



**Eastern Shore of Virginia Ground Water Committee**

**September 21, 2021 10:00a.m.**

Accomack County Board Room

Accomack County Administration Building

23296 Courthouse Avenue

Accomac, VA 23301

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

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

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

Sèvis Tradiksyon Disponib: Rele 1-718-838-9317 ... # 6980900. Peze 2 pou kreyòl ayisyen.

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## MEETING AGENDA

1. Call to Order
2. Public Participation
  
3. Minutes of the July 20<sup>th</sup>, 2021 Meeting ..... 5
4. August 2021 Financial Status Reports ..... 13
5. September, 2021 Staff Report..... 15
  - Environmental Reviews and Permits ..... 15
  - Other Items..... 15
  - Research & News..... 16
  - Upcoming Events/Meetings..... 16
6. Ground Water Consultant Updates ..... 17
7. Ground Water Project Priorities..... 21
8. FY 2022 ATTENDANCE RECORD ..... 22
  
9. Other Matters
10. Schedule Next Meeting (October 19, 2021 at 10:00AM) **NOTE: NO DECEMBER 2021 MEETING**
11. Adjourn

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**Minutes of the July 20<sup>th</sup>, 2021 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, July 20<sup>th</sup>, 2021 at the Barrier Islands Center in Machipongo, VA.

<b><u>Members Present</u></b>	<b><u>Members Absent</u></b>	<b><u>Others Present</u></b>
Paul Muhly, Chairman	Charles Kolakowski	Jessica Steelman, A-NPDC
John Coker, Vice Chairman	Taylor Dukes	Sam Caldwell, USGS*
Daniel Hershey	Michael Mason	Joe Grist, VDEQ*
Roberta Kellam	Jackie Phillips	Britt McMillan, ARCADIS
Grayson Chesser		Bill Savage, ESSWCD
Paul Grossman		Janet Sturgis, NoCo Citizen
		Sue Mastyl, Clean Water Council
		Kurt McCoy, USGS*
		Curtis Consolvo, Geo Resources*
		Matt Kearns, USGS*
		Ashley Mills, A-NPDC

*\*signifies virtual participant*

### Call to Order

Chairman Muhly called the meeting to order at 10:03 AM.

### Public Comment

Sue Mastyl, Clean Water Council –

Expressed concern of “pending” status of the Columbia and Eastern Shore Surficial Aquifer General Permit Regulatory Advisory Panel legislative document draft. Joe Grist, VDEQ, responded it was still in review.

### Review of the May 18, 2021 Minutes

The draft minutes of the April 18<sup>th</sup>, 2021 meeting were presented. Committee Member Grossman requested the amendment be made under Other Items that a subsection be added for DEQ’s newly initiated Environmental Justice Committee.

**Committee Member Grossman moved to approve the Minutes of the May 18, 2021 meeting with amendments. The motion, seconded by Vice Chairman Coker, carried unanimously.**

### FY 2021 Financial Status Report

The FY 2021 Financial Status Report as of June 2021 was presented. Total Bills Payable equaled \$1,613.86; total revenues received equaled \$0.00.

**Committee Member Grossman moved to approve the June 2021 Financial Status Report. The motion, seconded by Committee Member Hershey, carried unanimously.**

### Staff Update

#### Committee Attendance Record

The FY2021 Committee Attendance Record was recorded.

### Environmental Reviews and Permits

VA Pollutant Discharge Elimination System Program –

#### **Wastewater Treatment, Accomack County**

**Permit Number: VA0090875**

**Notice Purpose:** To seek public comment on a draft permit that will allow the release of treated municipal wastewater into a water body in Oak Hall, Virginia.

**Public Comment Period: June 30, 2021 to July 30, 2021**

**Applicant:** Oak Hall LLC, 655 Fox Run Road, Suite B, Findley, OH 45840

**Facility:** Oak Hall Shopping Center Wastewater Treatment Plant, SE Corner of Hwy 13 and Rt. 175, Oak Hall, VA. 23416

#### **DEQ Contact:**

Robert E. Smithson, [Tidewater Regional Office](#)

Phone: 757-518-2106; Fax: 804-698-4178

Email: [Robert.SmithsonJR@DEQ.Virginia.gov](mailto:Robert.SmithsonJR@DEQ.Virginia.gov)

VA Pollution Abatement Program –

None.

Consent Orders –  
None.

Groundwater Withdrawal Permits –  
None.

*Environmental Impact Reviews* –  
None.

*Water Quality* –

#### Other Items

*GWC Statement of Principal* –

Subcommittee meeting with Scott Kudlas to be held virtually on Tuesday 7/27/2021 at 9AM. Members in subcommittee are: Paul Muhly, John Coker, Roberta Kellam, & Britt McMillan. Members have been notified and provided information to attend.

*Water Clinic* –

Staff gained consent from Theresa Pittman & Ursula Deitch of Virginia Tech to include a data share release letter in the testing kits for release of 911 address of the water tested with the A-NPDC for further assistance in monitoring and improving the water quality on the Eastern Shore (Attachment A from July 20, 2021 GWC Meeting Packet).

*Additional GWC Funding* –

Draft letters for Accomack and Northampton counties (Attachments B & C from July 20, 2021 GWC Meeting Packet). Ground Water Committee members requested edits be made to the draft and for further discussion to be held during the August GWC meeting.

Staff was advised by the A-NPDC Director of Administration that in order to request mileage reimbursement, it must be in the Committee By-Laws (Attachment D from July 20, 2021 GWC Meeting Packet).

**Committee Member Grossman moved for a 30-day notice to amend the by-laws to include “3.6 Members of the Committee shall be eligible for reimbursement of mileage to and from Committee meetings.” This motion, seconded by Vice Chairman Coker, carried unanimously.**

#### Research & News

*Site Investigation Report for Per- and Polyfluoroalkyl Substances* by Goddard Space Flight Center Wallops Flight Facility Wallops Island, Virginia

Highlights from Jeremy L. Eggers, Associate Chief, Office of Communications at Goddard Space Flight Center:

- The Wallops and Town of Chincoteague finished drinking water continues to be nondetect (or very low detects – i.e., less than 1 part per trillion) for PFAS
- The NASA-funded/operated Granular Activated Carbon (GAC) Water Treatment System is now operational and connected to the Town’s water system—this allows the town to use

its three shallow and one deep well that had been off-line previously due to impacts from PFAS

- With the GAC now in place, Wallops is no longer supplementing the Town's water, though we maintain the capability to do so if ever needed
- We've completed a new well for the Wallops main base that replaces a well that was poorly constructed (and had PFAS hits); we're in the final design phase of the infrastructure design for connecting the new well to our existing field
- We've released the final Main Base PFAS [Site Investigation Report](#) in this update
- Information Sheet (Attachment E from July 20, 2021 GWC Meeting Packet)

*Supervisors Approve Northampton Comp Plan Update with Changes* by Stefanie Jackson, Eastern Shore Post, p. 1

<https://www.easternshorepost.com/wp-content/uploads/2021/06/06.11.21.pdf>

Of Note: Article section on the Columbia Aquifer and BOS Betsy Mapp comments.

*Bundick Well & Pump Company Flyer* (Attachment F from July 20, 2021 GWC Meeting Packet).

*Email Response to Bundick Well & Pump Company Flyer* by Ken Dufty (Attachment G).

*Technical/Regulatory/Educational Items*

Upcoming Events/Meetings

*REGULAR MEETINGS OF STATEWIDE AUTHORITIES, BOARDS, COMMISSIONS, AND COMMITTEES –*

None.

*MEETINGS ABOUT TOTAL MAXIMUM DAILY LOADS (or TMDLs) for IMPAIRED WATERS –*

For more information about TMDLs in Virginia, click here for the [Virginia Department of Environmental Quality TMDL Web site](#). TMDL reports are available at <http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/TMDL/TMDLDevelopment/ApprovedTMDLReports.aspx>.

*VIRGINIA GENERAL ASSEMBLY WATER-RELATED MEETINGS –*

For meetings of legislative committees and commissions, see <http://lis.virginia.gov/cgi-bin/legp604.exe?191+oth+MTG>. Links to information about General Assembly commissions, councils, and special interim committees coordinated by the Division of Legislative Services are available online at <http://dls.virginia.gov/commissions.html>. The Virginia General Assembly Web site is <https://virginiageneralassembly.gov/>.

USGS EM-Logging 2020 Presentation

Sam Caldwell with USGS presented findings from EM-Logging 2020. Presentation can be found [here](#).



Ground Water Consultant Report

*Technical/Regulatory/Educational Items –*

- 1) The Technical Advisory Committee, administered by DEQ, for the General Permit for Non-Agricultural Surficial Aquifer Withdrawals concluded their work on June 22 with draft regulations as 9VAC25-920. The next steps are to submit the draft regulation to the State Water Control Board, public review, and a final presentation of the regulation to the Board. Presentation can be found [here](#).
- 2) NASA completed a (final) Site Investigation Report for Per- and Polyfluoroalkyl (PFOS and PFOA) Substances for the Wallops Flight Facility. A summary presentation of results, findings and recommendations provided in the report will be provided. This is an example of emerging contaminants in the groundwater on the Shore and potential risks to the groundwater resource.

*Other Items –*

- 1) Additional FY2021 Groundwater Committee activities. Continue update of the Eastern Shore Groundwater Protection Plan.

*Ground water Consultant Quarterly Report, Q3 (April 2021 – June 2021) –*

<b>Eastern Shore of Virginia Ground Water Committee                      Contract Year Oct. 1, 2020 – September 30, 2021                      (2021 Project Year)                      Consultant Progress Summary</b>		
<b>Task 1 - Committee Meetings (2021 Project Year Goal = 5)</b>		
% Completion	>100%	
Date	Activity	Additional Comments
10/20/2020	Wrote Memo; Attended Meeting	
11/17/2020	Meeting cancelled	Meeting cancelled due to Covid 19
12/15/2020	Meeting not held	Meeting not normally scheduled
1/18/2021	Meeting cancelled	Meeting cancelled due to Covid 19
2/16/2021	Wrote Memo and technical documentation; Attended Meeting	None
3/16/2021	Wrote Memo and technical documentation; Attended Meeting	None
4/20/2021	Wrote technical documentation; Attended Meeting	None
5/18/2021	Wrote Memo and technical documentation; Attended Meeting	None
6/15/2021	Meeting not held	Meeting not normally scheduled
<b>Task 2 – Technical Documentation (i.e. memos &amp; additional documents as needed)</b>		
Date	Document	Additional Comments
10/20/2020	Summary proposed General Permit for Surficial Aquifer Use	None
10/20/2020	Summary – proposed modifications to 2013 Groundwater Protection Plan	None
2/16/2021	Detailed review of Marshall-Johnson-Grapeland Complex. Discussed alternate sources (surficial	Groundwater Committee recommended development of a

	aquifer), historical and proposed withdrawal amounts, and historical water level changes	Statement of Principles outlining need to encourage use of the more sustainable surficial aquifer over the Yorktown-Eastover aquifer.
2/16/2021	Brief review of the recharge dynamics to the aquifer systems	Provide a more detailed review at a future meeting.
3/16/2021	Developed Statement of Principles for the Groundwater committee	Draft reviewed and distributed to Groundwater Committee
4/20/2021	Critical Resource Area ("Spine Recharge") presentation. Reviewed the history, development, and use of various Critical Resource Area / Spine Recharge Areas developed for the Shore from the original 1992 Groundwater Supply Protection and Management Plan to the present.	The review discussed applicability, use, and limitations of the various designations. Also discussed were principal "data gaps" needed to better refine the areas.
4/20/2021	Presented preliminary results of data compiled from the comprehensive DEQ groundwater use database. Discussed ways the compiled data will be used, including integration in a GIS database.	Discussed data processing needs necessary to rectify the data for use.
5/18/2021	Reviewed the final Kuzzens Marshall Johnson Grapeland Complex Groundwater Withdrawal Permit (GW0070100). The final permit included several additions that addressed some comments and concerns expressed by the Groundwater Committee, including: 1) restricting use of the confined aquifer to historical use and requiring additional withdrawals from the surficial aquifer; 2) additional water quality monitoring, including neighboring wells; and 3) requirement to evaluate expanding irrigation ponds and recycling greenhouse irrigation water.	The revised permit addressed many of the Groundwater Committee's comments and concerns. The Committee commended DEQ on these changes and requested implementation of similar conditions on future permits, where appropriate, recognizing there may be circumstances where the provisions should not be applied.
5/18/2021	Reviewed the existing Tyson Virginia Pollutant Abatement Permit (VPA) from the context of groundwater protection. There are a number of provisions that reduce the potential for excess leaching of nitrogen to groundwater, including a requirement to rotate application between fields on a minimum 3-year basis, limits to the loading, and requirement to update the plans and field testing at a set schedule.	Many of the requirements in the VPA permit significantly reduce the likelihood that excess nitrogen will leach to groundwater as had been reported for a different poultry land application operation in an adjoining State.
5/18/2021	Presented the new Virginia Environmental Data Hub, that became publicly available April 2021. The data hub significantly improved access to basic information retained by DEQ through tools such as the easy to access Open Data Portal and the Environmental Data Mapper (EDM).	While not all information retained by DEQ is available through this tool, it provides a good source of basic information on permits and monitoring information maintained by DEQ. Where more detailed information is necessary, this tool provides the means to research and request additional information from DEQ through FOIA.

**Task 3 - Groundwater Permit Review**

<u>Applicant</u>	<u>Permit Status</u>	<u>Aquifers</u>	<u>Annual Amount (Gal)</u>
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GW0071600 Kuzzens Mappsville	Public Comment Complete	MYTEO	4,800,000
GW0070100 Kuzzens Marshall-Johnson-Grapeland Complex	Public Comment	COL, UYTEO	129,500,000
<b>Task 4 – Implement Committee Work Plan</b>			
<b>Date</b>	<b>Activity</b>	<b>Outcome/Additional Comments</b>	
<b>Work with the GWC and the A-NPDC to implement the approved Work Plan based on the Preservation Plan:</b>			
<b>Monitor and review Federal and State regulations</b>			
12/09/2020	SWCB adoption of 9VAC25-910 (General Permit for Surficial Aquifer use)	Attended meeting	
12/15/2020	Track new General Assembly Bills	(no relevant bills)	
3/16/2021	Develop draft Statement of Principles outlining the Groundwater Committee desire to increase use of the more sustainable surficial aquifer in preference to the Yorktown-Eastover.	Draft Statement of Principles prepared and distributed to Committee	
4/20/2021	Presented an update of the comprehensive water use records provided by DEQ from their database that was recently upgraded. Information from the database will be used to update the Resource Plan document.	In addition to incorporating the information into the Resource Plan document, the information will be integrated in a GIS for future access. The data currently needs to be reviewed and some records rectified. USGS has indicated they are working on a similar task and we may be able to consolidate efforts.	
<b>Coordinate and/or track independent research on the Eastern Shore</b>			
<b>Provide technical assistance to A-NPDC staff.</b>			
2/16/2021	Provided information on historical Eastern Shore Seafood withdrawal	Information for potential future development	
3/16/2021	Developed Statement of Principals	Draft Statement of Principles prepared and distributed to Committee	
<b>Work with the GWC and A-NPDC to develop funding mechanisms and to coordinate with local, state, and federal agencies and institutions to implement these objectives.</b>			
October	Eastern Shore Surficial Aquifer General Permit Regulatory Advisory Panel	Final meeting, developed consensus on proposed language for the regulation (9VAC25-610). The proposed regulation will be presented to SWCB in December for approval	
<b>Task 5 – Quarterly Progress Reports</b>			
<b>% Completion</b>	<b>75%</b>		
<b>Due Date</b>	<b>Additional Comments</b>	<b>Date Presented to GWC</b>	
1/18/2021	None	Provided as summary table	
4/20/2021	None	Provided as summary table	
7/20/2021	None	Provided as summary table	

<b>Task 6 – Update the Eastern Shore Groundwater Resource Protection and Preservation Plan</b>		
<u>Date</u>	<u>Activity</u>	<u>Additional Comments</u>
10/20/2020- Present	Update relevant sections of the 2013 Groundwater Management Plan.	4Q2020 focus was on updating Conceptual Site Model
4/20/2021	Presented an update of the comprehensive water use records provided by DEQ from their database that was recently upgraded. Information from the database will be used to update the Resource Plan document.	In addition to incorporating the information into the Resource Plan document, the information will be integrated in a GIS for future access. The data currently needs to be reviewed and some records rectified. USGS has indicated they are working on a similar task and we may be able to consolidate efforts.
<b>Task 7 – Prepare an Annual Use Summary Report</b>		
<u>% Completion</u>	<u>%</u>	
<u>Date</u>	<u>Activity</u>	<u>Additional Comments</u>
<b>Additional Services (Optional)</b>		
<u>Date</u>	<u>Activity</u>	<u>Additional Comments</u>

Schedule Next Meeting & Adjournment

The next Committee meeting was scheduled to be in Accomack County at the Enterprise Building: 23372 Front Street, Accomac for August 17<sup>th</sup> at 10:00 AM. NOTE: NO DECEMBER 2021 MEETING.

