
Maryland Phase II WIP Comment Response Document

Addressing comments received during the public comment period
for the Draft Maryland Phase II Watershed Implementation Plan
January 25 through March 9, 2012



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1. Commenters

Commenter #	Author	Affiliation
C1	Don Mulrine	Private citizen
C2	Barry Miller	Private citizen
C3	Gary J Thuro	Private citizen
C4	Wesley Cox	Private citizen
C5	Dale Anderson	Private citizen
C6	Deborah Holden	Private citizen
C7	Robert W. Poling	Private citizen
C8	Morita Bruce	Private citizen
C9	Anonymous	
C10	Mareen D. Waterman	
C11	David Flores	Private citizen
C12	Greg Cantori	Private citizen
C13	Richard Outen	Private citizen
C14	Bob and Dyanne Welte	Private citizen
C15	Doug Valentine	Private citizen
C16	Calvert County Board of County Commissioners	Calvert County
C17	The County Commissioners of Kent County	Kent County
C18	Prince George's County	Prince George's County
C19	Samuel Owings	Private citizen
C20	W. R. Carter, III	Private citizen
C21	Kathleen Starghill-Sherrill and Karen Lewand	Baltimore Chapter American Institute of Architects
C22	Thomas Hughes	Private citizen
C23	Darin Crew, C.P.H.	Private citizen
C24	Carlton Haywood	Maryland's Watershed Implementation Plan Stakeholder Advisory Committee
C25	Robert G. Hoyt	Montgomery County Department of Environmental Protection
C26	Matthew Candland	Carroll County Water Resource Coordination Council
C27	Mike Logothetis	Private citizen
C28	Terry R. Matthews	State Water Quality Advisory committee
C29	Theaux M. Le Gardeur	Gunpowder Riverkeeper
C30	John Bolinski	Private citizen
C31	Thomas T. Alspach	Talbot Preservation Alliance
C32	Evan Branosky and John Talberth	World Resources Institute
C33	Vanessa A. Finney	Maryland Nursery and Landscape Association
C34	Jim Long	Mattawoman Watershed society
C35	Heather L. Forsyth	Chester River Association
C36	Allegany county	Allegany county
C37	Dru Schmidt-Perkins	1000 Friends of Maryland
C38	Stuart Stainman	Private citizen
C39	Janice Wiles	Friends of Frederick County
C40	Marcy D. Ramsey	Chester River Association
C41	Jennifer Dindinger	Choptank Tributary Team

Commenter #	Author	Affiliation
C42	Pat Pudalkewicz	Harford County Department of Planning & Zoning
C43	James M. Irvin	Howard County Department of Public Works
C44	Adam Lindquist	Waterfront Partnership of Baltimore, Inc.
C45	Steve Stewart	Baltimore County Department of Environmental Protection and Sustainability
C46	(combination of organizations)	Maryland's Eastern Shore
C47	Nikki L. Tinsley	Citizens Advisory Committee
C48	Storm Water Association of Maryland	Storm Water Association of Maryland
C49	Maryland Association of Municipal Wastewater Agencies, Inc.	Maryland Association of Municipal Wastewater Agencies, Inc.
C50	Cecil County Department of Public Works	Cecil County Department of Public Works
C51	Tom Leigh, Drew Koslow, Tim Junkin	Midshore Riverkeeper Conservancy
C52	Eliot Powell	Maryland State Builders Association
C53	Claudia Friedetzky	Maryland Chapter of the Sierra Club
C54	Steve Raabe	Anne Arundel County Watershed Stewards Academy
C55	Department of Defense	Department of Defense
C56	Choose Clean Water Coalition	Choose Clean Water Coalition
C57	Bonnie Bick	Private citizen
C58	Steven Worrell	Private citizen
C59	Sassafras River Association	Sassafras River Association
C60	Alison Prost and Jenn Aiosa	Chesapeake Bay Foundation
C61	Beth Mullin	Rock Creek Conservancy
C62	Marcus Griswold	Blue Water Baltimore, Scientific and Technical Advisory Committee
C63	Emily Thorpe	Private citizen
C64	Court Hugo and Michael J. Pieper	KCI Technologies
C65	Kimberly L. Burgess	City of Baltimore Department of Public Works, Bureau of Water and Wastewater
C66	Michael Moulds	Dorchester County
C67	Corey W. Pack	Talbot County Council
C68	Curtis Coon	City of Havre de Grace Planning Commission
C69	Gerald W. Winegrad	Senior Scientists & Policymakers for the Bay
C70	Diana Cohen	Private citizen
C71	Shannon Moore	Frederick County, Community Development Division, Office of Sustainability and Environmental Resources
C72	Rupert Rossetti	Private citizen
C73	Halle Van der Gaag	Blue Water Baltimore
C74	George Kaplan	Private citizen
C75	George and Margaret Anzalone	Private citizen
C76	Nathaniel K. Brown	Maryland Port Administration
C77	Kyle Huthison	Private citizen

2. General Objection

a. Schedule

Comment # 1.

Commenter: C69

The commenter is disappointed that Maryland has postponed their implementation deadline to 2025.

Response: There were very practical problems with meeting the 2020 target. Although it is only five years, compared to the three years to 2020 after the 2017 reevaluation, the eight years to 2025 makes a big difference. That five years meant much higher annual costs and practical problems with State and local feasibility studies, design and procurement processes.

b. Implementation/Reasonable Assurance

Comment # 2.

Commenters: C37, C53, C56, C69

The commenters suggest that the Phase II WIP should be a mechanism for accelerating implementation of restoration strategies and be backed up by reasonable assurances that certain actions will happen within a certain time and water quality goals are met. They believe that the Phase II WIP does not provide reasonable assurance that the implementation will occur to meet the 2025 goal and that that the necessary nitrogen, phosphorus, and sediment reductions will be met.

Response: The WIP with the milestones, public review and revised permits provides, in combination with EPA oversight and commitment to consequences, appropriate reasonable assurance.

Comment # 3.

Commenters: C22, C31

The Basin Model should be abandoned because it lacks individual responsibility, objective and quantifiable reduction targets, and no political entity has the ability enforce pollution reduction practices to ensure goals will be achieved. Instead counties should be responsible for loading targets separated by county and sector (especially agriculture and urban).

Response: While Maryland will be reporting to EPA on a Basin scale, that reporting will be based on aggregation of county level reporting. The State will continue working with the counties and tracking progress at the county scale.

Comment # 4.

Commenter: C40

The commenter states that agriculture is the largest source of pollution on the Eastern shore, and would like to make sure the Phase II WIP has the capacity to achieve reduction targets in that sector. They suggest that the WIP include a schedule that shows an increasing rate of implementation.

Response: Of the four sectors, only wastewater and agriculture provided complete strategies. Maryland Department of Agriculture has a very complete plan to achieve its targets. Agricultural implementation is generally tracked monthly by BayStat.

c. Problems with achieving

Comment # 5.

Commenter: C34

While the commenter supports the stormwater retrofit strategy, they believe that the expected rate of implementation might be unrealistic. They note the Interim Target for reducing stormwater pollution relies, in part, on “stormwater retrofitting” 20 percent of untreated impervious surface within the 5-year cycle of an MS4 permit. For example, Charles County renewed its MS4 permit in 2002, which required 10 percent of untreated impervious cover to be retrofitted within the 5-year cycle. As of 2010, their implementation rate was roughly 4 percent per cycle. They suggest that the WIP II should justify the realism of the goal or provide strategies to reduce the stormwater component if the stormwater retrofitting falls behind schedule.

Response: Those discussions will occur through the permitting process. Legislation passed this year (2012) to require local stormwater utilities to fund Phase I county permit requirements will greatly help.

Comment # 6.

Commenter: C47

The commenter notes that the stormwater sector will bear an extraordinary burden compared to other sectors. They recognize that the state has acknowledged this in the WIP by allowing an MS4 to comply with the retrofit/restoration requirement using an alternative approach.

Response: It is true that costs per pound for stormwater nutrient reductions are high and why flexibility has been provided. In addition, various trading approaches can reduce the burden significantly if local governments wish to pursue those options. However, (1) explicit permit requirements must still be met, and (2) there is significant local benefits in stream restoration and other restoration activities.

Comment # 7.

Commenter: C52

The commenter points out that the draft WIP requirement to retrofit existing urban areas will increase the cost of urban stormwater management and suggests that will make agricultural nutrient management more cost-effective. They also suggest that all necessary wastewater infrastructure should be completed first before a wide spread retrofit program is implemented.

Response: There are currently opportunities for local governments to pursue various trading strategies to lower costs. We cannot take a sequential approach, first wastewater, then stormwater approach. Continuous incremental progress from all sectors is necessary.

Comment # 8.

Commenter: C15

The commenter is overall disappointed in the current TMDL WIP procedure. The goal for Enhanced Nutrient Management strategy by 2025 is that the application of nitrogen will be reduced by 50% on 175,000 acres of pasture. In reality, there will be much less pasture land acres that that may already be fertilized that would allow for reduced nutrient application.

Response: The model addresses availability of a given land use for each practice. If sufficient pasture is not available for Enhanced Nutrient Management, then alternatives will be found through the adaptive management process.

Comment # 9.

Commenter: C22

The commenter states that the agriculture sector is the largest source of nutrient and sediment pollution and that there is a lack of action in that sector. They are concerned that the State's decision not to mandate significant reforms in the agricultural sector will fail to improve water quality by 2025.

Response: It is not true that there is a lack of action from agriculture. In 2011 they had the highest implementation of cover crops, significant progress has been made on revising the P-site index, and new nutrient management regulations have been proposed.

Comment # 10.

Commenter: C20

The commenter recognizes the EPA's watershed model does not work as reliably at small scales as the basin level. The commenter suggests that MDE should include current loadings by subwatershed. They suggest that as local governments develop plans and strategies, including BMP locations, the focus will need to be on the subwatershed boundaries rather than political boundaries, which may require coordination between multiple counties or states.

Response: Each county has been assigned allocations based on the aggregation of individual model cells. MDE can aggregate these cells at the subwatershed level to evaluate progress.

Comment # 11.

Commenter: C69

The commenter notes that a complete and detailed strategy with a timeline does not appear in the Phase II WIP document, as promised in the Phase I WIP in 2011. The commenter notes that the agricultural sector has had difficulty achieving nutrient and sediment reductions after 26 years of funding enhancements for voluntary practices, and they believe the state is not taking all the necessary to control stormwater from developed areas and mandatory, enforceable regulations are needed for success. The document does not adequately address nonpoint source pollutants and lacks specific requirements, detailed measures, and how necessary funding will be provided. The draft Phase II WIP does not adequately deal with future growth, how pollution caps will be maintained, and there is too much reliance on offsets and trading. They are concerned with realistically being able to meet the projected nitrogen and phosphorus targets from WWTP and nitrogen reductions from septic systems by 2025.

Response: Expecting a complete and detailed strategy with a timeline for a 13 year projects, involving numerous public and private entities, uncertain funding and other complications is not realistic. Through permitting processes for stormwater and CAFOs, and specific legislation such as the BRF, septic and stormwater utility legislation passed in 2012, Maryland will assure adequate progress will be made.

Comment # 12.

Commenter: C74

The commenter suggests removing Figure 1 on page 5 because it is “disconnected from reality”. They refer to the county plans in general, and recognize that there are some “good” county plans, but most need improvements. The State is relying on counties to carry out specific actions to achieve the State’s goals; however, the commenter is not confident that counties will achieve the required goals. Counties are reluctant to commit to actions due to uncertainties in funding. The commenter suggests that the connection and gaps between the State’s TMDL goals and the county plans be addressed.

Response: Subsequent revisions of key county stormwater permits in conjunction with required stormwater utilities will meet the goals.

Comment # 13.

Commenter: C29

The commenter believes that the methodology and science presented in the Maryland Phase II WIP shows a preference for obtaining reductions of nitrogen, phosphorous and sediment that, while consistent with the Bay model, are not necessarily protective of local waterways also protected under the Clean Water Act.

Response: The Bay TMDL and WIP are not intended to be comprehensive. They are one tool, for 3 forms of pollution. The TMDL process, permits, and other processes are required to address other forms and sources of pollution.

d. Equality between sectors; e.g. urban and agriculture

Comment # 14.

Commenter: C19

The Phase II WIP plan focuses on urban stormwater runoff, and the commenter would prefer to see similar attention to the agriculture section.

Response: It does not “focus” on urban stormwater runoff. Stormwater, septic and agriculture were treated identically in formulating allocations. In fact, more attention is focused on agriculture because there are many more types of BMPs available for reductions from agricultural sources.

3. General Support

***NOTE:** In addition to the individual comments on the draft Phase II WIP addressed in this document, MDE also received over 1,300 emails from citizens across the State expressing their enthusiastic support for EPA and Maryland’s efforts to restore the Chesapeake Bay and the State’s local streams and rivers. Of these, about 124 conveyed individual messages of support and urgent need for the WIP. About 1,192 emails conveyed identical comments of support but also urged Maryland to develop a strong Phase II WIP by: ensuring agricultural plans are robust; holding local governments accountable for implementing Bay TMDL reduction actions; providing clearly articulated “backstops” detailing consequences the state will impose if they don’t; and including more specific information about where targeted pollution reduction activities are expected to occur.*

Comment # 15.

Commenters: C2, C6, C8, C11, C17, C20, C21, C23, C24, C34, C35, C37, C38, C39, C40, C41, C44, C45, C46, C47, C51, C53, C56, C58, C59, C60, C64, C67, C69, C71, C73, C75

The above commenters expressed supportive remarks. Many noted support for the WIP process (including goals of cleaning up/restoring the Bay)/EPA/Maryland MDE/the TMDL. Several commend the effort of the State, MDE, local governments, MDA, NRCS and/or EPA Region 3. Several noted they believe that MDE/the WIP is in the right direction, and/or will help improve the Chesapeake Bay. A commenter believes that Maryland’s WIP provides a balanced approach to addressing nutrient and sediment load allocation. The commenters support the State’s effort to coordinate watershed management efforts with local jurisdictions, stakeholders, neighboring states. Several commenters join MDE’s commitment to clean water, and look forward to working with MDE, including assisting with implementation of the WIP.

Although some commenters support the WIP, they also suggested that improvements to the Draft Phase II WIP are necessary, or provided additional suggestions. One mentioned the need to exert strong leadership and adopt the necessary regulatory and funding measures to achieve the TMDL, and provide an example for other states.

One commenter appreciate the efforts to keep the public informed, involved and to make the process as open and transparent as possible, and several thank MDE for the opportunity to comment on the WIP.

Response: Maryland has exerted strong leadership as exemplified by the successes of the 2012 legislative session. The public can remain informed through the BayStat website and a federal Chesapeake Bay Tracking site that provides a similar function Bay-wide.

Comment # 16.

Commenters: C11, C23, C53, C56, C37

The commenters believe that in addition to improving the quality of the Chesapeake Bay via implementing the TMDL, it will also promote job growth; create more robust and sustainable local and state economies; produce healthier and stable communities; and protect recreational resources. Commenter C23 believes that a clean bay will sustain and grow the economy and ensure future generations learn to respect our environment.

Response: Agreed.

Comment # 17.

Commenter: C28

The Draft WIP does an excellent job outlining Maryland's capacity and limitations to meet the Bay TMDL. The adaptive management approach allows for improved techniques and science to refine the implementation strategy to meet the TMDL. The administration, coordination and outreach by the State during the WIP II development process are commendable. The economic benefits and job creation discussion are timely and profound. The "Cost Analyses and Funding Studies for Maryland's Phase II WIP" in Appendix C provides a scientific basis for establishing stormwater fees for counties, which can be used to generate necessary financing. The 'Task Force on Sustainable Growth and Wastewater Disposal' generated comprehensive recommendations. Adoption of these recommendations will be vital to gaining the financing necessary to meet the TMDL.

Response: Agreed.

Comment # 18.

Commenter: C40

The commenter recognizes that this process is going to be difficult and expensive and urges that direct county involvement continue to play a major role in the process.

Response: Agreed.

Comment # 19.**Commenter: C73**

The commenter encourages continued rigor and commitment to technical analysis and implementation details to ensure these plans are meaningful and enforceable. The Phase II WIP is challenged when it comes to allocating the correct loads in more urbanized areas of the State, particularly as it relates to managing and mitigating the impacts of stormwater. The commenter hopes that the WIP process and related funding requirements will help to accelerate innovation in the design and implementation of new technologies to help meet the needs of the built environment. Such innovation must be fostered, encouraged and incentivized by the EPA and MDE, and research for the design/implementation and monitoring of new practices must move quickly to help meet WIP and Permit timelines. Local jurisdictions must be able to receive credit for these practices if proven effective through monitoring data.

Response: Agreed.

Comment # 20.**Commenter: C25**

The commenter supports Maryland's decision to match the EPA timeline. The commenter suggests that the WIP document should note that the local plans were developed with the old timeline of 100 percent implementation by 2020, so they need to revise their planning projections.

Response: Opportunities to revise the plans have been provided between March and July of 2012.

4. Cost

a. Need to account for...

Comment # 21.**Commenter: C65**

A statement should be added to page 66 to the *capacity building* section recognizing the potential for increased costs due to the demand for labor and material resources within the state resulting from a significant increase in capital projects. While technology might decrease costs, the availability of labor, materials, and suitable implementation locations might offset any of those decreases.

Response: It is currently anticipated that the various jurisdictions will pursue different time frames and acceleration rates for their restoration projects. While there is the potential for increased costs, given the current economic conditions we expect at this time, that capacity to design and build these projects is sufficiently available that costs will not rise significantly because of excess demand.

Septics

Comment # 22.

Commenter: C9

The cost estimates from local governments are overestimating the true cost of WIP implementation, specifically regarding septics. The E3 approach is not presenting an accurate picture of what will realistically occur, and therefore hindering WIP implementation.

The commenter suggested criteria to determine septic improvements based on geography, upgrades, and replacements. They suggest that septics too far from WWTPs should not be considered for hook up, due to high costs and should be considered for upgrading or replacing with denitrification technology. The state needs to establish a common approach that local governments can use for more accurate implementation cost estimates.

Response: We agree that in some case local cost estimates are probably high. E3 is not used to determine what will actually occur, but provides an extreme estimate of what could occur. The decision on what septic systems to hook up and which to upgrade is a local decision.

Comment # 23.

Commenter: C25

Montgomery County suggests evaluating septic allocations and considering what strategies would be cost effective to reduce those loads. They are in the process of determining the resources necessary and potential funding sources to develop a comprehensive approach to address issues associated with County septic systems.

Response: That is a valid and productive approach.

Comment # 24.

Commenter: C38

The current rate of subsidies to upgrade septic systems is not sufficient. If the bill setting up tiered development areas fails, than regulation of septic systems should require all new septic systems to include BAT to remove nitrogen, and require replacement septics to have enhanced nutrient removal.

Response: Regulations addressing these issues have been proposed.

Comment # 25.

Commenter: C42

Local governments will need adequate time to set up a system in their budgets to receive, manage, and report funds. (Page 38, 3rd bullet) Is there a local match requirement for use of the BRF?

Response: Local governments should already have such systems as most receive at least some State funds. The WIP outreach process has emphasized the need to address resource needs for multiple

projects. MDE's Water Quality Infrastructure program should be contacted regard BRF requirements.

Comment # 26.

Commenter: C58

The commenter suggests the use of popular media to publish estimates for annual pounds of nitrogen per person entering the bay from municipally treated wastewater compared to septic systems. They believe this strategy will provide information that would help explain the high costs associated with septic system strategies based on nutrient loading rates.

Response: That information is available on the BayStat website, which is available to the media.

Comment # 27.

Commenter: C71

In Frederick County 15,500 of the 36,000 septic systems would require retrofitting for an estimated cost of \$186,000,000. Flush tax funds 15 system upgrades per year. MDE should consider more cost-effective methods to meet septic sector loading targets.

Response: Frederick County should examine opportunities for more cost effective approaches and modify its WIP strategy appropriately.

Comment # 28.

Commenter: C74

Upgrading septic systems is very expensive that most homeowners would find the option undesirable. New denitrification systems require yearly maintenance. The WIP suggests approximately 200,000 septic upgrades with an associated cost of over \$2.5 billion. If the new systems are not properly maintained, their discharge will be comparable to traditional systems. The commenter suggests requiring only new systems use enhanced nutrient removal technology and doubling the current pace of upgrades in the Critical area (focusing on failing septic).

Appendix A indicates that 46,300 septic systems are in the Critical Area, with 6,500 to be connected to WWTPs. The WIP does not indicate where the remaining 150,000+ septic upgrades are or why they are considered cost-effective. The septic plans should be made explicit or scaled down because they are considered a public investment.

Response: New systems will be required to use new technology. That does not reduce the load from existing systems. It will be required that homeowners provide proof that systems are being properly maintained. It is up to local governments, in constructing their strategies, to decide what mix of reductions they wish to use.

General BMPs

Comment # 29.

Commenter: C20

Appendix A, Section 5 Agriculture, Part M Vegetated Open Channels, page A-38 —The funding strategy states “re-establishment of funding for public drainage association maintenance activities...” Caution should be undertaken with extreme care. Most of the maintenance activities on PDA ditches consist of mowing the banks or dipping out sediment deposits from the ditch, which increases delivery of dissolved or suspended nutrients downstream.

Response: As of 2000 the Public Drainage Association Assistance program was retooled based on recommendations of the Public Drainage Taskforce. Cost Share funding is provided for environmental friendly projects like wetland enhancements, algae turf scrubber, hydro modification, etc. No funding is provided for mowing or sediment dipouts.

Comment # 30.

Commenter: C42

Many of the existing BMPs were selected based on the ease of construction/implementation. Examples of contributing factors for construction include: located on public land, ease of access, addressed public safety issues, or addressed an impact to public infrastructure. As local governments begin to implement the more challenging BMPs, costs are anticipated to escalate.

Response: The less expensive, more readily available activities will of course, occur first.

Urban stormwater

Comment # 31.

Commenter: C61

Restoration projects have important economic benefits. Economist Dennis King of the Maryland Center for Environmental Sciences had the following observation: “Stream restoration projects tend to be more labor intensive than upgrades to waste water treatment plants and therefore generate more direct jobs per dollar spent. Because they also involve purchases of more local inputs in the form of earth moving, stones, plant material etc. they also tend to generate more indirect jobs per dollar spent. Besides providing more ancillary ecosystem service benefits using stream restoration to achieve water quality goals will generate more local and regional jobs.”

Response: No comment needed.

Comment # 32.

Commenters: C25, C48, C65

The estimated urban stormwater retrofit/restoration strategy costs are too low. Appendix C and the average cost for urban BMPs of \$12,500/acre/year. The commenters believe that this figure is an

order of magnitude lower and suggests a more accurate cost be used or a more clear explanation of how the number was calculated. This estimate is lower than the WIP I estimate of \$18,500/acre and significantly lower than the Center for Watershed Protection's estimate of \$88,000/acre. These figures include construction, operations and maintenance, but not the cost of land, E&S costs on extractive land, street sweeping, mine reclamation, and shoreline erosion control. One commenter recommends adding a sentence to page 46 noting that the costs are significantly higher in established urban areas.

Response: At this time these costs are estimates and will likely be modified in the future. MDE's cost estimate included actual costs reported by counties for retrofits required under current MS4s, and they will be modified going forward with actual experience. It must be understood as well that costs will vary widely between the jurisdictions because of land costs, labor costs and BMPs chosen.

Comment # 33.

Commenter: C48

The proposed retrofit/restoration requirements for urban stormwater are unaffordable or unattainable. Additional data suggests that the costs would be \$700 to \$1,800 per household per year.

Response: Some counties have suggested such high costs, then realizing they had more flexibility than they had previously understood, realized initial estimates were probably too high. MDE expects that as approaches are evaluated in more detail, lower cost alternatives will be found.

Comment # 34.

Commenter: C42

The WIP does not mention urban stormwater monitoring costs. Land acquisition costs and required post-construction monitoring have the potential to add significant costs to implementation of urban BMPs.

The commenter supports MDE working with stormwater professionals and the CBP Urban Stormwater Workgroup to assess new strategies to help reduce costs for urban stormwater, in addition to MDE's plan to convene a group of experts to identify the most cost effective practices to achieve retrofit requirements. They recommend that the same approach to innovative septic system strategies be pursued.

Response: Stormwater monitoring costs are a requirement of the stormwater permit and would be required regardless of the WIP. Land acquisition costs were not evaluated because they are site-specific and vary too widely. MDE fully supports an adaptive management process, and is open to subsequent revision of strategies as long as a satisfactory pace is maintained.

Comment # 35.**Commenter: C60**

The State must guide the way for securing revenue streams or outright require their development by local jurisdictions. The WIP is lacking a firm commitment from the State to generate sustained, dedicated revenue streams for meeting MS4 and WIP stormwater reductions locally. In the final Phase 1 WIP, the State committed to pursuing “a statewide system of fees” for local jurisdictions that have not adopted fees by the end of 2012.

Response: Subsequent to this comment the State has passed legislation doubling the Bay Restoration Fee and requiring local jurisdiction to develop stormwater utilities.

Comment # 36.**Commenter: C64**

The commenter supports the implementation of the Task Force on Sustainable Growth recommendations relating to Increasing BRF Revenue and a Revised Authorized Uses of BRF for the purpose of planning, design and project management support for implementation of projects which reduce sediment and nutrients from urban lands. The commenter mentions that that a regular and reliable source of funding is needed for urban sources.

Response: They are being implemented through legislation and regulation.

Municipal wastewater treatment plants**Comment # 37.****Commenter: C49**

Additional marginal reductions in POTW WLAs would not be cost-effective. The additional reductions would result in higher costs with diminishing benefits, along with potentially detrimental environmental impacts.

Response: In comparison to cost-effectiveness to reach 4 mg/l at larger POTWs, additional marginal reductions at POTWs may not appear cost effective. But in comparison to costs for nutrient reductions through stormwater controls or septic systems upgrades, additional marginal improvements from more intense process management at large plants, use of land application, and upgrade of minor POTWs could appear to be very cost effective.

Comment # 38.**Commenters: C59, C17**

State funding (i.e., BRF) for minor WWTPs upgrades should be made available. Upgrades to ENR may help reach local water quality targets, but require financial assistance. Funding should be prioritized based on need and consistent with state mandates imposed.

Response: Once bonds for upgrades of the major treatment plants are paid, this may be possible.

Comment # 39.

Commenter: C62

There is a need for a dedicated funding source and funding for WWTP upgrades is dependent on amending the Bay restoration Bill. Additional aspects should also be considered during upgrades, including water reuse, and evaluation of risks due to climate change.

Response: The Bay Restoration fee increase has been passed. Climate change is currently beyond the scope of the WIP, but is being considered by the State in other contexts.

Comment # 40.

Commenter: C13

The commenter states that they do not support the State's goal to increase revenues for the flush tax. Will the State absorb costs as a result of software modification and additional time required to set up a more complicated billing system or for the State to take responsibility for monitoring usage and billing? Customers may not understand the fee increase. The contents of the Bill and anticipated consequences (fee increases) should be better explained.

Response: As the bill passed there should be minimal modification needed, since the original fixed cost framework has been maintained.

Agriculture

Comment # 41.

Commenters: C46, C69

The WIP must estimate the necessary resources for making new staff (need for engineering and technical resource demands in agricultural sector) operational, including cost projections and strategies for securing funding. The draft WIP lacks any plan for how this major increase in personnel will be funded.

Response: The Maryland Department of Agriculture is looking into this and we are looking for various allocations of State and federal funds.

b. Feasibility issues

Comment # 42.

Commenter: C2

Who will pay for these plans, with cost estimates of almost \$10,000 per household?

Response: Those costs are likely grossly overestimated, but there will costs that will be passed on. This is not optional issue. Federal law requires that streams and rivers meet water quality standards.

Comment # 43.**Commenters: C1, C16, C25, C42, C67, C43**

Implementation costs cannot be supported by local taxes and resources, so state and federal funding is needed. Commenter C43 notes that the draft WIP identifies the goal of treating stormwater runoff from 20 percent of untreated impervious areas, and mentions that achieving the goal is dependent on many issues including adequate funding from federal, state, and local sources. Commenter C42 specifically mentions funding cuts for the Federal Wildlife Habitat Incentive Program and NOAA's programs (such as the Chesapeake Bay Interpretive Buoy program and oyster restoration projects).

Response: There is already significant state and federal funding being provided. Typically the types of projects suggested are relatively small compared to the implementation funds needed. Dropping those projects will not significantly advance the Bay restoration and might harm it (oysters eat algae and remove nutrients from the system).

Comment # 44.**Commenter: C31**

It appears that by eliminating lawn fertilizer nitrogen could be reduced by an amount greater than what is now proposed under existing urban and septic scenarios, costing nothing. Talbert County needs \$100 million in support of the BMPs under consideration, which is not realistic to believe that that will occur.

Response: In 2010 a fertilizer bill passed that should help achieve cost-effective reductions.

