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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
TDD (804) 698-4021
www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

December 20, 2013

Lewis L. Lawrence, III
Executive Director
Middle Peninsula Planning District Commission
125 Bowden Street
Saluda, Virginia 23149

SUBJECT: Compliance Determination for Middle Peninsula Regional Water Supply Plan

Dear Mr. Lawrence:

Thank you for your efforts to develop and submit the water supply program for your localities. We recognize the significant level of effort the localities put forth in the development of this first program, particularly given the amount of data necessary to successfully meet the program requirements. The information you provided will be very valuable to the Commonwealth as we collectively plan for how best to meet the future water needs of all Virginians.

The Department of Environment Quality (DEQ) has completed review of the water supply program you submitted in accordance with 9 VAC 25-780-50. DEQ has determined that your program conditionally complies with the regulation, provided that the identified conditions are addressed by the five-year review and update. The attached documentation outlines the conditions of compliance and provides a record of the review by DEQ and other state agencies as required in 9 VAC 25-780-140.

My staff will be following up with you to assist with addressing the conditions prior to the five-year review and update of your water supply program. If you have any questions please contact Tammy Stephenson, Water Supply Planning Program Coordinator, at (540) 562-6828.

Thank you for your efforts to promote sound water supply planning in your community. My staff and I look forward to working with you to meet your future water supply needs.

Please share this decision with the planning partners in your region.

Sincerely,

David K. Paylor

DKP:ewf
Attachment

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MEMORANDUM

TO: James Golden, Deputy Director

FROM: Scott Kudlas, through Jeff Steers

DATE: December 20, 2013

SUBJECT: COMPLIANCE DETERMINATION FOR THE MIDDLE PENINSULA REGIONAL WATER SUPPLY PLAN

Proposed Action:
As documented in the attached Compliance Checklist, staff recommends that the Middle Peninsula Regional Water Supply Plan be found to comply with 9 VAC 25-780-140.C and F, with the following conditions to be completed in time for the five-year review of the plan, or December 20, 2018, whichever comes first:

1. Complete items marked as "to be addressed in the next plan revision" as noted in the "Response Matrix for DEQ Comments," submitted to DEQ with the regional plan in July 2011.
2. Include the annual and monthly permitted amounts contained in groundwater withdrawal permits for all the community water systems located within the Ground Water Management Areas.
3. Provide additional information for non-agricultural self-supplied users of >300,000 gallons per month of surface water including any limitations on withdrawals established by permits issued by the SWCB, VDH, or any other agency and the average and maximum daily withdrawal design capacities.
4. Provide peak day water use by month for community water systems in the planning region.
5. Provide the missing water demand projection data for the community water systems in the region including the estimated water demand in annual average and peak monthly basis for each existing or proposed CWS.

6. Evaluate the items currently missing from the alternative analysis, including a description of potential water savings through demand management, and a description of water demand management and conservation alternatives.

Previous Action:
None. This is the initial compliance determination for this plan.

Background:
The Middle Peninsula Regional Water Supply Plan included all the readily available information required by the regulation.

Plan Type: Regional

River Basin: Rappahannock Basin

Applicable localities:
Counties of Essex, King and Queen, King William, Mathews and Middlesex
Towns of Tappahannock, Urbanna and West Point

Current Sources:
All forty-eight community water systems in the region are groundwater sourced. An estimated 78 percent of the total population in the region use private groundwater wells. The Smurfit-Stone Corporation located in the Town of West Point is the region's major self-supplied groundwater user. Most of the major self-supplied agricultural users withdraw from surface water sources.

Statement of Need:
Future water use is projected for a 30-year planning period, to the year 2040. Water resources are assumed adequate to meet projected demand in the planning region except in King William County and the Town of West Point. The rapid growth predicted for King William County and the Town of West Point result in projections that exceed current community water system supplies by 2020 for King William (deficit of 0.925 MGD) and 2030 for West Point (deficit of 0.036 MGD).

Alternatives:
Alternative sources listed for the Town of West Point include system upgrades and groundwater permit modifications that allow for greater use of existing wells. New well development and an intake on the Pamunkey River are King William County's preferred alternatives for source water.

Drought Response:
Drought stage triggers and responses are described in the region's Drought Response and Contingency Plan. Drought emergency enforcement is addressed by ordinances adopted by all localities in the planning region.

State Agency Comments:
The plan was submitted to state agencies for their evaluation and comment on January 3, 2013. General comments were received from the Department of Health, the Department of Conservation and Recreation, and the Department of Historic Resources.

Public Comments on Plan Adoption:
No written public comments were received.

Public Notice of Tentative Compliance Finding:
Staff published a finding of compliance on November 13, 2013.

Attachments:
The completed Local and Regional Water Supply Plan Compliance Checklist is attached.

✓ Approved or _____ Disapproved

Signature James J. Golden
James Golden

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Water Supply
Compliance Checklist
Local and Regional Water Supply Plan program documents

Locality / Region: Middle Peninsula Regional Water Supply Plan
If planning regionally, list localities included in WSP

- Essex County
- King and Queen County
- King William County
- Mathews County
- Middlesex County
- Town of Tappahannock
- Town of Urbanna
- Town of West Point

Reviewing WSP Planners: Sara G. Jordan/Mary Ann Massie

Reason for Compliance Evaluation:

☒ **Initial Review**
☐ **5 years after Compliance Determination**, if circumstances have changed or new information has been made available
☐ **10 year revision and resubmission**

The *Compliance Checklist ("Checklist")* is used by Water Supply Planning staff as a tool for evaluating local program elements required by §9 VAC 25-780, et seq., the Local and Regional Water Supply Planning regulation (the "Regulation"). The checklist is completed by Department of Environmental Quality ("DEQ") staff, based upon information and materials provided by locality or regional staff. "Yes" and "No" indications for making a reasonable effort to meet specific requirements are generally followed by staff comments that may be helpful in developing future iterations of water supply plans.

The *Compliance Checklist* is composed of the following parts:

- **Part I – Program Background and Adoption Process**
- **Part II – Water Supply Plan and Required Program Elements**
- **Part III – Compliance Review and Consistency Determination Process**
- **Part IV – Requirements for Compliance to be Addressed by the Five-Year Review, Preliminary Identification Of Conflicts, Items of Interest, DEQ Action Items**

PART I. PROGRAM BACKGROUND and ADOPTION PROCESS

PART I of the checklist reviews the documents that constitute a local or regional water supply program and the planning process that was undertaken. The Regulation requires that local or regional water supply plans ("WSP" or "Plan") (§9 VAC 25-780-40) be developed through a planning process that includes a public hearing by all participating localities (§9 VAC 25-780-50) and local adoption. Once an adopted Plan is submitted to DEQ, the Plan(s) are reviewed to determine compliance with the Regulation.

A. Describe the **WSP development process** (§9 VAC 25-780-140 A and C): The plan was prepared for the Middle Peninsula Planning District Commission (MPPDC) by EEE Consulting Incorporated and MPPDC staff.

1. What entity was lead for Plan development? (i.e. local planning or utility department or service provider, planning district commission, etc.) Middle Peninsula Planning District Commission (MPPDC) with EEE Consulting Incorporated

2. Was a technical advisory or stakeholder group involved in the process? ☒ yes ☐ no
If "Yes," then describe membership and level of expertise and involvement. The planning region was represented by a technical advisory committee that included representation from each locality, the MPPDC, and EEE Consulting.

