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Proposed Regulation Agency Background Document

Agency name	State Water Control Board
Virginia Administrative Code (VAC) citation	9 VAC 25 -600
Regulation title	Eastern Virginia Groundwater Management Area
Action title	Amend the Eastern Virginia Groundwater Management Area
Date this document prepared	May 19, 2010

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 36 (2006) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

Brief summary

In a short paragraph, please summarize all substantive provisions of new regulations or changes to existing regulations that are being proposed in this regulatory action.

The Eastern Virginia Groundwater Management Area regulation is being amended to include the following additional localities to the groundwater management area: the counties of Essex, Gloucester, King George, King and Queen, Lancaster, Mathews, Middlesex, Northumberland, Richmond, and Westmoreland, and the areas of Arlington, Caroline, Fairfax, Prince William, Spotsylvania, and Stafford counties east of Interstate 95.

Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly chapter number(s), if applicable, and (2) promulgating entity, i.e., the agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

The basis for this regulatory action is provided for in § 62.1-44.15(10) and § 62.1-256.8 of the Code of Virginia. The designation process is outlined in 9VAC25-610-70 and 9VAC25-610-80.

Purpose

Please explain the need for the new or amended regulation by (1) detailing the specific reasons why this regulatory action is essential to protect the health, safety, or welfare of citizens, and (2) discussing the goals of the proposal, the environmental benefits, and the problems the proposal is intended to solve.

Groundwater levels in the undesignated portion of Virginia's coastal plain are continuing to decline. Impacts from groundwater withdrawals are propagating along the fall line into the undesignated portion of Virginia's coastal plain and have the potential to interfere with wells in these areas without assigned mitigation responsibilities. Given current groundwater declines, the entire coastal plain aquifer system must be managed to maintain a sustainable future supply of groundwater for the protection of the health, safety or welfare of the citizens in the Eastern Virginia Groundwater Management Area.

Substance

Please briefly identify and explain the new substantive provisions (for new regulations), the substantive changes to existing sections, or both where appropriate. (More detail about these changes is requested in the "Detail of changes" section.)

The regulations are being amended to expand the groundwater management area to include localities that are included in Virginia's Coastal plain, whose boundary extends westward to interstate 95. The term ground water is being revised in the regulation to the term groundwater to be consistent with common usage and the use of the term by United States Geological Survey (USGS).

Issues

Please identify the issues associated with the proposed regulatory action, 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 the regulatory action poses no disadvantages to the public or the Commonwealth, please so indicate.

The primary advantage to the public will be that these regulations will manage groundwater resources sustainably within the entire coastal plain. This will ensure that Virginia’s groundwater resources are being managed in order to maintain resource availability for future Virginians. There are no disadvantages to the public from managing the groundwater resource.

The primary advantage to the Commonwealth is that groundwater resources will be comprehensively managed. There are no disadvantages to the Commonwealth from managing the groundwater resource.

With the expansion of the groundwater management area, additional withdrawers of groundwater will be required to obtain groundwater withdrawal permits. These permits are issued based on demonstrated need for groundwater, require water conservation and mitigation of impacts, and specify maximum amounts of groundwater that may be withdrawn. All withdrawers of groundwater, unless exempted by statute, are required to obtain a permit, which places additional regulations on withdrawers of groundwater occurring within the management area.

Requirements more restrictive than federal

Please identify and describe any requirement of the proposal which are more restrictive than applicable federal requirements. Include 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 statement to that effect.

The management of groundwater resources is required by Virginia statute. There are no applicable federal requirements.

Localities particularly affected

Please identify any locality particularly affected by the proposed regulation. Locality particularly affected means any locality which bears any identified disproportionate material impact which would not be experienced by other localities.

The following localities are currently included in the Eastern Virginia Groundwater Management area: the counties of Charles City, Isle of Wight, James City, King William, New Kent, Prince George, Southampton, Surry, Sussex, and York; the areas of Chesterfield, Hanover, and Henrico, counties east of Interstate 95; and the cities of Chesapeake, Franklin, Hampton, Hopewell, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg.

The following additional localities are proposed for inclusion in the Eastern Virginia Groundwater Management Area: the counties of Essex, Gloucester, King George, King and Queen, Lancaster, Mathews, Middlesex, Northumberland, Richmond, and Westmoreland, and the areas of Arlington, Caroline, Fairfax, Prince William, Spotsylvania, and Stafford counties east of Interstate 95.

