

**REPORT PREPARED BY THE VIRGINIA DEPARTMENT OF
CONSERVATION AND RECREATION**

**ANNUAL FUNDING NEEDS FOR
EFFECTIVE IMPLEMENTATION OF
AGRICULTURAL BEST
MANAGEMENT PRACTICES (BMPS)**

**TO THE
CHAIRMEN OF THE HOUSE APPROPRIATIONS AND
SENATE FINANCE COMMITTEES**



**COMMONWEALTH OF VIRGINIA
RICHMOND
DECEMBER 2010**

Executive Summary:

In 2008 the Virginia Natural Resources Commitment Fund (VNRCF) was established in Virginia Code as a subfund of the Virginia Water Quality Improvement Fund. Monies placed within the VNRCF are to be used solely for the Virginia Agricultural Best Management Practices Cost-Share Program. The Department of Conservation and Recreation (DCR) is directed by § 10.1-546.1 to submit annually by October 15th, the “...funding amount for effective Soil and Water Conservation District technical assistance and implementation of agricultural best management practices...for each year of the ensuing biennial period.”

DCR examined the agricultural BMP funding needs that pertain to achieving water quality objectives in the Chesapeake Bay basin, as well as the agricultural BMP needs for “TMDL” (Total Maximum Daily Load) waters that fail to achieve state water quality standards for the Southern Rivers portion of the state (waters outside the Bay basin). DCR recognizes the need to address all water quality problems that are associated with agricultural nonpoint source pollution; however the Environmental Protection Agency’s (EPA) development of a Chesapeake Bay TMDL is expected to impose undesirable consequences for jurisdictions (6 states and the District of Columbia) that fall short of Chesapeake Bay nutrient and sediment reduction targets.

The Chesapeake Bay TMDL is to be completed by EPA in December, 2010. On September 3, 2010 Virginia submitted its DRAFT Watershed Implementation Plan (WIP) to achieve the nutrient and sediment allocations set by EPA. On September 24, 2010 EPA released a summary Evaluation of Virginia’s Draft Watershed Implementation Plan. It is clear from EPA’s summary that they believe the Virginia Plan is not sufficient to achieve the required nutrient reductions and therefore, EPA would impose a moderate level of more aggressive controls on permitted facilities. Public comment is being received from September 24 through November 8, 2010. Virginia will submit a final Phase I WIP to EPA by November 29, 2010. Once the Chesapeake Bay TMDL is final and Virginia’s WIP is accepted, DCR will update projections for the agricultural BMP needs to support Virginia’s Bay Clean-up efforts.

To address the agricultural BMP needs within the Chesapeake Bay, DCR used the most current (2005) Tributary Strategy reduction goals which were established through use of the EPA Chesapeake Bay Program Office’s phase 4.3 watershed model. DCR has focused on the implementation of the five priority practices (nutrient management plans, cover crops, livestock exclusion from waterways, conservation tillage including continuous no-till and establishment of riparian buffers) over a 15 year period that begins in fiscal year 2011 and ends in 2025 –the agreed to deadline by EPA and Bay jurisdictions to have in place the strategies that will achieve the Bay’s water quality objectives.

Funds placed within the VNRCF must be divided with 55% supporting BMPs in the Chesapeake Bay, 37% for BMPs in the Southern Rivers and 8% for provision of technical assistance by Soil and Water Conservation Districts (SWCD). By using the annual funding projections for BMPs in the Chesapeake Bay, DCR represented the amounts as 55% of the total annual deposit in the VNRCF. By mathematically deriving the total deposit amount, the remaining 45% was apportioned with 37% of deposited funds supporting BMPs in the Southern Rivers and 8% supporting SWCD technical assistance. Statewide funding needs are summarized on page 9 of this report and total approximately \$1.1 billion between FY11 and FY25.

In addition, the Chesapeake Bay states, including Virginia, have committed to meeting two-year “milestones” in order to accelerate restoration and provide greater accountability. The 2011 Milestone is considered a “voluntary” Milestone since it was conceived prior to the development of the Chesapeake Bay

TMDL. The two-year Milestones beginning with 2013 are part of the progress accounting system for the TMDL and may carry regulatory consequences if they are not achieved.

