Roanoke Valley-Alleghany Regional Commission Review Findings and Recommendations Chesapeake Bay TMDL WIP-2



Roanoke Valley Alleghany Regional Commission Chesapeake Bay TMDL Phase II Watershed Implementation Plan Regional Steering Committee

Jeff Busby, County Planner Botetourt County

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Alleghany County

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Introduction

This report was prepared by the Roanoke Valley-Alleghany Regional Commission (RVARC) as supplemental material to the February 2012 local government submittals to the Virginia Department of Conservation and Recreation (DCR) as input to the forthcoming Virginia Phase II Watershed Implementation Plan (WIP) for the Chesapeake Bay TMDL.

The purpose of this report is to:

- 1. Document the efforts of the RVARC governments to participate in the development of Virginia's Phase II WIP; and
- 2. Describe the resource needs of local governments related to implementing the Phase II WIP.

Chesapeake Bay TMDL

The Chesapeake Bay TMDL is the Total Maximum Daily Load of nutrients and sediment that can enter the bay while still achieving water quality standards. The Chesapeake Bay TMDL, similar to local TMDLS that have been developed in the RVARC area, documents impairments and recommends measures to reduce or eliminate pollutants in waterbodies. The Chesapeake Bay TMDL is a response to consent decrees coming from court cases over the past 25 years due to insufficient progress and continued poor water quality despite restoration efforts by state and local governments.

Virginia's Chesapeake Bay Watershed Implementation Plan Phase I was a continuation of work begun with Virginia's Tributary Strategies in 2005. The Phase I WIP focused on enhanced best management practices implemented for each sector: wastewater, onsite sewage treatment, agriculture/forest and urban lands.

The Phase II Watershed Implementation Plan is being developed by the Commonwealth of Virginia as part of the Chesapeake Bay TMDL effort. As directed by the EPA, the purpose of the Phase II WIP is to:

- A. Divide the Bay TMDL allocations into local area targets (counties and cities);
- B. Work with local partners to help them better understand their expected contribution to and responsibility for meeting the TMDL allocations;
- C. Describe how partners are going to reduce loads delivered to the Bay; and
- D. Identify those resources, authorities, and other forms of assistance needed to implement actions that achieve TMDL allocations.

The Phase II WIP supplements the strategies included in Virginia's Phase I WIP that was approved by EPA in December 29, 2010. The strategies and commitments in the Phase I document remain in force.

RVARC Profile

The Roanoke Valley-Alleghany Regional Commission area includes the counties of Alleghany, Botetourt, Craig, Franklin and Roanoke, the cities of Covington, Roanoke and Salem and the towns of Boones Mill, Buchanan, Clifton Forge, Fincastle, Iron Gate, New Castle, Rocky Mount, Troutville and Vinton (see Map 1). The region has a population of 330,918 and covers 2,325 square miles.

The RVARC area is served by three Soil and Water Conservation Districts: Blue Ridge SWCD, Mountain Castles SWCD and Mountain SWCD. The area is served by the Virginia Department of Environmental Quality's Blue Ridge Region Roanoke office.