B. What **documents constitute the water supply program** (§9 VAC 25-780-50 A)? (e.g. ☐ comprehensive plan amendments; ☒ a map or maps identifying important elements such as existing environmental resources, existing water sources, significant existing water uses, and proposed new sources; ☒ water supply plan(s); ☐ water and sewer plan(s); and ☒ other local plans/ordinances. Provide a list of document title(s), adoption date(s), and local code citations:

1. Regional Water Supply Plan for the Middle Peninsula of Virginia; dated July 2011 (includes a document titled "Middle Peninsula Regional Water Supply Plan Response Matrix for DEQ Comments" which addresses comments from the final DEQ grant checklist)

2. Article VII: Water Conservation Ordinance, King and Queen County; dated October 11, 2011

3. Town of West Point, Ordinance #11-11, amending Chapter 62 of the Town Code; dated October 24, 2011

4. Essex County Water Conservation Ordinance, Chapter 21 of the County Code; adopted December 6, 2011

5. Middlesex County Water Conservation Ordinance, attested copy included in Appendix U; adopted November 1, 2011

6. King William County Ordinance #11-03; Section 78-192 of the County Code: Water Emergencies and Conservation, amendments adopted January 23, 2012

7. Town of Tappahannock; Town Code: Chapter 58 Article IV, Section 58-124 Water emergencies and conservation; copy found in Appendix U; adopted officially on December 9, 2013

8. Town of Urbanna; Town Code: Article IV: Water Emergencies and Conservation; adopted October 17, 2011

9. Mathews County; Virginia Water Conservation Policy; adopted November 19, 2013

C. Have **copies of all adopted program documents** itemized above been submitted and received by DEQ for evaluation of compliance (§9 VAC 25-780-50 C 9)? ☒ yes ☐ no
If "No," which document(s) is missing? _____

D. Describe the **WSP adoption process** (§9 VAC 25-780-140 A and C):
1. Public Hearing/Adoption Date(s) for all localities participating in the planning effort:
   a. *Essex County: unattested resolution included in Appendix T: public hearing occurred on November 8, 2011; adoption occurred on December 6, 2011*

   b. *King and Queen County: attested resolution in Appendix T: approval of a water conservation ordinance, a public hearing and adoption occurred on October 11, 2011*

   c. *King William County: unattested minutes in Appendix T: public hearing and adoption occurred on September 26, 2011; adoption of water emergency and conservation ordinance amendments occurred on January 23, 2012*

   d. *Mathews County: attested resolution: public hearing and adoption occurred on March 27, 2012; public hearing and adoption of the water conservation policy occurred on November 19, 2013*

   e. *Middlesex County: attested resolution included in Appendix T: public hearing occurred on October 18, 2011; adoption (ordinance and water supply program) occurred on November 1, 2011*

   f. *Town of Tappahannock: attested resolution included in Appendix T: public hearing occurred on October 11, 2011; adoption occurred on November 14, 2011; Water Emergencies and Conservation ordinance adopted on December 9, 2013*

   g. *Town of Urbanna: attested resolution included in Appendix T: adoption and public hearing occurred on October 17, 2011. A drought ordinance 11-11 was adopted on October 24, 2011.*

h. *Town of West Point: attested resolution included in Appendix T: a drought ordinance was approved, public hearing and adoption occurred on October 24, 2011*

2. Has a copy of all program adoption resolution(s) been provided (§9 VAC 25-780-50 C 10)? ☒ yes ☐ no
   If "No," which localities have not provided copies of resolution(s) adopting WSP?

3. Has a record of public hearing(s) been provided, including copies of all written comments and comment responses (§9 VAC 25-780-50 C 11)? ☒ yes ☐ no
   Public hearing records have been provided for all localities. According to the MPPDC (November 2013 response), no written comments were received during the planning process.
   If "No," which localities have not provided copies of public hearing record?

4. COMMENTS:

E. Was a **Drought Response and Contingency Plan ("DRCP")** (§9 VAC 25-780-120) required (see Part II D)? ☒ yes ☐ no

1. If "Yes," was a drought response ordinance adopted? ☒ yes ☐ no

2. Has a copy been provided for review? ☒ yes ☐ no

3. COMMENTS:

F. Has a ***WSP Review Checklist*** previously been submitted for grant purposes?
   ☒ yes ☐ no ☐ N/A

1. If "Yes," have all outstanding or inadequate items been addressed? ☒ yes ☐ no
   The MPPDC worked with EEE to address many of the deficiencies in the grant checklist. A "Response Matrix for DEQ Comments" was included in the formal submission. Some items were not completed due to insufficient information. The County has indicated the next revision of the plan will address the items found in F.2. below and any others as noted on the Response Matrix.

2. If "No," list any outstanding or inadequate items to be addressed by the locality/region:
   a. Based on the narrative and Table 4 the reader would assume that 11 systems are subject to Ground Water Management Area (GWMA) permitting; however, only two community water systems show GWMA limitations in Appendix D. (According to the Response Matrix for DEQ Comments- Plan Update July-December 2010 (Matrix), this will be addressed in the next plan revision)

   b. For the West Point Country Club (self-supplied user of more than 300,000 gallons per month of surface water) the following items are missing: design capacity for

average daily and maximum daily withdrawal and any limitations on withdrawals established by permits issued by the board, the Department of Health or any other agency. (Design capacities are listed as n/a in Appendix F; the Matrix states "in future reviews see if more information is available.")

c. For self-supplied users on individual wells withdrawing less than 300,000 gallons per month, include an estimate of the number of residences. (Matrix notes that this will be addressed at a future update.)

d. Projected future population estimates for each CWS are not provided, but are easy to derive from the existing CWS population information. (Matrix states this will be addressed in a future update to the plan).

e. Estimated water demand for each existing or proposed community water system on both an annual average and peak monthly basis. (Matrix states this was provided by EEE but it is still not present in the plan for each individual community water system). Peak monthly demands are not estimated.

f. Estimated water demand for each existing or proposed community water system disaggregated into categories of use appropriate for the system. Provide the total projected water demand for all existing or proposed community water systems disaggregated into categories. (Matrix states this will be addressed in future updates to the plan.)

g. The statement of need and alternatives section have items that need further description including, but not limited to, a description of potential resource issues or impacts and a description of potential new sources including estimated volumes from each source. (Matrix states the information provided is all that is available at this time. This will be addressed more in the next Plan revision.)

COMMENTS: _____

PART II: WATER SUPPLY PLAN and REQUIRED PROGRAM ELEMENTS

PART II of the checklist pertains to the required elements of each water supply plan, as outlined in §9 VAC 25-780-70 through 130. The Regulation requires that Plans be developed using *"existing, readily available information."* Additional, detailed studies were not required to be performed per the Regulation. If data gaps are identified during Plan review, it may be that the information did not exist or was not readily available at the time of Plan development, in which case a notation to that effect should be made in the "COMMENTS" area provided for each subsection below.

A. Describe **Existing Water Sources** (§9 VAC 25-780-70) as follows:

1. Summarize existing water sources as identified in the Plan: Water is supplied almost entirely from groundwater sources. The Middle Peninsula contains many surface water bodies, but they are not currently used for drinking water due to treatment costs. All 48 community water systems in the region are groundwater based. Thirty-four self-supplied users of greater than 300,000 gallons per month are listed in the plan. These users withdraw groundwater, surface water, or a combination of both water types.

