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ALLEGANY COUNTY, MARYLAND

Office of The Board of County Commissioners

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September 27, 2012

Mr. Paul Emmart
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230-1718

RE: Accounting for Growth – Proposed Offset Policy

Dear Mr. Emmart:

Please find enclosed Allegany County's comments on the proposed Accounting for Growth Offset Policy. These comments were generated by our county Environmental Policy Review Team with partnership and input from the Allegany County Bay TMDL/WIP Committee.

As you know, Allegany County is committed to partnering with the State to restore the health of the Chesapeake Bay. This is demonstrated in the commitments set forth in our Phase II Watershed Implementation Plan. Furthermore, our implementation efforts in working towards our 2013 milestones are well underway.

However, as noted in the attached comments, Allegany County's impact upon the Bay does not mirror in the slightest larger jurisdictions to the east. As a supplement to our comments, we would like to cordially invite MDE policy writers to visit us here in Allegany County. We feel confident that a personal tour of our county will help MDE's central planners to fully appreciate our geographic and topographic constraints, and provide to them a better understanding of the historic and limited development opportunities which serve as the basis for our opposition to this growth control policy. Please contact Mrs. Angie Patterson, Land Use & Planning Engineer, at 301-876-9509 or apatterson@allconet.org to arrange your visit. We sincerely look forward to hosting you.

Thank you for the opportunity to comment on this draft policy. If you should have any questions, please contact Mrs. Patterson.

Sincerely,

COUNTY COMMISSIONERS OF
ALLEGANY COUNTY, MARYLAND

Michael W. McKay, President

Creade V. Brodie, Jr., Commissioner

William R. Valentine, Commissioner

cc: Allegany County Bay TMDL/WIP Committee (by email)

Allegany County Comments – Accounting for Growth: Proposed Offset Policy

September 27, 2012

In response to the Maryland Department of Environment (MDE) call for stakeholder input on the referenced proposed policy, the Board of County Commissioners of Allegany County provides the following comments, which support opposition:

- **Policy Goals are not applicable to Allegany County**

The proposed policy addresses "increased loads from population increase and economic development". While population increase and economic development are real issues with respect to nutrient loading in other parts of the state, they are not in Allegany County. Allegany County's population has decreased from 89,556 in 1950 to 75,087 in 2010, a **16% loss** over the last 60 years. Furthermore, our projected population, prepared by the Maryland Department of Planning (MDP), basically remains static with a nominal 0.1% increase per year over the next 30 years.

Allegany County's geographical and topographical constraints will not allow growth at a magnitude that could result in the problems experienced in the central part of the state. Allegany County knows its most precious resources are its undeveloped mountains. Our past and current development patterns demonstrate our long-time commitment to protecting these resources.

Steep slopes, flood plains, unsuitable soils, already developed lands and protected lands in Allegany County leave very little land available for future development – only about 6,500 acres or 2.5% of the County's total land mass. Much of the commercial and residential development that is occurring is redevelopment because both topography and existing infrastructure make redevelopment more cost effective.

Further regulation of growth is simply not warranted in Allegany County. All counties are not created equal in terms of development opportunity and should not be treated alike.

- **Delivery factors must be incorporated into load calculations**

Allegany County has been proactive in responding to the Bay TMDL initiative. We have cooperated with State requests in developing our Watershed Implementation Plan (WIP), which was submitted on time and outlines our commitments towards meeting the goals that were given to us by the State. We have been patient in that have not been shown the complete "science" behind the allocations. Due in part to lack of resources to search out the answers, we have simply had to trust that the State has applied a delivery factor for our load considering our great distance from the Bay. All along we have been assured by MDE Science Service Administration staff that, indeed, this has been accounted for.

This proposed offset policy, however, explicitly states that delivery factors were not incorporated. Although the Bay model allegedly accounts for the attenuation that occurs from the furthest reaches of the Potomac River, MDE has chosen not to apply this factor to the offset policy. When questioned on this decision at the July 24 outreach meeting in Hagerstown, the Panel's response was that delivery

factors were not applied in an effort to "keep things simple". Keeping things simple, however, is to the detriment of a County that already struggles with economic growth in some of the furthest reaches of the Bay watershed.

Furthermore, the proposed policy recognizes that an offset in Allegany County may not be worth as much as an offset closer to the Bay. How can the policy acknowledge an applicable delivery factor on one hand and not on the other?

There must be some science available to support delivery factor applicability in the Bay model. This science should be used to apply a delivery factor to the offset policy, as well.

- **Scientific data should be shared with local government partners**

What is the source of the stormwater nitrogen loading factors, i.e. 15.34 lbs/acre impervious, 10.78 lbs/acre pervious and 3 lbs/ac forested?

It would go a long way for this and other scientific information to be shared with local governments. As partners in this unprecedented effort to restore the health of the Bay, it would be helpful to understand the science that supports these proposed policies and initiatives. This policy will impose significant costs and sacrifices to the citizens of Maryland and yet the policy outreach does not include the scientific reasoning. If local governments are expected to partner with the State, as implied by the WIP initiative, then we should be treated as partners, with the respect of sharing the data, as well as the applied methodology, that is the basis for decisions that will have such a significant impact on our citizens.

- **Environmental Site Design (ESD) credit should be scientifically supported**

The proposed policy gives only a 50% credit to new development projects that implement ESD. When questioned on this decision at the July 24 outreach meeting in Hagerstown, the Panel's response was that this credit is conservative and may increase as the policy is further developed. There was no reference to a particular study that resulted in this number, which suggests it is no more than arbitrary.

Three years ago, local jurisdictions were required to adopt and administer ESD regulations. At that time, ESD was presented as "the answer" for a developed site to mimic woods in good condition. This would suggest that the post-development load mimics the pre-development load, or may even decrease the load in the case of a non-wooded pre-development condition.

What science supports only a 50% credit for the offset policy? Why do developers not get full credit for implementing ESD, which "mimics woods in good condition"? Again, if science supports the assumption, information sharing would go a long way. If there is no supporting science, then the 50% credit is arbitrary and unfounded and is not supported by this partner in the restoration efforts.

- **Forested loads should not be required to be offset**

The proposed policy requires offsets for the entire post-development load rather than the difference between pre- and post-development. A nitrogen load from a forested acre is natural and should be recognized as a baseline load for a developed site.

Furthermore, a nitrogen load of 3 lbs per forested acre in the post-development condition is required to be offset. So, the forested load in the pre-development condition is treated as "negligible", i.e. not worth subtracting from the post-development load, yet the same forested load in the post-development condition is considered significant enough to calculate and warrant offset. Either the forested load should be treated as negligible or it should be recognized – and the decision should be justified.

- **Analysis on land available for offsets is warranted**

What thought has been given to land availability for offsets? Most land uses are developed, used for agriculture or mining, or already forested. Has an analysis been done to determine how much undeveloped unforested land is available? An example 4-acre minor subdivision of 7 half-acre lots on BAT septic results in **64 lbs** of nitrogen to be offset. According to the Bay model (specifically, Maryland Assessment Scenario Tool or MAST), only 3.6 lbs of nitrogen is reduced by tree plantings on 1 acre. This would require 18 acres of tree plantings to offset a 4-acre minor residential subdivision. Where can these plantings take place? If it takes place on agricultural land, then we lose our farmers and our food source. Is there a significant amount of land available that is not already developed, used for agriculture or already wooded? This example requires greater than 4X the land for offsets than would be developed, which shows that analysis of available land is warranted.

- **Trading Geographies**

The Discussion Draft document dated July 12, 2012 outlines three potential trading geographies, in all of which, Allegany County is included in the Potomac River basin. Allowing trades within the Potomac River basin lumps Allegany County, the County with the lowest median household income in the state, with some of the wealthiest counties in the state: Montgomery and Frederick. [1]

Nutrient trading is not an environmental policy, but rather an economic policy; a government sanctioned economic policy of this nature will have detrimental effects to the way of life in Allegany County. As a hypothetical example, a 4.2 acre lot in Frostburg near the interchange of I-68 and MD 736 is designated for commercial development in the Comprehensive Plan, Zoning Ordinance, and Water & Sewerage Plan. A developer, Mr. Frost, has secured funding after demonstrating a market need for a new restaurant and a small extended-stay hotel to support the growth at Frostburg State University and the new business park, as well as accommodate interstate travelers. Mr. Frost knows his profit margin will be small, but is local to Frostburg and wants to invest in the community. During the permit process, Mr. Frost learns he will need to take additional measures to offset the nitrogen pollutants for his project, despite implementing ESD to the MEP for stormwater management and a public sewerage

[1] SAIPE 2010, Maryland Department of Planning, http://planning.maryland.gov/msdc/hhinc_median&mean.shtml

connection to a modern ENR WWTP. The costs associated with the offsets further reduce the profit margin. Then, Mr. Frost finds out about the urban nutrient trading program – and realizes he can forest his 4.2 acres and record a protective easement for a relatively small investment and then sell nutrient credits to a central Maryland developer looking to construct a new shopping center near Rockville, and make a larger profit with less risk. Mr. Frost, known to be a prudent business man, decides to move forward with the latter option. The valuable land suited for development has been lost and the residents of Allegany County receive no benefit from the transaction.

Trading geographies must remain small, i.e. within County only, to preserve the true value of land.

- **Alternative approach – provide an exemption**

Give credit where credit is due. For static growth counties with very little opportunity for development due to other factors, provide an exemption. Do not regulate growth where growth regulation is not warranted. Allegany County is 75% forested and remaining developable land is a nominal 2.5%. Our population has declined over the last 60 years and is projected by MDP to basically remain static for the next 30. Our developers are generally small business folks trying to make a small profit while investing in their community. Allegany County risks losing what little opportunity we have to develop due to artificially inflated land values related to offset trading with wealthy developers in the central part of the state. While we are willing to be proactive partners in cleaning up the Bay, as demonstrated in our Phase II WIP, we are not willing to make the sacrifice that this policy proposes.

Maryland Offset Policy
Baltimore County Department of Environmental Protection and Sustainability (EPS) Comments
September 13, 2012

Offset Policy Synopsis:

- Require all new development to offset post-development stormwater, septic system, and increase vehicle travel loads based on nitrogen. This is based on the total site nitrogen load, minus the installation of ESD stormwater practices and any installation of denitrifying On-site Sewage Disposal Systems (OSDS).
- Redevelopment (>40% Impervious cover) is required to meet the increase in nitrogen attributable to vehicle travel loads only.
- Require offsets for sanitary sewer system loads if the development results in an increase in nitrogen above their cap.
- Use nutrient trading as the mechanism for meeting offset requirements.

Baltimore County EPS Offset Policy Guiding Principles

- Offsets options need to be expanded with urban type offsets as first choice before default to agricultural offsets or fee-in-lieu.
- Offsets need to be implemented on-site and in the same watershed to the extent possible.
- The offset policy needs to support local redevelopment/revitalization efforts.
- The offset policy should not make it more costly for local governments to meet their pollutant load reductions.

General Comments:

The policy should limit the use of offset exchanges between new development and agriculture. While the major objective of offsets is to ensure no increase in pollutant loads from new development, the policy needs to consider other State and local objectives such as Smart Growth and PlanMaryland. This can best be achieved by assuring that the offsets will be accomplished to the extent possible through the implementation of urban offset credits, both on-site and off-site as detailed below. Additionally, the permanence of exchanges between new development and agricultural uses are probably the least efficient exchange considering program costs, monitoring and enforcement.

The current draft approach does not use any incentives or disincentives to achieve the overall goal of offsetting the increase in loads from future development, with the exception of redevelopment of sites with >40% impervious cover. While this has the

advantage of simplicity, it may have the effect of discouraging development growth in areas were the local jurisdictions and state would want that growth to occur. Incentives to maintain more forest on-site or provide additional treatment by capturing off-site drainage should be included.

The policy needs to provide many more alternatives for meeting the offsets that will be required for new development. Relying solely on the nutrient trading policy now in existence is overly restrictive and could have the effect of degrading local water quality at the expense of meeting the overall intent of the offset policy to allow no increases in nutrient and sediment loads to the Bay from future development. Additional offset options need to be explored and included in the overall policy.

The calculation of the offset credits required for the stormwater portion of the nitrogen load should be based on using forest as the baseline load. Forest is the natural land cover in the Chesapeake Bay watershed; achieving forest-loading rates for nitrogen, phosphorus, and sediment should result in meeting water quality standards. The current proposed method of calculating the stormwater offset credits required would hold new development to a higher standard than is being required for other sectors.

If the pre-development land use is urban, then by addressing a 100% of the nitrogen load associated with that acreage, there is a decrease in the load calculated by the Chesapeake Bay Watershed Model. The credit should go to the local jurisdiction in which the development takes place. The location of development is in part dependent on the land use policies and zoning of the local jurisdiction. Providing credit to the local jurisdiction provides an incentive to develop land use policies that focus future development in already developed areas (redevelopment and revitalization).

While the calculation of the offset nitrogen credits needed is fairly clear-cut; there is currently no way to estimate the cost of complying with the offset policy; making it difficult for developers and their funding sources to determine whether any particular development is financially feasible. This can be rectified by establishing a floor for the minimum value of an offset credit and by establishing the fee-in-lieu value, thereby providing a range of possible costs for meeting the offset. The free market will determine the cost of the actual cost of an offset credit within the range established. The fee-in-lieu must be adequate to meet the necessary offset and not act as a disincentive to seek actual offsets. The fee-in-lieu presents a practical problem since that may be the preferred choice and actual implemented offsets will not occur. This leaves government to implement the offsets. A very limited fee-in-lieu with difficult to reach hardship criteria should be developed. The fee-in-lieu needs to include the design and construction costs for the more expensive retrofits (the less costly retrofits are needed for local jurisdictions to meet their reduction allocations), staff costs for project management, inspection, and future maintenance. It should also include land acquisition costs, as existing public land will be used by local government as restoration project sites for meeting the local government reduction allocations.

Water quality nutrient trading programs are relatively new and have a spotty track record. In addition, there is a difference of opinion on the legality of nutrient trading programs. Water quality nutrient trading programs are based on the more successful carbon trading programs for air pollution. There is a difference between the programs in that air sheds

are large and relatively well mixed, so where the carbon is reduced is less of a factor than the total amount of carbon reduced. In water quality nutrient trading the impacts associated with development, the impacts are more local in nature. In an ideal world, these impacts would be mitigated in close proximity to maintain water quality in the local stream. In structuring the offset policy these local impacts need to be considered.

Specific Comments:

The State has asked for comments on the Accounting for Growth Policy and specifically asks for input based on the categories, in bold, below.

Alternative Approaches:

Under alternative approaches we have included both alternatives for calculating the amount of offset needed and alternatives to achieving the offset.

Alternatives for calculating the amount of offset needed:

The current proposed method for determining the amount of offset needed is based on the post development load and whether the site is new development or redevelopment as defined by the 2007 Stormwater Act (ie. >40% impervious cover).

Forest Preservation Incentive: By using the full post development load, including the forest load as part of the calculation for the amount of offset needed, the draft policy provides no incentives for maintaining existing forest. In order to correct for this, the policy could be changed to allow the forest load to be subtracted from the total development load. Alternatively, by using forest as the baseline load for the project site as detailed above, any forest remaining on site will automatically require no offset in the stormwater calculations.

Community Revitalization Incentive: By treating all development that does not meet the 2007 Stormwater Act definition of redevelopment (ie. >40% impervious cover) as new development the draft offset policy provides a disincentive to developing urban sites that already have a significant amount of impervious cover, but are below the threshold for of the redevelopment definition. These sites should already be classified as urban pervious and urban impervious in the Chesapeake Bay Watershed Model because they do have a significant amount of impervious cover. The disincentive is due to the greater difficulty and cost in developing an already developed site (gray field) compared to a green field site. If the developer has two options, one green field and one gray field and they both would have the same offset amount, then the green field development could yield more profit for the developer due to the differential costs of development between the two sites.

This disincentive could be corrected by providing a scaling of the amount of offset required based on the amount of existing impervious. A cutoff of 20% impervious cover could be used where any development below that level would have to provide the full calculated offset amount, but sites above 20% impervious would be scaled to less than the full offset amount. A simple formula would be to subtract 5% from the required offset for predevelopment impervious cover over 20% for each percentage point over 20%. The calculation would be:

Percent of Offset Owed = 100% - ((Pre-development impervious percentage – 20) * 2.5)

This can be used either as a continuous formula, or the pre-development impervious percentage can be required to round down to the next whole percentage point. The adjustment to the offset owed would only apply to the stormwater portion of the calculations. Some sample results of the formula:

Predevelopment Impervious %	Calculated % Offset Owed
25%	87.5%
30%	75%
35%	62.5%
39%	47.5%

Alternatives to Achieving the Offset:

The proposed method for achieving the offsets is to use the Maryland Nutrient Trading Program. This program is designed to provide offset credits for agricultural practices that exceed the baseline reductions needed to meet the Chesapeake Bay TMDL. Currently, there are sufficient credits to accommodate 92 homes statewide based on the examples provided in the spreadsheet and the number of credits registered in the Maryland Nutrient Trading Program. This trading program is broken down into three basins (see comments below on trading geographies). There is no incentive provided for the developer to address the offsets on-site if possible or to treat off site pollutant loads, or for the development of urban credits for trading.

On-Site Offset Credits: There are a number of ways that on-site credits could be developed. If the developer afforests a portion of the site beyond the requirements of the Forest Conservation Act this should be allowed as an on-site offset credit. This is different than the preservation of existing forest discussed above. The portion the site that is to be reforested would count as pervious urban in determining the amount of offset needed, but the reforestation could be used to help meet the offset. **This should only count if it exceeds the requirements of the Forest Conservation Act or any local requirements.**

An additional on-site credit could be achieved through restoring a stream segment associated with the property if it is in need of restoration. This is a more complicated approach, because it would require expertise on the local level on stream restoration practices and how a particular site fits into the overall stream restoration approach in the local jurisdiction. If the stream and buffer system are to remain in private ownership, then this may not conflict with the local jurisdiction needs to meet load reduction requirements. **Due to cost and level of expertise needed, this may not be a viable option for many developers.**

Off-Site Offset Credits: In many cases due to the natural flow of water a development site may be able to capture offsite drainage and provide stormwater management for an untreated offsite drainage area. Many of the existing facilities capture off-site drainage. Depending on the amount of offsite runoff captured and the treatment applied, there could be a calculation of the pounds of nitrogen removed.

