Eastern Shore of Virginia Groundwater Committe May 21, 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:

- 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 Disponib; Rele 1-718-838-9317 ... # 6980900. Peze 2 pou krevôl avisyen.



Eastern Shore of Virginia Groundwater Committee May 21, 2024 Meeting Agenda

- 1. Call to Order
- 2. Public Participation
- 3. Minutes of the April 16, 2024 Meeting
- 4. April Financial Status Report
- 5. May 21, 2024 Staff Report
- 6. Residential Well Testing Programs
- 7. Groundwater Outreach and Education
- 8. May 21, 2024 Ground Water Consultant Report
- 9. Committee Attendance Record FY2024
- 10. Attachments
- 11. Schedule Next Meeting for June 18, 2024 at 10:00 a.m. Eastern Shore Chamber of Commerce / Board Room
- 12. Adjournment

TO: Eastern Shore of Virginia Groundwater Committee

FROM: Kellen J. Singleton

Interdisciplinary Planner, A-NPDC

DATE: May 21, 2024

SUBJECT: April 16, 2024 Meeting Minutes

Minutes of the April 16, 2024, Eastern Shore of Virginia Groundwater Committee Meeting are attached.

Committee approval of the April 16, 2024, minutes is requested.

Minutes of the April 16, 2024 Meeting Eastern Shore of Virginia Groundwater Committee

The meeting of the Eastern Shore of Virginia Groundwater Committee was held at 10:00 A.M. on Tuesday, April 16, 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
John Coker, Chairman	Mike Mason	Kellen Singleton / A-NPDC
Calvin Washington Sr. / Vice Chairman	Grayson Chesser	Curtis Consolvo / Geo Resources *
Paul Grossman	Charles Kolakowski	Rosemary Paparo
Daniel Hershey	Elaine Meil / A-NPDC	Britt McMillan / ARCADIS *
Steve Sturgis		Faith Lewis / A-NPDC
Ann Hayward Walker		Patsy Felthousen
Sue Mastyl		Greg Felthousen
		Anne Doyle / A-NPDC *
		Eric Seavey *
		Getzks *

*Signifies Zoom participation

1. Call to Order

Chairman Coker called the meeting to order at 10:02 A.M.

2. Public Participation

Several residents from Onancock, VA, addressed the committee with concerns about the DEQ notice, in the Eastern Shore Post. The Town of Onancock will provide the water to a 465 unit development. The concern of an additional draw of 120 million gallons a year. The location of this development is county owned land between Onley and Onancock. The residents are concerned to hear of this information. It has not come before the town council meetings or the planning commission meetings. Discussion ensued and the fear of lowering the water supply drastically for future usage, coning, and potential saltwater intrusion concerns were voiced.

Dana Simpson was also concerned with the above mentioned topic. She would like to volunteer her graphic design services to the committee if we would need help to get something together to get our information to the public.

GWC Advisor, Britt McMillan, added as you pull more water out you are increasing the recharge to them. It will be slightly less than the full amount. He also wondered how many developments would happen if the Town of Onancock was not supplying the water.

Granville Hogg has two concerns. The first one is the Town Field Road issue. It has been an ongoing problem. The drain pipe was inserted 2½ feet and runs into the upper groundwater aquifer. It runs going out in excess of 300,000 gallons per month. The second concern was related to DEQ permits. He would like the committee to review what a mitigation plan is and what is required by a permit user to remediate the problem. He requested the committee to place him on the next meeting's agenda for 30 minutes to discuss these topics.

3. Minutes of the February 20, 2024 Meeting

Adoption of the minutes for February 20, 2024, were requested.

Member Paul Grossman moved to approve the minutes of the February 20, 2024 meeting as presented. It was seconded by Member Walker, the motion was carried by unanimous vote.

4. February Financial Status Report

The February Financial Status Report was presented.

Member Grossman moved to approve the February Financial Status Report as presented. It was seconded by Member Mastyl, the motion was carried by unanimous vote.

5. March 19, 2024 Staff Report

Staff updated the committee on the active Groundwater Withdrawal permits in Accomack County, VA. as well as several upcoming State Water Contril board events/meetings.

Groundwater Withdrawal in Accomack County, Virginia - GW0049201

Public Comment period: March 8, 2024 - April 8, 2024

Applicant name, address and permit number: Town of Onancock; 15 North Street, Onancock, VA 23417; GW0049201

Name and location of water withdrawal: Town of Onancock Water System; 15 North Street, Onancock, VA 23417

Groundwater Withdrawal in Accomack County, Virginia - GW0069101

Public Comment period: March 15, 2024 - April 15, 2024

Applicant name, address and permit number: Kuzzens Inc.; 3769 Grapeland Circle, Exmore, VA 23350;

GW0069101

Name and location of water withdrawal: Melfa Farm; Fair Oaks Rd. (ST. Rt. 672), Melfa, VA 23410

Groundwater Withdrawal in Accomack County, Virginia - GW0069901

Public Comment period: March 15, 2024 - April 15, 2024

Applicant name, address and permit number: Kuzzens Inc.; 3769 Grapeland Circle, Exmore, VA 23350;

GW0069901

Name and location of water withdrawal: Tipton Farm; Seaside Rd., Marionville, VA 23408

For details please see:

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

Date and Tir	ne 🕇	Meeting Title	Board	Scope
Mar-23 2024 (Sat)	3:30 pm	Screening & Discussion: Against the Current Eastern Shore Community College	WHRO Public Media And World	R
Mar-28 2024 (Thurs)	2:00 pm	Sewage Collection and Treatment Regulation (9VAC25-790) Amendments - Regulatory Advisory Panel	State Water Control Board	R
Apr-20 2024 (Sat)	10:00 am	"Return to Our Roots" – Exmore Earth Day 2024	Town of Exmore	Н

Staff updated the committee on a scheduled Earth Day event, which will be held on 04/20/2024, in Exmore Town Park. There will be several events and it will be an opportunity for the committee to get outreach and information to the public. Staff has reached out to DEQ Tidewater Coordinator of Environmental Justice, Grace Holmes. She will be representing DEQ at the "Return to Our Roots" at the Exmore Earth Day 2024 event. Staff will coordinate with DEQ staff in a dual exhibit effort.