Comment # 45.**Commenter: C16**

Calvert County notes that the costs associated with meeting allocations are untenable and cannot be passed on to their citizens. They question if the Plan can realistically meet the TMDL when multiple counties have indicated they are unable to afford the implementation costs. The 25 percent increase in BRF funding distributed to the counties seems low, considering implementations actions to meet reductions occur at the local level. BRF monies distributed to the counties should be increased. The legislative proposal to double the BRF and require Counties to develop a stormwater utility, in addition to state and federal grants, would help the County, but would not offset costs to a reasonable level

Response: The BRF fee increase has passed and will help. Because of the inherent uncertainties, however, the State urges local jurisdictions not to be overly concerned about the total costs at this time, but rather to focus on the nearer term. Even if you believe that the total cost is untenable, that should not stop you from moving forward with what you can do now. In the future, increased funding or model changes may make the 2025 goal more attainable IF we prevent conditions in the Bay from getting worse by accelerating restoration progress now. The most important issue at this time is to demonstrate progress toward the goal, rather than certainty that the goal will be achieved.

Comment # 46.

Commenter: C2

Industries will be unable to financially handle multiple concurrent major regulatory changes besides this plan and the Bay TMDL, including MACT, Greenhouse Gas Emissions, OSHA silica rules.

Response: Typically industry will not encounter regulatory changes due to the WIP. The primary impact will be the review and revision of discharge permits on the regular five year schedule.

Comment # 47.

Commenter: C7

A citizen in Calvert County strongly disapproves of the County's estimated costs of over one billion dollars. They suggest the State identify, prioritize, and proceed with the most important goals and actions, rather than mandate the entire set that would be unaffordable and unachievable.

Response: Agree.

Comment # 48.

Commenter: C52

BRF and stormwater fees will not be adequate to cover costs of the Bay clean up. The TMDL/WIP program will need the financial benefits that come from new development.

Response: Agree

Comment # 49.

Commenter: C17

Kent County is concerned that costs to implement local practices is unattainable, and believe that implementation of the WIP over the long term will be limited by costs.

Response: The WIP is a planning effort with regulatory implications, but like any planning effort, it isn't perfect. Because of the inherent uncertainties, however, the State urges local jurisdictions not to be overly concerned about the total costs at this time, but rather to focus on the nearer term. Even if you believe that the total cost is untenable, that should not stop you from moving forward with what you can do now. In the future, increased funding or model changes may make the 2025 goal more attainable IF we prevent conditions in the Bay from getting worse by accelerating restoration progress now. The most important issue at this time is to demonstrate progress toward the goal, rather than certainty that the goal will be achieved.

Comment # 50.

Commenter: C35

The commenter acknowledges that costs are a significant issue, and suggests strengthening the WIP with more funding to support agricultural BMPs.

Response: The WIP itself cannot address funding, that is legislative authority. Nevertheless, in 2012 the General Assembly doubled the Bay Restoration Fee, passed a mandatory stormwater utility fee, and approved the Governor's budget for the Chesapeake and Coastal Bays Trust Fund.

Comment # 51.

Commenter: C48

The commenter questions that the cost estimates are reasonable and whether the MS4s will be able to comply with retrofit/restoration requirements. The WIP suggests local governments will be expected to bear nearly all of the financial obligations for implementation, with only some covered by the State and federal governments. The proposed \$27.8 increase in the State's budget is insufficient and that future federal funding is unpredictable. The commenter suggests the State provide (and include in future Phase I and II permits) a framework evaluating cost feasibility for a locality similar to considerations of MEP involved in the MS4 permitting process.

Response: The WIP is a planning effort with regulatory implications. Because of the inherent uncertainties, the State urges local jurisdictions not to be overly concerned about the total costs at this time, but rather to focus on the nearer term. Even if the total cost is untenable, that should not stop you from moving forward with what you can do now. In the future, increased funding or model changes may make the 2025 goal more attainable IF we prevent conditions in the Bay from getting worse by accelerating restoration progress now. The most important issue at this time is to demonstrate progress toward the goal, rather than certainty that the goal will be achieved.

Comment # 52.

Commenter: C61

The Plan does not include either incentives or disincentives to ensure full funding. The State's intention to check funding status in its 2013 Plan review does not contain measurable milestones. It is not clear whether the Governor's Task Force on Sustainable Growth and Wastewater Disposal's recommendation to establish a cost sharing agreement between state and local governments has or must be adopted by local governments.

Response: The threat of EPA consequences provides an incentive for full funding. The measurable milestones are with respect to the rate of implementation, not funding. If milestones are not met, increased funding may be required to avoid even more costly EPA actions.

Comment # 53.

Commenter: C67

The State Plan needs to include sufficient flexibility to permit load trading among all the sectors to enable counties to produce the maximum pollution reduction for the funds expended.

Response: That flexibility is available.

Comment # 54.

Commenters: C25, C52, C67

A focus on BMPs that are cost effective per pound of pollutant reduced should be emphasized through coordination with stakeholders to implement cost-effective BMPs. Prioritize planned activities by cost effectiveness.

Response: The most cost-effective BMPs may have limited applicability or not be applicable in many locations. In general, the most-effective BMPs have been chosen.

Comment # 55.

Commenter: C32

One hurdle for MS4s or other entities implementing BMPs is cost. The cost associated with implementing BMPs is substantial in an absolute sense and relative to county or municipal operating budgets. Unit costs (e.g., reductions per acre, volume unit, pound of nutrient reduction) are extremely high (estimated \$804/pound of TN).

Response: No response needed.

Comment # 56.

Commenters: C18, C61

Section 1.9 of the WIP discusses the Maryland 2011 legislative and policy initiatives to support the Bay TMDL and mentions the failed *Watershed Protection and Restoration Act*. The passage of such a bill is considered essential to raising the funds for BMP implementation.

Response: The Bay Restoration did very well in the 2012 General Assembly.

Comment # 57.

Commenter: C18

Prince George's County supports the recommendation by the Task Force on Sustainable Growth and Wastewater Disposal that BRF should be amended to include funding stormwater retrofit projects. The bill was recently introduced in the General Assembly did not include funding for stormwater retrofit projects. We hope that this recommendation is acted upon immediately.

Response: Additional funding has been provided through the Stormwater Utility bill.

Comment # 58.

Commenters: C60, C69

One commenter notes that the legislation introduced by the Governor doubled the BRF, rather than tripling it, which they note will limit funding for projects. Another commenter notes that increasing the BRF will provide additional funds for septic system upgrades, although not nearly enough to meet the 27,944 system upgrades by 2017. Current rates of implementation (funded by state grants), have resulted in roughly 600 denitrification upgrades annually. How does the State plan to achieve its 2017 septic upgrade goal? The state should require all new and all replacement systems to be nitrogen removing BAT systems.

Response: Many jurisdictions submitted alternative approaches like hookups to wwtps or more efficient community systems.

Comment # 59.

Commenter: C23

The commenter would like to know what the requirements are for the State, its counties, and cities to provide increased funding to achieve the goals. They also question why the WIP does not require a funding mechanism to give assurance of implementation.

Response: The WIP is just a plan and cannot funding commitments without both Executive and Legislative authorization. Where funds have been authorized, those funding sources were documented in the WIP. By July 2013, Phase I MS4 jurisdictions are required to fund their MS4 programs with a stormwater utility.

Comment # 60.

Commenter: C43

MDE should include a discussion of the content of and funding levels contemplated by the 2012 General Assembly's bills:

- SB 240/HB446 (Bay Restoration Fund increase tax levels) and the amount of revenue this bill is estimated to generate, and its relationship to the Final Report of the Task Force on Sustainable growth and Waste Water Disposal, and to the estimated costs of meeting Maryland's 2025 targets.
- SB236/HB445 (Sustainable Growth and Agricultural Preservation Act of 2012).
- SB 614 (Upgrading the remaining 44 major WWTPs and requirement to create local jurisdiction dedicated stormwater utility fees). There should be a discussion of what levels of revenue might be generated by the 24 local jurisdictions' stormwater utility fees, and how such revenues compare with estimates produced by the King-Hagan report.

Response: It is impossible to predict a legislative session, so it was not documented in the WIP. The Bay Restoration fee was doubled, restrictions were put on septic systems, and a stormwater utility must be implemented by July 2013 by Phase I jurisdictions.

Comment # 61.

Commenter: C73

The commenter notes the difficulty of obtaining funding through legislation. Besides the doubling of the BRF, the unsuccessful bills have included those requiring local jurisdictions to develop and implement a fund source to address stormwater related solutions (including existing infrastructure) and requiring BAT for septic systems. If not successful, other strategies need to be immediately available to financially support local jurisdictions.

Response: They were successful.

Comment # 62.

Commenter: C17

The Kent County Comprehensive Plan supports both the use of alternative energy sources and the upgrading of its WWTPs to ENR standards. However, the upgrade costs to users of rural systems are enormous, resulting in County taxpayers subsidizing up to 30% of the upgrade costs. Additionally, the County is concerned that a local jurisdiction will be responsible to cover any BRF shortfall.

Response: US Department of Agriculture Rural Development is a good source of funds for this type of project.

Comment # 63.

Commenter: C22

The commenter believes that the current WIP will not work on the eastern shore due to lack of funding. They also note that agriculture is allowed to write its own rules.

Response: No comment needed.

5. Trading and Offsets

Growth

Comment # 64.

Commenter: C65

The description of the Maryland's Accounting for Growth strategy appears to encourage urban sprawl, simply moving the problem from established developed areas.

Response: The Accounting for Growth in Loads policies will be released in July.

Comment # 65.**Commenter: C60**

The commenter stresses it is important to prevent and then minimize new pollution loads associated with growth, prior to considering offsets. In some cases the use of offsets as the primary means to control the impacts of growth is insufficient. Offsets place little responsibility on local government to modify land use decision-making to benefit water quality; they are not expected to be widely available in the near term; and they could become more attractive than on-site minimization and treatment of pollution, to the detriment of local environmental quality.

Response: Offset policy will serve to drive the reduction of new loads because then the costs for offsets will not be incurred. Accounting for Growth in Loads is complimentary to Smart Growth, but not a Smart Growth policy itself, nor is the TMDL. Accounting for Growth in Load is a policy to prevent new loads of N, P and sediment to already impaired waters.

Offsets**Comment # 66.****Commenters: C24, C45**

It is recommended that local governments and interested stakeholders (homebuilder and local government) be included in the process of development of the off-set policy.

Response: That is the plan. A number of large stakeholder groups are discussing the draft policy with members of the bay Work Group and a series of stakeholder meetings over the late summer and early fall will engage a multitude of additional stakeholders.

Comment # 67.**Commenters: C24, C45, C71**

The Off-Set Policy discussion is lacking in the Draft WIP II, and does not provide sufficient detail to assess and comment on. Commenter C71 fears that the policy will be adopted by legislation before it is clear what the policy will be. The issues with the off-set policy are tied to the nutrient trading policy. The policy will be developed during the short term. We recommend that the WIP include a schedule and approach for further developing the policy at a similar level of detail in the Phase I WIP. Full disclosure of the proposed offset policy is requested.

Response: The Offset Policy is planned for regulation rather than statutory authority and will have extensive opportunity for public involvement.

Comment # 68.**Commenters: C26, C77**

The commenters are concerned that there is a potential for inequities in the Offset Policy. The State process for developing the policy should include considerable opportunities and sufficient time for

meaningful local review, input, and discussion. As the offset strategies will have direct cost implications, a true and accurate cost impact/benefit analysis should be part of this process. Commenter C77 does not agree that future offsets for development should be allowed to come from agricultural land. They are concerned that the ability to pay for land is inequitable between developers and farmers. They note that a large percentage of the land farmed in Maryland is owned by non-farmers who rent their land out, and there is a possibility that a developer would be able to purchase land/ offsets from the landowners for large amounts of money, without the farmer/renter being able to financially contend. They suggest the offset policy needs to be rethought should not be allowed to come from food producing land. They believe offsets need to come from their own sector or possibly allow trading with agriculture.

Response: There likely is not time to produce a “true and accurate cost impact/benefit analysis” and moreover, since the strategy will rely on a market-based approach any analysis to estimate the cost of offsets is likely to be incorrect at best and misleading at worst. This is already a policy of the state; the majority of a farm cannot be taken out of production for the purposes of generating tradable credits. There will be extensive opportunity to discuss these issues.

Comment # 69.

Commenter: C69

The commenter is concerned if nutrient trading and offsets are not implemented cautiously and correctly without monitoring, there could be problems. The policy to offset new loads needs to be accelerated and these offsets should be applied now. The commenter references draft Phase II WIP language regarding minimizing loads from new development. The commenter offered suggested methods to achieve this including a requirement for no net increases in stormwater discharge rate, volume, and pollutants for all new development for a 5-year storm. They would like to see the policy mentioned in the WIP that new development shall meet all applicable Maryland law and regulations and offset post-development nonpoint source loads above the forest loads be implemented as soon as possible with appropriate monitoring to assure the offsets are accomplished.

Response: There will be extensive opportunity for public discussion of the Offset Policy.

Trading

Comment # 70.

Commenter: C77

The commenter believes that each sector should meet its own goals and not be able to trade and/ or meet their own sector goals by short changing another sector.

Response: Reducing costs is critical to the economy and to the feasibility of implementation. We cannot afford to ignore those opportunities.

Comment # 71.**Commenter: C69**

The commenter is concerned if nutrient trading and offsets are not implemented cautiously and correctly without monitoring, there could be problems.

Response: Then it needs to be done correctly.

Comment # 72.**Commenter: C40**

They recommend that plans for nutrient trading proceed with transparency and full disclosure.

Response: Agreed.

Comment # 73.**Commenters: C32, C60**

The commenter encourages the state to move forward with “Phase 3” of its trading and offsets program. They recommend MDA and MDE consider including provisions in the Phase III of the Maryland nutrient trading program or the Accounting for Growth Strategy for complementing MS4s retrofit stormwater control measures (SCMs) with credits as well as offsetting loads from new development. They also suggest developing methods so that an MS4 could use nutrient credits in lieu of some necessary reductions. They note in order to allow MS4s to trade, there must be the inclusion of numeric WLAs in their NPDES permit to provide the necessary level of accountability. The optimal policy would allow MS4s and entities within them to purchase credits or offsets to meet WLAs, at least in the near-term until retrofit SCMs are implemented. Credits or offsets could help MS4s to overcome retrofit challenges by a) capitalizing on the cost differentials between non-urban BMPs and SCMs and among SCMs, and b) enrolling private lands through existing authority.

Response: All of these issues are being addressed as part of the permitting process, the Accounting for Growth Process and the Trading policy process.

Comment # 74.**Commenter: C32**

Language in the draft WIP and the Accounting for Growth and Offset Strategy suggests that credits and offsets could accommodate growth and complement efforts to achieve WLAs for the stormwater sector. The commenter suggests trading policies should insure measures receiving credit (especially if the stormwater sector is included) demonstrate improved water quality and reduced permit compliance costs. Additional design elements, such as those included in the EPA *Review of Maryland's Trading and Offset Programs*, could make trading more effective. In addition to cost benefits, trading would benefit MS4s if credits or offsets could compensate for a lack of public land to implement retrofit practices. The commenter also provided a table with additional acreage

available (total 6.5 million acres) for 16 BMPs with a potential to reduce 11 million pounds TN and 600,000 pounds TP.

The commenter provided estimated unit costs demonstrating potential cost savings from substituting agricultural BMPs at \$2.33 to \$28.07 per pound of reduced nitrogen for SCMs that cost as much as \$804 per pound. The commenters also discuss volume trading program (proposed in DC), and note that if a similar approach were used in Maryland that should also apply to existing development and volume would need to be translated into nutrient and sediment reductions. Additional design elements, such as those included in the EPA *Review of Maryland's Trading and Offset Programs*, could make trading more effective.

Response: We appreciate the commenters going on the record with specific examples of how trading can help contain some costs of Bay restoration and suggestions on refining the evolving trading program. Third party verification ensures that practices have been installed properly so that it generates the assumed nutrient reduction efficiencies. Inspecting or monitoring each credit generating practice is neither practical nor cost effective. Permit requirements, such as MS4, are a part of each jurisdiction's efforts to meet target load reductions. Those jurisdictions can implement other strategies to meet target load reductions but cannot increase implementation of non-MS4 required actions or purchase credits in lieu of meeting permit requirements.

Comment # 75.

Commenter: C64

Nutrient trading provides economic incentive for dischargers to reduce their nutrient loads and abide by the limitations of their NPDES permits. It can be cost-effective and effective for improving water quality when trading ratios are applied to account for uncertainty, water quality, and delivery. The commenters suggest Trading-in-Time be clarified or be revised to comply with Maryland's Nutrient Trading Policy. The commenter noted that the length of time between when a WWTP can bank a nutrient credit and apply it needs to be verified is inconsistent with Nutrient Trading Policy.

Trading-in-Time might be a way to save enough credits to meet the 2017 and 2020 nutrient reduction targets, but it may not be a sustainable mechanism to reduce nutrient discharges in the extended future. The revenue generated by purchases of nutrient credits from the WWTPs would help fund implementation of future upgrades to meet the demands of population growth. Trading-in-Time would initially decrease nutrient loads, but would allow for increased loads at a later date. This trend might impede water quality improvement. An alternative to Trading-in-Time is to use credits accumulated from the retirement ratio of nutrient credit sales. A retirement ratio is the portion of the credit purchase or sale that is owed to the State.

Commenter: C29

The language related to trading-in-time provisions and any offsets in the draft should be clarified so that 303(d) listed impaired waters are not subject to significant increases in loading of nitrogen, phosphorous and that 303(d) waters will still be managed by the local TMDL process.

Response: Maryland will be reviewing its entire trading policy over the next several months in conjunction with the development of the Offset Policy. Trading in time is not intended to be a sustainable approach; rather it is a mechanism to utilize pro-active reductions from the Bay Restoration fund upgrades of WWTPs to meet EPA's schedule requirements. Where stormwater upgrades cannot be completed as quickly as desirable because of funding, feasibility, design, procurement or land purchase delays, trading in time can provide a mechanism to assure EPA that overall we are still on schedule to meet WIP goals. As stormwater retrofits are implemented, the "trade" would be bought back to allow for future growth.

Comment # 76.

Commenters: C45, C76

The commenters are concerned that the three basin trading approach (Potomac, Patuxent and Everywhere Else) will curtail trading opportunities within Maryland, and will severely limit nutrient reductions from occurring, especially on the Eastern Shore. They note that more populated areas with an interest in offsetting/trading would not be allowed to trade with agricultural areas on the Eastern Shore with available credits/opportunities.

Commenter C45 also noted that the basin trading approach could have important implications on meeting locally based TMDL reductions, where the policy will allow the growth in a pollutant load within an impaired watershed with the off-set elsewhere. This could result in an additional burden on local government to provide additional restoration activity to off-set the increase in load. It is recommended that the nutrient trading policy be revised to allow a tiered approach to nutrient trading where the first tier requires trading within the same 8-digit watershed if credits are available; the second tier requires trading within the same 6-digit basin if credits are available, and the third tier being the current system. Or, they suggest that trades should be encouraged state-wide in order to get the nutrient trading market started, and improve Bay water quality.

Commenters: C42, C43, C72

The commenters referenced language regarding offset requirements within the basin, with the exception of the Susquehanna. The commenter would like an explanation of the rationale for doing anything other than offsetting in adjacent Basins. They note Cecil and Harford Counties have portions of the Eastern and Western Shore basins. Isn't this geography sufficient? Will there be some type of inter-jurisdictional mechanism developed that will allow for offset trading between the Susquehanna Basin and all of the other basins.

Commenter C43 requests that an exception to the nutrient trading policy that restricts trading between basins be made for BMPs implemented within Howard County to allow for greater flexibility in implementing BMPs in a more cost efficient way.

Commenter: C47

The commenter recommends that Maryland manage a public process to revise their trading program to address the recent EPA evaluation and other comments. They would like clarification in the Phase II WIP whether or not MS4s may trade with other sectors to achieve nutrient reductions, because they

have received conflicting answers from state regulators. They support the concept of equivalency to allow an MS4 to comply with the retrofit/restoration requirement using an alternative approach and believe that trading is beneficial option. The commenter suggests that the State consider the feasibility of trading, and include a discussion of this option in the final Phase II WIP.

Commenters: C50, C67

The proposed nutrient trading policy should be revised to allow greater flexibility for nutrient trading and explained in specific terms. Topics to consider include, but are not limited to, cross sector trading, trading among sectors, trading between watersheds that share borders. The mechanism for trading among sectors should not result in a mere shifting of the load burden from one sector to another without adequate compensation.

Response: Maryland will review all of its trading policies in conjunction of the development of the Offset Policy. The geographic scale of trades will be part of that review. There are some constraints on the scale of trading (county, basin, state, interstate), especially the need to meet local TMDLs in non-tidal waters, and to meet the land-river scale TMDLs that are part of the Bay TMDL. Maryland is tending towards a wider scope or scale of trading to allow for more opportunities to trade and thereby lower costs.

Comment # 77.

Commenter: C43

The commenter would like to stress that the WIP's goal of treating storm water runoff from 20 percent of currently untreated impervious areas is dependent on many issues including MDE passing policies needed to allow nutrient trading between the stormwater, wastewater, and agricultural sectors.

Response: The State disagrees that treating untreated impervious areas is dependent in any way on trading, but does recognize that appropriate trading policies could reduce the cost of meeting the nutrient reduction costs related to stormwater. Treatment of impervious surface likely cannot be traded because trades would not improve the local stream damage caused by large untreated areas.

Comment # 78.

Commenter: C71

In the public meeting in Hagerstown Maryland on February 29, 2012, Dr. Richard Eskin of MDE's SSA stated that trading would be available for new development offsets but would not be available for stormwater retrofits. As the stormwater retrofits have some of the highest cost per acre of any BMP type, this drives up the cost to comply with the WIP.

Response: Dr. Eskin did not say that. What he said was that where there was an explicit requirement in the permit, that explicit requirement could not be traded because it is necessary to correct local stream damage. However, the WIP nutrient reductions would likely exceed what would be obtained with the retrofits, and those reductions could be traded, i.e., the full nutrient reduction would not have to be obtained with retrofits, but less expensive approaches could be used.

Comment # 79.**Commenters: C24, C41**

Trading issues need to be reconciled within the context of the scale of the Bay model. The WIP for the agricultural sector is constructed at the major basin scale yet the trading program and offset policy are at the farm scale or the development parcel. We recommend that the WIP include a discussion on how the trading program and the offset policy will be adjusted or developed considering the model accuracy at different scales. If the Model can indeed scale down to a farm level, then managing and enforcing load allocations at the county level seems feasible and appropriate.

Response: These issues will be discussed within the context of the trading and offset programs. The model does not need to scale down to the farm scale. Rather a baseline of farm practices has been developed and, once met, a farm can generate nutrient credits. This is a “scalable” approach, because if each farm meets the baseline the sector allocation will also be met.

Comment # 80.**Commenter: C52**

The WIP should include mechanisms for the implementation of a viable, vigorous trading and offset programs for nutrients and sediment including point sources, nonpoint sources, and combinations. Opportunities for trading and offset should be available for new development and MS4s to facilitate compliance with the permit reduction requirements. They do not support Maryland incorporating a requirement for a permanent offset for new development in its offset program. Such a requirement would be financially unsustainable to meet the demands for population increases. MDE should consider establishing an advisory group made up of regulatory staff and stakeholders to monitor implementation progress of offset and trading measures and ensuring that they are affordable mechanisms for accommodating future growth.

Response: Since in general, new development is permanently generating new loads, the offsets need to be permanent as well. How those offsets are generated can play a large role in the feasibility of generating permanent offsets. For example, purchase of land and permanent easements, upgrades of wastewater treatment plants, or purchase of credits from approved aggregators. There will be significant stakeholder involvement in development of offset regulations, and EPA and the State will subsequently track offsets as part of the WIP reporting and tracking effort.

6. Process

Comment # 81.**Commenter: C52**

The compressed timeframe by EPA makes it difficult to fully assess the potential impact on the development industry, in addition to adequately implement plans. MDE should advocate for more time to vet, define and refine the Phase II WIP.

Response: The time frame was extended through July, and there will be subsequent opportunities to make revisions.

a. Transparency

Comment # 82.

Commenter: C21

The final Maryland plan must clearly document how next steps will be implemented and funded in every part of the state.

Response: Each county has submitted, or MDE has created for them, detailed strategies. The milestones submitted concurrently with the strategies provide the near term documentation.

Comment # 83.

Commenters: C25, C67

The WIP anticipates an adaptive process therefore local jurisdictions must be able to provide amendments to the local implementation plans. This would enable implementation of the most effective and economically efficient strategies as new information and new conditions emerge. The adaptive management approach must be applied to the permitted BMPs and their implementation. The WIP should provide for local input and coordination among all sectors' strategies as the implementation plans are finalized to assure advantage of opportunities for joint projects or working together in target areas. This type of coordination is likely to lead to greater efficiencies for project planning, design, and construction. The current two tiered approach separating the sector's planning process inhibits communication and coordination and the identification of mutually beneficial strategies.

Response: Coordination should occur through the teams, which should include both urban and agricultural, county, NGO, and municipal representatives. That is the purpose of the teams.

Comment # 84.

Commenters: C47, C52

The commenter recommends the final WIP include the local clean-up plans in order to avoid conflicting goals. We understood the Phase II WIP to be the detailed plan that will take implementation to the local level, but we are unsure how this will effectively occur unless the local plans are included in the final Phase II WIP.

Response: The local plans are available on the MDE website.

Comment # 85.

Commenter: C26

MAST is not transparent. Understanding how MAST uses the data to calculate reductions is vital to understanding how the BMPs work together and what mix of BMPs to use. Additionally, the document should mention the changes that resulted in notifying local jurisdictions 18 days ahead of the submission deadline that everything entered was invalid and the implications this had on the process.

Response: MDE and the MAST developer conducted hands-on sessions to train county staff in using MAST. This training included explanations of how to combine and sequence BMPs to get the maximum reductions. Since MAST is a simulation of the Bay Watershed Model, to fully understand MAST, one would need to fully understand the Bay Model, which is not practical.

Comment # 86.

Commenter: C71

Frederick County notes that MDE has altered its load estimates by sector at least six times since April 2011. They are concerned that the loads will continue to change and that establishment of a plan on those shifting numbers requires constant readjustments and provides little certainty for goal and budget setting processes.

Response: The loads were “locked down” for the March submission.

Comment # 87.

Commenter: C35

The commenter suggests strengthening the WIP to address with more transparency the reliance on nutrient trading that will be required in order to pay for required changes.

Response: Trading issues will be addressed through a review of the trading program, rather than in the WIP.

Comment # 88.

Commenter: C39

The commenter encourages MDE to provide details about where pollution-reduction practices are to be targeted; how implementation of these practices will be accelerated, and how pollution reductions will be verified.

Response: Where practice are targeted is a local decision, MDE will just track that they are completed. The milestones will encourage the acceleration of implementation. States are working with EPA on verification practices that will apply Baywide.

Comment # 89.**Commenters: C40, C66**

We request the State make this process as transparent as possible. The commenters request that county agricultural plans be made publically available and provide information to County residents regarding the overall efforts from all sectors to show the efforts made by all to meet our clean up goals. Local Plans need information from the Department of Agriculture and Soil and Water Conservation District offices on how the local County agricultural goal can be met so that the agricultural sector can be fully represented at the local level.

Response: The agricultural strategies are posted on the web. Progress can be tracked on the BayStat website for Maryland and BayTAS (Tracking and Accounting System) for the Bay. The agricultural sector is fully represented by the Conservation Districts.

Comment # 90.**Commenter: C18**

TN load reduction target/goal for the Urban Sector in Prince George's County has been increased by four times from WIP-I to WIP-II. MDE's explanation is that the *Rural* residential areas were changed from *Forest* to *Urban* sector in the new Bay Model. However, by checking with the County's GIS information, the *Rural* residential area is only approximately 25 percent of the County. It is questionable that the change can really increase the target TN load by 4 times.

Response: In comparison to the CBP P5.3.0 watershed model, used to calculate the Phase I WIP load reduction targets, the CBP P5.3.2 watershed model, used to calculate the Phase II WIP load reduction targets, greatly improved the delineation of the urban footprint within the bay watershed. CBP P5.3.0 model land-use vastly under estimated total urban area. The model land-use did not accurately capture less dense urban areas such as rural residential development and suburban subdivisions. This is because the urban footprint in the CBP P5.3.0 model was based solely on the analysis/classification of 2006 Landsat satellite imagery, with subsequent projection, in tabular format, of the 2006 urban acres to 2010. CBP P5.3.2 model land-use, however, following the initial analysis and classification of the 2006 Landsat satellite imagery, used ancillary datasets (i.e., roads data, housing data, etc.) to reclassify the data, in order to better capture less dense urban development. These additional datasets and reclassification techniques greatly improved the delineation of the urban footprint. CBP P5.3.2 model urban acres are very similar to county estimates, such that in Montgomery County, CBP P5.3.2 underestimates the county impervious estimates by only 2,242 acres, i.e., 37,632 acres compared to 35,389 acres, respectively (only a 6% underestimation).

b. Fairness

Comment # 91.

