing and Public Comment for the draft Poultry House Consent Orders:* DEQ will hold a public information briefing on August 22, 2018 from 6:30 pm to 8:30 pm at Arcadia High School. An additional public comment period for the CO will be provided from August 23 through August 31, 2018. A copy of the public briefing announcement is attached.



Other Items:

1. Additional FY2019 Groundwater Committee activities. Activities in addition to routine Committee matters will be discussed. Two additional activities to complete in FY2019 are:
 - a. Update information for the DEQ Water Supply Plans. Information specific to the Northampton County Water Supply Plan and Accomack County Water Supply Plan will be prepared and submitted to DEQ.
 - b. Update the Eastern Shore Groundwater Protection Plan. It has been five years since the plan was prepared. The plan included a 5-year review and update as necessary. There have been substantial research and regulatory activities over the past 5-years that warrant updating the plan. In addition to updating research and regulatory activities, updating the sustainability metrics is recommended. The need for more discrete sustainability metrics was discussed in prior meetings, and these metrics should be incorporated in the plan.

Eastern Shore of Virginia Ground Water Committee FY 2019 Consultant Progress Summary			
Task 1 - Committee Meetings (FY19 Goal = 10)			
% Completion		10%	
Task 2 – Technical Documentation			
No.	Activity	Month	
1	Review DEQ Consent Orders for unpermitted poultry houses that appear to require a groundwater withdrawal permit.	Aug	
2	Review draft poultry house Groundwater Withdrawal Applications for 41 applications provided to the Groundwater Committee. The review focused on location of the proposed withdrawals, target aquifers, requested amounts, and considerations for the groundwater resource.	Aug	
3	Reviewed proposed additional activities for the Groundwater Committee to consider for FY2019.	August	
Task 3 - Groundwater Permit Review			
Applicant	Permit Status	Month	Annual Amount (Gal)
None			
Task 4 – Implement Committee Work Plan			
Activity	Month(s)	Outcome	
Task 5 – Progress Reports			
% Completion		10%	



MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee
 FROM: Britt McMillan
 Principal Hydrogeologist
 Arcadis
 DATE: August 21, 2018
 SUBJECT: FY2018 Annual Summary Ground Water Consultant Report

Eastern Shore of Virginia Ground Water Committee FY 2018 Consultant Progress Summary		
Task 1 - Committee Meetings (FY15 Goal = 10)		
% Completion		90%
Task 2 - Technical Documentation		
No.	Activity	Month
1	Summarize findings from the Eastern Virginia Groundwater Management Advisory Committee. Included in the findings was the recommendation for regional planning efforts through EVGMA Planning District Commissions with specific reference to the Eastern Shore of Virginia Groundwater Committee as an example to be emulated.	Aug
2	Present information from USGS Circular: <i>Understanding Nutrients in the Chesapeake Bay Watershed and Implications for Management and Restoration – The Eastern Shore</i> . The circular provided a synopsis of research completed on nutrient contribution to the Chesapeake Bay from the Eastern Shore along with target reductions in nutrient loading necessary to meet the TMDL requirements.	Aug
3	Presented the draft Groundwater Use Summary and discussed groundwater use trends over the past 8 years.	Sep
4	Presented three-dimensional perspectives of the Eastern Shore Groundwater Resources using the Eastern Shore Model and well and water quality data from DEQ. The information ultimately will be developed into a short video to support understanding of the groundwater resources on the Eastern Shore	Sep
5	Discussed recent events that potentially conflict with the goal of increasing use from the more sustainable Columbia aquifer on the Eastern Shore. The Groundwater Committee requested preparation of informational materials, in the form of a two-page summary and presentation suitable for public meetings such as County Board of Supervisors. These informational materials would focus on the importance of the Columbia aquifer as part of the Columbia aquifer and Yorktown-Eastover aquifer Sole Source Aquifer System.	Sep
6	Attended the VDEQ Aquifer Science and Modeling Workshop. Information covered and discussed at the workshop included: 1) current understanding of the hydrogeologic framework for the Eastern Shore with a focus of paleochannels; 2) recalibration and sensitivity analysis for the Eastern Shore Model; and 3) modeled groundwater withdrawal impacts from current and permitted withdrawals on the Shore.	Oct