Staff reported the website update is a priority. It is an extensive process.

6. Residential Well Testing Program

A scope was drafted in March of last year. Member Walker, Member Paul Muhly, and Member Dan Hershey met during the summer and made more changes to the scope. A consultant will be needed because of the type of scope we want. This was allocated in the budget. The goal is to test the quality of the drinking water in underserved residential wells. Funding has come from both Accomack and Northampton Counties. Goal 1 of this program is to develop and implement a residential well testing program, in accordance with appropriate quantitative protocols provided by certified laboratories and/or agency guidelines. Goal 2 is to coordinate the communication and exchange of resulting data with local, state, and federal drinking and groundwater stakeholders. Goal 3 is to institute educational activities about drinking water quality for Eastern Shore

communities. The committee would like to move on this before June 24, 2024. The committee needs to vote in the April meeting. The committee needs a Field Sampler and to select a lab the specimens will be tested. There should also be a fixed price for testing. The specimens will be collected and tested by using state protocols. Discussion ensued on the attachments that were enclosed in the packet.

7. Groundwater Outreach and Education

Staff is meeting April 20, 2024 with Member Mastyl and Member Walker to develop educational material. GWC Advisor McMillan would be happy to review the factsheets. Staff could review articles needing to be archived.

8. Groundwater Sustainability: Regulatory Policies and Updates

Member Grossman explained to the committee that Delegate Robert S. Bloxom was asked to propose the pond legislation. It is House Bill #1466 and has passed the House. If this passes it will take ponds out of the mines and minerals concerns. Member Grayson Chesser reiterated the importance of the above legislation. This would cut down on the need for borrow pits. Discussion ensued on the relevance of this legislation. The bill was modified to be a one time exemption only per land. Member Mastyl states there is a bill in the Senate presently that includes DEQ initiating a review of the Groundwater Management Act. The whole state would be affected by this review.

9. March 19, 2024 Groundwater Consultant Report

GWC Advisor McMillan wanted the committee to review the 02/20/2024 Groundwater Consultant Report. Discussion ensued on the three permits. He spoke of the special conditions and withdrawal amounts. Graphics were shown on screen to show the committee certain information.

A copy of the presentation will be attached to the packet.

10. Attachments

11. Scheduled Next Meeting

The next scheduled meeting for the Groundwater Committee will be held on Tuesday, May 20, 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. Seconded by Member Walker, it was approved unanimously.

The meeting was adjourned at 12:10 P.M.	
	John Coker, Chairman
	Elaine K. N. Meil. Secretary/Treasurer

TO: Eastern Shore of Virginia Groundwater Committee

FROM: Sandy Taylor

Administrative Director, A-NPDC

DATE: May 21, 2024

SUBJECT: April 2024 Financial Statement

Attached is the April 2024 Eastern Shore of Virginia Groundwater Financial Statement.

Committee approval of the April 2024 Financial Statement is requested.



EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE

Financial 5 4 1	Statement-April 2024	
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Fiscal Year 2024

	Annual Budget	Current Activity	YTD Activity	Balance
	Budget	HOUTE	210117101	Bulling
Ground Water Consultant Appropriations:	# 14 251 00	# 7 10E EO	¢ 14 251 00	\$ 0.00
Accomack County	\$ 14,251.00	\$ 7,125.50	\$ 14,251.00	0.00
Northampton County	7,415.00	\$ 3,707.50	\$ 7,415.00	\$ 0.00
Subtotal	\$ 21,666.00	\$ 10,833.00	\$ 21,666.00	\$ 0.00
Ground Water Modeling Run Appropriation	s:			
Accomack County	\$ 1,500.00	\$ 0.00	\$ 0.00	1,500.00
Northampton County	1,500.00	0.00	\$ 0.00	1,500.00
Subtotal	\$ 3,000.00	\$ 0.00	\$ 0.00	\$ 3,000.00
Ground Water Committee Staff Support:				
Accomack County	\$ 12,276.00	\$ 1,182.16	\$ 12,330.51	-54.51
Northampton County	7,724.00	\$ 608.98	\$ 6,581.93	1,142.07
Subtotal	\$ 20,000.00	\$ 1,791.14	\$ 18,912.44	\$ 1,087.56
Ground Water Member Fees:				
Accomack County	\$ 2,640.00	\$ 494.40	\$ 1,569.90	1,070.10
Northampton County	2,640.00	\$ 379.36	\$ 1,090.59	1,549.41
Subtotal	\$ 5,280.00	\$ 873.76	\$ 2,660.49	\$ 2,619.51
USGS Ground Water Model:				
Accomack County	\$ 7,500.00	\$ 0.00	\$ 0.00	7,500.00
Northampton County	7,500.00	\$ 0.00	\$ 0.00	7,500.00
Subtotal	\$ 15,000.00	\$ 0.00	\$ 0.00	\$ 15,000.00
Dubtom	4,			
Ground Water Plan Project Implementation				
Accomack County	\$ 26,854.00	\$ 0.00	\$ 0.00	26,854.00
Northampton County	15,827.00	0.00	\$ 0.00	15,827.00
Subtotal	\$ 42,681.00	\$ 0.00	\$ 0.00	\$ 42,681.00
Total Revenues	\$ 107,627.00	\$ 13,497.90	\$ 43,238.93	\$ 64,388.07