**Vice Chairmain Coker made a motion to adjourn at 11:54 AM. The motion, seconded by Committee Member Grossman, carried unanimously.**

Chairman Muhly adjourned the meeting at 12:00 PM.

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Paul Muhly, Chairman

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Elaine K. N. Meil, Secretary

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee  
FROM: Jessica Steelman  
Coastal Planner  
Accomack-Northampton Planning District Commission  
DATE: September 21, 2021  
SUBJECT:

**August 2021 Financial Status Reports**

The FY 2021 Financial Status Report is attached.

<b>TOTAL BILLS PAYABLE</b>		<b>\$7,100.00</b>
Revenues Received:	Accomack County	\$7,505.25
	Northampton County	\$5,651.50
<b>TOTAL REVENUES RECEIVED</b>		<b>\$ 13,156.75</b>

**Staff requests the Committee review and consider approving the August 2021 Financial Status Report.**

**EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE**  
**Financial Statement--August 2021**  
**Fiscal Year 2021**

	Annual	Current Period	YTD		
<b>REVENUES:</b>	<u>Budget</u>	<u>Activity</u>	<u>Activity</u>	<u>Balance</u>	<u>% of Budget</u>
<b>Ground Water Consultant Appropriations:</b>					
Accomack County	\$ 14,251.00	\$ 3,562.75	\$ 3,562.75	\$ 10,688.25	25.00%
Northampton County	7,415.00	\$ 1,853.75	\$ 1,853.75	5,561.25	25.00%
Subtotal	<u>\$ 21,666.00</u>	<u>\$ 5,416.50</u>	<u>\$ 5,416.50</u>	<u>\$ 16,249.50</u>	
<b>Ground Water Modeling Run Appropriations:</b>					
Accomack County	\$ 1,500.00	\$ 375.00	\$ 375.00	1,125.00	25.00%
Northampton County	1,500.00	\$ 375.00	\$ 375.00	1,125.00	25.00%
Subtotal	<u>\$ 3,000.00</u>	<u>\$ 750.00</u>	<u>\$ 750.00</u>	<u>\$ 2,250.00</u>	
<b>Ground Water Committee Staff Support:</b>					
Accomack County	\$ 6,770.00	\$ 1,692.50	\$ 1,692.50	5,077.50	25.00%
Northampton County	6,191.00	\$ 1,547.75	\$ 1,547.75	4,643.25	25.00%
Subtotal	<u>\$ 12,961.00</u>	<u>\$ 3,240.25</u>	<u>\$ 3,240.25</u>	<u>\$ 9,720.75</u>	
<b>USGS Ground Water Model:</b>					
Accomack County	\$ 7,500.00	\$ 1,875.00	\$ 1,875.00	5,625.00	25.00%
Northampton County	7,500.00	\$ 1,875.00	\$ 1,875.00	5,625.00	25.00%
Subtotal	<u>\$ 15,000.00</u>	<u>\$ 3,750.00</u>	<u>\$ 3,750.00</u>	<u>\$ 11,250.00</u>	
Total Revenues	<u><u>\$ 52,627.00</u></u>	<u><u>\$ 13,156.75</u></u>	<u><u>\$ 13,156.75</u></u>	<u><u>\$ 39,470.25</u></u>	25.00%

<b>Ground Water Modeling Run Appropriations:</b>	
Remaining Balance FY2021	\$ 9,000.00
Total Revenues/Remaining Balance	<u>\$ 61,627.00</u>

<b>EXPENDITURES:</b>					
Ground Water Consultant	\$ 21,000.00	\$ 5,250.00	\$ 5,250.00	\$ 15,750.00	25.00%
Ground Water Modeling Run	6,000.00	\$ 0.00	\$ 0.00	6,000.00	0.00%
Ground Water Committee Staff Support	14,627.00	\$ 1,850.00	\$ 1,850.00	12,777.00	12.65%
USGS Ground Water Model	14,000.00	\$ 0.00	0.00	14,000.00	0.00%
Total Expenditures	<u>\$ 55,627.00</u>	<u>\$ 7,100.00</u>	<u>\$ 7,100.00</u>	<u>\$ 48,527.00</u>	12.76%

NET SURPLUS OR (DEFICIT) \$ 6,000.00 \$ 6,056.75 \$ 6,056.75  
OF REVENUES LESS EXPENDITURES

\* Deposits for the period include:

As Summarized \$ 13,156.75

\$ 13,156.75

\*\* Expenditures for the period include:

Payables (previous month) \$ 7,100.00

Total Expenditures \$ 7,100.00

**Bills Payable as of June 30, 2021**

<u>DUE TO</u>	<u>DESCRIPTION</u>	<u>DATE</u>	<u>AMOUNT</u>
ANPDC	Staff Support	30-Aug-21	\$ 1,850.00
<b>Total Bills Payable</b>			<u><b>\$ 1,850.00</b></u>

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee  
FROM: Jessica Steelman  
Coastal Planner  
Accomack-Northampton Planning District Commission  
DATE: September 21, 2021  
SUBJECT:

**September 21, 2021 Staff Report**

Committee Attendance Record

The FY2022 Committee Attendance Record is [attached](#).

Environmental Reviews and Permits

*VA Pollutant Discharge Elimination System Program –*

**Wastewater Treatment, Town of Chincoteague**

**Permit Number: VA0054003**

**Notice Purpose:** To seek public comment on a draft permit that will allow the release of treated municipal wastewater into a water body in Chincoteague, Virginia.

**Public Comment Period: September 1, 2021 to October 1, 2021**

**Applicant:** Sunset Bay Utilities, LLC, 9919 Stephen Decatur Highway, Ocean City, MD 21842

**Facility:** Sunset Bay Utilities South Wastewater Treatment Plant, 3855 South Main Street, Chincoteague, VA 23336

**DEQ Contact:**

Robert E. Smithson, [Tidewater Regional Office](#)

Phone: (757) 518-2106; Fax: (804) 698-4178

Email: [Robert.SmithsonJr@DEQ.Virginia.gov](mailto:Robert.SmithsonJr@DEQ.Virginia.gov)

*VA Pollution Abatement Program –*

None.

*Consent Orders –*

None.

*Groundwater Withdrawal Permits –*

**Public Notice:** [General Permit for Use of Surficial Aquifer on the Eastern Shore \[9 VAC 25 – 910\]](#) Public Comment opened on 8/30/2021 and will remain open through 10/29/2021.

*Environmental Impact Reviews –*

None.

Other Items

*Major SUP 2021-05 Eastern Shore Materials, LLC Borrow Pit –* documents from Northampton Planning Commission August 3, 2021 meeting can be viewed [here](#); fall under the Bureau of Mines. GWC original 2018 letter attached.

*ESVA Groundwater Litigation* – documents attached.

Research & News

*Sea Level Rise and Failing Septic Systems*, by Molly Mitchell, PhD, and Julie Herman, PhD, Virginia Institute of Marine Science (attached); full research article can be viewed at <https://www.frontiersin.org/articles/10.3389/fmars.2021.631757/full>

Upcoming Events/Meetings

*REGULAR MEETINGS OF STATEWIDE AUTHORITIES, BOARDS, COMMISSIONS, AND COMMITTEES* –

**Public Hearing – Proposed Amendments to the Water Quality Management Planning Regulation – Nutrient Allocations**

A public hearing to receive comments on proposed amendments to the Water Quality Management Planning Regulation. The proposal appears in the Virginia Register on August 30, 2021. The public comment period begins on August 30, 2021, and ends on October 29, 2021.

**Date/Time:** 10/7/2021 at 1:00PM

**Location:** Department of Environmental Quality, Piedmont Regional Office, 4949-A Cox Road, Glen Allen, VA 23060

**Contact:** Gary Graham, [gary.graham@deq.virginia.gov](mailto:gary.graham@deq.virginia.gov), 804-689-4103

*MEETINGS ABOUT TOTAL MAXIMUM DAILY LOADS (or TMDLs) for IMPAIRED WATERS* –

For more information about TMDLs in Virginia, click here for the [Virginia Department of Environmental Quality TMDL Web site](#). TMDL reports are available at <http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/TMDL/TMDLDevelopment/ApprovedTMDLReports.aspx>.

*VIRGINIA GENERAL ASSEMBLY WATER-RELATED MEETINGS* –

For meetings of legislative committees and commissions, see <http://lis.virginia.gov/cgi-bin/legp604.exe?191+oth+MTG>. Links to information about General Assembly commissions, councils, and special interim committees coordinated by the Division of Legislative Services are available online at <http://dls.virginia.gov/commissions.html>. The Virginia General Assembly Web site is <https://virginiageneralassembly.gov/>.



MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee  
FROM: Britt McMillan, Principal Hydrogeologist, Arcadis  
DATE: September 21, 2021  
SUBJECT:

**Ground Water Consultant Updates**

Technical/Regulatory/Educational Items:

1. Public Comment (**ends October 29, 2021**): General Permit for Use of Surficial Aquifer on the Eastern Shore [9 VAC 25 - 910].
  - a. See draft Regulations (**attached**)
  - b. See Background Documents (**attached**)
  - c. The purpose of the general permit is *“to authorize the development of a general permit and create a new general permit regulation to promote use of the surficial aquifer on the Eastern Shore for non-potable purposes”*
  - d. Regulatory Advisory Panel (RAP) formed 1Q2020 and completed draft regulations by October 2020.
  - e. SWCB authorized Public Comment at their December 2020 meeting.
  - f. Public Comment period ends October 29, 2021.
  - g. Summary of 9VAC25-910:
    - i. Permit duration: Fixed 15-year (i.e. 2020 to 2035) regardless of application date
    - ii. Applicable withdrawals:
      1. Groundwater withdrawals > 300,000 gal/month from the surficial aquifer
      2. For the purpose of the general permit, wells with a maximum depth less than 80-feet is considered to be screened in the surficial aquifer
      3. Wells screened deeper but are believed to be surficial aquifer must demonstrate with geophysical logs. Additionally, drilling must be coordinated at least four months in advance with DEQ.
    - iii. Application Requirements:
      1. Permit fee (**\$600**). Agricultural withdrawals no fee.
      2. Groundwater Withdrawal Permit Application Form (**see attached**), provided by DEQ). The intent is a simplified form similar to other general permit applications.
      3. GW-2 (**see attached**): well construction reports (Water Well Completion Report)
      4. Well name; depth; screen intervals; pumping rate; and location (longitude and latitude)
      5. Map showing locations of wells
      6. Surface water and groundwater conjunctive use systems, if applicable. (Irrigation ponds and similar)
      7. Amount (monthly) of groundwater requested.

8. If a well is > 80 ft depth, geophysical logs and optional DEQ inspection (at the discretion of DEQ).
  9. Area of impact (for use in the Mitigation Plan).
  - iv. Reporting Requirements:
    1. Routine monthly total use reported to DEQ annually (**see attached reporting form**).
    2. Withdrawals in excess of the permit amount must be reported by the 5<sup>th</sup> day of the month following the excess withdrawal. Failure to report may result in compliance or enforcement activities.
    3. Annual Water Audit Form (**see attached**) documenting:
    4. Water use compared to expected need
    5. New water saving equipment, procedures, or improvements
    6. Leak detection and repair including quarterly visual monitoring.
  - v. Mitigation Requirements:
    1. Requires an Area of Impact analysis:
      - a. <https://swet.apps.aquaveo.com>
    2. Instructional video:
      - a. <https://www.youtube.com/watch?v=NzZWjTmL-oA&feature=youtu.be>
    3. Follows the existing mitigation requirements:
    4. Response to a claim will be within 5-business days
    5. If accepted, mitigation within 30-business days
    6. If denied:
    7. Provide justification for denial
    8. Require additional documentation
    9. May request arbitration
2. Wagner Pit proposed expansion.
- a. Proposed approx. 51 acre expansion to a new parcel east (and across railroad tracks) from the existing borrow pit.
  - b. Proposed operations are reportedly the same as the existing pit. In April 2018 (**attached**), the Groundwater Committee reviewed a Special Use Permit that would expand the existing pit by 8-acres.
  - c. Based on review of the documents related to the proposed 51 acre expansion, the principal findings from the April 2018 review apply:
    - i. Any impacts to the confined Yorktown-Eastover aquifer is expected to be negligible.
    - ii. Potential impacts to the surficial (Columbia) aquifer are:
      1. Lowered groundwater levels during operation which may reduce yield for the adjacent nursery well or other shallow wells nearby;
      2. Local change in the groundwater flow conditions:
        - a. Groundwater converging toward the pit at higher rates during operation, which has the potential to result in movement of groundwater impacted by nearby septic or agricultural systems (after operations cease, groundwater flow would most likely return to approximate pre-pit conditions); and

- b. After excavation is complete, the pit would be expected to behave similarly to other irrigation ponds: a net source for groundwater recharge in the winter months and a net sink (removal) for groundwater in the summer months.
  - iii. A condition in the April 2018 review was *“no disposal of any material into the pit and the use of the pit as an irrigation pond following excavation conclusion.”*
  - iv. The exception is that the proposed expansion appears to leave open the possibility that fill may be placed in the pit. From an August 31, 2021 response:
    - 1. *“As projects that come up, where overburden is brought to the pit, it will be utilized in berms or to slope pit walls.”*
    - 2. There is also reference to monitoring (including “water monitoring”) in accordance with DMME requirements. There does not appear to be any monitoring requirements in the existing DMME permit.
    - 3. Certain fill material, either placed adjacent to the pit or in the pit, can have the potential to adversely impact groundwater quality.
- 3. Thomas Farms Poultry Groundwater Withdrawal Permit lawsuit:
  - a. Between Jessica L. Thomas, LLC, et al (Petitioners) v. Virginia State Water Control Board, et al. (Defendants)
  - b. Involves three farms: Chicken Bacon Ranch; Wishart’s Point Farm; and Thomas Farm.
  - c. Relevant text from the introduction:
    - i. *“appeal contesting the last minute addition of a Special condition to three groundwater withdrawal permits”*
    - ii. *“The Special condition requiring a costly alternative source investigation (“ASI”) was added despite the fact that (1) DEQ’s own rigorous Technical Evaluation demonstrated no need for the condition to be imposed; (2) no comments received by the Board offered any contrary evidence or support for imposition of the condition; and (3) DEQ, the agency with technical expertise in groundwater permitting, confirmed to the Board that there was no technical support for inclusion of the condition.”*
    - iii. *“Moreover the condition was added at the eleventh hour, without any notice or opportunity to object provided to Thomas Farms, without any written explanation or justification for the Boards deviation from the DEQ recommendation.”*
- 4. Draft Groundwater Committee Prioritization Matrix
  - a. A detailed draft matrix was previously submitted. Based on an initial review of the Matrix, an annotated version has been developed to facilitate priority ranking for groundwater resource issues on the Shore.
  - b. The annotated matrix is intended to supplement the detailed matrix and not replace it. The annotated matrix is structured similar to the detailed matrix with four major categories:
    - i. Institutional Mechanisms
    - ii. Research Needs

- iii. Monitoring
- iv. Alternate Source Development
- c. The four major categories are further subdivided as needed.
- d. Descriptive columns have been added, some that include a subjective ranking (Implementability, Short Term Effectiveness, Long Term Effectiveness, Implementation Cost)
  - i. An initial rank has been populated for each category.
  - ii. Because these rankings are subjective, there should be additional consideration on the final ranking.
- e. The intent is to use the annotated matrix to identify short term and long term focus for Groundwater Committee efforts with the detailed matrix providing necessary information to provide backup for the recommendations.

Other Items:

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

MEMORANDUM

TO: Eastern Shore of Virginia Ground Water Committee  
FROM: Britt McMillan, Principal Hydrogeologist, Arcadis  
DATE: September 21, 2021  
SUBJECT:

**Ground Water Project Priorities**

See addendums: *DRAFT Project Priorities Matrix* and *Ground Water Committee Actionable Items* for discussion.



# A-NPDC

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## EASTERN SHORE OF VIRGINIA GROUND WATER COMMITTEE FY 2022 ATTENDANCE RECORD

Members	Term Exp.	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
<b>Accomack County</b>													
Daniel Hershey	June 2022	X	*										
Grayson Chesser	June 2023	X	*										
Jackie Phillips	NA		*										
Paul Muhly	Chairman Next vote: July 2023	X	*										
<b>Northampton County</b>													
John Coker	Vice Chairman Next vote: July 2023	X	*										
Paul Grossman	March 2024	X	*										
Roberta Kellam	March 2024	X	*										
Taylor Dukes	January 2022		*										
<b>Non-Voting Ex-Officio Members</b>													
Charles Kolakowski	NA		*										
Elaine Meil	NA		*										
Mike Mason	NA		*										

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



# Dredging in Virginia

Submitted by Jim Lang, Pender & Coward, PC

## What Is Dredging?

Dredging is the removal of sediments from the bottom of lakes, rivers, harbors, and other water bodies in order to maintain or increase the water's depth to ensure safe passage of vehicles. There are 3 steps to the dredging process: extraction, transport, and disposal.

Environmental dredging removes sediment contaminated by pollutants. This practice reduces the risk that contaminated sediment poses to human health and the environment. In 2017, 360,000 cubic yards of creosote-contaminated sediment was removed from the Southern Branch of the Elizabeth River in Portsmouth.