Additional Offset Credits: Since the current Nutrient Trading Program will probably not provide sufficient credits to offset development, particularly if the program attempts

to keep the credits within the same jurisdiction (see trading geographies below) additional credit programs should be explored. These could include:

Redevelopment Offset Credits: In order to encourage redevelopment to provide more water quality treatment than the minimum required, redevelopment offset credits could be calculated and used to offset development elsewhere. If a redevelopment project provides additional treatment for on-site or off-site stormwater management, the additional nitrogen reductions could be calculated and entered into either the existing nutrient trading program or a registry could be established. By establishing this credit, redevelopment may become more financially feasible and thereby result in an increase in redevelopment and further water quality improvements.

Septic Upgrade Credits: A registry could be established where private residential property owners could make their On-site Sewage Disposal Systems available for upgrade. A developer could then meet his obligation by upgrading OSDS on private property. This would have to be coordinated with the local governments that have nitrogen reduction allocations associated with OSDS, to assure that they will be able to achieve their reductions.

Sanitary Sewer Connection Credits: If in the process of extending sewer to the development it is possible to connect existing OSDS to the sanitary sewer system, a credit system could be established. The credit would be based on the developer paying the cost of the connection of the existing OSDS and the differential between the nitrogen loading from the OSDS versus the nitrogen loading from the WWTP.

Modifications to the Nutrient Trading Program (Establish a Minimum Amount per Credit): Urban offset credits should be used prior to using agricultural offset credits or defaulting to fee-in-lieu. The current draft policy proposes using the agriculture trading mechanism as the sole source of credits. There are currently insufficient credits in the nutrient trading system to supply the credits that would be needed. There are only sufficient credits to provide an offset for approximately 92 homes statewide. In order to address the current uncertainty in the cost of offsets that affects both the farmer willing to post his credits and the developer trying to determine the financial feasibility of a development, a cost floor should be established on the cost of a credit. This will allow the farmer to determine the minimum amount that he will receive for his credits and allow the developer to frame his cost analysis based on this floor and the ultimate fee-in-lieu that he could default to if there are insufficient credits to offset his development. The fee-in-lieu should be set at a rate that covers the more costly stormwater retrofits, along with an additional amount to cover the staffing for project oversight, inspection, and maintenance; and land acquisition costs. The local jurisdictions will need all of the lower cost retrofits to meet local stormwater pollutant reduction allocations. On-site credits and urban offsite credits should be required and only if loads are not adequately reduced should off-site agricultural credit offsets be allowed with a floor.

Roles for: Local Governments, Aggregators, Brokers:

The local government will likely play a crucial role in the implementation of the offset policy. Since the offset will be tied to the local development process, the state would either have to coordinate with each local jurisdiction on timing and approval of offsets and the timing and approval of issuing permits. This could result in delays for developers

that are costly, or could result in projects going forward that do not have adequate offsets approved. By delegating authority for implementing the offset policy to the local jurisdictions, the process can more easily be crafted to fit with the local development process. This becomes critical if on-site offset credits are included in the policy. This could result in changes in the development plan that would need local review and approval. For that portion of the offset policy that would deal in nutrient trading, aggregators to represent the farmers and brokers to represent the development interest would help smooth the process and avoid one-on-one dealing of developers with individual farmers. Since these aggregators and brokers would be doing this for a living, then the process, including preparation of legal documents, and development of long-term easements for recordation in the land records to ensure permanent protection of offsets would be addressed more efficiently.

Aggregators and brokers should be licensed and subject to periodic audits by the state. They potentially should be considered as the responsible parties to ensure offsets over the long term.

Using Nitrogen and Not Phosphorus or Sediment:

While nitrogen can serve as the primary credit for calculating offset transactions, there needs to be a separate calculation for phosphorus and sediment for those local watersheds that have either phosphorus or sediment or both TMDLs. Nitrogen will work well enough for meeting the Bay TMDL where it has been shown that meeting the nitrogen reductions will exceed the phosphorus and sediment reduction allocations, but local TMDLs may have higher phosphorus and/or sediment reductions compared to the those for the Bay. In that case, phosphorus and sediment credits should also be calculated and if they exceed the requirement for nitrogen, then those credits should be substituted for the nitrogen credit. In order to keep the accounting system simple, a back calculation of a nitrogen credit could be done.

Effective Date:

January 1, 2014

However, a grandfathering timeframe needs to be developed, as has been done for other environmental regulations.

Calculating the stormwater load, including circumstances where the development treats a quantity of stormwater different from that required by the stormwater regulations:

See above on alternative approaches. For those development projects that do not provide full compliance with the stormwater regulations, then the additional nitrogen load offset needs should be calculated. Since review of stormwater associated with development is under the review of the local government, this provides another argument for delegating the offset policy to local governments.

Trading Geographies:

Location of Offset in Relation to Impact: The trading geographies need to be refined. The current geography only has three basins in the entire state. Before going to trading,

an attempt needs to be made to meet the offset reductions on-site, either by additional on-site practices or capturing off-site drainage and treating it on-site as detailed above. Within the geographies below, urban credits that are available should be utilized prior to going to the agricultural credits. The following order of geographies should be followed:

- On-site offset credits
- Within the same 12 digit watershed in the same county
- Within the same 12 digit watershed in an adjacent county.
- Within the same 8-digit watershed in the same county.
- Within the same 8-digit watershed in an adjacent county.
- Within the same 6-digit basin the same county
- Within the same 6-digit basin in an adjacent count.
- Within the same basin as the development activity based on the current 3 basin trading system.
- Within any of the basins in the state.
- If no credits are available through any of the above, then the project can default to a fee-in-lieu. There are two options for the fee-in-lieu; local stormwater projects or use the money generated for enhanced dredging behind the Conowingo dam. Refer to discussion below under uses of fees-in-lieu.

This sequence of trading geographies will, to the extent feasible, keep the offsets as close to the impacts as possible.

Delivery Ratios: Trading geographies also has implications for meeting the Bay TMDL given the different delivery ratios of nutrients and sediments to the Bay. The offset requirements are calculated using Edge-of-Stream nitrogen loads. Depending on the location of the development, there will be a differential delivery of nitrogen to the Bay. Delivery is affected by both distance from the Bay and the presence of Reservoirs that provide water quality treatment and reduced volumes of water delivered downstream. If the development is in a watershed that borders the Bay, there will be 100% delivery and there is no difference between the EOS load and the delivery load. In an extreme case, such as, the Liberty Reservoir watershed, there is no delivery to the Bay. Each Chesapeake Bay Watershed Model land/river segment has its own unique delivery ratio to the bay. If the credits are within the same land/river segment, then a 1:1 purchase of the credits will result in the no increase of nitrogen loads to the Bay. If the development is in a watershed with a 100% delivery to the Bay and the credits are purchased in a location that has a reduced delivery to the Bay or vice versa, then the credits should be scaled to result in no increase in the Bay.

Verification and Recording of Offsets and Trades:

Verification of offsets under the draft policy would fall to the Maryland Department of Agriculture to verify that the individual farms meet the baseline criteria and the additional agricultural practices are in place and the amount of credit available. Similarly the trades would need to be verified by the State through the existing Nutrient Trading

Program through a mechanism that would require the submittal of the necessary legal documentation.

If additional offset credit mechanisms are developed, such as, for redevelopment stormwater treatment in excess of the requirements or septic system upgrades, these should be included in the Nutrient Trading Program. This will provide transparency. The local jurisdiction that reviews the stormwater plans for development or oversees the installation of enhanced OSDS should provide the verification of the credits, but the mechanism for submitting the necessary legal documentation should remain the same.

If offset credits are being provided on-site through any of the mechanisms detailed above, the verification should rest with the local government with periodic audits by the State. Perhaps a private inspector could verify compliance. These inspectors would be certified by the local government and would inspect and verify based on a schedule (every three years).

Ensuring Offsets are Permanent:

Offsets should be recorded in the land records for the property that is providing the offset, although the cost for recordation should fall to the developer. This will assure that the location of the offset is permanent. However, depending on the type of BMP providing the offset, the offset may not be permanent. For example, and agricultural riparian buffer providing an offset may be subject to stream erosion from a major storm anytime after it is installed and credits are given. The land may at that time be under different ownership. It needs to be determined who will be responsible for maintaining the long-term functioning of the offset credit. In the case presented, the original owner of the farm received the payment for the offset credit; the developer has turned over the rights of the subdivision (open space, etc.) to a homeowners association and is long gone. Who would be responsible for replacing the offset, the current owner of the land, the homeowners association, aggregator, the broker? Would this be detailed in the legal agreements and placed in the land records? Since the offset has to be in place prior to the development taking place the legal documents will be between the developer and who? The broker, the aggregator? This part of the policy needs to be carefully considered to make the policy workable in the future. Private inspection with government oversight as described above

Perhaps the aggregators and brokers should be bonded and held ultimately responsible for ensuring the offsets.

Land Preservation: Preference should be given to lands that are under a preservation easement. This will ensure that not only will the offset area be protected, but the surrounding agricultural operations and/or forest cover will be preserved as well. These preservation easements are subject to inspection already.

Uses of fees-in-lieu:

Fees-in-lieu should be established for the more costly retrofits and cover the cost of design and installation, staff time for project management, and initial operation and maintenance for a 30-year lifespan of the project.

The fees-in-lieu could alternately be used to cover some of the cost of dredging behind the Conowingo Dam. The maintenance dredging to maintain the existing capture volume

is estimated to be $58 million annually. If not addressed the increased nutrient and sediment pollution coming over the dam will increase in future years and set the Bay restoration back. The fees-in-lieu could be used for additional capacity development for dredging beyond the maintenance dredging. In other words, the maintenance dredging needs to come from another source, but the fee-in-lieu funds could provide the additional capacity that is needed to accommodate additional loads from larger storms.

Fees-in-lieu should be discouraged as a last resort when on-site, off-site offsets do not work. This should not be the easy way out. Setting fees high enough would discourage this as the offset of choice.

Maryland Offset Regulations
Baltimore County Department of Environmental Protection and Sustainability (EPS) Comments
September 21, 2012

General Comments:

- See Baltimore County EPS comments on the Offset Policy document.
- The issue of location of the offsets does not appear in these regulations. It is important that the offsets be in close proximity to where the impact is occurring (see Offset Policy Comments – Offset Geographies).
- There are no requirements that offsets be tied to local TMDLs that may be based on phosphorus or sediment.
- While fee-in-lieu should be a last highly constrained option, they should be in the regulations.
- There is neither an effective date nor grandfathering provisions in the regulation. Both of these should be provided.
- These regulations do not encourage community revitalization. Provisions should be made to reduce the offset requirements for development sites that have impervious cover in the 20% to 40% range.

Specific Comments:

- .02 Scope: A. It would appear by this definition that the offset regulations only apply if there is a change in land use. This could be argued that if the site is already developed and is in urban land use, then the regulations do not apply. Under Definitions, "Change in land use" cites three characteristics; it is possible for a development to occur that does not meet the three characteristics and is therefore exempt from the offset regulations. The wording needs to be changed to reflect the intent of the offset regulations. Perhaps the wording below could serve.

    A. Any urban development project and

- .04: The first sentence has the same problem as indicated above. This needs to be clarified.
- .05 A. (3): There are no provisions for having forest serve as a baseline for a predevelopment load. The Chesapeake Bay TMDL does not have an allocation for reduction of nitrogen and phosphorus from forest lands (except for forest harvesting operations). Development should not be held to a higher standard than other sectors when it comes to meeting the Chesapeake Bay water quality standards.
- .05 E.: Placing the burden of for meeting the Chesapeake Bay TMDL on the development community after 2025 by increasing the offset requirements by four times

is unfair. If the other sectors (Point Sources, Urban Stormwater, Septic Systems, and Agriculture) have been remiss in meeting their obligations, it is unfair to place their burden on the development community. The development community should be held to the same standards of the other sectors.

- .06 Obtaining offsets A.: Does this provision apply only to structures and facilities, some of the offset options such as riparian forest buffers are neither a structure or a facility. How does this work with the nutrient trading program in D. and E.? How is a developer able to ensure that an offset obtained through the nutrient trading program will remain in perpetuity when they have no control over the farmers actions.
- .06 Obtaining offsets B. and C.: The wording in B. would seem to leave open the ability to identify other offset options, as these are examples. While C. would place the requirement to maintain the offset in perpetuity on the local government. Does the state anticipate providing for local delegation of implementation of the offset regulations; and if so, will the local jurisdiction be able to identify other offset options. Regardless of the offset type, standards need to be developed for each offset. For example, forested riparian buffers should have standards for minimum width, forest health, etc.
- .06 Obtaining offsets D. and E.: The regulations are unclear who is responsible for maintaining the offsets that are purchased through the Maryland Nutrient Trading Program.
- .07 Proof of Nutrient Credits A. (2): Point source is not defined in the definition sections of the regulations. Does this include septic system upgrades, stormwater facilities, WWTP? What about afforestation? Is the Maryland Nutrient Trading Program open only to the agricultural sector or can anyone register credits with the program, say a private landowner that reforests his land? Would MDA be responsible for certifying non-agricultural credits? This provision needs to be clarified. It would seem to prohibit development of other offset options, such as, redevelopment providing more stormwater treatment than required by law.
- .07 C. and D.: It is not defined at what point in the development process the certification and the information required are to be submitted to MDE. Given that the development process varies by locality how will this be achieved? Is there any intent to provide for delegation of the enforcement of the offset regulation to local jurisdictions? There are no timeframes for MDE to review the materials submitted and provide of deny certification of offset credits. This could seriously interfere with the local development process.

COUNTY COMMISSIONERS *of* CAROLINE COUNTY, MARYLAND

LARRY C. PORTER
PRESIDENT

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MEMBER

WILBUR LEVENGOOD JR.
VICE PRESIDENT

SARA B. VISINTAINER
CHIEF OF STAFF

KEN DECKER
COUNTY ADMINISTRATOR

ERNEST A. CROFOOT
COUNTY ATTORNEY

October 1, 2012

Mr. Paul Emmart
Maryland Department of Environment
1800 Washington Boulevard
Baltimore, Maryland 21230-1718

Re: Accounting for Growth

Dear Mr. Emmart:

Through our ongoing dialogue with the other rural counties in Maryland, we have received the September 27 letter sent by Mr. Phil Hager, Director of Carroll County's Department of Land Use, Planning, and Development commenting on MDE's "growth offset policy" and the draft regulations. We are writing to support his letter and its overall message.

Even in the best of times, additional layers of land use regulations present a tremendous challenge. Unfortunately, we not only are mired in a terrible economy but are also struggling with deep cuts in funding (highway user revenues) and new unfunded mandates (teacher pensions). While the State of Maryland's budget has increased every year, our local budget has been cut around 15 percent.

One of our primary sources of revenues is local property taxes. Because of the collapse of the real estate market, we have no way of understanding the cumulative impact of the unprecedented wave of these new regulations.

To better explain our concern, we offer two recent examples: the laws requiring sprinkler systems in all new homes and installation BAT septic systems. These two changes by the Legislature will increase the cost of a rural house in Caroline County by $15,000 to $25,000. For some perspective, the median sales price for homes here recently fell below $120,000.

While MDE has not prohibited building new homes on private wells and septic systems, the new regulations make such construction cost prohibitive, particularly in areas like ours where the increase represents a dramatic percentage increase.

We understand that MDE believes that public utilities are the answer. Unlike the metro/suburban region, Caroline County has only a handful of municipal water and sewer systems. On the vast majority of our 326 square miles of land, property owners must build new homes on wells and septic systems, or not at all.

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Intentional or not, we believe the current situation is a direct consequence of the State's "one-size-fits-all" approach to land use and environmental regulation. With regard to the Watershed Implementation Plans (WIPs), our appeals to have the State consider regional differences in geology, topography, and soils have gone unheeded. We were forced to fight prior iterations of septic legislation—in part because MDE and MDP had trouble understanding that our transfer-of-development rights (TDR) receiving area does not have public water or sewer available. The very first point Mr. Hager makes in his letter is that MDE has failed to allocate any growth in areas not served by public sewer. The inescapable conclusion for those of us living in rural Maryland is that MDE simply does not want another house built on private wells and septic.

We have been told these regulations are necessary to improve water quality in the Chesapeake Bay. In Caroline County, we know a bit about environmental stewardship. We have strong history of agriculture preservation. MDE has used our WIP as a model for other local governments. It is precisely because we care about the Bay and the natural environment that we find the regulations troubling.

It seems the growth offset policies reflect a consensus more of political "anti-growth" ideology than of science. As evidenced by the brief analysis provided by Mr. Martin Covington, even *average* leakage of wastewater treatment mains and pipes dramatically changes the calculus of septic versus sewer. To quote from the analysis:

> *"At 5% leakage, houses on 2-acre lots with wells and conventional septics result in less nitrogen load (16.3 lbs/acre) to receiving waters than the same houses on ¼-acre lots served by a public ENR WWTP and with environmental site design (ESD) incorporated to the maximum extent practical (MEP) (22.9 lbs/acre)."*

As we read Mr. Covington's analysis, the large-lot, rural subdivision loathed as "sprawl" might actually be better for the environment than the smaller-lot, urban subdivisions enthusiastically promoted as "Smart Growth." We understand that the Carroll County analysis is cursory, however, isn't the Chesapeake Bay worth taking the time to get this right?

Instead of continuing the frenetic rush of new regulations, we urge MDE to slow down. Provide all interested parties with the foundational data and analysis. Answer the scientific questions raised by Carroll County with transparency, openness, and a spirit of collaboration.