It is important to recognize that projections of needed BMPs and their associated costs are dynamic and will change over time. Funding levels in the near term will ultimately affect needs to later years. It is also important to recognize that current difficult economic conditions may hamper the ability of the Commonwealth to meet the total needs. Further, acreage in agricultural production varies from year to year (some acres are lost to other land uses, some acreage is gained when idle land is cropped). Projections of needed BMPs changes when implementation of cost-shared practices is credited, and when better accounting for voluntary BMPs is documented. Cost-share funding amounts change over time to elicit farmer participation in voluntary state and federal cost-share programs. These factors and others mean that the projections of funding for agricultural BMPs should be examined over time and as directed by § 10.1-546.1, DCR shall report annually by October 15th, the funding amount needed for implementation of agricultural BMPs.

The Virginia General Assembly during their 2010 session established a recurring source of revenue to support implementation of agricultural BMPs. A portion of the recordation fee collected by localities for land transactions is now being deposited in the Natural Resources Commitment Fund. The annual projection of revenue is placed at approximately \$9.1 million.

The commonwealth ended FY10 with a balance of funds that may enable monies to be dedicated to address nonpoint source (NPS) pollution and the implementation of agricultural BMPs. Closure to enable a deposit in the Water Quality Improvement Fund and its sub fund, the Natural Resources Commitment Fund will require action by the Virginia General Assembly in 2011. Such a deposit could exceed \$25 million to address NPS, dependent upon General Assembly action and actions by individuals authorized by Code to make such funding decisions. If appropriated, funds would be available for BMPs beginning in FY12.

While the basis for projecting funding needs for the period FY11 through FY25 remains unchanged since DCR's initial report (submitted in October, 2009), significant financial appropriations from state and federal sources are impacting the overall funding needs for FY11 and FY12. In short, the combined existing and projected funding for FY11 and FY12 is expected to:

- fulfill the agricultural BMP funding needs in the Chesapeake Bay basin,
- fall somewhat short of funding needs in the Southern Rivers in FY11 while fulfilling the needs in FY12,
- and fall short of fulfilling the technical assistance financial needs of SWCDs in both fiscal years.

A comprehensive explanation of the available and projected funding is provided within the **Introduction: Overview of the Funding Projections** portion of this report.

Introduction: Overview of the funding projections

Basis of This Report :

Section 10.1-2128.1 of the Water Quality Improvement Act requires that the Department of Conservation and Recreation (DCR) “in consultation with stakeholders, including representatives of the agricultural community, the conservation community, and the Soil and Water Conservation Districts, shall determine an annual funding amount for effective Soil and Water Conservation District technical assistance and implementation of agricultural best management practices pursuant to § [10.1-546.1](#). Pursuant to § [2.2-1504](#), the Department shall provide to the Governor the annual funding amount needed for each year of the ensuing biennial period.” DCR has consulted with the interests named above in the preparation of this report. Funds would be deposited in the Virginia Natural Resources Commitment Fund (VNRCF), a subfund of the Water Quality Improvement Fund. Other surplus funds may be deposited in the Water Quality Improvement Fund.

Virginia’s strategy for agricultural BMPs gives special emphasis and targets funding to five “Priority Practices” that include nutrient management plans, cover crops, exclusion of livestock from streams with alternative water sources constructed, conservation tillage including continuous no-till and the establishment of riparian buffers. These practices have been determined to substantially meet Virginia’s tributary strategy level of agricultural implementation to achieve water quality standards. The full range of practices supported by the cost-share program are established in DCR’s Virginia Agricultural BMP Cost-Share Manual which is available from the agency and posted on DCR’s website at: http://www.dcr.virginia.gov/soil_and_water/costshar.shtml

Funding levels projected in this report are in 2009 dollars.

Approach Used to Project Needed Funding:

In the Chesapeake Bay watershed, Virginia has been assigned loading caps on nitrogen, phosphorus and sediment through the development of Tributary Strategies for each major river basin, including the tidal creeks and rivers of Eastern Shore. In addition, the Environmental Protection Agency is in the process of developing a TMDL (“Total Maximum Daily Load”) for the entire Chesapeake Bay watershed which will likely require Virginia and other Bay jurisdictions to put in place all needed pollution reduction control measures no later than 2025 (measures include agricultural practices, stormwater management and controls on sewage treatment plants and industrial facilities). Further, the Bay jurisdictions have committed to achieve incremental pollution reduction goals through a sequence of two year “Milestones” that will demonstrate measurable progress towards meeting overall pollution reduction goals.

The Chesapeake Bay TMDL is to be completed in December, 2010, by EPA. On September 3, 2010 Virginia submitted its DRAFT Watershed Implementation Plan (WIP) to achieve the nutrient and sediment allocations set by EPA. On September 24, 2010 EPA released a summary Evaluation of Virginia’s Draft Watershed Implementation Plan. It is clear from EPA’s summary that they believe the Virginia Plan is not sufficient to achieve the required nutrient reductions and therefore, EPA would impose a moderate level of more aggressive controls on permitted facilities. Public comment is being received from September 24 through November 8, 2010. Virginia will submit a final Phase I WIP to EPA by November 29, 2010. Until the Chesapeake Bay TMDL is final and Virginia’s WIP is accepted, it is not possible to accurately project the agricultural BMP needs to support Virginia’s Bay Clean-up efforts.