## National, State, and Local Economies Depend on Dredging

According to the U.S. Department of Commerce, \$1.6 trillion worth of cargo passed through U.S. ports in 2017. This created over 3 million jobs. Without dredging, the U.S. would be unable to engage in the world's largest trading route. The United Nations Conference on Trade and Development (UNCTAD) found that maritime transport is responsible for four-fifths of world merchandise trade volume.

A twenty-foot equivalent unit, or TEU, is used to measure cargo capacity for container ships, applying the dimensions of a standard 20-foot shipping container. TEUs help determine the amount of cargo imported within a given year.

On the East Coast, the top 4 ports imported the following TEUs in 2020:

- Port of New York / New Jersey – 7.5 million TEUs
- Port of Savannah, GA – 4.6 million TEUs
- Port of Virginia – 2.8 million TEUs
- Port of Charleston, SC – 2.3 million TEUs

Many of these ports, including Savannah, GA, Virginia, and Charleston, SC, are currently undergoing dredging projects to increase the depths of their waters.

## Types of Dredging

There are 2 types of dredging: mechanical and hydraulic.

Mechanical dredging is used to create new channels, ports, and other navigable waterways. It is used to remove heavy gravel, often with a clamshell or backhoe.

Hydraulic dredging, on the other hand, removes sediment that migrated into previously dredged waterways. It is better suited to remove silt and sand, typically implementing a cutter suction dredger or a hopper dredger in the process.

## Federal Environmental Requirements

### The Clean Water Act

Under the Clean Water Act, dredging projects require a permit from the U.S. Army Corps of Engineers (USACE). This permit regulates fill activities for material falling back to the bottom of the waters.

A dredging project will be granted a general permit if it meets the following eligibility criteria:

- USACE Nationwide Permit 19: for "minor" dredging (less than 50 cubic yards)
- Norfolk District Regional Permit 01: for new and for maintenance dredging

If the dredging project falls outside the scope of the criteria above, an individual permit is required. More engineering and analysis are required to obtain individual permits from USACE.

In Virginia, projects must also include a Water Quality Certification. This gives the state of Virginia oversight, in order to maintain water quality.

### National Environmental Policy Act (NEPA)

Any time a federal permit is required, the issuing federal agency must comply with the requirements of NEPA. If impacts to the environment are significant, the agency must issue an Environmental Impact Statement, which can take multiple years and hearings to complete.

However, most projects don't require this in-depth analysis. The majority of projects can move forward with an Environmental Assessment or a Categorical Exclusion.

### Endangered Species Act

If there are protected species in the area of the project, like turtles or Atlantic sturgeon, there are dredging requirements that must be met. This act protects the feeding and reproduction patterns of those animals.

### Marine Mammal Protection Act

Whether animals are endangered or not, animals like whales, dolphins, and manatees must be protected. There will be accommodations to the project that will prevent the harassment of these species.

### Additional Potential Requirements:

- Magnuson-Stevens Fishery and Conservation Management Act
- Resource Conservation and Recovery Act
- Marine Protection, Research, and Sanctuaries Act
- Coastal Zone Management Act

*See Dredging, cont'd on p. 6*

# General Assembly Actions

## Statewide Changes and Local Options

By Mary Miller

In addition to new adopted statewide regulations, during both the General Assembly Regular Session and Special Session, some optional actions for county, city, and town governments to consider were also passed. Below are some new laws and options that directly affect localities. Some passed easily, with majority support, others passed with both partisan and nonpartisan opposition. The votes of both Shore legislators, Senator Lynwood Lewis and Delegate Robert Bloxom, are noted.



### New Statewide Changes That Will Impact Localities

- **Bicycle safety** – Previous law required motorists to pass bicyclists at a reasonable speed, at least 3' to the left of the cyclist. Now, if the travel lane is not wide enough for the 3' distancing, then “the overtaking vehicle shall change lanes.” Cyclists may now ride no more than 2 abreast. ▶ **Senate passed:** 21-18, Lewis, aye; **House passed:** 75-24, Bloxom, aye. (HB2262)
- **Virginia Fair Housing Law** – Unlawful discriminatory housing practices: prohibits localities from discrimination in the application of land use ordinances or guidelines, or the permitting of housing developments, “on the basis of race, color, religion, national origin, sex, elderliness, familial status, source of funds, sexual orientation, gender identity, status as a veteran, or disability”; or “because the housing development contains or is expected to contain affordable housing units...” During deliberations, the following exemptions were added to the original Bill: “that the provisions of this subsection shall not be construed to prohibit ordinances related to short-term rentals,” and “It shall not be a violation of this chapter if land use decisions or decisions relating to the permitting of housing developments are based upon considerations of limiting high concentrations of affordable housing.” ▶ **Senate passed:** 27-11, Lewis, aye; **House passed:** 77-22, Bloxom, aye (HB2046)
- **Littering** – The minimum fine for littering doubled, from \$250 to \$500. Littering is defined as “dumping or disposing of litter, trash, or other unsightly matter on public or private property.” ▶ **Senate passed:** 23-14, Lewis, aye; **House passed:** 65-32, Bloxom, aye (HB1801)
- **Marijuana** – Effective July 1, 2021, criminal penalties for simple possession of marijuana were eliminated under certain conditions: for possession in public of up to 1 oz. by adults over 21; for cultivation of up to 4

plants per household by adults over 21, at their primary residence; or for adult-sharing of up to 1 oz. in private without remuneration. Numerous provisions of the bill are subject to reenactment by the 2022 Session of the General Assembly. ▶ **Senate passed:** 23-16, Lewis, aye; **House passed:** 53-44, Bloxom, nay (HB2312)

- **Education** – A) *After-School Meals* – Requires school districts with 50% of students eligible for free or reduced-price meals, and which also offers educational or enrichment activities, to apply to participate in the Afterschool Meal Program. Requirement may be waived by state if participation is not financially viable for the school. Effective date, July 1, 2022. ▶ **Senate passed:** 39-0, Lewis, aye; **House passed:** 89-11, Bloxom, aye (HB2135)
- B) *Reading Intervention Services* – Requires reading intervention services for students K to Grade 3 based on a student’s demonstrated reading deficiencies. Requires that parents be notified before the service begins and that progress be monitored throughout the length of the services. ▶ **Senate passed:** 39-0, Lewis, aye; **House passed:** 100-0, Bloxom, aye (HB1865)

### New Regulations That May Be Adopted by Localities

- **Community development** – Removal of clutter from property – Provides that a locality may, by ordinance, require the removal of clutter from property, except for land zoned or used for active farming, or other exemptions as decided by the locality. Clutter may be removed from property by the locality, and expenses charged to the owner. Clutter is defined as including mechanical equipment, household furniture, containers, trash, garbage, refuse, litter, and similar items left in public view for an extended period or allowed to accumulate. Violations would be subject to civil penalties. ▶ **Senate passed:** 21-18, Lewis, aye; **House passed:** 52-43, Bloxom, nay (HB1778)
- **Transportation** – Local speed limit reduction: Allows local governments to reduce speed limits to less than 25 mph, but not less than 15 mph, in business or residential districts. ▶ **Senate passed:** 21-17, Lewis, aye; **House passed:** 93-6, Bloxom, aye (HB1903)

To find more information on these new laws, look up Bill numbers (format: HBxxxx) noted for 2021 Regular and Special Sessions (<https://lis.virginia.gov/cgi-bin/legp604.exe?211+men+BIL>).





## RECYCLING CORNER

### Recycling Campaigns Through National Brands

Terracycle® (www.terracycle.com) provides a means to recycle packaging and items that aren't accepted at the convenience centers – and it's free. To recycle items, simply sign up online, print a shipping label, box up your (empty, clean, and dry) packaging, and send it off (check specific requirements for each brand on the website). Once collected, the materials are cleaned and melted into plastic pellets to make new recycled products.

You can also drop off candy and snack wrappers at the Terracycle box at REI (Independence Ave. & Virginia Beach Blvd., Virginia Beach), or drop off disposable cups, lids, and straws; candy and snack wrappers; and coffee and creamer capsules at the Zero Waste Box at local Subaru dealers.

The program includes reward points, which can be redeemed for a variety of charitable gifts, product bundles, or payment to a nonprofit or school of your choice. To date, more than 202 million people in 21 countries have raised over \$44 million for charities around the world. Some of the many brands participating in the program include:

- Arm & Hammer™ baking soda pouches, and Arm & Hammer™ and OxiClean™ laundry pouches
- Brita filters, pitchers, dispensers, bottles, faucet systems, and packaging
- Burt's Bees® beauty and personal care packaging
- Calphalon® (all brands of metal-based [nonstick aluminum, stainless steel, carbon steel, cast iron] cookware, bakeware, and cutlery)
- Halls® (all brands of cough and sore throat drop packaging)
- Head & Shoulders non-aerosol packaging, including bottles, flexible plastic packaging such as color packets, flexible plastic tubes, and complex closures
- Herbal Essences aerosol and non-aerosol packaging
- Late July® Snacks packaging
- Rubbermaid® (well-used plastic and glass storage containers of any brand)
- Santa Fe Natural Tobacco Company (all tobacco waste – extinguished cigarettes, cigarette filters, loose tobacco pouches, outer plastic packaging, inner foil packaging, rolling paper, and ash)
- Solo® (all rigid, #6 plastic cups)
- Teva sandals


**UPDATE:** Along with Food Lion and Walmart, Accomack County convenience centers are again recycling plastic grocery bags and other plastic film and overwraps.

## Dredging, cont'd from p. 4

### Obtaining Dredging Permits in Virginia

The majority of dredging projects support a water-dependent activity. To begin the permit process, you must submit a Joint Permit Application to the Virginia Marine Resources Commission (VMRC). The VMRC will then coordinate review with state agencies and USACE. At this point, the USACE will coordinate a review with federal agencies.

Timelines vary for project permits. The best-case scenario is the process taking around 4 months to complete, but some projects take years.

**Ed. Note:** Several dredging projects are planned for the Eastern Shore. Oyster Harbor, in Northampton County, recently underwent a dredging project that lasted several weeks. The process included transporting and launching the dredging vehicle and other equipment; stretching out and connecting the tube through which the dredged material would be transported; maneuvering the tube so that there was always ingress and egress through the channel for watermen and recreational boaters; and transporting the dredge material away from the harbor. 



An Army Corps survey boat brought inspectors to the harbor in Oyster to wrap up a recent dredging project.

## VOLUNTEER!

### CBES 28<sup>th</sup>

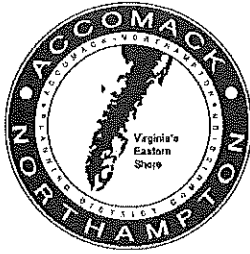
## Between the Waters Bike Tour

Saturday, October 23, 2021

Sign up at: <https://www.signupgenius.com/go/10c0f4daeab22a3fbc52-cbes>

Contact Mary Ehmann, CBES Bike Tour Coordinator, [cbesbiketours@gmail.com](mailto:cbesbiketours@gmail.com) or (973) 787-7895

All state COVID regulations will be followed.



# A-NPDC

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April 25, 2018

Mark Freeze, Chair  
Northampton County Planning Commission

Re: Wagner Pit SUP Review, Ground Water Implications

Dear Mr. Freeze:

I am writing on behalf of the Eastern Shore of Virginia Ground Water Committee to relay information provided by the groundwater consultant, a hydrogeologist with Arcadis, and discussed by the Committee during the April 17, 2018 meeting. These remarks concern the Wagner Pit Special Use Permit (SUP) being considered that would expand existing operations by 8 acres. The consultant assumed that the statements made in the SUP application would and have been followed. This includes that no waste material will ever be placed in the pit and that after excavation the pit will be used as an irrigation pond. These are two important stipulations, that if not followed negate the following statements. Evidence of a plan to follow through with these SUP stipulations would be advised.

Assuming that there will never be waste material (even that allowed through existing Virginia Department of Mines Minerals and Energy regulations) placed in the pit and that after excavation the pit will be used as an irrigation pond, the consultant found that:

- Any impacts to the confined Yorktown-Eastover aquifer is expected to be negligible
- Potential impacts to the surficial (Columbia) aquifer are:
  - Lowered groundwater levels during operation, which may reduce yield for the adjacent nursery well or other shallow wells nearby;
  - Local change in the groundwater flow conditions:
    - Groundwater converging toward the pit at higher rates during operation, which has the potential to result in movement of groundwater impacted by nearby septic or agricultural systems (after operations cease, groundwater flow would most likely return to approximate pre-pit conditions); and
  - After excavation is complete, the pit would be expected to behave similarly to other irrigation ponds: a net source for groundwater recharge in the winter months and a net sink (removal) for groundwater in the summer months.

Vital conditions specific referenced in the Operation Plan indicate that:

- “Any trash generated will be cleaned up daily and removed from the site”
- “Any contaminated materials used will be removed from the site and properly disposed of”
- “No metal, lumber, or debris will be left on the mine site”
- “No stumps, debris, building materials, tires, or house garbage will be brought on the site during the life of this operation.”

In conclusion, should the SUP be issued and the operation expanded there are some potential impacts of unknown extent to adjacent users of the surficial aquifer and potential movement of nearby septic influenced groundwater. Proximity, or width of the buffer area, to the pit would affect the extent (i.e. the smaller the buffer the stronger

the impact to adjacent properties). The conclusions of Britt McMillan, the Arcadis hydrogeologist, depend on the conditions stated in the permit application being strictly followed: no disposal of any material into the pit and the use of the pit as an irrigation pond following excavation conclusions.

If you have any questions or comments, please do not hesitate to contact me at (757) 787-2936 x116 or email@anpdc.org.

Very truly yours,



Elaine K. N. Meil  
Executive Director

cc: Hon. Paul Muhly  
Chairman of the Eastern Shore Ground Water Committee

Mrs. Janet Sturgis  
Northampton County Planning Commission



[townhall.virginia.gov](http://townhall.virginia.gov)

## Proposed Regulation Agency Background Document

<b>Agency name</b>	State Water Control Board
<b>Virginia Administrative Code (VAC) Chapter citation(s)</b>	Primary Action: 9VAC25-910 Secondary Action: 9VAC25-610
<b>VAC Chapter title(s)</b>	9VAC25-910 - General Permit for Use of Surficial Aquifer on the Eastern Shore, and 9VAC25-610 - Groundwater Withdrawal Regulations
<b>Action title</b>	Creation of a General Permit for Use of the Surficial Aquifer on the Eastern Shore
<b>Date this document prepared</b>	

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 14 (as amended, July 16, 2018), the Regulations for Filing and Publishing Agency Regulations (1VAC7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

## Brief Summary

*Provide a brief summary (preferably no more than 2 or 3 paragraphs) of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation). Alert the reader to all substantive matters. If applicable, generally describe the existing regulation.*

There is significant non-potable groundwater use from the confined aquifer system for agricultural activities such as irrigation and cooling for poultry houses. Various parties on the Eastern Shore, including the Eastern Shore Groundwater Committee propose that use of the surficial aquifer or water table aquifer for non-potable uses achieves greater long-term aquifer sustainability. This regulatory proposal amends the existing groundwater withdrawal regulation to authorize the development of a general permit and creates a new general permit regulation to promote use of the surficial aquifer on the Eastern Shore.

## Acronyms and Definitions

*Define all acronyms used in this form, and any technical terms that are not also defined in the "Definitions" section of the regulation.*

Board - State Water Control Board

ESGMA – Eastern Shore Groundwater Management Area

### Mandate and Impetus

*Identify the mandate for this regulatory change and any other impetus that specifically prompted its initiation (e.g., new or modified mandate, petition for rulemaking, periodic review, or board decision). For purposes of executive branch review, “mandate” has the same meaning as defined in Executive Order 14 (as amended, July 16, 2018), “a directive from the General Assembly, the federal government, or a court that requires that a regulation be promulgated, amended, or repealed in whole or part.”*

---

This regulatory action is in response to a mandate created by Chapter 755 of the 2019 Acts of Assembly that requires the Board to adopt regulations to provide incentives for the withdrawal of groundwater from the surficial aquifer in the Eastern Shore Groundwater Management Area rather than from the deep aquifer in that management area.

### Legal Basis

*Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia and Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency’s overall regulatory authority.*

---

The promulgating agency is the State Water Control Board.

Section 62.1-256 of the Code of Virginia authorizes the Board to adopt such regulations as it deems necessary to administer and enforce the provisions of this chapter.

Section 62.1-262.1 of the Code of Virginia requires the Board to adopt regulations to provide incentives for the withdrawal of groundwater from the surficial aquifer in the Eastern Shore Groundwater Management Area (ESGMA) rather than from the deep aquifer.

Chapter 755 of the 2019 Acts of Assembly requires the Board to adopt regulations to provide incentives for the withdrawal of groundwater from the surficial aquifer in the ESGMA rather than from the deep aquifer.

### Purpose

*Explain the need for the regulatory change, including a description of: (1) the rationale or justification, (2) the specific reasons the regulatory change is essential to protect the health, safety or welfare of citizens, and (3) the goals of the regulatory change and the problems it’s intended to solve.*

---

The purpose of these regulatory actions is to provide incentives in the form of an accelerated permit process for the use of the surficial aquifer on the Eastern Shore for non-potable purposes through the creation of a general permit. The adoption of a general permit protects the health, safety or welfare of citizens by providing incentives for non-potable water needs to be met by the surficial aquifer, thus conserving groundwater in the deep aquifers for potable needs.