Sincerely,

COUNTY COMMISSIONERS OF
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Larry C. Porter, President

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Department of
Land Use, Planning & Development
Carroll County Government
225 North Center Street
Westminster, Maryland 21157

September 27, 2012

Paul Emmart
Maryland Department of Environment
1800 Washington Boulevard
Baltimore, Maryland 21230-1718

Re: Accounting for Growth:
1. *Offsets Discussion Draft (dated July 12, 2012)*
2. *Draft Regulation for Discussion (dated August 27, 2012): Title 26, Subtitle 08, Chapter 11*

Dear Mr. Emmart:

We appreciate the opportunity to continue to participate in the process to review the discussion drafts for both the growth offsets policy and the draft regulation related to growth offsets and provide input on issues that still need to be addressed. Again, input from local jurisdictions and other stakeholders is critical to developing a program that is realistic, reasonable, and implementable.

We understand that the anticipated regulation will be an implementation of Maryland's Phase II Watershed Implementation Plan (WIP). We also understand why the State is evaluating strategies to allow new growth to proceed as we try to reduce existing loads to meet the Bay TMDL. Our preference is to delay implementation of this regulation until the effectiveness of other measures already in place or in motion can be evaluated, and until the economy in Maryland improves considerably. Overall, we believe this regulation will have significant impacts on the ability for property owners to develop their property as otherwise allowed under local zoning regulations, due in part to the availability of offsets and in part to the cost of providing offsets and the related cost of development. In many cases, the cost to offset will be prohibitive. The result is likely to be properties that are not able to exercise their development rights, or significantly fewer,

and therefore, reduced revenues for local jurisdictions, on which they rely to provide local citizens with services and to comply with State and federal mandates.

In addition, with the regulations being based on the draft growth offsets policy, we would question the draft regulation and its validity, as our comments on the policy discussion draft identify numerous technical difficulties. A delay in implementation of this policy and resulting regulation will allow for a thorough review and modification of the numerous technical issues outlined in the following comments on both.

Ultimately, the adopted regulation should be easy to understand and based on accurate science and logic that support the mechanics and procedures associated with it. It is our hope that, as a result of the public vetting process, an improved, technically sound decision related to the offset policy and regulations will emerge.

The following comments address the growth offsets policy discussion draft (dated July 12, 2012) as well as the growth offsets regulation discussion draft (dated August 27, 2012). The comments for each are presented individually, as the provisions of each vary in several areas. However, the comments should be considered in concert, as the implications of changes would impact both.

1. Accounting for Growth: Offsets Discussion Draft (dated July 12, 2012)

General

1. ***Need allocation for growth outside areas served by public sewer***: In accounting for growth, loads were allocated for growth that is served by a public sewer system. However, no allocation for growth was made in the remaining regions in Maryland. Therefore, the WIP and its implementation via the requirement for this policy create an unfair regulatory and financial burden on areas not to be served by public sewer service, thus ignoring the equitable allocation methodology claimed. This issue is compounded by the recently proposed regulations requiring best available technology (BAT) for new development served by private wastewater systems and the limitations placed on rural areas as a result of the requirements associated with Senate Bill 236 (Sustainable Growth and Agriculture Preservation Act of 2012). The accounting for growth strategy on Page 2, which states that the "strategy will encourage counties and municipalities to manage their growth and help make offsets available for the growth and development they want," is true only for those jurisdictions which are flush with Targeted Growth and Revitalization Areas. Ironically, these areas also contribute the heaviest of the existing stormwater loads, which will be exempt by this proposed policy.
2. ***Show supporting technical data and maintain transparency***: All of the technical data used to support and develop the offsets policy and implementation should be included either in the text or as an appendix. Maintaining transparency provides

local jurisdictions and other stakeholders with a better understanding of how the program works, why it should be implemented in a certain way, and how we will achieve the desired end result.

3. ***Support addressing nitrogen only***: We support the inclusion of nitrogen only at this time. If phosphorus is to be considered as an addition to the program, it should be after 2017 and after adequate time has passed to assess the impacts and effectiveness of the nitrogen offsets program.

<u>Loads and Ratios</u>

4. ***Use edge-of-stream (EOS) load to determine offsets***: The text should clearly indicate whether the load to be offset is the delivered load, the edge-of-stream (EOS) load, or edge-of-field load. EOS loads should be the basis for the offsets and should be used consistently throughout. Using the EOS load would make it easier for local jurisdictions or individual property owners to determine, and understand, what the load actually is. In addition, it would do more to address local water quality, and delivery factors would not have to be part of the equation, which would simplify the process. In Carroll County, areas within reservoir watersheds should have no stormwater load to offset. If delivered loads are used, additional detail should be provided to make the delivery factors very transparent and to ensure that local jurisdictions understand exactly how the loads are determined for each watershed.
5. ***Describe loading rates and use local TMDL-scale watersheds***: Loading rates should be described in more detail as well. Loading rates by the smallest-scale watershed possible should be available to local jurisdictions.
6. ***Simple to understand and transparent***: The entire offset program needs to be simple to understand and transparent. Local jurisdictions and developers need to be able to easily understand what the offsets are based on, how to determine the offsets needed for a given project, and how they are tracked and credited. The process should not cause significant delays in the development process, particularly for those that have a positive economic development impact.
7. ***Exclude forested areas***: If forested areas are considered the natural state, the load calculator should exclude forested areas from the calculations. These loads should not have to be offset.
8. ***Do not include mobile emissions***: Mobile emissions, and the use of Vehicle Miles Traveled (VMTs) as its measurement, should not be included in the offsets program and calculations. The direct correlation with VMTs is not an accurate enough indicator, and no rational nexus has been provided for their use. Mobile emissions should be addressed more directly through other measures or initiatives.

<u>Costs</u>

9. ***State should monitor and enforce***: The administrative burden for monitoring and enforcement should not be pushed to local jurisdictions. In addition to the potential

problems with inconsistency, local jurisdictions do not have the staff and financial resources to take on this additional workload.

10. ***Provide economic analysis of costs and impacts prior to implementing***: An analysis to identify anticipated costs to purchase or install offsets and to administer each component of the program should be completed prior to finalizing any policy or regulation. The analysis should include an estimate of Maryland's capacity to generate offsets and the anticipated supply and demand, as well as the rate and location of those offsets. The implications for each jurisdiction and the state as a whole should be evaluated and considered prior to making any decisions. Avoiding unintended consequences, costs, and unrealistic expectations and requirements should be a goal prior to establishing an offsets program. This information is important to making well-informed, realistic, and reasonable decisions. Currently, only an extremely limited number of registered nitrogen credits appear to be available for use in the Potomac Basin.

<u>Septic Loads</u>

11. ***Figures and equations used do not reflect true loads from development***: The figures and equations that support the concepts and calculations for identifying loads to be offset do not reflect the true loads that result from development. Requiring loads to be offset in conjunction with development significantly impacts the development process and cost. Therefore, the data and calculations should accurately reflect the actual influence of various factors on loads generated and loading rates. For example, the calculations do not incorporate the untreated load to receiving waters that results from leakages in the sewer systems. (see attached "Carroll County Analysis: Septic Systems versus Wastewater Treatment Plants (WWTPs)") The calculations also do not reflect the fact that a conversion from row crop agriculture to a residential, commercial, or industrial use actually results in a reduction of nitrogen loading. While the purpose of the figures used in the post-development load and offset requirement calculation may support the state's "Smart Growth" goals, the figures do not accurately reflect actual water quality results.
12. ***Remove references to per capita loading rates***: The draft references the use of per capita loading rates as part of the analysis supporting the policy. Per capita loading rates are essentially a proxy for loading rates by household. However, the Bay Model uses per acre loading rates. Therefore, not only is the use of per capita loading rates inconsistent with the Bay Model, it also presents a misleading picture of the actual loads that result from various densities of residential development. (see attached "Carroll County Analysis: Septic Systems versus Wastewater Treatment Plants (WWTPs)") In addition, the Pounds N per Job/Resident indicated in the table appear to be incorrect for Large Lots no Sewer; the number is too high.
13. ***Break septic loads out separately***: Since the septic, wastewater, and stormwater sectors are addressed separately in the Watershed Implementation Plans (WIPs), for

consistency the septic loads should be broken out as a separate component from stormwater for the purposes of the offset calculations as well.

Wastewater Loads

14. ***Allow WWTP capacity under nitrogen cap to be traded***: Some municipal wastewater treatment plants may have additional design capacity under their nitrogen cap that is more than they anticipate needing to accommodate planned growth. Although this would cap their growth as well, other jurisdictions may be interested in purchasing/trading the credits generated by this excess capacity.

Offset Practices

15. ***Establish broad range of acceptable offset practices***: To maintain flexibility, a broad range of acceptable offset practices must be established and available prior to implementing the program. Without flexibility, the availability of offsets (supply) may not be great enough for the program to function, thereby bringing development to a halt.

Fee-In-Lieu

16. ***Use fees-in-lieu within watershed where generated***: If a fee-in-lieu option is considered, the fees should be used for projects to achieve local TMDL compliance within the same jurisdiction from which they were collected. If offsets are not generated within the same watershed they are used, that watershed will not be able to achieve TMDL compliance.

Post-Development Load/Land Use Change

17. ***Recognize and give credit for load reduction from change in land use***: The policy as drafted prohibits the purchase of credits sought as a result of a change in land use. *If a development project is going to be required to offset the entire post-development load, it should be allowed to get credit for the load reduction achieved through that change*. (see attached "Carroll County Analysis: Change in Loads Due to Land Use Changes") The reduction in nitrogen achieved by converting an agricultural use to a residential use is significant. While we may want to provide incentives to focus growth and development in designated growth areas, the offset ratios should be based on demonstrated water quality impacts, rather than the desire to influence development patterns.

Redevelopment

18. ***Do not exempt redevelopment from offset requirement***: Redevelopment should not be given a blanket exemption from meeting the offset requirements. Redevelopment of a property could result in a significantly higher load than the existing load, and its impacts should not be ignored for the sake of encouraging redevelopment. (see attached "Carroll County Analysis: Redevelopment") In addition, larger projects

proportionally gain greater relief from mitigation requirements than smaller projects, yet larger projects contribute more significant actual loads. Exempting redevelopment will result in missing a very significant opportunity to reduce loads in areas that are major sources of nitrogen loads.

Trading

19. *Explain baseline pollution control*: Page 5 of the discussion draft references the baseline pollution control and reduction requirements. What is this baseline? How is it determined? Will it change in 2017?
20. *Explain nutrient trading policy in more detail*: While the offsets policy/regulation will go hand-in-hand with the nutrient trading policy, the policy should provide additional information on some of the process and mechanics from the trading policy here so it is clear for those who intend to provide offsets without trading. For example, for the agriculture sector, the baseline load refers to an individual farm/property. However, for other uses and sectors, indicate the geographic area for which the baseline load needs to be met if it will not be at the individual property level. Trading geographies should reflect the watersheds at the scale of local TMDLs.
21. *Limit trading to 8-digit watersheds where credits are generated*: Trading should be limited to areas within the 8-digit watershed and/or the county in which the credits are generated, even if they are located within a Targeted Growth and Revitalization Area. Allowing trading outside of the watershed negatively impacts a jurisdiction's ability to meet its local TMDLs. If EOS is not used, compliance with local TMDLs will be difficult to determine. Trading within counties and 8-digit watersheds preserves a county's ability to prevent other counties from consuming local offset potential. Additionally, if trading is permitted between watersheds, it will be very difficult to reconcile the differences between EOS and delivered loads.
22. *Do not limit offset generation to agricultural properties*: The ability to generate offsets for trading should not be limited to agricultural properties. Any property owner should be able to implement activities that reduce nitrogen loads and potentially go beyond the baseline to generate credits.

Effective Date

23. *Use an effective date of 2017 or later*: December 31, 2014, is the effective date discussed in the policy draft. An effective date of October 1, 2016, would be consistent with SB 236 and would allow plans in the pipeline to be minimally impacted by the change. As an alternative, a date in 2017 also might make sense, as this is when the model will be rerun, and we will have an idea what kind of progress we are making without offsets.

Verification, Enforcement, and Administration

24. *Do not push verification and enforcement down to local governments*: The document does not specify who will verify the offsets, how they will be documented, and how

they will be enforced. If they are documented in a State permit, presumably the State would then enforce the offset requirements as well. We would not recommend verification and enforcement responsibilities be delegated to the local jurisdictions. Local government staffs are already stretched to maximum capacity and cannot take on this additional responsibility. How credits will be certified, verified, and tracked should be clearly described.

25. ***Make process simple and transparent***: The process to purchase and verify credits should be as simple and transparent as possible.
26. ***Include grandfathering provisions***: The policy should include any anticipated grandfathering provisions and clearly describe them.
27. ***Permanent offsets are unrealistic***: Mandating that offsets be permanent is unrealistic and could present a logistical nightmare.

<u>Miscellaneous</u>

28. ***Specify "Bay" TMDL when referencing TMDL watersheds***: At the bottom of Page 4, the text should specify that the TMDL watershed refers to the Bay TMDL, as opposed to local TMDLs.
29. ***Define forest***: To be sure everyone is on the same page, it would be helpful to indicate which definition of "forest" will be used for the purpose of this regulation.
30. ***Remove reference to jobs/resident ratios***: The purpose and need for the discussion and inclusion of the jobs/resident ratios and information is not apparent. It is not pertinent to growth offsets and nutrient reduction. The specific rationale for including it should be explained more thoroughly, or the reference to and discussion of jobs/resident ratios should be removed.

2. Accounting for Growth Draft Regulation for Discussion (dated August 27, 2012): Title 26, Subtitle 08, Chapter 11

<u>General</u>

31. ***Make all technical data available on webpage and create guidance document concurrent with regulation***: All of the technical data used to support and develop the offsets policy, regulation, and implementation should be available on the Accounting for Growth webpage for anyone to access and understand. Maintaining transparency provides local jurisdictions and other stakeholders with a better understanding of how the program works, why it should be implemented in a certain way, and how we will achieve the desired end result. A guidance document to accompany the regulation, posted on the website, should include all of the methodology, data to support it, examples, acceptable offset practices, etc. A draft of this document should be available prior to the release of an official draft of the regulation, and a final version should be available concurrent to the adoption of the regulation.

32. ***Make program simple and transparent***: The entire offset program needs to be simple to understand and transparent. Local jurisdictions and developers need to be able to easily understand what the offsets are based on, how to determine the offsets needed for a given project, and how they are tracked and credited. The process should not cause significant delays in the development process, particularly for those that have a positive economic development impact.
33. ***Provide economic analysis of costs and impacts prior to implementing***: An analysis to identify anticipated costs to purchase or install offsets and to administer each component of the program should be completed prior to finalizing the regulation. The analysis should include an estimate of Maryland's capacity to generate offsets and the anticipated supply and demand, as well as the rate and location of those offsets. The implications for each jurisdiction and the state as a whole should be evaluated and considered prior to making any decisions. Avoiding unintended consequences, costs, and unrealistic expectations and requirements should be a goal prior to establishing an offsets program. This information is important to making well-informed, realistic, and reasonable decisions.

<u>Definitions</u>

34. ***Support addressing only nitrogen load***: We support the inclusion of nitrogen only at this time. If phosphorus is to be considered as an addition to the program, it should be after 2017 and after adequate time has passed to assess the impacts and effectiveness of the nitrogen offsets program.
35. ***Clearly define change in runoff characteristics***: "Change in land use" includes a change in the runoff characteristics. The type of change in these characteristics needs to be clearly defined, along with the way in which that change would be measured.
36. ***Use consistent ENR treatment levels***: "Enhanced Nutrient Removal" – The Bay Model uses 3 mg/liter at the treatment level for WWTPs using ENR. However, the draft regulation uses 4 mg/liter. Why was this change made? If this regulation is to implement the WIP, the numbers should be consistent with the Bay Model figures.
37. ***Allow locals to set gallons per day for EDUs based on actual system records***: "Equivalent dwelling unit (EDU)" – Local governments are to use 250 gallons per day (gpd) as one EDU. However, if records indicate that the average flows are consistently lower than 250 gpd over a given time period, the option should be available to use a number lower than 250 gpd as one EDU.
38. ***Use redevelopment definition consistent with Stormwater Management Act of 2007***: "Redevelopment" – The definition of redevelopment indicates that the impervious area of the *existing project site* must exceed 40 percent to be considered redevelopment. Section .05 D of the draft states that no offsets are required if the redevelopment complies with the Stormwater Management Act of 2007. However, the definition of redevelopment is different than the definition in the Stormwater Management Act. The Stormwater Management Act requires the 40 percent

impervious area to be calculated on the entire property, not just the project site. This definition should be consistent with the definition in the Stormwater Management Act.