Bills Payable as of April 31, 2024

A-NPDC	Staff Support	04/01/2024-04/31/2024	\$ 1,791.14
Board Members	Meeting Fees	March & April 2024	\$ 873.76
Arcadis	Consultant	March 2024	\$ 10,833.00
		Total Bills Payable	\$ 13,497.90

Allocated Funds	Prior Year Funds	Expenditures	Balance
Ground Water Modeling Run Ground Water Plan Project Implementation	\$14,000.00 44,847.00	\$14,000.00 0.00	\$ 0.00 \$ 44,847.00
Total Allocated Funds	\$ 58,847.00	\$ 14,000.00	\$ 44,847.00

TO: Eastern Shore of Virginia Groundwater Committee

FROM: Kellen J. Singleton

Interdisciplinary Planner, A-NPDC

DATE: May 21, 2024

SUBJECT: May 2024 Staff Report

Environmental Reviews and Permits:

Permit Name: Virginia Pollutant Discharge Elimination System Permit, issued by the DEQ pursuant to applicable water laws and regulations.

Name, Address, and Permit Number of Application: Accomack County Public Works Department, 24401 Joynes Neck Road, Accomac, VA 23301; Permit No. VA0091529

Name and Address of Facility: Accomack County Leachate Treatment Facility, 9397 Cutler Road, Atlantic, VA 23303

Project Descripton: Accomack County has applied for the reissuance of a permit for the discharge of treated industrial wastewater and domestic septage from the operation of the Accomack County North Landfill. The discharge has a design flow of 0.023 million gallons per day (MGD). The facility proposes to release the treated, disinfected industrial wastewater into Assawoman Creek in the Chesapeake Bay, Atlantic and Small Coastal watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: bacteria, nutrients, organic matter, physical and chemical properties, solids, metals, inorganics, organics, and flow. Generated sludge is pumped and hauled by a septage hauler to Pocomoke City, MD.

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

VA Pollution Abatement Program:

Facility	Permit Number	City / County	Permit Action	DEQ Admin Office	Application Received	Application Complete	Draft Permit Sent to Owner
Accomack County Leachate Treatment Facility	VPA01079	VPA01079 Accomack County		Tidewater	12/11/2020	01/20/2021	
Tyson Farms Inc Temperanceville	VPA01035	Accomack County	Reissuance	Tidewater	10/06/2020	05/12/2021	
Atlantic Town Center Clean Water Plant	VPA01080	Accomack County	Issuance	Tidewater	04/11/2011		
Kuzzens Incorporated	VPA01047	Northampton County	Reissuance	Tidewater	0/28/2022	05/27/2022	
Perdue Foods LLC - Accomack	VPA01076	Accomack County	Reissuance	Tidewater	09/09/2022		

Consent/Enforcement Orders:

N/A



Groundwater Withdrawal Permits:

Groundwater Withdrawal in Northampton County, Virginia - GWI000343

Public Comment period: April 26, 2024 - May 27, 2024

Applicant name, address and permit number: Hermitage Farms Nursery; 7488 Mason Farm Road,

Franktown, VA 23354; GWI000343

Name and Location of Water Withdrawal: Hermitage Farms Nursery; 7488 Mason Farm Road,

Franktown, VA 23354

Groundwater Withdrawal in Accomack County, Virginia - GWI000313

Public Comment period: April 26, 2024 - May 27, 2024

Applicant name, address and permit number: William M. Daley; 18205 Hermitage Road, Onancock, VA

23417; GWI000313

Name and Location of Water Withdrawal: Broadleaf Farms; 20178 Fairground Road, Onancock, VA

23417

Groundwater Withdrawal in Accomack County, Virginia - GW0059900

Public Comment period: April 19, 2024 - May 20, 2024

Applicant name, address and permit number: Ish Farms LLC; 30414 Nocks Landing Road, Oak Hall, VA

23416; GW0059900

Name and Location of Water Withdrawal: Ish Farm (Breeder Farm); 30361 Nocks Landing Road, Oak

Hall, VA 23416

Groundwater Withdrawal in Accomack County, Virginia - GW0055701

Public Comment period: April 12, 2024 - May 13, 2024

Applicant name, address and permit number: Dreamland Acres LLC; 22481 Dreamland Avenue,

Accomac, VA 23301; GW0055701

Name and Location of Water Withdrawal: Dreamland Acres; 22481 Dreamland Avenue, Accomac, VA

23301

For details please see:

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

Upcoming Events/Meetings:

Date and Time		Meeting Title	<u>Board</u>
Jul-10 2024	11:00	Public Hearing – Proposed amendments to the Virginia Water Protection Permit Program Regulation (9VAC25-210) and the Groundwater Withdrawal Regulations (9VAC25-610)	State Water
(Wed)	am		Control Board

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

Old Business:

GWC advisor Britt McMillan with addition and assistance from Chairman Coker and staff have drafted and delivered a Public Comment concerning GW0049201 and GW0053801 addressing concerns found in the groundwater withdrawal applications. Please see the below:

Eastern Shore of Virginia Ground Water Committee

Julius Colors

dein Weshington Vios Chairman Slaine Med

Britt McMiller Serketool Johns

To: James Peed, DEQ Central Office

james.peed@deq.virginia.gov

Re: Comment on Draft Kuzzen's KMC Camp (GW0053801) Permit

The Eastern Shore of Virginia Groundwater Committee has reviewed the draft Groundwater Withdrawal Permit for the Town of Onancock that is currently under Public Comment. Based on the information provided, 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 but we totally disapprove of the comments about the Surficial aquifer.