**Substance**

*Briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both. A more detailed discussion is provided in the “Detail of Changes” section below.*

Amendments to the Groundwater Withdrawal Regulations will establish the framework for the issuance of a general permit under the Groundwater Withdrawal Regulation. The new general permit regulation will include the establishment of permit terms, withdrawal limitations, and reporting requirements necessary to permit withdrawals.

**Issues**

*Identify the issues associated with the regulatory change, including: 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions; 2) the primary advantages and disadvantages to the agency or the Commonwealth; and 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, include a specific statement to that effect.*

The advantages to the public and the agency of creating a general permit is that it will be available to facilities with eligible withdrawals to withdraw groundwater in a manner that is protective of the confined aquifers in the ESGMA without the increased cost and more complex application process associated with issuing an individual permit. There are no known disadvantages.

**Requirements More Restrictive than Federal**

*Identify and describe any requirement of the regulatory change which is more restrictive than applicable federal requirements. Include a specific citation for each applicable federal requirement, and a rationale for the need for the more restrictive requirements. If there are no applicable federal requirements, or no requirements that exceed applicable federal requirements, include a specific statement to that effect.*

There is no applicable federal law. Management of groundwater sustainability is required by state law.

**Agencies, Localities, and Other Entities Particularly Affected**

*Identify any other state agencies, localities, or other entities particularly affected by the regulatory change. “Particularly affected” are those that are likely to bear any identified disproportionate material impact which would not be experienced by other agencies, localities, or entities. “Locality” can refer to either local governments or the locations in the Commonwealth where the activities relevant to the regulation or regulatory change are most likely to occur. If no agency, locality, or entity is particularly affected, include a specific statement to that effect.*

Other State Agencies Particularly Affected

9VAC25-610 amendments. No agencies are affected by authorizing the development of a general permit.

9VAC25-910 General Permit. State agencies that require a permit to withdraw 300,000 gallons in a month or more of groundwater within the ESGMA may save time and money by withdrawing from the surficial aquifer and choosing to use the General Permit.

Localities Particularly Affected

9VAC25-610 amendments. No localities are affected by authorizing the development of a general permit.

9VAC25-910 General Permit. Localities that require a permit to withdraw 300,000 gallons in a month or more of groundwater within the ESGMA may save time and money by withdrawing from the surficial aquifer and choosing to use the general permit.

Other Entities Particularly Affected

9VAC25-610 amendments. No entities are affected by authorizing the development of a general permit.

9VAC25-910 General Permit. Other entities that require a permit to withdraw 300,000 gallons in a month or more of groundwater within the ESGMA may save time and money by withdrawing from the surficial aquifer and choosing to use the general permit. A primary driver this legislation was the modernization of the poultry industry on the Eastern Shore and concerns about the long-term sustainability of the confined aquifers that are the only source of potable drinking water in the ESGMA. The most likely users affected by this permit are agricultural, irrigation, and commercial entities.

For purposes of "Locality Particularly Affected" under the Board's statutes

It is not expected that any locality will bear a disproportionate material impact not experienced by other localities. Currently all entities proposing to withdraw 300,000 in a month of groundwater from any aquifer, including the surficial aquifer, must obtain an individual permit to do so.

**Economic Impact**

*Pursuant to § 2.2-4007.04 of the Code of Virginia, identify all specific economic impacts (costs and/or benefits), anticipated to result from the regulatory change. When describing a particular economic impact, specify which new requirement or change in requirement creates the anticipated economic impact. Keep in mind that this is change versus the status quo.*

**Impact on State Agencies**

<p><i>For your agency:</i> projected costs, savings, fees or revenues resulting from the regulatory change, including:</p> <ul style="list-style-type: none"> <li>a) fund source / fund detail;</li> <li>b) delineation of one-time versus on-going expenditures; and</li> <li>c) whether any costs or revenue loss can be absorbed within existing resources</li> </ul>	<p><u>9VAC25-610 amendments.</u> There will be no change resulting from the adding of authority to create a general permit.</p> <p><u>9VAC25-910 General Permit.</u> There is not currently a general permit for groundwater withdrawals so anticipating the number of prospective users of this permit is uncertain. The most likely users of this permit are agricultural, irrigation, and commercial entities. There are currently a total of 91 individual permits within the ESGMA that fall into those categories of use: 58 agricultural, 23 irrigation, and 10 commercial. The Water Withdrawal Permitting Program is primarily general funded with a small portion of permit fees. The vast majority of these potential permittees (agriculture and irrigation) will be considered "agriculture" under the fee regulation and not subject to permit fees. This does not change under these two proposed regulatory actions. DEQ expects that staff time allocated to the processing of these general permits can be absorbed. Nonagricultural entities would be subject to a \$600 general permit fee which may result in a loss of fee revenue compared to the \$9000 individual permit fee.</p>
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<p><i>For other state agencies:</i> projected costs, savings, fees or revenues resulting from the regulatory change, including a delineation of one-time versus on-going expenditures.</p>	<p><u>9VAC25-610 amendments.</u> There will be no change resulting from the adding of authority to create a general permit.</p> <p><u>9VAC25-910 General Permit.</u> Agencies, like the Department of Conservation and Recreation, which has a state park in the area, may be able to meet their water needs through the use of this general permit saving them time and money. The potential savings include the reduced permit fees, the avoidance of detailed geotechnical studies as part of the individual permit application, and not having to pay fees to publish public notices. Depending on the properties of the surficial aquifer and its water quality at the project location it is possible that more than one well will need to be drilled in the surficial aquifer to achieve the same yield as a well drilled in the confined aquifer. Since the costs of drilling are typically charges per foot of depth, the possible increase in cost from drilling more than one well may be insignificant. The permit term is 15 years so the permit fee and publication charges are ongoing savings at the 15 year frequency, the drilling savings on drilling costs is a one time savings.</p>
<p><i>For all agencies:</i> Benefits the regulatory change is designed to produce.</p>	<p><u>9VAC25-610 amendments.</u> This change allows the agency to develop a streamlined permit option for a specific category of groundwater withdrawals.</p> <p><u>9VAC25-910 General Permit.</u> The regulatory change provides a lower cost and faster permit option for those localities needing groundwater. It is believed that conservation of the groundwater within confined aquifers in the ESGMA will result by creating a streamlined general permit process for using the surficial aquifer. Greater use of the surficial aquifer is believed to result in keeping confined aquifers available for potable use over a longer period.</p>

**Impact on Localities**

<p>Projected costs, savings, fees or revenues resulting from the regulatory change.</p>	<p><u>9VAC25-610 amendments.</u> There will be no change resulting from the adding of authority to create a general permit.</p> <p><u>9VAC25-910 General Permit.</u> Localities may be able to meet their water needs through the use of this general permit saving them the cost of amending their individual permit saving time and expense. There is no fee currently associated with this general permit.</p>
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<p>Benefits the regulatory change is designed to produce.</p>	<p><u>9VAC25-610 amendments</u>. This change allows the agency to develop a streamlined permit option for a specific category of groundwater withdrawals.</p> <p><u>9VAC25-910 General Permit</u>. The regulatory change provides a lower cost and faster permit option for those localities needing groundwater. It is believed that conservation of the groundwater within confined aquifers in the ESGMA will result by creating a streamlined general permit process for using the surficial aquifer. Greater use of the surficial aquifer is believed to result in keeping confined aquifers available for potable use over a longer period. If successful in promoting greater use of the surficial aquifer this action would delay new capital investments a locality may need to make to secure surface water due to declines in groundwater availability.</p>
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**Impact on Other Entities**

<p>Description of the individuals, businesses, or other entities likely to be affected by the regulatory change. If no other entities will be affected, include a specific statement to that effect.</p>	<p><u>9VAC25-610 amendments</u>. There will be no change resulting from the adding of authority to create a general permit.</p> <p><u>9VAC25-910 General Permit</u>. Any individual, business, or other entity choosing to withdrawal 300,000 gallons in a month or more of groundwater from the surficial aquifer in the ESGMA.</p>
<p>Agency's best estimate of the number of such entities that will be affected. Include an estimate of the number of small businesses affected. Small business means a business entity, including its affiliates, that:</p> <p>a) is independently owned and operated and;</p> <p>b) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million.</p>	<p><u>9VAC25-610 amendments</u>. There will be no change resulting from the adding of authority to create a general permit.</p> <p><u>9VAC25-910 General Permit</u>. There is not currently a general permit for groundwater withdrawals so anticipating the number of prospective users of this permit is uncertain. The most likely users of this permit are agricultural, irrigation, and commercial entities. There are currently a total of 91 individual permits within the ESGMA that fall into those categories of use: 58 agricultural, 23 irrigation, and 10 commercial.</p>
<p>All projected costs for affected individuals, businesses, or other entities resulting from the regulatory change. Be specific and include all costs including, but not limited to:</p> <p>a) projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses;</p>	<p><u>9VAC25-610 amendments</u>. There will be no change resulting from the adding of authority to create a general permit.</p> <p><u>9VAC25-910 General Permit</u>. The proposed general permit regulation contains a number of specific instances of regulatory streamlining that may result in cost reductions. They include 1) simplified reporting, including reducing the reporting frequency from quarterly to annually; 2) the use of a water conservation and management</p>

<p>b) specify any costs related to the development of real estate for commercial or residential purposes that are a consequence of the regulatory change;</p> <p>c) fees;</p> <p>d) purchases of equipment or services; and</p> <p>e) time required to comply with the requirements.</p>	<p>checklist form for annual reporting instead of a customized applicant conservation plan and reporting; 3) reduced permit application fees; 4) the elimination of publishing charges for public notices; and 5) accelerated permit processing times. The vast majority of these potential permittees (agriculture and irrigation) will be considered "agriculture" under the fee regulation and not subject to permit fees. This does not change under the proposed regulatory action. Nonagricultural entities would be subject to a \$600 general permit fee compared to the current \$9000 individual permit fee. Meters that measure the amount of groundwater withdrawn from each well are required and cost between \$500-\$1000 for a mechanical meter and several thousand dollars for a digital meter including installation costs. Mechanical meters are acceptable. It is expected that conducting the meter reading and assessing the conservation measures, filling out the form, and providing it to DEQ will involve 10-12 hours per year for most facilities.</p>
<p>Benefits the regulatory change is designed to produce.</p>	<p><u>9VAC25-610 amendments.</u> This change allows the agency to develop an accelerated and streamlined permit option for a specific category of groundwater withdrawals.</p> <p><u>9VAC25-910 General Permit.</u> The regulatory change provides a lower cost and faster permit option for those localities needing groundwater. It is believed that conservation of the groundwater within confined aquifers in the ESGMA will result by creating a streamlined general permit process for using the surficial aquifer. Greater use of the surficial aquifer is believed to result in keeping confined aquifers available for potable use over a longer period.</p>

**Alternatives to Regulation**

*Describe any viable alternatives to the regulatory change that were considered, and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the regulatory change. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in § 2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulatory change.*

Alternatives to the proposal have been considered by the Department. The Department has determined that the proposed regulation (the first alternative) is appropriate, as it is the least burdensome, least intrusive and least costly alternative that fully meets statutory requirements and the purpose of the regulation. The alternatives considered by the Department, along with the reasoning by which the Department has rejected any of the alternatives considered, are discussed below.

1. Adopt the proposed regulation without amendment. This option is being selected because the proposed regulation provides the least onerous means of complying with the minimum requirements of the legal mandates.

2. Make alternative regulatory changes to those required by the provisions of the legally binding state and federal mandates, and associated regulations and policies. This option was not selected because it does not meet the state mandate, which could result in the imposition of requirements that place unreasonable hardships on the regulated community without justifiable benefits to public health and welfare.
3. Adopt none of the proposed regulatory requirements. This option was not selected because it does not meet the requirements of the state mandate.

**Regulatory Flexibility Analysis**

*Pursuant to § 2.2-4007.1B of the Code of Virginia, describe the agency’s analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) establishing less stringent compliance or reporting requirements; 2) establishing less stringent schedules or deadlines for compliance or reporting requirements; 3) consolidation or simplification of compliance or reporting requirements; 4) establishing performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the regulatory change.*

The establishment of a general permit for withdrawal of groundwater from the surficial aquifer is expected to provide an incentive for use of this more sustainable aquifer instead of the confined aquifers. The action minimizes the costs to a small business owner and simplifies the application process. Without the general permit, a small business owner would be required to obtain an individual permit which would increase the complexity of the permit application and increase costs. The proposed general permit regulation contains a number of specific instances of regulatory streamlining that may result in cost reductions. They include 1) simplified reporting, including reducing the reporting frequency from quarterly to annually; 2) the use of a water conservation and management checklist form for annual reporting instead of a customized applicant conservation plan and reporting; 3) reduced permit application fees; 4) the elimination of publishing charges for public notices; and 5) accelerated permit processing times.

**Public Comment**

*Summarize all comments received during the public comment period following the publication of the previous stage, and provide the agency response. Include all comments submitted: including those received on Town Hall, in a public hearing, or submitted directly to the agency. If no comment was received, enter a specific statement to that effect.*

<b>Commenter</b>	<b>Comment</b>	<b>Agency response</b>
Elaine N. K. Meil, Accomack- Northampton Planning District Commission	Wells with a depth of 80’ or less should be considered Columbia wells and regulated under the general permit. Applicants should estimate the withdrawal amount and the justification kept as simple as possible. The permit term should be 15 years or 30 years. There should be a general permit quarterly reporting schedule based upon a meter reading. Applicants should be able to elect to receive prompts from DEQ by email or mail. Applicants should be prompted by DEQ on a quarterly basis to read their meters and receive DEQ follow up when applicants fail to report back. No other reporting should be required. An automated technical evaluation should be completed by DEQ based	These comments will be provided to the Regulatory Advisory Panel (RAP) for discussion.

	on a latitude and longitude description of the well. The general permit should be issued upon completion of the application within 60 days.	
Holly Porter, Delmarva Poultry Industry, Inc. (DPI)	Delmarva Poultry Industry, Inc. was supportive of the legislation, has a vested interest in the regulation, and would like to be part of the conversation. DPI nominates Holly Porter for participation on the RAP.	DPI's support and interest is noted. (Ms. Porter was selected to participate on the RAP.)
Hobey Bauhan, Virginia Poultry Federation (VPF)	VPF's strongly supports Delmarva's request that Ms. Holly Porter participate on the regulatory advisory panel.	VPF's support is noted. (Ms. Porter was selected to participate on the RAP.)
Andrea Wortzel, Mission H2O Virginia	Requested that a Mission H2O Virginia representative be invited to participate on the Regulatory Advisory Panel.	One or more current or former members of Mission H2O Virginia were selected to participate on the RAP.
Nick Thomas	As an Eastern Shore poultry grower with new GWPs and a grain farmer that uses surface water, Mr. Thomas feels that he can assist with real solutions to protect the groundwater supply and volunteers to participate on the RAP.	Mr. Thomas's interest in participating is noted. (Mr. Thomas was not selected to participate on the RAP.)
Shannon Alexander, Accomack-Northampton Planning District Commission	The Ground Water Committee would like extensive representation on the RAP and requests that all voting members of the Committee and the Committee Consultant, Britt McMillan, be included in the RAP. Additionally, the RAP should meet on the Eastern Shore, since it is an Eastern Shore specific topic.	The Planning District Commission's interest and request for representation are noted. Ms. Alexander's request that RAP meetings take place on the Eastern Shore is also taken under advisement. (Paul Muhly, John Coker, Jessica Steelman, and Britt McMillan from the Planning District Commission were all selected to participate on the RAP.)
Sue Mastyl, Virginia Eastern Shore Clean Water Council	Virginia Eastern Shore Clean Water Council is interested in having Ms. Mastyl participate on the regulatory advisory panel to develop the regulation for incentivizing folks to use the surficial aquifer on the Eastern Shore.	The Council's interest in participating on the RAP is noted. (Ms. Mastyl was selected to participate on the RAP.)

**Public Participation**

*Indicate how the public should contact the agency to submit comments on this regulation, and whether a public hearing will be held, by completing the text below.*

In addition to any other comments, the Board is seeking comments on the costs and benefits of the proposal and the potential impacts of this regulatory proposal. Also, the Board is seeking information on impacts on small businesses as defined in § 2.2-4007.1 of the Code of Virginia. Information may include: 1) projected reporting, recordkeeping and other administrative costs; 2) probable effect of the regulation on affected small businesses; and 3) description of less intrusive or costly alternative methods of achieving the purpose of the regulation.

Anyone wishing to submit written comments for the public comment file may do so by mail, email or fax to Gary Graham, Regulatory Analyst, Department of Environmental Quality, P.O. Box 1105, Richmond, Virginia, 23218, fax (804) 698-4178, email gary.graham@deq.virginia.gov. In order to be considered, all comments submitted by fax must include the first and last names of the intended recipient, the sender's name, and the sender's personal contact phone number. Comments may also be submitted through the

Public Forum feature of the Virginia Regulatory Town Hall (<http://www.townhall.virginia.gov>). Written comments must include the name and address of the commenter. In order to be considered, comments must be received by 11:59 pm on the last day of the public comment period.