<u>Calculation of post-development load and offset amount</u>

39. ***Explain basis for figures used for percentage of nitrogen removed with conventional septics***: In Section .05 A (1) (b), using a load of 9.86 lbs to be offset for new conventional septic systems assumes that 60 percent of the nitrogen load is removed in the soil between the edge of the drain field and the EOS. Previously, this number assumed a 50 percent reduction, which was half of the total wastewater load coming from a household. Why did this change?
40. ***Indicate load to be offset is zero not that actual load is zero***: While the zero lbs of total nitrogen per year referenced in Section .05 (2) (a) is meant to be the amount that should be added to the calculation for post-development load, it is confusing because the actual load is not zero. The text should be reworded accordingly to clarify that the actual load is not zero but no load will be added into the calculation for this discharge.
41. ***Use consistent treatment levels and associated concentrations***: Section .05 A (2) (b) (ii) of the draft shows the loads to be offset for WWTPs using ENR as 3.1, for WWTPs using Biological Nutrient Removal (BNR) as 6.1, and for WWTPs using secondary treatment as 13.7. If the associated treatment levels and resulting concentrations are 4 mg/l, 8 mg/l, and 18 mg/l, respectively, the loads to offset should be 3.1, 6.2, and 14, respectively, for consistency.
42. ***Correct equation used for post-development stormwater load***: The equation shown in Section .05 does not accurately reflect the treatment level that occurs for impervious and pervious areas or the inclusion and treatment of atmospheric nitrogen.
    a. Section .05 A (3) reduces the nitrogen load for *both* impervious and pervious by 50 percent if using ESD. This assumes that 100 percent of the runoff from both the impervious areas *and* the turf areas is treated when using ESD practices. In reality, the turf areas are used *as* the ESD practices for the impervious in many developments and do not receive any treatment.
    b. Since the loading rate for nitrogen for both impervious and pervious areas already includes atmospheric deposition, treatment of runoff from impervious and pervious areas provides treatment of a portion of the atmospheric nitrogen as well. Adding nitrogen from mobile sources separately does not account for the actual treatment of atmospheric deposition provided by ESD practices. To be more accurate, the addition of mobile sources in subsection (5) should be eliminated and replaced by percentage increases in the loads applied to the impervious and pervious areas.
43. ***Use EOS loads to determine offset requirements***: The policy discussion draft used EOS loads as the load to be offset. The draft regulation, however, revised this to use delivered loads (EOS converted to delivered) as the loads to be offset. However, EOS loads should be the basis for the offsets. Using the EOS load would make it

easier for local jurisdictions or individual property owners to determine, and understand, what the load actually is. In addition, it would do more to address local water quality, and delivery factors would not have to be part of the equation, which would simplify the process. Nevertheless, the offset policy is meant to address the Bay TMDL. Therefore, using the delivered loads would be more accurate to indicating what a development project actually needs to offset for the Bay. Consequently, in Carroll County, areas within reservoir watersheds should have no load to offset.

44. *Provide delivery factors by local-scale watersheds and be transparent*: If delivered loads are used, additional detail should be provided to make the delivery factors very transparent and to ensure that local jurisdictions understand exactly how the loads are determined for each watershed. Specific delivery factors should be provided for each watershed, possibly at the same scale that Use Classifications are provided for other purposes. In addition, when referencing loads, the text should clearly indicate throughout whether the load being referenced is the delivered load, the EOS load, or edge-of-field load.
45. *Do not require offsets for forested areas*: If forested areas are considered the natural state, offsets should not be required for the portions of properties and sites that are forested.
46. *Let individual developments calculate actual loads*: If the method can be documented and is acceptable, individual development projects should be able to calculate the actual load specific to their property/project rather than using standard rates or factors that are applied statewide.
47. *Break septic loads out separately*: Since the septic, wastewater, and stormwater sectors are addressed separately in the Watershed Implementation Plans (WIPs), for consistency the septic loads should be broken out as a separate component from stormwater for the purposes of the offsets calculations as well.
48. *Recognize and give credit for load reduction from change in land use*: The reduction in nitrogen that occurs as a result of change of land use is not included in the calculation for post-development load and accounted for in the resulting amount to be offset. *If a development project is going to be required to offset the entire post-development load, it should be allowed to get credit for the load reduction achieved through that change*. This reduction is real (see attached "Carroll County Analysis: Change in Loads Due to Land Use Changes"). The reduction in nitrogen achieved by converting an agricultural use to a residential use is significant. While we may want to provide incentives to focus growth and development in designated growth areas, the offset ratios should be based on demonstrated water quality impacts, rather than this desire to influence development patterns.
49. *Use same impervious surface loading rate as Bay Model*: The post-development stormwater load calculation includes an impervious surface loading rate before ESD of 15.34 lb N/acre/year. This number actually reflects nitrogen contributed from atmospheric deposition. However, roughly one-third is volatilized and, therefore,

never runs off and should be removed from this load as it is in the Bay Model. The same rate and methodology used in the Bay Model should be used here for consistency.

50. ***Use same pervious surface loading rate as Bay Model***: The Bay Model attributes 50 lbs N/acre/year from fertilizer to the load from turf. This figure is not reflected in the 10.78 lb/acre/year averaged statewide for the pervious surface loading rate before ESD. The same rate and methodology used in the Bay Model should be used here for consistency.
51. ***Identify how credit is calculated for Administrative Waivers***: The calculation for the amount of load to be offset for development that received an Administrative Waiver needs to be explained in more detail, as the circumstances for these developments are different. The description should identify if the 50 percent reduction is applied if ESD practices are used. If the project is built according to the original, approved design, how much credit will be given?
52. ***Do not include mobile emissions***: If the atmospheric nitrogen load is already captured in the loading rate shown in section .05 A (3), a separate, additional calculation for nitrogen from mobile sources is redundant and does not match the Bay Model. As written, the regulation does not account for any treatment of nitrogen from mobile sources. The mobile source component in section .05 A (5) should be eliminated from the draft regulation and calculation methodology. In addition, no nexus or rationale is given for adding mobile sources in this way. The use of census tracts as the measurement of mobile emissions is not appropriate, as the direct correlation with mobile sources is not an accurate enough indicator and should be addressed more directly through other measures or initiatives. If the anticipated increase in atmospheric nitrogen is to be incorporated to the calculations and offset requirements, it should be done through a change to the loading rates for impervious and pervious areas. The increase should be based on actual measured amounts, or could be estimated based on historical data.
53. ***Do not exempt redevelopment from offset requirement***: Redevelopment should not be given a blanket exemption from meeting the offset requirements. Redevelopment of a property could result in a significantly higher load than the existing load, and its impacts should not be ignored for the sake of encouraging redevelopment. (see attached "Carroll County Analysis: Redevelopment").
54. ***Rewrite to indicate measures to be in place by 2025 rather than reductions met***: Subsection E and E (1) state that "if the Chesapeake Bay is not meeting water quality standards for dissolved oxygen or clarity or is otherwise impaired by nutrients or sediments…," offsets shall be 4:1. The Bay TMDL does not require that water quality standards be met by 2025. Rather, it requires that measures be in place by 2025 that are reasonably expected to achieve the needed reduction. Therefore, the condition in Subsection E needs to be rewritten and Subsection E (1) needs to be removed.

Obtaining offsets

55. ***Establish broad range of acceptable offset practices***: To maintain flexibility, a broad range of acceptable offset practices must be established and available prior to implementing the program. Without flexibility, the availability of offsets (supply) may not be great enough for the program to function, thereby bringing development to a halt. This list then should be referenced in the regulation.
56. ***Clarify how offsets made permanent***: Section .06 A should clarify exactly how the offsets will be made permanent, such as easements conveyed with recorded maintenance agreements, as well as how that will be done and by whom.
57. ***Reference list of acceptable BMPs***: Section .06 B includes only examples of permanent offsets, which seem more appropriate to be included in part of another point that prescribes something. Alternatively, something could be added to B to reference a list of acceptable BMPs that could be used as offsets and should include more than just stormwater offsets. The list of acceptable offsets should include inflow and infiltration (I/I) improvements and repairs, such as rehabilitation or replacement of leaking sewer mains (see attached "Carroll County Analysis: Septics Systems Versus Wastewater Treatment Plants (WWTPs)").
58. ***Allow WWTP capacity under nitrogen cap to be traded***: Some municipal wastewater treatment plants may have additional design capacity under their nitrogen cap that is more than they anticipate needing to accommodate planned growth. Although this would cap their growth as well, other jurisdictions may be interested in purchasing/trading the credits generated by this excess capacity. The text should clearly indicate if properties other than agricultural properties can generate offset credits.
59. ***Use fees-in-lieu within watershed where generated***: If a fee-in-lieu option is considered, the fees should be used for projects to achieve local TMDL compliance within the same jurisdiction from which they were collected. If offsets are not generated within the same watershed they are used, that watershed will not be able to achieve TMDL compliance.
60. ***Explain nutrient trading in more detail***: While the offsets regulation will go hand-in-hand with the nutrient trading policy, the regulation should provide additional information on some of the process and mechanics from the trading policy here so it is clear for those who intend to provide offsets without trading. For example, for the agriculture sector, the baseline load refers to an individual farm/property. However, for other uses and sectors, indicate the geographic area for which the baseline load needs to be met if it will not be at the individual property level. Trading geographies should reflect the watersheds at the scale of local TMDLs.
61. ***Limit trading to 8-digit watersheds where credits are generated***: Trading should be limited to areas within the 8-digit watershed and/or the county in which the credits are generated, even if they are located within a Targeted Growth and Revitalization Area. Allowing trading outside of the watershed negatively impacts a jurisdiction's ability to meet its local TMDLs. If EOS is not used, compliance with local TMDLs will

be difficult to determine. Trading within counties and 8-digit watersheds preserves a county's ability to prevent other counties from consuming local offset potential. Additionally, if trading is permitted between watersheds, it will be very difficult to reconcile the differences between EOS and delivered loads.

62. ***Do not push verification and enforcement down to local governments***: The draft does not address who will be responsible for requirements for verification, certification, enforceability, accounting, and trading. These activities should be addressed in the regulation and should be performed by the State.

<u>Proof of Nutrient Credits</u>

63. ***Allow certified credits not used to be available for other projects***: Section .07 B describes the conditions for expiration of nutrient credit certifications. If a construction project does not commence within the allotted time, but the offsets have been put in place, the certification should not go away. At this point, the offset is already implemented and reducing nitrogen loads. Instead, the offsets should become credits that are available for other projects.
64. ***Do not push verification and enforcement down to local governments***: The administrative burden for monitoring and enforcement should ***not*** be pushed to local jurisdictions. In addition to the potential problems with inconsistency, local jurisdictions do not have the staff and financial resources to take on this additional workload.
65. ***Do not push verification and enforcement down to local governments***: The document does not specify who will verify the offsets, how they will be documented, and how they will be enforced. If they are documented in a State permit, presumably the State would then enforce the offset requirements as well. We would not recommend verification and enforcement responsibilities be delegated to the local jurisdictions. Local government staffs are already stretched to maximum capacity and cannot take on this additional responsibility. How credits will be certified, verified, and tracked should be clearly described.
66. ***Make process simple and transparent***: The process to purchase and verify credit should be as simple and transparent as possible.
67. ***Include grandfathering provisions***: The policy should include any anticipated grandfathering provisions and clearly describe them.

In conclusion, the process to develop a regulation to create growth offsets requirements needs to be simple to understand and transparent. Before any decisions are made, the costs – to individual developers and property owners, to local governments, and to the state – and implications need to be analyzed. Adequate time to evaluate the results of other efforts that have already been initiated should be given to ensure that additional measures actually have a causal relationship and do not result in unintended consequences.

Additionally, it is imperative that the data on which these decisions are made be based on a complete, accurate, technically sound foundation, as well as true water quality impacts. Based on our review, and the three attached technical papers, we recommend taking a step back to reevaluate the process to determine loads and loading rates. The policy and resulting regulation should be crafted utilizing all significant contributing factors, ensuring the loads and loading rates used represent the truest picture possible of the actual loads and their impacts. For this reason, we also recommend a scientific, open, impartial review of the policy foundation, to include data and calculations.

If you have any questions related to our input, please feel free to contact Brenda Dinne, Special Projects Coordinator with this Department, at 410-386-2145 or bdinne@ccg.carr.org. We look forward to continued collaboration on the implementation of this regulation.

Sincerely,

Philip R. Hager
Director
Carroll County Land Use, Planning & Development

Attachments:

- *Carroll County Analysis: Septic Systems versus Wastewater Treatments Plants (WWTPs)*
- *Carroll County Analysis: Changes in Loads Due to Land Use Changes*
- *Carroll County Analysis: Redevelopment*

C: Board of Carroll County Commissioners
Carroll County Planning Commission
Steve Powell, Carroll County Chief of Staff
Thomas Devilbiss, Deputy Director, Carroll County Department of Land Use, Planning & Development
Brenda Dinne, Special Projects Coordinator, Carroll County Department of Land Use, Planning & Development
Martin B. Covington, III, PE, Carroll County Stormwater Management Program Engineer
afg@mde.state.md.us (official comments to MDE)
Richard E. Hall, Secretary, Maryland Department of Planning
Les Knapp, Legal & Policy Counsel, Maryland Assoc. of Counties

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Bureau of Resource Management

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Septic Systems versus Wastewater Treatments Plants (WWTPs)

The emphasis on the amount of nitrogen reduced by connecting development to existing WWTPs is misleading. The calculations to estimate nitrogen loads do not consider leakage in existing sewer systems, especially in older systems where the leakage tends to be greater. The numbers do not reflect the loss of nitrogen that occurs to leakage, resulting in only a portion of the load actually being conveyed to the WWTP itself. Since all new development in areas served by public sewer discharges into the existing conveyance systems, direct untreated discharges from leakage into the receiving water bodies will only increase with each additional connection to the systems. Where new loads are being connected to the sewer system, the discharge into the receiving stream will go up even if connected to a WWTP with enhanced nutrient removal (ENR) treatment because of bypass and leakage.

Therefore, the calculations used on Pages 8 and 9 of the Growth Offsets Discussion Draft (July 12, 2012) are not accurate. The amount of leakage in the system determines how much nitrogen will bypass the WWTP and, thus, increase the total nitrogen entering the stream system. An average leakage rate of 5% needs to be applied to all examples and to the offset calculations. This will change the results.

Does leakage really occur? In Baltimore City, measurements of dry weather flows in streams showed that 15% of the nitrogen was from untreated sewage. A 2% leakage rate from the system would produce this result. Likewise, a USGS study of Mine Branch run in Baltimore County showed that 50% of the nitrogen in the water was from raw sewage. A 13% leakage rate would produce this result. Published studies of sewer main leakage rates range from 1% to 13%, with an average around 5%. At 5% leakage, houses on 2-acre lots with wells and conventional septics result in less nitrogen load (16.3 lbs/acre) to receiving waters than the same houses on ¼-acre lots served by a public ENR WWTP and with environmental site design (ESD) incorporated to the maximum extent practical (MEP) (22.9 lbs/acre).

Conclusion

The load per developed acre already is more favorable with 2-acre homes on private well and conventional septic systems (16.26 lbs/acre) than ¼-acre lots served by a WWTP with ENR (24.91 lbs/acre). If ESD to the MEP is used with both scenarios, and the

conventional septic systems on 2-acre lots change to septics using BAT, the results further favor 2-acre homes (8.14 lbs/acre) over ¼-acre homes (18.66 lbs/acre). If you assume a 5% leakage rate for the public sewer system, the results are even more decisive, with the same ¼-acre homes increasing from 18.66 lbs/acre to 22.90 lbs/acre. The 5% leak creates a 23% increase in the nitrogen load.

Martin B. Covington, III, PE, D.WRE
Carroll County Stormwater Management Program Engineer
September 25, 2012

Gale Engles, Bureau Chief

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Changes in Loads Due to Land Use Changes

Development of land results in a change in nitrogen loads. Conversion of row crop agricultural land to a residential, commercial, or industrial use results in a reduction of nitrogen loads. This reduction will make a significant difference in the total nitrogen loads and should not be discounted from offset credit.

An analysis of the data used in the Chesapeake Bay Phase 5.3 Community Watershed Model ("Bay Model"), U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) "Conservation Practices" and the discussion draft of Title 26, Subtitle 08, Chapter 11 Chesapeake Bay Restoration, dated August 27, 2012, demonstrates the effect on nitrogen loads of converting land from an agricultural use to a residential use.

Row crop agriculture (corn) *generates* an edge-of-stream (EOS) load of 48.4 lbs/acre/year. If the EOS load generated from a forest area is 3 lbs/acre/year, the conversion of row crow agriculture to a forested stream buffer would result in a 45.4 lbs/acre/year reduction in nitrogen loads.

Two-acre lots on private well and conventional septic generate 16.26 lbs/acre/year, which is 4.93 lbs/acre from septic at 9.86 lbs/household plus 11.33 lbs/acre, based on the loading rates in the discussion draft. This results in a reduction of 32.14 lbs/acre/year from the pre-development, agricultural load.

On the other hand, ¼-acre lots served by a wastewater treatment plant (WWTP) using enhanced nutrient removal (ENR) technology generate 24.91 lbs/acre/year, which does not even account for leakage in the sewer system. To derive the load per acre, the wastewater load of 3.1 lbs/household/year is multiplied by 4 households per acre to arrive at 12.4 lbs/acre/year. Add to this number the stormwater loading rate of 12.51 lbs/acre/year associated with this land use, and the total load per acre is 24.91 lbs. The resulting reduction in nitrogen load from row crop agriculture to ¼-acre residential lots is 23.49 lbs/acre/year.

Conclusion

The conversion of agricultural land outside of a designated growth area may not be desirable if a jurisdiction is trying to focus growth and development in these areas. However, from a water quality standpoint, it results in beneficial offset of nitrogen loads.

In addition, the use of per household loads, rather than per acre loads, to reflect the water-quality benefits of higher-density residential development over lower-density residential development is misleading and is not consistent with the Bay Model. The per acre nitrogen load from 2-acre lots on well and conventional septic is both less than the load from ¼-acre lots on ENR WWTPs and results in a greater post development reduction in nitrogen loading.

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Carroll County Stormwater Management Program Engineer
September 21, 2012

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Redevelopment

An existing commercial site (Wal-Mart) was compared with Example 2 of the discussion draft. Actual data from Carroll County sewer records were used, as shown in the table below, and are compared to Example 2 in the policy discussion draft, with loading rates updated to correspond to the figures used in the draft regulation. This comparison illustrates that exempting all redevelopment from many of the offset requirements overlooks important differences in outcomes.