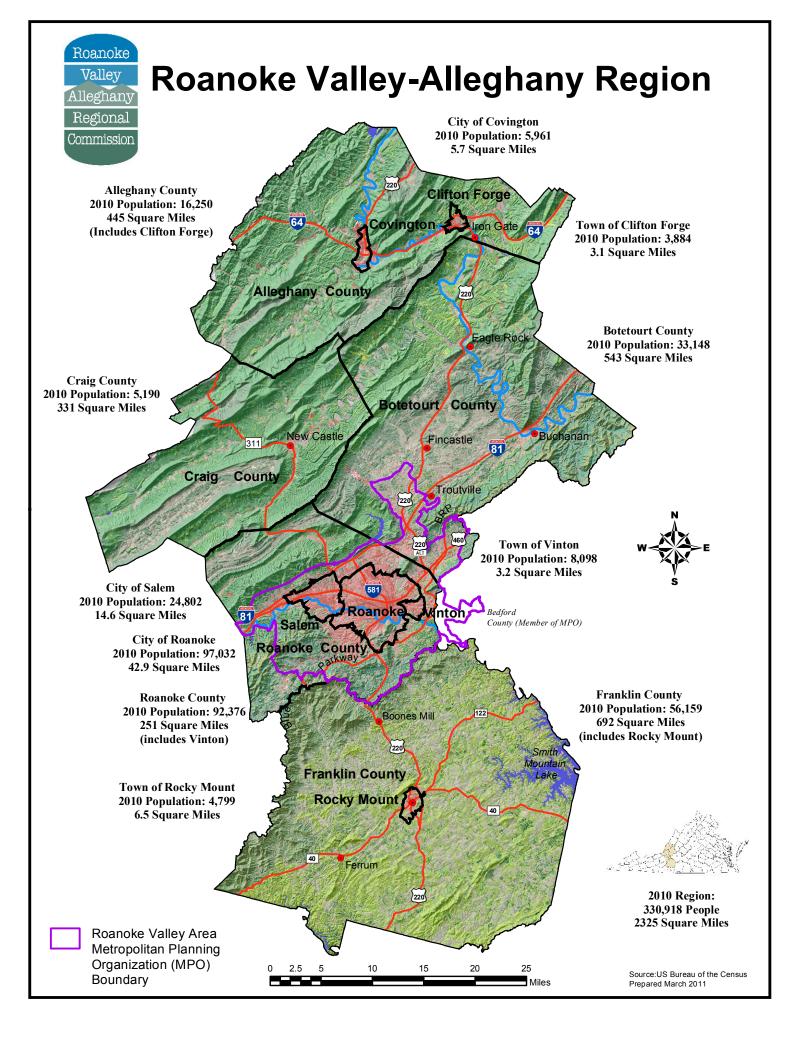
Land uses in the watershed are mostly rural in nature and include agriculture, forestry and low density residential uses. Urbanized development is limited to small towns and the City of Covington.

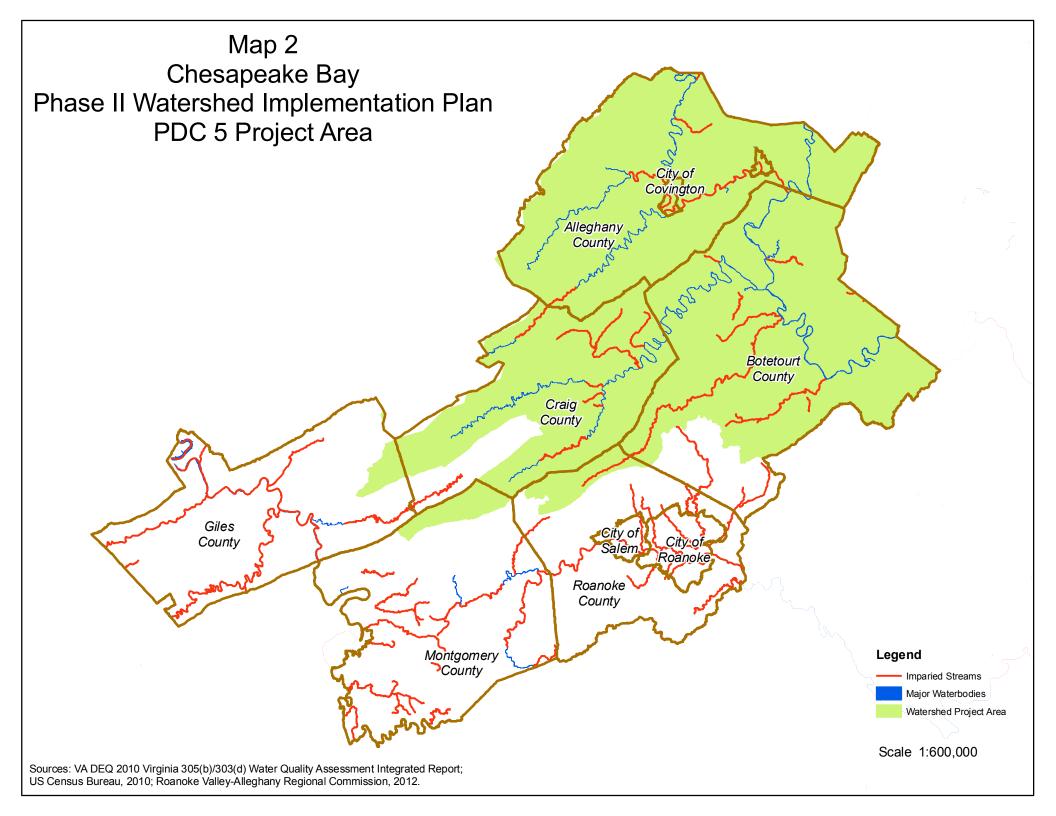
The region drains to three watersheds: the Chesapeake Bay (James River), the Roanoke River and the New River. Approximately one-third of the RVARC is located in the James River watershed. The Chesapeake Bay watershed drains the counties of Alleghany, Botetourt, Craig and Roanoke, the City of Covington, and the towns of Buchanan, Clifton Forge, Fincastle, Iron Gate, New Castle and Troutville (see Map 2). Drainage from portions of the neighboring Virginia counties of Bath, Giles, Highland and Montgomery and West Virginia's Monroe County passes through the RVARC region on its way to the James River and Chesapeake Bay.