In the Southern Rivers watersheds (those major river basins that do not drain to the Chesapeake Bay) the focus of projecting agricultural BMP funding needs is based upon the implementation of TMDLs on smaller scale water bodies which fail to meet the state's water quality standards. The impaired waters generally demonstrate bacterial and benthic impairments that are most frequently attributed to pollutants from agricultural sources. Virginia continues to dedicate funds to support TMDL Implementation Plans (IPs) through a combination of state (WQIF and VNRCF) and federal (EPA Section 319 grant) funds.

A more detailed explanation of the funding projections for agricultural BMPs is provided for the Chesapeake Bay basin and the Southern Rivers watersheds in this report. Projections of the funding amounts needed by Soil and Water Conservation Districts for the implementation of agricultural BMPs are based upon the provision in Virginia Code §10.1-2128.1. B.1. which directs 8% of the monies distributed from the VNRCF for agricultural BMPs to be used for technical assistance.

The estimated funding deposits into the VNRCF for the period that spans FY11 through FY25 are summarized in the table in Part 4 on page 9 and totals ~\$1,123,000,000 over the 15 year period. Of these amounts, 8% will support SWCD technical assistance, 55% will support agricultural BMPs in the Chesapeake Bay basin and 37% will support BMPs in the Southern Rivers.

Budgetary and appropriation actions of the 2010 Virginia General Assembly

Through a budgetary action of the 2010 General Assembly, a recurring source of monies to support incentives for agricultural BMPs was established as follows:

“§3-6.01 RECORDATION TAX FEE

There is hereby assessed a twenty dollar fee on (i) every deed for which the state recordation tax is collected pursuant to §§[58.1-801](#) A and 58.1-803, Code of Virginia; and (ii) every certificate of satisfaction admitted under §[55-66.6](#), Code of Virginia. The revenue generated from fifty percent of such fee shall be deposited to the general fund. The revenue generated from the other fifty percent of such fee shall be deposited to the Virginia Natural Resources Commitment Fund, a subfund of the Virginia Water Quality Improvement Fund, as established in §[10.1-2128.1](#), Code of Virginia. The funds deposited to this subfund shall be disbursed for the agricultural best management practices cost share program, pursuant to § 10.1 - 2128.1, Code of Virginia.”

In addition, appropriations language in the funding amounts provided to DCR specified the following:

“H.1. Included in the amounts for Statewide Agricultural and Urban Nonpoint Source Water Quality Improvement is \$9,100,000 the first year and \$9,100,000 the second year from nongeneral funds to be deposited to the Virginia Natural Resources Commitment Fund, a subfund of the Virginia Water Quality Improvement Fund, as established in § 10.1-2128.1, Code of Virginia. The funds shall be dispersed pursuant to § 10.1-2128.1, Code of Virginia.

2. The source of an amount estimated at \$9,100,000 the first year and \$9,100,000 the second year to support the nongeneral fund appropriation to the Virginia Natural Resources Commitment fund shall be the recordation tax fee established in Part 3 of this Act.

3. Out of these amounts, a total of 8 percent, or \$1,200,000, whichever is greater, shall be provided to Soil and Water Conservation Districts for technical assistance to farmers implementing agricultural best management practices.”

Accounting for Federal Funds

The Virginia office of the Natural Resources Conservation Service of the United States Department of Agriculture provided their projection of implementation of agricultural best management practices in the Chesapeake Bay watershed. These projections include special Chesapeake Bay appropriations designated as Chesapeake Bay Watershed Initiative (CBWI) funding, authorized by the 2008 federal Farm Bill. In addition there is the ongoing funding of the federal Environmental Quality Incentive Program or "EQIP" program. These collective funds are credited in program years FY09, FY10, FY11 and FY12. Federal funds support the implementation of the same five priority practices that are the focus of the state cost-share program as well as other important BMPs that are implemented through these USDA programs which receive credits through the Chesapeake Bay watershed model. DCR will continue to work closely with NRCS to determine and report what the special federal Bay funding and the existing EQIP program will accomplish in FY11 and FY12 in order to credit it towards the overall 2013 Milestone period.