A public hearing will be held following the publication of this stage, and notice of the hearing will be posted on the Virginia Regulatory Town Hall (<http://www.townhall.virginia.gov>) and on the Commonwealth Calendar (<https://commonwealthcalendar.virginia.gov/>). Both oral and written comments may be submitted at that time.

### Detail of Changes

*List all regulatory changes and the consequences of the changes. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Use all tables that apply, but delete inapplicable tables.*

**Changes to 9VAC25-610:**

Current chapter-section number	New chapter-section number, if applicable	Current requirements in VAC	Change, intent, rationale, and likely impact of new requirements
610-10.	N/A.	Definitions.	<p>Amends section to add definitions of "General permit," "Instream beneficial uses, and "Surface water."</p> <p>Intent is to facilitate implementation of the new general permit requirements by being clear about what terms used in groundwater general permits mean.</p> <p>Necessary for clarity in implementing the proposed 9VAC25-910 general permit requirements.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>

**Promulgating Sections in 9VAC25-610:**

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
610-95	General Permits (requirements).	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992).	<p>Adds a new section to Chapter 610 that authorizes general permits.</p> <p>Intent is to facilitate implementation of the new general permit requirements of 9VAC25-910.</p> <p>Necessary to implement the new 9VAC25-910 general permit requirements under the current permit authority of 9VAC25-610 and to</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>describe and limit the use of that permit type.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
610-95 A.	General requirements authorizing the issuance of general permits.	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992).	<p>Adds a new subsection that authorizes general permit regulations and specifies general requirements for general permit regulations. Subdivision 1 specifies when a general permit may be used. Subdivision 2 requires that the general permit must clearly identify the permit conditions. Subdivision 3 allows certain uses to be excluded from the general permit.</p> <p>Intent is to facilitate implementation of the new general permit requirements of the proposed 9VAC25-910.</p> <p>Necessary to implement the proposed 9VAC25-910 general permit requirements under the permit authority of 9VAC25-610 and to describe and specify the use of that permit type.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
610-95 B.	Exceptions to the authorization for general permits.	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992).	<p>Adds a new subsection that authorizes the board to require individual permits when a case-by-case determination indicates that the coverage by a general permit does not address aquifer, water quality or ecosystem service concerns. Subdivisions 1-5 specify some cases where an individual permit may be required, such as interfering wells, impacts on available groundwater or surface water, polluted groundwater or surface water in the area, noncompliance with the general permit conditions, and the user no longer qualifying for coverage under the general permit. The listed examples are not intended to be the only cases requiring individual permits.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>Intent is to facilitate implementation of the new general permit requirements of the proposed 9VAC25-910.</p> <p>Necessary to implement the proposed 9VAC25-910 general permit requirements under the permit authority of 9VAC25-610 and to describe and specify the use of that permit type.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
610-95 C.	Authorization for revoking general permits.	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992).	<p>Adds a new subsection that authorizes the board to revoke general permit coverage in certain cases after a public hearing.</p> <p>Intent is to facilitate implementation of the new general permit requirements of the proposed 9VAC25-910.</p> <p>Necessary to implement the proposed 9VAC25-910 general permit requirements under the permit authority of 9VAC25-610 and to describe and specify the use of that permit type.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
610-95 D.	Authorization for activities are limited to the term of the general permits.	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992).	<p>Adds a new subsection that authorizes activities under the general permit only for the permit term specified by the general permit regulation.</p> <p>Intent is to facilitate implementation of the new general permit requirements of the proposed 9VAC25-910.</p> <p>Necessary to implement the proposed 9VAC25-910 general permit requirements under the permit authority of 9VAC25-610 and to describe and specify the use of that permit type.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>



New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
610-95 E.	Automatic termination of general permits.	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992).	<p>Adds a new subsection that specifies that the general permit coverage for a use automatically terminates on the date that coverage under an individual permit for that use becomes effective.</p> <p>Intent is to facilitate implementation of the new general permit requirements of the proposed 9VAC25-910.</p> <p>Necessary to implement the proposed 9VAC25-910 general permit requirements under the permit authority of 9VAC25-610 and to describe and specify the use of that permit type.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
610-95 F.	Authorization for requesting exclusion from a general permit.	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992).	<p>Adds a new subsection that allows a permittee operating under an individual permit that becomes subject to a general permit regulation when it becomes effective, to request exclusion from the general permit regulation and continue coverage under the individual permit.</p> <p>Intent is to facilitate implementation of the new general permit requirements of the proposed 9VAC25-910.</p> <p>Necessary to implement the proposed 9VAC25-910 general permit requirements under the permit authority of 9VAC25-610 and to describe and specify the use of that permit type.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
610-95 G.	Process for promulgating general permit regulations.	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992).	<p>Adds a new subsection that specifies that general permits may be issued, modified, revoked, reissued or terminated in accordance with Virginia's Administrative Process Act, (Code of Virginia §2.2-4000 et seq.)</p> <p>Intent is to facilitate implementation of the new general permit requirements of the proposed 9VAC25-910.</p>



New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>Necessary to implement the proposed 9VAC25-910 general permit requirements under the permit authority of 9VAC25-610 and to describe and specify the use of that permit type.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>

**Promulgating 9VAC25-910 (General Permit for Use of Surficial Aquifer on the Eastern Shore):**

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
910-10	<p>Definitions, specifically for the following terms:                      "Act," "Adverse impact,"                      "Applicant," "Area of impact,"                      "Beneficial use,"                      "Board,"                      "Department,"                      "Director,"                      "Eastern Shore Groundwater Management Area,"                      "Groundwater,"                      "Mitigate,"                      "Permit,"                      "Permittee,"                      "Person," "Surface water and groundwater conjunctive use system," "Surficial aquifer," "Well," and "Withdrawal system."</p>	<p>Code of Virginia § 62.1-44.2 et seq., Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>Specifies that the definitions in the Groundwater Management Act and Groundwater Withdrawal Regulation apply, but adds more specific definitions applicable to this proposed regulation.</p> <p>Intent is to facilitate implementation of the new general permit requirements by being clear about what the terms used in 9VAC25-910 mean.</p> <p>Necessary for clarity in implementing the proposed 9VAC25-910 general permit requirements.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-20	Information requirements.	Code of Virginia § 62.1-44.2 et seq., Code of Virginia §	Specifies that the requirements of 9VAC25-610-380 apply, and specifies that the board may require additional information pertinent to the review of an

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
		62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610-380.	<p>application and requires that the owner provide that information.</p> <p>Intent is to facilitate implementation of the new general permit requirements by requiring that owners provide such information that the board deems necessary to determine the impact of the withdrawals.</p> <p>Necessary to ensure that sufficient information is available for proper review of the general permit application.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-30	Purpose.	Code of Virginia § 62.1-44.2 et seq., Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>Specifies the purpose for the general permit, application processing by the board, final action by the board, and how the processing of the general permit is different from procedures for individual permits.</p> <p>Intent is to provide information about application review and processing requirements, and to require board action according to those requirements.</p> <p>Necessary to ensure that the board action process is clear to applicants and that board action follows statutory requirements for review and final action.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-40.	Delegation of authority.	Code of Virginia § 62.1-44.2 et seq., Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610	<p>Specifies that the Director and his staff are delegated authority assigned to the board under this proposed chapter.</p> <p>Intent is to enable prompt review of a general permit application and to facilitate a quick final action without a formal review and decision by the board.</p> <p>Necessary to ensure that the general permit application review and final action processes are as simple and prompt as staff resources allow.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
		(Groundwater Withdrawal Regulation).	Impact is to incentivize the use of the surficial aquifer through the use of a general permit.
910-50.	Effective date of the permit.	Code of Virginia § 62.1-44.2 et seq., Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>Specifies the effective date of the general permit (based upon the effective date of the General Permit Regulation), and the expiration date of the general permit, 15 years later. Coverage would be provided under the general permit until expiration of the general permit unless terminated or revoked earlier.</p> <p>Intent is to have coverage under the general permit extend to the expiration date for all approved users regardless of when coverage is granted, and to provide as much of the 15 years of coverage that remains before that expiration date.</p> <p>Necessary to ensure that the general permit term is a maximum of 15 years.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-60.	Authorization to withdraw groundwater from the surficial aquifer of the Eastern Shore.	Code of Virginia § 62.1-44.2 et seq., Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	Specifies that persons granted coverage may withdraw water from the surficial aquifer provided that an application is submitted in accordance with this chapter, any required application fee is paid, the applicant receives coverage from the department, the applicant complies with the requirements of the general permit and other applicable laws and regulations, the applicant is not required to obtain an individual permit for the proposed withdrawals, the withdrawal activity is not otherwise prohibited by law or regulation, and the activity is not contravened by applicable Groundwater Withdrawal Regulations. It also specifies that coverage is not required if the activity is excluded from permitting requirements. An eligible applicant may instead apply for an individual permit at his discretion.

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>Intent is to authorize withdrawals after application review and the applicant is granted coverage under the general permit, as long as the applicant remains compliant with the general permit and is not otherwise required to obtain an individual permit.</p> <p>Necessary to authorize and facilitate compliant withdrawals from the surficial aquifer under the permit terms.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-70.	Reasons to deny coverage.	Code of Virginia § 62.1-44.2 et seq., Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>Specifies that coverage under the general permit shall be denied by the board if the withdrawals cause, contribute to, or may be expected to cause or contribute to more than minimal water level declines, degradation of water quality, hydrology, or other instream beneficial uses. Coverage is limited to activities within the Eastern Shore Groundwater Management Area (ESGMA), activities in the surficial aquifer, and wells with a maximum depth of 80 feet unless logs are provided with the application that demonstrate that the maximum depth is still within the surficial aquifer of the ESGMA as determined by the department. The board may also require an individual permit rather than granting coverage under the general permit.</p> <p>Intent is to allow groundwater withdrawals to the surficial aquifer in the ESGMA without causing or contributing to adverse groundwater or surface water impacts, and without requiring unnecessary testing and monitoring expenses in order to apply for the permit.</p> <p>Necessary to ensure that withdrawals under the general permit are limited to the surficial aquifer without adverse groundwater or surface water impacts,</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>and without requiring applicants to do expensive testing and monitoring.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-80 A.	<p>Application requirements. Requirement to file a complete application.</p>	<p>Code of Virginia § 62.1-44.2 et seq., Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>Requires the applicant to file a complete application for coverage in accordance with the requirements of the rest of this section.</p> <p>Intent is to ensure that the application requirements and application process are clearly provided.</p> <p>Necessary to ensure that sufficient information is included with the application to allow proper review of the application by the department and to ensure timely final action on the application.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-80 B.	<p>Application requirements. Application content.</p>	<p>Code of Virginia § 62.1-44.2 et seq., Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>Specifies certain minimum information be provided in the application for coverage in accordance with subdivisions 1 through 10, including: the permit fee, if applicable; signature; well construction reports, well descriptions, well locations on certain USGS maps; information on conjunctive use systems, if applicable; the certification of compliance notification from the local governing body; justification of the groundwater withdrawal volume requested; and certain geophysical logs that are required if the wells are deeper than 80 feet.</p> <p>Intent is to ensure that application requirements are clear and are the minimum necessary requirements to complete the review process.</p> <p>Necessary to ensure that sufficient information is included with the application to allow proper review of the application by the department and</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>ensure timely final action on the application.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-80 C.	Application requirements. Board waiver.	Code of Virginia § 62.1-44.2 et seq., Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>Specifies that the board may waive the minimum information requirements of subsection B if it has access to substantially identical information that is accurate and relevant.</p> <p>Intent is to ensure that the application requirements are the minimum necessary to complete the review process.</p> <p>Necessary to ensure that sufficient information is available to the department without the applicant having to provide information identical to information already available.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-80 D.	Application requirements. Requiring the submission of additional information.	Code of Virginia § 62.1-44.2 et seq., Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>Specifies that the board shall require the applicant to submit additional information if the application is determined to be incomplete.</p> <p>Intent is to ensure that the application requirements necessary to complete the review process are met according to established processes.</p> <p>Necessary to ensure that sufficient information is available to the department.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-80 E.	Application requirements. Procedures for administrative withdrawal of an incomplete application.	Code of Virginia § 62.1-44.2 et seq., Code of Virginia § 62.1-254 et seq. (Ground Water	Specifies that the board may administratively withdraw an incomplete application for failure to provide the additional information required by the board within 60 calendar days of the board's last request. Provisions are made for an applicant requesting that

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
		<p>Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>the application review process be suspended, and for additional application fees being required from the applicant when resubmitting an application that was administratively withdrawn by the board.</p> <p>Intent is to provide processes for withdrawing applications, suspending review of applications, and resubmitting withdrawn applications.</p> <p>Necessary to specify and clarify processes necessary for management of incomplete applications.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90.</p>	<p>General Permit. Coverage and authorization for withdrawals.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>Coverage granted to the applicant for the remaining term of the general permit, and compliance with the requirements of the general permit and 9VAC25-610 is required for owners whose application is accepted by the board. Withdrawals are authorized in accordance with the application, the general permit provisions for operating conditions, and the general conditions applicable to all groundwater withdrawal permits.</p> <p>Intent is to provide the authorization for withdrawals from the surficial aquifer consistent with the application and general permit conditions.</p> <p>Necessary to implement the withdrawal of groundwater from the superficial aquifer.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90. Part I. Subsection A.</p>	<p>General Permit. Operating Conditions. Authorized withdrawal.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of</p>	<p>The withdrawal of groundwater is specified to be limited to the wells identified in the application.</p> <p>Intent is to provide the authorization for withdrawals from the surficial aquifer consistent with the application.</p>



New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
		Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>Necessary to implement the withdrawal of groundwater from the surficial aquifer.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-90. Part I. Subsection B.	General Permit. Operating Conditions. Reporting.	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>The withdrawal of groundwater is required to be recorded at the end of each month and reported to the department by July 10<sup>th</sup> of each year for the previous 12 months. Records of water use are required to be maintained by the permittee in accordance with conditions specified in Part II of the general permit. Reporting of any excess in the monthly permitted withdrawal is required to be reported by the 5<sup>th</sup> day of the month following the month of the excess withdrawal.</p> <p>Intent is to provide the minimum recordkeeping and reporting requirements that are necessary to demonstrate compliance with the general permit.</p> <p>Necessary to implement the withdrawal of groundwater from the surficial aquifer.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-90. Part I. Subsection C.	General Permit. Operating Conditions. Water Conservation and Management Plan.	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>A water conservation and management plan is required and implemented through an annual water audit that quantifies the flows of water in the system and shall include a documented review of water use compared with expected need, documentation of changes to the water saving equipment, procedures or improvements or water saving processes, implementation and evaluation of a leak detection and repair process changes to the system implemented in the previous year, and a completed department-provided Audit Form. Results of the audit must be maintained onsite and provided to the</p>