A long-standing goal of the Groundwater Committee has been promoting the use of the more sustainable Surficial aquifer where feasible. The Fact Sheet associated with the KMC Camp permit states that the Surficial aquifer "...typically requires some level of treatment..." and that the upper and middle portions of the confined Yorktown-Eastover aquifer "...requires little treatment, if any...". These two statements appear to indicate groundwater from the Surficial aquifer will likely require more treatment than groundwater from the Yorktown-Eastover aquifer system. While there have been longstanding anecdotal statements to this effect the Groundwater Committee is not aware of water quality data or studies that have established that, in fact, the Surficial aquifer more likely requires treatment. While the water quality of the aquifers vary it is not clear to the Groundwater Committee that the Yorktown-Eastover aquifer system, overall, requires less treatment and that this information is best determined on a location-by-location basis.

If these statements in the Fact Sheets are based on information DEQ possess, the Groundwater Committee would appreciate obtaining this information. If the statements reflect unvetted information provided by other sources, the Groundwater Committee requests that these statements are not used as part of rationale in permit decisions since such statements discourage use of the more sustainable Surficial aquifer.

Accomack-Northampton Planning District Commission Address: PO Box 417 23372 Front Street Accomac, Virginia 23301 Phone: (757) 787-2936

- DEQ responses to GWC Comments concerning Draft Permits GW0049201 and GW0053801 were received via email by staff, members, and advisors on May 2, 2024. Please see below:
 - Response to Comment Regarding Town of Onancock (GW0049201) Draft Permit, May 2, 2024

Mr. Singleton,

This email is in response to the Eastern Shore of Virginia Ground Water Committee comments received for the Town of Onancock draft Groundwater Withdrawal Permit, GW0049201 (GW1000240). The withdrawal requested by the Town of Onancock was based on the current and projected water demands provided by the Town as part of the application process. The projected demand for the Coastal Square development that was factored into the requested withdrawal was based on a subset of the planned 700 units. Since the requested withdrawal only accounts for projected demands associated with a subset of the 700 units planned for the Coastal Square development and the information source that references 465 planned units has not been identified or verified, the Department does not recommend changing the number of planned units for the Coastal Square development that is included in the fact sheet. Further, the Coastal Square development includes proposed residential and commercial units and it's unclear if the stated 465 planned units are associated with residential and/or commercial units. In the Permit Fact Sheet, the Department recommended a sitespecific investigation of the Surficial aquifer during this permit term for the Town of Onancock. The Department acknowledges the request for more comprehensive saltwater intrusion monitoring in the Eastern Shore GWMA and will discuss this further internally.

Thank you.

Caitlin Kelly
Groundwater Withdrawal Permitting Team Lead
Office of Water Withdrawal Permitting
Virginia Department of Environmental Quality
1111 East Main Street, Suite 1400
Richmond, VA 23219
(804) 774-0828

• Response to Comment Regarding Kuzzen's KMC Camp (GW00538101)

Draft Permit, May 2, 2024

Mr. Singleton,

Thank you for your comments regarding the draft permit for groundwater withdrawal at the Kuzzen's KMC Camp, GW1000263 (advertised as GW0053801). The Department agrees that the statement in the analysis of alternative water supplies section of the permit factsheet that the Surficial aquifer ".... typically requires some level of treatment..." and the confined Yorktown-Eastover aquifer "...requires little treatment, if any..." are generalized statements and the need for treatment within the Surficial aquifer or Yorktown Eastover aquifer is best determined on a location-by-location basis. The Department will amend these statements in the final copy of the Fact Sheet.

Let me know if you have any other questions regarding the permit itself.

James E. Peed
Water Withdrawal Permit Writer, Office of Water Withdrawal Permitting
Virginia Department of Environmental Quality
1111 East Main St., Suite 1600
Richmond, VA 23219
(804) 839-8227

On April 20, 2024 staff along with Members Grossman, Walker, and Mastyl attended and represented the committee at the Exmore Earth Day "Return to Our Roots" event. The event was well attended. Groundwater questions were solicited from attendees and educational material was distributed. Please see the final draft of the April 2024 GWC distributed informational trifold below:

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

ABOUT US

The 11-member GWC meets to times a year and includes elected officials, citizens, Accomack-Northampton Planning District Commission (A-NFIC) staff, and a consulting hydrogeologist to discuss a wide variety of Eastern Shore groundwater issues. Under its mandate, the GWC comments on proposed withdrawal permits, and advises the two counties on issues relating to groundwaters. Coensionally, EPA sends federal projects to the GWC for review is spart of a Memorandum of Understanding related to our Sole Source Aquifer.

The GWC encourages the use of the more sustainable surficial Columbia aquifer as one approach to preserve the deeper, resource-limited Vocktown-Eastower aquifer. The GWC is working with local farmers and farm agencies to reduce irrigation dependence on the Yorktown-Eastower. The GWC also conducts special studies and supports educational activities for Eastern Shore communities. New programs and information are being developed in 2024.