Commenters: C14, C31

The commenters recommend abandoning the Basin Model because there is no way to require anything of the counties. They insist on numeric, quantified, reduction targets for counties and sectors (county septic, storm water, and agriculture).

Response: Although Maryland will report to EPA at the Basin scale, we will be tracking progress at the county scale because responsibility and authority for implementation lies with the counties.

Comment # 92.

Commenter: C1

The commenter believes that the State and federal government's responsibility for current conditions should be addressed. The commenter feels that regulation for stormwater and septics have been ignored. They note that runoff has not been the sole fault of the farmers that require fertilizer to provide food.

Response: There are very aggressive policies for stormwater, including new Phase I and anticipated Phase II permits, as well as recent legislation limiting septics, proposed regulations that require all new septics to be BAT, and a policy in development that would require offsets of all new nutrient or sediment pollutant loads from new development.

Comment # 93.

Commenter: C52

The commenter believes that the Chesapeake Bay TMDL process is an intrusion by the federal government on the States to clean up the Bay without necessary funding. It is imperative that the allocation of the TMDL diet is done in a fair and equitable manner for all concerned. Due to the EPA not allowing for appropriate timelines, the State was forced to develop this top/down approach. All of the provisions of the WIP should have a clearly articulated transition plan for implementation. The EPA needs to establish a level playing field for discharge requirements. The commenter urges the State to protect our interest to prevent future requirements by EPA for "catch up measures" intended for other states that may punish sectors in Maryland.

Response: The TMDL is not an intrusion on states, but an explicit requirement of the Clean Water Act lawfully passed by our Congressional representatives. The issues are complex, but every effort has been made to assure that the TMDL allocations are fair and equitable. Although the approach was largely top down for Phase I, Phase II had extensive local outreach and used all of the significant input provided by local governments and the farm community. EPA is evaluating each State on its merits, and assigned each state its responsibilities, so that one state is not responsible for the lack of progress in another.

Comment # 94.

Commenter: C29

The Clean Water Act goal ‘to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters’ [CWA §101(a)] is further trumped by proposed reductions in the Agriculture sector that largely relies on suggested, voluntary approaches rather than mandated approaches..

Response: There are actually numerous mandatory controls on agriculture, including: Maryland 1998 Water Quality Protection Act mandating nutrient management plans, MAFOs and CAFOs, and many incentives and subsidies that are available. Agricultural progress will be tracked as will all sectors and Maryland believes adequate progress will be made, if not, action will be taken.

Comment # 95.

Commenter: C49

The commenter is concerned by preliminary conclusions that the P-Index will result in “significant reductions in cropland eligible to receive additional phosphorus, particularly in areas of historically high concentrations of animal agriculture.” The commenter also references the State’s nutrient management regulations and opposes the State’s efforts to restrict biosolids land application. The commenter requests that the Final Phase II WIP acknowledge the special status of biosolids.

Response: As far as the Bay is concerned, there is no special status for biosolids. Numerous projects are being concerned that will facilitate the disposal of excess phosphorus.

Comment # 96.

Commenter: C19

The agricultural sector must follow fertilizer application regulations; however, residential turf lawn fertilizer application is not regulated. The commenter recommends introducing public education for residential lawn care including little to no fertilizer application. They suggest that instead of regulating agriculture, develop good, effective, cost feasible programs and then give farmers the technical assistance and resources to implement these programs.

Response: Both residential and commercial applications are now controlled by the Fertilizer Act of 2010. There is significant technical and cost assistance available to farmers, including full costs for cover crops and technicians to develop nutrient management plans for farms.

Comment # 97.

Commenter: C66

The commenter requests that MDE and EPA periodically update the public with the status of equal efforts by other states (particularly Pennsylvania) to meet TMDL goals.

Response: That will all be on the Bay Program Tracking and Accounting System (BayTAS) web page.

Comment # 98.**Commenter: C38**

The commenter believes that no additional WIP requirements should be required of Baltimore City and County before 2017 beyond complying with the current plans for helping upgrade major sewage treatment plants and achieving MS4 permit compliance, due to associated high costs.

Response: No basis is provided for this comment.

c. Allocation Approach (cost vs. fairness)**Comment # 99.****Commenter: C74**

The commenter understands the argument about the tradeoff between equity and efficiency (fairness and cost), but with a total cost estimate of over \$14 billion, and funding uncertain at best, cost is a major concern. The slight increase in funds in the BRF, from a doubling of the flush tax, is nowhere close to being adequate. The equity/efficiency tradeoff needs to be revisited.

Response: That tradeoff can be addressed in local strategies by looking at trading. If a locality can reduce costs by paying farmers for example, for additional nutrient reductions instead of accomplishing the same reduction by stormwater at higher costs, they should propose specific scenarios.

Comment # 100.**Commenter: C52**

Regulated and non-regulated urban have a combined 2025 allocation of 7.594 million pounds of nitrogen and a target of 7.323 million pounds (3.5% lower). At the same time, cropland's allocation is 12.482 million pounds of nitrogen and has a target of 12.883 million pounds (3.2% higher).

Response: No response needed.

Comment # 101.**Commenter: C16**

Calvert County would like explanation regarding some potential equity issues they have identified in *Analyses of Maryland Jurisdiction TMDL Caps and WIP Phase 2 Draft Plans*. They note the percent reduction for nitrogen loadings between counties is highly variable, which they consider inequitable. They also note that the difference in the costs/household or per county budget between different counties varies, which they believe is unfair. They are concerned that the County is being penalized for its smart and controlled growth programs that have kept the County's population low.

Response: A key point to understanding equitability is that the point source allocations were effectively set years ago by Maryland's point source cap strategy. Maryland's WIP finished the job by setting equitable allocations among nonpoint sources. If the analysis underlying Table 1.1 were done for nonpoint sources, you would find even more equity among counties.

To assign the load reduction targets, the Maryland Department of the Environment (MDE) allocated to four sectors: (1) wastewater, (2) stormwater, (3) onsite disposal (septic systems), and (4) agriculture. The allocations to wastewater were based on the point source cap strategy that has been in place since 2004 for all municipal treatment plants. The ongoing upgrades of major municipal plants, which constitute 95 percent of the wastewater flow, will result in greater percentage reductions than any of the three remaining sectors. Hence, from the standpoint of equity, the point sources are doing their share. To provide reduction targets to the counties for the three nonpoint source sectors, the State applied the "polluter pays" principle. That is, everyone contributing to the problem must contribute to solving the problem in an equitable way. In addition, the reductions for sources closer to the Bay, which have a greater impact on Bay water quality and benefit more from the amenities of the Bay, including tax revenues, were allocated reductions proportional to those impacts. An alternative approach would have been to base the allocations on cost, but that would have placed a disproportionate load reduction burden on low-cost sectors, which would not have been fair to them. That said, Maryland's approach is flexible; it allows higher-cost sectors to pay for reductions from lower-cost sectors.

The State allocated nonpoint source loads by calling for an equal percentage reduction of the technically feasible reducible loads from each source sector. To do this, the State used two EPA model scenarios, and also considered the proximity to tidal waters. The first scenario, called "No Action," is the "Do Nothing" scenario. It reflects the loads from 2010 land use with no best management practices (no mitigation) at all. The second scenario is the "Do Everything" scenario. The difference between doing nothing and doing everything is the "reducible load." Figure 1 (attached) might be helpful. The impact of load delivery to the tidal waters was considered and counties that are closer to tidal waters were assigned a higher level of effort than counties that are further from tidal waters.

For each county and sector, the same objective approach was then applied: the reducible load for each nonpoint source sector in each county was reduced by the same percentage until water quality standards were achieved. An advantage to this approach is that it provides credit for existing implementation. When comparing reductions among counties, it is important to recognize that the amount of progress from the "No Action" condition (see C in figure 1) will affect the remaining reduction that needs to be achieved within each county. Furthermore, the varying mix of nonpoint sources from county to county also makes for differences in the remaining loads that need to be reduced across jurisdictions. Thus there may be significant differences in the reductions required among the various counties, but those differences are objectively based on (1) existing land use, (2) past remediation and (3) proximity to tidal waters.

You also noted Mr. Bowen's analysis suggesting that very little was required from Charles County; we disagree with Mr. Bowen's analysis. According to our most current numbers, based on the most

direct comparison of level of effort from No Action to allocation, Charles County needs to reduce nitrogen loads by 25% and Calvert by 33%, not a big difference, and easily explained by the three factors noted above (see figure 2). Looking at the reduction from current loads (as of 2009) Charles must reduce nitrogen by 18% and Calvert by 25%, an even smaller difference and likely attributable to those same three factors.

Comment # 102.**Commenter: C52**

The commenter believes the urban sector has been unduly targeted for stormwater retrofits. The urban retrofit costs, compared to other sectors (specifically WWTP), are extremely expensive versus the benefit expected. The commenter believes that this approach will lead to further economic constraints and suggests trading may provide proper balancing methodology.

Response: Allocations were based on level of effort, not cost. We agree that trading is the proper balancing methodology.

Comment # 103.**Commenter: C74**

The WIP seems to over-emphasize the importance of septic system when only 6 percent of the Bay's nitrogen loading originates from septic.

Response: Reductions from septic systems are proportional to the ability to reduce septic loads.

Loading**Comment # 104.****Commenters: C16, C36**

The commenter requests that MDE explain how the load reductions were derived for the various jurisdictions and why the distribution of load reductions and costs appear to be inequitable.

Commenters: C16, C36

The commenters requests that MDE explain how the load reductions were derived for the various jurisdictions and why the distribution of load reductions and costs appear to be inequitable. Commenter C36 is concerned by the load reduction allocation based on a 3-tier modeling process. Specifically the aggregation of such different county land use patterns into one single subwatershed resulting in a less accurate or reliable load reduction assignment. Since a recent TMDL indicated no TMDLs reductions were required for sediments and nutrients, Allegany and Garrett counties are negatively impacted by the higher concentration of contaminant-contributing uses in the downstream portion of the larger subwatershed. Allegany County requests that MDE re-evaluate Allegany and Garrett counties' load reductions by subwatershed due to vastly different land use patterns in each

part of that watershed. If there is a difference in loading allocations, they also question the fairness (based on environmental justice considerations) of requiring expensive measures to help offset the cost of mitigation efforts in more economically wealthy and vibrant Washington and Frederick Counties.

Response: Maryland has provided explanations on the equitable process for allocating loads geographically and among source sectors in numerous public presentations, webinars and written documentation (See the Sub-allocation Process, Appendix A of the Phase I WIP). Any further explanation would entail a more technical treatment of the subject. Local partners who are interested in that are welcomed to request a technical briefing.

Comment # 105.

Commenter: C41

The current strategy of linking sediment reductions to phosphorus reductions does not seem to account for other sediment erosion problems (i.e. shoreline erosion) that phosphorus BMPs would not address.

Response: At this time, EPA believes that it will, or will come close. This approach will be reevaluated in 2017.

Comment # 106.

Commenter: C71

It is inappropriate for the State to take credit for reducing atmospheric nitrogen inputs, when a significant portion of atmospheric nitrogen loads for the urban sector comes from atmospheric deposition according to the Phase I WIP. This leaves urban areas with a load that is incorrect because MDE does not subtract improvements in exceedance of the baseline, which is established as air quality under the Clean Air Act. Any nitrogen reductions should be credited to the land uses to which the loads apply. Explain why urban areas are required to reduce nitrogen through stormwater practices when the nitrogen is deposited by atmospheric processes.

Response: “The State” is not taking credit for reducing atmospheric nitrogen deposition, the federal government is. EPA subtracted atmospheric deposition off of the TMDL and taken responsibility for reducing those loads. So, essentially local areas were credited in advance for reductions in atmospheric deposition.

Cost effectiveness

Comment # 107.

Commenters: C7, C22, C40, C52, C58

The commenters have issues with the cost effectiveness of the WIP. They are concerned that cost effectiveness is not included in determining which BMPs to use or where to apply them (especially stormwater retrofits). The commenters suggest that cost effectiveness or other benefits should be

considered in the process so that funding is used most effectively. The State should allow local plans to meet the TMDL targets with the combination of the most cost effective BMPs.

One commenter suggests the development of cost optimization tools to aid in local planning and BMP selection would be an appropriate step in the planning process, or another suggests that MDE analyze the accepted BMPs according to their costs and pollution reduction potentials and rank them by their cost-effectiveness. Another suggests cost effectiveness should be used to determine allocations so target loads can be achieved by utilizing the most cost-effective techniques wherever possible (regardless of sector) and then developing a system to share the costs across sectors equitably.

Response: Cost effectiveness is a valid consideration for local governments in developing their WIPs. We have provided stormwater cost estimates. Most WWTP estimates have already been established, agricultural BMP costs are fairly well known as they are paid for or subsidized by the State. Septic system retrofit costs are also well known, so there is nothing to stop locals from considering cost effectiveness in developing plans. Cost-effectiveness is also a limited consideration because the most cost-effective practice may only be applicable to a minor extent.

Comment # 108.

Commenter: C19

The commenter suggests residential septic upgrades efforts be earmarked to the agricultural sector. They also note that the WIP devotes a fair amount attention to septics when only a small percentage of total pollution comes from them.

Response: Septic loads may be small, but they are still significant and they are growing. Trades with agriculture or WWTPs are both valid strategies. Several jurisdictions have reduced septic retrofits by making use of hookups to existing systems.

7. Modeling Issues

Comment # 109.

Commenter: C19

There is a lack of focus on pollution that starts as runoff in the higher elevations; most of the focus is on areas along the stream/river/bay edge while the source of runoff pollution is in the higher elevations which are almost totally ignored.

Response: Land use is treated equally across the watershed.

Comment # 110.

Commenters: C26, C42

EPA acknowledges the current data and model limitations with regards to county-level allocations. Local jurisdictions cannot be expected to make specific commitments. Text should be added as to how to help jurisdictions better understand their role and how their activities fit into the bigger framework.

Response: While there are limitations, they are not so limiting that local governments cannot make specific commitments. Perfect should not be the enemy of the good. Given that the initial 2017 plan only needs to achieve 60% of the total reduction the model and data are more than sufficient to begin implementation and make specific commitments.

a. Inaccuracies

Comment # 111.

Commenter: C52

Given the acknowledged flaws, EPA should strive for more accurate modeling before further implementation is required.

Response: The State is working with EPA to make the data and the model more accurate, however there is no reason to delay implementation as both the data and modeling are more than sufficient to make initial commitments.

Comment # 112.

Commenter: C42

The document also acknowledges the limitations of the CBP models and MAST tools available to estimate loads and allocations at the county-level scale. It is critical that this implementation plan is fluid and flexible enough to be updated and revised as new information becomes available. It appears that this document allows for iterative updates.

Response: It does.

Comment # 113.

Commenter: C15

EPA in their Bay Model assumes that every farmer is over applying nitrogen on every acre of cropland, hay land and pasture. It is known that most farmers don't fertilize at these rates. It is well known that 90 percent of farmers just about never apply nitrogen to their pasture fields.

Response: Through the Agricultural WIP workgroups the suggestion was made to have three levels of enhanced nutrient management to address this issue. MDA has proposed through the Chesapeake

Bay Program Agricultural workgroup that farmers receive credit for reduced fertilization rates on cropland, hayland and pasture.

Comment # 114.

Commenter: C29

The long term calibration station for the watershed model along the Gunpowder River not representative of the Gunpowder River inputs into the Bay is limited both from a hydrologic perspective (due to it being controlled by upstream releases) and from a water quality perspective.

Response: The EPA Chesapeake Bay Program modeling team is aware of, and has accounted for, the dams upstream of the Gunpowder River. If you have more specific questions or concerns beyond this general observation, it is recommended that you raise them directly with the EPA or MDE's Sciences Services Administration.

Comment # 115.

Commenter: C62

The commenter is concerned with the lack of information on sediment impacts, modeling, and reduction strategies and cannot be certain that these will be entirely addressed using phosphorous as a surrogate. Given the stated binding of phosphorous to sediment and the impact of storms on sediment transport, more detail should be given on page 17. Sediment transport and erosion is a huge issue in urban and urbanizing environments and in general, the WIP attributes most sediment to agricultural watershed, which is a small land use component in some watersheds. In developed watersheds there is significant sediment generation with down-cutting, embankment erosion from storm events, meander, etc.

Response: The concerns noted by the commenter are legitimate; however, they operate on a scale different than that addressed by the Chesapeake Bay Watershed Implementation Plan (WIP). This observation correctly suggests that the planning reflected in the WIP, while appropriate for the Bay scale, does not tell the entire story about how we need to manage our water resources at a more local scale. Watershed planning does not end with the Bay WIP, which operates at a very large scale in terms of loads to the Chesapeake Bay and tidal tributaries. Nor will the watershed planning end with the more local scale to be required by Maryland's pending Phase I Municipal Separate Storm Sewer System (MS4) permits; however, that is the logical next step in planning to address the urban setting referenced by the commenter. Beyond that, more geographically refined sub-watershed planning will be necessary, which in turn will be followed by stream-reach-scaled planning to support specific implementation projects.

b. Data

Comment # 116.

Commenters: C18, C25

The commenters noted the difference between the number of septic systems in local records and MAST. Commenter C18 further went on to state that they were only developing strategies for the systems they have records of and asked about how the loadings from septic systems are calculated and what happens to the loadings of additional systems in state and EPA records..

Response: This is an issue in several jurisdictions and part of a larger data issue. EPA has to use a land use and septic data base that is applicable across the watershed and may not be as accurate as local data. We expect the data issue to be addressed as part of the model upgrade between now and 2017. At this time is of course appropriate for local jurisdictions to address only the actual systems. As the data is corrected between now and 2017, when the model is recalibrated for 2017, everything should fall into place.

Comment # 117.

Commenter: C45

The delivered sediment load might be higher than the edge of stream load due to stream erosion. This should be addressed in the final paragraph on page 8.

Response: In the judgment of EPA modelers, the delivered load is correct. However, the commentor may raise this question directly with the EPA Chesapeake Bay Program as part of EPA's Midpoint Assessment process.

Comment # 118.

Commenter: C67

Commenter C67 mentioned that that model overstates the number of animals and is encouraged that the state is looking into this discrepancy.

Response: There are number of data issues that are being corrected.

Comment # 119.

Commenter: C68

The commenter feels that it is not achievable to implement a program effectively when the starting point has little or no empirically established on the ground measurement, because there are too many assumptions and not enough local data.

Response: There is extensive monitoring data over several decades that are used to calibrate the model and evaluate progress. All of the BMP data is “on the ground” data reported by local governments or soil conservation districts.

Comment # 120.**Commenter: C33**

It has been acknowledged by the State of Maryland that the origins of data in the models used to support the WIP is not clearly identifiable or reliable, and is lacking in acknowledging farming practices utilized by nursery growers.

Response: The Chesapeake Bay Program has recognized the issue with crediting best management practices by nursery operations. MDA and representatives of the Nursery Association are providing a suite of new BMPs to be utilized in the Chesapeake Bay Model as acknowledged nursery practices.

Comment # 121.**Commenter: C36**

The commenter has concerns over how the model accounts for combined sewer systems. Maryland's Phase II WIP gives very little detail as to how the Bay model accounts for reductions achieved by addressing these systems.

The City of Frostburg is separating their combined sewer systems and has already achieved approximately 40 percent separation. With a goal of complete separation by 2023, why does MAST reflect the land area of the City of Frostburg as *combined sewer land* with a baseline load of *zero*? This suggests that any stormwater retrofit projects, for instance, that are completed within that area cannot be credited in the model. However, in reality load reductions by stormwater retrofits in that area would be realized since those systems are or will be separated.

The City of Cumberland is capturing and treating their overflows. Since stormwater within the Cumberland combined sewer land area will ultimately be treated through the wastewater treatment plant, this area might be accurately reflected in MAST, e.g. stormwater retrofits in the City of Cumberland might not realize true reductions since the runoff is being treated through the WWTP. However, it remains unclear whether the reductions achieved by this method (treating stormwater to WWTP effluent standards) are appropriately credited in the model.

The commenter requests that the details of this data be covered in the Phase II WIP. Furthermore, we request that further consideration be given as to whether the model appropriately accounts for the reductions achieved by the elimination of these sewer overflows.

Response:

To first comment: Nutrient and sediment loadings from CSOs are considered and their elimination is credited in the Chesapeake Bay watershed model. Due to lack of an accurate system on how to track the progress towards the elimination of CSOs in Maryland, the methodology currently applied in the Chesapeake Bay watershed model to account for overflow elimination is to keep current nutrient and sediment loads (estimated 2010 loads) until the CSOs are completely eliminated. Once they are 100% eliminated, a 100% reduction is applied, making the loads from CSOs equal to "zero." For systems where 100% elimination is not expected (e.g., Cumberland CSS), the percent reduction will

be equal to the final percent elimination. Independently of the chosen solution, the elimination of CSOs is credited in the Chesapeake Bay watershed model.

To second comment: As explained above, nutrient and sediment loadings from CSOs are considered and their elimination is credited in the Chesapeake Bay watershed model. However, modeling of CSOs have not yet been included in MAST and that is the reason it maybe showing a baseline of “zero.” Accounting for CSOs in MAST has already been discussed and is in MDE’s workplan for future MAST improvements.

To third comment: The “capture and treat” method is treated in the model, in terms of crediting their load reductions, in the same way as the “separation” method. The difference in the model between the two methods is the change of CSO land area. For the “capture and treat” method, there is no CSO service area change. The percentage of captured overflow will be credited as the CSO load reduction, and the reduced CSO load is transferred to the WWTP load. If Cumberland CSO is designed for 85% capture of average overflow, it will not be 100% elimination, but 85%. For the complete separation method, there is 100% CSO load reduction and 100% CSO land area change. After complete separation, the CSO land will become the urban land for stormwater simulation, which will increase the stormwater loads.

To fourth comment: As explained, the Chesapeake Bay watershed model is appropriately accounting for the elimination of CSOs and the nutrients and sediment loads reductions associated with the elimination. Accounting for CSO elimination in MAST will be included in the near future.

c. Land use

Comment # 122.

Commenters: C18, C36, C42, C50, C52

The commenters each asked for specific clarifications on the land use in the model. Specifically are their plans to update the land cover to 2017 acres, how were construction acres determined, and asked that Maryland perform a quality check on the land use data in the model/MAST due to differences in model and local land use data. C18 requested a copy of the land use coverage used in the model.

Response: First, there is not a land use GIS coverage used in the model per se. The watershed model used for WIP development reflects 2010 land use that is only expressed in tabular format for each model land/river segment. That tabular information can be made available. Currently, the closest spatial representation of the watershed model land use is the USGS 2006 Chesapeake Bay Land Cover dataset, which can be made available as well. This spatial land-cover serves as the primary dataset used to inform the tabular model land use data, particularly the urban land-use acres. Second, EPA is establishing a technical workgroup to delve into land use issues, which will be open to local stakeholder participation. This workgroup will likely address the issues raised in the comments during the coming years to improve the land use information for the Phase III WIP process. It is likely that the land cover will be updated and that outstanding questions about construction acres will be addressed. As part of this process the State intends to advocate in support of incorporating local land

use data provided that it is well documented. EPA and MDE performed a QA/QC of the CBP P5.3.2 model land use data via comparisons to local county data, where available. For the more highly developed counties, when comparing total urban and impervious acres at a county scale, CBP P5.3.2 model land use estimates are very similar to the county derived total urban and impervious estimates. For instance, in Montgomery County, CBP P5.3.2 model land-use only underestimates the impervious acres in the county, in comparison to the local county data, by 2,242 acres, i.e., 37,632 acres compared to 35,389 acres, respectively (only a 6% underestimation). In primarily rural counties, the CBP P5.3.2 model land use still significantly underestimates the total urban footprint in these counties, which is something that future revisions to the model land use will try to correct for. CBP P5.3.2 model land use construction acres were based off construction NOI permit data at a county scale, collected by MDE and submitted to CBP.

Comment # 123.

Commenter: C18

The commenter requests that the urban land uses be divided into more specific categories (e.g., commercial, industrial, high density residential, median density residential, low density residential, etc.) similar to what agricultural land has.

Response: We agree and will endeavor to get EPA to make this modification. Providing more specificity in the urban sector is one the primary goals MDE has recommended to CBP for potential model land use revisions in 2017.

Growth and Land Conversion

Comment # 124.

Commenters: C37, C60

The commenters feel that the State must account for growth element of the Phase I WIP.

Commenter C37 notes that new growth and development is the only source of pollution that is still increasing. The commenter is concerned that guidance has not yet been developed or finalized for how local governments should implement this element. The State originally indicated a draft would be available by the end of 2011, but has not yet released a document to the public. Likewise, the State has not been adequately preparing local governments for the s offset requirement. The guidance should emphasize pollution prevention. The limited offset capacity should be acknowledged and the critical role of smarter growth planning must be highlighted.

Commenter C60 concurs with the concept laid out in the draft Phase I WIP that differentiates between growth that occurs in higher density areas with low per capita load potential, versus growth that occurs in more remote, less dense areas where per capita pollution loads are higher, provided that high-per-capita loads are offset at a ratio of at least 2:1. The commenter recommends that the criteria for designating mid-per-capita load areas be consistent with the criteria for designating Priority Funding Areas.

Response: This is being worked on. The Sustainable Growth Commission has been briefed and other stakeholder groups will be briefed during June. Public outreach on this issue is expected between June and mid-September 2012.

Comment # 125.

Commenter: C39

The commenter is concerned with sprawl impacts on waterways through sedimentation and increased impervious surfaces, urban and rural stormwater pollution and sewage treatment.

Response: This part of the Smart Growth agenda that is being very aggressively addressed by the Governor, the legislature and the environmental agencies.

Comment # 126.

Commenter: C52

The WIP should take into consideration the possible load reduction from land conversion. As conversion occurs from one land use to another, an assessment of the potential load reduction benefit should be conducted and monitoring on an annual basis. Additionally as acreage moves between sectors, the base line for each sector and the applicable reduction requirements should be recalibrated. The benefit of this conversion must accrue to the end user if Maryland moves forward with a permanent delta requirement in its offset program for development projects.

Response: Reduction in loads from the Agricultural Sector resulting from conversion of agricultural land uses to other uses (including development) that occurs over time will be reflected as a reduction in the total load from the Agricultural Sector. This in essence “credits” the Agricultural Sector with the load reduction resulting from conversion of agricultural land to development, which is as it should be: the inventory of agricultural sources has been reduced, and the load reduced accordingly. At the same time, all new development will result in new loads from the Development Sector which must be offset according to EPA’s WIP Guideline. In the aggregate, these post-development loads will increase the total load from Development Sector by the sum of the post-development loads. Total loads from all source sectors at any time in the future will reflect changes resulting from land use change accordingly: a reduction in the Agricultural Sector due to a reduction in the inventory of Agricultural sources, and an increase in the Development Sector due to an increase in the inventory of Development sources.

Comment # 127.

Commenter: C69

The Phase II WIP notes that MDP projects a net reduction in forest cover due to development and that if current trends continue, by 2035 an additional 404,000 acres of land will be developed and Maryland will lose an additional 176,000 acres of forest. Most will be converted to low or very low density residential development. The WIP fails to address the loss of existing forest lands. The commenter recommends Maryland’s Phase II WIP require a no net loss of forest in each watershed to achieve the nutrient and sediment TMDLs by a date certain to meet reasonable assurance

expectations. The Phase II WIP also should contain detailed measures to expand and fund forested buffer coverage to at least 85percent of all the shores of the Bay and its tributaries within Maryland's boundaries.

Response: The figures cited are from PlanMaryland - <http://plan.maryland.gov/>. We agree that the future loss of forest in Maryland is worrisome. The Phase II WIP does address this forecasted loss of forest land by proposing an accounting for growth strategy that will include disincentives for sprawl development. Although we don't expect the strategy to result in no net loss of forest, if crafted as envisioned, the accounting for growth strategy should reduce future forest losses and should offset new loads from low or very low density residential development. Also, note that the Phase II WIP shows an increase of 105,398 acres in forest land as a result of additional BMPs (e.g., forest buffers) that convert urban or agricultural land to forest; neither the WIP targets nor the WIP strategy loads reflect the continued loss of forest land that is expected to occur from future development.

Comment # 128.

Commenter: C34

The commenter notes that no estimates are presented for the impact of growth that will take place during the time frame of the targets. The draft WIP II acknowledges the issue of ongoing growth with an outline of offsets, which will be fleshed out by 2013. New growth typically replaces forest with urbanization. The commenter's analysis suggests that load reductions might be overwhelmed by growth. The present inability to gage the effects of new growth is a serious shortcoming of the WIP process that should be addressed in the revised WIP II. The commenter suggests that stronger state oversight of WREs would contribute to an understanding of the increased loads from land-use changes.