New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>department on request. Also, when a drought emergency is declared for the Eastern Shore, the permittee is required to implement the most restrictive of the state emergency provisions or the local drought management ordinance measures and maintain a record of the actions taken.</p> <p>Intent is to require that the permittee implement water conservation measures that are appropriate for use of the surficial aquifer.</p> <p>Necessary to conserve the superficial aquifer while using it.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90. Part I. Subsection D.</p>	<p>General Permit. Operating Conditions. Mitigation plan.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>Specifies that where the area of impact does not remain on the applicant's property or existing withdrawers will be included in the proposed well's area of impact, the applicant shall provide and implement a plan to mitigate all adverse impacts on existing groundwater users. The mitigation plan, at a minimum, shall include certain features and the plan shall be included as enforceable general permit conditions: (i) the rebuttable presumption that water level declines to existing wells within the area of impact are due to the proposed withdrawal; (ii) a commitment that the applicant will mitigate undisputed adverse impacts in a timely fashion; (iii) a speedy, nonexclusive, low-cost process to resolve disputed adverse impacts; and (iv) requirements that the claimant provide certain information and documentation and the reasons that the claimant believes that the applicant's withdrawals have caused an adverse impact on the claimant's well.</p> <p>Intent is to provide a low-cost, timely process for mitigation and resolution of claims of adverse impacts from a well's area of impact.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>Necessary to mitigate disputes over adverse impacts affecting the withdrawal of groundwater from the surficial aquifer.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90 Part I Subsection E</p>	<p>General Permit. Operating Conditions. Property rights.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>Specifies that the issuance of a general permit does not convey property rights; does not authorize any injury to private property, invasion of personal property rights, or infringement of laws or regulations; and does not constitute a defense in any civil action involving property rights.</p> <p>Intent is to ensure that the applicant knows that the issuance of a general permit does not convey property rights or provide a defense in any civil action involving property rights.</p> <p>Necessary to ensure that the general permit is not construed to affect property rights.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90. Part I. Subsection F.</p>	<p>General Permit. Operating Conditions. Well tags.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>Specifies that well tags shall be affixed to the well casing in a prominent place with specific minimum information on the tag in a format specified by the board. The tag is provided by the department.</p> <p>Intent is to provide the means of easily identifying the well.</p> <p>Necessary to identify the well for compliance, recordkeeping and reporting purposes.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90. Part I.</p>	<p>General Permit. Operating Conditions.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground</p>	<p>Specifies certain permittee actions required prior to abandonment of out of service wells, including complying with Department of Health regulations</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
Subsection G.	Well abandonment.	Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>concerning abandonment, notification to the Department of Environmental Quality 2 weeks prior to abandonment, and submitting documentation of the abandonment to the department within 30 calendar days after abandonment.</p> <p>Intent is to ensure compliance with regulation requirements for abandonment of out of service wells.</p> <p>Necessary to ensure compliance with regulatory requirements.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-90. Part II. Subsection A.	<p>General Permit.</p> <p>Conditions Applicable to All Groundwater Withdrawal Permits</p> <p>Duty to comply.</p>	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>Specifies that compliance with all permit conditions is required and noncompliance is a violation of law and grounds for enforcement action, permit termination, revocation, permit modification, and denial of an application. Nothing in the permit will be construed to relieve the permittee of the duty to comply with all applicable statutes, regulations, and prohibitions.</p> <p>Intent is to ensure compliance with all permit, regulation, and statutory requirements.</p> <p>Necessary to ensure compliance with all applicable requirements.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-90. Part II. Subsection B.	<p>General Permit.</p> <p>Conditions Applicable to All Groundwater Withdrawal Permits</p> <p>Duty to cease or confine activity.</p>	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater	<p>Specifies that it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the activity for which a permit has been granted in order to maintain compliance with the conditions of the permit.</p> <p>Intent is to ensure compliance with all permit, regulation, and statutory requirements.</p> <p>Necessary to ensure compliance with all applicable requirements.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
		Withdrawal Regulation).	Impact is to incentivize the use of the surficial aquifer through the use of a general permit.
910-90. Part II. Subsection C.	General Permit. Conditions Applicable to All Groundwater Withdrawal Permits Duty to mitigate.	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	Specifies that the permittee shall take all reasonable steps to avoid all adverse impacts that may result from this withdrawal as defined in 9VAC25-610-10 and provide mitigation of the adverse impact  Intent is ensure that the permittee is responsible for avoiding all adverse impacts from the withdrawals.  Necessary to ensure that any potential adverse impacts resulting from withdrawal are avoided or resolved.  Impact is to incentivize the use of the surficial aquifer through the use of a general permit.
910-90. Part II. Subsection D.	General Permit. Conditions Applicable to All Groundwater Withdrawal Permits. Inspection, Entry, and Information Requests.	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	Specifies that the permittee shall allow the board's duly authorized agents under reasonable times and circumstances, to enter the permittee's property to have access to, inspect and copy records, inspect facilities, systems, operations, and practices regulated or required under the general permit. Times for inspections are reasonable during regular business hours and during emergencies.  Intent is to ensure that the agency personnel have access to permitted facilities, systems, operations, and practices, and the records required by the general permit, for inspection at reasonable times.  Necessary to ensure that inspections and other reasonable compliance determinations may occur.  Impact is to incentivize the use of the surficial aquifer through the use of a general permit.
910-90. Part II.	General Permit.	Code of Virginia § 62.1-254 et	Specifies that the permittee shall furnish any information requested by the board necessary to determine if cause exists

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
Subsection E.	<p>Conditions Applicable to All Groundwater Withdrawal Permits.</p> <p>Duty to provide information.</p>	<p>seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>for making changes to the permit or determining compliance with the permit and shall provide copies or records required to be kept by the permit or regulation.</p> <p>Intent is ensure that the permittee complies with information requests necessary to determine compliance.</p> <p>Necessary to ensure that compliance can be determined.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90. Part II. Subsection F.</p>	<p>General Permit.</p> <p>Conditions Applicable to All Groundwater Withdrawal Permits.</p> <p>Water withdrawal volume records requirements.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>Specifies that the permittee shall maintain and provide copies of the permit on request; take measurements representative of metered activity; retain records of metering information, required reports, and data used to complete the permit application for three years after the expiration of coverage under the permit, which period may be extended by the board. It also specifies that metering records shall include the measurement date, place, and time; names of individuals performing the measurements, and the results of such measurements.</p> <p>Intent is ensure that the permittee is responsible for recording and retaining metering information for a sufficient time after the expiration of coverage.</p> <p>Necessary to ensure that all metering records necessary for compliance determinations are available beyond the permit expiration.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90. Part II. Subsection G.</p>	<p>General Permit.</p> <p>Conditions Applicable to All Groundwater Withdrawal Permits.</p> <p>Water withdrawal</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management</p>	<p>Specifies that the permittee’s well, impoundment, or impoundment system shall have in in-line totalizer flow meter accurate to plus or minus 10% of actual flows, installed prior to use, and that any defective meters shall be repaired</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
	<p>volume metering and equipment requirements.</p>	<p>Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>or replaced within 30 business days of discovery. Withdrawal measurements are still required if there are defective meters, with volumes reported based upon generally accepted engineering methods. Periods in which the meter is defective shall be clearly identified in required reports and an alternative method for determining flow may be approved by the board on a case-by-case basis.</p> <p>Intent is ensure that the permittee is responsible for measuring water flow accurately, maintaining the measuring devices, and reporting accurate flows regardless of defective metering..</p> <p>Necessary to ensure compliance with permitted well withdrawals.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90. Part II. Subsection H.</p>	<p>General Permit. Conditions Applicable to All Groundwater Withdrawal Permits. Well construction.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>Specifies that the applicant shall notify the department of a well’s construction timetable at least 30 days before the scheduled construction begins and receive approval and a well number from the department. Wells must have a construction permit or approval letter from the Department of Health prior to construction. Permittees with wells with a maximum depth greater than 80 feet must submit a complete suite of geophysical logs to the department with the completion report. The permittee’s determination of surficial aquifer depth shall be submitted to the department for review and approval prior to installing the well pump and a completed GW-2 form and other well construction documents shall be submitted to the department within 30 calendar days of the completion of the well and prior to the initiation of any withdrawal.</p> <p>Intent is ensure that the well construction process is compliant and that the required reports demonstrate</p>



New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>that the maximum well depth is within the surficial aquifer.</p> <p>Necessary to ensure that the wells constructed under this general permit are still eligible for coverage after the well is constructed.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90. Part II. Subsection I.</p>	<p>General Permit. Conditions Applicable to All Groundwater Withdrawal Permits. Transfer of permits.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>Specifies that the permittee notify the department before any transfer of the permit coverage, and that coverage under the general permit may be automatically transferred if three conditions are met: timely notice of property title transfer 30 business days beforehand; written agreement of the date of transfer of responsibility, coverage and liability; and the board does not notify the permittees of its intent to deny the new permittee coverage under the general permit.</p> <p>Intent is ensure that the permittees agree to the particulars of the transfer, that they also transfer responsibilities under the permit, and that the department has sufficient notice of the transfer to object if there are grounds to do so.</p> <p>Necessary to ensure that any all parties are informed and agree to any transfer of permit coverage.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90. Part II. Subsection J.</p>	<p>General Permit. Conditions Applicable to All Groundwater Withdrawal Permits. Notice of planned change.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610</p>	<p>Specifies that the permittee is required to give the department 30 business days prior notice of any planned physical alterations or additions to the permitted water withdrawal system.</p> <p>Intent is ensure that the department is aware of any change that might affect the permit coverage of the well system or the quality of groundwater withdrawn from the surficial aquifer.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
		(Groundwater Withdrawal Regulation).	<p>Necessary to ensure valid permit coverage and avoid adverse impacts resulting from changes to the covered well system.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90. Part II. Subsection K.</p>	<p>General Permit. Conditions Applicable to All Groundwater Withdrawal Permits.  Revocation and termination of coverage.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).</p>	<p>Specifies that coverage under the general permit may be revoked by the department in accordance with the provisions of 9VAC25-610. The permittee may terminate coverage under the general permit under certain specific conditions by filing a notice of termination with the department. The notice of termination shall contain specified information, a completed termination agreement form, the basis for submitting the notice of termination, the specific certification statement contained in the regulation, and a signature of a responsible party in accordance with 9VAC25-610.</p> <p>Intent is ensure that revocation of the general permit coverage follows established regulatory procedures and termination of the general permit coverage by the permittee follows established regulatory procedures.</p> <p>Necessary to ensure that withdrawals previously covered under the general permit either cease, are covered by an individual permit, or coverage is transferred to another owner.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
<p>910-90. Part II. Subsection L.</p>	<p>General Permit. Conditions Applicable to All Groundwater Withdrawal Permits.  Continuation of coverage.</p>	<p>Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia §</p>	<p>Specifies that permit coverage expires at the end of the term of the general permit. Exceptions are provided if the owner has provided a complete application 90 calendar days prior to expiration, in which case the owner may continue to withdraw until the board either issues coverage under a succeeding general permit or notifies</p>



New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
		62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>the owner that the withdrawal is not eligible for coverage under a general permit.</p> <p>Intent is ensure that the permittee has the ability to continue to be covered beyond the term of the permit until provision is made for coverage under an effective general permit or until notified that coverage is not available under a general permit.</p> <p>Necessary to ensure that there is continued coverage available under certain specified circumstances.</p> <p>Impact is to incentivize the use of the surficial aquifer through the use of a general permit.</p>
910-90. Part II. Subsection M.	<p>General Permit.</p> <p>Conditions Applicable to All Groundwater Withdrawal Permits.</p> <p>Duty to reapply.</p>	Code of Virginia § 62.1-254 et seq. (Ground Water Management Act of 1992), Code of Virginia § 62.1-256, and 9VAC25-610 (Groundwater Withdrawal Regulation).	<p>Specifies that if the permittee wishes to continue a permitted activity after the expiration of the permit, that it is the permittee's responsibility to apply for and obtain coverage under a new permit. Permittees covered by an effective general permit shall submit a new application at least 90 calendar days prior to expiration of the effective permit unless the board has granted permission for a later submission date in writing. The board is prohibited from granting permission for that new application to be submitted later than the expiration date of the existing permit.</p> <p>Intent is to make it clear that it is the permittee's responsibility to reapply for coverage under the new general permit as the expiration date of the existing general permit approaches, and under what circumstances that application must be made in order to be continuously covered.</p> <p>Necessary to ensure that there is continued coverage available to existing permittees if they apply under the specified circumstances.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			Impact is to incentivize the use of the surficial aquifer through the use of a general permit.

**Family Impact**

*In accordance with § 2.2-606 of the Code of Virginia, please assess the potential impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one’s spouse, and one’s children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.*

It is not anticipated that this regulation will have a direct impact on families.



## Virginia Department of Planning and Budget **Economic Impact Analysis**

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**9 VAC 25-910 General Permit for Use of Surficial Aquifer on the Eastern Shore**  
**Department of Environmental Quality**  
**Town Hall Action/Stage: 5341 / 9195**  
February 23, 2021

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### **Summary of the Proposed Amendments to Regulation**

Pursuant to Chapter 755 of the 2019 Acts of Assembly,<sup>1</sup> the State Water Control Board (Board) proposes to create a general permit to incentivize the withdrawal of groundwater from the surficial aquifer in the Eastern Shore Groundwater Management Area rather than from the deep aquifer in that management area.

### **Background**

In order for a person or entity to withdraw 300,000 gallons or more of groundwater per month from a Groundwater Management Area (GWMA), they must first obtain a groundwater withdrawal permit. There are two GWMA's in the state: the Eastern Virginia Groundwater Management Area which includes all areas east of Interstate 95; and the Eastern Shore Groundwater Management Area (ESGMA) which includes Accomack and Northampton counties. This regulatory action pertains specifically to the ESGMA.

According to the Department of Environmental Quality (DEQ), the groundwater withdrawals from the deep aquifer in the ESGMA have increased due to agricultural activities such as irrigation and due to modernization and cooling needs of poultry houses (e.g. misting of poultry to keep them cool). In particular, DEQ states that large poultry processing companies in the area (e.g. Purdue and Tysons) have been procuring poultry from growers closer to the processing plants in order to reduce their transportation costs.

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<sup>1</sup> <https://lis.virginia.gov/cgi-bin/legp604.exe?191+ful+CHAP0755&191+ful+CHAP0755>

Withdrawals from the deep aquifer is generally preferred by users over the surficial aquifer due to the consistency of water quality. Deep aquifers (also known as confined aquifers) are those in which an impermeable dirt/rock layer exists that prevents water from seeping into the aquifer from the ground surface located directly above. Instead, water seeps into confined aquifers from farther away where the impermeable layer does not exist. In contrast, surficial aquifers (also known as unconfined aquifers) are those into which water seeps from the ground surface directly above the aquifer. These differences produce higher quality water in the deep aquifers than the surficial aquifers, which can contain contaminants from the application of fertilizer, preservatives, other pollutants; and salt water mix to some extent. However, deep aquifers recharge much more slowly (hundreds to thousands of years depending on depth) than the surficial aquifers, which typically recharge annually based on rainfall. This has raised concerns locally that the deep aquifers may be depleted if more water is withdrawn from them than would be expected to be provided by recharge.

The General Assembly addressed these concerns with Chapter 755 of the 2019 Acts of Assembly, which mandated the Board to adopt regulations to provide incentives for the withdrawal of groundwater from the surficial aquifer rather than from the deep aquifer in the ESGMA. According to the mandate, such incentives may include extended permit terms of as long as 20 years, an accelerated permit process, discounted permit fees, other subsidies, or other incentives.

In response, the Board proposes to establish an accelerated permit process for the use of the surficial aquifer for non-potable purposes through the creation of a general permit. Any individual, business, or other entity choosing to withdraw 300,000 gallons in a month or more of groundwater from the surficial aquifer in the ESGMA would be eligible for a general permit that would be valid for 15 years.

### **Estimated Benefits and Costs**

Although there is no general permit currently for groundwater withdrawals, there are individual permits: 58 for agricultural uses, 24 for irrigation uses, 14 for municipal uses, eight permits for commercial uses, two for industrial uses, and one for fossil power (107 individual permits in total). The proposed rules would not directly affect the currently issued individual

permits, but rather provide incentives to the permit holders to obtain a general permit rather than an individual permit when their individual permit expires, which also has a duration of 15 years.

The proposed general permit would provide a number of benefits. These include 1) reduced permit application fees; 2) the avoidance of detailed geotechnical studies as part of the individual permit application and not having to pay fees to publish public notices; 3) accelerated permit processing times; 4) the use of a water conservation and management checklist form for annual reporting of water conservation actions implemented instead of a customized conservation plan and reporting; and 5) simplified water withdrawal reporting to assess how much water is being withdrawn, including less frequent reporting (annually as opposed to quarterly).

Agricultural entities, which comprise the vast majority of the permit holders, are currently exempt from the individual permit fee and would also be exempt from the fee for the proposed general permit. Thus, the fee related impact would be on non-agricultural entities who would be subject to a \$600 general permit fee compared to the current \$9,000 individual permit fee. Although permit revenues would likely decrease, DEQ states that the permit revenues comprise a small portion of the program's budget (approximately 7-12 percent depending on the year from permit fees, compared to 88-93 percent from the general fund), and DEQ expects that staff time allocated to the processing of these general permits can be absorbed.

The cost of a geotechnical study required for an individual permit ranges from a one-time expense of \$1,500 to \$5,000 every 15 years. This cost could be avoided if a user chooses to apply for a general permit, provided no special circumstances exist as specified in the proposed language (such as withdrawals that require a well that is more than 80 feet deep). Similarly, publication of a notice in a newspaper at a cost of \$200-\$300 every 15 years, or whenever a significant modification to the permit is needed, may be avoided with a general permit. Additionally, since the data and evaluation requirements of a general permit are lower in comparison to an individual permit, the permit processing times for a general permit are shorter. It is expected that 10-12 hours per year for most facilities would be needed to conduct meter readings and assess the conservation measures, fill out the form, and provide it to DEQ, which according to DEQ represents about a four-fold reduction in hours compared to an individual permit.

Depending on the geologic properties of the surficial aquifer and its water quality at the project location, it is possible that more than one well (generally no more than 80 feet deep) would need to be drilled in the surficial aquifer to achieve the same yield as a well drilled in the confined aquifer (generally about 300 feet deep). This may increase the drilling costs. However, since the drilling costs are typically based on each foot of depth, there is the potential to achieve the same yield with more wells of a shorter drilling depth. For example, if three wells that are each 80 feet in length produce the same yield as a 300 foot confined aquifer well, then drilling costs may actually decrease (240 feet vs 300 feet of drilling).

It must be noted, however, that even though there are uncertainties in the cost difference estimates between obtaining an individual permit vs. a general permit, a general permit is optional and not mandatory. Thus, we can reliably infer that the perceived benefits of a general permit to the user would exceed its perceived costs if it is chosen. Accordingly, a decision regarding whether to renew an individual permit or instead obtain a general permit would depend on the magnitude of benefits the general permit would provide to the existing permit holders. Similarly, new applicants would likely weigh costs and benefits of obtaining a general vs. individual permit.