Several sections of the James River and its tributaries have been identified by the Virginia Department of Environmental Quality as impaired and placed on the VADEQ 303d listing (see map 2). Recently developed TMDLs for the James River tributaries Jackson River and Looney Creek have identified impaired stream segments, specific water quality impairments (E. Coli, nitrogen and phosphorus) and related water quality information. Development of implementation plans for these waterbodies as well as the Chesapeake Bay is a critical need for the region.

In recent years, increasing emphasis has been placed on the region's natural resources and amenities and their impacts on the economy, health, environment, and overall quality of life in the region. The James River is one of the major resources in the region and serves many functions including water supply, open space, and recreation. The Jackson River serves as the main water supply for much of Alleghany County. A new regional wastewater treatment facility recently began operation on the Jackson River near its confluence with the James. The City of Covington and towns of Buchanan, Fincastle, and New Castle also have wastewater treatment plants that drain to the James River.

Continuing efforts to make tourism a major employment sector in the region such as the recently established Upper James River Water Trail and the status of sections of the James River as a Scenic River are dependent on clean water. Maintaining a high level of water quality must also be balanced with the traditional industries of agriculture and forestry.





The Local Government Role

The Virginia Department of Conservation and Recreation requested that local governments join the agency's efforts to work with EPA to refine the WIP by reviewing data used in the Chesapeake Bay Watershed model and providing additional data gathered at the local level.

The Department of Conservation and Recreation conducted a series of meetings during the Spring and Summer of 2011 with stakeholders from local governments, PDCs, state agencies, professional organization, environmental groups and Soil and Water Conservation Districts. DCR provided detailed Chesapeake Bay Watershed Model information for each of the local governments as well as its plan of action to complete the WIP II revisions by the EPA deadline of March 2012. DCR also explained its request for additional information concerning a BMP inventory, land use and land cover data, 2017 and 2025 BMP scenarios, implementation strategies and identification of needed resources in order to implement the proposed strategies in the WIP. The five WIP deliverables requested by DCR are described in a letter from David A. Johnson, Director of DCR, delivered to Chesapeake Bay Watershed local governments on or about July 25, 2011.