- It assumes that redevelopment is not a change in land use, which ignores conversion of commercial sites to a higher-density residential or mixed use. Redevelopment probably will result in a change to a different type of land use, such as is shown in the example below. Even if the post-development runoff from half of the impervious surface was voluntarily treated, at 100% efficiency which is improbable with current technology, only another 24 lbs/year of nitrogen load would be reduced, bringing the final load for Example 2 to 309 lbs/year rather than close to 333 lbs/year. At 309 lbs/year, redevelopment would actually result in a net nitrogen load increase of 105 lbs/year from the site, even if the housing was clustered and environmental site design (ESD) practices were used.
- It does not take into account the nitrogen load resulting from leakage from the sewer system. The tests of exfiltration described in literature give rates of 1% to 13%, with measured tests elsewhere of 5% leakage. (These are tests of the sewage mains and do not count other leakages in the system). Assuming a 5% leakage rate, Example 2 in the discussion draft would generate almost 61 lbs/year of additional, untreated nitrogen load that is not accounted for in the calculations.
- The calculations do not account for the load that the model attributes to turf that would be generated as existing impervious area is reduced. The accepted procedure is to compare the impervious area between the pre- and post-development and requires that the first inch of runoff from half of the pavement be treated, or that the pavement be removed. The effect of pavement removal is to increase the amount of onsite turf, which contributes 70% as much nitrogen as the pavement.

	Existing Wal-Mart Site on 12.5 Acres – All Paved	Redevelopment to 50 Households on 12.5 Acres (Example 2 of Discussion Draft)	Redevelopment to 50 Households on 12.5 Acres (Example 2 of Discussion Draft - Using Full ESD)
Wastewater Load			
Equivalent Households on WWTP	750 gpd = 3 households→ 5% leakage = .15 households→ 3 - .15 = 2.85 households @ WWTP	50 households→ 5% leakage = 2.5 households→ 50 - 2.5 = 47.5 households @ WWTP	50 households→ 5% leakage = 2.5 households→ 50 - 2.5 = 47.5 households @ WWTP
Load @ WWTP	2.85 x 3.1 lbs/yr = 8.84 lbs	47.5 x 3.1 lbs/yr = 147.25 lbs	47.5 x 3.1 lbs/yr = 147.25 lbs
Leakage	.15 x 24.32 lbs/yr = 3.65 lbs	2.5 x 24.32 lbs/yr = 60.8 lbs	2.5 x 24.32 lbs/yr = 60.8 lbs
Total WW Load	*12.49 lbs*	*208.05 lbs*	*208.05 lbs*
Stormwater Load	12.5 acres pavement x 15.34 lbs/acre = 191.75 lbs	48 lbs (impervious) + 67.38 lbs (pervious) + 9.38 lbs (forest) = 124.76 lbs	24 lbs (impervious) + 67.38 lbs (pervious) + 9.38 lbs (forest) = 100.76 lbs
Total Load	*204.24 lbs/year*	*332.81 lbs/year*	*308.81 lbs/year*

Note: 1 household = 250 gpd of sewage

Conclusions

Based on this comparison, the dense residential development results in 60% more total nitrogen load than the original use, which indicates that it should not be assumed that "redevelopment is not a change in land use" or that "redevelopment patently reduces the stormwater loading of nitrogen." This increase is a completely allowable increase, based on current state law, and demonstrates that relief from the offset requirement works against achieving the Bay TMDL.

Martin B. Covington, III, PE, D.WRE
Carroll County Stormwater Management Program Engineer
September 25, 2012

DORCHESTER COUNTY

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Steve Dodd, Director
Rodney Banks, Asst. Director
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410-228-1563 facsimile

October 1, 2012

Re: Senate Bill 236
Growth Offset Policy Comments

The County has numerous concerns with the draft growth offset policy. The County has not had sufficient time to organize all of its comments or to closely analyze the language of the draft policy mainly because of staff constraints. At this juncture, therefore, we offer only preliminary comments on the overall policy. We thank you for the opportunity to review the draft policy and regulations.

The policy seems to unfairly penalize our rural way of life. The policy places undue burdens on property owners by forcing them to find offsets that are not currently in place and increase the financial cost of development by purchasing credits or physically installing a practice. The policy will thwart the economic development of the County by greatly increasing the cost of development. Factors that could make the County attractive to a company are, the availability of developable land, the relative cost of living, and the availability of housing opportunities for an emerging workforce. The policy increases the cost of development and shrinks the inventory of land available for commercial and residential development. The cost of program implementation will further add to the cost of living in Maryland and further widen the gap in that cost in comparison to neighboring jurisdictions. Maryland already has some of the highest tax and fee burdens in the region and the costs associated with the implementation of this policy will ensure that we remain at a competitive disadvantage in that regard.

The County questions the scientific foundation of the nutrient loadings associated with different activities. We would like to see additional technical support verifying the data. The assumed loadings do not take into account the physical differences between properties that impact actual loading. We would like to see the removal of the mobile emissions calculations. Our rural communities would be unfairly penalized for choosing to live in non-urban areas. In that regard, at a minimum, we would ask that all existing lots of record and future minor subdivision that results in the disturbance of not more than an acre of land per lot be exempt.

The program seeks to create a market for nutrient credits. Such programs have not succeeded in fostering meaningful environmental improvement. The activity that merits a credit and the method for determination of the amount of such credit are subject to future political manipulation that will generate individual wealth on behalf of credit brokers and participants in favored activities while yielding no meaningful environmental improvement. The system of credits is not in place and

therefore construction projects which are first down the pipeline will have no bank of credits to consider or draw from. There has been no mention as to the actual cost of a credit and what it will mean to the cost of a new home for one of our County residents. The program as presented does not provide any credits for conversion of land use. As the program will encourage the use and purchase of credits through BMPs such as retrofits of existing stormwater systems and replacements of inefficient septics, and as these specific improvements which once claimed for credits cannot then be utilized to reach the target numbers in the WIP.

In conclusion, we ask that additional time be allowed for further analysis of the programs financial implications on each of Maryland's Counties and residents. Additional time is needed for review of the policy and regulation; it is an extremely complicated technical policy with regulations that offer a poor explanation of how it will be administered. We ask that the draft regulations be given further review and vetting. And that processing of permits, enforcement and documentation not be sent to local governments to administer.

Janice Henderson

Janice Henderson, AICP
Environmental Planner, Dorchester County

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FREDERICK COUNTY, MARYLAND

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David B. Dunn
County Manager

September 27, 2012

Mr. Paul Emmart
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230-1718

Re: Maryland's Draft Offset Regulation

Dear Mr. Emmart:

On behalf of the Board of County Commissioners ('Board') of Frederick County, Maryland, I am writing to submit the Board's comments on Maryland's Draft Offset Regulation for consideration as part of the public comment period.

The Offset Regulation puts an extreme burden on economic development to address the pollution from previous land uses, discourages cost-effective practices like cover crops and nutrient trading, and could halt economic development in the state of Maryland. Furthermore, we strongly urge the Maryland Department of the Environment (MDE) to address the disproportionate economic impacts to rural counties in the Offset Regulation.

The Board appreciates the opportunity to provide written comments. We strongly urge MDE to rewrite this regulation.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
OF FREDERICK COUNTY, MARYLAND

By: _____
Blaine R. Young, President

BRY/SKM/JMG
Attachment
cc: Board of County Commissioners
David B. Dunn, County Manager
Michael G. Marschner, Special Projects Manager, County Manager's Office
Eric E. Soter, Director, Community Development Division
Shannon K. Moore, Manager, Office of Sustainability and Environmental Resources, Community Development Division

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Frederick County Government Comments on the
Maryland Department of the Environment's Offset Regulation

Frederick County Government strongly supports the development of a fee-in-lieu and appreciates the Maryland Department of the Environment's (MDE) support on this issue. We have several suggestions on this matter:

- As the fee-in-lieu price will set the cap for the nutrient trading program, it should be set at a price that is competitive with the program but allows for more cost-effective solutions to be developed. If the price is too high, it will discourage innovation of more efficient practices beyond which we currently have. The price could be set at a 20-year cost for cover crops based on the cost per pound with a 4% per year escalation for administration and inflation and a 4% per year discount rate for accounting for the present value of future dollars. We believe cover crops should be considered because they are cost effective best management practices (BMPs) with high demand that are currently included as a BMP in the Bay Restoration Fund.

- The price should not be designed to discourage economic development but rather to achieve the most cost effective cap to pollution, which is the stated intent of the regulation and of the Environmental Protection Agency (EPA). Furthermore, the price will affect decisions to keep agricultural land productive and should not be set so high that farmers are encouraged to take land out of production.

- MDE has suggested that funds could go to the Bay Restoration Fund. We support this with caveats that local governments should receive set-asides for cover crops from the fee-in-lieu fund that allow for funds proportional to the amount collected for the jurisdiction to go back to local regions to address the goals of local total maximum daily loads (TMDLs).

- It is unclear who would administer a fee-in-lieu program. If this is placed on the county, it is unclear where the county would get additional credits from in light of its own hefty restoration and retrofit obligations. We believe the state should administer the program.

Annual practices like cover crops would not be permitted under the draft regulation, which requires a credit in perpetuity. This drives up the cost of offsets.

The Offset Regulation goes beyond adherence to a nutrient cap, despite the fact that EPA does not require this. The EPA Region III has noted in its comments on the states' proposed Watershed Implementation Plans (WIP) that they must "add a milestone to have a fully effective offset program in place by December 2013 for sectors with planned new or increased loadings, or make a demonstration that a specific sector will not experience net growth in loading," [EPA to WVDEP, February 2012]. In light of this, MDE's Offset Regulation creates an unfair standard for development projects that is not applied to any other land use, requiring them to eliminate the load from the previous land use with no credit, in addition to eliminating any additional load.

- For example, if the property were converted from open urban land, though the increased load would just be from the delta between the old land use load and the new one, the offset would be required for the entire load on the developed parcel. The offset on the developed land would result in a net reduction of load comparable to the load from the open urban land. If the previous land use were more polluting, as would be the case with some forms of agriculture, the developed acre would still have to offset the entire new load, while the agricultural acre would not have this offset requirement. This results in a net positive reduction for the entire agricultural land use though the stated intent of the Offset Regulation is to adhere to a nutrient cap.

- Barring this, we believe that any pounds reduced from this program in excess of the cap from the reduction of pollution on existing land uses should be allocated to the local governments which are assigned the task of meeting the state's local WIP targets under the Chesapeake Bay TMDL; otherwise the accounting for the local jurisdiction's load will be misrepresented in the model and the local government may be required to reduce pollution which has already been reduced. The local government could have the flexibility to apply credits representing these reductions to any sector which needs them or at a bare minimum the land use from whence they came.

We are curious if the lawsuit the EPA lost over interstate power plant emissions will have any bearing on the Offset Regulation for atmospheric deposition. We also note that atmospheric deposition is the same regardless of land use, and conversion to a developed use does not add this load; therefore, it is inappropriate to require its reduction as part of a cap management strategy for urban development.

Frederick County is uniquely situated for economic growth because of its location: at the intersection of Interstate 70 from Baltimore and Interstate 270 from Washington, D.C., with close proximity to major shipping routes north and west. Frederick County also touches Pennsylvania, and is across the river from Virginia and West Virginia. The Offset Regulation would diminish economic development opportunities by making growth in Maryland less desirable versus less-regulated neighboring states.

As the nitrogen loading rates for developed land already include atmospheric deposition from nitrogen, adding the load from vehicle miles traveled (VMT) appears to be double counting. The VMT numbers do not appear to be based on science. It is unclear if the scope of the Clean Water Act extends to the control of atmospheric pollutants in the case of the portion of the load attributed to VMTs.

Environmental site design stormwater techniques are set at 50% efficiency though they are said to imitate "woods in good condition." A forested load would be 3 pounds nitrogen per acre per year using state averages, but treated impervious land would have a load of 7.67 pounds per acre per year using 50% removal efficiency for nitrogen.

At this time, no offsets are available from the Agricultural Nutrient Trading Program in Frederick County. According to the Maryland Department of Agriculture, only one farm has evaluated the potential for offsets within Frederick County, and it could provide 140 credits; these credits are not available on the market. The Soil Conservation District (SCD) in Frederick County is evaluating a second farm. The policy for the creation of other offset types has not been developed, and no offsets are currently available within Frederick County. The SCD has stated that these evaluations are expensive and that there are problems with the software for evaluation. For such a program to work, the evaluation process must be streamlined.

Trading geographies for offset markets are too limited to take advantage of market efficiencies. The draft regulation allows for trading within the Potomac basin; no interstate trades; no trades outside of the county unless development is within the Targeted Growth and Revitalization tier; and no trading beyond local TMDL boundaries if for phosphorus, nitrogen or sediment. As most of Frederick County is covered by local TMDLs or soon will be, these rules severely limit the possibility of trades. Table 1 shows the main watersheds within Frederick County and their TMDL statuses. There are small fragments of other watersheds within Frederick County that also have TMDLs; these small regions would be even more affected by limited trading geographies. A study conducted for the Chesapeake Bay Commission entitled "Nutrient Trading for the Chesapeake Bay: An Economic Study" estimates that total costs to achieve nutrient reductions in the Chesapeake Bay could be reduced by 80%, with a potential increase in savings of 35% if the geographic scope is expanded from individual basins to the entire watershed. According to this study, "the potential benefits from trading are particularly high when urban sources are allowed to purchase credits. The possibility of large savings for urban areas is due primarily to the relatively high cost of controlling nutrients from urban stormwater runoff. In our analysis, we assume that regulated

urban sources are free to meet all of their TMDL [Total Maximum Daily Load] reduction requirements by purchasing credits from other sources."

Table 1: Status of TMDLs in Frederick County as of July 25, 2012

Watershed	Total Maximum Daily Loads			
	Sediment	Nitrogen	Phosphorus	Fecal Coliform
Chesapeake Bay	Approved 2010	Approved 2010	Approved 2010	
Potomac River (MoCo)	Submitted September 2011	Submitted September 2011	Submitted September 2011	
Lower Monocacy River	Approved 2009		Under Development	Approved 2009
Lake Linganore	Approved 2003		Approved 2003	
Upper Monocacy River	Approved 2009		Public Comment Phase	Approved 2009
Double Pipe Creek	Approved 2009		Public Comment Phase	Approved 2009
Catoctin Creek	Approved 2009		Public Comment Phase	

10% of each trade is retired with every trade. This would make offsets a nutrient reduction strategy rather than just a cap management strategy. As the TMDL already includes a margin of safety, the cumulative effect of adding in additional margins at every step just results in a more expensive plan. This is also true for nutrient credit expiration dates.

The policy sets different offsets depending on the type of wastewater treatment plant (WWTP) for development on sewer. If the sewer system is above its cap, offsets are required. The load per equivalent dwelling unit for biological nutrient removal and secondary treatment appear high, and an explanation of the calculation is requested. The secondary treatment is especially high, as it appears to be higher than septic loads from a traditional system.

Growth of most kinds is strongly discouraged by the Offset Regulation, even growth within planned growth boundaries. The growth least discouraged is redevelopment, though it still requires an offset for VMTs.

Redevelopment is already discouraged by a requirement to treat 50% of stormwater from the site through the Maryland stormwater regulations. Frederick County does not have substantial redevelopment opportunities because it is not heavily developed.

The verification requirements have not been developed and could potentially be onerous, particularly to evaluate maintenance of credit in the future.

The role for local governments is unclear though it seems implicit that the Maryland counties would be required to process the offset permits at the time of the processing of the Construction General Permit for Stormwater.

There is no deadline in the draft policy for grandfathering.

Stormwater waivers appear useless because their loads must be fully offset.

MDE's refusal to publish public comment is out of character for the organization and suggests that MDE does not want to publish what will quite obviously be a substantial amount of disagreement with Offset Regulation.

The coefficients in MDE's calculations use average edge of stream loads across Maryland for forest, pervious, and impervious surface loading rates. MDE claims it will convert for delivered loads but it is unclear what rate it will use. MDE should use the same delivery rate that it has in the Maryland Assessment Scenario Tool (MAST) derived from the Bay Model, which is approximately 30% for Frederick County. Septic numbers in MDE's draft regulation are average delivered loads for the state, which would overestimate the delivery rate, therefore the load and the pounds to be offset. Mixing and matching delivery rates puts jurisdictions further from the Chesapeake Bay at a disadvantage in light of the fact that nutrient offset credits are discounted to delivered loads.

Using Bay Model Edge of Stream (EOS) loading rates extrapolated from the MAST for Frederick County, the average loading numbers for impervious and pervious land are much higher than MDE estimates for EOS loads. If the final calculations from MDE use EPA loading rates specific to the region, the pounds to be offset will be significantly higher. MDE has not released its calculation methodologies. The forested loading rates are to be applied to acres of new forest in a new development area. That is unfortunate, if true, as forest removes a substantial amount of nitrogen from other land uses. Forests also demonstrate that no land use is able to release zero nitrogen.

The potential impact of the Offset Regulation is a significant increase in costs for development. Cost estimates per pound of nitrogen permanently removed are currently:

- $17,094 for agricultural nutrient trades (the Washington County SCD's estimate at public meeting 7/24/2012. They evaluated 28 farms. Three were eligible with 117 credits total. The SCD estimates this would add $40,000 to the cost of a new home with high density on enhanced nutrient removal WWTP).

- $2,600 for septic nitrogen removal (plus costs for verification, trading, operations and maintenance after the first five years, electricity. Uses MDE's $12,000/septic for upgrade and MDE's 5 pound removal estimate). The MDE discussed the possibility of tradable septic offsets.

- Table 2 estimates the cost per pound of nitrogen removed using stormwater practices. The costs per impervious acre are from King and Hagan's "Use of Planning Level Unit Stormwater BMP Costs with MAST Output to compare WIP Alternatives: Planning Level Unit Cost Development for Stormwater Management Best Management Practices (BMPs) Part 4: Integrating Unit Stormwater BMP Costs with MAST Output" commissioned by MDE. Impervious acres are calculated to acres of installation using MDE's "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated" document. Costs are over a 20-year period. Notably, the cheapest possible credit would be from street sweeping, at $2,555.76 per pound if swept over a 20-year period. The cheapest "forever" practice would be tree planting, at $4,009.56 per pound of nitrogen with 7 pounds credit per acre. Assuming this cost for MDE's scenarios in Section G of its draft policy, the 50 household residential development in Example 2 would require $368,879 in offsets from 19 acres of new forest. The developer in Example 7 would be

required to spend $1,074,562 in offsets from 55 acres of new forest. These are the *cheapest* credits that could be made available from stormwater practices using MDE estimates. This example also assumes that the credits are produced in a tidal area, as a discount would apply to credits generated further from the Chesapeake Bay.