Since existing permit holders already have established wells for deep aquifers, and are not required to change to the surficial aquifer, the incentives for them to use a general permit appear lower. Moreover, a well that is already built and in use represents a sunk cost to the existing permit holders, because they would need to abandon an existing well if they choose to apply for a general permit and then build a new well. New applicants, on the other hand, would be able to decide between constructing a well for deep versus surficial uses. In addition, it is likely that there will be public opposition to new deep aquifer withdrawal permits for non-public water supply. As a result of these facts, the number of likely prospective users of a general permit is subject to great uncertainty and an estimate does not currently exist, but this regulatory change appears more likely to impact new users than existing ones.

As for the impact on entities other than the direct user, greater use of the surficial aquifer is expected to conserve groundwater supplies within confined aquifers, making them available for potable use over a longer period. If this action is successful in promoting greater use of the surficial aquifer, it would delay any new capital investments a locality may need to make to

secure surface water due to declines in groundwater availability. The rate of potential saltwater intrusion in the confined aquifers is also expected to be reduced through greater use of the surficial aquifer. This action should not, however, have an effect on land subsidence (e.g. sinkholes), which is not considered a threat on the Eastern Shore due to its hydrogeology.

### **Businesses and Other Entities Affected**

The proposed amendments would primarily affect prospective groundwater withdrawal permit applicants for non-potable uses. There is no reliable estimate on how many prospective users may choose this option, but some are expected to do so. The prospective users in the ESGMA may be particularly affected as they would have an option to reduce their groundwater withdrawal permit costs.

In addition, the Department of Conservation and Recreation, which has a state park in the area, may be able to meet their water needs through the use of this general permit, thereby saving them time and money as discussed above.

### **Small Businesses<sup>2</sup> Affected:**

If there are any, the prospective permit applicants are likely to be small businesses. However, the proposed general permit does not appear to adversely affect small businesses.

### **Localities<sup>3</sup> Affected<sup>4</sup>**

ESGMA includes the counties of Accomack and Northampton, which would particularly benefit from the proposed amendments to the extent prospective and non-potable use applicants choose a general permit over an individual permit. These localities themselves may also prefer a general permit over an individual permit for their own non-potable municipal uses saving them time and expense. Currently, Accomack County has one permit for municipal water supply. Northampton County as an entity does not have a permit, but the Town of Cape Charles (which is the County seat) has one municipal water supply permit. Furthermore, improved conservation of deep aquifers in their area would also be beneficial for people living in these two counties.

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<sup>2</sup> Pursuant to § 2.2-4007.04 of the Code of Virginia, small business is defined as “a business entity, including its affiliates, that (i) is independently owned and operated and (ii) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million.”

<sup>3</sup> “Locality” can refer to either local governments or the locations in the Commonwealth where the activities relevant to the regulatory change are most likely to occur.

<sup>4</sup> § 2.2-4007.04 defines “particularly affected” as bearing disproportionate material impact.

## Projected Impact on Employment

The proposed amendments do not appear to directly affect total employment.

## Effects on the Use and Value of Private Property

The potential cost savings through the proposed general permit may reduce costs of prospective non-potable use permit applicants, which in turn could add to their asset values. Expected positive improvements in deep water conservation are not likely to directly impact real estate development costs in the short-term, but may add to the value of land over the long term.

## Legal Mandates

**General:** The Department of Planning and Budget has analyzed the economic impact of this proposed regulation in accordance with § 2.2-4007.04 of the Code of Virginia (Code) and Executive Order 14 (as amended, July 16, 2018). Code § 2.2-4007.04 requires that such economic impact analyses determine the public benefits and costs of the proposed amendments. Further the report should include but not be limited to: (1) the projected number of businesses or other entities to whom the proposed regulatory action would apply, (2) the identity of any localities and types of businesses or other entities particularly affected, (3) the projected number of persons and employment positions to be affected, (4) the projected costs to affected businesses or entities to implement or comply with the regulation, and (5) the impact on the use and value of private property.

**Adverse impacts:** Pursuant to Code § 2.2-4007.04(D): In the event this economic impact analysis reveals that the proposed regulation would have an adverse economic impact on businesses or would impose a significant adverse economic impact on a locality, business, or entity particularly affected, the Department of Planning and Budget shall advise the Joint Commission on Administrative Rules, the House Committee on Appropriations, and the Senate Committee on Finance within the 45-day period.

If the proposed regulatory action may have an adverse effect on small businesses, Code § 2.2-4007.04 requires that such economic impact analyses include: (1) an identification and estimate of the number of small businesses subject to the proposed regulation, (2) the projected reporting, recordkeeping, and other administrative costs required for small businesses to comply with the proposed regulation, including the type of professional skills necessary for preparing required reports and other documents, (3) a statement of the probable effect of the proposed regulation on affected small businesses, and (4) a description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation. Additionally, pursuant to Code § 2.2-4007.1, if there is a finding that a proposed regulation may have an adverse impact on small business, the Joint Commission on Administrative Rules shall be notified.





COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
APPLICATION FOR AN EASTERN SHORE SURFICIAL AQUIFER
GROUNDWATER WITHDRAWAL GENERAL PERMIT

1. APPLICANT INFORMATION:

FIN \_\_\_\_\_

Owner: \_\_\_\_\_ Phone: \_\_\_\_\_

Owner Address: \_\_\_\_\_
(Street, City, State, Zip Code)

e-mail: \_\_\_\_\_

2. FACILITY INFORMATION:

Facility/System Name: \_\_\_\_\_

Facility Address: \_\_\_\_\_
(Street, Road, or Route location, City, State, Zip Code)

Contact Name: \_\_\_\_\_ Title: \_\_\_\_\_ Phone: \_\_\_\_\_

e-mail: \_\_\_\_\_

Location of Withdrawal Well or Well System: \_\_\_\_\_
(County/City)

3. TYPE OF APPLICATION:

- Existing withdrawal, not previously permitted
New or expanded withdrawal

Existing permit number (If Applicable) \_\_\_\_\_

4. REQUESTED WITHDRAWAL AMOUNT:

\_\_\_\_\_ Maximum gallons per year

\_\_\_\_\_ Maximum gallons per month

5. TYPE OF USE:

- Public Water Supply
Agriculture (crop irrigation, livestock)
Surface Water and Groundwater Conjunctive Use
Commercial or Industrial
Other (describe)

6. FEE SUBMITTED: \$ \_\_\_\_\_ DATE \_\_\_\_\_ Agricultural Application - No Fee

OFFICE USE ONLY

Date Application Received \_\_\_\_\_

Application No. \_\_\_\_\_

Date Fee Received \_\_\_\_\_ Amount \_\_\_\_\_

Date LGOF Received \_\_\_\_\_

**7. JUSTIFICATION FOR THE AMOUNT OF WITHDRAWAL REQUESTED:**

**Description of beneficial use:**

- a. Describe the nature of the activity and the proposed beneficial use of groundwater.
- b. Include an overview of the system design, operation, and description of the product or service provided.
- c. Include information demonstrating that the annual and monthly amount of groundwater volume requested is the smallest amount necessary to support the proposed use.
- d. Describe how withdrawals will be apportioned to each individual well such as, the expected monthly and annual pumping volume for each well.
- e. For conjunctive use systems (combination of surface water and groundwater sources), describe the system components and identify the apportionment between surface water and groundwater.

**Water demand projections:**

- a. Include documentation supporting the proposed withdrawal, such as population growth, projected increasing water demand, and/or expansion plans.
- b. Include descriptive text and all calculations showing how the total amount of water requested was determined.
- c. Include specific requirements for each category of applicant: Public Water Supply, Agricultural, Commercial, and Industrial as described in the accompanying Application Instructions.

**Line Drawing:**

- a. Attach a line drawing showing the water flow through the facility/system.
- b. Indicate wells, meter locations, sources of surface water intake, treatment, or other related operations.

**8. AREA OF IMPACT**

For the proposed Groundwater withdrawal, provide the 1) Area of Impact map; and 2) Summary Table generated by the online SURFICIAL WELL EVALUATION TOOL (Located at [swet.apps.aquaveo.com](http://swet.apps.aquaveo.com))

**9. WELL LOCATION(S):**

Locate all wells (existing, proposed, abandoned, out of service), along with the facility property boundaries and/or water supply service area associated with the application on:

- a. A United States Geological Survey 7 1/2 minute topographic map or equivalent computer generated map. This map should contain the scale of the map, a north arrow, and, if applicable, quadrangle name. Include all nearby springs, rivers, streams, wetlands, and other surface water bodies on the map.
- b. A detailed location map for each existing and proposed well. The detailed location map must be of sufficient detail that all wells may be easily located for site inspection.





**12. LOCAL AND AREA WIDE PLANNING REQUIREMENTS:**

Include a completed Local Government Ordinance Form (LGOF) from the local governing body of the county, city or town in which the withdrawal is to occur, indicating that the location and operation of the withdrawing facility is in compliance with all ordinances adopted pursuant to Chapter 22 (§ 15.2-2200 et seq.) of Title 15.2 of the code of Virginia.

If the LGOF is not enclosed, include documentation demonstrating that the county, city or town failed to respond within 45 days to such a request made by the applicant by certified mail, return receipt requested. 9VAC25-610-94 2 i.

**13. CERTIFICATION AND SIGNATURE**

I certify under penalty of law that this document and all information submitted were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is to the best of my knowledge, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. I further certify that I am an authorized signatory as specified in the Groundwater Withdrawal Permit Regulation 9VAC25-610-10

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Printed Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

## **APPLICATION INSTRUCTIONS For Completing an Eastern Shore Surficial Aquifer Groundwater Withdrawal Permit Application**

**Note: These instructions consist of summaries and excerpts from the Groundwater Withdrawal Regulations (9VAC25-910-10). Please refer to the full text of the Regulations if additional clarification is needed regarding what is required in a specific application.**

### **WHO MUST APPLY FOR A GROUNDWATER WITHDRAWAL PERMIT**

9VAC25-610-40 of the Groundwater Withdrawal Regulations prohibits the withdrawal of groundwater in a groundwater management area without a groundwater withdrawal permit, except as excluded in 9VAC25-610-50.

### **WHO MAY APPLY FOR THIS GENERAL PERMIT FOR THE EASTERN SHORE SURFICIAL AQUIFER**

This general permit applies to groundwater withdrawals only from the surficial aquifer in the Virginia Eastern Shore Groundwater Management Area. Applicants may obtain this general permit for groundwater withdrawals from wells that are no more than 80 feet below land surface. Where wells are deeper than 80 feet below land surface the applicant must provide geophysical logs with the application that show the maximum depth of the well is constructed within the surficial aquifer of the Eastern Shore Groundwater Management Area, as determined by the Department of Environmental Quality (DEQ) review. Wells with a maximum depth less than or equal to 80 feet below land surface do not require submission of geophysical logs.

### **APPLICATION SUBMITTAL**

The application should be submitted in either electronic (PDF) or paper format. Applications should be submitted to DEQ's Office of Water Supply at [withdrawal.permitting@deg.virginia.gov](mailto:withdrawal.permitting@deg.virginia.gov) or P.O. Box 1105, Richmond VA, 23218

### **APPLICATION FORMAT**

An application is to be submitted on the forms provided with additional sheets attached, as stated in the application. Attachments should clearly identify the application section number and name to which they pertain and the pages should be numbered to facilitate review. Attachments should be submitted on 8 1/2" X 11" paper when possible.

### **APPLICATION INSTRUCTIONS**

#### **1. APPLICANT INFORMATION:**

The owner's official or legal name, Federal Identification Number, phone number, e-mail, and mailing address where correspondence should be sent.

#### **2. FACILITY INFORMATION:**

Name of the commercial, industrial or agricultural facility or the public water supply system from which the withdrawal will occur. Enter the street address of the facility if different from the owner's address. If the address is the same, enter "same". If the application is for a withdrawal for a public water supply with multiple well lots or a facility without a specific street address, enter the road or route fronting the property and nearby cross streets to locate the system. Give the name, title, work number, and e-mail address of a person who is thoroughly familiar with the operation of the withdrawal facility, the facts reported in the application, and who DEQ staff can be contacted if necessary.

#### **3. TYPE OF APPLICATION:**

Check the appropriate application type. If applicable, provide the DEQ the groundwater withdrawal permit number if the withdrawal is currently or has been previously permitted.

#### **4. REQUESTED WITHDRAWAL AMOUNT:**

Enter the amount of water needed to support the proposed beneficial use. The amounts listed should include the maximum annual amount and the peak monthly amount to allow flexibility in system operation. The monthly amount should not be one-twelfth of the annual amount.

**5. TYPE OF USE:**

Check the appropriate use type for the requested beneficial use. Identify if the system of uses Surface Water and Groundwater Conjunctive Use and include the Surface Water Withdrawal Permit Number, copy of the 401 certification, or exemption letter if available.

**6. FEE SUBMITTED:**

List the amount of fee payment and the date submitted.

The fee for a general permit is \$600.00. No fee is required for withdrawals for agricultural applications. The check or money order should be payable to the Commonwealth of Virginia - DEQ. Please submit the appropriate permit fee and the fee form to the DEQ accounting office in Richmond, Virginia. A copy of the form and a copy of the check or money order should be submitted with the completed permit application. Permit processing cannot be initiated until the fee is submitted.

The Permit Fee Regulation 9VAC25-20-10 requires an applicant to pay the fee at the time an application is submitted for a new or expanded groundwater withdrawal permit. Permit fees for agricultural withdrawal permits are not required, except when the application is for worker housing that is not on the same property as the agricultural operation.

**7. JUSTIFICATION FOR THE AMOUNT OF WITHDRAWAL REQUESTED:**

Describe the nature of the facility's activity (e.g., products produced or services provided). If the withdrawal is for more than one use, provide an estimate of the percent for each use. Include an attachment to the application that describes the water system uses and operations. This attachment needs to include both text and mathematical calculations that clearly explain how the requested withdrawal volumes were determined.

Agricultural water supply applicants must provide:

1. For crop irrigation provide:
  - a. The type of crop, acreage, watering requirements for the particular crop, and irrigation type (drip, pivot etc.); and
  - b. Documentation of seasonal variability and peak irrigation months.
2. For livestock watering provide:
  - a. Livestock type, number, and size of animals; and
  - b. Amount of water required per individual animal. Discussion of seasonal variability expected.

Commercial or industrial water supply applicants must provide:

1. Average daily amount of water used for commercial or industrial processes; and
2. Number of employees and average daily water use rate per employee per month.

Public water supply applicants must:

1. Describe existing supply sources, yields, and demands, including:
  - a. Peak day and average daily withdrawal;
  - b. Total consumptive use component of the withdrawal including the amount needed for human consumption as defined in 9VAC25-610-10 as water used to support human survival and health, including drinking, bathing, and showering, cooking, dishwashing, and maintaining hygiene;
  - c. Types of water uses; and
  - d. Existing water conservation measures and drought response plan, including what conditions trigger their implementation.

2. Describe projected demands in 5 year increments over a minimum 15-year planning period that includes:
  - a. Projected demand contained in the local or regional water supply plan developed in accordance with 9VAC25-780 or for the project service area if such area is smaller than the planning area; or
  - b. Statistical population (growth) trends, projected demands by use type including projected demand with and without water conservation measures.
3. Include a complete copy of the Virginia Department of Health Water Works Operation permit, including Engineering Description Sheets.

Surface water and groundwater conjunctive use applicants must provide:

1. Identification of all surface water sources, including pond and reservoir volumes where applicable,
2. Records documenting the amount of water withdrawn on a daily basis for each water source during average and drought weather conditions,

**8. AREA OF IMPACT**

Utilize the online SURFICIAL WELL EVALUATION TOOL (Located at <https://swet.apps.aquaveo.com>) to determine the Area of Impact (AOI) of the proposed withdrawal. The AOI is the aerial extent of each aquifer where more than one foot of drawdown is predicted to occur due to a proposed withdrawal.

An instructional video explaining how to use the online tool can be found at the following website address <https://www.youtube.com/watch?v=NzZWjTmL-oA&feature=youtu.be> or through the DEQ website.

Steps to use Surficial Well Evaluation Tool

1. Create an account if necessary.
2. New Surficial Withdrawal Evaluation : Insert the Name the project and select the Type - Surficial Withdrawal
3. Select Location: Zoom in to the map of the Eastern Shore and use the computer mouse to select the location of the well. Type in the Well Name, Well Depth in feet below land surface (ft bls) and Well screen interval also in ft bls. If needed, repeat the process to add all the wells that will be used to withdrawal groundwater for this project.
4. Enter Pumping Rate: Enter the pumping rate that will be applied to each well in the application and select the appropriate pumping units (cubic feet per day, gallons per year, gallons per minute, gallons per day). Enter the maximum pumping rate your application has multiple wells.
5. Model run: Review the well location and pumping rate information. Click Run to run the evaluation. A status page will be displayed which displays the progress of the evaluation. Each run will take several minutes to complete.
6. Results: Provide the following results generated from the Surficial Well Evaluation Tool with the application:
  - a. Printout of the Area of Impact map generated by the Tool. Applicants may also download the GIS shapefile generated by the Tool to create a map to submit to DEQ.
  - b. Select the Summary Table tab and print or save the summary table provided.

**9. WELL LOCATION(S):**

Locate all wells (existing, proposed, abandoned, out of service), along with the facility property boundaries (operations on contiguous properties, even if beneficial uses are different, may be considered for inclusion into a single permit) and/or water supply service area associated with the application on:

1. A United States Geological Survey 7 1/2 minute topographic map or equivalent map. This map should contain the quadrangle name, the scale of the map, and a north arrow.