The Department of Conservation and Recreation, in an effort to better coordinate local government input into the Phase II WIP, partnered with Virginia's Planning District Commissions to provide a limited, but very critical and important service of facilitation and coordination between the DCR staff and member local governments. RVARC agreed to coordinate the involvement of its localities in Virginia's Phase II WIP development process. Under this partnership, PDCs brought interested local governments together and provided a venue for dialog, allowing local governments to become better informed to make critical and important decisions in an attempt to complete the five WIP deliverables that DCR had requested. While this partnership with the PDCs was not made official until the award of an EPA grant in November 2011, RVARC began hosting meetings with DCR in May 2011.

Due to unanticipated anomalies resulting from the revisions to the Watershed Model, EPA issued guidance clarification on October 5, 2011. The new guidance led to a modification in the DCR's approach, shifting to implementation-based local targets.

On November 9, 2011, DCR communicated by letter to each of the localities within the Chesapeake Bay watershed its revised request for participation in developing the Phase II WIP. In the letter, DCR requested that local governments complete the following activities:

- 1. Develop a current BMP inventory this information will be used to update implementation progress data in the Chesapeake Bay model;
- 2. Evaluate the land use / land cover information included in the model and provide more accurate land cover information you may have this will be of tremendous assistance in ensuring that model revisions made in the future (2017) will more accurately reflect land use information in your locality;
- 3. Review the 2017 and 2025 BMP scenarios as identified in the Phase I WIP and develop preferred local BMP scenarios that provide a similar level of treatment identified local BMP scenarios will be aggregated and incorporated into the Phase II WIP;

- 4. Develop strategies to implement the preferred BMP scenarios strategies will also be aggregated and used in the development of Virginia's Phase II WIP; and
- 5. Identify any resource needs to implement the strategies and BMP scenarios this information will be used in drafting Virginia's Phase II WIP and developing of cost estimates for the implementation of the WIP.

The deadline for submission of local information in support of the Phase II WIP was February 1, 2012.

Meetings

June 23, 2011 – RVARC meeting with DCR

RVARC hosted a meeting with DCR representatives to discuss the schedule for delivery of data to the localities, the timeline to complete a Bay Phase II Watershed Implementation Plan, and what role the RVARC could play in the process. The scheduled release of the WIP II data set was planned for release in mid-July and the VAST assessment tool was supposed to be available by the end of July. RVARC stated its interest in coordinating regional meetings and providing technical assistance to local governments.

<u>August 23, 2011 – Regional Steering Committee meeting (DCR data delivery)</u>

The purpose of this meeting was to introduce the Bay TMDL Phase II WIP planning process and provide the most up to date information available on the process, deliver to each locality the Bay TMDL dataset and define how localities and soil and water conservation districts can help DCR and the other state agency partners in developing the Phase II WIP. The group discussed why local governments should participate in the review of the WIP II data even though it is not a requirement. DCR revised the timeline for release of VAST assessment tool to the end of September or early October and announced that it would host a training workshop once the VAST is available.

September 23, 2011 – Regional Steering Committee meeting

RVARC hosted a meeting with DCR, Mountain Castles SWCD, Health Department, local governments and New River Valley PDC. DCR described the allocation methods and process used for dividing the statewide allocation into locality (city and county) level allocations. DCR updated the group on the progress of the WIP II goals. The group was informed that EPA revised some of the land use data used in the WIP II model. DCR informed localities of the activities that would need to be undertaken (land use review, BMP inventory, etc) for the WIP II project. The VAST training workshop was discussed and those in attendance were reminded that they should attend.

September 29, 2011 – VAST training workshop

The VAST training workshop, hosted by DCR and the Virginia Conservation Network, was held at Central Virginia Community College Center in Amherst, Virginia. In addition to demonstrating how to use the VAST software, DCR staff covered the following topics: local benefits of action (participation in WIP II review), Phase II deliverables and timeline, model data review, collecting local community conservation information, and development of implementation strategies. Representatives from Alleghany County, Mountain Castles SWCD and RVARC attended the workshop.