Table 2: Costs per pound removed from stormwater practices using MDE loading rates and cost estimates

Practice Name	$/ N credit
Bioretention/raingardens (retrofit)	$28,340.29
Bioretention/raingardens (new)	$10,494.78
Bioswale (new)	$8,164.28
Dry Detention Ponds (new)	$89,465.45
Hydrodynamic Structures (new)	$146,831.81
Dry Extended Detention Ponds (new)	$22,366.36
Dry Extended Detention Ponds (retrofit)	$31,655.80
Impervious Urban Surface Reduction	$50,974.50
MS4 Permit - Stormwater Retrofit	$25,324.64
Urban Filtering Practices (sand, below ground)	$14,442.63
Urban Forest Buffers	$4,009.56
Urban Infiltration Practices	$11,000.00
Urban Tree Planting: Urban Tree Canopy	$11,066.88
Vegetated Open Channel - Urban	$5,534.84
Wet Ponds and Wetlands (retrofit)	$26,483.38
Wet Ponds and Wetlands (new)	$13,483.70
Urban Stream Restoration/Shoreline Erosion Control	$41,279.71

Local government projects such as the construction of libraries, senior centers, schools, and roads should be exempt.

Requiring four times the offset for development after 2025 if the Chesapeake Bay is not meeting water quality standards would likely halt economic development in the state of Maryland, if the Offset Regulation has not already achieved this by that time.

DAVID R. CRAIG
HARFORD COUNTY EXECUTIVE

MARY F. CHANCE
DIRECTOR OF ADMINISTRATION

C. PETE GUTWALD
DIRECTOR OF PLANNING & ZONING

HARFORD COUNTY GOVERNMENT

Department of Planning and Zoning

September 27, 2012

Mr. Paul Emmart
Maryland Department of Environment
1800 Washington Boulevard
Baltimore, Maryland 21230-1718

Dear Mr. Emmart:

The Harford County Watershed Implementation Plan (WIP) Team has reviewed and discussed the State's draft Growth Offset Policy. We would like to offer the following comments:

- The local jurisdictions' roles and responsibilities with regard to implementation of the Growth Offset Policy were a major concern. Who will be responsible for verification, certification, enforcement, accountability, tracking and permanency of the offsets, or of the credits if Nutrient Trading is used? In the draft Policy it appears that new State regulations will be developed to implement the Policy, and that either the current State Permit for Stormwater Associated with Construction Activity will be amended, or a new General Permit for Offsets Associated with Development Activity will be developed, to identify the offsets. Therefore, will the State take on the responsibility to oversee the proper implementation of this new program? At one of the public meetings, the State said that the County would be the "backstop". The County's and municipalities' roles and responsibilities should be clearly identified. Local staffing requirements are a concern if implementation is delegated to the counties and municipalities.
- It will be critical for each local jurisdiction to be able to determine the baseline for each source sector above which nutrient load reduction can be used for offsets. For example, the MAST scenario developed by MDE for Harford County indicates the need to upgrade 19,000+ conventional septic systems to BAT by 2025. Will this figure need to be met before any other BAT upgrades may be counted as an offset?
- If structural practices are used as an offset, then whatever mechanism a jurisdiction currently uses to ensure maintenance and longevity of current stormwater management practices should be allowed for the offsets. For example, in Harford County, homeowner's associations are currently responsible for maintenance.
- Is the current Trading Policy and Market well-established in order to handle the influx of offsets that may occur when this Policy goes into effect?

- Concern is raised about local water quality conditions and local TMDLs if trading is allowed between Counties, with other States, or across watershed boundaries. The questions raised in bullet #1 regarding verification, accountability, tracking and maintenance may be even more cumbersome if not located within the same jurisdiction.
- The idea of a fee-in-lieu for offsets met with varying opinions on the WIP Team. Some members were in favor of this in order to allow development proposals to proceed; however, others were concerned with the administrative bureaucracy that would be required to address this, especially if it became another unfunded administrative mandate to local counties and municipalities. If the money would be returned to local jurisdictions to implement stormwater management programs, then some were willing to reconsider this option.
- Similar to the Excel Offset Calculation Tool developed by MDE, a similar tool to show nitrogen load reductions from various BMPs would be helpful to those calculating offset options.

Thank you for the opportunity to comment on the draft Growth Offset Policy. We look forward to continued discussion with regard to the role of local counties and municipalities.

Sincerely,

Patricia J. Pudelkewicz

Patricia J. Pudelkewicz
Harford County WIP Team Coordinator

PJP/dl
CC: Harford County WIP Team Members

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Courthouse Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350

Marsha S. McLaughlin, Director

www.howardcountymd.gov
FAX 410-313-3467
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September 26, 2012

Paul Emmart
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore MD 21230-1718

Dear Mr. Emmart:

The Howard County Department of Planning and Zoning has reviewed the Maryland Accounting for Growth Policy, Discussion Draft dated July 12, 2012, and offers the following comments/questions on the proposed policy.

1. The Department supports requiring offsets to counter nutrient loads from new growth, and supports trading to allow more cost-effective solutions to achieve these reductions.
2. To encourage forest retention in new developments, consider providing an allowance for the existing load generated by forest cover, if that forest is retained.
3. The offsets must be long-term, but most agricultural practices will be traded with an effective life, which will vary according to the practice. If a developer is allowed to purchase credits for a specific period of time, what happens at the end of this time period when the credit must be renewed? If this is a residential development, will the responsibility of renewing the credits be assigned to the Homeowners Association? What happens if the owner of a commercial development goes out of business or sells the property? If the home owner or new commercial property owner is to assume responsibility for maintaining these offset credits, then this responsibility should be recorded in the land records for this property. Will the State track the expiration and need for renewal of these credits and notify property owners of their responsibilities?
4. The Department supports revising the trading areas to allow trades in the combined Patuxent, Western Shore and Susquehanna River in Maryland area, as this would allow trades within the County between the Patuxent and Patapsco River basins. This increased flexibility may make it easier to achieve offsets within the County.
5. It is not clear how it will be determined that an offset or trade goes beyond what is required to meet the local TMDL. For agriculture, the Bay TMDL baseline requirement is determined by translating Bay TMDL goals into a numeric per acre annual loading rate for each watershed. The baseline is then applied to the pasture/field/animal area that is being used to generate the credit. Can we assume this same approach would be used to determine agricultural baseline loading rates for local TMDLs? How would the baseline be determined for urban stormwater loads?
6. The Department supports the use of a short-term fee-in-lieu program to give the private market time to develop.
7. The Department is concerned that the MDE does not have the staff needed to manage and monitor this new program.
8. To reduce uncertainty for the development community, the Department supports an effective date that is six months after adoption of the new regulations, rather than waiting until December 2014.

Please contact Susan Overstreet at soverstreet@howardcountymd.gov if you would like to discuss these comments. Thank you for the opportunity to comment.

Sincerely,

Marsha S. McLaughlin
Director

cc: Howard Saltzman, Chief, Stormwater Management Division, Department of Public Works
James A. Caldwell, Stormwater Manager, Office of Environmental Sustainability

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DEPARTMENT OF GENERAL SERVICES

Isiah Leggett
County Executive

David E. Dise
Director

October 1, 2012

Mr. Paul Emmart
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230-1718

Dear Mr. Emmart:

Thank you for the opportunity to comment on the State's proposed Accounting for Growth Policy draft dated July 12, 2012. The proposed policy has significant implications on the direction, timing, and costs of development within Montgomery County and localities across the State of Maryland.

Montgomery County supports the intent of the proposed policy to prevent additional nutrient pollution in our regional waterways, focus growth and discourage sprawl development. A successful nutrient offset policy would provide substantial incentives for the County's Transit Oriented Development approach and support protection of the County's significant Agricultural Reserve.

Montgomery County has consistently supported protection of local water resources, in examples such as adoption of the Special Protection Area program, our dedicated Water Quality Protection Fund, and our Stormwater Management program which include requirements beyond the State's minimum for runoff management for redevelopment. The County developed our Stormwater Permit Implementation Strategy to address both the TMDLs to our local waters and to meet regional Bay restoration goals .

County staff participated in several of the public briefings and noted a number of common concerns that were raised including lack of details on defining what BMPs would qualify for the credit program, the availability of credits to support the proposed offsets and the administration of the offset program. Montgomery County offers the following comments:

Local vs. Bay TMDLs

A significant issue with the proposed offset policy for Montgomery County is that the local TMDLs tend to require more pollutant removal to protect local waterways than are needed to meet the Bay TMDLs. We would like to be assured that any offset policy is protective of local water quality and requires the purchase of credits within the same local watershed if there are local regulatory nutrient limits. Within Montgomery County, this includes the Anacostia and the Patuxent Watersheds and drainage to Clopper Lake.

Redevelopment

Montgomery County has established one of the most progressive growth management strategies in the United States. We are committed to accommodating the majority of new growth within our planned water and wastewater service areas. We are designing future communities that facilitate walking rather than driving to desired amenities and employment. To support this approach across the State, there should be no offsets required for redevelopment in mixed use zones that increase density, even if there is a mix of residential and commercial uses. The draft policy assumes that redevelopment is not a change in land use. Redevelopment is commonly based on changes in zoning and proposed land uses. The term "redevelopment" is used in many different scenarios. The term should be clearly defined so that it is consistent with the definition used for stormwater management regulations.

Protection of the Montgomery County Agricultural Reserve

Montgomery County has gone to great lengths to protect and preserve the portion of the County that is zoned for agricultural use. This program compliments the County's efforts. However, there are instances when properties are modified to replace old housing due to hardship or obsolete housing conditions. In such cases, the provisions of the policy should be waived.

Calculating Offsets Required

The draft policy proposes the total post-development nitrogen load to be offset beyond pre-development conditions, even for 100% forested sites. This is not consistent with current stormwater management requirements. We recommend that offsets be required only for the increase in load compared to forested good conditions rather than the total site load.

Stormwater Management Credits within Offset Program

A potential credit specific to Montgomery County is related to the County's runoff management requirement for redevelopment. The State assumption for redevelopment is to add management for 50% of the impervious. The Montgomery County requirement is to add management for 100% of the impervious so it would be possible for a developer in

Montgomery County to have 'credits' for the nitrogen in runoff from the additional 50% management required. Mr. Jay Sakai of MDE acknowledges this should be considered for the current proposal. Specifically, how would these 'credits' be tracked if the developer wanted to use them elsewhere or 'sell' them to other developers?

Maintenance of Sold Offset Credits Sites

The maintenance of BMPs that have been sold as offset credits should be the responsibility of the seller. Buyers cannot determine when BMPs are not maintained or are removed because they do not control the property. The responsibility for maintenance should be a part of the offset credit certification between the seller and the State.

Available Agricultural BMPs

We would like to see an analysis of the amount of new and redevelopment likely by 2025 and the amount of credits available based on agricultural BMPs. During the State presentations, considerable emphasis was given to the fact that the costs for nutrient reduction from agricultural BMPs is much lower per pound than urban stormwater BMPs. However, only the BMPs above what are necessary to meet the Bay and local TMDLs would be available for sale. If there are very few additional BMPs available, the credits would be very expensive based on market demand. If there are no additional BMPs available, then there could be no new or redevelopment without a fee in-lieu program.

Fee in-lieu Program

The State has proposed a fee in-lieu program through which developers could post funds in a program for subsequent use in installing offset BMPs. The county would like assurance that the funds collected for offsets from development within Montgomery County would be used for local BMPs and programs to assure that local water quality is protected.

Functional Administration of the Policy and Regulation

The draft policy suggests that MDE will review and approve all documents related to the offset process. The County is concerned with availability of MDE resources and coordination capabilities with local jurisdictions. Does the State propose to take an active role in local subdivision reviews and approvals? If so, the County has serious concerns that additional State involvement in the local subdivision process will result in delays and contradict the County's streamline development efforts. Tracking the application and availability of credits is also a concern. The County suggests that the most effective and efficient way to proceed is through local delegation of these matters.

Montgomery County appreciates MDE outreach efforts to date. However, there are a number of significant issues that have not been sufficiently addressed and we do not believe there has been adequate time devoted to more comprehensive discussions with local jurisdictions. Accordingly, we are requesting that the State defer the publication of regulations for consideration by the General Assembly committees until local governments have more time to consider and discuss policy implications within their existing planning and permitting programs.

Thank you for your consideration of Montgomery County's comments on the proposed policy and regulations. If you have any questions, please contact me at greg.ossont@montgomerycountymd.gov or 240-777-6192.

Sincerely,

Greg Ossont
Deputy Director, Planning and Development
Department of General Services

cc: K. Boucher, CEX
R. Bell-Pearson, CEX
D. Dise, DGS
D. Schwartz - Jones, DPS
R. Brush, DPS
A. Holmes, DOT
B. Hoyt, DEP
M. Curtis, DEP
S. Shofar, DEP
J. Criss, DED
M. Wenger, IGR
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MONTGOMERY COUNTY PLANNING DEPARTMENT
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

October 2, 2012

Mr. Paul Emmart
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230-1748

Dear Mr. Emmart:

The Montgomery County Planning Department has reviewed the State's proposed Chesapeake Bay Watershed Implementation Plan (WIP) Accounting for Growth Policy (Offset Policy) for the Chesapeake Bay WIP. We are concerned that excessive offsets are being required of smart growth projects and that the benefits of most offsets will occur outside of our jurisdiction. My staff offers the attached detailed comments.

Thank you for the opportunity to comment on this document. If you need additional information, please contact Mary Dolan, at 301-495-4552, or Mark Symborski, at 301-495-4636.

Sincerely,

Rose Krasnow

Rose G. Krasnow
Acting Planning Director

RK:MS:MD/am
Attachments

8787 Georgia Avenue, Silver Spring, Maryland 20910 Director's Office: 301.495.4500 Fax: 301.495.1310
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Montgomery County Planning Department Staff Comments on
The Chesapeake Bay Watershed Implementation Plan Accounting for Growth Policy

1. The Policy proposes that the required offset should be the total additional post-development load, as opposed to the difference between the post-development load and "woods in good condition" as was earlier envisioned. If the former is adopted, it may significantly increase the cost of development, and it could create reverse incentives where developing agricultural land may cost less or may even generate nitrogen credits compared with urban land. It doesn't seem a good idea to use a standard for offsets based on a pollution loading rate that is better than the best that nature can provide. If all pollution loading was the same as "woods in good condition", then the Bay would be fine—so that is the natural world's gold standard. As a result, it seems that it would make more sense and be more scientifically defensible to **use the difference between the post-development load and "woods in good condition" to determine the offset requirement**.

2. **Redevelopment that reduces pollutants should be eligible for credit** as part of the Offset Policy. This would encourage and support smart growth and reduce the costs of employing expensive measures in urban areas.

3. The Offset Policy should **provide an expanded range of offset options** including, but not limited to, treating offsite stormwater drainage on the development site, additional on-site afforestation, on-site stream restoration, upgrades of existing septic systems to BAT, connection of existing septic systems to sanitary sewer, installation of additional SWM controls beyond the requirements for redevelopment sites. It will be important, however, that in conjunction with the expanded offset options the Policy provide guidance designed to avoid or limit the creation of undesirable competition that may otherwise result between developers taking advantage of additional offset options, and local governments seeking similar low cost BMP options for meeting their pollutant reductions requirements.

4. The Offset Policy needs a mechanism to **address redevelopment cases in the 20%-40% imperviousness range**. If a redevelopment in this lower imperviousness range is done well, it might not increase loads even though it is below the current imperviousness threshold. This approach would encourage a redevelopment approach in a greater range of contexts. The use of **performance curves instead of percent load reductions** may be useful in addressing this point.

   A series of performance curves would allow for maximum effectiveness. This is an idea worth considering because industrial/commercial entities may be hesitant to remove imperviousness because it could put a developer into another category at the State level.

5. In crafting this Bay WIP Offset Policy, MDE needs to **consider that jurisdictions also have to address local water impairments**. Because of this, a better mitigation approach needs to be developed. For example, if mitigation cannot be done in the same 8-digit watershed where the development occurs, then it should occur in another watershed within the same County.

   Or the draft Offset Policy could be **modified to stipulate that new development in a Targeted Growth and Revitalization area will be able to obtain offsets anywhere in the same county that also drains to the Chesapeake Bay**. All other new development must obtain offsets in the same 8-digit watershed where the development is located, or in another watershed in the same county that has a greater need based on degree of local water quality impairment and drains to the Bay. Such an approach will help local jurisdictions to meet the Bay TMDLs, while minimizing the impacts of new development on the water quality of local streams. It would also preserve a similar incentive, as in the Draft Offset Policy, for new development to occur in Targeted Growth and Revitalization Areas.

6. As with offsets, **trading should occur first in within the same 8-digit watershed**. If that is not possible, it should first occur elsewhere within the County and then outside of the County. Trading outside the jurisdiction should be the discouraged. Not only is it cumbersome and complex, it can put the mitigation far from the pollution source and virtually eliminate mitigation from jurisdictions with higher land values. Furthermore, at what point do we say that there are no more offsets to handle the development?

7. **Fees in-lieu should only be available as the lowest priority** and used for smaller projects that cannot manage the offset. These fees should stay within the jurisdiction for projects identified by a local jurisdiction.

   To make sure that the offsets associated with fees-in-lieu also help to improve local water quality as much as possible, any fees-in-lieu should be based on the least expensive offsets that could be done in the same 8-digit watershed. If this cannot be done then the offsets should be the least expensive ones that could be done elsewhere in the same county.

   Fees should be set high enough to pay for reasonable improvements, additional staff and operation and maintenance.

8. Given the current economic climate and the fact that local governments are struggling to maintain current staffing and programs, it seems likely that in most jurisdictions the **State will need to administer the Offset Program**. The State should work with locals to make sure local concerns are met in implementing the State's Offset Program in those jurisdictions.