All of the localities listed above are localities particularly affected by the regulations.

Public participation

Please include a statement that in addition to any other comments on the proposal, the agency is seeking comments on the costs and benefits of the proposal, the impacts on the regulated community and the impacts of the regulation on farm or forest land preservation.

In addition to any other comments, the board/agency is seeking comments on the costs and benefits of the proposal, the potential impacts of this regulatory proposal and any impacts of the regulation on farm and forest land preservation. Also, the agency/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 may do so at the public hearing or by mail, email or fax to Melissa Porterfield, Office of Regulatory Affairs, P.O. Box 1105, Richmond, VA 23218, phone: 804-698-4238, fax: 804-698-4346 email: Melissa.Porterfield@deq.virginia.gov . Comments may also be submitted through the Public Forum feature of the Virginia Regulatory Town Hall web site at 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 5:00 p.m. on the date established as the close of the comment period.

A public hearing will be held and notice of the public hearing will appear on the Virginia Regulatory Town Hall website (www.townhall.virginia.gov) and can be found in the Calendar of Events section of the Virginia Register of Regulations. Both oral and written comments may be submitted at that time.

Economic impact

Please identify the anticipated economic impact of the proposed new regulations or amendments to the existing regulation. When describing a particular economic impact, please specify which new requirement or change in requirement creates the anticipated economic impact.

<p>Projected cost to the state to implement and enforce the proposed regulation, including (a) fund source / fund detail, and (b) a delineation of one-time versus on-going expenditures</p>	<p>Additional resources will be needed to implement the permit program within the expanded management area. The Groundwater Withdrawal Permit Program will need general funds (agency 440, Program 51228).</p> <p>Recurring costs include personnel costs for permit writers and computer rental costs. It is estimated that the processing of a permit application takes on average 118 man hours. This hourly rate was applied to the 111 known users in the expanded management area that currently withdrawing groundwater at rates that would require a permit. This number is then divided by a man year of 2040 hours to determine the number of staff needed.</p> $\frac{118 \times 111}{2040} = 6.4 \text{ (rounded to 6.0)}$ <p>6 x \$40,000 = \$240,000</p> <p>However, the regulation provides that existing groundwater users may continue to withdraw groundwater at historical levels after an area is</p>
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	<p>declared as long as a timely and complete application is submitted. This will allow the Department to phase in implementation of the program with current resources.</p>
<p>Projected cost of the new regulations or changes to existing regulations on localities</p>	<p>There are 27 known local government water withdrawals that would be impacted. Application fees for historic groundwater withdrawal permits are \$1200.</p>
<p>Description of the individuals, businesses or other entities likely to be affected by the new regulations or changes to existing regulations</p>	<p>Withdrawals of groundwater exceeding 300,000 gallons per month are required to obtain a permit unless exempted by state statute (62.1-260 of the Code of Virginia)</p>
<p>Agency’s best estimate of the number of such entities that will be affected. Please include an estimate of the number of small businesses affected. Small business means 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.</p>	<p>There are 111 known entities withdrawing 300,000 gallons per month or more that will be affected by this expansion of the management area. This estimate was developed from the database of entities reporting their groundwater withdrawal in compliance with 9 VAC 25-200.</p> <p>We estimate that 8 small businesses will be impacted. This estimate was made by looking at the database of reported users, the type of business activity associated with the water use and the amount of water used. We then cross referenced this list with the registered Limited Liability Corporations in the Virginia State Corporation Commission database.</p>
<p>All projected costs of the new regulations or changes to existing regulations for affected individuals, businesses, or other entities. Please be specific and do include all costs. Be sure to include the projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses. Specify any costs related to the development of real estate for commercial or residential purposes that are a consequence of the proposed regulatory changes or new regulations.</p>	<p>Permit fees. Application fees for historic groundwater withdrawals are \$1200 for a 10 year permit term. Every subsequent permit for the withdrawal is \$6000. No fees are required for an agricultural withdrawal.</p> <p>Aquifer testing typically ranges from \$10,000 - \$25,000. These tests are generally required only when an applicant wishes to rebut an area of impact determined by DEQ or the model used for evaluating drawdown impacts is known to have problems predicting drawdowns in a specific area.</p> <p>The estimated cost for a geophysical log is approximately \$1200 but varies based on the depth of the well. If a camera survey is required, costs typically range from \$1000 to \$2000 depending on whether the pump must be removed and depth of the well.</p> <p>Monitoring wells have been required when there is enough uncertainty whether a proposed withdrawal can meet the drawdown criteria that the permit would not be issued without the benefit of field water level data. This can range from \$50,000 - \$100,000 depending on the depth and number of wells.</p>