For more information or to



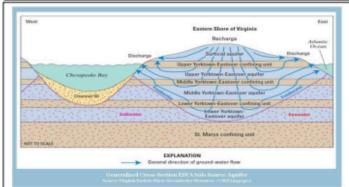




Protecting Our Precious Resource

EASTERN SHORE

GROUND WATER



Background

The Eastern Shore of Virginia depends entirely on groundwater for drinking water supplies, irrigation, and other water uses.

Multiple federal, state, and local ageacies work together to manage and protect the availability and quality of our groundwater, including US Geological Survey, Virginia Dept. of Environmental Quality, US Environmental Protection Agency, and Virginia Dent. of Health Dept, of Health.

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At the county level, in 1990 Accomack and Northampton counties established the Eastern Shore of Virginia Ground Water Committee (GWC) to assist local governments and residents in understanding, protecting, and managing the ground water resource. All withdrawals over 300.000 gallons a month require a DEQ permit. The GWC monitors all permit requests, as well as USAS and DEQ modelling, to identify any areas of concern, including excessive withdrawals or saltwater intrusion.

Important Designations

The Eastern Shore Groundwater Management Area

The Aquifer

As shown in the generalized graphic, the Eastern Shore of Virginia's Sole Source Aquifer consists of a Multi-aquifer System: the Columbia (surficial) aquifer and Yorktown-Eastover aquifer. These aquifers are composed of permeable sand that are separated by layers of clay which restricts groundwater flow. The permeable nature of the sands allow groundwater to be pumped from wells screened in the aquifers.



Replenishment and Use

Groundwater on the Eastern Shore is only Groundwater on the Eastern Shore is only replenished by direct precipitation, with about 12%, or 625 million gallons a day (MGD), reaching the Columbia aquifer. Only about 1%, or 9 MGD, reaches the Yorktown-Eastover aquifer.

Approximately 15 MGD is pumped from ponds and wells on the Shore, half of which is from surface ponds in the Columbia aquifer. In 2023, an estimated 8.4 MGD was pumped from wells, 95% of which from the confined Yorktown-Eastover aquifer system.







New Business:

• On April 23, 2024, staff attended the Eastern Virginia Groundwater Management Advisory Committee Meeting at the Patrick Henry Building in Richmond. Jason Early, P.G. (STANTEC) and Bryant Mountjoy, P.G., PMP (STANTEC) presented their work "Aquifer Recharge in the Coastal Plain: Considerations for Groundwater Trading". Following their presentation, the committee moved to "... reenergize the conversations about the possibility of Groundwater Trading using as a basis the modeling that was presented today that has more capability than models that were available previously because it appears that there may be some scientific supportable mechanism at some point to support the concept of trading." Theoretical options for recharge water source include treated wastewater; potable water; surface water; storm water; etc.

TO: Eastern Shore of Virginia Groundwater Committee

FROM: Kellen J. Singleton

Interdisciplinary Planner, A-NPDC

DATE: May 21, 2024

SUBJECT: Residential Well Testing Program

Subcommittee Program Scope and Standards Update

After the Committee's April 2024 meeting, Secretary Meil and A-NPDC staff discussed ways to timely advance professional procurement and project initiatives. The current A-NPDC/GWC contract with ARCADIS allows for the relevant addendum work. After consulting with Chairman Coker, A-NPDC staff, GWC Advisor McMillan, and Arcadis staff, Dawn Perriman, discussed the scope items that would be reasonable for Arcadis to either assist in or perform. Those items are highlighted in yellow below:

Staff Scope of Work:

- Administrative Labor (preferably \$25, or not to exceed \$50 per hour). Consider an ESCC intern. Labor rate will include liability insurance. Tasks:
 - a. Work with GWC to update the Groundwater 101 Fact Sheet for Residential use (Britt developed the original fact sheet) **Assist in drafting and review**
 - b. Coordinate with community representative and homeowners to schedule sampling and find out location of testing faucet
 - Purchase sample equipment and supplies. Refer to/incorporate the Equipment
 Checklist developed by Paul Muhly (attached) Arcadis would provide the
 needed equipment
 - i. For quantitative testing? Only handling the quantitative samples
 - ii. Also, high school test kits? Which ones, cost?
 - d. Engage, train, and schedule Field Sampler, who will sample in accordance with a Health and Safety Plan (HASP), either from their organization, A-NPDC, or develop one. Arcadis will develop a HASP to cover the Arcadis field sampler the field sampler will be properly trained in collecting the samples.
 - e. Establish subcontract with certified laboratory Arcadis will use a lab with a Master Services Agreement.
 - f. Develop spreadsheet for sample tracking and results

- g. Manage analysis of samples Use cost estimate from Water Testing Labs of MD, Inc. Other labs Arcadis may consider include: Eurofins, Pace Analytical, Enthalpy.
- h. Enter results data from lab on spreadsheet (developed in Task 1. f).
- i. Report program results to GWC (via PowerPoint), plus deliver electronic copy of data results spreadsheet.
- 2. Field Sampler. Consider qualified voluntee, e.g., former GWC member, or an ESCC intern. If hired, labor rate will include liability insurance and not to exceed \$50/hr. Tasks. Assuming a two-person team: 1 Arcadis Field Sampler and 1 County / GW Committee / A-NPDC representative
 - a. Obtain/organize supplies from Administrative Lead See Equipment Checklist
 - b. Carry out sampling with community representative
 - 1. Complete Residential Well Testing Field Work Sheet and Well Testing Owner's Name and Location Information
 - 2. Deliver samples to laboratory for analysis

The burdened rate for Arcadis field staff is an estimated \$90/hr.