2. Date and source of data used to provide the following information: ☒ Virginia Department of Health ("VDH") 2007 data and/or ☒ DEQ 2006 & 2007 data

3. List other sources of data, the date or date range of the data: _____

4. For community water systems ("CWS") using groundwater, is the following information provided ((§9 VAC 25-780-70 B)? If a CWS is not using ground water, so note in the "COMMENTS."
   a. name and ID number of all wells in locality ☒ yes ☐ no
   b. well depth ☒ yes ☐ no Not included for the following: Essex Mobile Home Park drilled well, Tucker Recreation Park drilled Well 1, and Woodruff Subdivision Well 2
   c. casing depth ☒ yes ☐ no Not included for the following: Essex Mobile Home Park drilled well, Riverside Estates MHP drilled Well 1, Tucker Recreation Park drilled well 1, and Woodruff Subdivision Well 2
   d. screen depth (top and bottom) or water zones ☒ yes ☐ no Not included for the following: Essex Mobile Home Park drilled well, Riverside Estates MHP drilled well 1, Tucker Recreation Park drilled Wells 1 and 2, Mizpah Nursing Home drilled Well 1, and Woodruff Subdivision Well 2
   e. well diameter ☒ yes ☐ no Not included for the following: Essex Mobile Home Park drilled well, Tucker Recreation Park drilled Well 1, Marle Hill Section 3 Well 1, and Woodruff Subdivision Well 2
   f. design capacity for the average daily and maximum daily withdrawal ☒ yes ☐ no Average not included for the following: Riverside Estates MHP drilled well 1; average and maximum not included for Jackson Creek Condominiums Well 1, Cedar Crestwell wells 1 and 2, Central Garage Water

System Kennington well, Marle Hill Section 3 well 1 and Woodruff Subdivision Well 2

g. system capacity permitted by VDH ☒ yes ☐ no not included for the following: Jackson Creek Condominiums Well 1, Kilmer's Point well 1, Cedar Crestwell wells 1 and 2, Central Garage Water System Kennington well, Marle Hill Section 3 well 1, and Woodruff Subdivision Well 2

h. annual and monthly permitted amounts contained in ground water withdrawal permits (for all wells located within ground water management areas) ☐ yes ☒ no ☐ N/A Permitted amounts are found in Appendix D for the Town of West Point. The remaining ten CWS in King William County do not include groundwater withdrawal permit information, as applicable. The Matrix notes this will be addressed in the next revision of the plan.

i. COMMENTS: _____

5. For CWS using reservoirs, is the following information provided (§9 VAC 25-780-70 C)? If a CWS is not using reservoirs, so note in the "COMMENTS."
   a. name of the reservoirs ☐ yes ☐ no
   b. sub-basins in which the reservoir(s) are located ☐ yes ☐ no
   c. drainage area above dam ☐ yes ☐ no
   d. amount of on-stream storage available for water supply ☐ yes ☐ no
   e. design capacity for average daily and maximum daily withdrawals from the reservoir(s) ☐ yes ☐ no
   f. safe yield of the reservoir(s) ☐ yes ☐ no
   g. capacity of any associated water treatment plant ☐ yes ☐ no
   h. VDH permitted capacity of the systems ☐ yes ☐ no
   i. any limitations on withdrawal established by permits issued by the SWCB, VDH, or any other agency ☐ yes ☐ no ☐ N/A
   j. COMMENTS: not applicable to this region

6. For CWS operating a system of interconnected reservoirs, is the following information provided either for the entire system, or as a subset of the system (§9 VAC 25-780-70 C)?
   a. reporting of the design capacity for withdrawals ☐ yes ☐ no
   b. designed average daily withdrawal ☐ yes ☐ no
   c. designed maximum daily withdrawal ☐ yes ☐ no
   d. safe yield ☐ yes ☐ no
   e. Does the Plan designate which reservoirs and which intakes constitute a system? ☐ yes ☐ no
   f. Does the Plan report the drainage area and amount of storage available for water supply from each reservoir independently? ☐ yes ☐ no
   g. COMMENTS: not applicable to this region

7. For CWS using stream intakes, is the following information provided (§9 VAC 25-780-70 D)? If a CWS is not using stream intakes, so note in the "COMMENTS."
   a. name of the stream or river ☐ yes ☐ no
   b. drainage area above the intake ☐ yes ☐ no
   c. sub-basin in which the intake is located ☐ yes ☐ no
   d. design capacity for average daily and maximum daily withdrawal from the stream ☐ yes ☐ no
   e. safe yield ☐ yes ☐ no
   f. lowest daily flow of record ☐ yes ☐ no
   g. design capacity of the pump station ☐ yes ☐ no
   h. design capacity of the water treatment plant ☐ yes ☐ no
   i. capacity of the system permitted by VDH ☐ yes ☐ no
   j. any limitation on withdrawals established by permits issued by the SWCB, VDH, or any other agency ☐ yes ☐ no ☐ N/A
   k. COMMENTS: not applicable to this region

8. For all non-agricultural, self-supplied users (SSU) of more than 300,000 gallons per month of surface water, is the following information provided (§9 VAC 25-780-70 E)? If none exist, so note in the "COMMENTS."
   a. name of the water body utilized ☒ yes ☐ no
   b. design capacity for average daily and maximum daily withdrawal ☐ yes ☒ no
   c. any limitations on withdrawals established by permits issued by the SWCB, VDH, or any other agency ☐ yes ☒ no ☐ N/A
   d. COMMENTS: The West Point Country Club. Page 24 states that information on existing water use is limited. No information on withdrawal limitations due to permits is provided in Section 4.0 or Appendix F. The Matrix states "...EEE provided Appendix F. In future reviews see if more information is available."

9. For all non-agricultural, self-supplied users of more than 300,000 gallons per month of groundwater, is the following information provided (§9 VAC 25-780-70 F)? If none exist, so note in the "COMMENTS."
   a. name and ID number of the well or wells ☒ yes ☐ no well name/ID not provided for Ralston Purina Incorporated's Golden Cat Division
   b. well depth ☒ yes ☐ no not included for West Point Veneer wells 1 and 2, and King William County Acquinton Elementary well
   c. casing depth ☒ yes ☐ no not included for West Point Veneer wells 1 and 2, and King William County Acquinton Elementary well
   d. screen depth (top and bottom) or water zones ☒ yes ☐ no not included for West Point Veneer wells 1 and 2, Ralston Purina Incorporated's Golden Cat Division, King William County Acquinton Elementary well, and Christchurch School
   e. well diameter ☒ yes ☐ no not included for West Point Veneer wells 1 and 2, King William County Acquinton Elementary well, and Christchurch School

f. design capacity for the average daily and maximum daily withdrawal, and ☒ yes ☐ no Average daily design capacities are not included for all the Stone Container Corporation sources, and West Point Veneer wells 1 and 2.
Maximum daily design capacities are not included for West Point Veneer wells 1 and 2.
The maximum daily design capacity reported for King William County Schools appears to be entered incorrectly in the Appendix E spreadsheet.

g. any limitation on withdrawal established by permits issued by the SWCB, VDH, or any other agency ☒ yes ☐ no ☐ N/A

h. COMMENTS: _____

10. For ground or surface water to be purchased from water supply systems outside the geographic boundaries of the planning area, is the following information provided (§9 VAC 25-780-70 G)? (NOTE: 'to be purchased' presumes an existing contract with an entity outside of the planning region)

a. amount to be purchased, on a maximum daily and average annual basis ☐ yes ☐ no ☒ N/A

b. any contractual limitations on the purchase of the water, including but not limited to:

i. term of any contract or agreement ☐ yes ☐ no

ii. recipient(s) or areas served by the water purchased ☐ yes ☐ no

iii. name(s) of the supplier(s) ☐ yes ☐ no

c. COMMENTS:

11. For water available to be purchased outside the planning area from any source with the capacity to withdraw more than 300,000 gallons per month of surface and ground water, is the following information provided (§9 VAC 25-780-70 H)? (NOTE: 'available to be purchased' presumes no contract is in place but could be in the future with an entity outside the planning region)

a. amount available for purchase, reported on a maximum daily and average annual basis ☐ yes ☐ no ☒ N/A

b. any contractual limitations on the purchase of the water, including but not limited to:

i. term of any contract or agreement ☐ yes ☐ no

ii. geographic region(s) that receive the water purchased ☐ yes ☐ no

iii. name(s) of the supplier(s) ☐ yes ☐ no

12. COMMENTS:

13. For agricultural self- supplied users (SSU) of more than 300,000 gallons per month, is the following information provided (§9 VAC 25-780-70 I)? If none exist, so note in the "COMMENTS."

a. a list of agricultural users ☒ yes ☐ no

b. an estimate of total agricultural usage by source ☒ yes ☐ no
c. whether the use is irrigation or non-irrigation ☒ yes ☐ no
d. whether the source is surface or ground water ☒ yes ☐ no
e. COMMENTS:

14. For self-supplied residential and business users withdrawing less than 300,000 gallons per month, is the following information provided (§9 VAC 25-780-70 J)? If none exists, so note in the "COMMENTS."
    a. an estimate of the number of residences ☐ yes ☒ no ☐ N/A
    b. an estimate of the population served by individual wells ☒ yes ☐ no ☐ N/A
    c. an estimate of the number of businesses supplied by individual wells ☒ yes ☐ no ☐ N/A
    d. COMMENTS: The Matrix states the number of residences will be addressed at a future update.

15. Has a summary of findings and recommendations from source water assessment plans and/or wellhead protection programs been provided (§9 VAC 25-780-70 K)? ☒yes ☐ no
    a. COMMENTS: _____

B. Describe **Existing Water Use** (§9 VAC 25-780-80) as follows:
1. Summarize existing water use as discussed in the Plan: The existing use information obtained from surveys and public records was incomplete with limited amounts of data provided. Therefore, most of the water use data in the plan is estimated by those writing the plan. It is estimated that most of the water withdrawn in the planning region is used by large self-supplied non-agricultural users (~18.0 MGD).

2. Source of data used -- *Source:* ☒ VDH waterworks permit compliance reports, ☐ ground water permit compliance reports, and/or ☒ water use reports (§9 VAC 25-780-80 A). *Date or date range of data used*: 2007
    a. COMMENTS: _____

3. For each CWS, has the following information been provided (§9 VAC 25-780-80 B)?
    a. Population served ☒ yes ☐ no
    b. Number of connections ☒ yes ☐ no
    c. Average and maximum daily withdrawal ☒ yes ☐ no In Appendix D-2, most of the max and average daily withdrawals listed were not reported by the CWS, therefore they were estimated. Average was estimated as the number of connections multiplied by an equivalent residential use of 0.0002 (200 gallons per unit per day). Maximum was estimated as the average daily use multiplied by two.
    d. Water usage by CWS on an average monthly and annual basis, expressed in terms of million gallons per day ("MGD") ☒ yes ☐ no When comparing the data in

Appendix D-2, Appendix J, and the tables in Section 8.3.1; the 2007 average daily withdrawals (which equal use in this plan) vary between all three locations. In addition, based on the data in Appendix D-2, the monthly data in gallons was not entered correctly in Appendix J.

e. Peak day water use by month ☐ yes ☒ no Page 32 of the plan states that peak day use by month is found in Appendix J. The spreadsheets found in Appendix J appear to provide the annual average and average monthly water use for each CWS, not peak day use by month.
Page 31 notes most of the CWS surveys that were returned did not use meters or the meters were only periodically read.

f. Within each CWS service area, have the following estimates been provided?
   i. An estimate of the water used on an average annual basis by self-supplied nonagricultural users of more than 300,000 gallons per month of surface and ground water ☒ yes ☐ no ☐ N/A
   ii. An estimate of the amount of water used on an average annual basis by self-supplied agricultural users of more than 300,000 gallons per month of surface and ground water ☐ yes ☐ no ☒ N/A
   iii. An estimate of the number of self-supplied users of less than 300,000 gallons per month of ground water and an estimate of the total amount of water used by them on an annual average basis ☐ yes ☐ no ☒ N/A
   Discussed on page 34

g. An estimate of the disaggregated amounts of water used in categories of use appropriate for the system, as follows:
   i. Residential use ☒ yes ☐ no
   ii. Commercial institutional and light industrial ("CIL") use ☒yes ☐no ☐N/A
   iii. Heavy industrial use ☐ yes ☐ no☒ N/A
   iv. Military water use ☐ yes ☐ no ☒ N/A
   v. Water used in water production processes ☐ yes ☐ no ☒ N/A
   vi. Unaccounted for losses ☒ yes ☐ no
   vii. Sales to other community water systems and the names of such systems ☐ yes ☐ no ☒ N/A
   viii. Subtotals of the above categories for all community water systems ☒ yes ☐ no☐ N/A
   ix. Other: Unidentified uses are listed as "other" in Appendix K and include items such as system maintenance, construction, and other non-standard activities.

h. For each CWS using stream intakes, has a qualitative description of existing in-stream beneficial uses either within or outside the planning area that may be affected by the point of stream withdrawal been provided? ☐ yes ☐ no ☒ N/A

i. COMMENTS: Survey responses were limited in information pertaining to the usage characteristics of a CWS. Therefore, the disaggregated water use is estimated according to methods outlined on page 31 of the plan.
There are two appendices in the plan containing "Disaggregated Average Water Use Amounts": Appendices D-3 and K. The data is different in both appendices.

4. Has an estimate of the water used on an average annual basis by self-supplied non-agricultural users of more than 300,000 gallons per month of surface and ground water outside the service areas of CWS been provided (§9 VAC 25-780-80 C)?
☒ yes ☐ no ☐ N/A 2007 average annual water use is not provided in the plan for West Point Country Club's Olsson Pond withdrawal.

5. Has an estimate of the amount of water used on an average annual basis by self-supplied agricultural users of more than 300,000 gallons per month of surface and ground water outside the service areas of CWS been provided (§9 VAC 25-780-80 D)?
☒ yes ☐ no ☐ N/A 2006 average annual water use is not provided for the following users: Belle Meade Farm, Corbin Hall Farm, Fairfield Farm, Guy Chenault (Spring Hill Farm), Henry Longest, Locust Grove Farm, Mack's Blueberry Farm, Marion Guyton, Montague Farms, Mount Pleasant Greenhouse, M. S. Terrell and Sons, Pampitike Hill, S. E. Thomas and Sons, Tatterson Greenhouse, T. H. Crittenden and Sons, and Thomas B. Gilbert.

6. Has an estimate of the number of self-supplied users of less than 300,000 gallons per month of groundwater and an estimate of the total amount of water used by them on an annual average basis outside the service areas of CWS been provided (§9 VAC 25-780-80 E)? ☒ yes ☐ no ☐ N/A

7. COMMENTS: Page 35 discusses the agricultural use, "Overall, the total water use is relatively small in comparison to the community water systems and industrial users." This statement is confusing because Table 18 on page 37 shows agricultural use (withdrawal) is greater than that of the CWS.

C. For **Existing Water Resources** (§9 VAC 25-780-90), has the following information been provided?

1. Summarize existing water resources as identified in the Plan: The planning region is located in the Coastal Plain province. The three primary watersheds are the York and Rappahannock Rivers and Mobjack Bay. The planning region receives 40-47 inches of rainfall per year.