<p>Beneficial impact the regulation is designed to produce.</p>	<p>The regulation will now manage the entire coastal plain's groundwater resources to ensure that the resource is managed for all users.</p>
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Alternatives

Please describe any viable alternatives to the proposal considered and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the action. 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 regulation.

One alternative would be to not expand the groundwater management area throughout the entire coastal plain. This would be less protective of the resource because the withdrawals occurring outside of the groundwater management area would not be managed effectively. Due to the interconnectivity of the aquifers in the coastal plain, the withdrawal of groundwater from one area of the state may impact users in other locations within the state. Not regulating withdrawals could lead to reduced ability of users to withdraw groundwater from aquifers.

State statute specifies the criteria for requiring permits for groundwater withdrawals. Smaller businesses that utilize groundwater may not be required to obtain a permit. Many localities provide water service to entities within their locality and many small businesses will likely be able to purchase water service from the locality in which they are located instead of applying for their own groundwater withdrawal permit.

Regulatory flexibility analysis

Please 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) the establishment of less stringent compliance or reporting requirements; 2) the establishment of less stringent schedules or deadlines for compliance or reporting requirements; 3) the consolidation or simplification of compliance or reporting requirements; 4) the establishment of 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 proposed regulation.

This regulation only establishes the groundwater management areas. In developing the areas of localities to be included in the expanded groundwater management area, the agency considered how to minimize the area that needed to be included in the expanded Eastern Virginia Groundwater Management area and to provide a definitive way in which to divide parts of localities not needing to be regulated. The agency selected interstate 95 as a dividing point since the geography located west of the fall line differs from geology located east of the fall line. Interstate 95 was selected since it is the approximate area in which the fall line occurs within Virginia.

Public comment

Please summarize all comments received during public comment period following the publication of the NOIRA, and provide the agency response.

Commenter	Comment	Agency response
Mr. David Bailey The Environmental Law Group	Requested to be added to the agency mailing list and requested to participate on Regulatory Advisory Panel (RAP).	Mr. Bailey was considered for membership on the RAP and appointed to the RAP by the agency director and added to the agency mailing list.
Mr. Frank Fletcher	Supports expanding the Eastern Virginia Groundwater Management Area to include remaining portions of the Virginia Coastal Plain.	The agency appreciates the support of the commenter concerning the expansion of the Eastern Virginia Groundwater Management Area.
Steve Werner Draper Aden Associates	Requested to participate on RAP. Commented that the area to be included in the expanded Eastern Virginia GWMA extends from Caroline County northward through the eastern portions of Spotsylvania, Stafford, Prince William, and Arlington Counties and the eastern edge of the City of Alexandria, and the Northern Neck Counties to the east. This leaves a narrow band of the Coastal Plain that may be, but is not shown to be, in the Eastern Virginia GWMA. This includes portions of Hanover, Chesterfield, Henrico, Dinwiddie, and Greensville Counties and the Cities of Richmond, Colonial Heights, Petersburg and Emporia. The map should be revised to include the entire Coastal Plain to clarify the limits of the Eastern Virginia GWMA.	Due to the geology of Virginia, specifically the fall line that is located parallel to interstate 95, the behavior of the aquifers west of interstate 95 is very different than the aquifers located to the east of interstate 95. In many cases the aquifer thickness is too thin to provide sufficient yield in any remaining portion of the coastal plain west of interstate 95. Due to this difference in geology, the agency is not proposing to regulate the areas of counties located to the west of interstate 95. Due to differences in aquifer properties, the regulation of groundwater in areas west of interstate 95 is not needed at this time.
Beate Wright, Chair VA AWWA	recommended Mr. Rob Harris to serve on RAP to represent Va. Section of the American Water Works Association	Mr. Harris considered for membership on the RAP and appointed to the RAP by the agency director.
Addison Nottingham	-suggested member of the Virginia Potato and Vegetable	Mr. Lynn Gayle was appointed to the RAP by the agency director to represent the