November 9, 2011 – Regional Steering Committee meeting

Steering Committee met to discuss the progress made on the deliverables with James Davis-Martin of DCR. Mr. Martin reviewed the request from DCR and explained the options for responding to the request. Local government representatives expressed their concern about the lack of existing BMP data and land cover mapping. The localities that were trying to use VAST were finding it difficult to understand the development of scenarios and the results given by the

software. The committee was informed of the VAPDC and RVARC efforts to obtain funding from DCR to provide additional technical assistance to the local governments.

January 27, 2012 – Regional Steering Committee meeting

Steering Committee met to discuss the progress made on the deliverables and options for local government responses. Local government representatives stated their continuing frustrations about the lack of complete BMP data and land cover mapping. They also described their efforts to obtain information from the Virginia Health Department (for septic permits) and the Virginia Department of Forestry (land cover data). It was decided that each individual locality would submit a response to DCR and the RVARC would submit a summary report of findings and recommendations.

Review of Phase II WIP Data

1. Current BMP Inventory

Erica Moore, with the Mountain Castles Soil & Water Conservation District reviewed this data for Botetourt and Craig Counties and found that the data in VAST is documented in different units and terminology than those normally employed by the SWCD. Therefore interpreting and correcting the data was not possible in the time period allowed by DCR. Alleghany County contacted the Mountain Soil & water Conservation District and found that the SWCD did not have an existing BMP inventory for its service area.

2. Land Use / Land Cover Data

Locality representatives accepted this data as presented with caveats. Specifically, the localities do not maintain land cover data at the level in which it was collected for the Chesapeake Bay Watershed model. GIS map layers for the watershed model were not provided to localities and there was no way to effectively verify the data or make changes based on existing local knowledge. In an effort to acquire additional data for comparison, staff at Botetourt County contacted the Department of Forestry and Virginia Department of Health. Neither agency was able to provide any information that would assist in interpreting or verifying the land cover data. Lack of existing land cover data at the local level prevented an accurate review of this data component.

3. 2017 and 2035 BMP Scenarios

None of the RVARC localities offered any new scenarios. It was noted that localities do not have the authority to require BMPs other than E&S and stormwater regulations. It was felt that without an accurate BMP inventory and tools to predict the impact of proposed BMP scenarios, serious development of future scenarios was not possible.

4. Strategies to Implement BMP Scenarios

Localities did not offer any new strategies for implementing the BMP scenarios. Localities will continue to encourage land owners to utilize existing voluntary BMPs.

5. Resource Needs

- a. Fiscal analysis of the cost to meet the proposed goals in the Phase II WIP on a locality by locality basis. Localities are not able to commit to implementation of the WIP without knowing the financial impact on their budgets.
- b. Statewide land cover data mapping at a useful scale (3 meters) made available to local governments and state agencies.

- c. More opportunities for local staff training related to BMP implementation and the use of VAST software.
- d. Grant funding to help localities, SWCDs, and PDCs complete the necessary BMP inventories and land cover mapping.
- e. More complete BMP inventories.
- f. Accurate and complete septic system inventories from Virginia Department of Health.
- g. Better coordination of information from state and federal agencies (DCR, DEQ, VDOT, VDH, VDF and USFS).
- h. Communication from EPA as to their full reasoning, goals, and implementation of such a plan.
- i. Sharing of data and mapping among EPA and its consultants and the local governments that are required to review the data.
- j. Utilize the SWCD to provide educational opportunities to elected officials about BMPs and water quality in general.
- k. Designate the SWCD as the entity to track existing and future BMP implementation.
- 1. Utilize the SWCD to increase citizen appreciation (and ultimately change behaviors) of the James and its tributaries as a vital recreational, economic and life-sustaining natural resource for our community.
- m. Continue the Regional Chesapeake Bay Watershed Committee coordinated by the PDC as an educational and coordination tool for the Phase II WIP.
- n. Identify additional stakeholders and bring them into the Phase II WIP project (Upper James RC&D, local environmental groups, VA DEQ).
- o. Provide additional incentives for land owners to implement BMPs. This should include tax incentives, matching fund grants from the Water Quality Improvement Program (for businesses/farms) and additional construction and education/outreach funds from EPA.
- p. Detailed explanation of how implementation of the Phase II WIP will impact other state and federal regulations that are already in place such as MS4 permits, stormwater regulations, wastewater permits, and TMDLs.