Funding Needs Summary for FY11 & FY12

The basis for deriving the projections of funding needs for the period FY11 through FY25 remains unchanged from the initial funding needs report submitted by DCR in October, 2009. The sections that follow (Part 1 through Part 4) capture the basis for projecting funding needs in the Chesapeake Bay basin, the Southern Rivers, the technical assistance needs of the SWCDs and the overall agricultural BMP statewide funding needs. Reports in subsequent years will incorporate agricultural BMP commitments that are contained in the Chesapeake Bay WIP.

The summary that follows provides an explanation of the FY11 and FY12 funding needs and the extent those needs are addressed with appropriations made available from state and federal sources.

The table below depicts the projected funding needs and available funding for meeting Virginia's agricultural BMP cost-share commitments in the Chesapeake Bay, and requirements of the Natural Resources Commitment Fund for FY11 and FY12. State funds are provided through the recordation fee and through surplus funds that exist from remaining balances in state accounts following the close of fiscal year 2010. Federal Farm Bill funds are provided through NRCS EQIP and the NRCS Chesapeake Bay Watershed Initiative (CBWI).

It is important to note that DCR and NRCS have collaborated to ensure incentive programs do not compete for farmer participation, but instead complement each agency's program to enhance practice adoption. The federal EQIP and CBWI funds are intentionally not targeted specifically to the same BMPs as funds made available through the state program. Therefore, it should be understood that less applicable accomplishments of the specific five priority practices can be expected from those dollars. DCR has worked with SWCDs to focus efforts on the five priority practices and 85% of the state funds go to this suite of practices. Until sign-up and approvals are completed it is not possible to determine the actual BMPs that will be achieved using the federal funds.

At this time, no decision has been made on how the available \$36.4 million in WQIF surplus funds (from close-out of FY10) will be split between point and nonpoint. These funds, once appropriated by the 2011 General Assembly, will be applied to the FY12 program year beginning July 1, 2011. The table depicts one possible scenario with 90% of the total WQIF deposit, \$32.76M, to nonpoint and with \$27.76M to agricultural BMPs. Approximately \$5M may be directed to urban BMPs and special nutrient reduction projects.

The total statewide “need” in FY11 is \$40M and in FY12 is \$44M. These needs are based upon the existing Virginia Bay Tributary Strategies, not the Virginia Bay TMDL Watershed Implementation Plan, which is not yet completed. Also, the establishment of Bay TMDL “Milestone” goals for 2013, 2015 and 2017 may change the “need”, but to what extent is currently not known. We believe that the 2011 “needs” report will address these issues.

Adequacy of FY11 funding:

Based upon the above information, we believe the expressed need of \$22M for the Chesapeake Bay commitments will be met by the total available \$27.7M, even though NRCS practices differ from state practices. The available \$8.16M in the Southern Rivers falls significantly short of the \$14.8M need. The technical assistance funding to SWCDs of \$1.2M is considered minimally adequate given the lesser amount of state cost-share program funding. This is a 25% decrease in funding of SWCDs staff from the previous year, which resulted in the loss of technical capacity. Sufficient technical capacity will be needed to deliver the larger FY12 state cost-share program.

Adequacy of FY12 funding:

We believe the \$24.3M of expressed need can be met and exceeded by the potentially available \$36.9M. The availability of the federal funding should “make-up” for the lack of state funding. The available \$19.3M in the Southern Rivers is considered to be on par with the \$16.3M need. The technical assistance funding to SWCDs of \$1.2M is based upon the budget language approved during the 2010 General Assembly which set \$1.2M or 8%, whichever is greater, as minimum funding under the Natural Resources Commitment Fund.

Farmer share to implement cost-shared BMPs:

The total cost of implemented BMPs in the 2007 through 2010 program years was \$79,185,888 with Virginia’s farmers contributing \$20,480,209 of their own funds as part of the cost-sharing arrangement. This is an average of 26% of the total cost of implementation.

Impact of the voluntary agriculture and forestry BMP database strategy:

As a result of Senate Bill 346, passed by the 2010 Virginia General Assembly, the Secretary of Natural Resources has developed a strategy to promote, collect, certify and report best management practices outside of those already being captured by state and federal reporting systems. The strategy document is due to the General Assembly and Governor November 1, 2010 for consideration of the resource needs. A pilot effort would begin data collection in 2011 with expanded state implementation beginning in 2012. Reportable BMPs that support achievement of Virginia’s BMP goals will be reflected in future projections of needs.