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7	Presented limited water quality results from the domestic well sampling and discussed results in the context of the groundwater resource and domestic well construction considerations.	Nov
8	Presented draft legislation under consideration by the General Assembly. Groundwater Committee moved to support Senate Bill 520, legislation that would encourage use of the more sustainable surficial (Columbia) aquifer.	Jan
9	DEQ reviewed the Groundwater Withdrawal regulatory requirements and how the regulations seek to preserve a sustainable groundwater supply for the Eastern Shore of Virginia.	Jan
10	DEQ reviewed status of the Poultry House groundwater withdrawal permitting efforts to date. Provided a summary of the Applications that have been submitted for Poultry House operations.	Jan
11	Maintaining a Sustainable Groundwater Resource in the Multi-Aquifer Columbia – Yorktown-Eastover aquifer system: This presentation will 1) define sustainability in the context of the Eastern Shore aquifers; 2) identify factors that determine sustainability of the different aquifers; 2) limitations of the aquifers; 3) issues that have been experienced on the Eastern Shore; and 4) measures that can be taken to help maintain a sustainable supply	Feb
12	Presented: Columbia (Surficial) Aquifer as a Groundwater Resource on the Eastern Shore of Virginia. The presentation provided current information on our understating of the unconfined Columbia aquifer, sustainability, water quality characteristics, and vulnerabilities.	Mar
13	Discussed potential impacts from a proposed expansion of a borrow pit in Northampton Count.	Apr
14	Presented: Groundwater Level Trends on the Eastern Shore of Virginia. Groundwater level trends are one of the primary metrics used to track status of groundwater aquifers. Groundwater level trends as measured from State Observation Wells have been periodically reviewed by the Committee, with the last update approximately 5-years ago.	Apr
15	Presented: Sustainability Metrics. Presented the primary methods and metrics used to evaluate groundwater resources from the context of maintaining a sustainable supply. Covered included metrics appropriate for groundwater resources in general and metrics that are more important for the aquifers that provide water to the Eastern Shore.	May

Task 3 - Groundwater Permit Review

<u>Applicant</u>	<u>Permit Status</u>	<u>Month</u>	<u>Annual Amount (Gal)</u>
None			

Task 4 – Implement Committee Work Plan

<u>Activity</u>	<u>Month(s)</u>	<u>Outcome</u>
Present information on the Sole Source Aquifer; recent challenges for the Columbia aquifer; and maintaining the goal to promote sustainable use of the combined Columbia and Yorktown-Eastover aquifer systems.	August	A brief discussion on the dual-sole source aquifer system was initiated at the August meeting, however time limitations restricted the discussion.



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Prepared and presented on maintaining a Sustainable Groundwater Resource in the Multi-Aquifer Columbia – Yorktown-Eastover aquifer system: This presentation 1) defined sustainability in the context of the Eastern Shore aquifers; 2) identified factors that determine sustainability of the different aquifers; 2) limitations of the aquifers; 3) issues that have been experienced on the Eastern Shore; and 4) measures that can be taken to help maintain a sustainable supply	February	Presented to the groundwater committee followed by discussion with the Committee and public. Presentation is posted on the Groundwater Committee website for public access.	
Prepared and presented on Columbia (Surficial) Aquifer as a Groundwater Resource on the Eastern Shore of Virginia. The presentation provided current information on our understating of the unconfined Columbia aquifer, sustainability, water quality characteristics, and vulnerabilities.	March	Presented to the groundwater committee followed by discussion with the Committee and public. Presentation is posted on the Groundwater Committee website for public access.	
Presented to the Accomack County Board of Supervisors the presentation on maintaining a Sustainable Groundwater Resource in the Multi-Aquifer Columbia – Yorktown-Eastover aquifer system.	March	Presented the groundwater sustainability presentation to the Accomack County Board of Supervisors.	
Presented: Groundwater Level Trends on the Eastern Shore of Virginia. Groundwater level trends are one of the primary metrics used to track status of groundwater aquifers. Groundwater level trends as measured from State Observation Wells have been periodically reviewed.	April	Presented to the groundwater committee followed by discussion with the Committee and public. The presentation elicited questions regarding metrics used to monitor for groundwater sustainability which will be addressed in the May 2018 Committee meeting.	
Presented: Sustainability Metrics.	May	Presented the primary methods and metrics used to evaluate groundwater resources from the context of maintaining a sustainable supply. Covered included metrics appropriate for groundwater resources in general and metrics that are more important for the aquifers that provide water to the Eastern Shore.	
Discussed proposed new location for Town of Chincoteague well field. Prepared a brief memo to submit to the Town.	May	The discussion identified both regulatory and engineering steps that will needed to develop a well field at the new location and methods DEQ will use to evaluate potential impacts to other existing users.	
Task 5 – Progress Reports			
% Completion	90%		
Task 6 – Community Outreach (FY18 Goal = 2 from FY16)			
% Completion	100%		
No.	Presentation/Information Material Description	Date	Attendance



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

1	Information Brochure – Groundwater Use Summary	Sept	NA
2	Sustainable Resource for the Eastern Shore Presentation posted on the Groundwater Committee website for public access	Feb	NA
3	Sustainability Presentation to the Accomack County Board of Supervisors	March	NA
4	Encouraging use of Columbia aquifer to maintain a sustainable Groundwater Resource posted on the Groundwater Committee website for public access	March	NA