2. List sources and dates of data provided: Listed below, if noted in the plan.

3. Existing geologic, hydrologic, and meteorological conditions within the locality, and in proximity to the point of withdrawal if it is outside the planning area (§9 VAC 25-780-90 A). ☒ yes ☐ no

4. Existing environmental conditions that pertain to, or may affect, instream flow, instream uses, and sources that provide the current supply, as follows (§9 VAC 25-780-90 B):
   a. State or federal listed threatened or endangered species or habitats of concern ☒ yes ☐ no ☐ N/A Source: Virginia Department of Conservation and Recreation (DCR)
   b. Anadromous, trout, and other significant fisheries ☒ yes ☐ no ☐ N/A
   c. River segments that have recreational significance, including state scenic river status ☒ yes ☐ no ☐ N/A
   d. Sites of historic or archaeological significance ☒ yes ☐ no ☐ N/A National Park Service Register of Historic Places, 2008
   e. Unusual geologic formations or special soil types ☒ yes ☐ no ☐ N/A Chesapeake Bay Impact Crater
   f. Wetlands ☒ yes ☐ no ☐ N/A United States Fish and Wildlife Service, National Wetlands Inventory
   g. Riparian buffers and conservation easements ☒ yes ☐ no ☐ N/A Middle Peninsula Planning District Commission Report "Conservation Easements: Fiscal Impacts to Localities in the Middle Peninsula"
   h. Land use and land coverage, including items such as percentage of impervious cover within a watershed and areas where new development may impact water quality of the source ☒ yes ☐ no ☐ N/A According to the Matrix the percentage of impervious cover will be addressed in the next plan revision.
   i. The presence of impaired streams and the type of impairment ☒ yes ☐ no ☐ N/A 2006 305(b)/303(d) Report (DEQ, DCR)
   j. The locations of point source discharges ☒ yes ☐ no ☐ N/A
   k. Potential threats to the existing water quantity and quality, other than those from above ☒ yes ☐ no ☐ N/A

5. COMMENTS: Information listed for existing water resources should be cited and dated in future plan revisions.

D. Describe **Projected Water Demand** (§9 VAC 25-780-100) based upon accepted methodology (as outlined in the American Water Works Association ("AWWA") or American Society of Civil Engineers ("ASCE") manuals), as follows: Projected water demands are estimated for a 30-year planning period. The per capita method is used to estimate future water demand for community water systems located outside King William County. Three items are assumed in the projections of future demand for all localities except King William County: water use practices of community water systems will not vary significantly during the planning period; growth in the planning area will

affect community systems as comparable to changes in population percentages; during the planning period the ratio of populations served by community systems versus private wells will not change significantly. Due to the rapid growth in King William, demand projections in the plan are obtained from the 2010 King William County Master Utility Plan.

1. Summarize changes in projected water demand as provided in the Plan: Population and water demands are projected to increase throughout the planning region from 2010 to 2040. The rapid growth predicted for King William County and the Town of West Point result in projections that exceed current community water system supplies by 2020 (King William) and between 2020 and 2030 (West Point). Private well use for residential and commercial purposes is projected to increase during the planning period. Water demands for large self-supplied users (agricultural and non-agricultural) are assumed to remain consistent with permit limits, if permitted, or to remain at 2007 use levels.

2. Are water demand projections included (§9 VAC 25-780-100 A)? ☒ yes ☐ no
   a. List source and date or date range for population estimates: ☒ U.S. Census Bureau ☒ Weldon Cooper Center ☒ Virginia Employment Commission ("VEC") ☐ Other
   b. Dates and description of any other accepted source of population information used, including local or regional sources: _____
   c. Is documentation of information sources and methodologies provided? ☒ yes ☐no

3. Is an estimate of water demand within the planning area for 30 to 50 years into the future provided (§9 VAC 25-780-100 B)? ☒ yes ☐ no 30-year planning period (2010 to 2040)

4. Is an estimate of future water use projected at the beginning of each decade (2010, 2020, 2030, etc.) provided (§9 VAC 25-780-100 C)? ☒ yes ☐ no

5. Are the following projections provided for CWS within the planning area (§9 VAC 25-780-100 D)?
   a. An estimate of population within the locality served by each CWS ☐ yes ☒ no Matrix states this "will be addressed in a future update of the plan."
   b. A map depicting the proposed service area of each existing or proposed CWS ☒ yes ☐ no Figures 2 and 5A through 5E provides the well locations of all CWS but not the service areas.
   c. Estimated water demand for each existing or proposed CWS on both an annual average and peak monthly basis ☐ yes ☒ no The matrix states this was completed by EEE. Estimated water demand is provided in Section 8.3.1 by

locality for all CWS in total, not for each individual CWS. Peak monthly demands are not found in the plan.

d. Estimated water demand for each existing or proposed CWS disaggregated into categories of use appropriate for the system, such as: Page 64 of the plan notes that data is not readily available at this time to disaggregate demand.
   i. Residential use ☐ yes ☒ no
   ii. Commercial institutional and light industrial use ☐ yes ☒ no ☐ N/A
   iii. Heavy industrial use ☐ yes ☒ no ☐ N/A
   iv. Military water use ☐ yes ☒ no ☐ N/A
   v. Water used in water production processes ☐ yes ☒ no ☐ N/A
   vi. Unaccounted for losses ☐ yes ☒ no ☐ N/A
   vii. Sales to other community water systems and the names of such systems ☐ yes ☒ no ☐ N/A
   viii. Subtotals of the above categories for all community water systems ☐ yes ☒ no ☐ N/A
   ix. Other: _____

e. Total projected water demand for all existing or proposed CWS disaggregated into the categories mentioned in subdivision d, above. ☐ yes ☒ no

f. Were current conservation practices, techniques and technologies considered in the above water demand projections (§9 VAC 25-780-110 B)? ☒ yes ☐ no page 64

g. COMMENTS: _____

6. Has a projection of water demand on an annual average basis for each existing and any proposed self-supplied nonagricultural user of more than 300,000 gallons per month of surface and ground water located outside the service areas of CWS been provided (§9 VAC 25-780-100 E)? ☒ yes ☐ no ☐ N/A
   COMMENTS: _____

7. Has a projection of the amount of water use on an annual average basis for each existing and any projected self-supplied agricultural user of more than 300,000 gallons per month of surface and ground water located outside the service areas of CWS been provided (§9 VAC 25-780-100 F)? ☒ yes ☐ no ☐ N/A
   COMMENTS: Page 73, listed as a total per locality and the amount of water used is estimated to remain at 2007 usage levels throughout the planning period.

8. Has a projection of the number of self-supplied users of less than 300,000 gallons per month of ground water and a projection of the amount of water used on an annual average basis outside the service areas of CWS been provided (§9 VAC 25-780-100 G)? ☒ yes ☐ no ☐ N/A
   COMMENTS: _____

9. Has an explanation of how the projected needs of domestic consumption, in-stream uses, and economic development have been accounted for in the demand projection for the planning period been provided (§9 VAC 25-780-100 I)? ☒ yes ☐ no App P

10. COMMENTS: _____

E. Describe proposed **Water Demand Management** actions (§9 VAC 25-780-110), as follows:

1. Does the Plan describe practices for more efficient use of water? ☒ yes ☐ no
   a. If "Yes," which of the following are used: ☒ adoption and enforcement of Uniform Statewide Building Code ("USBC") sections requiring maximum flow of water closets, urinals, and appliances; Middlesex County and the Town of Urbanna have not adopted the USBC ☐ lower-water use landscaping; ☒ increases in irrigation efficiency (§9 VAC 25-780-110 A 1)?; ☒ other
   b. Describe additional water use efficiency practices: Some municipal CWS practice the following: require separate irrigation meters, use of SCADA system, and encourage the use of deduct meters and rain barrels. Some private CWS listed the following practices: use of monitoring wells and participation in the WaterSense program.