Appendix A Local Government Response Letters

County of Alleghany

Alleghany County Governmental Complex

9212 Winterberry Avenue

Covington, VA 24426

Administration 540/863-6600 Fax: 540/863-6606 Central Accounting 540/863-6610 Fax: 540/863-6611



Parks & Recreation 540/863-6622 Fax: 540/863-6620 Public Works 540/863-6650 Fax: 540/863-6655

February 6, 2012

David A. Johnson, Director Dept. of Conservation & Recreation 203 Governor Street Richmond, VA 23219-2010

RE: Alleghany County, VA - Phase II WIP

Dear Mr. Johnson:

This letter shall serve as Alleghany County's response to the Phase II WIP and BMP requirements as directed in your letter dated November 8, 2011. County staff has made every reasonable effort to utilize all available resources to review the data presented in the EPA's TMDL model. In addition, staff members have attended various meetings to not only respond to your request, but also to gain understanding on what we can do locally in regards to BMPs.

The Roanoke Valley-Alleghany Regional Planning Commission was very supportive in our efforts by arranging meetings with your staff and other localities. Our staff contacted many State and local agencies such as the Mountain Soil and Water Conservation District, the Soil Survey Office, the Farm Bureau, and the County Commissioner of the Revenue's office among others, seeking their help to verify land use data. However, our efforts were unsuccessful due to these agencies having insufficient data themselves.

County staff, to the best of our abilities, has determined that no additional BMP's in Alleghany County should be added to the TMDL model that were in place prior to 2006. However, we cannot determine if the land use acreages are correct due to a lack of corresponding maps for comparison. The County is currently working on ideas for future BMP's, but due to limited staff and resources we have not finalized any scenarios at this time. County staff attempted to utilize the VAST program to create BMP scenarios, but found it cumbersome and not user friendly.

John R. Strutner, County Administrator

BOARD OF SUPERVISORS

Suzanne T. Adcock Clifton Forge East District Carolyn T. Barnette
Clifton Forge West District

Shannon P. Cox Boiling Springs District

> Rickey D. May Falling Spring District

Stephen A. Bennett Jackson River District

Cletus W. Nicely Sharon District In conclusion, the current available resources do not allow the County to recommend any changes to the data for the EPA's TMDL model at this time.

Sincerely,

Christopher B. Clark, PE

Director of Public Works/County Engineer

/sm

cc: John Strutner, County Administrator

Jon Lanford, Assistant County Administrator

Shelly Mongold, County Planner James Davis-Martin, DCR via e-mail Eddie Wells, RVARC via e-mail

File



Botetourt County, Virginia Planning and Zoning Office Development Services

5 West Main Street, Suite 100 Fincastle, Virginia 24090 Phone (540) 473-8320 Fax (540) 473-2018

January 30, 2012

Construction Compliance

Erosion and Sediment Control Inspections and Enforcement Permit Applications & Plan Reviews

Planning Subdivisions Zoning Site Plans Land Conservation Department of Conservation & Recreation David A. Johnson, Director 203 Governor St. Richmond, VA 23219-2010

Re: Chesapeake Bay - Phase II Watershed Implementation Plan - Botetourt County, VA

Dear Mr. Johnson:

In response to your letter dated November 8, 2011, Botetourt County would like to offer some responses pertinent to the requested deliverables, as well as some general comments regarding the process.

