COMMONWEALTH of VIRGINIA

Chesapeake Bay TMDL
Phase I Watershed Implementation Plan

Revision of the Chesapeake Bay Nutrient and Sediment Reduction Tributary Strategy

November 29, 2010

PREAMBLE TO VIRGINIA'S PHASE I WATERSHED IMPLEMENTATION PLAN

The Chesapeake Bay is a national treasure and an ecological wonder. As Virginians, we are committed to ensuring a clean and vibrant Chesapeake Bay for future generations to cherish. We strongly believe a clean Bay is good for the economic well being of the State.

Since the submission of our draft plan on September 3, and EPA's response to the draft, we have been involved, along with EPA, in various stakeholder and public comment meetings across the state. During these sessions groups expressed their opinions and feedback on our draft plan. As a result, we have made substantial changes to the draft Plan after consultation with EPA, many stakeholders, and the public.

We have now crafted a good, amended plan that addresses the issues raised by EPA, and allows us to achieve pollution reductions absent "backstops" from EPA. However, the unexpected results of the most recent model run received from EPA on Tuesday, November 23 that showed a surprising allocation gap of more than a million pounds of nitrogen, force us to submit this plan as only an "initial submission." With only 14 work hours before the November 29 deadline we could not fully react to this very late data, although working through much of the holiday weekend we have been able to devise changes increasing the Wastewater Treatment load reduction significantly. Per discussions between Chuck Fox, EPA Senior Advisor to the Administrator for the Chesapeake Bay, and Martin Kent, the Governor's Chief of Staff, Virginia and EPA will continue to work to modify this plan over the next 7 to 10 days. These extra days will allow for additional model runs to identify ways to close this unexpected gap in the plan.

As we did in our draft plan, we must reiterate Virginia's concerns about the process, cost, legality, allocations, and compressed timing in the development of this plan. EPA asserts that it must develop the Bay TMDL by December 31, 2010 pursuant to the requirements of the Consent Decree entered in the case American Canoe Association et al. v. the United States EPA , 54 F. Supp. 2d 621 (E.D. Va. 1999). We note, again, that Virginia was not a party to that case, and the Consent Decree established a deadline of May 1, 2011 for the EPA to establish TMDLs for certain identified Virginia waters and pollutants if Virginia had not done so itself. This rush to completion has caused concerns in local governments and industry as well.

It is important to emphasize again that this plan is being developed during the worst economy in generations. Virginians have already invested billions of dollars in Chesapeake Bay water quality improvement to date. Full implementation of this plan will likely cost more than $7 billion new dollars which would be another federal unfunded mandate on the state, localities, private industries, and homeowners. In addition to the new health care law and other new regulatory burdens, it is placing enormous new fiscal stress on state budgets. However as a show of good faith, the Governor will include $36.4 million new dollars in our Water Quality Improvement Fund in his 2011 budget amendments. In these austere times, we cannot guarantee what additional funding will be provided by our General Assembly. It is our position that the success of the WIP may be subject to the provision of sufficient federal funding to assist in covering these massive new unfunded mandates.

As we indicated before, Virginia will move forward with the implementation of this plan with a clear focus on flexibility and cost effectiveness. For instance, it is our belief that an expanded nutrient credit exchange program will afford the same approach to other sectors, particularly urban stormwater and septic systems, and it will allow for decisions to be made across sectors in an orderly and cost-effective manner. Therefore Virginia will rely on principles of adaptive management taking advantage of new technology and low cost methods that may become available in the next 15 years to achieve our goals.

Again, Virginia must state its significant concerns with the nearly absolute reliance on management by computer model. While the Bay model has seen years of development it continues to experience flaws that call its outcomes into question. We are especially concerned that level of precision expected is far beyond what the model is capable of and fails to consider the economic consequences of its actions.

I would also call your attention to our proposed approach for the James River watershed. Because of its geographic location, the James has less impact on the water quality of the mainstem of the Chesapeake Bay than any other river. The James also is unique because of the chlorophyll standards that were adopted in 2005 with the concurrence of EPA. We believe that because sufficient new information is available for the James River, we should take the time necessary to review the James River numeric chlorophyll standards to ensure that they reflect the best science and regulatory approaches. Therefore, we have included a detailed plan to accomplish this review and amend standards if necessary prior to the scheduled revision of the TMDL in 2017. We will also consider developing a local chlorophyll-based TMDL for the James River. Our plan demonstrates that we will meet the 2017 target loads prescribed by EPA in all basins, including the James.