Comments on the Account for Growth (Offset) Policy
by
Prince George's County, Maryland

(A) Department of Environmental Resources:

1. Why is "Air Deposition" only applied to residential areas? How about the Commercial and Industrial areas?

2. Are there regulations that control nitrogen emission (Air Deposition) for new developments? If not, why is it included in the Offset Policy? What is the basis for the loading numbers used in the document (1.0 or 0.5 lb/yr)?

3. The Policy clearly identifies the roles of MDE and the Developers; but not the counties. What are the County's roles on the implementation of the Offset policy?

4. Currently, the County issues construction permits based on the Stormwater Management Ordinance approved by MDE. If MDE issues a General Permit to handle the Offset, does this mean that the developers need to prepare two sets of the development plans for each new development site –one for the County and the other for the State?

5. If yes, how will the County and MDE coordinate the two sets of the plans to ensure they are accurate and adequate?

6. The County is responsible for inspection, tracking and maintenance of the County approved BMPs. Who will inspect, track and maintain the additional BMPs required in the MDE issued General Permit? Who will ultimately be responsible for verifying BMPs and providing maintenance?

7. When/how will the county be notified when developers' requirements are fulfilled? Where in the process does county planning come in?

8. How are developers going to meet the State's general permit for new development and the County's erosion and sediment control permits?

9. What would the role of aggregators in the trading/offset procedures?

10. Will new developments need to have their offset credits deeded to the property?

11. Do offsets policy apply to county road expansion or the State putting in new parking lots?

12. Could an offset credits be taken for connecting existing septic facilities to an ENR WWTP with capacity? What about for converting onsite systems to BAT above the WIP plan?

13. Do stormwater loading calculations take into account regional variances to loadings rates? Eventually, will the offset policy have one set of specific loadings rates for the entire State?

14. The current offset calculation spreadsheet only calculates the offsets needed. Will there be another spreadsheet that will calculate the amount of BMPs needed for the offset?

15. This Policy will cause extra costs for the Building Industry. Are any neighboring jurisdictions such as D.C., Virginia or Pennsylvania developing a similar offset policy? If not, we will push a considerable number of new developments to our neighboring States and slow down our economic development.

(B) Department of Public Work and Transportation:

1. We assume that the developer will need to obtain an “Offset General Permit” through the Maryland Department of Environment (MDE). At what point does the developer need to get the General Permit?

2. Will the County be responsible for making sure a developer has their Offset General Permit prior to our approval/permit being issued?

3. Will the County reviewer have to review the on-site offset facilities or will they already be approved by the MDE reviewers?

4. Will the County inspectors be responsible for inspecting these onsite offset facilities during construction and after construction for operation and maintenance enforcement?

5. It is our understanding a land developer would be required to negotiate the off-site offset credits prior to obtaining stormwater management concept approval and/or permit issuance. If so, what mechanism will assure this is accomplished and what documentations are required?

6. Can developers make contributions to nearby (same watershed) county stormwater restoration projects and count toward the offset credits for that development? If so, what accounting methodology will be used (% funding or % efficiency)?

7. DPWT recognizes that MDE will be responsible for tracking the offset credits. However, the design engineer will need to account for the offset credits as part of the site development's stormwater management obligation. Given that the County review follows the criteria established in Chapter 5 of MDE's SWM Design Manual, (Environmental Site Design), how will the offset credits be taken into account?

8. Currently, DPWT is tracking all new SWM BMPs from the stormwater concept stage through final design plan stage. This is done in order to meet the NPDES permit requirements as defined in Attachment A of the draft NPDES Permit. At the same time, DPWT tracks and documents all BMPs and new impervious surfaces by watershed to ensure compliance with accounting for TMDL loading reductions. How will the offset credits be factored into the watershed TMDL calculations?

9. Based upon the Nitrogen loadings for given project densities, the growth polices generally favor redevelopment and smart growth projects over less dense/rural developments. What are the projected impacts to economic development in Prince George's County for imposing the new stormwater offset requirements?

10. For projects already approved or built with ESD to the MEP, will they be grandfathered even though they will fall short by up to 40% for water quality control?

11. For off-site offset BMPs, who will ensure the facilities continue to be maintained to a level that provides adequate removal efficiency? If an off-site system fails, will the credited development project lose those credits? Will notice of violation be issued to the property owner?

12. What will happen when there are no offset opportunities available within the watershed?

13. Many studies have shown that to obtain quantifiable nitrogen removal through the use of a BMP, there must be a de-nitrification component. An anaerobic zone is typically required. Will there be any updated BMPs to account for this in the offset facilities?

14. Given that the MDE has already approved our SWM Ordinance, and it does not reference TMDL or Offset Credits, does the Department need to revise the ordinance to do so?

15. Our SWM Design Manual is currently under revision and will need approval by MDE. Do we need to incorporate anything about offsets, or can we leave it out because MDE is tracking offsets and our review follows ESD to the MEP?

(c) Maryland-National Capitol Park & Planning Commission

1. Are County projects exempt from the offset requirements set forth in this policy? Will this policy be applied to all county construction projections including but not limited to new schools, new road facilities, and fire stations?

2. As a quasi-state agency are M-NCPPC projects exempt from the offset requirements set forth in this policy? There have been discussions about some state facilities being exempted from the regulation and the M-NCPPC is looking for clarification on this issue from MDE. This would apply to

all M-NCPPC construction projects including new park facilities.

3. The draft policy indicates that development would be required to apply for a General Permit or an Individual Permit for Stormwater Associated with Construction Activity. This suggests that MDE will be reviewing and approving all documents related to the approval of offsets from the stormwater management plans to the easement documents and approving the location of the offsets. As part of the local government planning development review and approval process, storm water management is a key component in the review of subdivision and site plans. Has MDE considered how they will coordinate and participate in the local development review process? Will more detailed procedures be available for comment at a future date? There is concern that development applications might be approved by the Planning Board or administratively without knowing if the applicant has met their offset requirements.

4. The draft policy, page 7, item 3 indicates that the offset "will require permanent offsets with an assurance that they will be maintained." How will perpetual easements be recorded during the process and when? Will MDE be developing a standard easement document that will identify the various uses and restrictions for the offset? Will property owners be able to stack different types of easements on one property? For example, could a property have a Maryland Land Preservation Easement on the property along with an offset easement?

5. Will MDE develop a tracking database to identify the location of all offset in each County? Will MDE be responsible for the inspection and maintenance of the easements on individual properties? MDE should review the requirements of the Maryland Department of Natural Resources Forest Conservation Act and local forest conservation ordinances to obtain an understanding of the resources needed and the various tracking requirements. At

this stage, it’s unclear if MDE has the staff resources to conduct a comprehensive program.

6. Currently redevelopment activity is defined as a site with existing project site impervious surface area that exceeds 40 percent. The intent of this requirement is to encourage redevelopment of existing areas located in Priority Funding Areas (PFA) or PlanMaryland’s Targeted Growth and Revitalization area. However, there are still areas within both of these categories that won’t meet the exemption criteria for redevelopment either because they are green fields or only have a limited amount of impervious surface. Has MDE considered reducing the offset requirements for projects located in the PFA or Targeted Growth and Revitalization Areas to further encourage redevelopment in these areas?

7. If a fee-in-lieu program is enacted, is MDE going to coordinate and allocate funding to the counties for stormwater management retrofits? Further details on how a fee-in-lieu program would function and operate are necessary before enactment.

8. Will the state coordinate offsets with local jurisdictions to determine if the offset is located in areas targeted by the jurisdiction for preservation? M-NCPPC has a Green Infrastructure Plan that identifies locations suited for preservation and parcels that will improve connectivity of woodland corridors.

9. How is maintenance or re-construction of an existing septic system treated? Does this require offsets?

10. “In order to further support Bay restoration and preservation and protect local water quality, the policy for Accounting for Growth also seeks to minimize pollutant load from new growth so fewer offsets are needed and to encourage use of offsets for the optimum economic development in Maryland. It proposes to accomplish this by establishing additional conditions on trading geographies. New development in a Targeted Growth and Revitalization

Area (a PlanMaryland Planning Area) served by an ENR WWTP will be able to obtain offsets anywhere in the TMDL watershed allowed by the trading policy, while all other new development must obtain offsets in County where the development is located. This restriction does not limit where those who generate credits can sell them."

Comment: Trading should not be allowed to go outside the county because we are in the Potomac and Patuxent watersheds and because this may be a way for some rural property owners to recoup some lost equity.

11. From page 6, E. Step-by-Step: "…Because redevelopment is not a change in land use, and because redevelopment patently reduces the stormwater loading of nitrogen, and because redevelopment usually involves denser, more compact development than the development it is replacing, redevelopment is favored from a water quality point of view. For these reasons, no offset is required for stormwater from redevelopment."

    Comment: The first sentence quoted above says that redevelopment is not a change in land use. Redevelopment frequently results in a change in land use in our county – this need to be clarified. The last sentence says that no offset is required for stormwater management, what about other offsets?

12. From page 6 "If the development will use on-site sewage disposal systems, the load for each household or equivalent unit using a conventional septic system is 9.86 lbs. of nitrogen. A system using best available technology (BAT) removes about half the nitrogen, so its load is 4.93 lbs. of nitrogen. These numbers are based on a state-wide delivery factor from these onsite systems of 42.5%."

    Comment: How was this is calculated because the nitrogen discharge is very different in different soils statewide.

13. From page 7 “Development that receives an administrative waiver from the stormwater regulations under COMAR 26.17.02.01-2 must calculate the actual post-development nutrient pollution load and offset it.”

    Comment: If the use of administrative waivers is for projects that are “exempt” from meeting the new swm regulations, then why would exempt projects be subject to the offset requirements?

14. From page 8, Applicability: “It will apply to any development that would be required to apply for either a General or Individual Permit for Stormwater Associated with Construction Activity; that is, projects that disturb one or more acres of earth.”

    Comment: If our DPWT’s threshold for requiring a permit is 5,000 square feet of disturbance, can the local jurisdiction enact legislation that sets the offset threshold at one acre?

15. From page 7: “Examples of permanent offsets are forested buffers that are protected by covenants or easements recorded in the land records, septic systems connected to WWTPs with room under their nitrogen caps, septic systems that are upgraded to best available technology to remove nitrogen, and conversion of dry stormwater management ponds to wet ponds.”

    Comment: Allowing septic systems that connect to WWTPs to count as offsets will cause sprawl by the extension of public sewer lines into areas not currently served by sewer. Upgraded septic systems to BAT already have to offset their extra nitrogen; they can serve as offsets too? Can woodland conservation banks, MET easements, etc. be used as offsets too? Existing and proposed or only proposed? This also relates to Comment #4.

16. “After significant outreach and stakeholder involvement, the Maryland Department of the Environment (MDE) will

propose regulations to implement the policies and mechanism."

Comment: MDE is required by SB 236 to propose new regulations to address offsets for Tier III areas by December 31, 2012. Does this mean that the offset regulations will be completed by December 31, 2012?

17. Example 2 on page 9: "The developer will have to offset the post-development nitrogen load of 117 pounds unless the parcel is located in a census tract with more than 10,000 people per square miles, in which case the offset would be 92 pounds."

    Comment: First comment is that the difference between 117 and 92 is not much of an incentive to build where there are 10,000 or more people per mile. Second comment is - if the only offset used is converting house to a system using BAT and its load is 4.93 lbs. of nitrogen, so that is equal to the credit given? In the example above, the offsets would require the conversion of 27 houses to BAT for 117 pounds or 19 houses for 92 pounds, in addition to the 4.93 pounds that each house would have to offset for? This appears to penalize applicants.

18. Does the offset run with the land or can a developer certify post development and take offsets to sell, leaving the existing development with no "breathing room" for the future? Can we require offset available capacities remain with a developing property controlled by a HOA, or at least leave some buffer is an on-site offset were to fail?

19. The following text suggestions are offered for consideration:
    - Page 1 first paragraph, suggest using the word "undermine" not "defeat"
    - Page 2 second paragraph at the end "with input from the counties"?
    - Page 2 B. include in second sentence "Thus, any new development must comply with Planning, zoning, subdivision..."

- Page 5 second paragraph first sentence include "local zoning and subdivision...
- Page 5, table. Is ENR is defined in the table?

D:/MCheng/WIP-II/Account for Growth/Comments on the Account for Growth

Washington County Government
Official Comments on the
Draft Offset Policy and
Draft Accounting for Growth Regulations
October 1, 2012

Comments on the Draft Offset Policy

1. The ESD to the MEP criteria is intended to treat the 1 year 24 hour rainfall event to mimic a forest in good condition site. It has been shown that 90% of the pollutants discharged from a developed site are discharged during rainfall events of 1 inch or less over 24 hours. ESD to the MEP minimum design criteria ensure that the 1 year rainfall event is captured within a series of ESD practices to mimic a forested site condition. One could argue that using ESD to the MEP should therefore provide treatment for 90% of the pollutant load.

   The minimum requirement for ESD to MEP is to capture and treat the Rev and WQv using ESD practices, leaving many sites not treating the CPv in an ESD practice. In these cases, the volume captured in the ESD practices is less than the amount discharged during the 1 inch 24 hour rainfall event. CPv in these cases is then treated in a conventional BMP. Conventional BMPs typically have a low (30%) nitrogen removal efficiency rate. (However, these same BMPs are predicted to remove sediment and phosphorous by 80% or more.)

   In the Growth Offset Policy, MDE has provided a credit for new development designed and constructed under the ESD to the MEP criteria. This credit would reduce the load reduction requirement for these sites by 50%. MDE has not provided information on what the 50% credit is based on. Why is this credit not 90% where the full Rev, WQv and CPv volume is managed using the ESD practices? MDE should consider making this credit site specific (and pollutant specific) to account for those development sites not treating the full Rev, WQv and CPv volumes in an ESD practice(s).

2. It is our understanding that NPDES Phase II communities (such as the City and Washington County), with the issuance of our next General Permits, will be required to retrofit stormwater controls or eliminate impervious surface on 20% of pre-1985 impervious areas that are assumed to have no control. Although this expected mandate is supposed to deal with existing development, Washington County will be using any management provided under this mandate as growth offset.

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3. Based upon some trial computations using the MDE offset spreadsheet, development data for three small (<3.1 acres) commercial sites in the City of Hagerstown and Washington County, and Dr. King's stormwater cost study, the estimated costs to provide stormwater BMPs to cover the required nitrogen load offsets ranges from $21,000 to $1.1 million depending upon the selected BMP. For one of these sites, an 8,400 sq. ft. children's day care facility on a 1-acre lot, the calculated offset cost ranged from $21,000 to $397,000 - this is in addition to an estimated cost of $34,000 just to do ESD to the MEP. These costs would certainly undermine the financial feasibility of many small commercial development projects, which are really the only types of projects that have been proposed in Washington County in the past five or six years.

4. There are serious issues with "permanent" easements for practices such as forest buffers; aside from the cost and complexity in inspecting/enforcing the maintenance of these buffers, there is also the fact that forest buffers aren't "permanent". While an easement may prevent these buffers from being developed, natural succession will make it unlikely that these remain "forested" indefinitely. Counting on buffers to provide permanent, full offsets is unrealistic.

5. On page 5 of the draft policy, there are loads being referenced based on the "associated numbers of residents and jobs accommodated for a given nitrogen load." This section also references that the full description of the methodology and the calculations were beyond the scope of the discussion draft. We would like this documentation to be made public on the MDE website as reference material for review and understanding to the Draft Policy. It is unacceptable that MDE has created a growth policy that will significantly impact local jurisdictions and land development activities yet MDE has not provided all of the detailed information needed to understand fully the basis of the policy development.

6. Presentation of some real world examples of how this might really work step by step (including details of how the calculations are performed, exactly who does what at each stage of review and implementation) not the superficial examples in the draft policy should be posted on the website for review and a better understanding of the intentions of this policy.

7. If the ESD/MEP requirements of the SWM ordinance are intended to return sites to "forest in good condition", why are there additional post-development load problems to be solved? Is the new standard now "better-than-forest condition"? If that is the case, does this mean we will need to take a look at ***actual*** forest and create SWM solutions to get these natural areas upgraded on par with our expectations for post-development sites?

8. Smart Growth? Or Green Sprawl?

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If urban infill sites are not large enough to accommodate ESD/MEP, Forest conservation areas, and additional offset solutions for stormwater, how can we expect the resulting fees (payment in lieu for Forest Conservation; purchasing offset credits) to make these sites competitive with larger sites in more rural areas in Maryland? or worse yet, with sites in neighboring Pennsylvania and West Virginia? We're likely to consume more land for development as developers look for large enough tracts to accommodate these treatment and protection areas as our small urban infill sites continue to languish at a competitive disadvantage. Rather than concentrating development, we will be spreading it further afield as developers seek large enough sites to create green development - or Green Sprawl.

9. Granting favored status to Urban Infill Development

"Redevelopment" is exempted from the offsets because of the water quality benefits generated by these projects. Similarly, the water quality benefits of "urban infill development" should receive credit in the offset requirements to recognize its more favored status over "rural greenfield development." Urban infill development involves parcels surrounded by developed areas which often do not have modern SWM management systems on-site to treat their post-development loads. As these infill sites develop, they are required to install modern SWM mechanisms which often catch surrounding untreated or unrestrained SWM runoff and treat it on the infill site. "Rural greenfield development" is less likely to create such regional loading improvements. In addition, "urban infill development" is compact, sends its wastewater to a WWTP, and does not require conversion of rural farm or forest lands to development – all of which are not usually the case with "rural greenfield development".

10. What happened to Plan Maryland?

We were promised that Plan Maryland would get the State agencies working together to encourage Smart Growth and the revitalization of our urban centers in Maryland. While the offset requirements will not apply to redevelopment, they will apply to urban infill development. If we are serious about the goals of Plan Maryland, the TAGR's should be treated much differently than lower priority growth areas in Maryland. Urban infill sites struggle at a competitive disadvantage with existing regulatory layers. Allowing new development in TAGR's to look farther afield for areas to purchase offset credits does not create a *real* benefit for those areas nor make these sites more attractive for development or more competitive with rural areas. Whether the developer can buy credits in his county or some other county, this requirement is still adding cost to development, which these sites cannot afford.