TO: Eastern Shore of Virginia Groundwater Committee

FROM: Kellen J. Singleton

Interdisciplinary Planner

Accomack-Northampton Planning District Commission

DATE: May 21, 2024

SUBJECT: Groundwater Outreach and Education

Groundwater Outreach and Education

Groundwater Outreach and Education

• Public mischaracterizations of ground water supply

- Information guide for decision makers and new membership
- Information handouts and material
- Public outreach and educational opportunities

TO:

Eastern Shore of Virginia Groundwater Committee

FROM:

Britt McMillan

Principal Hydrogeologist, Arcadis

DATE:

May 21, 2024

SUBJECT:

May 21, 2024 Groundwater Consultant Report

May 2024 Groundwater Consultant Report

May update will be provided separately.

TO:

Eastern Shore of Virginia Ground Water Committee

FROM:

Britt McMillan

Principal Hydrogeologist

Arcadis

DATE:

May 21, 2024

SUBJECT:

May 21, 2024 Ground Water Consultant Report

Technical/Regulatory/Educational Items

Three draft permits were submitted for public comment on or after April 16, 2024: Ish Farm
(Breeder) (GW0059900), Broadleaf Farms (GW1000313), and Hermitage Farms Nursery
(GW1000343). All draft permits are renewals of current valid permits. DEQ is accepting public
comment on the draft Ish Farm (Breeder Farm) permit through May 20, 2024 and public
comment on the draft Broadleaf Farms and Hermitage Farms permits through May 27, 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	fers Draft Permit (Gall)				Public		
racility		Туре	YTEO		YTEO New						Perce n-tile	Comment
Permit No	Name	1	s	U	м	L	1	Monthly	Annual	Increase		Deadline
GW0080100	Cherrystone Cempground	P			1	1	N	3,340,000	11,800,000	6%	52%	Oct 2
GW0053901	Perdue Farms	Ĭ.		~	1	×	N	78,000,000	700,000,000 to 650,000,000	-7%	100%	Oct 30
GW0080000	Afshan Farm	A	Г	П	UN	K	Y	1,216,860	4,725,900	NA	13%	Nov 6
GW0060601	Midwood Farm	A	1	1			N	3,000,000	10,000,000	-56%	50%	Nov 13
GW0037302	Shore Health and Rehab	P		1		Г	N	810,000	6,600,000	28%	26%	Jan 22
GW0070301	Shelley Farm	A		1			N	6,550,000	16,600,000	0%	69%	Jan 29
GW0070501	Jones 3 Farm	A	Г	1		Г	N	9,629,000	11,974,000	0%	55%	Jan 29
GW0079000	Eastern Shore Nursery	A	UN	к				6,300,000	36,890,000	NA	81%	Feb 12
GW0044201	Town of Chincoteague	P.	4	1	1		N	34,100,000	219,400,000	0%	98%	Feb 12
GW0070001	Walker Farm	A	1				N	7,500,000	13,100,000	0%	61%	Mar 4
GW0049201	Town of Onancock	Р	Г	П	1		N	10,597,000	120,000,000	49%	98%	April 8
GW0069101	Melfa Farm		Г	1	П	Г	N	20,200,000	46,250,000	-26%	82%	April 15
GW0069901	Tipton Farm		1	1			N	22,400,000	38,000,000	-46%	80%	April 15
GW0053801	KMC Camp	Р	Г		1		N	572,000	2,300,000	0%	2%	April 22
GW0069501	Seybolt Farm	A	1	1	1		N	5,664,000	10,014,000	-69%	42%	May 6
GW0055701	Dreamland Acres	P.	1				N.	1,100,000	12,000,000	0%	55%	
GW0059900	Ish Farms (Breeder Farm)	A				1	Y	700,000	4,100,000	NA	10%	May 20
GW1000313	Broadleaf Farms	A	1			Г	N	626,000	3,700,000	0%	10%	May 27

Notes:

Type: A = Agriculture

CA = CAFO (Confined Animal Feeding Operation)

I = industrial

P = Public Water Supply

Aguifers

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

YTEO = Yorktown-Eastover aquifer system

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

New:

Y = New Permit N = Re-issued Permit

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

Facility		Special Conditions					
Permit No	Name	wq	Alt	Other			
GW0080100	Cherrystone Campground	~		Chloride monitoring. Well video logging, survey, and pump reset.			
GW0053901	Perdue Farms	~	1	Tiered (decreasing) withdrawals, Alt Source Development Plan, Well Abandonment			
GW0080000	Afshan Farm		~	Pump intake, geophy logs, video logging			
GW0060601	Midwood Farm			Pump intake, geophysical logs, well abandon, pond controls			
GW0037302	Shore Health and Rehab			Well abandon			
GW0070301	Shelly Farm			None			
GW0070501	Jones 3 Farm			None			
GW0079000	Eastern Shore Nursery			Flow meters, geophysical logs, pump intake, pond level control			
GW0044201	Town of Chincoteague	¥		Well abandon, alternative source evaluation			
GW0070001	Walker Farm			Pond level control			
GW0049201	Town of Onancock			None			
GW0069101	Melfa Farm			Pond level control. Well abandonment.			
GW0069901	Tipton Farm			None			
GW0053801	KMC Camp			None			
GW0069501	Seybolt Farm		П	None			
GW0055701	Dreamland Acres		Г				
GW0059900	Ish Farms (Breeder Farm)		-	Pump intake			
GWI000313	Broadleaf Farms	Т		None			
GWI000343	Hermitage Farms	T	Г	Pond level Control			

Draft Broadleaf Farm (GWI000313) is for a renewed permit for an existing groundwater withdrawal. The initial permit was issued April 1, 2021 and the current permit was issued August 1, 2013 and expired July 31,2023 and has been administratively continued. The original (and current) permit (issued as GW0061101) was to withdrawal 3,700,000 gallons per year and 626,000 gallons per month. The draft permit is requesting the same amount.