Response: We are required to prepare a policy to offset new loads related to growth and development. That policy is under development and will be available for public discussion this summer and early fall. At the beginning of the TMDL process Maryland also projected potential new growth during the time period estimated to create the Accounting for Growth Strategy. The nutrient pollution from that estimated growth was added to the total for the first 2-year milestone period and the state implemented additional practices to reduce the nutrient pollution from new additional growth.

Comment # 129.

Commenter: C37

The commenter is disappointed and concerned that guidance for local governments on implementation strategies related to the growth and new development element of the State's plan has not been developed, as previously assured. They note that the State's plan requires future pollution loads related to growth to be accounted for. They note that the State's delay in guidance is costly as the local government staff will not be able to incorporate the requirements during the process of updating comprehensive plans, analyzing zoning, or approving new development codes.

Response: Those policies for offsetting growth will be available for discussion this summer.

d. BMP issues/limitations

Comment # 130.

Commenters: C17, C26, C31, C59, C62

Several commenters discuss the list of BMPs in state BMP list and the model. C31 and C59 would like to see (1) additional BMPs be included in the State BMP list and the Bay Model. C17 is concerned that (2) innovative practices are not incentivized within the model. They note living shorelines, rain barrels, and rain gardens are commonly implemented on rural development projects and rural residential tree plantings and urban canopy plantings should be credited in the MAST. C62 suggested that a major gap in the WIP is its (3) failure to include the upgrading of aging infrastructure as a BMP. Sewage is a major contributor of phosphorus, elimination of continuous, dry weather sewage leaks will help reduce the load. C26 suggested that giving local jurisdictions the option to use (4) alternatives to stormwater retrofits if equivalent nutrient practices can achieve the nutrient reduction would increase their ability to achieve needed reductions.

Response: (1) There is a process to add to the list of BMPs included in the model. It requires data to demonstrate the efficiency of the BMP and approval by various sector workgroups at the Bay Program. (2) Some of the BMPs mentioned are included in Environmental Site Design, so while not explicit are included. Residential tree planting and urban canopy are creditable. (3) While sewage maybe a major contributor, these are illegal discharges and so have no allocation and cannot be credited. If not corrected, additional BMPs will need to be implemented to achieve water quality. That said, there are two major consent decrees in place to address failed infrastructure. In addition, the Center for Watershed Protection is leading an effort to identify where there may be illegal or improper connections between sanitary and storm systems (not purposely combined systems, but where a sanitary connection was inappropriately made to a storm system or where there is inversion causing contamination) so that they can be identified and corrected. Finding these problems is not easy. (4) Alternatives to storm water practices are allowed, and on multiple occasions, MDE has indicated that there is flexibility in addressing urban nutrient load reductions. However, where a perm it has an explicit requirement, that requirement must be met.

Comment # 131.

Commenters: C18, C42

Two commenters asked for the MDE BMP database used for the Bay model, so they can verify the information in it. Commenter C42 noted that there are many BMPs not allowable in the database and they should be included so that all BMPs can be accounted for in the Bay model.

Response: The BMP database has been distributed to any one who asked. Contact the Science Services Administration at MDE if you need a copy.

Comment # 132.**Commenter: C28**

The WIP uses an estimated 25% removal rate for nitrogen for all urban BMPs, but does not indicate how this value was derived. We recommend that MDE provide more documentation to support the assumptions related to BMP performance. In addition, loading rates used in the MAST and other models should be updated to reflect the most accurate and scientifically sound data as additional monitoring and studies are performed.

Response: Not all Urban BMPs have the 25% removal rate. To clarify, MAST includes a generic BMP referred to as a “Retrofit” BMP in addition to other more specific types of urban BMPs. The “Retrofit” BMP uses an average removal rate of 25% Nitrogen. This BMP was derived from MS4 Annual Reports to provide a generic BMP type as a default when the actual BMP type may be unknown (e.g., future implementation). It reflects a conservative estimate of reductions based on a statistical sampling of historic records of retrofits that have been implemented in the recent past. All the information in MAST is consistent with the Chesapeake Bay Program Watershed Model Phase 5.3.2. When any updates are made to the information used in the CBP Model, that information is also updated in MAST. It is important to remember that MAST is an estimation tool created to be consistent with the CBP Model, thus enabling users to create reduction scenarios that provide reductions similar to those output by the CBP Model. During the coming years, the Bay watershed model and MAST will undergo refinements via a process that is open to the public. Your organization is encouraged to participate in that process to ensure your concerns are adequately addressed.

Comment # 133.**Commenters: C18, C25, C29, C43, C62**

Several comments were made regarding individual BMPs and the need for refinement of the overall BMP list and efficiencies, both of which will aid municipalities in meeting their WIP goals. Specifically, commenters would like clarification on and expansion of credit received from and reporting criteria for tree planting on urban land. Another commenter asked the state to review how it is handling stream restoration and urban nutrient management.

Response: A process has been set up as part of the Chesapeake Bay Program committee structure to review or revise BMP descriptions and efficiencies. As data is provided, the appropriate committees will review that data and the BMPs will be incorporated into the model. Stream restoration has assigned efficiencies consistent with filtration practices. Urban nutrient management is currently under review by the Chesapeake Bay Program to assign an efficiency for it.

Comment # 134.**Commenter: C28**

Since this sediment load is significant and can eliminate nutrient processing by aquatic life, WIPs should allow jurisdictions to get credit for the actual sediment reduction that is achieved as long as they can show a reasonable accounting for actual reductions.

Response: The question is unclear. Credit is given for sediment reduction consistent with the efficiency assigned to the BMP implemented.

Comment # 135.

Commenter: C64

Retrofitting of land developed prior to the requirement of stormwater controls can be done and has been done successfully; however municipalities have found that the land requirements in many instances do not allow for a complete or even partial retrofit. New facilities require significant surface area and often there is not enough publicly owned land for the number of retrofits needed, and often the land is not positioned appropriately in the watershed.

Response: At this point only 20% of the impervious surface without stormwater controls needs to be retrofitted. That amount of coverage provides adequate flexibility to find locations where retrofits are available. Further, this is a permit issue, not directly a WIP issue.

Comment # 136.

Commenter: C26

The Current Capacity Analyses done by counties were not used in the WIP. Please explain how county level information could be aggregated up to the major basin scale without location-specific information. Local jurisdictions also need to know if, when, and to what extent this information will be incorporated to the progress run.

Response: The current capacity analysis is just a capability, not a specific plan, so it isn't clear the relevance of current capacity to the question. To aggregate to the basin scale, the BMPs are assigned, through MAST to percentage of the applicable land in the county. If a county is split between basins, the implementation is split proportionally, and then the county BMP level is simply added up geographically across the basin. Progress runs are based on actual BMP implementation data submitted to the Department. For WWTPs, reports on implementation are maintained through the Bay Restoration Fund (BRF) tracking. For septic systems, it is also tracked through the BRF and any separate reports of privately funded upgrades. Stormwater progress is reported through county annual reports required by the permits, and agricultural information is reported by the Conservation Districts and managed in Conservation Tracker.

Comment # 137.

Commenter: C23

How does the model account for existing storm water BMP (i.e. rain gardens, wet detention ponds, and stream restoration) pollution removal rates? It seems that if these practices are not maintained that the less credit should be given. As future projects are implemented their efficiency can increase or decrease, how do these plans account for these credits?

How has climate change been incorporated into the WIP and how BMPs for stormwater get credit for required reductions? It appears that even in the last 10 years rain fall patterns have expressed more frequent intense storms, whereas most BMPs are designed to treat the 1 inch storm?

Response: The efficiency assigned to those practices was established using literature values and calculations and incorporates some assessment of failures. If the reduced efficiency is underestimated, then eventually that deficiency will need to be made up by other practices. Climate change has not been incorporated into the WIP at this time because there is no basis for quantitatively determining the impact of climate changes on water quality or model parameters.

e. MAST

Comment # 138.

Commenter: C17

Commenter wishes for a more user-friendly MAST interface. In addition they found MAST to be frustrating and limiting in that innovative BMPs were either omitted in MAST or given low efficiencies.

Response: We are working to further improve MAST. As indicated above, incorporating innovative BMPs is a process that is in place, but the necessary data to assign efficiencies to those innovative practices must be collected.

Comment # 139.

Commenters: C25, C52

Commenter provided examples of where MAST and county records differed on area (impervious and pervious), acres of BMP control (total and impervious), and nutrient loadings. They noted that addressing these concerns will require next steps for more detailed comparisons of base data layers to determine why there are differences in total acres and BMP acres with control, and how the differences in the loads per acre per land use type and BMP by category efficiencies may be reconciled. The accuracy of MAST could also be improved by using local data.

Response: Differences in land use between local data and EPA model data will be reconciled by 2017.

Comment # 140.

Commenter: C29

The commenter noted that “The loads calculated from the baseline do not match those provided by EPA; therefore, the current version of MAST does not provide useful output to determine if load allocations are being met. “ In addition, federal land has been disaggregated out of the total county areas, but State land has not.

Response: MAST is an estimator tool that was created to be consistent with the CBP Model. In the urban sector, the loads produced are very consistent with what is being produced by the CBP. Jurisdictions could use the MAST tool to produce the Urban Sector scenarios and be confident that the scenario loads produced would be close to the allocations when run through the CBP Model. State lands for the urban sector were based on information derived from DNR and MDP GIS shapefiles, in counties where State-owned land and facilities are under State Phase II MS4 permits, and therefore required to implement load reduction practices.

Comment # 141.

Commenter: C18

If there is no flexibility in MAST to allow BMP entry points through geographical means, the County and MAST numbers will not match, and the reductions will be off.

Response: MAST is an estimation tool that was created to be able to develop broad planning scale scenarios, not site specific, which would require point data.

8. Tracking and Accountability

Comment # 142.

Commenters: C53, C56

Continued engagement of local teams is critical to the success of this effort. A meeting schedule should be clearly articulated in the final WIP.

Response:

Comment # 143.

Commenters: C21, C34, C51, C53, C56, C60

The WIP should emphasize reasonable assurances, accountability, and consequences. Maryland must hold everyone accountable for reaching their pollution reduction goals, with clear backstops and consequences (especially local governments and agriculture).

Response: Agreed.

Comment # 144.

Commenter: C60

State and local leaders should facilitate coordination across counties and between stakeholders to more efficiently achieve basin goals and ensure each jurisdiction is making meaningful progress to more efficiently achieve basin goals.

Response: Agreed, but many of those local leaders disagree.

Comment # 145.

Commenter: C29

MDE should provide more detailed information related to the capacity to regulate the process including a substantive compliance plan and the utilization of numeric standards for nitrogen, phosphorous, and sediment to provide actual enforcement of the WIP to comprehensively.

Response: The WIP is an implementation plan, not a permit or regulatory requirement. It is EPA who has detailed possible “consequences” of not making adequate progress in their letter of Nov. 2009.

a. Tracking

Comment # 146.

Commenter: C42

Harford County notes it will be developing and refining their tracking systems to assure that all of the County’s efforts are counted.

Response: Excellent.

BMPs

Comment # 147.

Commenters: C59

The Phase II WIP should include mechanisms for the counties to use to track and report BMPs.

Response: MDE is working on making that easier and more consistent. The initial plan is to start with a spreadsheet beginning in fall 2012, and work to make MAST into a tracking tool.

Comment # 148.

Commenter: C32

Most MS4 boundaries coincide with county boundaries; therefore the county has authority to install BMPs on their lands and track progress. However, other entities (e.g., Phase II municipal MS4s, private landowners, industrial MS4s, federal properties) retain jurisdiction and a county may not have legal authority to require BMPs on those lands and it might be difficult for the county to document and track BMPs that are implemented on those lands.

Response: Phase II permits are going to look a lot more like Phase I, so that will require municipalities to do their share. Industrial MS4’s will have equivalent requirements where feasible. We are working with the federal facilities to do equivalent work. Therefore, most of the issues mentioned are already addressed. Any requirements for private landowners will need to be worked out. For the most part, small residential properties are captured in area-wide plans. There are

probably reasonable ways for localities to deal with major commercial properties through ordinance or during re-development.

Milestones

Comment # 149.

Commenter: C46

An accounting of how county and State-level milestones, including detailed descriptions of funding and programmatic needs at each level, combine to achieve the basin allocation should be provided.

Response: Sets of tables provided in mid-April contain that information.

Comment # 150.

Commenter: C46

The commenter recommends the agricultural milestones be updated to provide a reduction schedule in two-year increments, including target dates for action.

Response: Milestones were updated for the final submission.

Comment # 151.

Commenter: C34

MS4 permits are backed by *annual* reporting requirements; hence the two-year milestone-interval, *per se*, is no guarantee of performance.

Response: There will be at least two reports during each period, which is adequate to evaluate progress (we are considering more frequent reporting for BayStat). Lack of progress will be discussed if needed. There are separate time frames for EPA consequences and permit enforcement.

Comment # 152.

Commenter: C60

Missing from the document is a proposed plan for accelerating and targeting milestone activities including agricultural practices. Nor is there any discussion of how existing resources, or potential new resources, will be targeted geographically, or among sectors, or even among a list of practices within a sector.

With each SCD responsible for developing their own list of practices to meet target load reductions by 2017, how exactly are the 2012–2013 milestones to be coordinated or otherwise used to drive activities in specified basins? And within given basin, how are practices being targeted to maximize nutrient and sediment reduction efficiency and cost-effectiveness? The goal of incremental accountability may not be achieved if coordination and cost-effectiveness are absent from restoration planning and implementation.

Some of the milestone practice goals do not appear to correlate with narrative goals within the Phase 2 WIP document itself. For example, the septic milestone for the next two years is 1,200 septic upgraded to denitrifying systems. At this pace, the state will not come close to its stated five-year interim goal of almost 28,000 nitrogen-removing systems. The state should revise their 2012–2013 milestones to better correlate them with their Phase 2 WIP and also provide additional details regarding implementation and targeting.

Response: The milestones themselves, submitted as appendices provide information on milestone activities. These milestones have been modified since March 2012 as plans are refined and improved. MDE does not see that geographic targeting needs to be specified. The WIP calls for meeting implementation goals in each basin. How each county does that is not an issue at the State level. Resources by sector are usually implicit in the resource. For example, Bay Restoration Funds are specified for WWTPs, septic systems and cover crops. The Trust Fund is primarily going to stormwater. Farm Bill funding is for agriculture.

MDA is working with the SCDs and is coordinating Statewide and has submitted input decks that achieve each Basin's goals. We anticipate that for septic systems a significant portion will be hooked up to existing WWTPs or new community systems, rather than upgrading individual systems. Milestones will be revised annual in conjunction with BayStat and the EPA's Chesapeake Bay Program Office.

b. Accountability

Comment # 153.

Commenters: C21, C23, C34, C35, C37, C39, C40, C44, C46, C51, C53, C56, C59, C60, C66, C69

The accountability measures need strengthening, and should be clear and adequate for all sectors. Maryland must also hold parties responsible. The plan should also include incentives, clear backstops and consequences for non-compliance.

Response: No specifics are given as to specific weaknesses. The State believes that reporting and oversight, in combination with objective, quantitative goals and the threat of consequences are adequate at this point to assure accountability.

Comment # 154.

Commenters: C53, C56, C69

Both the State and local plans do not show accelerated commitment to implementation. Accelerated implementation including measures relating to development, retrofit of existing stormwater conveyances, wastewater, septic tank pollution, and reductions of agricultural pollution were to be addressed at the local level.

Response: It will take one to two budget cycles to accelerate implementation.

Local**Comment # 155.****Commenter: C11**

Hold municipal and county governments accountable for load reduction implementation strategies. The local governments should be required to meet and have measures in place to meet 2017 and 2025 required TMDL reductions.

Response: If submitted strategies did not achieve the required implementation levels, MDE supplemented the strategies to assure that they did so for both 2017 and 2025.

Comment # 156.**Commenter: C8**

Please make it clear what Maryland will do to insure compliance -- both inspections and penalties. Make sure we understand how this is going to work both local governments.

Response: The WIP is not a regulatory program. Inspections and penalties apply to permits, not to WIP strategies. However, if reported progress is not adequate, consequences such as permit revisions may ensue.

Comment # 157.**Commenters: C28, C40, C66, C69, C73**

The commenters are concerned that by using a basin scale, the plan sacrifices a level of accountability and lacks a clear identification of the roles and responsibilities of each entity (State or local government) for implementing the WIP within the given time frames. Entities should be made accountable for any unjustified failures/lapses and consequences should be established. The Final WIP II should have a separate section that explains the State's strategy (e.g. through MS4 permits, adaptive management, load targeting, etc.) to achieve the load reductions at the various milestones ahead. Commenters strongly suggest that each county should be accountable for implementing its plan.

The commenters would like explanation on how basin allocations were distributed, and if they were *backfilled*, it needs to be clearly documented so that accountability for meeting those reductions can be tracked.

Response: While reporting to EPA will be at the basin scale, the State has specific and explicit expectations at the County scale, which is the scale at which the plans were developed. Reporting and accountability both apply at the county scale. Basin level allocations from EPA were proportionally redistributed at the county scale using the detailed output from the watershed model. The allocations were based on full implementation of the existing ENR cap strategy, which is very stringent, and nonpoint source allocation based on equal percentage reductions of reducible loads for agriculture, stormwater and septic systems.

Comment # 158.

Commenter: C37

Ensure local governments comply with the accounting for growth element.

Response: This strategy is being developed at the State level and will be ready as a discussion draft for public review and comment in the summer of 2012.

Comment # 159.

Commenters: C51, C53, C56

The WIP requires more meaningful local engagement and it must detail clearly accountable local load reductions and steps needed to reach those reductions.

Response: There was very extensive local engagement and that engagement will continue. Local load reductions were made available to each county team in mid-April.

Comment # 160.

Commenters: C40, C46, C53, C56, C73

The final WIP should include a clear delineation of how county inputs are reflected in the state plan, as well as articulating a process for the state plan to be updated when the local plans are finalized in July. The final State WIP should clearly indicate how the county plans – pollution load numbers, BMPs, and milestones – were incorporated into the State’s plan. This process could be articulated in an appendix to the state WIP.

Response: County inputs are in the appendices. The specifics of the each county update will be published on the web after July updates and concurrence from EPA that the revisions still achieve the goals.

Comment # 161.

Commenters: C53, C56, C69

The final WIP must clearly articulate reduction goals for stormwater pollution from urban and suburban areas (even in areas where MS4 permits are not required) must be part of the local strategies in each jurisdiction.

Response: There are load reduction targets assigned to both NPDES-regulated urban and non-regulated urban areas (i.e., not regulated under NPDES MS4 permits) in the Phase II WIP.

Comment # 162.**Commenter: C60**

The commenter understands EPA's decision to not require numeric local area pollution reduction targets after critique of the model, we steadfastly believe that programmatic and implementation goals should be expressed at the local level.

Response: Programmatic and implementation goals are expressed at the local level.

Comment # 163.**Commenter: C46**

The Phase II WIP must ensure that actions by local partners are sufficient to achieve the basin reduction target.

- List the number of implementation and program actions including the anticipated number of BMPs and include in local milestones. The expected amount of nitrogen, phosphorus, and sediment reduction associated with each action should be indicated.
- Clarify responsibility (State or local) of implementation and program actions.
- Account for how county and State-level milestones combine to achieve the basin allocation.
- Specify the terms and timetable under which support for local jurisdictions by the State and partners will occur, including a description of what support means and clear expectations about the nature and extent of communications.
- Establish a clear and transparent system for local two-year milestone accountability, including the terms and conditions under which:
 1. progress including both voluntary and government-supported actions is verified and reported;
 2. local resource allocation and delivery schedules are determined to be sufficient to achieve basin targets;
 3. failure to achieve two-year milestones prompts the administration of consequences;
 4. consequences are delivered, including detailed procedures, examples, and vehicles for administrative relief;
 5. local jurisdictions may collaborate to ensure basin targets are achieved, and
 6. the State provides reasonable assurances to EPA that the Phase II WIP will achieve basin targets .
- Reference a commitment by the State to make centrally available detailed information on costs and benefits associated with approved pollution reduction strategies.

Response: Where local submissions were not adequate to achieve the basin reduction targets, those plans were supplemented and revised by MDE and made available to the localities. Some of the details requested are not available or changing, such as a result of legislation, which cannot be predicted and therefore cannot be incorporated into the plans *a priori*. The level of pre-decisional specificity is not appropriate. Consequences will be situational, i.e., a failure to complete a goal

because of circumstances beyond local control, with a plan to catch up, will be treated very differently from a simple refusal to implement.

Comment # 164.

Commenters: C60, C69

The WIP should be a complete document. County-by-county and watershed-by-watershed agricultural strategies should be an integral part of the Phase II WIP. This level of scrutiny and accounting is necessary to implement and track improvements at a local scale. This is lacking in the draft WIP.

Response: That information is available in the Appendices and in tables subsequently published in April 2012.

State/Federal

Comment # 165.

Commenters: C53, C56, C69

The draft plan assumes legislative action will be taken this session to increase funding for WWTPs and create dedicated local funding for stormwater retrofits. The final WIP should assess the likelihood of these bills succeeding and include contingencies should they fail to pass.

Response: These comments are being written subsequent to the legislative session, so it is clear that significant funding was provided. The contingency is always clear: if funding is not adequate, go back and ask again after, or under the threat, of EPA consequences.

Comment # 166.

Commenters: C53, C56, C60, C69

MDE has fallen behind schedule in finalizing MS4 permits, and the majority of urban jurisdictions are operating under lapsed or outdated permits. The commenters are encouraged that the state has committed to finalizing all Phase I permits and submitting draft Phase II permits by the end of 2012, and both the WIP and the milestones should reflect that as a priority.

The commenters encourage a serious review of the MS4 permits and make changes ensure reasonable assurance that they will meet WIP implementation goals. For example, the new Phase I permit requires retrofits to existing urban areas but does not set a standard or a methodology for how to implement those practices, and does not specifically require environmental site design be used when retrofitting developed lands. The Phase II WIP needs to address how the improvements called for in the MS4 permits will be funded, monitored and enforced.

Response: The permits have been critically reviewed by EPA and have or will undergo a public process. The permits do not need to specify environmental site design because that is already specified in State law.

Comment # 167.

Commenter: C60

The State must develop a timeframe and plan for finishing all outstanding CAFO permits to ensure these operations are able to comply with the law.

Response: Of the almost 600 applications for coverage under the General Discharge Permit for Animal Feeding Operations (General Permit), over 250 have been processed and registered. While the remainder will be registered over the next several months, most Maryland farms, including all farms applying manure are required by MDA regulations to be operated in accordance with nutrient management plans. These plans limit the application of all sources of nitrogen and phosphorus to those that are agronomically utilized. This prevents most contaminated runoff from farms. In addition, all farms that have applied, but not registered to date, have signed a compliance schedule which compels them to abide by most of the requirements of the General Permit and also allows MDE full inspection authority on these farms.

Comment # 168.

Commenter: C60

How the state intends to accelerate implementation of largely voluntary agricultural practices has not been adequately addressed and must be articulated.

Response: More money, more effort at signing farmers up for the programs. The plan is working, 2012 had the highest signup for cover crops ever.

Comment # 169.

Commenter: C67

On page 3 the Plan states, “many of the implementation actions will be conducted by local governments.” The Plan should be more explicit about the State’s role in implementing and financing pollution reduction.

Response: The State will implement non-point source controls on its land, or where that land is leased for farming, require appropriate practices in the lease. The State has now, through action of the General Assembly, committed to increased funding for the Bay Restoration and Trust Funds, and has required that Phase I subdivisions develop utilities to fund stormwater controls.

Comment # 170.

Commenter: C61

The commenter would like to ensure that the adaptive management strategy will not be used to pull back on goals or remove accountability.

Response: It will not. The 2017 goal is established and EPA will not modify it. The 2025 can only be modified by approved changes to the model. Although it is not likely that TMDL will change

significantly by modifications made to the model in 2017, it is likely that sector allocations will change significantly because of better accuracy for land use and septic system numbers, as well as changes to the model algorithms. Adaptive management allows us to do one thing instead of another, but the same effectiveness and pace will need to be maintained.

Comment # 171.

Commenters: C46, C65

The Bay TMDL and WIP are not enforceable regulations but they are the drivers for the regulations, therefore a cost-benefit analysis should be performed or the argument in the WIP should be modified. The Phase II WIP has a commitment by the State to make centrally available detailed information on costs and benefits associated with approved pollution reduction strategies.

Response: The cost benefit should take place when the regulations are proposed. It cannot be addressed in the WIP when it is not clear what form the regulations will take. EPA is currently working on costs and benefits and plans a final report before the end of 2012,

Comment # 172.

Commenter: C69

Mandatory regulations are needed and they should start with comprehensive new regulations on nutrient management that are enforced.

Response: It is not all clear that major regulatory changes are needed. Nutrient management regulations are being addressed, but the idea that other regulatory changes are needed is not apparent at this time.

Comment # 173.

Commenter: C28

Federal facilities are a source of significant pollution and must be held accountable (load reductions and timeline). Providing the necessary coordination (e.g. County liaisons, GIS data from state and/or County) should be a priority for the state and counties.

Response: Federal facilities are being held accountable and quarterly meetings are held to assure the necessary coordination.

Comment # 174.

Commenter: C4

What are citizens in neighboring Bay states (DE, PA, VA) are paying for Bay Restoration? For example, if Maryland has a flush tax of “X” dollars, what are they paying?

Response: Each state is taking different approaches. Pennsylvania for example, because it has relatively few major urban centers in the Bay watershed is focusing on reductions in agricultural

runoff, and is using regulatory approaches on the farms to achieve those reductions. Maryland, with a larger urban population can achieve reductions more effectively with a focus on major wastewater treatment plants supplemented by significant reductions in agricultural loads.

Comment # 175.

Commenter: C1

The SHA needs to be responsible for their systems. The commenter is surprised that in the SHA proposed budget they anticipate spending millions on stormwater, but question why it is only on the western shore. The commenter noted he was with an SHA manager talking about stormwater on a bridge that empties into the river, and he said “it’s not their problem they have no water coming from the bridge.”

Response: The SHA is only allocated WLAs for the 11 MS4 counties which are on the western shore.

Sector

Comment # 176.

Commenters: C39, C66

Additionally please educate us on how local governments and agriculture will be held accountable to the nutrient and sediment pollution reduction targets. Will counties be accountable or will the state?

Response: Counties will be held accountable for stormwater and septic reductions. The Maryland Department of Agriculture will be responsible for assuring agricultural implementation in conjunction with the Soil Conservations Districts. Local governments are also responsible for wastewater load reductions under MDE oversight.

Comment # 177.

Commenters: C46, C51, C53, C56, C69

The agricultural section does not provide reasonable assurance pollution will be reduced. MDE must articulate where agricultural practices will be implemented geographically and officially integrate the local plans into the WIP. The final state plan must include specific practices for each county and document the pollution reduction loads those practices are expected to achieve.

The commenters are also concerned over assumptions made by both MDE and EPA, and make the following suggestions:

- The baseline model assumes all CAFOs are permitted and meeting their permit requirements. The WIP must demonstrate how the state will bring CAFOs up to that standard. Commenter C69 finds the net increase in nitrogen loads from CAFO operations between 2010 and 2025 unacceptable, and the State should develop methods to reduce those loads.
- Update the milestones to include a reduction schedule in two-year increments, including target dates for action. Each agricultural strategy should include the following: an

implementation schedule with numeric reduction targets in two-year milestone intervals; clear standards by which implementation performance is measured and evaluated; and procedures for ensuring compliance, including incentives and consequences. The WIP needs to include measures to achieve reductions and available funding.

- The plan assumes adoption of new nutrient management regulations that have since been put on hold. The WIP must set a clear timeline for adopting those regulations.
- The majority of agricultural nutrient and sediment pollution reductions are reliant on annual practices that are variable in their success, highly subject to implementation issues, and require ongoing oversight or funding. The WIP should incorporate more permanent practices that have consistent and ongoing pollution reduction benefits.
- The plan does not pay enough attention to verification, especially on the annual practices. Current verification rates are far too low to provide reasonable assurance that these practices will be implemented, and implemented correctly to maximize pollution reduction benefits. The WIP should detail how sufficient resources will be provided to ensure verification, potentially through additional staff or monitoring stations.
- There is a need for open and transparent means of accounting for Agricultural sector reductions. Nutrient Management Plans are Clean Water Act documents and should be public documents as they are in Pennsylvania and Virginia.
- The WIP for the agricultural sector is constructed at the major basin scale yet we continue to have a trading program and are developing an offset policy that will require baselines derived at the farm scale or the development parcel. We recommend that the discussion on these issues with the Bay model be strengthened and include a discussion on how the trading program and the offset policy will be adjusted or developed considering the model accuracy at different scales.
- We also acknowledge the amount of work that has been done to update the P-index and recommend the schedule and process for finalizing the index is included in the Plan.
- Estimate the necessary resources for making new staff operational, including cost projections and strategies for securing funding.
- Expand Appendix A to include 1) estimates of resources required to deliver the implementation strategies, and 2) detailed strategies and timelines for how additional resources will be obtained and deployed.