2. Does the Plan describe water conservation measures used to conserve water through the reduction of use? ☒ yes ☐ no
   a. If "Yes," which of the following are used: ☒ technical, ☒ educational, and ☒ financial programs (§9 VAC 25-780-110 A 2)? ☐ other Some private CWS and self-supplied users listed the following practices: higher rates for use over 15,000 gallons, consumer education via websites, having leak adjustments available in the form of tariffs for leaks that are promptly repaired, maintaining an Environmental Program Manual which addresses water conservation, reusing water multiple times in processes, and recycling water from the wastewater treatment plant. Some municipal CWS practice the following: a water loss reduction program, water conservation rate structures, and the performance of lost water determinations.

3. Does the Plan describe practices to address water loss in the maintenance of systems to reduce unaccounted for water loss? ☒ yes ☐ no pg 76
   a. If "Yes," which of the following are used: ☒ leak detection and repair, ☒ old distribution line replacement (§9 VAC 25-780-110 A 3)? ☒ other Some municipal CWS practice the following: free leak detection kits for homeowners, regular meter readings, communication with VDOT and sheriff's office to monitor hydrant/work related withdrawals, and Town Code policies to track unauthorized connections. Some private CWS and self-supplied users listed the following practices: inventory, testing, maintenance, and replacement of meters,

source and service meters read weekly and bimonthly, and regularly scheduled water audits.

4. COMMENTS: Demand management questionnaires were mailed to municipal CWS, private CWS, and large private self-supplied users (agricultural and non-agricultural).

F. **Drought Response and Contingency Plan** (§9 VAC 25-780-120) for CWS and self-supplied users withdrawing more than an average of 300,000 gallons per month of surface or ground water.

1. Does the DRCP address unique characteristics of the water source being utilized and the nature of the beneficial use of water (§9 VAC 25-780-120.1)? ☒ yes ☐ no

2. Does the DRCP contain the following graduated stages of response to the onset of drought conditions, at a minimum (§9 VAC 25-780-120.2):

   a. Drought watch stage responses, intended to raise awareness: ☒ yes ☐ no watch is to be determined by monitoring meteorological conditions through a region-wide monitoring program termed the Regional Drought Monitoring Committee (RDMC). According to page 95, "The details of a monitoring program have not been completely developed at this time by the participating jurisdictions, and should be considered by local government when applicable." Responses to raise awareness will be initiated by the PDC through newspaper and public service announcements.
   b. Drought warning stage responses, voluntary water conservation practices intended to reduce water use by 5 to 10%: ☒ yes ☐ no warning is established by each individual locality, based on local monitoring; voluntary reductions of nonessential water uses are enacted.
   c. Drought emergency stage responses, mandatory water conservation practices intended to reduce water use by 10-15%: ☒ yes ☐ no emergency is established by each individual locality, based on local monitoring; mandatory reductions of nonessential water uses are enacted
   d. Describe any additional drought response stages included in the DRCP: _____

3. Does the DRCP contain references to adopted local ordinances and procedures for implementation and enforcement (§9 VAC 25-780-120.3)? ☒ yes ☐ no
   a. If "Yes," list code citations or describe policy: code citations found in Part I.B. of the checklist; Mathews County Water Conservation Policy was received by DEQ in November 2013, during the tentative compliance review process
   b. If "No," describe DRCP implementation and enforcement policy: _____

4. COMMENTS: _____

G. **Statement of Need and Alternatives Analysis** (§9 VAC 25-780-130), is the following provided:

1. Statement of Need: based upon the analysis of the above information derived from §9 VAC 25-780-70 through 110, are existing water sources adequate to meet current and projected demand (§9 VAC 25-780-130 A): ☐ yes ☒ no King William County and the Town of West Point will require more water to meet projected demands.

   a. If future demand is determined to exceed current supply, then has an analysis of alternative sources been provided, as follows (§9 VAC 25-780-130 B)? Page 119 states "Projected water supply deficits were identified for community systems in King William County and the Town of West Point. Therefore, a formal water supply alternatives analysis is not required for this WSP." According to the matrix this statement was corrected.
   b. A description of potential water savings through demand management actions ☐ yes ☒ no According to the matrix, this will be evaluated in the next plan revision.
   c. A description of potential new supply sources ☒ yes ☐ no
   d. A description of potential resource issues and impacts (based upon §9 VAC 25-780-140 G) for each potential new source ☐ yes ☒ no
   e. Is a description of various alternatives provided, including (§9 VAC 25-780-130 C):
      i. water demand management and conservation measures ☐ yes ☒ no
      ii. traditional supply increases such as wells, reservoirs, impoundments and stream intakes, etc. ☒ yes ☐ no
      iii. Nontraditional means of increasing supply such as interconnection, desalination, reclamation and reuse, etc. ☒ yes ☐ no
      iv. Describe any other alternatives considered
      v. Does the alternatives analysis include a combination of short and long term alternatives? ☒ yes ☐ no

3. Provide a list of preferred water supply alternatives for the planning area, if applicable: Town of West Point: short and long term alternative is listed as system upgrades and groundwater permit modifications that allow for greater use of their existing wells.

   King William County: short term alternative is listed as new well development, long term the development of a Pamunkey River withdrawal is the County's preferred source for water. The plan also briefly discusses water purchase possibilities with neighboring jurisdictions or CWS and the use of less conventional alternatives, such as desalination.

4. COMMENTS: _____

PART III: COMPLIANCE REVIEW and CONSISTENCY DETERMINATION PROCESS

PART III of the checklist pertains to the compliance review to be conducted by DEQ. This review includes program evaluation by state resource management agencies, identification of conflicts between submitted programs, and assessment of program compliance with the Regulation.

A. **Finding of Compliance with §9 VAC 25-780-50** as reviewed in PART II of the checklist:

1. ☐ Tentatively Compliant – proceed to public notice, as per §9 VAC 25-780-140 and 150.☒ Compliant – proceed to public notice, as per 9 VAC 25-780-150.

2. ☐ Noncompliant – Part IV outlines reasons and steps to address noncompliance

3. Date Finding of Tentative Compliance letter sent: 11/12/2013

4. Record of informal proceeding (when requested) pursuant to Article 3 (§2.2-4018, et seq.) of Chapter 40 of the Virginia Administrative Process Act: N/A

B. Determine **local/regional program consistency** with the following (§9 VAC 25-780-140 C):

1. §9 VAC 25-390-20 – SWCB Water Resources Policy: The Plan conditionally complies with the Local and Regional Water Supply Planning Regulation (§9VAC25-780, et seq.), and therefore provides the Board with the information necessary to fulfill its responsibilities under the Water Resources Policy (§9VAC25-390-20).

2. Section 62.1-11 of the Code of Virginia ("COV" or "Code") – declaration of Virginia's waters as a natural resource, use of which can be limited: The Plan provides the information necessary for meeting the mandates put forth in this section of the Code, and recognizes the need for authorized withdrawals for water supply while protecting other beneficial uses.

3. Section 62.1-44.36 of the Code of Virginia – SWCB assigned duty of planning for the development, conservation and use of Virginia's water resources: The Plan conditionally complies with the Local and Regional Water Supply Planning Regulation (§9VAC25-780, et seq.), and therefore provides the Board with the information necessary to fulfill its responsibilities under this section of the Code.