Groundwater use is for nursery crops with 73 beds of container plants and around 11 to 12 acres of field stock. An on-site pond provides irrigation water with groundwater from three production wells supplementing the pond supply.

Water is supplied from three wells, all screened in the Surficial aquifer.

ı	DEQ No.	Well No.	Screen Interval (ft bgs)	Estimated Aquifer	Apportioned Withdrawal (%)		
10	00-00924	#1	40-60	Surficial	10		
10	00-00925	#2	40-50	Surficial	75		
10	00-00926	#3	40-60	Surficial	15		

<u>Withdrawal Amounts</u>: The requested withdrawal amount of 3,700,000 gal/year is the same as the current permit. The amount requested is for a small amount, 90% of the permitted withdrawals on the Shore are greater. Maximum historical use over the previous permit term (2014-2024) was 3,418,640 gal/year in 2014. This amount is approximately 92% of the requested amount.

Alternative Sources (Surficial aquifer):

All water use is from irrigation ponds supplemented by wells screened in the Surficial aquifer. Sustainable sources of water are being use.

Special Conditions:

None

Additional Remarks:

Use of the Surficial aquifer to supplement the irrigation pond supply is noteworthy.

Draft Hermitage Farms Nursery (GWI000343) is for a renewed permit for an existing groundwater withdrawal. The current permit was issued August 1, 2013 and expired July 31,2023 and has been administratively continued. The current permit (issued as GW0068900) was to withdrawal 57,230,000 gallons per year and 15,420,000 gallons per month. The draft permit is requesting the same amount.

Groundwater use is for ornamental plants from three parcels totaling approximately 120 acres suitable for irrigation. Under the current permit, approximately 33 acres were in production in the western parcels, and there are no plans to expand to a larger area under the current permit. Two on-site irrigation ponds (Branch Pond and Back Pond) provide irrigation water supplemented by irrigation wells screened in the middle Yorktown-Eastover aquifer.

95% of the groundwater is pumped from 4 wells (see below). The remaining wells individually account for less than 2% per wells. Approximately 95% of the water is used for irrigation, with the remainder used for potable water and sanitation.

There are three modes of irrigation:

- Hand watering: from Propagation Well #1 and Propagation Well #2 in four green houses. Water
 use from these two wells account for 2% of the demand.
- Drip irrigation: from P&P Well #1 and P&P Well #2 for pot-in-pot irrigation through dedicated drip stakes placed in the individual pots. Water use from these two wells account for 56% of the demand.
- Overhead watering: from the two irrigation ponds supplemented by the <u>Branch Pond Well</u> and <u>Back Pond Well</u>. Branch Pond Well will be replaced in 2024 with a new well to a similar depth. Water use from these two wells account for 39% of the demand.
- Potable water: supply to six residential trailers and one office trailer supplied by the <u>Original</u>
 Office Well and <u>Housing Well</u>. Water use from these two wells account for 3% of the demand.

DEQ No.	Well No.	Screen Interval (ft bgs)	Estimated Aquifer	Apportioned Withdrawal (%)		
165-00550	Branch Pond Well	200-230	MYTE	21		
165-00551	Original Office Well	205-225	MYTE	1		
165-00552	P&P Well #1	201-231	MYTE	34		
165-00553	P&P Well #2	200-230	MYTE	22		
165-00554	Housing Well	220-240	MYTE	2		
165-00555	Propagation Well #1	220-240	MYTE	1		
165-00556	Propagation Well #2	211-230	MYTE	1		
165-00557	Back Pond Well	200-230	MYTE	18		

Withdrawal Amounts: The requested withdrawal amount of 57,230,000 gal/year is the same as the current permit. The amount requested is for a relatively large amount, 13% of the permitted withdrawals on the Shore are greater. Maximum historical use over the previous permit term (2014-2024) was 3,418,640 gal/year in 2014. This amount is approximately 92% of the requested amount. In addition to the maximum annual and monthly limits, a permit term (15-year) limit of 160,343,000 gallons is applied. Average annual use over the 15-year term is 10,689,533 gallons/year.

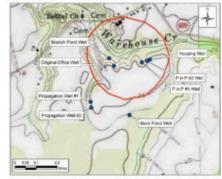
Alternative Sources (Surficial aquifer):

The Fact Sheet states: "Site specific investigations of the Surficial aquifer have been required for Poultry Farms and new or expanded facilities on the Eastern Shore. Since the permitted withdrawals are not an increase to an existing permitted facility, a site-specific investigation of the Surficial aquifer is not required during this permit term. Additionally, the Surficial aquifer can be more susceptible to anthropogenic contaminants from the surface such as from agricultural sources (e.g. fertilizer, pesticides) or from sewage treatment/disposal systems (e.g. onsite sewage drain fields)."

Special Conditions:

None

Hermitage Farms Nursery Area of Impact - Middle Yorktown-Eastover Aquifer



Hermitage Farms Nursery Wells
 Middle Yorkdown-Eastever Area of Impact

 Middle Yorkdown-Eastever Area of Impact
 Impact Section of the American Control of the Middle Yorkdown Eastever (MYE) aguiter resulting from a 10.889 (SSI ogs. 50) year withdistered from the Middle Yorkdown-Eastever aguiter using the AMA-brand/DIAP.