11. Any reward to Redevelopers for improving the condition of their "forest"?

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Redevelopers should receive credit for the improvements they are making to their "Paved Over Forest" sites if they over manage (greater than 50% impervious surface) these BMPs.

12. Phase II-B of the Maryland Trading Policy involves selling Agricultural Nutrient Credits. How about Redevelopment Nutrient Credits? Or Forest Nutrient Credits?

13. If forest conservation easement areas can count for SWM offsets, how much credit would they provide? Will this credit reflect the loading reductions provided in the MAST and Chesapeake Bay Model?

14. "Redevelopment is not a change in land use" - it can be in mixed-use districts or when redeveloping non-conforming land uses.

15. Special consideration for "census tracts with 10,000 people per square mile"

    We have multiple census tracts that cross over our corporate boundaries to include dense portions of the city and not so dense portions of unincorporated areas, which would make it difficult to meet the density threshold. Even in census tracts entirely within the city, 10,000 people per square mile is a high threshold to meet. (We calculated the density of three census tracts in the urban core of Hagerstown and only one had a density over 10,000 people per square mile, because of railroad lands, cemeteries, industrial land, etc. interspersed in the other two census tracts.) Therefore, the City and County are being penalized for being a rural community. The methodology and scientific data supporting the census tract loading rates needs to be posted on the MDE website for review and comment.

16. Who will implement the program? The draft document implies that MDE will review trading/offset proposals and incorporate them in a permit, possibly the General Permit for Stormwater Runoff Associated with Construction Activity. Will the local governments have any role in this process?

17. How does this policy transfer to the local TMDLs. If MDE is to do the review and approval and enforcement of offsets, will MDE notify the County of the outcome? Will the County have to apply similar offsets to the local TMDL?

18. How will offset credits be verified?

19. Is there a grandfathering provision? Ex. A construction plan approved prior to 2014 that does not incorporate on site provisions for off-setting. When the grading permit is applied for (and thus the NPDES General Permit for Stormwater Associated with Construction Activity is applied for) if offset trading isn't available, will the developer have to revise the development plan? OR will the development get delayed until trading credits are available?

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20. How are the other states in the Bay region addressing the offset for growth provision in the Bay TMDL? Are these similar policies? Washington County borders both Pennsylvania and West Virginia. Developers can easily move there projects to these states if they do not have a similar policy or if the policy they adopt has a lower financial impact on the project. Thus, adoption of these regulations would stifle the economic growth in Washington County.

21. Documentation on the reference for establishing the air deposition nitrogen loading should be included on the MDE website for review.

22. If phosphorus is not required to be offset at this time, do you expect that to sunset in the future, and if so when?

23. Can you define "underutilized"? Who will render this opinion when evaluating redevelopment sites?

24. From the examples you have provided do you really mean to imply that only residential land use has an impact on air deposition, not commercial uses? Again publishing the documentation on the air component would help clarify the State's approach to its inclusion.

25. Who will serve as the enforcement agency to prevent fraud and dishonest practices? Who will enforce "permanently?"

26. Are there any plans by the State to tax the purchase of trading credits this and thus driving the cost up further?

27. You mention that no offset is required for phosphorus at this time. Has EPA accepted this policy? A TMDL is being issued for Total Phosphorus in the Antietam Creek Watershed, because this is a local impairment, how will the Offset Policy which only addresses Total Nitrogen and allows for offset credits to be obtained outside the watershed insure that the water quality in this watershed does not deteriorate from new growth and prevent additional BMPs from being required to offset the growth. By only focusing on nitrogen especially with septic tank upgrades to BAT being an offset option, the County is concerned that a local impairment could be allowed to increase as an unintended consequence.

Comments on the Draft Accounting for Growth Regulations

A. No definition for Department is included in the draft regulations. For review purposes and based on the draft policy outreach meetings we will assume this to be Maryland Department of the Environment.

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B. The definition for redevelopment does not match the Stormwater Act of 2007 for consistency purposes this should be considered.

C. The definition of redevelopment specifically states that "construction, alteration, removal or improvement preformed on existing impervious area at a site…". This can be interpreted that if a developer has a project on a redevelopment site that he must follow one set of calculations for the impervious area and one set of calculations for work in pervious areas. Since one of the goals from the outreach meetings was to simplify these regulations and in order to promote the redevelopment of land in lieu of new development, all redevelopment on the pervious and impervious lands should be exempt if the property has an impervious area that exceeds 40 percent as defined in the Stormwater Act of 2007.

D. In regards to the loading rates provided to account for the stormwater loads:
    a. Documentation needs to be posted on MDE's website which provides the methodology and calculations utilized to determine these rates. It is clear that MDE has assumed that nitrogen loads from all impervious surfaces regardless of land use are equal. However, extensive research has shown otherwise.

    b. The regulations state that the EOS loads will need to be converted to delivered loads to determine the offsets required. Are the loads provided for stormwater the EOS loads or delivered loads?

    c. The delivered loads should reflect the delivered loads factor utilized in the MAST and Bay TMDL. Therefore, a development in Western Maryland should not be required to offset the same amount of loading as a development proposed next to or closer to the Bay with a higher delivery factor. The regulations should reflect what the delivery factor is so it can be added to the calculation.

E. Nitrogen from mobile sources favors dense urban areas over rural areas, creating another disadvantage to the rural communities in State regulations. While the explanation provided reflects the amount of miles a resident has to travel to get to work, it did not provide provisions for the amount of time a car spends idling in congested traffic in dense urbanized areas. It has been well publicized that this contributes to smog issues in the dense urbanized areas and therefore it should be included in the calculation of mobile sources. Additionally when focusing on residential only, the argument can be made on mass transit; however, the higher density of commercial and industrial business in these areas does not utilize the mass transit system and is contributing to the mobile sources.

F. For developers who have received an administrative waiver from the Stormwater Act of 2007, the application of actual EOS could be more stringent than the Stormwater Act regulations or these regulations. Therefore, flexibility should be

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provided for those properties that have received a waiver so they can calculate an offset that reflects the most feasible method of complying with all the regulations without penalty.

G. The definition of land use change includes properties where a change in runoff characteristics occurs in conjunction with residential, commercial, industrial, or institutional construction or alteration. Does this include public infrastructure such as WwTP upgrades? The County would suggest that public WwTPs being upgraded for BNR, ENR or other nitrogen removal purposes should be exempt from the regulations. Otherwise, a post development loading offset has to be performed for a project which is designed to reduce nitrogen from entering the Bay.

H. Page 5 of 8, E. "After December 31, 2012" at the end of subparagraph (1) under this section the word "and" should be replaced with the word "or". This will clarify that development in a County that has implemented the actions designed to meet the Bay TMDL are not penalized if the Bay has not meets its Water Quality Criteria.

I. The methodology for the multiplier of the post development load if the Bay does not meets the water quality criteria needs to be provided on the MDE website. Additionally, development in the State of Maryland should not be penalized if the other Bay States have not completed their required actions to address the Bay TMDL. Therefore , we request that the State modify this section to reflect that if the State of Maryland has not completed the actions required to meet its portion of the Bay TMDL, then a multiplier will be added and once the actions have been completed then this requirement shall be lifted.

J. A provision should be included that would allow a Developer to demonstrate that his project does not contribute any loading off his property and if successfully demonstrated to MDE that project will receive an exemption from this regulation.

K. Before these regulations are adopted, a fiscal analysis should be completed by the State to determine its impact on the development and future growth in the State of Maryland and each local jurisdiction.

L. Utilizing the Dr. King costs estimates and recent development plans, the following financial impacts could be estimated for the following type developments: (Note these costs are for construction only and do not account for the costs of land acquisition and maintenance)
    a. A 79.7 acre subdivision on an ENR WwTP with 92 single family units and 261 townhouses would be required to offset 848 lbs of nitrogen. The costs to construct the BMP offsets to achieve 848 lbs. of nitrogen removal ranges from approximately $2.48 million (for lowest cost BMP) to $48.06 million dollars (for the highest cost BMP). So the additional cost for these residential units could range from approximately $7,025 to $136, 147.

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Utilizing the average costs for BMP construction, the additional cost per unit would be approximately $31,850.

b. A medical facility that utilizes 1.6 EDUs with public sewer capacity on a 3.12 acre lot could incur costs of approximately $62,400 to $1,212,700 from the lowest cost to the highest cost for BMP construction. Based on the average costs for BMP construction this cost is estimated at approximately $283,715 in additional cost.

c. A convenience store/gas station on 2.2 acres with public sewer capacity, could incur costs of approximately $42,000 to $816,100 from the lowest to the highest cost for BMP construction. Based on the average cost for BMP construction this cost is estimated at approximately $190,900 in additional costs.

d. A 20 acre subdivision with 10 units on BAT septic tanks could incur costs of approximately $494,100 to $9,600,200 from the lowest to the highest cost for BMP construction. Based on the average BMP costs, the cost would be $2,245,850 in additional expenses or $81,450 per residential unit.

M. One of the offsets recognized in the regulation is the conversion of a conventional septic to a BAT or connection to a WwTP. In order for the County to reach the target load reduction for the septic sector, it must utilize these same BMPs. There is concern that development could come in and use up these offsets by offering better incentives for upgrades than the County before the target reduction is meet for this sector. This same concept is a concern for the other urban sector target load reductions as well. The State needs to conduct an inventory of the BMP availability prior to finalizing this regulation and provisions should be made in the regulation to insure that BMPs to achieve the target load reductions can be reasonably accomplished by the local government agency.

N. If a developer utilizes upgrading conventional septics to BAT septics, they do reduce nitrogen and meet the requirements of the regulations. However, septic tanks by their nature do not contribute sediment or phosphorus to the Bay. Therefore utilization of the BMP does not reduce the sediment and phosphorus from new development. How will this be accounted for? The regulations needs revised to address this issue. Failure to address the sediment and phosphorus from this scenario could lead to unintended consequence at the local level especially with local TMDLs.

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Draft Maryland Offset Policy
Questions/Comments for Discussion in a follow-up meeting with local government agencies in Washington County

1. For new developments in Maryland, the current stormwater management regulations (i.e. ESD to the MEP) are intended to make post-development sites function hydrologically not only at the same level as under pre-development conditions, but to go further and make post-development sites function like "forest in good condition". The reduction in stormwater discharge rates/volumes that ESD to the MEP mandates corresponds with a reduction in stormwater nutrient discharges. Isn't this difference between "pre-development" and "forest in good condition" nutrient loads already offsetting the effects of development/growth? If this was 2005, and the stormwater regulations were only requiring control back to a pre-development condition, a growth offset would be more logical.

2. It is our understanding that NPDES Phase II communities (such as the City and Washington County), with the issuance of our next General Permits, will be required to retrofit stormwater controls on 20% of pre-1985 impervious areas that have no control. Although this expected mandate is supposed to deal with existing development, isn't it in some ways, a growth offset?
    - The Washington County WIP team incorporated the 20% retrofit into our MAST calculations because we thought that it would be required one way or another; however, there are other ways to achieve the pollutant reduction goals via other BMPs.

3. Based upon some trial computations using the MDE offset spreadsheet, development data for three small (<3.1 acres) commercial sites in Hagerstown, and Dr. King's stormwater cost study, the estimated costs to provide BMPs to cover the required offsets ranges from $21,000 to $1.1 million depending upon the selected BMP. For one of these sites, an 8,400 sq. ft. children's day care facility on a 1-acre lot, the calculated offset cost ranged from $21,000 to $397,000 - this is in addition to an estimated cost of $34,000 just to do ESD to the MEP. These costs would certainly undermine the financial feasibility of many small commercial development projects, which are really the only types of projects that have been proposed in the City in the past five or six years.

4. There are serious issues with "permanent" easements for practices such as forest buffers; aside from the cost and complexity in inspecting/enforcing the maintenance of these buffers, there is also the fact that forest buffers aren't "permanent". While an easement may prevent these buffers from being

developed, natural succession will make it unlikely that these remain "forested" indefinitely. Counting on buffers to provide permanent, full offsets is unrealistic.

5. Would like to hear more about the "associated numbers of residents and jobs accommodated for a given nitrogen load." What does this mean?

6. Present some real world examples of how this might really work step by step (including details of how the calculations are performed, exactly who does what at each stage of review and implementation) not the superficial examples in the draft policy.

7. If the ESDMEP requirements of the SWM ordinance are intended to return sites to "forest in good condition", why are there additional post-development load problems to be solved? Is the new standard now "better-than-forest condition"? If that is the case, does this mean we will need to take a look at ***actual*** forest and create SMW solutions to get these natural areas upgraded on par with our expectations for post-development sites?

8. Smart Growth? Or Green Sprawl?

   - If urban infill sites are not large enough to accommodate ESDMEP, Forest conservation areas, <u>and</u> additional offset solutions for stormwater, how can we expect the resulting penalty fees (payment in lieu for Forest Conservation; purchasing offset credits) to make these sites competitive with larger sites in more rural areas in Maryland? or worse yet, with sites in neighboring Pennsylvania and West Virginia? We're likely to consume more land for development as developers look for large enough tracts to accommodate these treatment and protection areas as our small urban infill sites continue to languish at a competitive disadvantage. Rather than concentrating development, we will be spreading it further afield as developers seek large enough sites to create green development - or Green Sprawl.

9. Granting favored status to Urban Infill Development

   - "Redevelopment" is exempted from the offsets because of the water quality benefits generated by these projects. Similarly, the water quality benefits of "urban infill development" should receive credit in the offset requirements to recognize its more favored status over "rural greenfield development." Urban infill development involves parcels surrounded by developed areas which often do not have modern SWM management systems on-site to treat their post-development loads. As these infill sites develop, they are required to install modern SWM mechanisms which often catch surrounding untreated or unrestrained SWM runoff and treat it on the infill site. "Rural greenfield development" is less likely to create such regional loading improvements. In addition, "urban infill

development" is compact, sends its wastewater to a WWTP, and does not require conversion of rural farm or forest lands to development – all of which are not usually the case with "rural greenfield development".

10. What happened to PlanMaryland?

- We were promised that PlanMaryland would get the State agencies working together to encourage Smart Growth and the revitalization of our urban centers in Maryland. While the offset requirements will not apply to redevelopment, they <u>will</u> apply to urban infill development. If we are serious about the goals of PlanMaryland, the TAGR's should be treated much differently than lower priority growth areas in Maryland. Urban infill sites struggle at a competitive disadvantage with existing regulatory layers. Allowing new development in TAGR's to look farther afield for areas to purchase offset credits does not create a *real* benefit for those areas nor make these sites more attractive for development or more competitive with rural areas. Whether the developer can buy credits in his county or some other county, this requirement is still adding cost to development, which these sites cannot afford.

11. Any reward to Redevelopers for Improving the condition of their "forest"?

Why not give redevelopers credit for the improvements they are making to their "Paved Over Forest" sites? If they could be sellers of credits for getting these sites up to "Forest in Good Condition" status, it might provide a financial reward that could help to offset the cost of redevelopment and make these projects less risky and more competitive.

12. Phase II-B of the Maryland Trading Policy involves selling Agricultural Nutrient Credits. How about Redevelopment Nutrient Credits? Or Forest Nutrient Credits?

13. If forest conservation easement areas can count for SWM offsets, how much credit would they provide?

14. "Redevelopment is not a change in land use" - it can be in mixed-use districts or when redeveloping non-conforming land uses.

15. Special consideration for "census tracts with 10,000 people per square mile"

- Observed a couple of problems with this threshold. We have multiple census tracts that cross over our corporate boundaries to include dense portions of city and not so dense portions of unincorporated areas, which would make it difficult to meet the density threshold. Even in census tracts entirely within the city, 10,000 people per square mile is a high threshold to meet. (We calculated the density of three census tracts in the urban core of Hagerstown and only one had a density over 10,000 people

per square mile, because of railroad lands, cemeteries, industrial land, etc. interspersed in the other two census tracts.)

16. Who will implement the program? The draft document implies that MDE will review trading/offset proposals and incorporate them in a permit, possibly the General Permit for Stormwater Runoff Associated with Construction Activity. Will the County have any role in this process?

17. How does this policy transfer to the local TMDLs. If MDE is to do the review and approval and enforcement of offsets, will MDE notify the County of the outcome? Will the County have to apply similar offsets to the local TMDL?

18. How will offset credits be verified?

19. Not sure how the VMT load is applied.

20. Is there a grandfathering provision? Ex. A construction plan approved prior to 2014 that does not incorporate on site provisions for off-setting. When the grading permit is applied for (and thus the NPDES General Permit for Stormwater Associated with Construction Activity is applied for) if offset trading isn't available, will the developer have to revise the development plan? OR will the development get delayed until trading credits are available?

21. Same question as No. 19 with respect to projects under a Stormwater Administrative Waiver.

22. Does any of the other states in the Bay region have a similar policy under development?

23. You mention that no offset is required for phosphorus at this time. Has EPA accepted this policy?

24. Can you provide the reference for establishing the air deposition nitrogen loading?

25. If phosphorus is not required to be offset at this time, do you expect that to sunset in the future, and if so when?

26. Can you define "underutilized"? Who will render this opinion when evaluating redevelopment sites?

27. From the examples you have provided do you really mean to apply that only residential land use has an impact on air deposition, not commercial uses?

28. Slide number 8 in the presentation power point, regarding the nitrogen loading per capita – Can you provide the science references which support this claim.

29. Who will serve as the enforcement agency to prevent fraud and dishonest practices? Who will enforce “permanently?”

30. Are there any plans by the State to tax the purchase of trading credits this and thus driving the cost up further?

31. A TMDL is being issued for Total Phosphorus in the Antietam Creek Watershed, because this is a local impairment, how will the Offset Policy which only addresses Total Nitrogen and allows for offset credits to be obtained outside the watershed insure that the water quality in this watershed does not deteriorate from new growth and prevent additional BMPs from being required to offset the growth.