Eastern Shore Soil and Water Conservation District	Grower's Association be appointed to the advisory panel	Virginia Potato and Vegetable Grower's Association.
Lynton Land	agrees that the Eastern Virginia Ground Water Management Area should be expanded	The agency appreciates the support of the commenter concerning the expansion of the Eastern Virginia Groundwater Management Area.
Lyn Neira Resident of Lancaster County	Supports expansion of Eastern Virginia Ground Water Management Area	The agency appreciates the support of the commenter concerning the expansion of the Eastern Virginia Groundwater Management Area.
Gayl Fowler-SAIF Water Wells, Inc.	Supports expansion of Eastern Virginia Ground Water Management Area -supports further research of aquifers on the Northern Neck	The agency appreciates the support of the commenter concerning the expansion of the Eastern Virginia Groundwater Management Area.
William Pennell Lancaster County Administrator Lancaster County Board of Supervisors	Supports expansion of Eastern Virginia Ground Water Management Area to include all 10 counties that constitute the Middle Peninsula and Northern Neck.	The agency appreciates the support of the commenter concerning the expansion of the Eastern Virginia Groundwater Management Area.
Anthony Creech Resource International	Supports expansion of Eastern Virginia Ground Water Management Area	The agency appreciates the support of the commenter concerning the expansion of the Eastern Virginia Groundwater Management Area.
Andrea Wortzel Coordinator, Mission H2O	Current, accurate data and information, including modeling data, as well as information on the water supply plans of localities that area part of the groundwater management area as well as those to be included should be examined when considering if an expansion of the ground water management area is appropriate -requested representation on RAP – Tom Roberts	Mr. Roberts was considered for membership on the RAP and appointed to the RAP by the agency director. The agency also considered the data available concerning current groundwater conditions as a basis for the need to expand the groundwater management area.
Sarah Kadec James City County Citizens'	Supports expansion of Eastern Virginia Ground Water Management Area.	The agency appreciates the support of the commenter concerning the expansion of the Eastern Virginia Groundwater Management Area.

Coalition (J4C)		
Hampton Roads Planning District Commission Directors of Utilities Committee	Supports expansion of Eastern Virginia Ground Water Management Area.	The agency appreciates the support of the commenter concerning the expansion of the Eastern Virginia Groundwater Management Area.
Linda Miller	Supports expansion of Eastern Virginia Ground Water Management Area since this may help maintain water supplies.	The agency appreciates the support of the commenter concerning the expansion of the Eastern Virginia Groundwater Management Area.

Family impact

Please assess the 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.

This regulatory action is not anticipated to have any impact on the family or family stability.

Detail of changes

Please detail all changes that are being proposed and the consequences of the proposed changes. If the proposed regulation is a new chapter, describe the intent of the language and the expected impact if implemented in each section. Please detail the difference between the requirements of the new provisions and the current practice or if applicable, the requirements of other existing regulations in place.

If the proposed regulation is intended to replace an emergency regulation, please list separately (1) all provisions of the new regulation or changes to existing regulations between the pre-emergency regulation and the proposed regulation, and (2) only changes made since the publication of the emergency regulation.

Throughout the regulations, the terms “ground water” are being replaced with the term “groundwater” to be consistent with the use of the term by USGS. References to the Eastern Virginia Ground Water Management Area will not be changes to remain consistent with the name of the management area specified in statute.

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change, rationale, and consequences
10		Definition of terms included in regulation	Definitions are being revised to be consistent with definitions in statute.
20		Identification of localities included in the management area.	The following localities are proposed to be added to the eastern virginia Groundwater Management Area: Eastern Virginia Groundwater Management Area: the counties of Caroline, Essex, Gloucester, King George, King and Queen, Lancaster, Mathews, Middlesex, Northumberland, Richmond, and Westmoreland, and the areas of Arlington, Fairfax, Prince William, Spotsylvania, and Stafford counties east of Interstate 95.

Acronyms and Definitions

Please define all acronyms used in the Agency Background Document. Also, please define any technical terms that are used in the document that are not also defined in the "Definition" section of the regulations.

RAP- Regulatory Advisory Panel
 USGS- United States Geological Survey