The following deliverables were requested from Botetourt County:

1. Current BMP Inventory

We accept the Current BMPs as listed. Erica Moore, with the Mountain Castles Soil & Water District, reviewed this data and found that the data in VAST are portrayed in differing units and terminology than those normally employed by the Soil & Water Districts. Therefore, interpreting and correcting the data would be a huge undertaking and too time consuming for what current staffing allows.

2. Land Use/Land Cover Data

We accept this data as presented with caveats. Specifically, the county does not maintain this data at the level in which it has been collected. GIS Map Layers were not provided for us to effectively verify or make any changes. In an effort to acquire some additional information, staff contacted the Department of Forestry and the Virginia Department of Health. Neither agency could provide us with any information that would assist us in interpreting the data. undertake this challenge without knowledge of where the specific land uses are located within the watershed would be an impossible task.

3. 2017/2025 BMP Scenarios

We do not offer any new scenarios. It is difficult to evaluate BMP scenarios that are in the future when nearly all existing BMPs are voluntary in nature. Similar to aforementioned concerns, even moderately accurate predictions would be impossible, without proper tools or requirements.

4. Strategies to Implement BMP scenarios

We do not offer any new strategies. It is difficult to develop strategies when the base data is not available to us. We promote and encourage existing voluntary BMPs, but they are not always utilized by citizens.

5. Resource Needs The following list outlines the bare minimum requirement for a realistic opportunity for Botetourt County to fulfill the current DCR - WIP request.

- a. Statewide Land-Use Mapping Initiative
- b. Better training of staff of what is expected, how the figures are determined, VAST tool, and basic explanation of where we are and where we are going.
- c. Grants to help improve data and offered in a timely fashion.
- d. More complete BMP databases.
- e. Better coordination of information from state agencies.
- f. Communication from EPA as to their full reasoning, goals, and implementation of such a plan.

In September 2011, the Botetourt County staff met with the Roanoke Valley Alleghany Regional Commission, Mountain Castles Soil & Water District, and other regional localities in an attempt to collectively understand the Chesapeake Bay WIP Phase II and ascertain how we could offer assistance with data collection and information. We quickly recognized that much of the data had already been gathered, and we were being asked to review the data and make corrections. Initial questions revealed that no one could tell us the source of the data, nor the procedures for calculating loads or goals, nor could we receive GIS layers to help us better understand the data for our county.

Staff was invited to attend a training session for VAST. The day the training session was held, VAST went live and there were some glitches, and the knowledge of how to use the database was poorly communicated. We did not find VAST to be user friendly or to lead to a better understanding of the data.

Should we acquire new data in the future, we would like to reserve the opportunity to present that data. This process has been somewhat frustrating, and further demonstrates the lack of sufficient communication efforts and collaboration between federal, state, and local governments. However, we stand ready to work with others in any way possible, given a revised review framework, and clearly communicated short-term, midterm and ultimate goals for localities.

Regards,

Tim Ward Zoning Administrator

c: James Martin-Davis, DCR Spencer Suter, Botetourt County Erica Moore, MCSWD Eddie Wells, RVARC MILLIE HARRISON, CHAIRMAN NEW CASTLE DISTRICT

CARL BAILEY, MEMBER
POTTS MOUNTAIN DISTRICT

KEITH DUNBAR, MEMBER CRAIG CREEK DISTRICT



FRED CRAFT, VICE CHAIRMAN CRAIG CITY DISTRICT

MARTHA MURPHY, MEMBER SIMMONSVILLE DISTRICT

RICHARD C. FLORA COUNTY ADMINISTRATOR

P.O. Box 308
New Castle, Virginia 24127
540-864-5010 Phone
540-864-5590 Fax

February 2, 2012

Department of Conservation & Recreation David A. Johnson, Director 203 Governor St. Richmond, VA 23219-2010

Re: Chesapeake Bay - Phase II Watershed Implementation Plan - Craig County

Dear Mr. Johnson:

In response to your letter dated November 8, 2011, Craig County would like to offer some responses pertinent to the requested deliverables, as well as some general comments regarding the process.