	FY11	FY12
Chesapeake Bay Need	\$22,000,000	\$24,300,000
State recordation fee	4,740,000	4,740,000
State WQIF deposit	0	16,656,000
Federal EQIP	5,000,000*	5,000,000*
Federal CBWI	18,000,000*	10,500,000*
TOTAL Available	27,740,000	36,896,000
Southern Rivers Need	\$14,800,000	\$16,300,000
State recordation fee	3,160,000	3,160,000
State WQIF deposit	0	11,104,000
Federal EQIP*	5,000,000*	5,000,000*
Federal CBWI*	0	0
TOTAL Available	8,160,000	19,264,000
Technical Assistance Need	\$3,200,000	\$3,500,000
State recordation fee	1,200,000	1,200,000
State WQIF deposit	0**	0***
TOTAL Available	1,200,000	1,200,000

*These federal funds are projected; NRCS anticipates receiving these allocation amounts, but has only received \$13.5 M of FY11 dollars as of November 3, 2010. The federal EQIP and CBWI funds are intentionally not targeted specifically to the same BMPs as funds available through the state program and therefore do not equate dollar-for-dollar in terms of practices accomplished. NRCS believes they have adequate federal technical assistance funding as long as recent percentages, allowed for technical assistance provision, are continued in FY11 and FY12.

**Funding from the FY10 budget surplus may be appropriated by the 2011 Virginia General Assembly and deposited during FY11.

***DCR Director can allow WQIF funds to support technical assistance for delivery of BMPs.

Funds Allocated for Practices are Fully Utilized

DCR administers the cost-share program on an annual cycle that is consistent with the Commonwealth's fiscal year (July 1st through June 30th). DCR staff work closely with all SWCDs to monitor use of available funds and move monies among districts during the year to maximize BMP implementation. However at the end of each program year (June 30) some funds are unexpended. The majority of these funds will pay for BMPs that were not completed by June 30th, such as livestock exclusion practices that often take more than a year to complete. The monies are obligated to complete BMPs that are under construction. A smaller amount of funds remains that may be reprogrammed and allocated to SWCDs in the new program year that begins on July 1st. These uncommitted remaining balances exist due to many factors that include the

inability of farmers to implement BMPs due to weather conditions (too wet, too dry, etc.), financial reasons (farmers must also bear BMP expenses), issues with contractors and other factors.

According to data gathered from the last three cost-share program years, agricultural BMP funding is fully spent for a “100% utilization rate” given the cycle summarized above. The table that follows depicts monies on hand at the end of each program year which are issued to districts with documented implementation demands as the new program year begins.

Utilization Rates of 2008, 09, 10 Cost-Share Funds

2008		2009		2010	
% \$	% of C-S \$ spent or Obligated	% \$	% of C-S \$ spent or Obligated	% \$	% of C-S \$ spent or Obligated
Reallocated	13.2%	Reallocated	10.1%	Reallocated	12.2%
	86.8%		89.9%		87.9%

From this summary, the utilization rate of spent and obligated monies at the close of the program year averages 88.6% over the past three years. The balance of the remaining funds are issued to other districts at the outset of a new program year and spent along with new funding for the program year resulting in 100% utilization of available funds over any two year period of the program.

Reallocation of Funding

Cost-share funds are distributed to SWCDs under a contractual agreement with DCR. Quarterly reimbursements are issued to SWCDs to ensure they have funds available to reimburse farmers upon completion of practices. During the year and especially during the third quarter of each fiscal year, DCR staff work with the SWCDs to identify districts that have BMP signup that exceeds their available funding as well as districts that may have monies not yet obligated. Funds are shifted to SWCDs that can obligate the funds immediately. Reallocated funds adhere to all program requirements. This process of assessing need and reallocating funds continues past the end of the fiscal/program year until all funds have been committed with practices installed and farmers reimbursed. This full cycle and use of all funds is usually completed with in the first two quarters of the next fiscal/program year.

Delivery and Implementation of Agricultural BMPs –Expenses Borne by DCR, SWCDs and Farmers

DCR Cost-Share Program Delivery

DCR staff, (the Agricultural BMP Incentives Program Manager and Assistant Manager) manage the daily, recurring workload that enables an ongoing process of program development and administration. These staff oversee the program through an annual cycle that includes meetings with an Advisory Committee that culminates in the revision of an annual, comprehensive Ag BMP Program Manual. While these employees are principally charged with the day to day tasks of program development and administration, other DCR staff including Conservation District Coordinators located in DCR’s regional offices devote considerable time with program assistance and oversight. DCR’s central office staff is involved in cost-share program support to enable completion of actions that include the establishment of agreements between DCR and 47 SWCDs for program delivery, the processing of financial disbursements to SWCDs and the provision of promotional marketing products for program recruitment and information.