Based on all these issues, Virginia again reserves the right to adjust this plan based on new information such as conservation efforts currently implemented but not accounted for in the model, adverse economic impacts on business, funding availability from federal and other sources, and improved scientific methodologies.

We understand that our work will not end with the submission of our Watershed Implementation Plan. We will continue to work with EPA, stakeholders, and the public to ensure that our implementation improves water quality in a manner that is sensible, fair and cost effective as this process unfolds over the next 15 years. The Governor is fully supportive of all reasonable efforts to improve this great natural resource in conjunction with the leaders of the other Bay states.

Douglas W. Domenech
Secretary of Natural Resources
November 29, 2010
Richmond, Virginia

Virginia Watershed Implementaton Plan: TABLE OF CONTENTS

SECTION 1: VIRGINIA'S PLAN: OVERVIEW 1

1.1 Background and Approach to WIP Development 1
1.2 Guiding Principles for Virginia's Watershed Implementation Plan 2
1.3 Use and Limitations of the Chesapeake Bay Model 4
1.4 Stakeholder Engagement and the Stakeholder Advisory Group 4
1.5 Summary of Source Sector Strategies 4
Wastewater 4
Onsite/Septic 5
Agriculture 6
Urban Stormwater 7
1.6 James River Strategy 7
1.7 An Expanded Role for the Nutrient Credit Exchange 10
Overview of the Existing Nutrient Credit Exchange Program 11
Need for an Expanded Nutrient Credit Exchange Program 11
Expanding the Nutrient Credit Exchange Program 12
1.8 TMDL Overview and Introduction 15

SECTION 2: INTERIM LOAD TARGETS AND FINAL NUTRIENT AND SEDIMENT ALLOCATIONS 17

Table 2.1: VIRGINIA CHESAPEAKE BAY TMDL ALLOCATIONS: NITROGEN - 2025 [Million Pounds/Year] 17
Table 2.2: VIRGINIA CHESAPEAKE BAY TMDL ALLOCATIONS: PHOSPHORUS - 2025 [Million Pounds/Year] 18
Table 2.3: VIRGINIA CHESAPEAKE BAY TARGET LOADS: NITROGEN - 2017 [Million Pounds/Year] 19
Table 2.4: VIRGINIA CHESAPEAKE BAY TARGET LOADS: PHOSPHORUS - 2017 [Million Pounds/Year] 20

SECTION 3: Allocation process 21

3.1. Process for Developing Wasteload Allocations (WLAs) and Load Allocation (LAs) 21
3.1.1. Municipal Separate Storm Sewer Systems (MS4s) 21
3.1.2. Industrial Stormwater 21
3.1.3. Construction General Permit 22
3.1.4. Confined Animal Feeding Operations 22
3.1.5. Significant Wastewater Facilities 23
3.1.6. Non-significant Municipal Facilities 23
3.1.7. Non-significant Industrial Facilities 24
3.2. Table of Target Loads by Sector and Watershed 24
Combined Sewer Systems 27

SECTION 4 WASTEWATER 31

4.1. Current Programs and Capacity 31
Combined Sewer System 35
4.2. Accounting for Growth 37
Combined Sewer System 39
4.3. Gap Analysis 39