The following deliverables were requested from Craig County:

1. Current BMP Inventory

We accept the Current BMPs as listed. Interpreting and correcting the data would be a huge undertaking and too time consuming for what current staffing and funding allows.

2. Land Use/Land Cover Data

We accept this data as presented with caveats. Specifically, the county does not maintain this data at the level in which it has been collected. To undertake this verification without knowledge of where the specific land uses are located within the watershed would be an impossible task.

3. 2017/2025 BMP Scenarios

We do not offer any new scenarios. It is difficult to evaluate BMP scenarios that are in the future when nearly all existing BMPs are voluntary in nature. Similar to aforementioned concerns, even moderately accurate predictions would be impossible, without proper tools or requirements.

4. Strategies to Implement BMP scenarios

We do not offer any new strategies. It is difficult to develop strategies when the base data is not available to us. We promote and encourage existing voluntary BMPs, but they are not always utilized by citizens.

- 5. Resource Needs: The following list outlines the bare minimum requirement for a realistic opportunity for Craig County to fulfill the current DCR WIP request.
 - a. Statewide Land-Use Mapping Initiative
 - b. Better training of staff of what is expected.
 - c. Grants to help improve data and offered in a timely fashion.
 - d. More complete BMP databases.
 - e. Communication from EPA as to their full reasoning goals, and implementation of such a plan.

In September 2011, the Craig County staff met with the Roanoke Valley Alleghany Regional Commission, Mountain Castles Soil & Water District, and other regional localities in an attempt to collectively understand the Chesapeake Bay WIP Phase II and ascertain how we could offer assistance with data collection and information. We quickly recognized that much of the data had already been gathered, and we were being asked to review the data and make corrections. Initial questions revealed that no one could tell us the source of the data, nor the procedures for calculating loads or goals, nor could we receive CIS layers to help us better understand the data for our county.

Should we acquire new data in the future, we would like to reserve the opportunity to present that data. This process has been somewhat frustrating, and further demonstrates the lack of sufficient communication efforts and collaboration between federal, state, and local governments. However, we stand ready to work with others in any way possible, given a revised review framework, and clearly communicated short-term, midterm and ultimate goals for localities.

Sincerely,

Richard C. Flora County Administrator

cc: Cyrus (Artley) Bowman, Craig County Eddie Wells, RVARC



County of Roanoke

OFFICE OF THE COUNTY ADMINISTRATOR

5204 Bernard Drive, PO Box 29800 Roanoke, Virginia 24018-0798

B. CLAYTON GOODMAN III COUNTY ADMINISTRATOR TEL: (540) 772.2004 FAX: (540) 561.2884

January 30, 2012

Mr. David A. Johnson, Director Commonwealth of Virginia Department of Conservation and Recreation 203 Governor Street Richmond, Virginia 23219-1712

Dear Mr. Johnson:

In reference to your letter of November 9, 2011 concerning your efforts to develop a Watershed Implementation Plan for the Chesapeake Bay, staff has met several times with Mr. James Davis-Martin of your office, planning officials from the Roanoke Valley - Alleghany Regional Commission, and other localities in an effort to assist in this process.

We believe that the information in the Virginia Assessment and Scenario Tool (VAST) accurately depicts the land area and use that is reflected for Roanoke County in the Model v5.3.2. As indicated, the vast majority of the area is forested and represents 77% of the total area. The remainder of the area is primarily used for hay and pasture. As specific information on BMP's in this area is not available, we would agree with your approach used in the referenced model.

Please advise should you have questions or need additional information.

Yours truly,

B. Clayton Goodman III
County Administrator

Cc: Richard Flora, Chairman, Roanoke County Board of Supervisors
George W. Simpson, III, P.E., County Engineer
Wayne G. Strickland, Executive Director, Roanoke Valley-Alleghany Regional Commission