In addition, DCR contracts with NRCS to provide necessary agricultural engineering support for certain practices and for direct training of all SWCD technical staff for the delivery of the state program practices. Over the last three years, \$900,000 has been expended for this purpose.

To capture and document the implementation of thousands of BMPs annually, DCR has in place an automated Tracking Program used by all SWCDs. Two separate appropriations of \$500,000 (in FY07 and FY09) are enabling the modernization of a program and database that have been in continual use for over 20 years. The first phase of what is now a web based system for data entry by SWCDs is complete and fully operational. A more robust, enhanced program envisioned through a second phase of work is nearing completion. Once completed, additional annual funding may be necessary for the support system of hardware and staff that are essential to an effective BMP tracking and reporting system. These needs will be reflected in future reports.

SWCD Cost Share Program Delivery

The funding needs for SWCD technical staff that perform Cost-Share program delivery among the 47 districts is addressed within Part 3 of this report. These staff represent a portion of existing statewide SWCD infrastructure that enables local delivery of the Cost Share program and other programs and services. A line item within the DCR budget provides operational support for all SWCDs. The funds are administered by DCR through a policy adopted and periodically revised by Virginia Soil and Water Conservation Board. The policy [*Financial Assistance for Soil & Water Conservation Districts (SWCD/districts)*] establishes a list of essential funding components and annual cost estimates. When totaled, the current policy (adopted in May, 2009) authorizes each SWCD to receive \$120,000 annually from state appropriations. This amount of funding has yet to be realized and with FY10 funding reductions, each SWCD will receive on average just over half of the authorized amount (~\$68,000). The monies are provided as a basic foundation for each SWCD to pay for their most essential operating costs that enable the operation of an office, provision of administrative support and the business expenses of the 333 elected and appointed directors that serve on 47 district boards. District directors serve without compensation, but are entitled to reimbursement for their expenses incurred as they execute the duties of their office. (However, many decline reimbursement.)

Farmer Financial Investments in Cost-Share Program BMPs

Farmers voluntarily participate in state and federal cost-share programs to implement BMPs for a variety of reasons. BMPs provide multiple benefits that not only address the Commonwealth's interest in water quality improvement, but also often enhance the farm operation. Benefits to the farm operation vary depending on the practices that are implemented. For example, some practices provide benefits to livestock health and productivity. Other BMPs improve the productivity of the soil by enhancing moisture retention and increasing organic matter. All BMPs offered through the state's cost-share program provide water quality benefits. Once a practice is implemented according to the required specifications, the farmer receives reimbursement for up to 75% of the eligible costs of the practice, or for some BMPs a flat rate incentive payment is issued. Flat rate payments generally enable the farmer to recoup most of the out of pocket cost for the practice. Given these arrangements, farmers bear a portion of the cost for implementation of all agricultural BMPs.

Farmer Investment in 2008, 09, 10 Cost-Share Practices		
2008	2009	2010
\$6,113,857 Farmer Expense	\$8,620,897 Farmer Expense	\$7,435,209 Farmer Expense
Farmer Portion of Total Cost of BMPs Implemented: 30%	Farmer Portion of Total Cost of BMPs Implemented: 56%	Farmer Portion of Total Cost of BMPs Implemented: 41%

Part 1: Projecting Funding Needs Within the Chesapeake Bay basin

Overview of factors evaluated in projecting agricultural BMP implementation needs within the Chesapeake Bay basin:

- The U.S. Environmental Protection Agency (EPA) is working with its state partners in the Chesapeake Bay basin to set restrictions on nutrient and sediment pollution through a Total Maximum Daily Load, or TMDL. This regulatory tool of the federal Clean Water Act will be backed by state implementation plans that include measures to ensure pollution reduction commitments are met.
- A TMDL is required by the Clean Water Act for water bodies that fail to meet water quality standards. The state-federal Bay Program had previously committed to meeting standards by 2010, thereby preventing the need for the TMDL deadline set by the court agreement. But long-term, monitoring-based water quality trends and computer model projections show that the 2010 cleanup goals will take many more years to accomplish.
- The Bay-wide TMDL is scheduled to be completed in December 2010 and will identify adjustments to pollutant loading caps by major river basin in the Bay watershed.
- Measures specified by state TMDL implementation plans will address the reduction and control of point and nonpoint source pollutants through the end of 2025.
- On May 12, 2009, President Barack Obama signed an Executive Order that recognizes the Chesapeake Bay as a national treasure and calls on the federal government to lead a renewed effort to restore and protect the nation’s largest estuary and its watershed.
- Federal consequences under consideration for failing to meet Milestones could include:
 - more stringent requirements for permitted and regulated activities;
 - new laws and regulations and expansion of existing regulations;
 - impacts on federal funding made available to Virginia and other Bay jurisdictions.
- Governor McDonnell also committed to meeting the Milestones and submitted Virginia’s Draft Bay TMDL Watershed Implementation Plan to EPA on September 3, 2010.