Combined Sewer System 40
4.4. Strategy to Fill Gaps 40
4.5. Contingencies 41
Combined Sewer System 41
4.6. Tracking and Reporting Protocols 42
Combined Sewer System 43
4.7 Outstanding Issues That Need To Be Addressed 44
SECTION 5 AGRICULTURE 45
5.1. Current Programs and Capacity 45
Agricultural BMP Cost-Share Program 45
Agricultural BMP Tax Credit Program 46
Agricultural Stewardship Act 46
Biosolids VPA Regulations 47
Chesapeake Bay Preservation Act 48
Nutrient Management Training and Certification Program 49
Nutrient Management Plan Requirement for State Owned Lands 49
Poultry Waste Permits 50
Precision Nutrient and Pesticide Application Equipment Tax Credit 51
Virginia Pollutant Discharge Elimination System Animal Waste Permits 51
Virginia Pollution Abatement (VPA) Animal Waste Permits 51
Virginia Revolving Loan Fund 52
5.2. Accounting for Growth 52
5.3. Gap Analysis 53
5.4. Strategy to Fill Gaps 53
Descriptions of Input Deck Levels and Practices 62
Resource Needs 65
Agricultural Stewardship Act 66
5.5. Contingencies 67
5.6. Tracking and Reporting Protocols 67
Agricultural Stewardship Act 69
5.7 ANIMAL FEEDING OPERATIONS/CONCENTRATED ANIMAL FEEDING OPERATIONS 69
5.7.1: Final Nutrient and Sediment Target Loads 71
5.7.2 Current Loading Baseline and Program Capacity 71
5.7.3 Accounting for Growth 74
5.7.4 Gap Analysis 74
5.7.5 Commitment and Strategy to Fill Gaps 74
5.7.6 Tracking and Reporting Protocols 77
5.7.7 Contingencies for Slow or Incomplete Implementation 77
5.7.8 Targets and Schedule for CAFO Permit Coverage 77
SECTION 6 URBAN/SUBURBAN STORMWATER 78
6.1. Current Programs and Capacity 78
Erosion and Sediment Control Program 78
Industrial Stormwater 78
MS4 Permit Program 78
Construction General Permit 81

Nutrient Management Training and Certification Program 82
Stormwater Management Program 82
Chesapeake Bay Preservation Act and Regulations 83
Virginia Land Use Authorities and Requirements - Title 15.2 –Chapter 22 - Planning, Subdivision of Land and Zoning 84
Virginia Water Facilities Revolving Fund 85
6.2. Accounting for Growth 85
6.3. Gap Analysis 88
6.4. Strategy to Fill Gaps 88
6.5. Contingencies 95
6.6. Tracking and Reporting Protocols 96
SECTION 7 ONSITE WASTEWATER/SEPTIC 97
7.1. Current Programs and Capacity 97
7.2. Accounting for Growth 103
7.3. Gap Analysis 104
7.4. Strategy to Fill Gaps 105
7.5. Contingencies 106
7.6. Tracking and Reporting Protocols 107
SECTION 8 FOREST 108
8.1. Current Programs and Capacity 108
Virginia Silvicultural Water Quality Law 108
Water Quality Complaint System 108
Education and Technical Assistance 108
8.2. Accounting for Growth 109
Traditional Growth Expectations 109
New Growth Potential on the Horizon 109
Monitoring and Inspections with Growth 109
83. Gap Analysis 110
8.4. Strategy to Fill Gaps 110
8.5. Contingencies 111
8.6. Tracking and Reporting Protocols 111
SECTION 9: RESOURCE EXTRACTION 112
9.1. Current Programs and Capacity 112
9.2. Accounting for Growth 113
9.3. Gap Analysis 113
9.4. Strategy to Fill Gaps 113
9.5. Contingencies 113
9.6. Tracking and Reporting Protocols 113
SECTION 10: OTHER MANAGEMENT PROGRAMS 115
Shoreline Erosion Advisory Service 115
Virginia Clean Marina Program 115
No Discharge Zone Program 116
Wildlife Management 117
Restoration of Oysters and other filter feeders 118
Reduction in Air Deposition 118
Implementation of Alternative Technologies 118

APPENDIX 1– TARGET LOAD AND REDUCTION TABLES BY SOURCE-SEGMENT FOR 2017 AND 2025 119
APPENDIX 2 JAMES RIVER CHLOROPHYLL STUDY 120
APPENDIX 3: DEVELOPMENT OF PHASE I WATERSHED IMPLEMENTATION PLANS AND PUBLIC PARTICIPATION 128
3.1. Webinars and Public Meetings 128
Webinars 128
Public Meetings 128
3.2. Expert Panels 128
3.3. Stakeholder Advisory Group 129
3.4. Websites and Technology Based Outreach..... 131
Appendix 4 AGENCY CONTACT INFORMATION 133