2. A detailed location map for each existing and proposed well. The detailed location map must be of sufficient detail that all wells may be easily located for site inspection,

Maps must include the location of all nearby springs, rivers, streams, wetlands and other surface water bodies.

#### **10. EXISTING WELL INFORMATION:**

Complete the existing well information worksheet for all wells associated with the application and attach water well completion reports if available (GW-2 or Equivalent Forms). List all wells, including observation, abandoned or out of service wells. Every effort should be made to obtain completion reports. This can be accomplished by contacting the well driller, previous employees, Virginia Department of Health or DEQ.

Do not enter "see attached" on this table. Enter "NA" if well construction information is not available. Enter "none" on the first line if there are no existing wells associated with the application. Note yes or no in the column to indicate whether or not the wells currently have well plates. DEQ well identification plates must be attached to each existing well. New well identification plates will be provided at time of permit issuance.

Provide the latitude and longitude coordinates and the datum in which they were obtained. Typical datum is NAD 27, WGS 84 and NAD 83. The preferred datum is WGS84.

#### **11. PROPOSED WELL INFORMATION:**

Complete the proposed well information worksheet for all wells proposed for construction. Do not enter "see attached" on this table. Contact the DEQ's Office of Water Supply (OWS) to obtain the DEQ well identification numbers prior to application submittal. Refer to the DEQ well identification number on all drilling documentation. A DEQ well identification plate must be attached to each completed well. Identification plates will be provided by the OWS after well construction. Contact DEQ's OWS at least 30 days prior to the start of drilling operations for each proposed well. Provide the latitude and longitude coordinates and the datum in which they were obtained for each proposed location.

#### **12. LOCAL AND AREAWIDE PLANNING REQUIREMENTS:**

Attach the completed Local Government Ordinance Form (LGOF) from the local governing body of the county, city or town in which the withdrawal is to occur that indicates that the location and operation of the withdrawing facility is in compliance with all land use, planning and zoning ordinances adopted pursuant to Chapter 22 (§15.2-2200 et seq.) of Title 15.2 of the code of Virginia. If the LGOF is not enclosed, enclose documentation demonstrating that the county, city or town failed to respond within 45 days to such a request made by the applicant by certified mail, return receipt requested (9VAC25-610-94 2 i).

#### **13. CERTIFICATION AND SIGNATURE**

The application must be signed in accordance with the Groundwater Withdrawal Regulation 9VAC25-610-150. The application must contain the applicant's signature or the signature of a person acting in the applicant's behalf with the authority to bind the applicant. Electronic submittals containing the original signature page, such as that contained in a scanned document file, are acceptable.

The application should include the following certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.



COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
**Eastern Shore Surficial Aquifer General Permit**  
**Annual Groundwater Withdrawal Report**

Owner: \_\_\_\_\_  
 Facility: \_\_\_\_\_  
 Address: \_\_\_\_\_

Operator Name: \_\_\_\_\_  
 Position/Title: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Permit: \_\_\_\_\_

1) Meter Readings are in [**Circle correct meter multiplier**]: No Multiplier - 10's - 100's - 1000's of Gallons OR Cubic ft.

2) Enter the months and years the data represents:

[multiply cubic ft by . 7.48051948 to calculate gallons]

**July** Year

Owner Well Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

**August** Year

Owner Well Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

**September** Year

Owner Well Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

**October** Year

Owner Well Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

**November** Year

Owner Well Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

**December** Year

Owner Well Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

Facility Name:  GW Permit #:

<b>January</b>		Year <input type="text"/>		
Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

<b>February</b>		Year <input type="text"/>		
Owner Well Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

<b>March</b>		Year <input type="text"/>		
Owner Well Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

<b>April</b>		Year <input type="text"/>		
Owner Well Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

<b>May</b>		Year <input type="text"/>		
Owner Well Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

<b>June</b>		Year <input type="text"/>		
Owner Well Number	DEQ Well Number	Present Reading	Previous Reading	Total Gallons
Total Gallons This Month				

**Comments:** Use for meter issues (replacement, repairs, rollover notations) and dates associated, or other issues.

*Certification Statement - In accordance with 9VAC25-610-150 of the Groundwater Withdrawal Regulations: I certify under penalty of the law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.*

**Print Name:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ **Date** \_\_\_\_\_

**Important Note:** This reporting form is NOT valid unless it is **signed and dated** by a responsible official.

**General Instructions & Mailing Options: 1. (Do not alter this form. If you need assistance or questions please contact the DEQ staff)**  
 1. For Monthly or Annual permit limit exceedances a notification must be submitted by the 5th day of the following month of the exceedance by E-mail for quicker notice  
 2. Groundwater reports are due no later than July 10th (by Mail or Email)

Virginia Department of Environmental Quality Attention: OWS - Groundwater Withdrawal Compliance P.O. Box 1105, Richmond, Virginia 23218	<b>OR</b>	E-Mail Address: <a href="mailto:Withdrawal.permitting@deq.virginia.gov">Withdrawal.permitting@deq.virginia.gov</a> If using E-Mail option put the following in the subject line GW# [Permit Number] [Facility Name] & GW Report
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## Eastern Shore Surficial Aquifer General Permit Groundwater Withdrawal Water Conservation and Management Audit Form

Annual Audit Year \_\_\_\_\_

Facility \_\_\_\_\_

Permit # \_\_\_\_\_

Inspector(s) \_\_\_\_\_

**Quarterly Leak Detection and Repair** *(Visual inspection of all water delivery systems. Complete this table quarterly.)*

Task completed	Quarter (Check if None and enter audit date below)				Notes: Explain any leaks found, repairs, and date completed Describe other leaks identified and repaired since the previous audit
	1	2	3	4	
Well inspection: Identify and repair any leaks.	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None	
Distribution system inspection: Identify and repair any leaks in lines, connections, storage tanks, or other delivery devices or systems	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None	
Waterlines: Identify and repair any signs of leakage in above or underground (wet ground, ponding water etc.) waterlines	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None	
Additional Comments					

**General Instructions**

- Page 1: Complete quarterly (January, March, June, September) visual inspection of water system and document results on the form
- Page 2: Complete Annually: Audit of water use and conservation practices and document results on the form
- Audit forms shall be maintained onsite and available to the DEQ upon request.

**Groundwater Withdrawal Water Conservation and Management Audit Form**

**Annual Groundwater Audit** *(Complete this page annually)*

**Facility** \_\_\_\_\_ **Annual Permitted Withdrawal (gallons)** \_\_\_\_\_  
**Annual Audit Year** \_\_\_\_\_ **Audit Date** \_\_\_\_\_ **Monthly Permitted Withdrawal (gallons)** \_\_\_\_\_  
 Annual Water Use (gallons) \_\_\_\_\_ Maximum Monthly Water Use (gallons) \_\_\_\_\_  
 Previous Year Annual Use (gallons) \_\_\_\_\_ Previous Year Maximum Monthly Use (gallons) \_\_\_\_\_

<b>Audit Items</b>	<b>Yes</b>	<b>No</b>	<b>Notes (describe and explain discrepancies)</b>
Water use below permitted annual volume			
Water use below permitted monthly volumes			
Water use consistent with expected annual and monthly demand of the system			

**Water Conservation Practices:** (List new water saving equipment, procedures, improvements or processes implemented since previous audit)

**Additional Comments**

**Certification Statement** - In accordance with 9VAC25-610-150 of the Groundwater Withdrawal Regulations:

*I certify under penalty of the law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.*

**Print Name:** \_\_\_\_\_ **SIGNATURE** \_\_\_\_\_ **Date** \_\_\_\_\_

\*Indicates required field or section  
 \*\*Indicates required field or section, if applicable

**1. Contact Information\***

Contact:	Name	Address	Phone
Owner			
Driller			
System Provider			

**2. Well Location\***

Physical Address:		County/City:	
Subdivision Name:		Section:	Block: Lot:
Tax Map/GPIN #:			
Latitude:		N	Longitude: W
Datum Source	Horizontal: <input type="checkbox"/> WGS84 <input type="checkbox"/> NAD83 <input type="checkbox"/> NAD27		
Lat/Long Source (Check One): <input type="checkbox"/> Map <input type="checkbox"/> GPS <input type="checkbox"/> PPDGPS <input type="checkbox"/> Survey <input type="checkbox"/> Imagery <input type="checkbox"/> WAAS			
Location Information Collected By :			
Physical Location Description:			

**3. Facility & Use\***

Type of Facility (Check One):	Type of Use (Check All That Apply):		
<input type="checkbox"/> Private	<input type="checkbox"/> Drinking/Domestic Use	<input type="checkbox"/> Agricultural	<input type="checkbox"/> Food Processing
<input type="checkbox"/> Waterworks	<input type="checkbox"/> Manufacturing	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Injection
<input type="checkbox"/> Observation/Monitoring Well	<input type="checkbox"/> Geothermal (Cooling/Heating)	<input type="checkbox"/> Fire Safety	
	<input type="checkbox"/> Closed <input type="checkbox"/> Open: <input type="checkbox"/> Returned to Surface <input type="checkbox"/> Returned to Aquifer		

**4. Well Construction\***

Well designation, Name or Number:			
Date Started:	Date Completed:	Type Rig:	
Class Well (Check One): <input type="checkbox"/> I <input type="checkbox"/> IIA <input type="checkbox"/> IIB <input type="checkbox"/> IIIA <input type="checkbox"/> IIIB <input type="checkbox"/> IIIC <input type="checkbox"/> IIID <input type="checkbox"/> IIIE <input type="checkbox"/> IV			
Construction Type (Check One): <input type="checkbox"/> New <input type="checkbox"/> Existing-Modified: <input type="checkbox"/> Well <input type="checkbox"/> Pump: Date _____			
Well Depth: ft.	Total Hole (borehole) Depth: ft.	Depth to Bedrock: ft.	
Hole Size (Include reamed zones): inches from to ft. Inches from to ft.			
Height of Casing above Land Surface: ft. inches			
Casing Size (I.D.) and Materials: (below)		Total Depth of Casing: ft.	
inches from to ft. <input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness in.
inches from to ft. <input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness in.
inches from to ft. <input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness in.
Screen Size & Mesh:			
inches from to ft. <input type="checkbox"/> infilled	Mesh Size	Type	
inches from to ft. <input type="checkbox"/> infilled	Mesh Size	Type	
inches from to ft. <input type="checkbox"/> infilled	Mesh Size	Type	
Water Zones: from to ft. from to ft. from to ft.			
Gravel Pack:			
Size: Type:	from to ft.	Size: Type:	from to ft.
Grout Type:		Grouting Method:	Type of Seal:
<input type="checkbox"/> Bentonite Slurry <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite pellets/chips <input type="checkbox"/> Concrete <input type="checkbox"/> Neat Cement (6% bentonite)		<input type="checkbox"/> Poured from surface <input type="checkbox"/> Poured through tremmie pipe <input type="checkbox"/> Pumped from bottom upward	<input type="checkbox"/> pitless adapter <input type="checkbox"/> sanitary seal
Camera Survey: <input type="checkbox"/> Yes <input type="checkbox"/> No		Date Conducted:	
Additional Well Construction Form Information Attached: <input type="checkbox"/> Yes <input type="checkbox"/> No			

Well designation, Name or Number\*: \_\_\_\_\_

**5. Disinfection**

Well Disinfected: <input type="checkbox"/> Yes <input type="checkbox"/> No	Date: _____
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**6. Abandonment** (\*When abandoning the well, Sections 1 thru 4 must be completed and/or attach original GW-2)

Date Started: _____	Date Completed: _____
Static Water Level (unpumped level measured): _____	ft.
Casing Size (I.D.) and Materials: _____	Casing Pulled: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncased Well
Depth of Fill: _____	Type and Source of Fill: _____
Grout: From _____ to _____ Type: _____	From _____ to _____ Type: _____
Method of permanently marking location: _____	

**7. Pump Test\*\***

Static Water Level (unpumped level measured): _____	ft.
Date: _____	Method (Check One): <input type="checkbox"/> Water Tape <input type="checkbox"/> Airline <input type="checkbox"/> Transducer <input type="checkbox"/> Other
Stabilized measured pumping water level: _____	ft.
Date: _____	Method (Check One): <input type="checkbox"/> Top of Well <input type="checkbox"/> Top of Casing <input type="checkbox"/> Surface Level
Test Pump Intake Depth: _____	ft   Stabilized Yield: _____
Natural Flow: <input type="checkbox"/> Yes <input type="checkbox"/> No	Flow Rate _____ gpm after _____ hours
Estimated Well Yield: _____	gpm

**8. Pump Data\*\***

Type: <input type="checkbox"/> submersible <input type="checkbox"/> Turbine <input type="checkbox"/> Shallow Jet <input type="checkbox"/> Deep Jet <input type="checkbox"/> Other: _____	Motor HP: _____
Production Pump Intake Depth: _____	ft   Rated Capacity: _____
	gpm at _____ ft TDH

**9. Geologic Information**

Type Logs: _____	Aquifer Test Performed: _____
Water Quality Results Attached: Yes _____ No _____	

Comments:

Formation _____	Lithology _____	Province _____	Geologic Map Used _____
Elevation _____			
<b>For Office Use</b>			

\*Indicates required field or section  
 \*\*Indicates required field or section, if applicable

**10. Driller's Log** (Use additional sheets if necessary)\*

Well designation, Name or Number:					
Depth (feet)		Type of Rock or Soil	Remarks	Drilling Time (Min.)	Diagram of Well Construction (with dimensions)
From	To	(Color, material, fossils, hardness, etc.)	(Water, caving, cavities, etc.)		

**11. Certification**

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.*

Signature\*: \_\_\_\_\_ Date: \_\_\_\_\_

License Number: \_\_\_\_\_



\*Indicates required field or section  
 \*\*Indicates required field or section, if applicable

## Additional Well Construction Data

(Use and submit only if additional space is needed)

### 12. Additional Well Construction Data

<b>Well designation, Name or Number:</b>											
<b>Physical Location:</b>				<b>Date Started:</b>				<b>Date Completed:</b>			
<b>Hole Size (Include reamed zones):</b>											
inches	from	to	ft.	inches	from	to	ft.	inches	from	to	ft.
inches	from	to	ft.	inches	from	to	ft.	inches	from	to	ft.
inches	from	to	ft.	inches	from	to	ft.	inches	from	to	ft.
<b>Casing Size (I.D.) and Materials:</b>											
inches	from	to	ft.	<input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness	in.			
inches	from	to	ft.	<input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness	in.			
inches	from	to	ft.	<input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness	in.			
inches	from	to	ft.	<input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness	in.			
inches	from	to	ft.	<input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness	in.			
inches	from	to	ft.	<input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness	in.			
inches	from	to	ft.	<input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness	in.			
inches	from	to	ft.	<input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness	in.			
inches	from	to	ft.	<input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness	in.			
inches	from	to	ft.	<input type="checkbox"/> infilled	Material	Weight per ft.	or wall thickness	in.			
<b>Screen Size &amp; Mesh:</b>											
inches	from	to	ft.	<input type="checkbox"/> infilled	Mesh Size	Type					
inches	from	to	ft.	<input type="checkbox"/> infilled	Mesh Size	Type					
inches	from	to	ft.	<input type="checkbox"/> infilled	Mesh Size	Type					
inches	from	to	ft.	<input type="checkbox"/> infilled	Mesh Size	Type					
inches	from	to	ft.	<input type="checkbox"/> infilled	Mesh Size	Type					
inches	from	to	ft.	<input type="checkbox"/> infilled	Mesh Size	Type					
inches	from	to	ft.	<input type="checkbox"/> infilled	Mesh Size	Type					
inches	from	to	ft.	<input type="checkbox"/> infilled	Mesh Size	Type					
inches	from	to	ft.	<input type="checkbox"/> infilled	Mesh Size	Type					
inches	from	to	ft.	<input type="checkbox"/> infilled	Mesh Size	Type					
<b>Water Zones:</b>											
From	to	ft.	From	to	ft.	From	to	ft.	From	to	ft.
From	to	ft.	From	to	ft.	From	to	ft.	From	to	ft.
From	to	ft.	From	to	ft.	From	to	ft.	From	to	ft.
From	to	ft.	From	to	ft.	From	to	ft.	From	to	ft.
<b>Gravel Pack:</b>											
Size:	Type:	From	to	ft.	Size:	Type:	From	to	ft.		
Size	Type:	From	to	ft.	Size:	Type:	From	to	ft.		
Size:	Type:	From	to	ft.	Size:	Type:	From	to	ft.		
<b>Grout Type:</b>				from	to	ft.	<b>Grouting Method:</b>				
<input type="checkbox"/> Bentonite Slurry				<input type="checkbox"/> Neat Cement		from	to	ft.	<input type="checkbox"/> Poured from surface		
<input type="checkbox"/> Bentonite pellets/chips				<input type="checkbox"/> Concrete		from	to	ft.	<input type="checkbox"/> Poured through tremmie pipe		
<input type="checkbox"/> Neat Cement (6% bentonite)				from	to	ft.	<input type="checkbox"/> Pumped from bottom upward				