Response: The plans are geographically specific at the county scale, which is consistent with the resolution of the available data. The plans are fully integrated through the submission of a single input deck developed with the aid of MAST, to EPA. With regard to CAFOs, the WIP establishes a plan for the Department to implement. Additional funding was made available through CBRAP to accelerate CAFO permitting. The milestones are implemented annually. At this point they are largely programmatic, but that is appropriate because resources need to be gathered to accelerate implementation. The issue of using annual practices, especially for agriculture, is recognized, but there are no alternatives at this time. However, evaluation of water quality standards is based on a multi-year evaluation, so that should address some of the concerns with annual practices. Verification rules are currently (spring-summer 2012) being worked out between EPA and the States. Agricultural reductions will be tracked in Conservation Tracker and reported on the BayStat website. EPA is working on cost and benefit evaluations, due the end of 2012. It really isn't feasible to

elaborate in advance how additional resources will be obtained as evidenced by the 2012 session of the General Assembly where the Bay Restoration Fund was doubled, significant funding was obtained for the Trust Fund, and a requirement for a stormwater utility was established for the Phase I jurisdictions. No one could have predicted that level of success in advance.

Comment # 178.

Commenter: C46

The commenters recommend Appendix A be expanded to include estimates of resources required to deliver the 42 agricultural strategies and timelines for how additional resources will be obtained and deployed. They also recommend each agricultural strategy in the Phase II WIP include 1) an implementation schedule with numeric reduction targets in two-year milestone intervals; 2) clear standards by which implementation performance is measured and evaluated, including third-party verification, soil and ground water testing, and public access to nutrient management plans; and 3) procedures for ensuring compliance, including incentives and consequences.

Response: See comment #177.

Comment # 179.

Commenters: C23, C47, C53, C56, C60, C69

There is no methodology for what the MS4 permit requirements mean or standards the urban and suburban jurisdictions will be held to, and no reasonable assurance or requirement that reduction goal will be met. The Phase II WIP fails to provide mechanisms, funding sources, and verification for reductions in nutrients and sediment flows from urban/suburban stormwater, please address these. The Phase II WIP should also articulate a strategy and appropriate accountability measures for ensuring that communities without MS4 permits and basins without significant MS4 areas will achieve their stormwater pollution reduction targets as well. . There needs to be an increase in implementation enforcement.

Response: The accountability measures are clearly a combination of reporting and tracking and the consequences articulated by EPA. The MS4 permit requirements are explicit and clear, and if they are not met, MDE will consider enforcement action if needed. We actually looked fairly closely at the non-MS4 jurisdictions and found that the loads from these areas are relatively minimal and deserving of close attention, although they are expected to report what controls they have implemented.

Comment # 180.

Commenter: C11

Enhance and regularly audit the transparency and enforcement of industrial and agricultural sources of pollution for optimal accountability.

Response: Agreed.

c. Consequences

Comment # 181.

Commenters: C11, C37, C51, C53, C56, C59, C69, C73

Clearly articulate backstop measures and enforceable penalties if responsible parties (especially local governments) fail to meet their load reduction commitments.

Response: Backstop measures for the WIP were spelled out by EPA in its letter of Nov. 2009. Penalties are established during an enforcement action and are not pre-determined.

EPA

Comment # 182.

Commenter: C58

It appears that counties are reporting on the county scale, Maryland reports to EPA on the basin scale, and nonattainment leads to punishment at the state scale. It appears then that if some counties do not seriously make progress towards load reductions, the entire state could receive EPA consequences for actions that they were not responsible for. Please provide a more clear explanation of how this circumstance will be avoided.

Response: EPA would likely target its backstops to the problem areas by such things as re-writing permits for specific plants or jurisdiction not making adequate progress. Maryland could also take action, rather than leaving it to EPA.

State

Comment # 183.

Commenters: C21, C35, C40, C60, C66, C46, C68, C69

The WIP should explicitly state the backstops and consequences for local governments and sectors (agriculture, urban) failing to achieve their share of key reductions.

Response: No it shouldn't because consequences will be situational, i.e., a purposeful refusal to implement will be treated differently than a failure resulting for issues beyond state or local control.

Comment # 184.

Commenter: C23

What penalties are in place to ensure these plans are achieved or attempted to the maximum extent practicable? EPA has stated their actions should milestones in 2012 and 2017 indicate states are falling behind, what will MDE do to municipal partners? [sic]

Response: Penalties are imposed for permit violations, not lack of progress on the WIP and is a separate discussion. Actions taken by the State in response to insufficient progress will be situational and cannot be fully described without specific circumstances being available.

Comment # 185.**Commenters: C24, C29, C34, C40, C41, C46, C51, C53, C56, C59, C60, C65, C73**

Compliance, enforcement, and the accountability should be addressed and taken seriously across all segments of the plan. We recommend that the Next Steps section (or appendix) of the Plan include a discussion on potential consequences (including failing to put forth a good faith effort) with a schedule for issuing a letter or other documentation along with examples of the types of consequences that the State would consider imposing. Also include penalties for not creating effective local WIPs, or meeting milestones, and incentives that do. Please clarify how MDE plans to enforce the State's supplemental strategy for pollutant reduction. If a county did not submit a plan and is not regulated (having a permit). Greater enforcement by MDE is needed to uphold mandates and compliance with NPDES permits. Very few fines have been levied or collected.

The commenters have the following suggestions for potential consequences/backstops:

- State and federal permits could be withheld for new development that would add impervious surface
- Refusing to issue construction general permits for a jurisdiction,
- Requiring higher performance levels for permitted wastewater discharges,
- Expand MS4 permit coverage, including assigning MS4 permits to rural counties, or non-permitted counties,
- Initiating a review of all permits the jurisdiction has delegated authority over,
- Enhanced or targeted compliance and enforcement activities,
- Ratchet down permits on point sources to the limits of technology,
- Deny permit applications which lack sufficient protective measures for receiving waters,
- Redirect state funds,
- Increase funding for enforcement personnel for state and local agencies
- Increased penalties/fines for violations (e.g. increasing minimum fines as a disincentive and using penalties/fines to fund the WIP)

Response: See responses to comments 163, 183, 184,

Comment # 186.**Commenters: C40, C51, C53, C56**

The WIP should also provide specific examples of how this flexible approach might be applied in order to increase transparency and certainty of the process.

Response: "Flexible approach" is not articulated.

Comment # 187.

Commenters: C53, C56

The final WIP must not rely solely on the existence of a permit as evidence of a backstop. MDE must acknowledge that jurisdictions have failed to meet MS4 standards and lay out clear backstops and consequences for failures to achieve pollution reductions.

Response: This new round of permits is more compliance and enforcement oriented than prior generations of permits.

d. Verification

Comment # 188.

Commenter: C47

The commenter recommends the final WIP have quantitative targets for agricultural practices by which BMPs can be verified and progress can be measured and clearly reported to the public in a transparent way to demonstrate how they are being held accountable.

Response: It does.

Comment # 189.

Commenter: C60

The commenter recommends the state include an explanation of how MS4 permit restoration and retrofit requirements will be overseen and evaluated.

Response: Through annual reports submitted by the jurisdictions.

Comment # 190.

Commenter: C60

The only way to increase the likelihood of success is to invest in a rigorous program of verification, develop schedules for long-term maintenance, and significantly increase oversight and enforcement inspections of practices from all sectors. This program must include increased resources—at the local, state, and federal levels—dedicated to field-checking reported practices and increasing on-the-ground compliance inspections statewide.

Response: A verification program is in development. The milestones and 2017 re-evaluation provide schedules. Increased resources were provided in this year's legislative session.

Comment # 191.

Commenter: C61

The commenters support the Plan's determination that credit will only be given for actions that are reported and verified.

Response: Agreed.

Comment # 192.

Commenter: C69

The draft WIP should require assessments of nonpoint source BMPs, urban BMPs, and MS4 permit terms, in addition to reduction targets be conducted by independent third-party entities to assure effectiveness and proper implementation.

Response: Verification procedures are in development as of summer 2012.

Comment # 193.

Commenter: C73

The current method for evaluating if an entity is meeting target loads involves accounting for the number or acres of BMPs, and then estimating the predicted loads. The WIP does not address how MDE will determine whether those BMPs are actually maintained/implemented correctly or address how and when MDE will ensure compliance. The WIP should address this issue through funding, monitoring, and increased fines for violations.

Response: This issue is really one of appropriate monitoring, rather than compliance. If practices are not maintained or properly implemented, there will not be an appropriate change in water quality, so jurisdictions will need to implement more practices. There is choice, spend resources on maintaining the efficiency and effectiveness of already installed practices, or install more practices.

Comment # 194.

Commenter: C29

The commenter is primarily concerned with MDA's proposed verification and certification program for BMPs because it is still a voluntary program and lacks requisite transparency as the certification and verification of BMPs will be solely undertaken by the MDA and local Soil Conservation Districts.

Response: More explicit verification procedures are being developed in conjunction with other states and EPA.

e. Monitoring

Comment # 195.

Commenters: C62, C66, C73

It is imperative that the WIP include requirements for water quality monitoring/ inspections of BMPs, etc. to ensure compliance and that reductions are actually occurring. Please clarify whether projects implemented by the state or local governments will need to develop a significant monitoring component and outcome assessment. Please consider incorporating information (e.g., citations) that justifies this statement. Monitoring requirements should be incorporated into point source NPDES permits, but also MS4s, construction sites covered under the General Construction Stormwater (SW) Permit, industrial sites covered under the General Industrial SW Permit, and CAFOs. These are all point sources regulated under the Clean Water Act that the state can require water quality monitoring under their NPDES permits. Requiring monitoring will make it much easier/more realistic for the State to determine compliance with the permits and, therefore, compliance with the BMPs and target loads. Commenter 66 recommends another approach to monitoring progress, particularly in the agriculture sector, would be to utilize monitoring wells at select locations in and at the waterfront of agricultural fields, to test the groundwater.

Response: Water quality monitoring cannot be tied directly to implementation. There is parallel tracking of implementation and water quality monitoring with an extensive network of tidal and non-tidal water quality monitoring stations sampled by the State; local governments will not be asked to expand their water quality monitoring, but the State would like to incorporate their data. Verification programs are being developed to assure that BMPs are accurately tracked. All NPDES permits have a monitoring component.

9. Questions and Clarifications

Comment # 196.

Commenter: C2

The report suggests jobs will be created resulting in a net increase in jobs. Many of these jobs will be part time or periodic rather than full time. Why does the report not address how many of the existing jobs will be lost? Shouldn't we show the net increase in jobs? Shouldn't we try to protect the existing jobs that have served the public so well for so many years?

Response: These types of analyses depend on the assumptions made. Two analyses have been completed and they come to opposite conclusions. There is no reason why jobs should be lost, but clearly jobs will be generated by the work that needs to be done.

Comment # 197.

Commenter: C72

On page 42, the WIP states that “Others make a more honest argument that the economic activity of the Bay restoration isn’t new activity; it is simply a transfer from one type to another type of economic activity, say jobs. This can be refuted.” Do you really want to say this? What does that say about the people referred to in the prior sentence?

Response: It has been said. Not clear about who is being referred to in the prior sentence.

Comment # 198.

Commenters: C2, C18

Commenter C2 would like the document to clearly define and explain what a progress run is, the differences between the 2009 and 2010 progress runs, specifically what is included in each, and from when this progress is measured. Unless there is a specific reason not to, the 2010 progress run should be consistently referenced. The text also should explain how the reductions from 1985 to 2009, which are known but not represented here, will be incorporated into the 2017 Interim Strategy. Commenter C18 notes that only 2009 Progress information was used in the State WIP Plan. They would like the 2010 Progress run loading totals for the County by sectors.

Response: This question is outside the scope of the directly related to the WIP, thus a brief response is being provided. If further detail is requested, the commenter should follow up with MDE separately. A “progress run” is a watershed model computer simulation of the long term average nonpoint source loads that reflect implementation through July 30 of the given year. It also includes the point source discharges for the fiscal year of that run. Between 2009 and 2010, the distribution of acres of regulated and non-regulated urban stormwater was updated. Although it is desirable to use 2009 as a baseline for comparison with future progress, the change in urban stormwater noted above confounds such comparisons unless regulated and non-regulated stormwater are aggregated together.

The reductions from permanent BMPs implemented between 1985 and 2009 are represented in the 2009 loads upon which the WIP strategies are constructed. Hence, those reductions are incorporated into the 2017 Interim Strategy. The request for county-specific data is beyond the scope of the WIP comment process and should be made separately.

Comment # 199.

Commenter: C45

It would be useful for comparison purposes to add two columns that have the percent reductions for 2017 and 2025 by sector on Figures 3, 4, and 5. The comments here apply to Appendix B. The tables for 2017 and 2025 strategies have 2009 progress, while the figures have 2010 progress. The same progress should be used throughout the document.

Response: The intent of the figures is to provide a clear, uncluttered graphic that compares the overall load reductions (in millions of pounds) expected from the various sources for the two strategies. The tables in Appendix B have been updated with 2010 progress numbers throughout.

Comment # 200.

Commenter: C24

The terms *target* and *allocation* are used interchangeably throughout the documents but have very different connotations. This issue needs to be clarified and corrected.

Response: This comment was noted, and some effort was made to clarify the use of these terms in the WIP document.

Comment # 201.

Commenter: C2

Reference is made throughout the document to *non-regulated stormwater*. It would be helpful to explain what the non-regulated stormwater represents and clearly define those areas, who is responsible for them, and the expectation for how they will be addressed.

Response: Non-regulated stormwater is wet weather runoff in any jurisdiction or facility that does not have a Phase I or Phase II MS4 permit. The actual load from these areas is small. We want to know of any controls implemented on these areas.

Comment # 202.

Commenter: C2

While the report addresses septic systems, the Governor is currently proposing legislation that will essentially eliminate septic systems from new construction. Is this taken into consideration in the establishment of goals?

Response: The goals reflect existing systems. If fewer new systems are installed, that just simplifies future loads that need to be reduced.

Comment # 203.

Commenter: C72

The commenter is concerned regarding the County scale MAST scenarios as the basis for the State's implementation strategies in that the text of the MAST section does not tell the whole story, and might cast doubt upon other aspects of the document. They suggest the following change to the last paragraph.

“As explained above, the xxxxxx county-scale MAST scenarios were able to serve as the basis for the State's implementation strategies to meet the revised major basin load reduction targets set by EPA in August 2011. Where local WIP Teams chose not to submit a scenario, the State

prepared a default scenario to fill the gap, and these will be shared with the local jurisdictions in early April.”

Response: Not clear what part of the story hasn’t been told, or isn’t clear as of April 2012.

Comment # 204.

Commenters: C2, C45

Atmospheric deposition [Page 14]

- Provide the loads from this source and the expected reductions associated with it. The portion of the stormwater load that atmospheric deposition represents should be indicated and that portion of the stormwater load removed from the total reductions expected for the Urban Stormwater sector, particularly since the majority of this source is generated outside the Bay watershed and is to be addressed at the federal level.
- Will there be any further reductions by extension to the 2025 and what effect might that have on sector allocations?

Response: Atmospheric deposition is not explicitly noted because the reductions that need to be achieved are assigned to EPA, not allocated to the States, and will be achieved by federal Clean Air Act implementation. If was subtracted off the top so states can do that much less reduction.

Comment # 205.

Commenter: C72

In section III, should you not acknowledge the *late adapters* and *resisters* in some way? I’m concerned that this does not recognize what one can read in the press, and may cast doubt upon other aspects of the document.

Response: Actually we are finding that, despite protests, most jurisdictions are moving ahead. If not, it will become apparent when progress is evaluated and they will face the consequences. There is no need to create a more negative, adversarial tension at this time.

Comment # 206.

Commenter: C2

What is Pennsylvania’s contribution, both environmentally as well as financially, in the reductions from the Susquehanna watershed?

Response: PA was assigned reductions in the same way as Maryland and New York. PA’s actual load reduction will be much larger than Maryland’s, although as a percentage it should be similar.

Comment # 207.**Commenter: C65**

The commenter referenced 2-year milestones. Current annual reporting is based on the calendar year. Should regulated stormwater systems change reporting to similar fiscal year for MDE to evaluate progress on the same timeline?

Response: This will be changed to be consistent.

Comment # 208.**Commenter: C2**

On page 66 [found on page number 77], expand on why the urban sector will be the focus of re-evaluating the maximum feasible restoration strategy. If this infers changes to expectations for stormwater retrofits, at a minimum, all Phase I MS4 jurisdictions should be included in the discussions.

Response: MDE has the least confidence that the decisions that were made regarding the maximum feasible implementation for urban areas accurately reflects Maryland's urban areas and wants to reevaluate that strategy itself.

Comment # 209.**Commenter: C65**

Where is Figure 1? The nitrogen loadings are shown as Figure 2. Why are trends only shown for nitrogen and not phosphorus and what is the State's basis for expecting nitrogen loadings tied to land development? Has the state evaluated historic nitrogen loadings compared to the age of infrastructure to the nitrogen loadings from regulated stormwater? [Page 24]

Response: Corrected.

Comment # 210.**Commenter: C64**

It is unclear how Urban Stormwater nitrogen has remained steady, or as the report shows slight reductions over the last 25 years. Even with advances in stormwater technology and regulation, the nitrogen removal rates of these facilities still leave a percentage of nitrogen loading to the Bay. The commenter does not believe that the pace of stormwater retrofits on older facilities and development would be high enough to outpace the fraction leftover by today's technology, which should result in a net increase in nitrogen from the urban sector. For example a 2008 summary of MD's 11 Phase I NPDES MS4 permittees shows over 200,000 acres of uncontrolled impervious surface and only 4 percent progress during the permit terms leading up to 2008, leaving a major source still untreated. Could you please add language that describes this scenario in more detail? [Page 24, Section 1, Figure 2]

Response: The commenter's question is highly technical and somewhat outside the scope of the WIP comment response process. The information plotted on the referenced figure is output generated by the EPA Bay watershed model. MDE would be glad to discuss this level of detail and review any analyses the commenter would be willing to share. In addition, the commenter is invited to participate in the process led by the EPA Chesapeake Bay Program in the coming years, which will delve into significant technical detail as the modeling tools and data are refined in advance of the Phase III WIP development process.

Comment # 211.

Commenter: C2

Describe, in laymen's terms, nutrient transport losses, how they are determined and calculated, how they vary across the state, and the implications for the reductions expected of each jurisdiction or basin. [Pages 2, 8, 9]

Response: Nutrient losses are a critical component of the model. Terms in the model address denitrification (conversion of ammonia, nitrate and nitrite into N₂ gas), take up by plants, decomposition of those plants to release nutrients, burial, chemical transformations, loss to the system, and other factors. Typically the longer the distance the water has to travel, the more time and opportunity for these processes to act. The reductions were targeted in a limited way to those areas where the greatest improvement in water quality was obtained for each pound reduced. Therefore, we asked for more reductions from adjacent to the Bay than further away. Transport losses for Garrett County for example are about 9 times greater than for Dorchester where the nutrients go directly into the Bay.

Comment # 212.

Commenter: C64

Do large private commercial and industrial landowners (e.g., shopping centers, industrial parks, surface mines) have a place in this plan?

Response: During commercial and industrial re-development they will need to implement changes to reduce loads. In addition, in Phase I jurisdictions, they may be required to pay a fee to the county to pay for the pollution reduction implementation.

Comment # 213.

Commenter: C33

The nursery industry has tried to get clarification and definition of how it fits in the TMDL modeling, but has not met with clear success.

Response: Contact John Rhoderick at the Maryland Department of Agriculture.

Comment # 214.

Commenter: C45

Given that local jurisdictions close to the Bay are given larger load reductions than those further from the Bay; can we expect that grant monies will be targeted to these jurisdictions that have a greater effect on water quality improvement? (Page 10, second bullet, 3rd sub-bullet)

Response: In some cases yes, in other cases no, depending on the restrictions in the funding source. For example, the Bay Restoration Fund (BRF) prioritizes septic upgrades in the critical area, so that would provide a means to target. However the ENR portion of the BRF goes to the largest plants, regardless of where they are located.

Comment # 215.

Commenter: C72

Are the phosphorus and sediment numbers credible on Page vi? (Maryland's 2017 Interim Target strategy) Given all the focus on stormwater and the visual evidence to the contrary, does this seem realistic?

Response: In the judgment of EPA modelers, the numbers are correct. However, the commentor may raise this question directly with the EPA Chesapeake Bay Program as part of EPA's Midpoint Assessment process.

Comment # 216.

Commenters: C34, C45, C64

The state WIP appears to rely on phosphorus-reduction requirements to also reduce sediment. Further explanation should be given on Page 9, note C below tables as to why Maryland did not set sediment reduction targets.

Does the approach limit the use of permits to discharge stormwater during construction as a tool to compel compliance with sediment goals?

How is the reduction for sediment (page 11, Section 1) calculated without setting a Final Target Load? Please Explain.

Response: WIP did set sediment reduction targets, at least a final target loads for 2025, it just didn't have an explicit list of practices to achieve those targets. Sediment was often listed as total suspended solids. Stormwater construction permits right now are practice based. EPA is considering setting an explicit, numeric turbidity performance standard, but hasn't done so yet because of significant technical concerns. If that standard is set, it will apply to all permitted construction and will achieve creditable sediment load reductions.

Comment # 217.

Commenter: C64

The shift from targets, or allocations, at originally the co-segmentshed level was transitioned to the County level and now is finally at the basin scale. A clear definition of the responsible parties should be indicated. The use of basin level targets seems to leave the responsibility up to interpretation. A map of the basins with the County boundaries would be an excellent addition to the introduction of the report.

Response: Counties are still the responsible parties. Although we will be reporting to EPA at the basin scale, the State will be tracking progress at the county scale.

Comment # 218.

Commenter: C68

We (Havre de Grace) have a stellar WWTP. Do we get credit towards cleanup or are we penalized for having a state of the art WWTP before the deadline?

Response: The way the allocations were determined gives everyone full credit for all nutrient reductions that were implemented. It uses the “no action” scenario as a baseline, so everything that is done to reduce pollution loads gets credited as long as it is reported.

Comment # 219.

Commenter: C76

MDE has been made aware, and the WIP Phase II should reflect, that there is a difference between MPA owned DMCFs and USACE owned DMCFs. Hart-Miller Island, Cox Creek, and Masonville DMCFs are owned by MPA. Poplar Island is owned by the USACE Baltimore District. Courthouse Point, Bethel, and Chesapeake City are owned by USACE Philadelphia District. The baseline loads and allocations for DMCFs are not mentioned in the Phase II WIP under strategies to reduce loads.

Response: We are aware of the ownership of the different DMCFs and the baseline loads and allocations are included in Appendix G of the WIP documentation.

Comment # 220.

Commenter: C18

Expand Definition of U.S. Waters under the Clean Water Act: The recently proposed guidance by EPA will add substantial time before the proposed retrofit works can commence. This could delay implementation for restoration projects. Does MDE have any suggestions?

Response: That definition is not relevant to the Bay because all of the non-tidal segments are waters of the US under any definition being considered. That issue effects only marginal waters like wetlands and headwaters.

Comment # 221.**Commenter: C45**

On page 30, a column for the incremental difference between the 2009 Progress and the 2025 strategy is indicated in the text, but does not appear in the table. It would also be beneficial to see the incremental difference between 2017 and 2025 strategies

Response: The intent of the table is to present results of the strategy to meet 2025 targets and not the difference between 2017 and 2025. The table on p. 30 of the draft WIP shows the sediment loads and, as the footnote explains, Maryland did not set sediment targets by source sector, thus the column in that table does not show loads by sector.

Comment # 222.**Commenter: C2**

It would be very helpful to clearly explain the various categories of information in Table 6 on page 18 and how they relate to each other.

Response: 2010 Progress shows the current loads. 2017 interim strategy is where we need to be in 2017. Change from 2010 is the difference, or how much needs to be reduced from current loads by 2017.

Comment # 223.**Commenter: C64**

The commenter would like clarification regarding BMPS for Maryland's 2017 and 2025 Strategies [Tables 6 and 10, Section 1] for the following:

- Add an additional column listing the incremental difference between the 2008 Progress and the Interim Proposed Strategy.
- Please explain Forest Harvesting Practices BMP in more detail. Is it, in actuality that better Forest Harvesting Practices once put in place will reduce the negative impacts of Forest Harvesting?
- Many BMPs currently listed do not have any 2009 Progress reported, however we know that these practices have been used. Was no effort made to report these values or include them in the analysis? It should be clarified in Table 6 as to whether these are acres that the practice occupies, or treated acres.
- We would recommend having Urban Stream Restoration and Regenerative Stormwater Conveyance BMPs on separate lines unless it has been shown that their removal efficiencies for the targeted pollutants are similar.

Response: 2008 progress is based on a different model version and is not comparable to 2009 or 2010. Forest harvesting practices are a suite of BMPs that minimize the environmental impacts of road building, log removal, site preparation and forest management. These practices help reduce suspended sediments and associated nutrients that can result from forest operations. Details on all

BMPs can be found on the CBP Website, specifically:

http://archive.chesapeakebay.net/pubs/SB_V22_Final_12_31_2010.pdf

Progress information was based on information gathered from various sources then run through the CBP Model. The Phase I WIP report contains a flow chart for the information transference. It is important to remember that not all information can be transmitted to the CBP for various reasons. The most prevalent reason an Urban BMP was not reported to the CBP was it did not have all of the required information. It is also important to note that not all BMPs are approved by the CBP and can be run through the model.

10. County Specific

Comment # 224.

Commenter: C40

The commenter stresses local engagement and commitment as essential to the WIP's success. They suggest the State WIP (which was developed at the basin level) clearly indicate how the county plans – pollution load numbers, best management practices, and milestones – were incorporated into the State's plan. They suggest the State WIP should articulate the importance of the continued involvement of county teams and provide a meeting schedule for these teams.

Response: The State WIP was developed at the county level, not the basin level. For reporting to EPA it is aggregated up to the basin level. Tables issued in April show how best management practices are incorporated into the State plan. The last section in the main report clearly indicates that continuing county involvement is critical.

General

Comment # 225.

Commenters: C18, C67

What is the deadline for counties to submit the Final WIP II, July 2012 or one year from the MS4 Permit issuing date?

Response: Two entirely separate processes. We would like to receive final changes to the WIP by the end of June 2012, although an adaptive management approach will allow annual changes after that. By one year from the MS4 issuance date, a jurisdiction needs to develop an implementation for all approved TMDLs. Since the WIP will serve for the Bay TMDL, practically this means that plans must be developed for local TMDLs for sediment, bacteria, trash, toxics, etc.

Comment # 226.

Commenter: C18

Section 1.5 indicates that if county plans did not meet their targets, then additional BMPs and septic upgrades might have been added. The County requests the information be made available to those affected, and assurances that the County is not responsible for these additional measures.

Response: It was made available in mid-April 2012.

Comment # 227.

Commenters: C2, C43, C45, C66

The commenters asked if the State will provide comments on the local plans submitted. If so, they request the State provide feedback on local strategies as soon as possible. It would be helpful to further describe the actual process by which local jurisdictions are expected to continue to refine their plans. Significant resources at the State level need to be provided to locals in order to accomplish this step, particularly within this timeframe.

Response: The State will not provide explicit comments. Where the plans do not achieve allocations, the State will add BMPs until the allocations are met. This was done for the March 30 submission and the additions were made available to the local governments in April 2012.

Comment # 228.

Commenter: C65

The commenter referred to the State's assistance to local jurisdictions on page 66. What level of assistance will the state be providing? Specifically, what can counties expect for comments / review of both MAST scenario inputs and local WIPs? Will the state identify any supplemental strategy within that county?

Response: See responses to comments 226 and 227.

Comment # 229.

Commenter: C26

Local jurisdictions would benefit from including a description of potential consequences and to whom these consequences apply.

Response: The potential consequences were articulated in a letter dated Dec. 29, 2009 from Shawn Garvin, EPA Regional Administrator to L. Preston Bryant, chair of the Principals' Staff Committee at the time. This letter can be found on the EPA Chesapeake Bay TMDL website. Specific actions are likely to be dependent on the status and nature of progress made by the jurisdiction. Understand that these "consequences" are not enforcement actions, although enforcement actions may be taken for lack of compliance with a permit. The consequences will be actions taken to accelerate or achieve pollutant reductions consistent with the TMDL allocations, and could include actions such as more

stringent permits, reallocation of federal funds, or expansion of regulatory programs to currently unregulated areas or activities.

Comment # 230.

Commenter: C26

If the Bay model is limited at the county level, and MAST is based on and to be validated by the Bay model, it appears that local loading reductions are inappropriate at this time. Therefore, it seems premature to expect local jurisdictions to make specific budget or practice commitments. The text should be expanded to clarify how MAST can be reliably used at the county scale to measure progress and reductions or for any assurance of implementation.

Response: Within the limits of a planning framework and current expectations for only 60% of the required implementation, the model provides sufficient confidence for both budgeting and specific commitments. MAST is being considered as a tool to assist in assessing progress. MAST cannot provide assurance of implementation; that will take place using verification approaches being developed by the Bay Program.