Basis for calculating annual Cost Sharing/Technical Assistance funding needs:

Funding Needs For FY11 through FY25:

Based on the Chesapeake Bay Phase 4.3 Model, Virginia’s estimates of needed agricultural BMPs, not including the accelerated milestone commitment referenced in the previous paragraph, enables the state to fulfill needed nutrient and sediment reductions from agricultural lands. Using the total mix of priority BMPs and dividing the total by 15 years (2011 through 2025) the projected funding needs are calculated through an increasing increment of practices that must be implemented each year. These calculations account for the lifespan of the various practices such as cover crops that must be replaced annually or nutrient management plans renewed on a 3-year cycle.

As an example, the funding needed to accomplish levels of reduction from nutrient management planning and implementation on approximately 90% of the cropland and hayland in the Chesapeake Bay are included in the overall cost calculation for the bay watershed. The total cost is estimated at \$21,476,000 between FY11 and FY25 for plans and implementation on 335,572 acres, involving an annual increase of about 22,371 acres per year through that time period. This level of implementation reflects what would be accomplished if nutrient management plans were developed and implemented on farms of 100 acres or larger in the Chesapeake Bay watershed.

In addition, DCR has provided funding over the last several years to the Department of Forestry (DOF) for the implementation of best management practices on forestry operations. While a full needs assessment has not been done, DOF estimates that additional funding above the \$250,000 provided could be used. Further analysis will be performed to project additional needed funds and the resulting BMP implementation that would be achieved.

**CHESAPEAKE BAY WATERSHED AG BMP COST-SHARE FUNDING:
PROJECTED NEEDS (in millions)**

FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
\$22	\$24.3	\$26.6	\$28.9	\$31.2	\$33.9	\$36.1	\$38.4	\$40.7	\$43	\$54	\$56.3	\$58.6	\$60.9	\$63.2

Part 2: Projecting Funding Needs Within Virginia’s Southern Rivers:

Funding Needs for FY 2011 through 2025

According to the *2008 Virginia Water Quality Assessment Report* by the Virginia Department of Environmental Quality, a total of 486 impaired water bodies in the Southern Rivers watersheds are scheduled to have completed TMDLs by 2020. This number includes water bodies that have been placed on the Impaired Waters List since the court imposed 2010 TMDL Consent Decree schedule was established. As much as 60% of the river and stream nonpoint source impairments in the Commonwealth are attributed to agricultural sources (*2008 Virginia Water Quality Assessment Report*).

The amount of implementation funding that is targeted for the Southern Rivers for the period of 2011 to 2025 is \$416 million. This amount includes a base or foundation funding level of \$7.4 million per year for implementation of the five priority practices and other BMPs previously described. The annual \$7.4 million from 2011 through 2025 equals a total of \$111 million. The difference between the \$416 million and the \$111 million (\$305 million) is the amount of funding directed to targeted TMDL implementation.

The funding will be targeted to watersheds that have a TMDL implementation plan that specifies the types of agricultural BMPs that must be implemented to meet water quality standards. These plans are generally based on a five year implementation period with documented phased implementation milestones. It is projected that 20 of the 39 impairments in the Atlantic Coastal Basin and 117 of the 253 impairments in the Chowan/Albemarle Sound, Roanoke, New, and Clinch Powell Basins can be supported with the level of funding totaling \$305 million from FY11 to FY25. This represents 48% (141 out of 292 water bodies) of the impairments in the Southern Rivers that are considered to be predominantly caused by agricultural nonpoint sources. In order to fully fund Southern Rivers watershed impairments, additional targeted appropriations would be necessary that would be in addition to the funds provided based on the percentage requirements in the VNRCF.

The number of impairments that can be supported for BMP implementation is based on an average implementation cost of \$1.2 million per impairment for the Atlantic Coastal Basin and \$2.4 million per impairment in the other Southern Rivers basins. The estimated costs were based on information from the 23 TMDL implementation plans DCR has developed to date, and data that has been obtained from 27 targeted TMDL implementation projects that are currently on-going with DCR oversight using state and federal funding.