4. COMMENTS: _____

C. **Evaluation/inventory of conflicts** (§9 VAC 25-780-140 C 3 and 140 G)
This portion of the checklist will be relevant after development of the State Water Resources Plan.

1. Cumulative demand impact analysis ("CIA"): _____

2. Evaluation of conflicts between potential alternatives: _____

3. Evaluation of potential use conflicts between projected water demand and estimates of in-stream flow requirements: _____

4. Evaluation of relationship between local/regional plan(s) and State Water Resources Plan: _____

5. Describe any identified conflicts between jurisdictions, regions, and/or partners: _____

6. COMMENTS: _____

D. **Program evaluation by State Agencies**: Department of Conservation and Recreation ("DCR"), the Department of Game and Inland Fisheries ("DGIF"), the Department of Historic Resources ("DHR"), the Virginia Marine Resources Commission ("VMRC"), and VDH (§9 VAC 25-780-140 B and 150 B)

1. Dates of Agency comment period: 01/03/2013 to 07/10/2013
   a. DCR written comments received on 03/26/2013
   b. DGIF written comments received on _____
   c. DHR written comments received on 06/19/2013
   d. VMRC written comments received on_____
   e. VDH written comments received on 03/14/2013

2. Written Agency comments and DEQ responses attached.

3. Record of Technical Evaluation Committee meeting (if applicable): N/A

4. COMMENTS: _____

E. **Record of public notice(s), public comment period(s), and/or public meeting(s)** concerning DEQ findings concerning tentative program compliance (§9 VAC 25-780-150 and §9 VAC 25-780-160):

1. Dates of 30-day public comment period: 11/13/2013 to 12/13/2013

2. Date notice posted to DEQ website: 11/13/2013

3. Were written public comments received: ☐ yes ☒ no

4. Written public comments and DEQ responses attached. N/A

5. Record of requested public meeting(s) including notice and record of comment N/A

6. COMMENTS: _____

F. **Date of final determination of compliance with §9 VAC 25-780, et seq.** 12/20/13

G. **State Water Resources Plan**

1. Applicable text incorporated into SWRP: _____

2. Applicable data input into Cumulative Impact Analysis ("CIA") model: 2/21/13

PART IV: REQUIREMENTS FOR COMPLIANCE TO BE ADDRESSED BY THE FIVE-YEAR REVIEW, PRELIMINARY IDENTIFICATION OF CONFLICTS, ITEMS OF INTEREST, DEQ ACTION ITEMS

PART IV of the checklist includes requirements for compliance by the five-year review, as well as a listing of future water source alternatives identified in the Plan that may conflict with neighboring plans or regions, as noted by the reviewing planners. In addition, it is a place for items of interest and DEQ action items.

A. REQUIREMENTS FOR COMPLIANCE TO BE ADDRESSED BY THE FIVE-YEAR REVIEW

1. Complete items marked as "to be addressed in the next plan revision" as noted in the "Response Matrix for DEQ Comments," submitted to DEQ with the regional plan in July 2011.
2. Include the annual and monthly permitted amounts contained in groundwater withdrawal permits for all the community water systems located within the Ground Water Management Areas. (Checklist Part II A.4.h)
3. Provide additional information for non-agricultural self-supplied users of >300,000 gallons per month of surface water including any limitations on withdrawals established by permits issued by the SWCB, VDH, or any other agency and the average and maximum daily withdrawal design capacities. (Checklist Part II A.8)
4. Provide peak day water use by month for CWS in the planning region. (Checklist Part II B.3., page 11)
5. Provide the missing water demand projection data for the CWS in the region including the estimated water demand in annual average and peak monthly basis for each existing or proposed CWS. (Checklist Part II D.5)
6. Evaluate the items currently missing from the alternative analysis, including a description of potential water savings through demand management, and a description of water demand management and conservation alternatives.

B. PRELIMINARY IDENTIFICATION OF CONFLICTS

C. ITEMS OF INTEREST

1. A water supply planning study was prepared by the Middle Peninsula Planning District Commission (MPPDC) in 2002: "Water Supply Management of the Middle Peninsula of Virginia – An Information Review, 2002". This document notes that "regional drawdown and other factors have made ground water less accessible in some parts of the area, and salt water intrusion may make some ground water unsuitable for human consumption." In addition, the MPPDC study notes that agriculture and forestry dominate the economies of most Middle Peninsula counties. However, according to current county comprehensive plans, farm-related jobs are decreasing throughout the region.

2. According to page 10 of the plan, "Over 60 percent of the Region's population growth between 2000 and 2006 occurred in King William County and the Town of West Point."
3. Dragon Run Swamp is a habitat of concern in the planning region. It is approximately 140 miles in size and stretches across the counties of Essex, King and Queen, Middlesex, and Gloucester. Seven rare animals, seven rare plants, and five rare natural communities exist in the swamp.
4. According to the Middle Peninsula Planning District Commission Report "Conservation Easements: Fiscal Impacts to Localities in the Middle Peninsula", a little over 55,000 acres are recorded as being preserved in the planning region. 38,872 of these acres were reported as being held in conservation easements.
5. King William County developed a Master Utility Plan in 2010 (Resource International). The findings of this plan are incorporated into the water supply plan to represent King William County's projections of water demand.
6. Water demand management questionnaires were mailed to all community water systems and large private self-supplied users. Section 9.0 of the water supply plan provides an extensive list of currently implemented demand management efforts by municipal and private systems/facilities.
7. According to page 114, "...under the assumptions used to prepare this WSP, King William County would exceed 90 percent of the existing permitted capacity for public and privately-owned community systems in the County before 2015, assuming the growth rate experienced in the years between 2000 and 2007 are reestablished."

D. **DEQ ACTION ITEMS**

1. Develop clear, consistent guidance to aide localities in responding to regulatory requirements.
2. Develop an online tool for use by localities when updating the data requirements of the regulation.
3. Continue efforts to improve participation in water withdrawal reporting by agricultural and nonagricultural users through direct contact with users and coordination with other applicable agencies.
4. Continue efforts to create an inventory of DEQ permitted surface water withdrawals and to share this inventory with planning entities.
5. Continue efforts to create an inventory of groundwater source (well and spring) information, including DEQ permitted groundwater withdrawals and to share this inventory with planning entities.

Douglas W. Domenech
Secretary of Natural Resources

David A. Johnson
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-1712

MEMORANDUM

DATE: March 26, 2013

TO: Tammy Stephenson, DEQ

FROM: Roberta Rhur, Environmental Impact Review Coordinator

SUBJECT: DEQ, Middle Peninsula Regional Water Supply Plan

Division of Planning and Recreational Resources

The Department of Conservation and Recreation (DCR), Division of Planning and Recreational Resources (PRR), develops the *Virginia Outdoors Plan* and coordinates a broad range of recreational and environmental programs throughout Virginia. These include the Virginia Scenic Rivers program; Trails, Greenways, and Blueways; Virginia State Park Master Planning and State Park Design and Construction.

While the Middle Peninsula region does not have any designated scenic rivers, it is home to a multitude of water trails and rivers either worthy of scenic designation or that have been studied and found to qualify for scenic designation. These rivers include: the Rappahannock River, Dragon Run, the Mattaponi River, and the Ware River. The established water trails are Mathews County Blueways and the Algonquin Trace Water Trail.

These designations indicate river access is a high priority for local recreational enthusiasts. Therefore, any regional water plans should consider actions that would negatively impact water flows during peak recreational periods, typically during the warmer months and weekends.