Comment # 231.

Commenter: C1

The commenter insists the counties should not be allowed to take credit for ENR systems or other actions implemented through local funding efforts or grants, and not owned or supported by the respective county. Counties have not taken a proactive approach to address highway and agricultural runoff or eliminate septic.

Response: Credit for ENR upgrades is attributed at the County scale, not necessarily to Counties, although they are the primary point of contact. Municipalities have been involved in the process and in some cases agreements have been developed between counties and municipalities as to responsibility and credit. State highways are being addressed by the State Highway Administration; agricultural runoff is being addressed by the Department of Agriculture in conjunction with the Soil Conservation Districts.

Comment # 232.

Commenter: C17

The Phase II WIP poses a challenge to local jurisdictions to identify not only funding sources, but also the basic budgeting impacts of the identified load reduction strategies. The commenter supports BRF allocations for upgrades of minor plants to ENR.

Response: That issue has general support but before BRF funds can be applied to minor plants, existing bond must be repaid and the remainder of the major plants upgraded.

Comment # 233.**Commenters: C24, C25, C26, C42**

Local governments have difficulty understanding expectations for implementation at the county scale when strategies and milestones are developed at the basin scale. The local plans with adjustments from MDE need to be delivered to the local governments as soon as possible in order to make adjustments or improvements before July, or there should be an option of a local conditional approval if the State cannot send adjusted plans to the counties before April. The WIP document should further explain how the State supplemented local strategies by describing how this will subsequently affect the development of future 2-year milestones by local governments. Please explain the methodology used to determine if a jurisdiction “fell short” of the county targets. Phase I MS4 permit compliance should be the strategy used for filling the gap, rather than the E3 approach. Please clarify which counties the E3 approach were applied.

Response: Implementation strategies and milestones are developed at the County scale; they are only aggregated at the basin scale for reporting to EPA. The adjustments to local plans were delivered in mid-April and explained how the local strategies were supplemented. The determination as to whether a jurisdiction “fell short” was to run the submitted strategy through the Bay Watershed model and determine if the assigned allocations were met; if not, additional BMPs will be required as indicated in the April distribution of draft final strategies. The E3 scenario was used for all jurisdictions and all nonpoint sources to calculate allocations, but E3, was not a requirement. A “no action” scenario of 2010 land uses with no BMPs (do nothing) was used in conjunction with E3 (do everything) to calculate the reducible load. The same percentage reduction of reducible load was applied to stormwater, septic systems, and agriculture to calculate the allocation for nonpoint sources. The MS4 permit will be part of that reduction, but depending on how the MS4 is implemented, additional reductions may be needed.

Anne Arundel County**Comment # 234.****Commenter: C54**

The commenter suggests including a 2012–2013 milestone for a specific number of volunteer stormwater control projects.

Response: They can include that in their progress reporting, whether or not they make it a part of their milestones.

Baltimore County**Comment # 235.****Commenter: C70**

The commenter would like to correct that the Growing Home Campaign provides discount coupons for trees only and does not include shrubs on page 14 of the WIP. The commenter also wanted clarification regarding the implementation timeline of the DOE Sustainability grant funding and

whether the 700 trees planted is by the end of funding in fall of 2012 or 700 trees per year. The commenter would also like time frame clarification regarding the County's "Big Tree" sale strategy.

Response from Baltimore County: Per the inclusion of shrubs in the referenced text of the County's draft WIP, the text has not changed as this was inadvertently missed in the revision. The lack of revision does not, however, change the context or ultimate effort or credits due to Urban Tree Planting. While the funding was for trees, a number of the tree selections were smaller and would not count toward the Urban Tree Canopy credit with the Bay Program. The 700 trees are to be planted by the fall of 2012. That program will end. These 700 trees are included in the first 2-year timeframe. The text was changed to indicate per year.

Comment # 236.

Commenter: C29

The commenter does not support the following statement related to agricultural impacts as described in the Baltimore County Phase II:

"Most of the agriculture in Baltimore County is above the reservoirs and will have reduced delivery to the bay. Conversely, urban land use is mostly below the reservoirs and close to the bay; hence the larger reductions required for urban stormwater relative to the agriculture."

This reasoning, while satisfying the Bay TMDL, ignores the local reservoir TMDLs for sediment and phosphorous in Loch Raven and phosphorous in Pretty Boy and this approach is not protective of water quality.

Response: It does not ignore the local TMDLs, which must still be achieved; it simply provides a technically accurate understanding of the influences on the Bay.

Howard County

Comment # 237.

Commenter: C64

The *Trading in Time* strategy described in the County's proposed implementation plans is not consistent with Maryland's Nutrient Trading Policy and will help improve water quality. They suggest that the County clarify the Trading in Time policy or revise it to follow Maryland's Nutrient Trading Policy.

Response: Maryland's trading policy is being reviewed and likely will be revised to meet the requirements of the Accounting for Growth policy, EPA requirements for trading, and consistency with other Maryland policies.

Carroll County**Comment # 238.****Commenter: C29**

The commenter does not support the following statement related accuracy of methodology with MAST as described in the Carroll County Phase II:

“In addition, the local team received notice on November 1 of changes to the MAST model underlying assumptions and indicating that all previous scenarios were invalid. With these changes to the model and resulting changes to projected progress with current and planned projects, the local team lacks confidence in the ability of MAST to accurately reflect the progress that could be made toward meeting the reduction goals until the glitches can be worked out and the model sufficiently validated and verified.”

“...the local team lacks confidence in the ability of MAST to accurately reflect the progress that could be made toward meeting the reduction goals until the glitches can be worked out and the model sufficiently verified.”

The commenter feels that is not sufficient to characterize the development of the Phase II plan for Carroll County, as is stated numerous times in the draft document, as noted;

“Pending availability of funds... and approval by elected officials,”

Certainly some immediate oversight must be exercised by MDE to provide guidance for the plan for Carroll County so that one can be immediately undertaken.

Response: MDE has provided guidance to Carroll County in terms of allocations to the various sectors and the MAST tool. Despite Carroll County’s concerns, MDE believes that MAST and the Bay model on which it is based, provides data that is sufficiently accurate and dependable for use to generate a plan that needs to accomplish only 60% of the implementation required to meet the assigned allocations.

Charles County**Comment # 239.****Commenter: C34**

(1) In general the commenter finds that the WIP II narrative filed with MDE is quite weak on specifics.

(2) They recommend that an introductory section be added to the WIP that outlines the rationale for the WIP that includes the regulatory mandates, and reviews the conditions of their waterways.

(3) The commenter is concerned by a statement in a memo dated November 9, 2011 from the County planning staff to the County Commissioners characterizing the WIP II milestones as “a general planning framework to establish a work program to meet the goals.” The WIP II milestones are meant to be *concrete*, *verifiable*, and *quantifiable* stepping-stones toward meeting the required

pollution reductions. The commenter suggests a more aggressive first two-year milestone to include more implementation.

(4) The commenter suggests the County provide more specific information for gauging efficacy of proposed projects. They believe that there is little information in the County's WIP providing a reasonable assurance. They suggest including information that lays out the scope of required pollution reductions, and the reductions expected from the specific proposed steps.

(5) The commenter suggests including a more complete description of the existing local TMDLs, and the strategy for meeting them, including how the strategy relates to county allocations for reduction of nutrients and sediments to the Bay.

Response: (1) The required input deck from the County, or the revision of the strategy completed by MDE to meet the allocations will have very specific combinations of BMPs and the extent to which they will be implemented. (2) That information was included in the WIP I. (3) As indicated in (1), the WIP strategies are quantifiable. The submission of completed BMPs will be verifiable. The Bay Program and Maryland are committed to an adaptive management process. In practical terms, this means that if less expensive approaches are found, they can be accommodated as long as progress is not slowed and milestones are met. (4) Reasonable assurance is embodied in the plan itself, in the milestones, in the progress reporting, and in the potential for consequences. (5) Because Charles County is a Phase I MS4 jurisdiction, local TMDLs will be addressed by the County's revised MS4 stormwater permit, which will be issued this year. It will contain a requirement to develop an implementation plan for all approved TMDLs.

Dorchester County

Comment # 240.

Commenter: C75

The commenter supports the Dorchester County Phase II WIP and commends the good work of the County Team. They especially like the section on septic systems and believe it is a particularly good summary of what is and what needs to be done.

Response: No response needed.

Frederick County

Comment # 241.

Commenter: C39

The commenter noted the County's WIP lacked measurable pollution reduction strategies, concrete steps for implementation and identified no funding sources to implement reduction.

The commenter mentioned Commissioner DeLauter's comment "The WIP, Septic bill and Plan Md are all a farce to do nothing more than usurps local control of land use policy. They have nothing to do with clean water". They recognize that there is an ideological impediment to moving forward with the WIPs.

They are pleased that MDE's role includes clarifying the pollution reduction measures in Frederick County and holding the County accountable to implement them, however they are unclear how it will happen.

Response: Implementation will be tracked through progress reporting and biennial milestones.

Kent County

Comment # 242.

Commenter: C17

While Kent County is aware that significant gaps for load reductions exist in all source sectors in the Kent County Draft WIP. The County notes that one of their municipal plants might qualify for BRP funding allocated for upgrading minor plants to ENR.

Response: That should be addressed with the appropriate units at MDE.

Montgomery County

Comment # 243.

Commenter: C61

Rock Creek has high volumes of runoff have eroded stream banks and exposed tree roots in virtually all of its tributaries, and the Creek turns brown with sediment in every heavy rain. Roughly 75 percent of the Montgomery County portion of the Rock Creek watershed is now in poor or fair condition and is classified as impaired for bacteria. Development and, crucially, implementation of Maryland's Phase II WIP provide an opportunity to improve these conditions.

Response: Agreed.

Prince George's County

Comment # 244.

Commenter: C61

Federal facilities are a source of significant pollution and must be held accountable (load reductions and timeline). Providing the necessary coordination (e.g. County liaisons, GIS data from state and/or County) should be a priority for the state and counties. For example, Prince Georges County has a Watershed Plan for Piscataway Creek, which contains the JPA (Joint Base Andrews). The Piscataway plan includes detailed GIS and recommended retrofit projects. Coordination between JPA and Prince George's County is critical in order to properly estimate the cumulative reductions that might be achieved.

Response: We have been working very closely with DoD facilities including JPA. They have developed and are continuing to develop plans to accomplish pollution reductions on the bases equivalent to that expected of the localities.

11. Additional Suggestions

a. Technology

Comment # 245.

Commenter: C12

The commenter suggests using composting toilets and gray water systems to help eliminate nitrogen discharges, reducing energy use, and reducing water consumption and loadings from waste systems. They also suggest using the generated wastes from these systems as a natural compost and fertilizer.

Response: The applicability and acceptability of composting toilets is limited. There are health concerns with gray water systems for residences, but it certainly is applicable to commercial or industrial facilities. Gray water is currently used for irrigation for non-food crops or turf. Where composting toilets exist, the waste does provide good compost.

Comment # 246.

Commenters: C38, C41

The commenters suggest using the filtering abilities of menhaden and oysters to reduce pollutants from the Bay. The state should establish nutrient reduction credits for oyster restoration and oyster aquaculture efforts.

Response: The both have been considered. There is a major oyster restoration effort to re-establish more oyster biomass, but that effort has been limited by loss to disease. There is some indication of increasing resistance to disease, so that effort may be more productive in the future. Menhaden stocks are down because of over-harvesting, so cannot be considered part of the solution until inter-jurisdictional harvest quotas are resolved.

Comment # 247.

Commenter: C26

The commenter provided the following suggestions:

- The State and counties should develop a tracking system/database similar to the Conservation Tracker to provide consistency in data reporting.
- There should be a simplistic and easily understandable way of calculating load reductions for each individual practice and project implemented at the local level, so that local government can monitor their own progress.
- All effort should be made to facilitate the local review of State databases described in the Future Steps section. The review should specify the coordinating agency/contact, a list of State databases available, and the process for the review. The review should also include a review of land use data used in the model, and describe how the data will be updated and incorporated into the 2017 Interim Strategy.

Response: Tracking systems are being developed. We are considering revising the MAST interface to provide an easy way of calculating load reductions. The land use data is an issue, but it really isn't based on a State database. It is a regional database used by EPA because it provided a single consistent data layer for the entire Bay Watershed.

b. BMPs

Comment # 248.

Commenters: C38, C52

The commenters suggest state agencies must work with local governments and researchers to offer more cost effective measures (BMPs) to reduce nutrient loading. This process should include funding research, using pilot studies, and educating polluters and local government agencies. Commenter 52 suggests including a specific section within the Urban Stormwater section on redevelopment to provide specific incentives and new technologies.

Response: There is a process in place to approve new, innovative BMPs. The primary obstacle is lack of data to justify assigning an efficiency value or to adequately define the BMP.

Comment # 249.

Commenters: C60, C71

Commenter C71 encourages the use of urban nutrient management. However, Commenter C60 finds it troublesome that the draft Phase 2 WIP includes discussion of expanding the scope of the State's urban nutrient management program when it is uncertain how effective the current program is. While the programmatic expansion is due largely to the passage of the state's Fertilizer Use Act of 2011, the increase of more than 200,000 additional acres to the regulated sector, without significant changes to the program's capabilities, is not likely to make a verifiable impact on nutrients or sediment from the urban sector. Equating assumptions about land applications and citizen outreach to actual nutrient reductions should not be entertained. Instead, the state must determine how to augment staff and necessary resources to adequately handle the increased responsibilities of this program. Commenter C71 suggests the state or regional program be developed to provide soil test kits and education to the public. They believe the soil testing lab in Maryland should be re-established. They are also concerned that the effectiveness of this BMP is being re-evaluated, and that it will not be an attractive solution if there is no certainty associated with credit or other implementation.

Response: The comments on urban nutrient management (UNM) cover a wide range of issues including, how UNM is defined, what reductions are associated with UNM and how to track and verify UNM to name several of them. Interest in clarifying these and other issues is merited. Although these issues remain to be clarified, the EPA WIP planning framework allowed the inclusion of UNM in WIP strategies, because it is generally understood that preventing the excess application of fertilizers is a logical strategy option to consider. That said, significant work needs to be conducted over the coming years to work through the technical details necessary to bring more clarity to these issues.

Comment # 250.**Commenter: C63**

(1) Buffers (forests, wetlands, grasslands) and stream protection should constitute a greater percentage of the Bay restoration and nutrient reduction plan as a cost effective measure. (2) Incentivized buffer programs for farmers and private citizens to plant buffers should be included in the WIP, for example, one option is to provide rewards for pounds of nutrients reduced rather than acres implemented. (3) Increased funding for education and financial assistance needs to be made available to forest and wetland landowners in order to maintain and expand these important ecosystems.

Response: (1) Buffers are a cost effective measure in many cases, but the opportunity for implementation is limited. (2) Buffer programs are incentivized; they are based on acres rather than pounds because pounds vary with many factors, so the model track acres and calculated pounds reduced. A payment system based on pounds reduced would be extremely complicated. (3) Increased funding is a broad problem; the stormwater utility law passed by the 2012 General Assembly begins to address the issue.

Comment # 251.**Commenter: C45**

The proposed strategy will exceed the 60 percent interim 2017 targets for all pollutants. The final Maryland Phase II WIP should either reduce the amount of restoration proposed to the 60 percent, or explicitly state that the strategy allows for *adaptive management* of restoration activities in the 2017 time frame.

Response: Nitrogen and phosphorus reductions are linked for many practices. To achieve the needed phosphorus reduction, it may be necessary to reduce nitrogen beyond the minimum requirement. The 60% may be exceeded in 2017 due to the advance reduction at WWTPs due to the BRF. However, to assure compliance with the 2015 goal, and to allow for growth, that is a necessary interim condition.

c. Funding**Comment # 252.****Commenter: C6**

The commenter suggests adding a flush tax to the residents in the Bay area.

Response: The flush tax was doubled by the 2012 General Assembly.

Comment # 253.

Commenters: C66, C52

MDE needs to identify the funding sources and the timeline for flow of funds to accomplish the provisions outlined in the Phase II plan. A funding gap analysis needs to be performed to determine the anticipated amount of grant funding and what local funding expectations will be.

Response: A funding gap analysis would not be helpful at this time. In addition to ongoing agricultural funding, provision for additional funding was made by doubling the Bay Restoration Fund Fee, requiring a stormwater utility in Phase I jurisdictions, and providing additional funding to the Chesapeake and Coastal Bays Trust Fund.

Comment # 254.

Commenter: C67

The use of BRF should be permitted more flexibility in implementing local TMDL programs in the most cost effective manner.

Response: Reductions of pollutants attributable to the BRF also apply to local TMDLs.

Comment # 255.

Commenter: C61

The commenter suggested implementing a bottle deposit to reduce trash in local waters and use as a funding source.

The commenter encourages funding for watershed groups to assist with planning and implementation. With appropriate funding, nonprofits can help ensure that the goals of the Plan are achieved.

Response: Trash is not relevant to the WIP, although it is a significant concern. There is funding available to watershed groups through EPA grant programs.

Comment # 256.

Commenter: C52

Require a stormwater utility fee statewide for all MS4 jurisdictions to fund local retrofit projects. Increase the Bay Restoration fee for wastewater and septic systems to help support stormwater retrofits.

Response: This was achieved by the 2012 General Assembly for Phase I jurisdictions.

d. Other

Comment # 257.

Commenter: C60

The state's assistance of local efforts by holding regular stakeholder meetings should be expressly articulated within the final Phase 2 WIP to assure local governments that the state intends to remain an active partner.

Response: We do intend to remain an active partner and plan on a combination of webinars and meetings into the future.

Comment # 258.

Commenter: C61

MDE should encourage all entities within the county to work together, in order to prevent interfering with strategies in another sector/entity. MDE should consider the District of Columbia as a partner because policies and practices are not always integrated. Coordination could bring additional leverage to the actions of individual jurisdictions.

Response: MDE has strongly encouraged all entities within a county to work together is the way recommended teams be structured. We have partnered with the District on several inter-jurisdictional TMDL.s

Comment # 259.

Commenter: C28

The commenter suggests using existing regulatory framework (e.g. MS4 permits, fertilizer laws, etc.) to establish targets and strategies in the absence of County plans until better local data is available and the Bay model can be reconciled to the smaller geographic scale.

Response: The MS4 has limited application in that it only applies to 10 jurisdictions (12 if Phase II is included) and limited municipalities. It does apply in that the MS4 requires TMDL implementation plans for all approved TMDLs; this will include the Bay TMDL. Therefore the WIPs developed by Phase I jurisdictions, and probably Phase II jurisdictions, will likely serve the MS4 requirement.

Comment # 260.

Commenter: C50

MDE should perform an assessment to determine if all jurisdictions that are required to obtain coverage under the MS4 general permit have actually acquired coverage.

Response: MDE is aware of such issues.

Comment # 261.

Commenter: C1

The Critical Area should be disbanded. Without being able to address stormwater issues near the waterways, stormwater will never be cleaned properly and that the most effect way to prevent and treat runoff is to construct stormwater facilities near the rivers.

Response: The critical area serves numerous purposes and has had significant success. Repealing the Critical Area law because it isn't perfect and doesn't address everything would b counter-productive.

Comment # 262.

Commenter: C38

The commenter suggests expanding access to the Chesapeake Bay and its major tributaries, including increasing public Bay waterfront land, to the citizens that are helping finance the Plan.

The state should promote the benefits of a cleaner Chesapeake Bay and its marine resources to counter concerns about the cost of cleaning the Bay.

Response: There is Bay workgroup addressing access issues, but that is separate from the implementation plan to achieve the TMDL.

Comment # 263.

Commenter: C24

The WIP does not specifically address sediment reduction strategies. How will projects document sediment reduction without first using a standard method of determining sediment supply? The commenter recommends adopting the use of EPA's Watershed Assessment of River Stability & Sediment Supply (WARSSS) or similar protocol for evaluating streams and rivers impaired by excess sediment.

Revisions to the WIP should address any legislation that passes and should indicate if and when other recommendations from the Task Force on Sustainable Growth and Wastewater Disposal will be pursued.

Appendices F and G should be organized by County to assist with local understanding of the expectations.

Response: The model addresses sediment reductions inherent in the BMP efficiencies. Legislation has its own implementation requirements and do not have to be tracked within the WIP. Reductions generated by that legislation will be tracked as part of the progress reporting. Appendices F and G have been revised to include a column indicating the county in which each facility is located, and organized by county where appropriate.

Comment # 264.

Commenter: C29

The state should adapt numeric standards for nutrients and sediments as a way to evaluate and ensure reductions, in addition to being enforceable.

Response: The State disagrees. There are too many uncertainties with ecological processing of nutrients to justify credible criteria. The model addresses the key aquatic life issues by addressing dissolved oxygen and clarity, and appropriate controls loads rather than ambient concentrations.

Comment # 265.

Commenter: C62

The commenter would like to see the State's strategy address climate change. Please consider the impacts of a changing climate on these ecosystems and the potential impact that increasing water temperatures and sediment inputs will have on these ecosystems. Criteria should be developed for implementing BMPs taking into account climate change effects sooner rather than later. Criteria for BMP selection could be based on those that will address more intense and frequent storms, particularly in the late fall/winter and early spring, a greater frequency of short-term droughts, and a loss of land due to sea level rise. Practices should be implemented that will address these factors (or options for implementing practices) in a way that will reduce our risk to climate change should be considered.

It would be beneficial for the state to identify partnerships that would provide co-benefits of any restoration activity. These partners could include educational institutions, non-profit agencies, and other interested parties. Without these partnerships, it is unclear how the state will provide the necessary technical assistance for all the necessary projects.

Response: At this point, the impacts of climate change are not sufficiently known to project what impacts it will have. The WIP process is all about partnerships, in fact the University of Maryland Environmental Finance Center was a co-presenter at the final round of regional WIP meetings.

Comment # 266.

Commenter: C41

The State should include a strategy for preparing example ordinances and programs to assist local governments with implementation. They suggest the state develop a clearinghouse of information about effective local programs, technologies, and strategies to be shared at the local level.

The commenter requests the State mentions how natural disasters (including hurricanes or dam releases) are incorporated into the model calculations of load allocations, especially between states.

Response: If there was a pre-determined approach it might make sense for the State to suggest ordinances and programs. However, there are so many possibilities it simply isn't possible for the State to make such suggestions that wouldn't be considered as limiting options. It would be far better

for local governments to get together themselves and discuss approaches. That is one of the purposes of MACO as well various regional councils. Individual events such as hurricanes are not explicitly considered; a hydrology is based on a ten year period and so will capture such events.

Comment # 267.

Commenter: C37

Guidance documents should be developed as to help local governments analyze and reform existing plans and ordinances to limit the offsets needed.

Response: MAST and the cost information the State has assembled will allow the localities to perform that analysis. It isn't clear how that would "limit offsets." If offsets refers to new growth, finding offsets is up to the developer. If the commenter is referring to restoration implementation, there may be ways to reduce costs, but that will not limit offsets.

Comment # 268.

Commenter: C64

The commenter recommends streamlining or accelerating the administrative review for projects (e.g. retrofit restoration), NPDES MS4 annual report reviews, and permits.

Response: There are resource constraints, but MDE is aware of the various concerns.

Comment # 269.

Commenters: C67, C52

Page 13 states that local fertilizer management initiatives are expected, however, current State law specifically prohibits this. The State should enable local jurisdictions to undertake local fertilizer regulation. Amendments to the State's fertilizer law should be sought to allow jurisdictions the ability to regulate lawn fertilizer application as required by local conditions. Consider additional enforcement mechanisms to implement fertilizer restrictions. MDE should get assurance from EPA that credits for implementation of fertilizer restrictions will be granted.

Response: Despite prohibitions on formal local regulation of fertilizers, local governments may engage in residential education and outreach programs. Such efforts on the local level to change the behavior of home owners, if properly documented, could have a measurable impact on nutrient loads that would warrant credit in the EPA Chesapeake Bay TMDL accountability framework. However, the accounting for any local programs would need to be reconciled with the impacts of the new State fertilizer law. This will surely be a topic of discussion in the coming years as the EPA Bay Program refines its accountability framework.

Comment # 270.

Commenter: C52

The local land use planning and approval process should dictate implementation of all new statutory and regulatory obligations that result from the WIP.

Response: It isn't clear that the WIP presents any statutory or regulatory obligations. Although may be a solution to some issues, there are usually non-regulatory options.

Comment # 271.

Commenter: C8

Further explanation is needed as to how septic systems pollute the Bay.

Response: Nitrogen in human waste is released from the tanks into the groundwater. The groundwater travels to the nearest stream, where it adds the nitrogen it contains to the surface water that travels to the Bay.

Comment # 272.

Commenter: C74

The document needs a list of abbreviations and acronyms.

Response: We agree this would be helpful but time did not permit the development of such a list.

Comment # 273.

Commenter: C68

I believe the program should take into account all improvements made, whether made prior to, during, or after the arbitrarily - imposed deadlines.

What if the City required something like rain barrels prior to the effective drop dead date for controlling runoff....How would the City get any credit for this improvement? I would like to see several short-term improvements made, but feel that to do so would, in the end, make the cost of reaching our percentage improvement requirements all the more costly....

Response: The way the allocations are done, credit is given for all activities that reduce nutrient loads.

e. Sector

Comment # 274.

Commenter: C21

The Plan needs to address pollution from agriculture and urban areas; including how and where the strategies will be implemented. In all urban areas, WWTPs need to be upgraded. We want our cities to work with the state and federal governments to create clean water plans. To be effective, these plans should include measurable results, funding sources, and a clear roadmap for implementation.

Response: Pollution is being addressed from the three sectors you mention plus septic systems. Maryland is in the process of re-writing permits for urban stormwater. Agriculture had its best signup ever for cover crops this year. Maryland probably has the most advanced wastewater treatment in the country and the Bay Restoration Fund was doubled to continue making progress. The plans and milestones are explicit, measurable and provide a road map for implementation.

Comment # 275.

Commenter: C38

Pollution from agricultural sources is not as highly regulated as WWTP and MS4s. Regulation of animal farm operations should be strictly enforced by the MDE while aid and technical assistance should be provided by MDA.

Response: Animal farm operations are enforced by MDE, which has taken enforcement action when necessary.

Comment # 276.

Commenter: C15

The commenter made the following suggestions targeting the agricultural sector.

- Soil Conservation & Water Quality Planning (SC&WQP)
 - Increasing planning and implementation rate for SC&WQP

[Editor's Note: The commenter provided attachments with these comments, presenting a water quality evaluation system and related tools developed by the commenter for conservation planners.]

- Every farm/tract should be in baseline compliance, which consists of: having a high quality soil conservation and water quality plan; having a higher quality nutrient management plans (then current level); address the runoff from animal concentration areas (ACA – barnyards, feedlots, sacrifice lots, etc.); buffer all streams with a minimum of grass; exclude livestock from streams with fencing, off-stream watering facilities and controlled stabilized stream crossings; proper pasture management and cropland management to maintain soil loss at “T” or less.

- The current procedure utilized in conservation planning only includes in the plan those conservation practices that the farmer has decided to install or implement. My procedure at least tracks those recommended conservation practices on a sub-watershed basis.
- This planning process also has the ability to make a cost estimate for installing or implementing those conservation practices recommended addressing water quality concerns. This would help estimate total costs and how much is needed from cost-shares to address water quality concerns.
- Conservation Planning needs improvement to address local water quality concern. Agriculture wants to receive credit for all of conservation work that has been implemented over the past several decades, but no one wants to document the practices and water quality conditions. I have [an assessment and planning tool] as a program and I am willing to provide it to Conservation Districts at no costs other than set up.
- Cover Crops
 - Planting cover crops should be included/required in every conservation plan for croplands entering fall/winter with low-residue cover. The cover crop should be planted within days of harvesting the fall crop.
- Nutrient Management Planning (NMP)
 - NMP need to address runoff from all animal concentration areas (ACA include barnyard, feedlots, sacrifice lots), in addition to conditions of pastures and streams with livestock access.
 - Prevent over application of bio-solids, and restrict the application between mid-November through late February and on snow covered fields.
 - Find other uses for animal manure and bio-solids.

Response: Thank you for the suggestions. The public comment process is not an appropriate forum for vendors to showcase their own products.

Comment # 277.

Commenter: C22

The commenter made the following suggestions:

- A riparian forested buffer of at least 60 feet on agricultural lands should be mandatory in the entire eastern shore basin.
- A roadside ditch grassed buffer of at least 25 feet for agricultural lands should be mandatory.
- The planting of *traditional* cover crops should be mandatory on all cropland. The *commodity* cover crop program should be done away with.
- There needs to be a considerable reduction in the amount of corn acreage planted on the eastern shore. Chickens will eat barley, oats and alfalfa which could be substituted for some of the corn in their feed. Alfalfa requires no nitrogen and act as a natural buffer blocking both nutrients and sediment.

Response: A 60 and 25 foot buffer may be excessive from a water quality perspective. There may be alternative approaches to get the same results. Also, the basis for these specific distances isn't clear, based upon the topography of the shore.