Maximum radius of one foot drawdown (Area of Impact) extends approximately 0.2 miles from the sympton center. DEQ. Office of Water Supply March 15, 2004

Additional Remarks:

The Fact Sheet states: "Additionally, the Surficial aquifer can be more susceptible to anthropogenic contaminants from the surface such as from agricultural sources (e.g. fertilizer, pesticides) or from sewage treatment/disposal systems (e.g. onsite sewage drain fields)." As a counterpoint not mentioned in the Alternative Source evaluation is that the Yorktown-Eastover aquifer is more susceptible to saltwater intrusion.

Also, the Nursery successfully uses two on-site ponds to supply most of the irrigation demands. These two on-site ponds more susceptible to the cited "anthropogenic contaminants". Note that in the past, Branch Pond (the larger of the two ponds) received treated wastewater from the former Nassawadox Hospital to supplement the surface water. Water from "sewage treatment" does not appear to be an issue. <u>Recommendation:</u> The Fact Sheet should be amended to reflect this information.

According to the Fact Sheet, the Branch Pond well (165-00550) will be replaced in 2024. This would be an ideal opportunity to replace the well in the Surficial aquifer. Jones 1 farm (GW0070900), located within 2-miles of Heritage Farms uses 98% of its irrigation water from the Surficial aquifer and has a similar demand as Heritage Farms (58,000,000 gal/year). Without site specific information to indicate otherwise, there is reason to believe a similar yield is available at Heritage Farms. Recommendation: Request replacement of the Branch Pond well with a well screened in the Surficial aquifer unless it can be demonstrated through site specific testing that the Surficial aquifer is not available. Other near by wells, including Jones 1 Farm, have demonstrated that the Surficial aquifer is capable of yielding the quantity and quality of water suitable for agricultural irrigation at quantities used by Heritage Farms.

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:

- "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}

Draft Ish Farm (Breeder Farm) (GW0059900): The draft Ish Farm (Breeder Farm) comment period ends May 20, one day before the Groundwater Committee Meeting. To accommodate this shortened

comment period, the Ish Farm review and a Draft Public Comment was provided to the Groundwater Committee for review on May 11, 2024. The Draft Permit Review and Draft Public Comments are enclosed.

DEQ Groundwater Withdrawal Permit Special Conditions Tracking Sheet: As part conditions applied to the Poultry Houses permitted under the Consent Special Order in 2019, a number of the permits were required to complete Surficial aquifer testing, along with other conditions (such as completing geophysical logs). The following permits were required to submit Surficial aquifer testing reports to DEQ by or before March 31, 2024. These reports were requested via FOIA from DEQ on May 15, 2024.

	GW0073000	Old Mill Farms
	GW0073700	Tanner Farm
	GW0074300	Levi Farm LLC
•	GW0074500	McChicken Farms
	GW0074700	Sanns of the Shore Farm
	GW0075400	Van Tran Farm
•	GW0075700	Dennis Farm
	GW0075800	Giuse Farm
•	GW0075900	Shore Time Poultry Farm
•	GW0076000	Tai Dat Farm
	GW0076600	Greene's Poultry Farm
	GW0077800	Brittany Poultry Farm LLC
•	GW0077900	Turkey Run Farm
	GW0078400	Summers Rest Farm
•	GW0074800	Johnathan Farm
	GW0076100	Steven Farm

The Surficial aquifer testing schedule for these permits and other Poultry House permits are provided on the enclosed table. The first date (September) is the date the testing must be conducted by. The second date (March) is when the report must be provided to DEQ.

This table will be updated to include more recent permits with Surficial aquifer testing requirements.

TO: Eastern Shore of Virginia Groundwater Committee

FROM: Kellen J. Singleton

Interdisciplinary Planner, A-NPDC

DATE: May 21, 2024

SUBJECT: Committee Attendance Records

The FY2024 Committee Attendance Records are attached.



EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE FY 2024 ATTENDANCE RECORD

	Term								Π			Τ	Τ
Member	Ехр.	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
				AC	COMA	K COUN	İΤΥ						
Calvin Washington Sr.	Vice Chair, July 2025	-	-	-	-	-	-	х	х	Х	x		
Paul Muhly	Vice Chair; Next vote: July2025	*	х	х	х	*	*	-	-	-	-		
Dan Hershey	June 2025	*	х	х	/	*	*	х	Х	х	х		
Grayson Chesser	June 2023	*	Х	х	/	*	*	х	х	х	7		
Sue <u>Mastyl</u>	April 2025	*	Х	Х	X	*	*	х	Х	x	х		
				NOR	ТНАМР	том со	UNTY						
John Coker	Chair; Next Vote: July2025	*	/	х	x	*	*	х	/	х	х		
Paul Grossman	March 2024	*	x	x	x	*	*	x	x	х	x		
Steve Sturgis	July 2024	*	х	/	х	*	*	х	х	/	x		
Ann Hayward Walker	December 2024	*.	х	х	х	*	*		x	x	x		
				NON-V	OTING	EX-OFF	ICIO MI	EMBERS					
Charles Kolakowski	NA	*	/	/	/	*	*	/	x	x	/		
Mike Mason	NA	*	/	7	/	*	*	7	7	7	7		
Elaine Meil	NA	*	7	/	7	*	*	7	Х	x	7		
-	Not a <u>Member</u>			Х	Member Present				0		Alternate Present		
*	No Meeting Held			NA		Not Applic				/	Absen		