As the regional plan is developed and specific projects are proposed, DCR's PRR would appreciate the opportunity to comment further.

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, several natural heritage resources have been documented in Middle Peninsula Region (See Attached Table). DCR supports the Middle Peninsula Regional Water Supply Plan. However, for any future plans for water supply expansion including system

upgrades for the Town of West Point through development of new groundwater capacity and supplemental withdrawal and King William County's development of new wells and new surface water withdrawal from the Pamunkey River, DCR recommends coordination with this office to determine impacts to natural heritage resources.

In addition, the Bethel Beach State Natural Area Preserve and the New Point Comfort State Natural Area Preserve are located in Mathews County.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species.

New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Gladys Cason (804-367-0909 or Gladys.Cason@dgif.virginia.gov).
Thank you for the opportunity to comment on this project. According to the information currently in our files, state listed animals have been documented within the Middle Peninsula Regional Water Supply Plan area. Due to the legal status of these resources, DCR recommends coordination with the U.S. Fish and Wildlife Service (USFWS) and VDGIF, Virginia's regulatory authority for the management and protection of these species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

Division of Stormwater Management

Stormwater Management:
Projects involving land-disturbing activities equal to or greater than 10,000 square feet, or equal to or greater than 2,500 square feet in all areas subject to the Chesapeake Bay Preservation Act, must comply with the Virginia Erosion and Sediment Control Law and all applicable regulations adopted in accordance with that law. Projects involving land-disturbing activities equal to or greater than one acre, or equal to or greater than 2,500 square feet in all areas of the jurisdictions designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act, must comply with the Virginia Stormwater Management Act and the Virginia Stormwater Management Program (VSMP) Permit Regulations adopted in accordance with the Act. If you have project specific questions please contact the Virginia Department of Conservation and Recreation Tappahannock Regional Office:
http://www.dcr.virginia.gov/stormwater_management/index.shtml

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

Cc: Amy Ewing, VDGIF
Kim Smith, USFWS

COMMONWEALTH of VIRGINIA

Department of Historic Resources

Douglas W. Domenech
Secretary of Natural Resources

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June 19, 2013

Tammy Stephenson
Virginia Department of Environmental Quality
629 East Main Street
P.O. Box 1105
Richmond, VA 23218

RE: Middle Peninsula Regional Water Supply Plan
Essex, King and Queen, King William, Mathews, and Middlesex Counties, Virginia
DHR File No. 2013-3411
Received January 3, 2013

Dear Ms. Stephenson:

Thank you for requesting our comments on the referenced project. Our comments are provided as technical assistance to the Virginia Department of Environmental Quality (DEQ) in assessing the potential impacts of the Middle Peninsula regional water supply plan on historic resources. Following a review of the water supply plan, we find that the document provides a thorough analysis of existing water systems as well as the future needs of the region based on forecasting population and economic growth. The various population and economic models utilized in the document seem to indicate that, on balance, the county will exhibit a slight water supply deficit by the end of the planning period. Specifically, deficits may be experienced within King William County and the Town of West Point. In order to address this deficit, these municipalities are exploring a variety of options including the development of additional groundwater wells as well as a potential new intake along the Pamunkey River.

Because no specific details for these improvements are mentioned in the document, it is difficult for DHR to comment at this time on potential impacts to historic properties. We would like to take this opportunity, however, to remind DEQ and Caroline County officials that many water supply infrastructure projects require consultation with our office under Section 106 of the National Historic Preservation Act. Section 106 requires Federal agencies to consider the effects of their undertaking on historic resources that are either listed on or eligible for the National Register of Historic Places (NRHP). For water supply infrastructure projects, Section 106 is often triggered through the disbursement of a Federal grant or other funding or through the issuance of a permit, such as a Corps of Engineers permit for impacts to Waters of the United States.

The counties that comprise the planning region, taken as a whole, are comprised of many more historic properties than the Virginia Landmarks Register (VLR) and National Register of Historic Places (NRHP) resources listed in the water planning document. We would encourage county and town officials to conduct a more thorough analysis and obtain the locations of those historic resources that are either listed on or eligible for the NRHP with the assistance of DHR's Data Sharing System (DSS) and our Archives staff. Once completed, these resources should be added on to a comprehensive GIS so that these historic buildings, sites, and structures may be considered as future improvement projects are proposed.

In addition to the resources already recorded, there are numerous additional historic buildings, structures, and archaeological sites that have yet to be identified simply because there are many portions of the locality that have yet to be systematically surveyed. If compliance with Section 106 with any given project is required, it is extremely important to contact the applicable Federal agency and DHR as early as possible in the project planning and design process so that historic resources may be properly identified, evaluated, and if necessary, mitigated for adverse effects.

With respect to the projects themselves, there are a number of infrastructure improvements that have the potential to impact historic resources. These projects may include, but are not limited to:

- Municipal water and sewer installation and upgrades
- Relicensing for existing dam structures
- Agricultural irrigation projects
- Creation of new reservoirs or other water impoundment areas
- Raising or lowering of a floodpool within an existing reservoir or impoundment area
- Construction of a new or expansion of an existing water supply or sewage treatment plant
- Dam removal projects

While the responsibility of completing Section 106 coordination is the responsibility of the applicable Federal agency, state and local agencies and officials have the opportunity to be an active participant in the process and we encourage DEQ and the municipalities that make up the planning region to keep an open line of communication with DHR as future needs and projects arise.

Once again, we appreciate being given the opportunity to provide our comments on this document. If you have any questions concerning our comments, or if we may provide any further assistance, please do not hesitate to contact me at (804) 482-6452; brad.mcdonald@dhr.virginia.gov.

Sincerely,

Brad McDonald, Archaeologist
Office of Review and Compliance

VIRGINIA DEPARTMENT OF HEALTH – OFFICE OF DRINKING WATER
Water Supply Plan (WSP) Review

Reviewed By:	Awsprfzhar N. Mirza	Review Date:	3-13-2013
Field Office:	East Central Field Office	Planning District(s):	18
WSP Name:	Middle Peninsula W S P		
Does WSP include all significant community waterworks?			☒ Yes ☐ No
If no, identify significant waterworks that are excluded from the plan:			
Does WSP propose new or expanded waterworks capacity in the future?			☒ Yes ☐ No
Is need for future new or expanded waterworks consistent with existing ODW information and previous planning reports for the waterworks?			☒ Yes ☐ No ☐ NA
If no, explain:			
Are new water sources proposed?			☒ Yes ☐ No
If yes, have safe yield evaluations been performed for new sources?			☐ Yes ☒ No ☐ NA
If yes, do the safe yield evaluations appear reasonable?			☐ Yes ☐ No ☒ NA
Comments:			
New wells may be drilled in the future.			
If new sources are proposed, has the quality of sources been considered including upstream discharges and land use?			☒ Yes ☐ No ☐ NA
Comments:			
Although withdrawal from Pamunkey River has been considered but is unlikely in the near future.			
Is expansion of the existing source(s) proposed?			☒ Yes ☐ No
If yes, is a new safe yield evaluation of the source needed?			☒ Yes ☐ No ☐ NA
If yes, has a new safe yield evaluation of the existing source been provided?			☐ Yes ☒ No ☐ NA
If yes, does the new safe yield appear reasonable?			☐ Yes ☐ No ☒ NA
Comments:			
Other comments or concerns:			
In Table 4 on page 23, Essex County presently has 12 community water systems and Mathews County has 7 commuity water systems for a total of 46 community water systems. On page 112, it was stated that the Town of West Point may exceed VDH permitted capacity by 2012. It has not exceeded and is well within the VDH permitted capacity.			