Comment # 278.

Commenter: C27

The commenter suggests the use of methane digesters as an option in rural areas of the Chesapeake Bay watershed. <<http://www.bayjournal.com/article.cfm?article=4297>>

Response: Maryland has very few dairy or confined livestock operations that could utilize this type of technology in a cost effective manner.

Comment # 279.

Commenter: C24

The commenter would like to acknowledge the amount of work that has been done to update the P-site index and recommends the schedule and process for finalizing the index be included in the WIP.

Response: Discussion of the process and schedule to revise the P-Site index is included in the WIP.

Comment # 280.

Commenters: C46, C69

The commenter made the following suggestions for the agricultural sector:

- The State's Phase II WIP should require discrete, performance-based nutrient and sediment reduction targets from nonpoint sources, including specific BMPs and geographic areas. Implemented BMPs should be assessed by a third party.
- Maryland's WIP should include requirements to implement measures, including BMPs, throughout each waterway segment in the State. Maryland's WIP should include detailed sanctions for any source that fails to meet the TMDL limits and two-year milestones, including the non-point sources.
- The Phase II WIP should have reductions of nonpoint source loads from agricultural operation and include regulations and better enforcement. Monitoring of nonpoint source pollutants from agriculture is essential and should be made public.
- Maryland should expand the CAFO designation and all agricultural lands receiving manures from any AFO should be treated as a regulated entity/activity. Assessment and accountability of all state regulated agricultural activities (including CAFOs) should be increased in order to provide adequate assurance that regulations will be enforced.
- The State should adopt requirements for land disposal of animal waste/manure that parallel the State's regulations (COMAR 26.04.06.09) for land disposal of human sludge. These requirements should include requiring incorporation of all animal waste/manure into soils within 24 hours of application on land, soil tests to assure the land is not phosphorus

- saturated, and that prohibit application on steep slopes, highly erodible soils, frozen ground, and in riparian buffers of up to 200 feet.
- Cover crops should be required on agricultural lands that receive human sludge and/or animal waste/manure for a minimum of one year after application. Fields with excessive phosphorus levels (determined by mandatory soil testing) should not be permitted to apply human/animal waste/manure. The WIP should require reducing phosphorus levels to agronomic requirements.
 - Greater accountability and verification of performance of agricultural BMPs is essential and must be required in Maryland's Phase II WIP.
 - Maryland's WIP should adopt a commitment to mandate all agricultural farm land water quality plans that include clear targets, a reasonable implementation schedule, progress checks, and enforcement.

Response: The majority of the comments are already addressed in the Phase II WIP document and in Maryland's current policies.

Comment # 281.

Commenter: C5

The commenter made the following suggestions:

- Encourage organic, no till produce farming with incentives, targeting lands where excessive fertilizer is being applied.
- Require restrictions on fertilizer use on residential properties, especially in the critical areas.
 - Plant native grasses, or design lawns requiring less mowing
 - Educate landowners of the benefits of higher lawn cutting heights
 - Promote recycling or composting of leaves, rather than sending to landfills
- Demand the legalization of industrial hemp farming, and invest in the development of the industry.
- Encourage innovative, natural, cost effective solutions for runoff treatment such as utilizing mycorestoration (the use of various fungi species) to treat runoff, remediate toxins, and build soil within bio-retention cells.

Response: These and many other options have and will continue to be evaluated based upon sound scientific research.

Comment # 282.

Commenter: C38

Additional staff resources should be allocated to MDA to provide assistance to farmers (BMP education, technical assistance, inspection of nutrient management plans and practices).

Response: Based upon the successful completion of the Agricultural Phase II WIP the State of Maryland has provided additional funding to Soil Conservation Districts to hire 23 additional technical personnel to assist farmers and landowners.

Comment # 283.

Commenter: C69

The commenter noted that the WIP lacks specificity and funding mechanisms and provided the following suggestions for developed land:

1. The WIP should require offsetting all additional loads from population growth and development in the respective watershed. Maryland's WIP should include measures to expand MS4 jurisdiction over more developed lands, better septic system requirements with adequate funding, and improved growth control measures.
2. The WIP should include a requirement and enforcement for a no net increase in the stormwater discharge rate, volume, and pollutant loads from all new development by using on-site containment through environmental design.
3. The WIP should contain improved retrofit requirements for MS4, construction, and other developed land, including re-development (based on a 5-year storm, or require offsets), that meet the no net increase in rate, volume, and pollutants rule. Maryland's WIP must include funding mechanisms to provide reasonable assurances that such urban retrofit will be accomplished.
4. The WIP should include mandatory measures with timelines for urban retrofits of large dense developed areas that are privately owned, combined with funding mechanisms to assure this will occur.
5. Measures to reduce or eliminate fertilizer usage on residential lawns, golf courses, and public lands should be part of the WIP, and also prohibit the sale of fertilizers containing phosphorus.
6. The WIP should ensure that all public lands, and federal and state facilities should be required to implement stormwater retrofits, following EPA's guidance pursuant to Section 438 of the Energy Independence and Security Act and Section 502 of Chesapeake Bay Executive Order (13508). All new government construction should meet a requirement for no net increase in rate, volume, or pollutants for a 5-year storm.

Response:

1. The offset policy is in development and was released summer of 2012. Expanding MS4 jurisdiction is not really cost effective since the Phase I and Phase II captures most of the urban land in the state.
2. This is already required by the Stormwater Act of 2007.
3. Providing retrofit treatment of the 5-year storm would provide limited pollutant reductions above the existing WIP and at a significant cost. Maryland's stormwater management program requires that all new urban runoff be treated through environmental site design to the maximum extent practicable, which equates to 98% of the annual average rainfall. This replicates runoff from woods in good condition. Maryland's

programs also require stringent stormwater treatment requirements for redevelopment and restoration for controlling 20% of a jurisdiction's impervious surface area in a 5-year permit term. Combined, these programs ensure urban pollutant reductions necessary for meeting the Bay's TMDL milestones and water quality criteria.

The Watershed Protection and Restoration Program (HB197) was signed into law in April 2012. The program establishes a system of stormwater remediation fees and a local watershed protection and restoration fund (WPRF) that must be implemented by counties and municipalities that are subject to a National Pollutant Discharge Elimination System (NPDES) Phase I Municipal Separate Storm Sewer System (MS4) permit in Maryland. The WPRF will provide the necessary funding for stormwater management, and stream and wetland restoration projects to improve water quality and reduce phosphorus and nitrogen levels to Chesapeake Bay and its tributaries.

4. The funding aspect was addressed in the 2012 session of the General Assembly, at least for Phase I jurisdictions. We see no need to mandate privately owned land at this time if the allocations can be achieved without such a mandate.
5. This was addressed by the Fertilizer Act in 2011.
6. EISA already mandates stormwater controls for federal facilities so the WIP does not need to address it. State facilities are addressing stormwater as well. All new construction needs to meet ESD to the MEP.

Comment # 284.

Commenter: C60

Maryland should prioritize prevention and on-site load reductions as the primary means to address proposed new loads due to growth. When plans for new developments are being created, they should minimize pollution (including reducing impervious areas, using BAT septic systems or ENR wastewater systems), and be designed to meet water quality standards,

Response: When the offset policy is established, economic factors will drive new development in this direction.

Comment # 285.

Commenters: C69, C57

Maryland's Phase II WIP should require a no net loss of forest coverage in each of its Bay watershed segments. The Plan also should contain detailed measures to expand and fund forested buffer coverage to at least 85% of all the shores of the Bay and its tributaries.

Maryland's WIP should contain provisions to target funds, such as from Maryland's Program Open Space and Agricultural Land Preservation Fund, for the purchase of sensitive lands such as forests and wetlands, especially those bordering the Bay and its rivers. Acquisitions should take into consideration State Wildlife Action Plans and Green Infrastructure maps that have been updated to reflect the implications of climate change and expected sea level rise.

Response: The WIP cannot require a no net loss of forest, that would take enabling legislation, which is already established under the Forest Conservation Act. Just having the funding is not sufficient – the land owner needs to be willing to sell.

Comment # 286.

Commenter: C69

Maryland’s Phase II WIP must require all new and replacement on-site waste disposal systems to be the BAT for nitrogen removal.

The WIP should include implementation of a mandatory septic inspection program for existing systems, with a requirement for a BAT system replacement for failing systems.

The Maryland WIP should commit to evaluation of existing clusters of septic systems for practicality of connection to centralized ENR sewage plant.

Response: The WIP cannot require anything, it is just a plan. The recommendation would need to be implemented through legislation or regulation. In this case, MDE has the authority to promulgate regulations to do exactly as suggested.

Comment # 287.

Commenter: C50

The commenter suggests connecting existing onsite septic disposal systems to advanced WWTPs. It is unknown whether MDE will permit the construction of new WWTPs with either groundwater or surface water discharges.

Response: The option of connecting on-site systems has been proposed by several counties, however, creating the infrastructure to do so is usually extremely expensive. Construction of new WWTPs would require an offset equal to the projected load because the wasteload allocation is capped.

Comment # 288.

Commenter: C69

The Phase II WIP must aggressively address and fund infrastructure upgrades to prevent and treat combined sewer overflows.

Maryland’s Phase II WIP should adopt measures to assure that existing Clean Water Act and other water quality laws are fully enforced, including at all WWTPs.

Response: CSOs are being dealt with by consent decrees.

Comment # 289.

Commenter: C18

Fixing leaking sewer lines can significantly reduce the nutrient and sediment loads. The local governments should have the flexibility of taking credits for this kind of work.

Response: Leaking sewer lines are illegal discharges so they do not have an allocation. Localities are required to fix leaking lines regardless of the WIP or TMDL. Since there is no allocation, they can't get credit for it.

Comment # 290.

Commenter: C69

The Maryland WIP should provide better regulations and enforcement measures for air emissions from point sources.

All new stationary sources of air emissions contributing nitrogen should be required to offset those increases. The WIP must include provisions for accomplishing this offset.

Response: The issue of whether air emissions can be limited by the Clean Water Act is in front of the courts right now. The WIP cannot establish new authorities; it is only plan that can indicate what actions will be implemented under existing authority. Air emissions are being dealt with by EPA under the Clean Air Act, not the WIP.

Comment # 291.

Commenter: C57

It would be beneficial if the WIP process could provide guidance to Charles County's Comp Plan (currently being developed) by drawing attention to the fact that past land-use decisions are a key cause for our water quality problems, and that the costs for meeting TMDLs is only going to go up without a different approach. It would be helpful to have a fact sheet that explained how better land use decisions (smart growth) would lead to less tax payer money necessary to meet the future TMDL's and WIPs.

Response: Land use decisions are complex. Often short-term land use issues can overshadow long-term issues like Bay restoration. It's important for local jurisdictions to make the connection between land use and water quality within their local plans by committing to land use policies that support water resources. There are a variety of publications available from MDP, EPA, and non-governmental organizations about the link between better land use decision making and water quality. The state would be happy to share these documents.

12. Miscellaneous

Comment # 292.

Commenter: C26

The document does not benefit from including failed legislation from prior years. It should also be noted that, by the time the legislature wraps up this year's session, it will be too late to incorporate anything into the 2013 budgets.

Response: The purpose for including failed legislation is to indicate what actions have been taken to try and respond to the various needs; it demonstrates a good faith effort. Further, failed legislation often succeeds in later years as the idea is reconsidered and understanding and positions are refined. While it is true that local budgets are well-along they aren't necessarily finalized by early April. In addition, the budgetary need for the WIP was established earlier and could have been incorporated into local budgets.

Comment # 293.

Commenter: C69

Bold actions, not simply plans and pledges, will be necessary in order to reduce nutrients and sediments. Despite many initiatives and much funding we know that the voluntary, collaborative approach to Bay restoration has not worked and current efforts have been insufficient and are failing.

Response: No response needed.

Comment # 294.

Commenter: C20

The executive summary of the main report should reproduce/include the King-Hagan report's own executive summary table ES-1. This would give substance to and stimulate discussion of local plans. MDE should recommend to local jurisdictions that they include this table in their own plan workups.

Response: The information is appropriately provided in the WIP documentation. What the local jurisdictions include in their own plans is at their own discretion.

Comment # 295.

Commenter: C28

The commenter referenced the last two sentences on page 29 regarding the reduction of sediments to the bay. The commenter notes that upland BMPs are unlikely to arrest an existing unstable stream condition and poor habitat by themselves, and often need help from stream restoration. Identifying watershed-scale opportunities for stormwater management including upland BMPs and stream restoration is the ideal approach to reestablishing local stream habitat while also addressing the Bay TMDL.

Response: Agreed. Several counties have taken this approach.

Comment # 296.

Commenter: C62

It may not be accurate to expect significant changes in the urban stormwater and septic loads, based on the past trends. Agricultural and point source loads might eventually level out due to population growth and capacity. Though significant legislation has been passed recently and is expected to be passed, the state doesn't have a strong basis for achieving urban stormwater and septic goals.

Response: Improvements in water quality due to urban stormwater and septic retrofits will be slow relative to agriculture and wastewater load reduction. Agricultural loads will likely go down long-term both because of BMP implementation and loss of agricultural land to development. Point source loads will go up, at least to the cap, due to increased population. Once the cap is reached, all additional development will need to be offset so that loads will stabilize.

Comment # 297.

Commenter: C10

Septic systems older than 25 years should be connected to public sewer systems. The commenter is disappointed that MDE and MDP have chosen to oppose needed sewer lines because they could allow lots to be built on which cannot be developed with septic. They disapprove the attempts to prohibit new septic systems unless they are the new type BNR systems, because they remove slightly more than half of the nitrogen in the septic water, converting the rest to a gas (Nitrous Oxide, a principal component of acid rain). The money wasted in subsidizing BNR systems (about \$12,000 each), would be better spent on public sewer lines to areas with significant failing septic, such as Southern Kent Island, where about 1,000 failing septic are close to Chesapeake Bay.

Response: The main reason that connection to public sewer is not feasible in all cases is expense, not additional development. It is incorrect that any septic system converts nitrates, nitrites or ammonia to nitrous oxide. It is converted to N₂ gas which comprises 80% of the atmosphere and is relative inert and does not convert acid nor contribute to eutrophication.

Comment # 298.

Commenter: C22

The commenter is disappointed the State has not been more aggressive with agricultural practices on the eastern shore farms, and notes that the area is unable to assimilate all the nitrogen that is being applied to the cornfields. BMPs employed to date have not had any noticeable effect on water quality. The nitrogen levels in the Choptank have steadily risen over the past 40 years.

Response: The State has been sufficiently aggressive with agriculture to meet the assigned allocation; that is all that is needed.

Comment # 299.**Commenter: C30**

The commenter is concerned that MDE will reclassify the three drainage ditches on his property to intermittent streams, which would be detrimental to his horse operation and the value. He is concerned the WIP will 1) divide his farm into 4 sections; 2) cause him to invest in expensive fencing, manure storage facility, and special equipment to spread manure; and 3) stop him from spreading manure in the winter.

Response: Specific cases, not directly referenced in the WIP cannot be addressed here.

Comment # 300.**Commenter: C23**

The commenter was surprised more emphasis was not placed on air deposition loading and reductions. They question why stormwater BMPs should treat nitrogen from air deposition if it could have been reduced from the source. They note there may be more cost-effective and pollution prevention measures that have been included to address loading from air sources. The note there is a potential for creation of green energy jobs by pushing for further alternative energy generation sources and improved energy conservation. They note this Plan is a missed opportunity to reduce climate change and bay pollutants simultaneously.

Response: Air deposition was not addressed in more detail because it was not allocated to the States because most of it comes from outside the region. EPA accepted the need to address reduction in atmospheric deposition, so no state strategies were required. There are ongoing conversations between MDE and EPA on what the State can do to gain additional nutrient reduction credit through reductions of air emissions from programs like the Health Air Act. Green energy programs are ongoing and will be captured in other ways.

Comment # 301.**Commenters: C3, C34**

By focusing exclusively on reducing nutrient and sediment loads, other contributions to the degraded state of the Bay and its tributaries are overlooked. These contributions include, but are not limited to, impervious cover, road ice-treatments, thermal pollution, pesticides, heavy metals, oil and other hydrocarbons, disturbance of nutrient cycling in small streams, and changes in hydrological regime (including erosive discharges). At a minimum, the WIP should include a discussion of the extent to which WIP implementation strategies will affect, or not, other vectors of aquatic degradation. The WIP II should address more broadly how aquatic systems will fare under the present approach, and rectify any problems associated with too narrow a scope.

Commenter C3 questions if the Maryland draft incorporates the new poisons and pollutants, such as mercury, that will enter the Bay via the Potomac if the trash burner planned for Frederick County goes forward.

Response: Pollution not related to nutrients or sediments are addressed separately through local TMDLs and permit requirements consistent with water quality standards. The WIP is not a catch-all for everything that ails the Bay. It is a specific plan to meet nutrient and sediment allocations from a TMDL.

13. Strategies

Comment # 302.

Commenter: C32

MS4s or the entities within them could seek credits or offsets because of the hurdles associated with implementing BMPs, including land availability. Costs aside, MS4s may need to consider options for reducing pollutants beyond those achievable on county-owned lands. Even if local governments maximize the pollutant reductions possible through BMPs on public lands, they may need to create new policies for achieving nutrient reductions on private and industrial lands and work with the federal government to reduce flow from federal properties.

Response: The response is included in the comment: MS4 jurisdictions may need to create new policies to address loads from private sources. Industrial sources have stormwater permits as do federal facilities.

Comment # 303.

Commenters: C46, C69

Such a significant increase from point sources from 2017 to 2025 necessitates much more stringent and specific measures with adequate funding to squeeze out more reductions from nonpoint sources, particularly from agriculture and from urban developed lands. The State should articulate the accountability measures it intends to utilize for nonpoint source pollution reduction, especially on the Eastern Shore.

Response: The increase in point source loads is due to loads already allocated to growth and have been factored into the allocation to other sources.

Comment # 304.

Commenter: C65

Appendix H only includes strategies from SHA and state university systems. Will there be specific strategies for other state-owned facilities, especially ones with NPDES Phase II General Permit for small MS4's?

Response: Yes. The two major sources are parks and university campuses. Most parks are largely forested so there isn't too much to do. The University system is developing its plans.

Comment # 305.**Commenter: C62**

While an extensive list of available practices is identified and state strategies are expanded upon in Appendix A, significant detail is missing in regards to how these practices will be implemented and what defines each practice. Please provide more detail on what the market opportunity is for each practice (e.g. how much land is available to implement each practice) and what are the comparative costs per unit per practice per target pollutant? We believe this process would indicate which pollutants cost more to manage and which practices manage most efficiently.

Response: Definitions of the practices are available from the Chesapeake Bay Program Office and does not need to be repeated in the WIP. MAST actually specified the amount of land applicable to each practice as the strategies were developed based on implementation for a percentage of the applicable land. A study is underway as of June, 2012 to determine opportunities for offsets.

a. Septic**Comment # 306.****Commenter: C60**

The state must articulate what reasonable assurance it expects to include in the WIP to ensure such a dramatic acceleration of septic system upgrades or connections in order to meet the interim goal for 2017. The commenter is disappointed the WIP does not address the need to require BAT or septic to facilitate new growth or replace failing systems outside of the Critical Area.

Response: Regulations with that requirement have subsequently been introduced.

Comment # 307.**Commenter: C52**

Septic systems in Maryland contribute 3.6 million pounds or 1.38 percent of the nitrogen to the Chesapeake Bay. The septic tasks have the following deficiencies:

1. The Growth projections being used over-estimate the future growth loads from septic development. Septic development historically has been 15–16 percent of total residential growth; not the 25% being used. (Permit data from 2009, 2010, and 2011 show 9,000 housing units being built vs. the 20,000 units projected.)
2. There is no identified funding source for connection of OSWDS systems to public sewer.
3. The conversion of conventional OSWDS task cannot be accomplished based upon doubling the BRF fee.
4. The cost per pound of nitrogen reduction from these tasks is \$3,710.00.

Response: (1) Improving the accuracy of the land use and septic system data is one of the tasks that needs to be accomplished between now and 2017. (2) That is not entirely correct. Some BRF funds can be used for that purpose; however, most of the cost will need to be covered by the local jurisdiction as part of its implementation plan. (3) Additional funds will be needed. (4) No response needed.

Comment # 308.

Commenter: C1

Septics should be banned or updated to eliminate contaminated to leach into the soils.

Response: That is not feasible for all areas/systems.

Comment # 309.

Commenter: C18

Please clarify if counties are responsible for determining strategies for septic systems or if it is a state, region, or county wide strategy?

Response: In general, counties are responsible for implementing whatever they put in their strategies, or MDE added to their strategies to meet the assigned allocation. This includes septic systems.

Comment # 310.

Commenter: C22

In the eastern shore basin, placing emphasis on septic systems is not going to make much of a difference in nitrogen reduction, because of the low overall percent contribution to the nitrogen loading. This is not to say that areas of failing septic systems should not be connected to public sewer or that new construction in the Critical Area must have BAT septic systems.

Response: No response needed.

Comment # 311.

Commenters: C24, C49

The WIP calls for septic pump-out of 24,510 systems. Commenter C24 notes that Appendix A does not include a strategy for septic pump-outs. This practice should either be deleted in the WIP or a strategy should be developed for inclusion in the Appendix. Both commenters agree that consideration must be given to the potential impact on smaller WWTPs to both acceptably treat the additional and highly concentrated waste. The strategy should consider the development of pretreatment or capacity availability of the designated WWTPs. It does not appear that the capital costs associated with these facilities was incorporated in the cost estimates for septic systems and that such costs should be added for accuracy.

Response: Local jurisdictions can implement this strategy. How they do so is likely dependent on internal processes such as proof of pump out with payment of property taxes. Small WWTPS should not accept the waste if they cannot handle it. Development of a pre-treatment system is one way to allow a jurisdiction to meet this strategy.

b. Agriculture

Comment # 312.

Commenter: C31

Talbot County is disappointed the committee that developed the local agricultural WIP did not adequately utilize buffers (riparian, forest, grass) as a cost-effective BMP.

Response: The Agricultural Phase II WIP workgroup in Talbot County had representation from farm service personnel who had worked in outreach and installation of buffer practices. To date over 3,400 acres of grass buffers and 512 acres of forest buffers have been implemented in Talbot County. Opportunities going forward are limited.

Comment # 313.

Commenter: C60

While the Phase 2 WIP identifies the need to increase Soil Conservation District engineering and technical resources by 50 percent, the WIP does not articulate how this significant increase in manpower will be achieved, or sustained. Since Maryland relies heavily upon the implementation of annual practices, including cover crops and Soil Conservation and Water Quality Plans, these resources will likely need to be sustained for the foreseeable future in order to ensure the state's agricultural sector meets and maintains its annual implementation targets. Increased implementation of longer-lasting BMPs would provide a meaningful *backstop* against low implementation in any given year of an annual practice, such as low cover crop planting rates due to inclement weather.

Response: Additional funding and resource was obtained with the 2013 budget to increase technical assistance. The Agricultural Phase II WIP contains significant permanent structural practices. The problem is that the Chesapeake Bay Model gives a greater reduction to the annual practices, thereby increasing their cost effectiveness.

Comment # 314.

Commenters: C31, C67

Counter-productive BMPs should be eliminated and the most cost-effective ones encouraged. The most prominent of these is the continued payment of taxpayer subsidies to farmers for the planting of commodity cover crops. If the dollars now being expended for subsidies of commodity cover crops were removed and rolled over into the pool of funding for traditional cover crops, there would be more incentive to plant the latter resulting in no taxpayer underwriting of additional unnecessary fertilizer.

Response: Maryland’s Agricultural Phase II WIP does not include implementation of commodity cover crops.

Comment # 315.

Commenter: C20

In November, 2011, MDA withdrew its proposed regulations on nutrient applications that would have addressed/expanded fertilizer application setbacks and fencing of livestock from surface waters, seasonality/timing of nutrient application, storage/spreading of manure/fertilizers, etc. The 2012–2013 Milestones appear to retain some of actions that would have been a part those proposed regulations. MDE must be certain that the WIP is not relying on regulations that have been withdrawn to achieve milestone, interim or final reductions.

Response: The proposed amendments to the regulations governing Maryland’s Nutrient Management Program were revised and have now been adopted by MDA. They went into effect on October 15, 2012.

Comment # 316.

Commenters: C31, C40

Commenter C40 recommends each agricultural strategy in the Phase II WIP include 1) an implementation schedule with numeric reduction targets in two-year milestone intervals; 2) clear standards by which performance is measured and evaluated, including third-party verification and soil and groundwater testing; and 3) procedures for ensuring compliance, including detailed descriptions of incentives and consequences. These should be described at the county scale. Commenter C31 was similarly concerned that the narrative style the BMPs is not a plan and more should be done in the WIP.

Response: MDA has created a web page to allow public tracking of agricultural BMP implementation to meet the Phase II WIP two-year milestones. The Agricultural Phase II WIP outlined these milestones, as well as uniform procedures for verification and compliance.

Comment # 317.

Commenter: C62

The state addresses gaps where counties did not submit plans or were not able to develop a plan that would meet the state’s goals. The state makes a simplified calculation of load reduction and potential practices and only addresses these gaps on paper. These practices do not seem to be vetted by the county. Based on this approach and the lack of capacity or interest at the county level, what level of certainty is there that these load reductions will be achieved? The state needs to state this uncertainty and describe the mechanisms for achieving load reductions in the case where county is unable to. Lastly, how does the state enforce any reductions in local jurisdictions that did not present a plan?

Response: The County can “vet” those practices between March 30 and July 2. EPA or state “consequences” will be used to achieve the allocations if necessary.

Comment # 318.**Commenter: C15**

The 2-year Milestone for enhanced nutrient management calls for 200,000 acres of cropland. These milestones can probably be met and be fairly easy to properly document. This is a reason for implementing a better soil conservation and water quality planning procedure—to have a better inventory of what is happening out there on the ground. The commenter feels that credit should be for the actual reduction in nitrogen application compared to the past nitrogen application.

Response: That is effectively what is calculated.

Comment # 319.**Commenter: C15**

The commenter agrees that every cropland field that enters fall with low-residue cover should have a cover crop planted. But in order for cover crop to have produced the necessary growth to be effective they need to be planted much earlier than they are currently as not to waste funding. The commenter then went on to identify the most effective planting dates for regions in Maryland.

Response: Cover crop plantings are predicated upon previous crop removal. Maryland does pay an incentive for aerial application cover crops in standing cropfields to allow for early planting.

Comment # 320.**Commenter: C60**

The commenter appreciates the recognition within the WIP that no fertilizer should be applied on cover crops planted to scavenge residual nitrogen left in the soil after harvest. The commenter is particularly concerned that farm acres, on which cover crops may be planted in the future as a requirement of fall manure or biosolids applications, might still be counted toward annual milestone goals, even though they would not be reducing nutrient losses, but allowing nutrient additions. While the requirement for fall cover might help keep some nutrients from running off-site, these crops should not be cost-shared, nor counted toward state milestone goals.

Response: The application of manure and biosolids requires incorporation to reduce the potential for runoff.

c. Waste Water**Comment # 321.****Commenters: C49, C66**

Commenter C49 states that the WIP suggests requiring “at least five” significant minor municipal WWTPs to upgrade to ENR by 2017. Mandating upgrades for minor municipal WWTPs would be a significant departure from the current Point Source Strategy, which only requires a non-significant wastewater plant to achieve WLAs equivalent to ENR concentration levels if that facility expands.

BRF funding is inadequate at this time to perform the upgrades. In addition, the WIP does not justify these upgrades based on a review of cost-effectiveness. The commenter requests deletion of this strategy. If funding is available, the discussion can be revived when the State prepares the next set of two-year milestones. Commenter C66 would like the state to identify the candidate and supplemental list of 10 minor public WWTPs for ENR funding by 2013 so that adequate time is available for design and construction.

Response: The potential list of “major-minor” plants was included in the final submission. If these plants are not upgraded, the reduction will need to be met by stormwater or septic reductions which are likely less cost effective. It is hoped that they plants will be upgraded to meet local need beyond the WIP, or that after the larger plant upgrades are paid off, BRF funds will become available. There is no need to remove it from the WIP at this time.

Comment # 322.

Commenter: C60

The commenter agrees with pursuing a statutory change that would increase the BRF to raise revenues and close much of the projected gap for finishing major WWTP upgrades. This is critical, as the interim WIP strategy relies heavily on completion of these upgrades to achieve more than 5 million pounds of the State’s nitrogen reduction goal by 2017.

Response: The fee was doubled by the 2012 General Assembly.

Comment # 323.

Commenters: C49, C69

Commenter 69 feels that Maryland should allocate WWTP loads using facility’s 2010 wastewater flows, assuming a concentration of 3 mg/L nitrogen and 0.3 mg/L phosphorus, and that any increased nitrogen or phosphorus loads with flows beyond 2010 actual flow levels should be offset with equal or greater reductions from other sources. Conversely, commenter C49 feels that existing WLAs give POTWs very little cushion to withstand normal operational variability without an exceedance of the WLA, therefore, WLAs should not be reduced.