The funding for the Southern Rivers impairments does give priority to the five priority practices; however additional practices will be funded based on the needs articulated in the implementation plans for TMDL waters. Overall, the calculation of needs is based on targeted TMDL work and the continuance of the cost-share program that directs at least 80% of funding to the priority practices.

SOUTHERN RIVERS AG BMP COST-SHARE FUNDING: PROJECTED NEEDS (in millions)

FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
\$14.8	\$16.3	\$17.9	\$19.4	\$21	\$22.8	\$24.3	\$25.9	\$27.4	\$28.9	\$36.3	\$37.9	\$39.4	\$41	\$42.5

Part 3: Projecting Funding Needs for SWCD Technical Assistance:

Funding Needs for FY 2011 through 2025:

Districts receive general fund appropriations from the Virginia General Assembly on an annual basis. Funds from line items within DCR’s budget enable the monies to support the operating expenses of SWCDs to include a share of the salaries paid to district staff. In addition, most districts receive financial support from the jurisdictions (counties and cities) that are contained within the district boundaries. Beyond these state and local funds, districts generate revenue to support their expenses through conservation equipment rental programs (such as no-till seeding drills), or the sale of items such as tree seedlings, bat boxes, and other conservation products.

DCR has in place through written agreements with each SWCD that they will:

“...Ensure staff implementing the Virginia Agricultural BMP Cost-Share Program, and other agricultural related programs, obtain the USDA Virginia NRCS conservation planning Level I certification within 18 months of employment with a SWCD (dependent upon availability of all required courses with a demonstration of good progress if 18 months is exceeded) and job approval authority for appropriate BMPs within the service area of the district. Conservation planning certification and job approval authority should be maintained thereafter. Depending on BMPs implemented by the SWCD, higher levels of conservation planning certification may be required.”

As a result, it takes an average of 2 years for new SWCD technical staff to obtain the expertise to effectively assist agricultural producers with BMP implementation.

The 8% of funding provided by VNRCF is specifically directed to the technical staffing necessary to deliver the agricultural BMPs funded by the remaining 92% of funds. Basic SWCD operational support is funded separately and if it declines it will impact the ability of districts to field adequate staff even at the authorized 8% VNRCF level.

For the purposes of this document, projections of costs associated with delivery of technical assistance by SWCDs continue to be based upon the 8% allowed through the VNRCF.

SWCD TECHNICAL ASSISTANCE IMPLEMENTATION FUNDING (in millions)

FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
\$3.2	\$3.5	\$3.9	\$4.2	\$4.5	\$4.9	\$5.3	\$5.6	\$5.9	\$6.3	\$7.9	\$8.2	\$8.5	\$8.9	\$9.2

Part 4: Summary of Total Cost Sharing/Technical Assistance Funding Needs:

TOTAL STATEWIDE FUNDING NEEDS (in millions)

FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
\$40	\$44	\$48	\$52	\$57	\$62	\$66	\$70	\$74	\$78	\$98	\$102	\$107	\$111	\$115

The combined total funding for the period FY11 through FY25 equals: \$1.123 billion

Potential Changes to Projections for FY11 - FY25 Funding :

The preceding funding projections are predicated predominately upon Virginia’s need for fulfilling Chesapeake Bay restoration commitments based on the loading reductions identified in Virginia’s tributary strategies. Changes are expected through the implementation of the Phase 5.3 Chesapeake Bay Watershed Model in support of the Chesapeake Bay TMDL. The new model will likely alter Virginia’s projection of numbers of needed BMPs and their nutrient/sediment reduction efficiencies. Funding projections can also be effected by changes in the agricultural economy, world markets, climate, weather events and a variety of other factors.

These points are critical towards an understanding that the projections of agricultural BMPs which are necessary to achieve the state’s water quality commitments will be changing in the years to come. With those changes the funding projections to carry out those BMPs will change and revisions to the levels of funding that are necessary to implement those BMPs should be expected.

Funding Needs Beyond FY25:

This document provides an annual, incremental framework to convey the funds that are necessary to fulfill Virginia’s needed reductions in agricultural nonpoint source pollution from fiscal year 2011 through 2025. Inherent in the reliance of state and federal financial incentives that support the cost of BMP expenses borne by Virginia farmers is the need for continued funding in the years beyond 2025. It will be necessary for the Commonwealth to maintain the nutrient and sediment reductions realized through 2025 from all sources of nonpoint source pollution. For agricultural BMPs, quantities of annual, agronomic practices like cover crops will be necessary through 2026 and beyond. Other BMPs that have multi-year lifespans must be replaced and continued in 2026 and the years that follow. These projections of funds that will be needed in 2026 and thereafter will be incorporated in reports in the years to come.