Response: Point source WLAs are based on the existing ENR Cap Strategy that allocates loads equivalent to 4 mg/l of nitrogen times the design flow capacity. This actually gives quite large margin for operational variability as well as growth, since most plants are obtaining effluent limits well-below the 4 mg/l annual average required by their permit and their design flows.

Comment # 324.

Commenter: C49

Because the proposed POTW WLAs are already so stringent, there is limited capacity to accommodate growth on high-performing centralized WWTPs. This capacity and associated nutrient allocation should be preserved for smart growth and economic development.

Response: It has been; see response to comment 323.

Comment # 325.

Commenter: C55

The target loads in the NPDES Permit #MD0023523 do not agree with the loads identified in Appendix F. Please clarify where the target loads listed in Appendix F came from and please explain how the target loads listed in Appendix F will or will not affect the existing NPDES permits.

Response: A footnote was included in Appendix F explaining the differences in the loadings. The footnote is as follows:

MD0023523 US Naval Academy WWTP: The TN and TP Chesapeake Bay TMDL WLA for this facility are initially allocated as 12,182 lb/yr and 914 lb/yr, respectively. During the renewal process of the current discharge permit (07-DP-2535), MDE and NSA Annapolis WWTP negotiated and agreed to a lower permitted flow of 0.7 MGD instead of the 1.0 MGD design capacity. As part of the agreement, the Chesapeake Bay TMDL TN and TP WLA, which were based on the 2004 Tributary Strategy were reduced by 30% to TN = 8,527 lb/yr and TP = 640 lb/yr. The State is retaining custody of the difference between the permitted allocation and the Chesapeake Bay TMDL allocation for future use determination.

Comment # 326.

Commenter: C55

The nutrient loading rate provided only includes the Bay TMDL loading rate for TN and TP as proposed in the draft industrial permit. The draft industrial permit also includes a nutrient loading rate for the Mattawoman Creek. A current TSS loading rate is not included in either the current or draft industrial permit.

Response: Nutrient Loading – DOD’s statement concerning TN and TP is correct. However, it is important to note that the Bay TMDL TN and TP limits are for all outfalls combined; while the Mattawoman TN and TP limits apply to the combined discharges going into Mattawoman Creek (Outfalls 007, 010, 021, 035, 040, 071, 080, 082, 083, 085, 086, 090, and 107). Therefore, the Mattawoman limits are just a subset of the Bay limits. Consequently the WIP only needs to list the Bay wide limits.

TSS Loading – DOD is correct in their statement that the draft permit does not include a facility wide limit for TSS loading. MDE’s Industrial Permits Program does not consider it necessary. TSS limits was only deemed necessary on a few waste streams in the draft permit. For the great majority of outfalls TSS was not a parameter of concern. Thus, it was not considered necessary to place a facility wide TSS loading cap.

Comment # 327.**Commenter: C55**

The Bay Annual Maximum Loading Rates (AMLRs) are listed as limitations in the draft permit. As part of the NPDES permit renewal process, MDE should consider listing the AMLR as goals to allow for further discussion before being set as permit limits. Because 1) The nutrient loading allocation for NSFIH discharges to the Mattawoman Creek was specifically designated for a future Phase II MS4 permit. If this load allocation is used for the industrial NPDES permit and not for a future Phase II MS4 permit how will the MS4 load allocation be derived? 2) The Phase I WIP repeated the Tributary Strategy NSFIH numerical nutrient loading for the Lower Potomac. The annual loads were based on flow, performance levels, and potential loading reductions existing prior to 2008. These factors will be changing over the next three years as NSFIH relocates the current outfalls and monitoring locations. 3) The current industrial NPDES permit does not require sampling or reporting TN values, TP values, or the calculated loading rates. Therefore, these will not be reported for NSFIH until 36 months after the effective date of the permit when monitoring points have been moved out of streams and flows are accurately measured.

Response: In the draft permit, MDE's Industrial Permits Program made the determination that nutrients should be limited. However, the Program realized that implementation time is needed, thus the draft allows 36 months from the effective date for the limits to take effect. Responses to the commenter's numbered statements follow:

1. MDE's Industrial Permits Program can't speak as to plans for use of this load for a future MS4 permit. To the Program's knowledge, this load has always been associated with the Navy's Indian Head industrial surface water NPDES permit. Thus, as part of the renewal, the permit incorporated the loads as limits on the industrial part of the facility. The draft permit does include authorization for industrial storm water coverage. The Department also would entertain a future proposal to share the load between industrial and MS4 portions of the facility. However, this would require re-opening the industrial permit.

2. Comment noted, but no explanation is included on why relocation of the outfalls would mean that the load allocated would be made inadequate by this project. In other words, there is not a reason given on why relocating outfalls would increase the TN and/or TP being discharged.

3. The draft clearly states that TN and TP monitoring is to start as of the effective date of the permit. Specifically, the footnotes state that, "All monitoring requirements are effective as of the date of issuance of this permit." ONLY the effective dates of the limits are delayed for 36 months.

Comment # 328.**Commenter: C28**

The commenter questions the calculation for sediment data in Table 5 [page 16]. Table 5 indicates an increase from 5,709 million (2010, calculated from observed data) to 55,134 million pounds (2017,

calculated from interim permit limits) of sediment. They suggest a better approach would be to use some fraction of the permit limit in 2017 to estimate the discharge estimates in that period. Historical records can be checked to see what fraction of the permit limit is the most likely load that will be realized, and the number of pounds adjusted accordingly.

Response: The reason for the difference in sediment numbers is that the 2010 Progress column reflects actual discharge loads from waste water treatment plants and the 2017 Interim Strategy column reflects permit limits. The actual 2010 waste water plant discharges are significantly less than the permit limits, which are set to be protective of the receiving water bodies. To change the 2017 Interim Strategy for the wastewater plants would entail committing to change the permit limits. MDE decided that changing the sediment permit limits was not warranted at this time; hence, the table continues to reflect the difference reflected in comparing 2010 actual discharges and sediment permit limits that are the basis of 2017 Interim targets.

d. Forest

Comment # 329.

Commenter: C69

Maryland's WIP should contain provisions to target funds, such as from Maryland's Program Open Space and Agricultural Land Preservation Fund, for the fee simple or easement purchase of sensitive lands such as forests and wetlands on private lands and farm lands, especially those bordering the Bay and its rivers. Acquisitions should take into consideration State Wildlife Action Plans and Green Infrastructure maps that have been updated to reflect the implications of climate change and expected sea level rise.

The 32,000 acres of urban forest buffers are a start but there is no concrete plan for how this will be accomplished and funded.

Response: DNR has adopted an internal policy to target land acquisitions and conservation easements. The policy developed adaptive criteria that included Blue Infrastructure, Green Infrastructure and habitat migration opportunities and barriers. The criteria finds adaptive benefits of land conservation under different sea level rise scenarios to help DNR target sensitive lands for acquisition and easements.

The last legislative session increased funds for point source and nonpoint source reductions, particularly the administration added money to the Chesapeake and Atlantic Coastal Bays Trust Fund. Funds for riparian buffers, tree planting and wetland restoration on public lands have a dedicated annual program in the Chesapeake and Coastal Bays Trust Fund. Priority watersheds will be targeted first. Also, DNR continues to coordinate with other state public land owners to identify natural filter opportunities. DNR is working in coordination with its Forest Service to identify new funding sources, and using GIS to locate areas for urban forest buffers.

e. Urban

Comment # 330.

Commenter: C62

While the state has required the sale of low phosphorus fertilizer, the WIP suggests that a barrier might exist to fully achieving phosphorous reductions. The commenter would like more detail on the potential gap in phosphorous levels since licensed and established lawn care and landscaping companies are not required to use low phosphorus fertilizer.

Response: All applications of urban fertilizer by lawn care companies are based upon soil testing. Areas of high phosphorus are required to utilize low “p” fertilizer; only starter fertilizer is allowed for newly established lawn.

Comment # 331.

Commenter: C73

Jurisdictions are routinely operating under expired MS4 permits, with a known lack of compliance to mandated requirements, with no enforcement or sense of urgency for corrective action on behalf of the state. Permits should be issued with a focus on water quality improvements. Progress cannot be checked through a once-a-year annual report; it must occur with more frequency and must be supported by data collection to ensure actual water quality improvements. These improvements must occur and be tracked on a timely basis, relative to the two-year milestones and WIP implementation.

Response: New permits have been noticed and will all be out before the end of the year.

Comment # 332.

Commenter: C2

The third full paragraph on Page 13 needs to be clarified and expanded to more fully explain the control of fertilizer application for regulated and non-regulated areas and what is meant by the new local government initiatives referenced here.

Response: The law requires that MDA develop the program by 2014. MDA will be providing additional guidance as the program develops.

Comment # 333.

Commenter: C18

Please provide guidance on urban nutrient management and how counties can take reduction credit for this practice. What is the 2010 Progress run data for urban nutrient management for counties?

Response: MDA has provided a letter through MDE on guidance in developing their Phase II WIPs for urban nutrient management.

Comment # 334.**Commenter: C43**

The WIP specifies the goal of treating storm water runoff from 20 percent of currently untreated impervious areas. How will the reductions in phosphorus loads from urban sources resulting from the Fertilizer Use Act of 2011, will count towards the 20 percent of impervious area to be treated?

Response: Two separate goals. The treatment of the 20 percent will be determined by actual reporting of implementation and determining how many acres it applies to. Monitoring required by the permit should indicate any reduction in phosphorus.

Comment # 335.**Commenters: C62**

The WIPs state that implementation will occur at the *maximum extent practical*. It is not clear how this terminology will affect implementation and reductions associated with recommended practices. An analysis of the effects of such terminology on past practices would be useful and perhaps some level of uncertainty should be communicated if this terminology is to remain.

Response: MEP is defined in documentation for the Stormwater Program.

Comment # 336.**Commenters: C48, C53, C56, C60, C69, C71**

There should be no confusion or conflicts between the final WIP and the final Phase I MS4 permits, which should be addressed before draft permits are finalized.

Please clarify the discrepancy of what constitutes the area covered by NPDES MS4 permits between the MDE Science Services Administration, the Stormwater Program, and the MS4 definition in the Clean Water Act in the Federal Register. The discrepancy in definition results in varying estimates for the 20 percent restoration of a County's untreated urban impervious areas.

Please clarify the 20 percent retrofitting requirements/goals, since there seems to be a discrepancy between the WIP Phase II (MS4's pre-1985 development), the draft MS4 permits (county's untreated urban impervious area), and MDE's Stormwater Program (any area built prior to 2002 as well as areas without any stormwater management). Also, please clarify retrofit goals. Existing MS4 permits require a 10 percent retrofit, while the WIP mentions a 30 percent goal. Then the WIP later states just 85 percent of the retrofit goal should be reached by 2017.

Furthermore, MDE's draft *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* dated June 2011 greatly limits the amount of credit that we can receive for nonstructural practices, though they may be even more efficient for nitrogen and phosphorus removal than structural practices. Adding confusion, the definition of MEP as facilities built after 2002 that is included in MDE's *Stormwater Accounting Guidance* conflicts with both the Draft Phase II WIP and

the MS4 permit drafts. The final WIP must ensure that standards and goals are clear and consistent across both the WIP and the MS4 permits.

Commenters believe the equivalency concept in Draft Phase II WIP is appropriate. The TMDL allows for stormwater programs to restore water quality *equivalent to retrofitting*, however the permit does not make such provisions. Without such provisions in the MS4 permits, the cost of meeting TMDL WIP requirements is significantly greater.

Commenter C48 objects to permit terms that apply to areas beyond the MS4, and question the State's legal authority to impose such conditions.

Response: Regarding the apparent "discrepancy of what constitutes the area covered by NPDES MS4 permits ..." cited by the commenters: There is no intended discrepancy. The methodology applied in the draft Phase II WIP assumed that very low density and rural developed areas were not covered under a given county's MS4 permit, and in order to exclude these areas from MDE's delineation of NPDES regulated stormwater, a combination of US Census "urbanized areas" and "core" urban areas from the USGS 2006 Chesapeake Bay Land-Cover Dataset was applied. At the time, both MDE's Science Services Administration (SSA) and Water Management Administration (WMA) were in agreement that this was the proper method to use. This method is consistent with the landuse assumptions in the Bay TMDL. However, in order to accurately reflect new MS4 permit conditions, the final version of the Phase II WIP has been revised to include the entire urban area of a given MS4 county within the NPDES Regulated Stormwater Target Loads.

The WIP refers to retrofitting areas developed before the State's 1985 Stormwater Act required stormwater controls as a short-hand for areas needing retrofits. MS4 jurisdictions should follow the more specific guidance from MDE's stormwater program. This includes improving areas with some existing stormwater controls, i.e., those built prior to 2002. MS4 jurisdictions should coordinate with MDE's stormwater program to work through the accounting details of the 20% retrofit goal.

In regard to meeting "85% of the retrofit goal" by 2017, we are unaware of such a reference in the WIP. Regardless, the timing of achieving the 20% retrofit goal will be prescribed by the 5-year permit period and not the WIP.

The intent of the stormwater permit is to mitigate the impacts of urbanization on things like stream channel integrity and stream base flow, not simply nutrients. Hence, the intent of the 20% retrofit goal in the next permit is to ensure that local stormwater programs maintain this focus on the traditional benefits of stormwater controls and not solely nutrients. That said, given the accelerated schedule of meeting the nutrient load reduction, the 20% retrofit target in the next permit does not preclude jurisdictions from doing additional activities that reduce nutrients. These may include various non-structural activities, which would help contain costs of achieving nutrient reductions. We urge jurisdictions to continue discussing specific ideas in this regard with MDE.

14. Editorial

Comment # 337.

Commenters: C20, C28, C42, C45, C55, C64, C72

The commenters provided the following editorial comments/suggestions:

- Appendix A.5. P.A-26. Loads. Although I realize that the following refers to simple, nearly insignificant rounding errors, it would be helpful if the text agreed with the charts/figures, and with itself from one page to another. Page A-26 states that the figure following shows that the N load from agriculture constitutes 39 % of the total [of all] 2009 source sector loads. However, the figure on p. A-27 sums to 38 %. Subsequently, the chart for N on p. A-28 states 38 % as agricultural source sector.
- Appendix A.5.A.Cover crops, p.A-32 Strategy is given as annually planting 417,014 acres. However, the 2012-2013 milestone states 355,000 acres.
- Appendix A.5: C. Conservation tillage, p. A-34: Strategy is stated as maintaining the existing coverage at 704,198 acres, but the 2012-2013 milestones table states that the increment for the milestone is 764,630 acres.
- AppendixA.5.F. p. A-35. Streamside protection without fencing. 2017 strategy is given as an additional 2500 acres, but the 2012-2013 milestones table states 5,050 acres.
- Appendix A Section 1 Part C, Retrofit/Optimization at Major Industrial Treatment Plants to meet the Tributary Strategy Goal last sentence of 2015: Naval Support Facility at Indian Head on page A-4 states renewal of NSFIIH's "wastewater discharge permit from their industrial operation is pending with nutrient limits anticipated to be effective no later than calendar year 2014." As of March 9, 2012 the Maryland NPDES Permit has not been reissued. Because the nutrient limitations do not become effective until three years after the permit is issued or reissued, the nutrient limitations will not become effective before 2015.
 - Recommendation: Revise statement to read "...nutrient limits anticipated to be effective in 2015."
- Appendix A Section 1 Part E, Continue ENR Retrofits at Major Federal WWTPs, second sentence of 2012-2017 on page A-6 states "Naval Surface Warfare Center Indian Head have been delayed and referred to EPA."
 - Recommendation: Revise the statement to correctly identify the facility as Naval Support Facility Indian Head (NSFIIH) and to correctly reflect that the wastewater treatment plant was completed in August 2011 and is currently meeting permit limits for the ENR that became effective January 2012.
- Appendix A Section 1 Part E, Continue ENR Retrofits at Major Federal WWTPs, third sentence of 2012-2017 on page A-6 states:

- “The United States Naval Academy has advised that it may not meet the 2015 permit milestone for meeting ENR limits. MDE has advised the Naval Academy that we expect it to achieve the permit limit but has given EPA notice of potential delay and has asked the Naval Academy to provide an updated status.”
- Comment: In a recent meeting between the Naval Academy and MDE to discuss the WWTP, the Naval Academy advised MDE that they will meet the 2015 permit milestone for meeting the ENR limits.
- Recommendation: Delete the statement in its entirety from the 2012-2017 section of Appendix A, Section 1 Part E as the statement is invalid.
- Appendix A: Page A-38 indicates non-urban stream restoration on 29.061 linear feet, should be 29,061.
- p. i – Table of Comments – 1.8 omitted
- The second to last sentence of the last paragraph on page iii of the Executive Summary and page v of the Main Report states:
- “Finally, the State has provided standard stormwater management strategies for federal and state facilities, as well as a number of small municipalities, that are covered by federal NPDES stormwater permits.”
 - Comment: In this statement we believe you are referring to the 20% retrofit requirements that are to be built into the new MS4 permits. The use of the term "standard stormwater management strategies" indicates that federal NPDES Stormwater permit holders have been given a specific set of practices to be implemented in support of the Chesapeake Bay TMDL which we do not believe has actually happened to date.
 - Recommendation: Revise the sentence in both locations to read:
 - “Finally, the State has been including standard stormwater management goals in permitting requirements for federal and state facilities, as well as a number of small municipalities, that are covered by federal NPDES MS4 stormwater permits.”
- p. 1 – 3rd, paragraph, last sentence “....on states that do not meet a variety.....”
- p. 9 – Table 2, under Total Suspended Solids, footnote ‘b’ should be ‘c’.
- P 13. Period at end of 2nd Paragraph
- P 13, Paragraph 3, add the word through in the 2nd line
- P 16. Paragraph 2, 2nd sentence should be ‘changed’ vs change
- Page 17 and the following table: A column for the incremental difference between the 2009 Progress and the 2017 strategy is indicated in the text, but does not appear in the table. The

column should be added.

- P 21 Paragraph 3. Last sentence, compliment should be complement
- P 43 Paragraph 2 of section 1.10.2 should be form not from.
- p. 38 – 2nd paragraph under 1.8.2 – run-on sentence
- p. 42 – 2nd paragraph under 1.10.1 – first two sentences need to be reworked
- p. 43 – 2nd paragraph under 1.10.2 – reword third sentence
- On page 58 of the Main Report in the last sentence of the last paragraph the following statement is made:
 - “DoD subsequently indicated that it is working on a MAST-like tool and that it is coming up with its own set of reduction targets.”
 - Comment: This statement does not accurately reflect the information that was discussed. The US Army Corps of Engineers, not the DoD, has developed a Best Management Practice Database for the Army. The purpose of this Database is to provide a tracking and reporting mechanism that can be used by installations to determine BMP efficiencies using the list of BMPs provided in MAST. The data used to determine efficiencies is based on what is provided in MAST. The Database is not a MAST-like tool nor will it result in the development of its own set of reduction targets.
 - Recommendation: Revise the sentence to read:
 - “The US Army Corps of Engineers indicated is it working on a Best Management Practice Database to provide a tracking and reporting mechanism that can be used to determine the efficiency ratings of the BMPs selected for installation. The information contained in MAST is used as the basis for development of the BMP Database efficiency rates.”

pdf pg	Report page	Current Text	Recommendation	Comment
9	1	The federal Clean Water Act requires limits to be placed on pollutant loads that are impairing water quality. The federal Environmental Protection Agency (EPA) led a multi-year process to determine the limits on the amount of impairing pollutants from all sources entering the Chesapeake Bay.	Explain somewhere in here that the nutrients (N & P) & sediment, in excess, are pollutants	There is confusion among the public about why nutrients, which seem to be necessary for life, are deemed pollutants.

pdf pg	Report page	Current Text	Recommendation	Comment
9	1	Thus, as part of the TMDL development process, EPA called upon states to develop Phase I Watershed Implementation Plans (WIPs). The Phase I WIPs, part of a three-phase adaptive planning process between 2010 and 2017,	Explain somewhere in here what the 3rd Phase is. Either as a footnote, or in the text.	You introduce the 3-phase concept, but no-where in the document have I found an explanation of Phase III. It certainly isn't in the intro!
9	1	This assurance is further "back-stopped" by EPA's commitment to impose "consequences" on states that do meet a variety of specific benchmarks ² .	This assurance is further "back-stopped" by EPA's commitment to impose "consequences" on states that do not meet a variety of specific benchmarks ² .	
10	2	This difference was necessary to accommodate the equitable allocation method used to partition loads among the various source sectors, which was also done in the Phase I WIP	Please footnote to reference section in Ph I WIP that discusses this	
10	2	This tool is used to determine the effect of exchanging loads geographically. The second tool estimates the effect of exchanging total nitrogen (TN) and total phosphorus (TP) within a basin.		What does " exchanging " mean in this context
12	4	That complex process is reflected in the Figure 1 below, which shows twenty-four jurisdictions , each having four major source sectors, feeding information to the State and then on to EPA.	That complex process is reflected in the Figure 1 below, which shows twenty-four jurisdictions (23 counties & Baltimore City) , each having four major source sectors, feeding information to the State and then on to EPA.	I keep hearing people, even those on the WIP SAC, referring to "24 counties"
19	11	For local teams that did not submit strategies the following practices have been included: Upgrade or connect 60% of the septic systems in the Critical Area (1,000 ft from tidal waters) Stormwater retrofits of developed lands with little or no management (30% for Phase I MS4 NPDES permits, 20% for Phase II MS4 NPDES permits)	For local teams that did not submit strategies the following practices have been included: Upgrade or connect 60% of the septic systems in the Critical Area (1,000 ft from tidal waters) Stormwater retrofits of developed lands with little or no management (30% for Phase I MS4 NPDES permits, 20% for Phase II MS4 NPDES permits) Additional strategies as	My guess is that the two strategies you mentioned are insufficient to close the gap.

pdf pg	Report page	Current Text	Recommendation	Comment
			necessary to meet the reduction targets.	
26	18	Table 6 BMPs (ditto Table 10)		Are septic units really in Acres, or are they in systems? Where/How are the Wastewater "BMPs" listed
28	20	Table 6 BMPs (ditto Table 10)		Are Street Sweeping units really in Acres? Or miles?
32	24	Figure 2		Can we show the actual detail between 1985 & 2009 somewhere?
46	38	Minimizing loads from new development is essential to the success of the strategy to offset growth. It reduces the need for offsets and helps preserve offsets for physical and economic development that is vital to the State and local jurisdictions.		Can we explain somewhere how Offsets and Trading interrelate and differ? What is "physical" growth in this context?
48	40	This bill supports the Administration's operating budget. It designated \$23.5 million for the Governor O'Malley recently proposed \$25 million for the Trust Fund in fiscal year 2012, a 25% increase over 2011.		I got lost in the numbers here!
49	41	Maryland is engaged in research to support revisions to the P Site Index that will improve the ability to rank fields in a relative manner according to their potential for P loss to surface waters. The revisions include new science evaluating the contributing P sources, including the soil P saturation ratio as a measure of potentially water-soluble P in the soil and management decisions regarding manure or fertilizer P application		I'm confused. What is the bottom line on the P Index?

pdf pg	Report page	Current Text	Recommendation	Comment
		methods.		
50	42	According to economist Dennis King,	Please footnote the reference ..	
9	1	Thus, as part of the TMDL development process, EPA called upon states to develop Phase I Watershed Implementation Plans (WIPs). The Phase I WIPs, part of a three-phase adaptive planning process between 2010 and 2017,	Thus, as part of the TMDL development process, EPA called upon states to develop xxxxx Watershed Implementation Plans (WIPs). The Phase I WIPs, part of a three-phase adaptive planning process between 2010 and 2017,	
29	21	The two-year milestones are also are tracked closely by Maryland's BayStat		
33	25	The participants included farmers, Soil Conservation District planners, engineers, technicians, NRCS, FSA, University of Maryland Extension, County Agricultural Coordinators, agro-business, representatives from local watershed organization, Chesapeake Bay Foundation,	The participants included farmers, Soil Conservation District planners, engineers, technicians, NRCS, FSA, University of Maryland Extension, County Agricultural Coordinators, agro-business, representatives from local watershed organizations, Chesapeake Bay Foundation,	
34	26	Tables 7 - 9 summarize the results of Maryland's Final Target strategies for nitrogen phosphorus and sediments. Specifically, the tables shows the estimated 2010 load, the load that is expected to be achieved as a result of the Final Strategy19	Tables 7 - 9 summarize the results of Maryland's Final Target strategies for nitrogen phosphorus and sediments. Specifically, the tables show the estimated 2010 load, the load that is expected to be achieved as a result of the Final Strategy20	
47	39	It alters specialty fertilizer labeling requirements to include information on nitrogen content, a statement directing applicators when and where not to apply the product,	It alters specialty fertilizer labeling requirements to include information on nitrogen content, a statement directing applicators when and where ??? to apply the product,	A positive sounds better than a negative!

pdf pg	Report page	Current Text	Recommendation	Comment
48	40	In addition to the above, the following legislation was bit adopted in 2011, but is likely to be revived in some form during the 2012 Legislative Session:	In addition to the above, the following legislation was not adopted in 2011, but is likely to be revived in some form during the 2012 Legislative Session:	
49	41	Following the end of the 2011 General Assembly session, Governor O'Malley signed an Executive Order to establish the Task Force on Sustainable Growth and Wastewater Disposal (also known as the "Septics Task Force") to look at this issue and make recommendations to prevent continued water quality deterioration by construction of new large housing developments	Following the end of the 2011 General Assembly session, Governor O'Malley signed an Executive Order to establish the Task Force on Sustainable Growth and Wastewater Disposal (also known as the "Septics Task Force") to look at this issue and make recommendations to prevent continued water quality deterioration caused by construction of new large housing developments	
49	41	Most importantly, P Site Index calculation accurately represents the critical source area concept, allowing the P loss potential a single physical transport pathway to drive the final risk assessment score to "Very High" reducing the allowable application of phosphorus.	Most importantly, P Site Index calculation accurately represents the critical source area concept, allowing the P loss potential of a single physical transport pathway to drive the final risk assessment score to "Very High", reducing the allowable application of phosphorus.	
50	42	however, in today's world economy, the many of the jobs created making our retail products occur overseas.	however, in today's world economy, many of the jobs created making our retail products occur overseas.	
51	43	This issue of values aside, a cost/benefit analyses is required for regulations, but the Bay TMDL and WIP are not regulations, so a cost/benefit analysis is not required.	This issue of values aside, a cost/benefit analysis is required for regulations, but the Bay TMDL and WIP are not regulations, so a cost/benefit analysis is not required.	
51	43	Although these complexities are acknowledged they are beyond the scope the cost estimates provided in this section.	Although these complexities are acknowledged they are beyond the scope of the cost estimates provided in this section.	
54	46	The \$2.38 billion cost for upgrading major and minor municipal waste water treatment plants in represents the costs to be incurred between 2009 and 2017 to finish	The \$2.38 billion cost for upgrading major and minor municipal waste water treatment plants represents the costs to be incurred between 2009 and 2017 to finish	

pdf pg	Report page	Current Text	Recommendation	Comment
55	47	This charge was taken up by Task Force on Sustainable Growth and Wastewater Disposal (Task Force) established by Executive Order and described in Section 1.9.	This charge was taken up by Task Force on Sustainable Growth and Wastewater Disposal (Septics Task Force) established by Executive Order and described in Section 1.9.	
56	48	Use targeting and competitive awards to maximize cost effectiveness of the funds, including competitive grants for 10 of the largest minor WWTPs upgrades to ENR prioritized to promote smart.	Use targeting and competitive awards to maximize cost effectiveness of the funds, including competitive grants for 10 of the largest minor WWTPs upgrades to ENR prioritized to promote smart growth .	
57	49	of Phase II: identifying more detailed, geographic-specific pollution reduction targets, as well as	of Phase II: identifying more detailed, geography-specific pollution reduction targets, as well as	
57	49	Within each of Maryland's 23 counties and Baltimore City, representatives of the entities with responsibility and authority to control nutrient and sediment loads from all sources would be identified, including	Within each of Maryland's 23 counties and Baltimore City, representatives of the entities with responsibility and authority to control nutrient and sediment loads from all sources could be identified, including	
63	55	The participants included farmers, Soil Conservation District planners, engineers, technicians, NRCS, FSA, University of Maryland Extension, County Agricultural Coordinators, agro-business, representatives from local watershed organization , Chesapeake Bay Foundation,	The participants included farmers, Soil Conservation District planners, engineers, technicians, NRCS, FSA, University of Maryland Extension, County Agricultural Coordinators, agro-business, representatives from local watershed organizations , Chesapeake Bay Foundation,	

Response: MDE thanks the commenters for identifying errors, omissions and discrepancies in the text of the Phase II WIP report, as well as suggested revisions for improving clarity. MDE has incorporated these edits and suggestions where appropriate in the revised WIP report submitted to EPA on March 30, 2012.